

# DEMOTIVATING FACTORS FOR ARCHITECTS IN THE CONSTRUCTION INDUSTRY

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Motivation is one of the factors that influence the productivity of people. Architects play a vital role in the management of projects in the construction industry. The success of construction projects relies heavily on their active involvement and effective performance. Hence it is important to assess the impact of motivation on the performance these architects. On the other hand, architects are frequently confronted with problems that could lead them to demotivation. Demotivation is caused not simply by a lack of motivators but the existence of certain situations that cause dissatisfaction and discourage individuals from pursuing desired goals and aims. From this point of view, the present study conducted with the aim of identifying factors affecting demotivation of Turkish architects. After a review of extant literatures in construction management, and design management 69 demotivating criteria was produced and used in questionnaire survey, and data were collected from architects who are working at construction industry, especially at design firms. The questionnaires were administered to architects via e-mail, and 71 participants responded to the survey. Utilizing the particular statistical analyzes, the factors were identified for detailed analysis and discussion. From the findings of the present study, ten underlying demotivating factors have been identified for architects in Turkish construction industry. This study would help managers of design firms to develop healthy workforce through eradication of the identified demotivating factors using some of suggested solutions.

*Keywords:* De-motivation, Design firms, Construction management, Architects, Turkey.

## 1 INTRODUCTION

The construction industry is complex, dynamic and uncertain, and requires highly motivated employees. The issue of employee motivation is important as it establishes a substantial foundation for high performance levels and less unproductive time. Therefore, improving productivity of the employees on a project can have a significant improvement on the project outcome (Zakari, et al., 1997; Kazaz, et al., 2008).

There is an implicit assumption that lack of motivation is the same as demotivation as conceptualized by Gorham and Christophel (1992), while other researches (Ng *et al.* 2004) argued that the two are different. Lack of motivation means lack of inner or social stimulus or impetus for an action on the part an individual (also refers to as “no motivation” or “zero motivation”). Demotivation on the other hand entails dampening of morale or spirit in carrying out a particular action. It generally causes dissatisfaction, and in actual fact, it is even worse than lack of motivation as it leads to feeling of being downcast, dispirited, depressed and despondent on the part of employee.

Motivation and de-motivation are an important aspect in heavy industries such as construction due to the project-based nature of the sector. Construction industry relies heavily on human resources who work in teams over a period of time, to deliver client needs and requirements to desired quality and within budget. During the projects, individual project team members are confronted with many problems, such as poor team interaction, low-quality workmanship, material unavailability, co-workers' incompetence and the project itself among others, which could lead to demotivation and low morale (Ng *et al.* 2004).

Studies on motivation in the construction industry have been done since the early 1970s. Nearly all of these studies have focused on the motivating factors of workers and foremen. However, there have been only a few studies focusing on the demotivation of architects and civil engineers. Although, architects play an important role in the management of construction projects, there has been only a one study, which belongs to Oyedele (2013) focusing on the demotivation of architects. The main area of interest for that study is the examination of architects' demotivation that is involved in the design phase of construction projects. The difference between our study and other one is Oyedele (2013) determined 43 demotivating factors for UK architectural practices, whereas 69 factors are defined in this study. The other difference is this study is the first and unique study, which investigates the Turkish architects' demotivation factors.

## 2 RESEARCH METHOD

After a thorough review of extant literature particularly in the knowledge areas of project management, organizational behavior and design management and practice, which are deemed important to the subject area, 69 demotivating factors, were identified. The motive for this was to deduce whether the 69 identified criteria influence architects demotivation or not.

## 3 FINDINGS

### 3.1 Participants

The sample comprised of architects who are currently employed in the construction sector. Therefore, the participants' experience (in years) is important for evaluating the significance of de-motivational matters. The distribution of the respondents' experience (in years) and working area are presented in Table 1 as crosstab.

Table 1. Demographics of survey respondents.

<i>Years of experience</i>	<i>Type of Working Area</i>			<b>Total</b>
	<i>Office</i>	<i>Site</i>	<i>Office+Site</i>	
<i>1-5 years</i>	22	3	16	41
<i>6-10 years</i>	9	0	6	15
<i>11-15 years</i>	3	0	3	6
<i>16-20 years</i>	1	0	1	2
<i>21 years and above</i>	2	1	4	7
<b>Total</b>	37	4	30	71

### 3.2 Reliability and Non-Parametric Tests

Using the SPSS (Statistical Package for Social Sciences) software tool, the overall Cronbach's alpha coefficient for this study was 0.976, demonstrating a very good reliability and internal consistency of majority of the criteria. To confirm that all the criteria are actually contributing to this internal consistency. According to Field (2005), if a criterion were not contributing to the overall reliability and therefore not a good measure of the construct, its associated Cronbach's alpha coefficient would be higher than the overall coefficient (0.976). This higher value implies that if the criterion were deleted, the overall reliability of the whole data would improve (Field 2005). Based on this rule, three criterions (DC5, DC11, DC13) were identified having a value of 0.977. It means that the criterions – “incompetence among design teams/co-workers”, “isolation by opposite gender” and “inadequate social activities out of working hours” are therefore unreliable and not a good construct in measuring architect demotivation based on the population surveyed, and were consequently dropped from the list, leaving only 66 criteria.

After establishing a statically reliable list of architects demotivating criteria, it was essential for this study to examine whether the criteria were perceived similarly or differently by the respondents based on their demographics. These include the architects' years of experience as an architect in the construction industry and the type of working area that the respondents are currently located. Since the data were not drawn from a particular probability distribution and normal distribution is not assumed, non-parametric tests of Kruskal-Wallis were used for both demographics respectively.

For the differences in perception based on years of experience and working area type, Kruskal-Wallis test was used since there are more than two samples that are independent. The null hypothesis is that there are no differences in the perception of the respondents among the groups with regards to their years of experience and working area type, respectively.

### 3.3 Demotivation Severity Index and Ranking of Architects' Demotivating Criteria

In order to measure respondents' perception on the level of severity of each demotivating criteria, a demotivation severity index formula was computed using Eq. (1) below. The equation was derived from similar formula computed by Kometa et al. (1994) and Chan and Kumaraswamy (2002).

Demotivation severity index:

$$(DS) = \left( \frac{\sum_{i=1}^N (s_i)}{NS} \right) \times 100\% \quad (1)$$

From the overall ranking, the top five demotivating criteria in descending order include: DC49 – “Inept leadership behaviors of managers (e.g. dictatorial, bullying, intimidation, etc.)”, DC6 – “Inadequate commitment among design team members”, DC8 – “Distrust and dishonesty among design team members”, DC60 – “Disrespectful

manager”, DC48 – “Poor co-ordination between manager and employee”. The three factors (DC49, DC60, DC48) are demotivating criteria arising from manager or supervisor. The next two demotivating factors belong to design team / co-workers related group.

### 3.4 Underlying Demotivating Factors – Exploratory Factor Analysis

Using exploratory factor analysis, the 66 reliable criteria (identified from the reliability analysis) were inputted to the SPSS software tool. The results indicated a ten-factor solution, which accounted for 84.18% of total variance as shown in Table 2.

Table 2. Exploratory factor analysis.

		<b>Eigen value</b>	<b>% of variance</b>	<b>Factor loadings</b>
<b>Factor 1</b>	<b>Poor tangible and intangible conditions of organization</b>	27.50	41.67	
DC31	Lack of complimentary lunch, beverages (coffee, tea, etc.) at work			0.773
DC33	Lack of on the job training activities			0.759
DC69	Long distance between work and city center			0.710
DC34	Inadequate opportunity for career development			0.682
DC68	Transportation problem- Long distances between accommodation and work			0.682
DC29	Poor working environment (overcrowded, poor lighting, noise, etc)			0.628
DC42	Organizational politics hinders performance and success			0.583
DC27	The work is unattractive and dull for me			0.577
DC30	Inadequate project resources (software, computer, etc.,)			0.552
DC32	Inadequate holiday entitlement			0.521
DC40	Lack of giving adequate information to employees about their performance at work by managers			0.509
DC41	Unequal authority and responsibility among co-workers at same position			0.455
<b>Factor 2</b>	<b>Poor interpersonal relationship</b>	4.82	7.31	
DC2	Poor co-ordination of design teams			0.820
DC7	Inadequate co-operation among design team members			0.785
DC1	Poor communication within design teams			0.768
DC6	Inadequate commitment among design team members			0.699
DC4	Unhealthy competition among co-workers			0.617
DC12	Lack of helping each other among co-workers			0.566
DC14	Team members dislike their work			0.564
DC3	Incompatibility of design team members			0.448
<b>Factor 3</b>	<b>Project induced stress</b>	3.19	6.84	
DC64	Dissatisfaction of clients			0.751
DC24	Excessive work load pressure			0.682
DC23	Unfair duty distribution among co-workers			0.679
DC38	Display of lack of interests in subordinate’s work/ideas by supervisors			0.638
DC22	Lack of employee’s winning recognition by supervisors			0.595
DC19	Unfairness distribution of promotion and bounty			0.566
DC17	Unfairness and unequal salaries and promotion among co-workers who work at same position			0.542
DC39	Inadequate freedom in day-to-day conduct of work			0.524
DC25	Working excessively long hours			0.514

Table 2. Exploratory factor analysis (Continued).

		<b>Eigen value</b>	<b>% of variance</b>	<b>Factor loadings</b>
<b>Factor 4</b>	<b>Poor managerial relationship</b>	2.59	5.93	
DC46	Co-workers cannot use initiative about work			0.696
DC37	Having inadequate authority for doing this work			0.595
DC47	Poor communication between manager and employee			0.701
DC48	Poor co-ordination between manager and employee			0.625
DC58	Lack of synergy between organizational goals and leadership behavior			0.574
DC45	Inadequate planning and control in organization			0.628
DC36	Unclear / Undefined job description			0.425
DC66	Lack of labor discipline			0.443
<b>Factor 5</b>	<b>Negative leadership behavior</b>	2.48	4.76	
DC49	Inept leadership behaviors of managers (e.g. dictatorial, bullying, intimidation, etc.)			0.696
DC50	Inadequate leadership support			0.658
DC44	Employees do not feel that they belong to that firm			0.604
DC51	The working environment is focused on negative criticism			0.534
DC52	Frequent changes of project priorities by supervisors			0.511
DC60	Disrespectful manager			0.480
<b>Factor 6</b>	<b>Organizational injustice</b>	1.99	4.01	
DC15	Inadequate social insurance rights			0.749
DC18	Lack of monetary prizes (e.g. promotion and bounty) expect from salary			0.678
DC20	Late salary and promotion payment			0.666
DC16	Inadequate salaries			0.592
DC53	Clients demand for radical and high-degree of innovation in design			0.576
DC21	Lack of rise opportunity			0.463
<b>Factor 7</b>	<b>Dysfunctional design team</b>	1.97	3.57	
DC54	Design decisions are dictated by cost and not quality factors			0.810
DC55	Unrealistic project demands from clients			0.702
DC26	Low participation in decision making			0.567
DC59	Restrictive and negative effects of legal legislations to architectural designs			0.546
DC61	High ratio of failures at work			0.433
<b>Factor 8</b>	<b>Poor organizational culture</b>	1.87	3.20	
DC67	Cultural differences among co-workers			0.740
DC65	Compulsion for attending long distance business travel			0.734
DC10	Lack of liveness among co-workers			0.709
DC62	The jobs that are given by clients are not continuous and balanced throughout the year (some months are very busy, whereas others are not)			0.586
DC63	Chaos environment at the firm			0.478
<b>Factor 9</b>	<b>Perceived career decline</b>	1.57	2.68	
DC9	Perception of lack of respect among co-workers			0.782
DC8	Distrust and dishonesty among design team members			0.674
DC28	Work assignments do not always match my skills and interests			0.522
DC35	Poor safe and healthy conditions			0.518
<b>Factor 10</b>	<b>Lack of concurrent engineering</b>	1.05	2.00	
DC56	Uncooperative behaviors of clients/other project stakeholders			0.715
DC57	Difficulty in understanding idiosyncratic and tacit needs of clients			0.682
DC43	Lack of creativity easement of co-workers			0.522
			81.97	

The KMO value and the Bartlett tests of sphericity were 0.760 (above 0.5) and 0.000 (less than 0.05) respectively, indicating that the data set is suitable for factor analysis (Pallant 2005).

#### 4 CONCLUSIONS

The focus of this study is on factors causing demotivation to Turkish architects within architectural organizations. These include factors originating from organizational behavior, project processes and design team/co-worker related activities. From the findings of this study, ten underlying demotivating factors have been identified, and include “poor tangible and intangible conditions of organization”, “poor interpersonal relationship”, “project induced stress”, “poor managerial relationship”, “negative leadership behavior”, “organizational injustice”, “dysfunctional design team”, “poor organizational culture”, “perceived career decline”, “lack of concurrent engineering”.

Of importance to this subject area is the comparison of the demotivating factors identified in this study with motivational factors identified in previous studies; specifically, the questions whether lack of motivation means presence of demotivation or vice versa.

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