

# Critical Factors to Company Success in the Construction Industry

G. Arslan, and S. Kivrak

**Abstract**—Achieving success is a highly critical issue for the companies to survive in a competitive business environment. The construction industry is also an area where there is strong competition due to a large number of construction contractors. There have been many factors such as qualified employees, quality workmanship and financial management that can lead to company success in the construction industry. The aim of this study was to investigate the critical factors leading to construction company success. Within this context, a survey was carried out among 40 Turkish construction companies which are located in the Northwest region of Turkey. In this survey, top-level managers and owners of the companies were interviewed. The interviews took place over a five month period between January and May 2007. Finally, the ranking of the critical success factors has been determined by using the Simple Multi Attribute Rating Technique (SMART). Based on the results, business management, financial conditions and owner/manager characteristics were determined as the most important factors to company success.

**Keywords**—Company success, construction, organization, success factors.

## I. INTRODUCTION

**S**UCCESS has been the ultimate goal of every business activity [1]. It is highly important for the organizations to be successful in their businesses in order to survive in competitive business environments such as construction. The construction industry is changing constantly with the developments of new business methods and technologies [2]. Thus, construction companies have to adopt these applications and develop appropriate strategies to be more competitive in this industry and get success in their businesses.

There are many definitions of success. Traditionally, it is defined as the degree to which goals and expectations are met. On the other hand, one of the definitions of failure is the inability of a firm to pay its obligations when they are due [3]. In recent years, there has been an increase in the studies of critical success/failure factors especially in project management subject [4]. The traditional approach to success in the construction industry is to focus on the ability to plan and execute projects [5]. Traditionally, the success parameters for projects in this industry are cost, time and quality [6].

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However, due to the changing business environment it is crucial to focus on corporate success in order to be competitive in this environment.

Some of the researches related to success factors showed that the most important factors contributing to success are company's management systems and practices [7], [8]. Implementation of accounting systems and regular review of financial statements [9], control of job-site safety [10], and ongoing training and education [11] are some other factors contributing to construction company success addressed in the literature. In the study of Hutchings and Christofferson [12], carried out among small-volume residential construction companies in the United States, the most important factors to company success were found as quality workmanship, honesty, having good subcontractors, customer communications, reputation, having good employees, and completing projects on time, respectively. In a survey carried out among Germany's largest construction companies, the most important success factors were identified as employee development, effective risk management, innovation, partnerships with customers, and lean organizational structure [13].

As construction is a risky business and the possibility of business failure always exists, companies have to consider the parameters that can have a direct effect to their success in business. In this study, the critical factors leading to construction company success have been investigated. Within this context, a survey was carried out among 40 Turkish construction companies which are located in the North-West region of Turkey. SMART is used to determine the ranking of the critical success factors.

## II. TURKISH CONTRACTING SERVICES

The construction industry is one of the major industries in Turkey. It represents approximately 6% of Turkey's Gross National Product (GNP). Turkey started to export contracting services in the first half of the 1970s. Currently, many Turkish contractors have been operating within the international market. They have carried out \$65 billion worth of projects internationally so far [14]. The majority of them have been operating in the Russian Federation, Middle East Republics, Northern Africa and Far East regions. Turkish contractors gain the competitive advantage by rapid construction and high risk-taking ability. They are using the most advanced technologies in the market and are able to design, erect, build

and operate almost all kinds of civil and industrial projects.

Turkish contracting services can be divided into two parts as lower-quality domestic-only set of firms and the higher quality international firms. There are more than 30,000 active local firms and approximately 130 firms operating internationally. Additionally, there are about 70,000 companies that are not registered but constitute the informal construction industry and most of them carry out small and irregular projects [15].

### III. SURVEY

The aim of this research is to find out the critical factors leading to construction company success. The survey was carried out among 40 Turkish construction companies which are located in the North-West region of Turkey and operate in the local market. Construction firms registered with the Chamber of Commerce at this region were considered in the study. The majority of these firms are operating in building and housing sectors. In this survey, semi-structured interviews were carried out among top-level managers and owners of the companies. Top-level managers and owners were selected for the interviews because they are assumed to have enough knowledge about the organizational structure, culture and strategies. The 40 interviews took place over a 5 month period between January and May 2007 and each lasted approximately 1 hr.

The survey questionnaire was administered during face-to-face interviews and it consisted of 23 questions including both closed and open-ended questions. It is divided into two main sections. Section I covered general information about the companies. Section II dealt with factors leading to company success. Although survey results reflect the opinions of experts from 40 firms, it is believed that they can give an idea about the critical success factors leading to company success in the Turkish construction industry.

SMART is used to determine the ranking of the critical success factors. This technique is originally introduced by Edwards [16]. It is an extension of direct rating techniques. In SMART, ratings of alternatives are assigned directly. The decision maker is asked to rank each of the attributes, assigning the first ranked attribute to a score of 100. Then the performance values with relative weights for all attributes are determined and a utility value for each alternative is calculated. One of the limitations of this technique is that it ignores the interrelationships between parameters.

The factors considered in the study were identified based on a literature review. A total of 7 possible factors that were felt to have an effect on the construction business success of companies in Turkey were determined. These main factors are business management, financial conditions, quality of work and workmanship, sales and marketing, use of technology, market selection and owner-manager characteristics. Similarly, the sub-factors of these main factors were determined and the importance weights of them are calculated according to the responses.

### IV. SURVEY RESULTS

The respondents were asked to evaluate the importance level of the main factors. Table I shows the ranking of the factors according to their importance as perceived by the respondents. Business management, financial conditions and owner-manager characteristics were considered as the most important factors to company success. Surprisingly, technology usage was not considered as an important factor for company success. Although the majority of the respondents considered the advanced technologies as important tools, it was not seen as a highly essential parameter for company success.

TABLE I  
 ANALYSIS OF MAIN FACTORS TO COMPANY SUCCESS

| Factors                         | Score  | Weight |
|---------------------------------|--------|--------|
| Business management             | 97.50  | 0.1659 |
| Financial conditions            | 96.25  | 0.1638 |
| Owner-manager characteristics   | 92.75  | 0.1578 |
| Quality of work and workmanship | 89.25  | 0.1519 |
| Sales and marketing             | 81.00  | 0.1378 |
| Market selection                | 66.75  | 0.1135 |
| Use of technology               | 64.25  | 0.1093 |
| Total                           | 587.75 | 1.0000 |

#### A. Business Management

Based on the literature review, planning was addressed as one of the most important management practices. According to the evaluation of the sub-factors of business management, organizing and planning was also considered as the most important success factor. The results obtained in this study are quite different from the survey performed in the United States in which strategic planning was ranked only twenty-first out of seventy-eight different responses [12]. Job cost control and quality control were determined as the following important factors (Table II). However, risk management was reported to be less significant than expected.

TABLE II  
 FACTORS OF BUSINESS MANAGEMENT

| Factors                 | Score  | Weight | Importance Weight<br>(0.1659*weight) |
|-------------------------|--------|--------|--------------------------------------|
| Organizing and planning | 97.00  | 0.2411 | 0.0400                               |
| Job cost control        | 89.50  | 0.2225 | 0.0369                               |
| Quality control         | 83.00  | 0.2063 | 0.0342                               |
| Risk management         | 68.25  | 0.1697 | 0.0282                               |
| Good record keeping     | 64.50  | 0.1604 | 0.0266                               |
| Total                   | 402.25 | 1.0000 | 0.1659                               |

#### B. Financial Conditions

Availability of cash flow is highly essential for the companies in order to continue their businesses. Generally, Turkish contractors face with difficulties with cash flow due to delays in progress payments when they operate in public construction works. This condition is due to lack of funds to finance public construction works in Turkey [17]. The majority of the respondents considered control of cash flow as the most important sub-factor of financial conditions as might be expected. Capital/financial strength and country's

economical conditions were considered as the following important factors (Table III).

TABLE III  
FACTORS OF FINANCIAL CONDITIONS

| Factors                         | Score | Weight | Importance Weight<br>(0.1638*weight) |
|---------------------------------|-------|--------|--------------------------------------|
| Control of cash flow            | 97.30 | 0.1954 | 0.0320                               |
| Capital/financial strength      | 84.30 | 0.1693 | 0.0277                               |
| Country's economical conditions | 83.80 | 0.1683 | 0.0276                               |
| Profit margins                  | 82.30 | 0.1652 | 0.0271                               |
| Timely payment of bills         | 81.80 | 0.1642 | 0.0269                               |
| Low interest rates              | 68.50 | 0.1376 | 0.0225                               |
| Total                           | 498.0 | 1.0000 | 0.1638                               |

### C. Owner-Manager Characteristics

In this study, owner-manager characteristics were considered as one of the main important factors to company success. It is highly essential that owners also have some managerial experience. It is critical by dealing with their employees and motivating them [18]. Leadership was considered as the most important factor (Table IV). Communication is also an essential subject in today's business environment. Lack of communication skills can cause serious problems in coordination of works.

TABLE IV  
FACTORS OF OWNER-MANAGER CHARACTERISTICS

| Factors               | Score  | Weight | Importance Weight<br>(0.1578*weight) |
|-----------------------|--------|--------|--------------------------------------|
| Leadership            | 95.50  | 0.1750 | 0.0276                               |
| Experience            | 94.75  | 0.1736 | 0.0274                               |
| Communication skills  | 92.50  | 0.1695 | 0.0268                               |
| Honesty               | 92.25  | 0.1690 | 0.0267                               |
| Education level       | 87.75  | 0.1608 | 0.0253                               |
| Political connections | 83.00  | 0.1521 | 0.0240                               |
| Total                 | 545.75 | 1.0000 | 0.1578                               |

### D. Quality of Work and Workmanship

Based on the analysis of the sub-factors of quality of work and workmanship, the most important factors are determined as client satisfaction, use of good quality materials, and teamwork and harmony (Table V). The majority of the respondents considered client satisfaction as the most essential item. They indicated that it is highly important for winning future projects in this industry. Having good subcontractors were considered as relatively less important than the other items.

### E. Sales and Marketing

The respondents were asked to evaluate the sub-factors of sales and marketing. Based on the responses, company image, good advertisement and competitive pricing were considered as the most important factors (Table VI). As mentioned before, the use of technology was not considered as a major factor to company success. Similarly, using latest technologies, such as e-marketing, was considered less significant than might be expected.

TABLE V  
FACTORS OF QUALITY OF WORK AND WORKMANSHIP

| Factors                       | Score  | Weight | Importance Weight<br>(0.1519*weight) |
|-------------------------------|--------|--------|--------------------------------------|
| Client satisfaction           | 97.80  | 0.1551 | 0.0236                               |
| Use of good quality materials | 92.50  | 0.1468 | 0.0223                               |
| Teamwork and harmony          | 92.30  | 0.1464 | 0.0222                               |
| Completion of job on time     | 88.30  | 0.1400 | 0.0212                               |
| Qualified consultants         | 88.30  | 0.1400 | 0.0212                               |
| Qualified personnel           | 86.30  | 0.1369 | 0.0207                               |
| Good subcontractors           | 85.00  | 0.1348 | 0.0205                               |
| Total                         | 630.50 | 1.0000 | 0.1519                               |

TABLE VI  
FACTORS OF SALES AND MARKETING

| Factors             | Score  | Weight | Importance Weight<br>(0.1378*weight) |
|---------------------|--------|--------|--------------------------------------|
| Company image       | 82.80  | 0.1808 | 0.0249                               |
| Good advertisement  | 74.80  | 0.1633 | 0.0225                               |
| Competitive pricing | 70.50  | 0.1540 | 0.0212                               |
| Fair pricing        | 69.50  | 0.1518 | 0.0209                               |
| Sales offices       | 63.00  | 0.1376 | 0.0190                               |
| Innovative products | 52.00  | 0.1136 | 0.0157                               |
| E-marketing         | 45.30  | 0.0989 | 0.0136                               |
| Total               | 457.90 | 1.0000 | 0.1378                               |

### F. Market Selection

The respondents were asked to evaluate the sub-factors of market selection. Based on the responses, the most important factor was identified as doing business in markets where the company has adequate experience (Table VII). Kangari [19] stated that lack of experience in the company's line of work accounts for 18.2% of all failures. Therefore, experience is a critical issue in market entry decision and source of competitive advantage.

TABLE VII  
FACTORS OF MARKET SELECTION

| Factors                          | Score  | Weight | Importance Weight<br>(0.1135*weight) |
|----------------------------------|--------|--------|--------------------------------------|
| Company experience in the market | 76.25  | 0.3498 | 0.0397                               |
| Determine public needs           | 73.50  | 0.3372 | 0.0383                               |
| Level of competition             | 68.25  | 0.3130 | 0.0355                               |
| Total                            | 218.00 | 1.0000 | 0.1135                               |

### G. Technology Usage

Technology usage was not considered as a highly important factor for company success. Companies considered this factor as an essential element for success but not as important as the other factors such as owner-manager characteristics. The sub-factors of technology usage are listed in Table VIII.

TABLE VIII  
FACTORS OF TECHNOLOGY USAGE

| Factors                           | Score  | Weight | Importance Weight<br>(0.1093*weight) |
|-----------------------------------|--------|--------|--------------------------------------|
| Follow and adopt new technologies | 71.25  | 0.2751 | 0.0301                               |
| Qualified technical staff         | 71.00  | 0.2741 | 0.0300                               |
| Usage of software programmes      | 58.50  | 0.2259 | 0.0247                               |
| Having a web-site                 | 58.25  | 0.2249 | 0.0245                               |
| Total                             | 259.00 | 1.0000 | 0.1093                               |

## V. CONCLUSION

This study presented the survey carried out among Turkish construction companies. The critical factors leading to construction company success have been investigated through interviews among top-level managers and owners of the companies. According to the results business management, financial conditions and owner-manager characteristics were identified as the most important main factors to success.

Organizing and planning was perceived to be the most important factor contributing to company success when considering the importance weights of the factors. According to the literature review, this result might be expected since planning was addressed as one of the most important items of all the management practices. Moreover, it was interesting to note that managers/owners did not consider technology usage as a highly essential item for company success.

The findings from the study should be interpreted with caution since the research was limited with only 40 small-medium sized firms. Future researches involving managers/owners of top construction contractors can provide a comparison of the results of studies conducted in other countries.

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