Return on Leadership

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Abstract

It is generally accepted that leadership is the foundation for creation of a company's business results. However, empirical evidence is lacking.

This paper examines the relationship between leadership and key performance results based on a Return on Leadership Model. The model links Denison's four leadership traits to people results, customer results, and ultimately key performance results. Further specified, the model is a structural equation model with nine latent variables, each measured by a set of indicators, observed by survey questions. To validate the model, an empirical study was conducted, and 379 managers from medium-sized and large companies in Denmark participated. The estimation of the model shows that the model structure explains return on leadership very well, and the findings support the developed model. We are able to quantify the relationships from leadership to people results, customer results and key performance results and, in this way, the data presented here provide evidence that leadership is linked to key performance results.

Several results and applications of the model are shown. The findings provide new knowledge about how leadership can be linked to performance, and how excellent leadership creates key performance results.

1. Introduction

Leadership has an imperative role in the performance of a company. In the future, the leader's job will both become more important and difficult as the demand to create short-term results increase, while new ways of creating efficiency within the company and efficiency of the employees is a recurrent demand.

To achieve success as a leader, one has to have the ability to develop visions, set clear goals, formulate strategies, align goals and objectives with the strategy and vision, engage in partnerships, invest in new, better and faster production plants, organize an efficient production process, etc. Nevertheless, this is insufficient - many leaders can accomplish these tasks.

In future, the situation also calls for leaders who are able to mobilize the employee's cre-

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ative abilities and individual talents, and turn these into innovation and performance, which the customers will experience as rewarding and value adding. Accordingly, this will secure the customer's retention. Leaders who moreover are able to create a strong reputation among the stakeholders - compared to competitors - will discover that their company has taken the lead both in regards to financial results and the more 'soft' performance results.

There exists empirical evidence for the relationships between a company's financial results, customer loyalty and employee satisfaction and loyalty (e.g. Anderson *et al.*, 1993; Reichheld, 1996; Anderson *et al.*, 1997; Dahlgaard *et al.*, 1998, p. 157, 354-355; Barber *et al.*, 1999; Ekløf *et al.*, 1999; Anderson and Mittal, 2000; Brooks, 2000; Kristensen *et al.*, 2000; Grønholdt and Martensen, 2002). Conceptually and empirically there is also support for that the employees' satisfaction and loyalty depend on the leadership of the company (Eskildsen and Dahlgaard, 2000; Martensen and Grønholdt, 2001; 2002). By including this leadership-employee relationship, we hereby extend the well-known employee-customer-profit chain (Brooks, 2000) and the service-profit chain (Heskett *et al.*, 1997) with leadership.

In the EFQM Excellence Model (visit www.efqm.org) leadership is the foundation for the creation of results. The model is based on the causal relationships between leadership, employee results, customer results and key performance results; and the importance of leadership is well established and generally accepted. During the years only few attempts to study the causal relationships in the EFQM Excellence Model have appeared in the literature. Therefore further demonstration and documentation of the model's relationships are required. An interesting question is then how strong are these relationships? And which implications will this have for the development of the quality of leadership? This paper aims to examine the relationships between quality of leadership, employee results, customer results, and key performance results. The relationships are analysed within a new theoretical framework designated Return on Leadership Model, inspired by the EFQM Excellence Model and the employee-customer-profit chain approach.

2. The Return on Leadership Model

2.1 Measuring leadership: The Denison Leadership Development Model

Given the criticality of leadership and its fundamental role, the emergence of a new return on leadership model that expands the understanding of the leadership construct, its measurement and its relations to other central indicators in the EFQM Excellence Model are of major importance for organizations in the aim to achieve return on leadership.

Based on a review of the literature on measuring leadership (e.g. Kanji and Moria E Sà, 2001; Northouse, 2001) we have chosen *The Denison Leadership Development Model*, created by Professor Daniel R. Denison, Ph.D. and William S. Neale, M.A., M.L.I.R, copyright date 1996 (Denison and Neale, 1996; www.denisonculture.com, click on 'Leadership Development'). There are several reasons for using the Denison Leadership Development Model.

Firstly, the model is behavioural based. In the behavioural approach to leadership the focus is solely on leaders' behaviour, i.e. what the leaders do and how they behave towards the employees under different circumstances. As Northouse (2001, p. 52) state: The behavioural approach focus on "what leaders do rather than who leaders are". Leaders' behaviour and what they do are especially related towards tasks and relationship behaviours. Task behaviour focus, naturally, on how the leaders can help the employees achieve their goals for instance by providing clear guidelines and priorities for the employees, or by providing the employees with a clear mission that gives meaning and direction to their work. Relationship behaviours focus on how leaders can "help subordinates feel comfortable with themselves, with each other, and with the situation in which they find themselves" (Northouse, 2001, p. 35). Since the behavioural leadership perspective focuses on which leadership behaviour is the most effective for the creation of excellent results and a productive organisation, we believe that this is the best theoretical approach to our problem.

Secondly, the model is designed and created within the business environment.

Thirdly, the model and measurement instrument has been thoroughly tested and applied in practice with good results. It is based on several studies conducted over a 15-year period on over 1,000 organizations and 40,000 respondents.

Fourthly, the model is linked to bottom line business results; there has actually been found positive and significant relationships between leadership and specific performance measures such as return on assets, return on investment, sales growth, market share, quality and employee satisfaction (www.denisonculture.com).

Denison has identified four leadership traits (Denison and Neale, 1996; Hooijberg and Denison, 2003; www.denisonculture.com):

- Involvement: "Building human capability, ownership and responsibility"
- Consistency: "Defining the values and systems that are the basis of a strong leadership"
- Adaptability: "Translating the demands of the organizational environment into action"
- Mission: "Defining a meaningful long-term direction for the organization"

Each of the four leadership traits is extended via three set of leadership skills and practices - concrete activities that are linked to the leadership trait. A further explanation of what is behind the four leadership traits and 12 leadership skills can be seen on www.denisonculture.com, where also Denison's 96 items to measure the 12 leadership skills are available. It is also possible to get an understanding of how different combinations of the four leadership traits either support or counteract each other.

Generally, Denison's research has demonstrated that the leadership in an effective organization must reflect all the modelled characteristics' thus none of the four leadership traits or 12 underlying skills seem redundant in a management perspective.

Based on 1254 managers' participation in the Denison Leadership Development Survey between 1996 and 2001 Hooijberg and Denison (2003) have tested the validity and reliability. The conclusion was that each of the 12 leadership skills is highly reliable, confirmatory factor analyses shows that the three-factor model fits well for each trait, and the 12 skill measures fit into the four basic traits defined by the model.

2.2 The Conceptual Model

Figure 1 shows the conceptual Return on Leadership Model. The arrows in Figure 1 represent the hypothetical relationships between the different variables, which we a priori expect. It is assumed that Denison's four leadership traits have a direct and positive effect on People results. Leadership thus provides the foundation for people (employee) results, which is supported, among others, by Bycio *et al.* (1995), Koh *et al.* (1995), Dvir *et al.* (2002), Dumdum *et al.* (2002), Jung and Sosik (2002) and Kark and Shamir (2002).

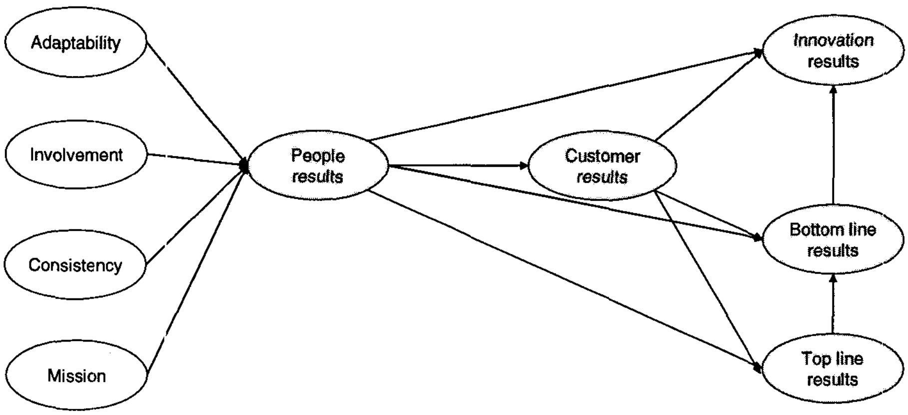

Figure 1. The Return on Leadership Model

As mentioned in section 1, People results have a positive and direct effect on Customer results, which accordingly have a positive and direct effect on companies' key performance results, divided into Top line, Bottom line and Innovation results, the last-mentioned providing the opportunity for long-term performance results.

However, a priori we would also expect that People results, like Customer results, have a direct effect on Top line, Bottom line and Innovation results.

Loyal employees want to stay in the organisation in the future, will be motivated to do an extraordinary good job, and will feel highly responsible for their performance. Loyal employees thereby identify with, are involved in, and enjoy membership in the organisation, and want to yield a contribution in excess of the expected to achieve the visions and goals of the organisation. Thus, it is assumed that high employee motivation and job satisfaction have a positive effect on employee loyalty and productivity, customer loyalty and profitability and ultimately the company's financial results. Good employee results will then contribute to an economic prosperous company (Bottom line results). A priori we also expect that satisfied and loyal employees will have a positive effect on the number of loyal customers, but it will also have a positive impact on customers' repeat purchase (size and frequency of purchase), which combined will have a positive influence on turnover (Top line results).

Satisfied and loyal employees, who are motivated and committed, will be innovative and come up with suggestions and new ideas, and this will lead to better innovation results. Such employees seem to reflect an innovative company with a potential for prosperity (Innovation results). This is further supported by Cooper *et al.* (2004), who in a major and recent benchmarking study found that among the 20% best performing businesses, 35% had a new product idea suggestion scheme in place, compared to 8% of the 20% worst performing businesses. Generally, Cooper *et al.* (2004) find that a "supportive climate for innovation is a major difference between best and worst performers."

As mentioned in section 1, several studies confirm the strong and direct link between People and Customer results; thus we also expect to find such a strong impact here.

Intuitively, we expect People results to have a greater impact on Top line results than on Bottom line results, as the employees to a higher degree can influence and control these key performance results.

In figure 1 it appears that Top line results naturally have a direct and positive impact on the Bottom line results. The more loyal customers per employee the higher turnover per employee. A high market share in strategic important markets means a stronger tendency to expect an economic strong company. This will be reflected in the productivity per employee, the customer profitability, and the financial bottom line results.

Moreover, Bottom line results affect Innovation results positively and directly. A company which has earned money on the bottom line will have the opportunity to invest in new and successful products and services, and thereby ensure further growth and business results in the future. Many studies have previously documented that, on average, up to 50% of company sales are derived from new products launched in the previous five years (Page, 1991; Cooper, 1993). Cooper (1993; 2001) refers to a study, which shows that profits from new products will account for almost half of the bottom line of companies.

Cooper (1990) has found that the strongest predictor of investment value is degree of innovativeness of the company, and in the chemical industry product innovation is not just important to ensure competition, but it is also important in financial markets in fixing the value of the company as a long-term investment.

Cooper and Kleinschmidt (1991) have also studied the relationship between innovativeness and return on investment, and the results are clear: On average, highly innovative products do very well.

In Cooper *et al.*'s (2004) most recent benchmarking study, the authors find that the share of sales revenue derived from three-year new products are about 28% of sales. For top 20% of the business units the share is 38%, and for these top 20% of businesses come 42% of profits from new products. Moreover, the study shows that the success ratio in average is 60% for all business units which are examined, but significant differences exist between top 20% businesses and bottom 20% in regards to the success rate. Top 20% businesses have over twice the success rate of the bottom 20% (80% versus 38%). And the bottom 20% has more than three times the failure rate of the top 20%.

3. Methodology and Data

The conceptual model in Figure 1 is specified as a structural equation model with nine latent variables, each measured by a set of indicators, observed by survey questions. The questions used to measure the four latent leadership variables are based on a selection of the Denison Leadership Development Survey questions, as well as a few other leadership measures found in literature studies. The different results measures were developed based on literature studies in general, specific recommendations in the EFQM Excellence Model for the measurement of the results criteria, together with our experiences from employee and customer satisfaction and loyalty measurement. All questions are designed in a generic way, meaning they were formulated in general terms, allowing them to be used across companies and industries. Hereby the estimated results of the model can be compared across companies and industries, and this gives the possibility to use the results as benchmarks.

A questionnaire was designed consisting of 68 questions capturing leadership, 36 questions capturing the five result variables and a few background questions. Respondents evaluated all questions on a 7-point scale. Most of the questions were formulated as statements, to which the respondent was asked to rate her/his level of agreement (from 'strongly disagree' to 'strongly agree' or from 'decreased significantly' to 'increased significantly').

To validate the Return on Leadership Model, a survey was conducted during December 2004. The data included 379 interviews with managers from medium-sized and large companies in Denmark. Approximately 1/3 of the respondents were top managers and about 2/3 medium-level managers. The respondents expressed perceptions of leadership quality in their company and perceptions of the five results areas.

We assume that leadership comprises a set of behaviours that can actually be observed, measured and developed. We also assume that employee and customer results are well-known, and that managers have a reasonable understanding of the company's key performance results. These assumptions are critical for the model results and applications, but often seen applied in practice with good and reliable results (Dess and Robinson, 1984; Huber and Power, 1985; Ambler and Kokkinaki, 1997).

Based on the data collected, the model in Figure 1 can be estimated by using a partial least squares (PLS) method (Fornell and Cha, 1994; Chin, 1998). PLS estimates the inner coefficients (impacts), which correspond to the relationships between the latent variables, and the outer coefficients (weights), which correspond to the relationships between the latent variables and the set of indicators. Based on the outer coefficients a performance index for each of the nine latent variables can be estimated as a weighted aggregate of the observed indicators.

4. Initial Data Analyses

Several analyses have been carried out to assess the included items and provide methodological validation of the latent variables in the Return on Leadership Model.

Analyses of internal consistency reliability were carried out. Cronbach's alpha was first calculated for the items of each latent variable. All items contributed significantly to the reliability. Cronbach's alpha ranged from 0.84-0.97, leaving us with an average Cronbach's alpha for all nine variables as high as 0.92. All values are clearly higher than the generally recommended lower limit of 0.70 for Cronbach's alpha (Hair *et al.*, 1998; Robinson *et al.*, 1991), indicating that all the items in each latent variable form a single, strongly cohesive and conceptual construct.

Furthermore, exploratory factor analyses were conducted on the five latent result variables to examine whether the items produced the proposed factors and whether the individual items were loaded on their appropriate factors as hypothesized. A principal factor analysis with varimax rotation technique was conducted on all items, and the results supported the proposed five-factor solution.

Finally, confirmatory factor analyses were conducted to assess the items of the latent variables more rigorously, based on the correlation matrix of the items. Specifically, the confirmatory factor analysis was used to detect the hypothesised uni-dimensionality of each construct, which the results supported.

These initial results provided evidence of reliability and construct validity.

5. Estimation of the Model

Figure 2 shows the estimated Return on Leadership Model, based on the 379 interviews with top and medium-level managers. Performance indexes for each latent variable are shown inside the circles, and impact scores between the latent variables are shown by arrows.

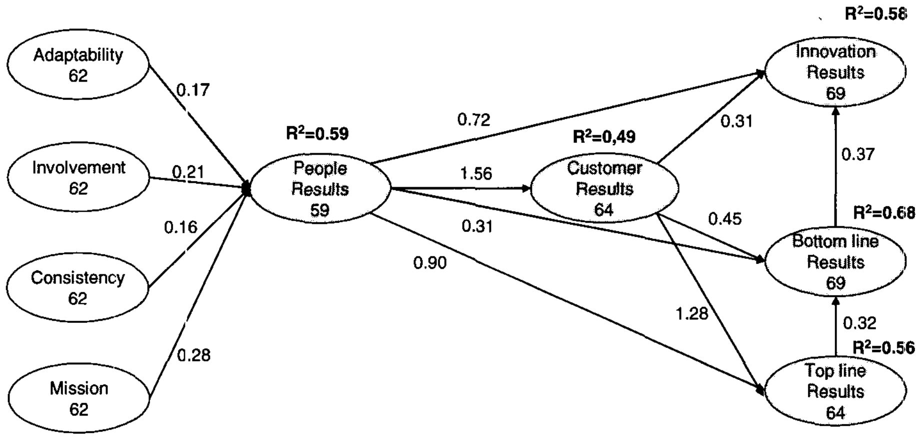

Figure 2. The estimated Return on Leadership Model

A performance index for a latent variable is estimated by a weighted average of scores from the corresponding indicators (questions), transformed from the original 7-point scale to a 0- to 100-point (poor-to-excellent) scale. E.g., Adaptability has an estimated performance index of 62 as shown in Figure 2.

An impact score represents the effect of a change in the performance index of 1 point in a latent variable. E.g., a 1-point increase in the performance index for Adaptability directly results in a 0.17 increase in People results' index as shown in Figure 2.

All the relationships between the latent variables shown in Figure 1 were tested, and all were significant.

By estimating the model in Figure 2, we have achieved a high level of explanatory power for the Bottom line results. The model is able to explain 68% of what drives Bottom line results ($R^2 = 0.68$). The obtained level of explanatory power for both Top line and Innovation results are relatively smaller, $R^2 = 0.56$ and $R^2 = 0.58$ respectively, but yet at a reasonable level. The findings thus indicate good support for the developed model.

For Customer results $R^2 = 0.49$, which is lower than the above mentioned levels of explanatory power. In the pan European customer satisfaction index studies (ECSI/EPSI Rating) it is required that R^2 of customer satisfaction must be at least 0.65 (EPSI Rating, 2003, p. 21). Our experiences from the Danish ECSI pilot project (Martensen *et al.*, 2000; Grønholdt *et al.*, 2000) is that when it comes to customer loyalty, the explanatory power is significantly less; on average, R^2 was 0.47 for the 30 measured Danish companies. In the present study the latent variable Customer results, among other things, is composed of both satisfaction and loyalty. In this light, and since People results is the only explanatory variable, a R^2 of 0.49 seems not to be too bad. If the model and its measure instrument should be used in the future, it is worth to consider whether there are other and more useful ways of measuring this variable.

6. Model Results and Discussion

The estimated model in Figure 2 shows that the proposed hypotheses are confirmed:

- Leadership → Employee results → Customer results → Key performance results. Thus we have confirmed both the employee-customer-profit chain, and the extended version: Leadership-employee-customer-profit chain.
- All four leadership traits have a positive effect on Employee results, and Leadership can be viewed as the basis for a company's business results, which is precisely the starting point in the EFQM Excellence Model.
- People results have the greatest impact on Customer results (1.56) - actually the largest direct impact in the entire model.
- People results have a stronger direct impact on Top line results (0.90) than on the Bottom line results (0.31).

Moreover, it is clear from Figure 2 that all leadership traits reach an index of 62 - thus no leadership traits perform better or worse than other leadership traits as we study all companies and all industries. With leadership indexes of 62, there is room for improvement.

Everything points to the fact that success in one leadership area means success in the other three areas as well. This is also supported by the high correlation coefficients (0.83-0.88) between each pair of the four leadership traits. Of course this conclusion can be revised if we split the sample into groups regarding company characteristics (e.g., business sector and size).

Top line results are the key performance results with the lowest score (index 64), whereas both Bottom line and Innovation results obtain indexes of 69; this is actually the highest score in the model. It is interesting to notice that in spite of the fact that the leaders perceive their leadership accomplishments to an index of 62 and Employee results to index 59, they believe that the company both in the short and the long term perform well. The reason is that the index levels for Bottom line and Innovation results are at least seven index points higher than the indexes for the leadership traits and People results.

Mission is the most important of the four leadership traits, since it has the greatest impact on Employee results. Denison's three leadership skills of Mission are: 'Defines strategic direction and intent', 'Defines goals and objectives', and 'Creates shared visions'. That Mission is the most important leadership trait is in harmony with a thorough literature review on leadership where Kanji and Moura E Sé (2001) identify the critical success factors for leadership excellence, among others, as strong and shared organizational values, mission, vision, and strategy.

We can question why each of the four leadership traits do not have higher impacts on Employee results than 0.16-0.28. These are the four lowest direct impacts in the model – much lower than all other impacts in the model. On the other hand, the four leadership traits forms leadership in total, and therefore the final effect on Employee results is 0.17+0.21+0.16+0.28 = 0.82. Viewed like this, leadership has the fourth largest direct effect in the model.

Customer results have the largest direct impact on Top line, i.e. 1.28 – actually the second- largest direct impact in the model. The relative size of Customer results' impact on the three key performance results is no matter for surprise, and appears to be intuitive reasonable: largest effect on Top line, then on Bottom line and finally on Innovation results.

Based on the impact scores in Figure 2, the total impact, i.e. the direct and indirect impacts, on the five results variables may be calculated. These numbers are shown in Table 1.

The overall pattern in Table 1 is that People results is the variable which obtain the highest total impact score on all four results variables. So the employees are (still) sitting on the gold!

Table 1. Total impacts on the five results criteria.

	People results	**Customer result**	**Innovation results**	**Top line results**	**Bottom line results**
Adaptability	*0.173*	*0.270*	*0.333*	*0.499*	*0.333*
Involvement	*0.214*	*0.335*	*0.413*	*0.620*	*0.414*
Consistency	*0.164*	*0.257*	*0.316*	*0.475*	*0.317*
Mission	*0.280*	*0.438*	*0.539*	*0.810*	*0.541*
Leadership in total	0.831	1,300	1.601	2.404	1.605
People results	-	1.564	1.937	2.894	1.931
Customer results	-	-	0.632	1.278	0.853
Innovation results	-	-	-	-	-
Top line results	-	-	0.118	-	0.316
Bottom line results	-	-	0.373	-	-

Note: The numbers show the total impact of a one point improvement in the drivers on the five results criteria

Furthermore, leadership in total plays a very important role with an impact level systematically around 20% under the People results' level. It is interesting to see that Mission is the one of the four leadership traits, which contributes the most to all five results variables. The study shows that to obtain return on leadership it is imperative to have leaders, who can create a vision for what the organization can become, develop a business strategy, link the pieces together by formulating a blueprint, and communicate this vision to everybody in the organization in an inspiring and motivating way. All employees must understand the direction they are heading at, and they must be committed to this direction (Thornberry, 1997). That is how the individual employee can contribute to the realisation of goals and vision. "It is not enough for leaders to be able to develop a simultaneously inspiring and realistic vision; they need as well to be credible in communicating and implementing it" (Kanji and Moria E Sà, 2001).

Employees must know the current situation in order to consider the gap between current reality and vision. If the gap is too large, people will give up in advance and thereby lose interest in fulfilling the vision. Goals, even though ambitious, should be attainable to be motivational (Dubrin, 1998, p. 249). The best result will be achieved if the motivation for change comes from people themselves - intrinsic motivation for fulfilling the vision.

These points of view correspond well to Senge's (1996) perception, who states that "shared visions emerge from personal visions", and that "intrinsic and extrinsic visions need to coexist".

According to Tushman and Nadler (1996), leaders' normally first work actively on envisioning or articulating a credible yet exciting vision of the future. Second, they personally work on energising the organization by demonstrating their own excitement, optimism and enthusiasm. Third, they put effort into enabling required behaviours by providing resources, rewarding desired behaviours, building supportive organizational structures and processes, and by building an effective senior team.

According to the latent variable Mission it is important to have clearly agreed upon goals, a common and fully understanding of the objectives, the current situation and the steps needed to achieve these improvements. Leaders must therefore have a general overview of the business programme - i.e. in which direction will the strategy lead the company. What are the long-range implications of the developed vision, blueprint and strategy? Can the short-term challenges be solved satisfactorily if the long-term goals are to be pursued? Leaders must clarify what roles they expect the business programme to fulfil and enable progress towards them to be measured. What are the expectations of business programme beyond increasing revenues and profits? Does it differentiate the company from its competitors? Is it relevant to all stakeholders? Is it exiting and inspiring? Leaders must use this overview when they guide their employees in the right direction.

Further more leaders must outline tasks, expected outcome, timing and responsibility in the business blueprint. The expected success criteria could for instance be specified in clear guidelines, minimum standards and performance benchmarks, that define a successful business programme. Why is it so important to sharpen and clarify the leaders' expectations to a business programme? Because clear expectations are much easier to communicate to everybody throughout an organization, than vague or no expectations. Clear expectations will also improve consistency of effort. "Best efforts, team members changing this way and that way without guidance of principles and expectations to performance, can do a lot of damage. Team members doing their best, but not knowing what to do, will often result in chaos" (Deming, 2000).

7. Leadership in Top and Bottom Companies

Prabhu and Robson (2000a; b) found in their survey, that "world-class organisations and less successful companies were clearly different in terms of leadership practices (such as the development of a service culture, customer orientation, establishment of human resources strategies, innovation and existence of a quality mindset)". Let us see if this is also the case in our study. For that purpose we can study how the participating companies, which either perform extremely well in one of the three key performance results (top 10% companies) or extremely poor (bottom 10% companies), score on Denison's four leadership traits. The results are shown in Figure 3 for the companies which perform best and worst on the Bottom line. Similar figures are made for the companies which perform best and worst on the Top line and the Innovation results; however, as the same pattern occurs, we have decided only to bring the results for the Bottom line.

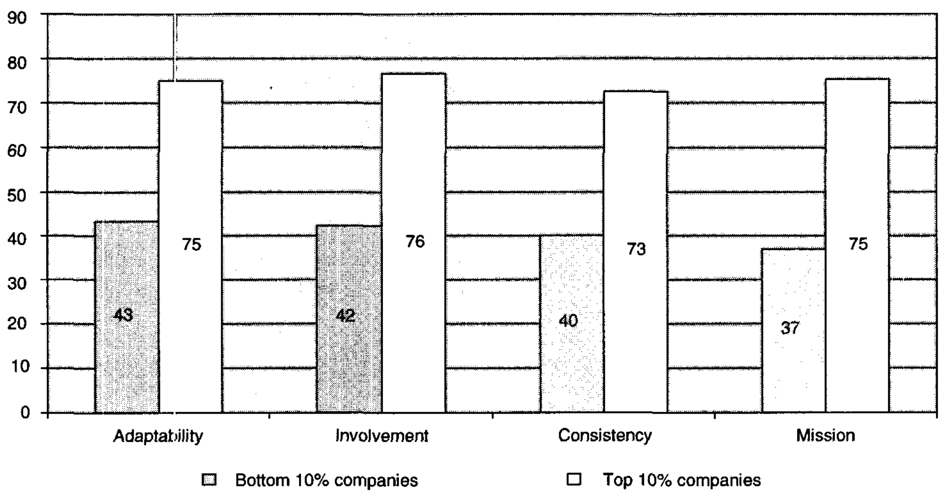

Figure 3. The leadership trait's indexes for top 10% and bottom 10% companieson Bottom line results

Figure 3 clearly confirms that top 10% companies differentiate significantly from bottom 10% companies with regard to how well they score on Denison's four leadership traits - top 10% companies score almost twice as good, and this is the case for all four traits. The differences between the two indexes within each of the four leadership traits - and within each of the underlying 12 leadership skills - are statistically strongly significant (all $t > 5.3$, $df = 72$, $p < 0.0001$). The difference between the best and worst performing companies is most obvious for Mission, with a total of 38 % points. The best companies do not perform better on this trait compared to the other three traits - it is the bottom 10% companies which perform particularly poor here. When this result is compared to Table 1, we can conclude, that if the lowest performing companies want to improve their performance, they need to aim at Mission, as this leadership trait has the largest effect on all five results criteria, and at the same time this is the leadership trait where they perform worst today.

Altogether we conclude that a company which aims to be among the 10% best performing companies in regards to Bottom line results need to have an index of approximately 75 or more on all four leadership traits.

If we conduct further analyses based on the 12 leadership skills and practices, it is clear that the difference between the best and worst performing companies is, not surprisingly, within all Mission's three leadership skills: 'Defines strategic direction and intent', 'Defines goals and objectives', and 'Creates shared vision'; the differences are respectively 38% points, 40% points and 39% points. But the differences are also significant for 'Defines core values' (40% points) reflecting the trait Consistency, and 'Develops organizational capability' (35% points) reflecting the trait Involvement.

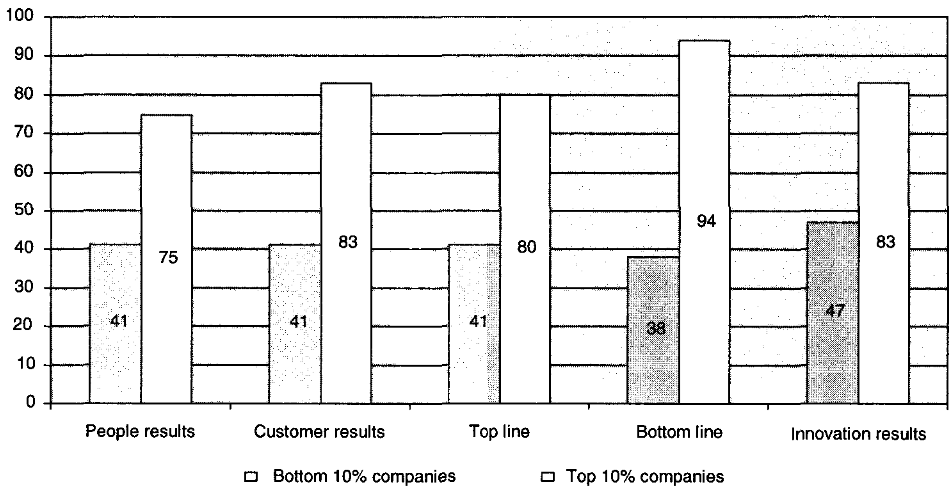

Figure 4. The results criteria's indexes for top 10% and bottom 10% companies on Bottom line results

Furthermore, it is interesting to study how the top 10% and bottom 10% companies score on the three key performance results. In Figure 4, we have compared the indexes for the five results criteria for the 10% best and 10% worst performing companies on Bottom line.

Figure 4 shows some very interesting results. The gaps between top and bottom companies are also strongly significant here. The top 10% companies score 147% better on the Bottom line than the bottom 10% companies; at the same time they score 95% better in Top line results, 77% better in Innovation results, 83% better in People results and 102% better in Customer results. In average for the three key performance results, it appears that top 10% companies outperform the bottom 10% companies by 106%. Such significant differences are also found if we go into details with the underlying indicators.

Thus, we conclude that the best companies score twice as good as the worst performing companies. To be among the top 10% companies requires excellent leadership and high scores on *all* four of Denison's leadership traits. Said differently: coherent leadership gives a double return!

8. Conclusions and Direction for Future Research

In this paper a Return on Leadership Model is developed, linking leadership to key performance results. The model is formulated as a structural equation model with latent variables, and it is validated on the basis of a survey among medium-sized and large companies in Denmark. The estimation of the model shows that the model structure provides a good explanation of key performance results and our validation further provides support for the developed model and the associated measurement instrument.

Within the frame of this model, the relationships between leadership, People results, Customer results and three key performance results: Top line results, Bottom line results and Innovation results is examined. Leadership is operationalized by Denison's four leadership traits: Adaptability, Involvement, Consistency and Mission. The main conclusions are:

- Leadership has documented effect on the bottom line; hence we find clear empirical evidence for the causal chain: Leadership-employees-customers-business results.
- The quality of leadership can be measured in a reliable and valid way by using Denison's four leadership traits.
- The quality of leadership has a significant effect on People results, Customer results and key performance results: Top line, Bottom line and Innovation results.
- All four leadership traits: Adaptability, Involvement, Consistency and Mission have a positive effect on all results criteria.
- Mission is the most important leadership trait for all results criteria. The Mission

(vision, goals and strategic direction) must be in place to create results. A clear vision, defined goals and a clear sense of direction means innovation and good financial results.

- The tendency is obvious; if a company scores well on one specific leadership trait, it scores well on the other three leadership traits too.
- The 10% best performing companies differentiate significantly from the 10% worst performing companies with regard to how well they score on the four leadership traits.
- Coherent leadership is important for the creation of key performance results, both short-term (in the form of Top line and Bottom line results) and long-term (in the form of Innovation results).

The results of the model show that there is no significant difference between the index values for the four leadership traits. However, our analysis is based on the entire sample of companies, i.e. the findings concern an 'average' company, and this may influence our conclusions. Our hypothesis is that leadership is practised differently depending on company characteristics (e.g., business sector and size). This can be studied by conducting separate analyses of relevant groups of the sample, for instance, manufacturing, service and trade companies, or large and small companies. Some interesting differences may appear in the groups' performance on the four leadership traits, and thus uncover which leadership traits are especially effective for key performance results in the various groups of companies. This could be a relevant direction for further research.

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