

# The search for excellence in Construction industry

## A Study on the Factors of Regional Competitiveness in the Danish construction industry

Kristian Ditlev Bohnstedt  
Jesper Kranker Larsen

*Department of Mechanical and Manufacturing Engineering,  
Construction Management, Aalborg University, Denmark*

### Abstract

**Purpose** - With the oppressive financial crisis it's particularly urgent for a firm to consider options for increasing its competitiveness in a substantial way that help a business navigate safely through the crisis. This paper aims to examine whether companies abilities to turn their focus on innovative strategies will yield value-creating assets for themselves and their customers.

**Design/methodology/approach** - The studies first section consists of the following analysis groups; literature review, questionnaire-survey, analysis of benchmark results and economical analysis. Furthermore through a comparative analysis based on the detected contexts i.e. between economy and quality, it was possible to explain how these factors are linked with the use of innovative strategies within the company. A final verification where made using a qualitative empirical study performed on selected cases in the best performing segment, determine underlying elements and factors in the focus areas of the firms.

**Findings** - Innovation has a tendon positive effect on economic stability and customer satisfaction. Especially for companies with a special focus on Business Environment, Marketing & Advertising, Employees, Applied Technologies, Work methods and Sources of information. The key words that characterize the best performing companies in the north of Jutland are: superior service, always the best quality, the perfect employee, shared values and a strong culture.

**Research limitations/implications** - The authors carried out an in-depth review of the literature that reveals that few studies either theoretically or empirically address this question. They begin with the idea that organizational innovation is the key to solve the absence of economic stability, productivity, efficiency and competitiveness. Not all organizations have all the knowledge they need to carry out their innovative strategies.

**Originality/value** - In order to compete in a declining market the role of innovation is an essential element. Creating a core competence in which survival becomes a pushover is eminent. The authors consider how the degree of focus on innovation in specific strategic areas positively influences the ability to create profits, customer value, productivity growth and long-term economic stability.

**Keywords** Business Management, Competiveness, Innovation, Strategy

**Paper type** Draft

### 1 Introduction

It is argued that the construction industry in lack of innovation can be characterized by being too conservative and tradition-bound, why this therefore becomes a hindrance to the prospect of success. Due to the oppressive financial crisis it is therefore particularly relevant to consider the possibilities of increasing businesses competitive advantage where it is necessary with innovative thinking to break with tradition. Uninhibited innovation is not the path to success, the right innovative approaches carefully selected. This underlines the relevance and importance of investigating the issue further to find out which innovative approaches have the greatest effect, and thus what the best do better. The papers subject is competitive advantage in the construction industry. The subject is inspired by

previous projects, which mainly had a focus on companies' particular ability to create a good business both internally and externally by altering strategic processes, which repeatedly led to the question of whether the best companies have something special in common? The Danish construction industry has for years been criticized for poor productivity and ineffective efficiency improvements compared to other Industries and European countries (Byggeriets Evaluerings Center 2010a p.5-7), even though many initiatives have been introduced to improve the situation sufficient results have not yet been made (Ebst 2010; Bertelsen 2004 p.46-69). These considerations led to formulation of the main problem: What makes the best better?

## 2 Conceptual Background

The following chapter will form the theoretical basis for conducting the study, which is based on previous studies. It will also explain how the concept of innovation in the context of this report is to be understood and what is meant with the word "best", this is done by reviewing relevant literature on the subject.

### 2.1 Definitions

Innovation is defined by Eurostat and the OECD as: "...the implementation of a new or significantly improved product (goods or service), or process, a new marketing method, or a new organizational method in business practices, workplace organization or external relations." (Oslo Manual 2005 p.46). The broad definition opens more possibilities, but innovation is categorized as implementation of one or more types of innovation such as product and process innovation. The minimum requirement for innovation is that the product, process, marketing, or organizational method must be new, or at least significantly improved the company, whether it is adopted or newly developed by the company (OSLO Manual 2005 p.46-48). Eurostat and the OECD has further divided the process of innovation in four fields of product innovation (goods or service), process innovation (production or logistics management), marketing innovations (packaging, promotion techniques, or pricing) and organizational innovation (business processes, knowledge systems) (OSLO Manual 2005 p.49-53).

Core competence is defined as a unique set of linked skills, activities and resources that simultaneously make a competitive advantage, customer value, differentiate the company from its competitors, and potentially can be extended and developed (John-son et al. 2011 p. 89; Prahalad et al. 1990 p. 7). The ability to innovate and create a core competence is a core competence, whether core competency is innovation depends on the definition of innovation, according to Eurostat and OECD a core competence, is to be considered innovative, involves a new or significantly improved production or delivery method (OSLO Manual 2005 p.46). The conjunction is the same if one core skills are an organizational, marketing or product-related (Hall, 1992 p. 403-406).

### 2.2 Previous studies

The past decade there have been two major international studies on the subject of construction firms' competitiveness and innovation. The first article is the result of 3 year collaboration between the Science, Innovation and Electronic Information Division, Statistics Canada, and the Institute for Research in Construction, National Research Council of Canada. The purpose of the study was to create an understanding and assessment of innovation, technologies and processes in the Canadian construction (Anderson et al. 2001). The project team dealt with the hypothesis that the ability to adopt and sort innovative strategies is the key element in developing new technological developments. To answer the theory they conducted a questionnaire survey. Overall, the report found that there is a relationship between size of the company and its involvement in using innovative technologies and processes (Anderson et al. 2001).

The second article is based on a survey conducted in the Australian construction industry by Project Management, Queensland University of Technology. The purpose for the study was to determine whether the construction business strategies where as described in the literature and to examine which strategies are the most source of competitive advantage (Manley et al. 2009). The study group asked a sample of 377 respondents on the subject of 23 focus areas spread over 5 main strategies which included the following themes; employees, marketing, technology, research and development, relationships with competitors (Manley et al. 2009). The survey data from 377 respondents was used to divide the sample into two categories; more innovative and less innovative companies. This helped the study group to identify strategies where innovative companies are doing better. Given these described parameters it was found that innovative firms have more focus on 6 of the 23 favored strategies than less innovative companies have. The areas on which the most innovative companies had the largest focus on were; research & development, create and maintain business alliances, ensure a regular experience system which is integrated, using partnering, use best practices, and focus on recruitment new graduates (Manley et al. 2009).

## 3 Research methodology

In the methodological considerations a technical/social science methodologies approach where chosen. The first section consists of the following analysis groups; literature review, questionnaire-survey, analysis of benchmark results and economic analysis. Furthermore through a comparative analysis based on the detected correlations i.e. between economy and quality, it was possible to explain how these factors are linked with the use of innovative strategies within the company. A final verification where made using a qualitative empirical study performed on selected cases in the best performing segment, determine underlying elements and factors in companies focus areas. In order to illustrate the relations between the selected methods that are proposed in this research, we represent them with a graphic that clearly shows the relations between the different analyses, as shown in *Figure 1*. The different parts in *Figure 1* will in the following be explained in different paragraphs to gain an overview.

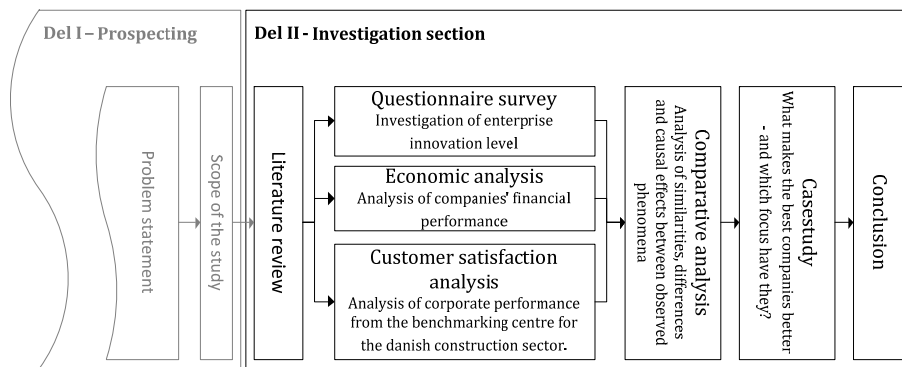


Figure 1 - Illustration of the methodology and elements in the analysis.

### 3.1 Literature review

Do we recognize the best companies when we see them? The literature review is the first part of the comprehensive study set up to investigate which key focus areas that are the possible explanations to what makes the best companies better than others. With the word best it is meant the ability to create customer value, quality, workplace safety and delivery on time but equally important is it that the companies has the ability to create economic stability and productivity for the company itself. The literature review is therefore selected as a tool to help identify causal key areas and to assess the analytical results. It should be understood in the sense that it will reinforce that study results if there are found similarities between the results obtained by the literature review and the results found further on in this study. The review is based on two bestselling books the first is Build to last (1994) by C. Collins and JI Porras based on some of America's most successful businesses. The second book is the international best seller and best-selling business book In Search of Excellence (1982) by T. Peters and R. Waterman. These books share some similarities i.e. that all the companies they treat one way or another differentiates itself from others thus creating a competitive advantage.

### 3.2 Questionnaire survey

A quantitative research where carried out for which a questionnaire where designed. The structured questionnaire was sent by electronic mail due to the wide geographical dispersal of our sample firms. We attempted to make the questionnaire as simple and clear as possible. In order to carry out our research, it was necessary to choose a sample of firms that have been involved in at least one evaluation case. We used the The Benchmark Centre for the Danish Construction Sector's database, in which we found 42 firms distributed throughout North Jutland that complied with the characteristics required by our study. From the total of firms from the database, we could not make contact to 2 due incorrect/or no contact information or the fact that the firm had disappeared, and a total of 20 firms that, despite forming a part of the base consulted, declared that they did not fit the profile of the study as defined in the covering letter sent with the questionnaire. The total sample successfully contacted and obtained correctly completed questionnaires from came down to 20. In order to measure our variables, we created a series of measurement scales, starting with the definitions of innovation and what constitutes a god firm and approaches developed in the theoretical section, which, to be considered as such, must be reliable and valid. The reliability indicates that all the items in the scale are measuring the same latent variable, therefore the values must be strongly related to each other and be internally consistent. However, reliability of a scale does not ensure the validity of the measurement instrument as it does not ensure that it is measuring what the researcher wishes it to (Lavrakas 2008 p. 713.714). Reliability is therefore a necessary condition, but is not sufficient to ensure validity (Lavrakas 2008 p.719-720). There are different procedures for measuring the reliability of a scale, in our case, we chose to work with SPSS Statistics from IBM where we used the Cronbach alpha, as it is the most widely used indicator for this type of analysis. Cronbach alpha is described as the ratio of total variance of a scale that is attribuTable to a common source, presumably the real value of the variable that the items attempt to describe (Agresti & Finlay 2009 p.246). The value of this coefficient varies between 0 and 1 (Agresti & Finlay 2009 p.246), so that a greater value than 0.7 is admissible in experimental studies but it is generally agreed that as low as 0.6 is accepTable in exploratory type research, 0.8 is god and in applied research it is 0.9 (Nielsen & Kreiner 1998). The values of Cronbach alpha will be discussed in the Findings section.

#### 3.2.1 Questions

A focus on certain innovative processes and business strategies improves competitiveness (Manley et al. 2009 p. 765; Winch 1998 p. 271). By studying the subject of innovation, it was found that there exist two areas in which these a company can innovate, these are; external innovation as a market oriented factors and internal company strategies and characteristics. The focus in this study is the internal factors: (1)The Benchmarking Centre for the Danish Construction Sector which examines the respondents relation to their membership in The Benchmarking Centre for the Danish Construction Sector. This is to clarification whether the respondents are the best in the industry, or if there representative in the benchmarking center simply is a necessity to obtain projects. (2)Business environment and success factors which reveals companies' own view on the industry and their customers. (3)Marketing strategy which demonstrate the company's perception of maximizing competitiveness and what strategies within customer value companies consider most important. (4)Employee strategy examines the importance of employees. (5)Technological strategy were used technologies were examined, investments in R&D

and introduction of new systems. (6)Advanced technology strategies were the use of methods such as ISO / EMAS was identified. (7)Sources of information's strategy were use of information relative to other companies and suppliers was assessed. (8)Obstacles were barriers the company considers using innovative strategies.

### 3.3 Economic analysis

In order to assess the economic conditions of the firms we conducted a financial evaluation of the annual financial statements. We used financial statements Commerce and Companies Agency, all of which are based on the traditional accounting model, also known as the annual periodic model where the focus is on signifying the liquidity of the company's, the income and expenses in a given accounting period of 12 months shown. The financial analysis is used to evaluate a given company's financial performance within a limited time of 5 years. Because this analysis is limited to public accounts, it has been necessary to make individual assessments of the business in order to ensure a comparable result. Result of a financial analysis is a number of measuring points that characterize the company in a given accounting period. This will be used in the comparative analysis.

### 3.4 Customer satisfaction analysis

An examination of different firm sizes ability to meet and satisfy customer's requirements will make the basis for assessing what makes a company better in the comparative analysis. When distributing the questionnaires, we asked for permission to inspect corporate grade books character from The Benchmarking Centre. A grade book contains general information about the company, the case, customer, building type, time and performance. The summary of corporate performance is presented in four categories, deadlines, constraints, work accidents and customer satisfaction on a scale from A to E, where A is best. We will in this analysis focus on the customer's assessment of the companies. We hereby mean customer satisfaction because this tells about; satisfaction of the process, build quality, end product etc., in the form of two calculated and weighted averages. The calculations of these averages are based on the following formulas:

$$\text{Weighted avg. 1} = \frac{\text{Deadlines} + \text{Defects} + \text{Workaccidents} + (\text{Process} \cdot 2) + \text{Loyalty}}{6}$$

$$\text{Weighted avg. 2} = \frac{\text{Process} \cdot 2 + \text{loyalty}}{3}$$

### 3.5 Comparative analysis

In order to compare data groups, we use a comparative method. This method is used in scientific research, which sought to explain similarities and differences between the observed phenomena within a defined area of analysis (Bryman 2008). Here, the method will be used to investigate correlations between phenomena and context they exist in. This is done from the results of the survey, analysis of the grade books and the financial analysis. For example, on the basis of detected context i.e. in the economy and the quality we will investigate how it is reflected by the level of innovation.

### 3.6 Case study

In a need to explain the correlations found in the comparative analysis we used a case study. The goal of these case studies is to gain a knowledge and understanding. The aim is to identify those factors that are specific to the studied strategies, where we want to underline what in on strategy i.e. Business Strategy, Factors of Business Success, where we want to explain when ether it is networking or radio commercials etc. the companies use. Taking the comparative analysis in to account is expected to find correlation between a company's particular focus on specific innovative areas, and its positive economic and quality-related returns thereon, used case studies to flesh out what the company does in this focus. In the case studies we used semi-structured interview. With regard to the preparation of the questionnaire, we chose to use very open-ended questions so respondents can have their say. This promotes an open dialogue, including ensuring that the words are not placed in the mouth of the respondent (Bryman 2008). We chose not to emit questions in advance to the respondents before the interview took place. This is done to avoid biased attitudes and ensure that candid answers.

## 4 Findings and discussion

In the questionnaire survey, there were found a tendency for positive correlation between business size and its focus on innovative strategies. It was found that large firms with 50 to 199 employees overall weighted innovation strategies higher than the remaining respondents in the survey, and in most cases over the average level. It is also striking that the weighting of innovative strategies from small businesses, generally falls below the average weight of the strategies. The largest difference is found between small am medium sized companies, where the difference between medium and large companies is marginal, as shown in *Table 1*. Especially the company's competitiveness, customer value and desire to develop a unique expertise are in focus. Furthermore the segment of large companies paid a certain positive focus attracting new graduates, and students from the higher education institutions in the employee strategies. Besides attracting more graduates in their organization, the large firms also found it important to offer training to employees.

Strategy type / Company Size	Small (Index)	Medium (Index)	Large (Index)	Average (Index)
<b>Business environment and success factors</b>				
My clients needs are easy to predict	58,3	62,5	55,0	58,8
My client can easily find a substitute for my services	61,1	75,0	70,0	67,5
My competitors actions are easy to predict	41,7	58,3	50,0	48,8
My business can easily substitute among suppliers	55,6	66,7	85,0	66,3
The arrival of competitors is a constant threat	63,9	58,3	65,0	62,5
Materials and supplies quickly become obsolete	55,6	54,2	45,0	52,5
Technologies in the office are changing rapidly	55,6	58,3	60,0	57,5
Technologies on the construction or building site are changing rapidly	52,8	62,5	60,0	57,5
<b>Marketing strategy</b>				
Developing a unique expertise or a unique marked	62,5	75,0	90,0	75,0
Developing products and services which reduce client operating costs	75,0	83,3	95,0	82,9
Seeking business outside present geographical area	42,9	70,8	75,0	61,1
Increasing market share	50,0	75,0	90,0	69,4
Building and enhancing relations with current clients	75,0	91,7	90,0	84,7
Attracting new clients	71,4	87,5	95,0	83,3
Providing a broader range of services to clients	68,8	75,0	95,0	77,6
Ensuring employees are aware of business issues	71,4	70,8	90,0	76,4
<b>Employee strategy</b>				
Encouraging and rewarding employees to seek out technological improvements	68,8	87,5	85,0	78,9
Encouraging and rewarding employees to seek out organizational improvements	62,5	66,7	80,0	68,4
Providing or supporting training programs for employees	67,9	79,2	85,0	76,4
Hiring graduates from colleges or universities	29,2	58,3	75,0	52,9
Hiring experienced employees	78,1	91,7	80,0	82,9
Participating in apprenticeship programs	50,0	66,7	68,8	61,7
Using teams which bring together people with different skills	50,0	58,3	75,0	61,7
<b>Technological strategy</b>				
Using new user-freindly technologies	60,0	75,0	75,0	70,3
Investing in research and development	43,8	45,8	50,0	46,4
Protecting intellectual property	55,0	45,8	83,3	57,1
Participating in the development of industry standards and practices	60,0	62,5	81,3	66,7
<b>Advanced technology strategy</b>				
Written market analysis report to evaluate needs/opportunities	33,3	33,3	50,0	37,5
Written documentation of technological improvement in firm	0,0	16,7	40,0	15,8
Written evaluation of new ideas to develop company options	22,2	41,7	60,0	37,5
Using computerized quality systems	55,6	41,7	40,0	47,5
<b>Sources of information's strategy</b>				
Build-operate-transfer (BOT) contracts	27,8	33,3	70,0	40,0
Post-commissioning inspection or maintenance contracts	83,3	33,3	100,	72,5
Long term working arrangements with other businesses to work on joint projects	33,3	33,3	80,0	45,0

Table 1 - Pooled analysis of survey results, broken down by company size.

#### 4.1 Economic analysis

It was chosen to calculate the standard deviation of the individual businesses financial performers across the five years period, see Table 2. This is done because of large fluctuations in the companies' economic performance. Standard division is an expression of fluctuations from year to year's average. Calculating the variance and deviation there must be paid attention to an overall positive or negative development in the company's performance. By calculating the standard deviation, see Table 2, it is found that the large firm (5.4 percentage points) achieves the smallest deviation from the total average. For the remaining segments the deviations are for small (6.5 percentage points) and medium (10.8 percentage points). Despite large fluctuations in return on capital employed (ROI) the standard deviation, see Table 2. shows that large firms have greater stability in return on capital employed (ROI) (8.4 points), compared with the medium (13.7 percentage points) and small (19.6 points). The relatively stable but downward trend among the large firms seen in Table 2 where the large companies as well as the remaining segments, reduces their return on capital employed (ROI) in the critical years. By calculating the standard deviation, a decreased proliferation in return on equity between segments was found. Large firms (26.9 percentage points) achieves the highest stability, followed by medium (29.5 percentage points), and the small players (30.1 points). The observed low standard deviation of solvency ratio for large firms (6.6 points), medium (8.0 percentage points) and small (9.4 percentage points) testifies that the market is under pressure. Expectedly the

high competition in the market provides continuous smooth solvency ratio and low standard deviations. However the tendency for large companies is less deviant for the total average. Overall large companies got the lowest standard deviations in four out of six categories, see *Table 2*. It is therefore found that the larger companies outperform the rest of the segments with only a few fluctuations in the annual results.

Company	Contribution ratio (%)	Profit ratio (%)	Return on capital employed (%)	Return on equity (%)	Solvency ratio (%)	safety margin (%)
	Standard deviation (percentage point)					
Average small business	6,1	6,5	19,6	30,1	9,4	18,1
Average medium business	11,3	10,8	13,7	29,5	8,0	49,3
Average large business	5,1	5,4	8,4	26,9	6,6	31,8

*Table 2 - Standard deviation for the economic analysis. NA \* means that there has been no data available.*

#### 4.2 Customer satisfaction analysis

In the customer satisfaction analysis it was found that the largest companies with average rating (4.68 points) outperforms the remaining segments with an higher average than the medium (4.24 points) and smaller companies (4.44 points), see *Table 3*. Furthermore, it appears that the largest companies do much better in customer evaluation, see *Table 3* (weighted average 2), where large companies by 4.6 points on average scores 0.4 points above the small (4.2 points) and 0.9 points above the medium-sized businesses who receive 3.7 points. Generally the outcome of the selected companies coincides with the average of the 366 companies compiled by the Benchmark Centre for the Danish Construction Sector itself. The largest companies differentiate themselves positively in all areas except loyalty. The reason may be found in the markets for small businesses where they typically have a propensity to act in smaller communities or in collaboration with the same great primary or general contractor.

Company	Measuring points			Customer satisfaction		W. Average. 1	W. Average. 2
	Deadlines	Deficiencies	Accidents	Process	Loyalty	All, Process *2	Process *2, Loyalty
Small Aver. 4,44	5,0	3,6	5,0	4,0	4,6	4,35	4,19
Medium Aver. 4,24	5,0	3,8	4,9	3,6	3,9	4,12	3,68
Large Aver. 4,68	4,9	4,4	5,0	4,6	4,5	4,67	4,56
BEC Aver.	5	4	5	3,8	4,4	4,33	4,00

*Table 3 - Business performers from the Benchmark Centre for the Danish Construction Sector. The scale goes from 1-5, where 5 are best.*

#### 4.3 Comparative analysis

When comparing results from the customer satisfaction analysis and economical analysis, it is possible to divide all segment into two new categories; most successful companies using "strategy" and less successful companies using "strategy" which also contains a representation of the company's ability to create economical stability. This compilation can be seen in *Table 4*.

Company no.	Customer sat.	Economical std. Dev.	Re-codet data from economical anlasis	Overall assessment
M (large)	5,00	1,95	5,00	5,00
K (large)	5,00	2,12	4,78	4,89
C (small)	4,77	2,05	4,88	4,82
J (large)	4,99	2,64	4,10	4,54
I (medium)	3,30	2,28	4,57	3,94
N (large)	3,50	2,54	4,23	3,87
G (medium)	3,90	3,08	3,52	3,71
H (medium)	3,80	3,45	3,04	3,42
D (small)	4,07	3,69	2,72	3,39
L (small)	3,51	3,57	2,88	3,20
F (medium)	3,40	4,85	1,20	2,30
E (medium)	3,54	5,00	1,01	2,27
A* (small)	-	2,47	4,32	2,16
B* (small)	3,67	-	-	1,83

*Table 4 - Comparison of the results from the customer satisfaction analysis and economical analysis.*

Based on this consideration, the companies were divided into categories based on earnings in the five-year period and on customer satisfaction, where the standard deviation of their economic performing is used as a measure for assessment. It was then found that the category of most successful companies included in majority large companies with 50 to 199 employees (67%) se Table 5. It was also found probable that a special focus on certain strategies leads to success, this focus is on; Market & marketing, Technology strategy, Advanced technology, Information sources, and Construction methods as shown below in *Table 5*.

Strategy type	Percent of most successful companies using "strategy"	Difference in % points	Percent of less successful companies using "strategy"	Tendency
<b>Business environment and success factors</b>				
My clients needs are easy to predict	3,17	-14%	3,60	↓
My client can't easily find a substitute for my services	4,17	14%	3,60	↑
My competitors actions are easy to predict	3,00	-7%	3,20	⇒
My business can easily substitute among suppliers	4,17	9%	3,80	⇒
The arrival of competitors is a constant threat	3,33	-2%	3,40	⇒
Materials and supplies quickly become obsolete	3,17	-7%	3,40	⇒
Technologies in the office are changing rapidly	3,33	-8%	3,60	⇒
Technologies on the construction or building site are changing rapidly	3,50	-3%	3,60	⇒
<b>Marketing strategy</b>				
Developing a unique expertise or a unique marked	4,40	36%	2,80	↑
Developing products and services which reduce client operating costs	4,67	10%	4,20	⇒
Seeking business outside present geographical area	3,83	22%	3,00	↑
Increasing market share	4,60	35%	3,00	↑
Building and enhancing relations with current clients	4,83	25%	3,60	↑
Attracting new clients	4,67	23%	3,60	↑
Providing a broader range of services to clients	4,60	13%	4,00	↑
Ensuring employees are aware of business issues	4,50	24%	3,40	↑
<b>Employee strategy</b>				
Encouraging and rewarding employees to seek out technological improvements	4,67	9%	4,25	⇒
Encouraging and rewarding employees to seek out organizational improvements	4,17	10%	3,75	⇒
Providing or supporting training programs for	4,33	13	3,75	↑
Hiring graduates from colleges or universities	4,00	19	3,25	↑
Hiring experienced employees	4,17	-	4,75	↓
Participating in apprenticeship programs	3,60	3	3,50	⇒
Using teams which bring together people with	3,67	5	3,50	⇒
<b>Technological strategy</b>				
Using new user-freindly technologies	4,17	-2%	4,25	⇒
Investing in research and development	3,00	8%	2,75	⇒
Protecting intellectual property	3,50	14%	3,00	↑
Participating in the development of industry standards and practices	4,25	24%	3,25	↑
<b>Advanced technology strategy</b>				
Written market analysis report to evaluate needs/opportunities	0,50	60 %	0,20	↑
Written documentation of technological	0,33	-	-	
Written evaluation of new ideas to develop company	0,50	60	0,2	↑
Using computerized quality systems	0,50	60	0,2	↑
<b>Sources of information's strategy</b>				
Build-operate-transfer (BOT) contracts	0,33	39%	0,20	↑
Post-commissioning inspection or maintenance	0,83	52%	0,40	↑
Long term working arrangements with other businesses to work on joint projects	0,50	60%	0,20	↑
<b>Business types</b>				
Proportion of large-sized businesses	67%	75	17	
Proportion of middle-sized businesses	17%	-	57	
Proportion of small-sized businesses	17%	-	29	

Table 5 - Pooled analysis results for comparative analysis, by strategies.

#### **4.4 Case study**

In order to clarify the content of focus areas (Market & Marketing, People, Technology and Working Strategies) a case study was performed of the survey's best performing companies. In the case study it became obvious that businesses needed customers, but many forget about their customers. These successful companies have an obsession about the customer, usually pertaining to quality, reliability, or service. Excellent product quality and reliability is their way of making a satisfied customer. They believe that great service will keep the customer coming back. They make a serious effort to shape values. They are of the opinion that right values, clearly expressed, will help define the organization. They feel that it is difficult to teach values through written policy statements. Stories, myths, and legends will go a long way to transmit the organizations value system. The best performing companies in the study developed a philosophy and lives the philosophy that involves everyone within the organization with the overall success of the company will become better for it. They don't believe in mindlessly holding on to yesterday, diversification is a good thing. But these companies organizations that branch out remaining somewhat close to their primary skill will be more successful.

#### **5 Conclusion**

The initial conceptual and literature review showed what constitutes a good company and what innovative focus areas that have a particularly positive impact on competitiveness. It was also found that great companies were characterized by their ability to create stability independent of changing leadership and business cycles. The following specific focus areas were found to be the ones which give the most competitive advantage; Business Environment & Success Factors, Market & Marketing Officer, Applied Technologies, Methods, Sources of information and Barriers.

Based on this information and drawn experience in international reports we conducted a survey. Results of the survey showed trends for large companies to generally have more focus on innovation strategies; Market & Marketing, Employee-, Technological and Working Strategies. It was also reflected that the size of a firm and level of innovation has a positive linear relationship. There was also a tendency between customer satisfaction and economic stability, therefore tendency showing that financially stable companies provide stable customer satisfaction and vice versa. It has become clear that companies with a focus on the aforementioned innovative strategies also are the companies with the strongest economic stability and customer satisfaction. It is hereby argued that the innovations have a potentiating effect on the economy and customer satisfaction, whether one comes before the second or vice versa, is not unique.

In order to clarify the content of focus areas (Market & Marketing, People, Technology and Working Strategies) a case study was performed of the survey's best performing companies. It was here found that the companies' leaders lead the organization based on ideology and values. Corporate leaders indoctrinate employees to appreciate the customer, and ensure through its presence the right culture. It was also found that companies have a special focus on only the "right" employees, employees that are willing to be integrated into the culture and share the company's value. Companies offer freedom with responsibility, because the leader believes that the employees will do the right if they are given more freedom in the organization. The key words that characterize the best performing companies in the survey are: superior service, always the best quality, the perfect employee, shared values and a strong culture.

#### **6 Further Research**

Today there are various institutes of the country's universities who research on the topics as treated in the paper. As this paper only based on data collected from North Jutland, it would be necessary and useful to see whether the result also is national. It's also recommended to extending the study internationally by comparing the Danish construction industry with construction industry in other countries. This allows possible underlying causes for the lack of focus on innovative processes, and the too much focus on price, time and tradition, etc. to be explored. In further research of the subject, it would probably be possible to make a stronger statement about the innovative focus areas, and the argument for how innovative proceedings are related, and could be substantiated. It is recommended that teachers and researchers in construction-, and technical project management at Aalborg University takes the result in the paper, and ensures the subject and data will be developed and produced to colleagues and others researchers.



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