Employees' Empowerment and Its Effect on Team Effectiveness: Field Study on Jordanian Construction Firms

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ABSTRACT

This study examines the effect of employees' empowerment on team effectiveness in the Jordanian Construction firms. Empowerment measures included four dimensions/ subscales: Impact, self-determination (choice), competence, and meaning. Team effectiveness measure included also four subscales/dimensions: performance, innovation, communication, and use of resources. Researchers adopted the aforementioned measures and their subscales after intensive review of available literature on the subject. A questionnaire was developed based on previous researches, and administered with a convenience sample of (182) employees selected from (20) firms. A number of statistical indicators and tests were used such as, descriptive statistics, correlation, and regression tests. Results showed that employees in Jordanian construction firms perceived a good level of empowerment, and teams attained relatively good levels of effectiveness, as there was noticeable impact of empowerment on team effectiveness. Finally, the study provided a number of suggestions aiming at enhancing empowerment and improving team effectiveness.

Keywords: Empowerment, Team Effectiveness, Construction Firms, Jordan.

1. INTRODUCTION

During the last years, Jordanian private businesses, including construction industry, have witnessed so many challenges, changes and demands, such as globalization, fierce competition, world free trade treaties, rising expectations of internal and external customers, … etc. Such internal and external pressures and change forces have made it very critical and necessary for business organizations to become more effective, efficient, responsive and innovative. Thus, managers have become more interested in applying current management and organizational trends and themes such as TQM, process reengineering, restructuring, empowerment, learning organization, etc. Recently, empowerment has gained more attention and popularity, at both governmental and

private levels, and among academicians and researchers. Yet, to the best knowledge of the writers of this paper, no study has been carried out on the subject in the Jordanian setting.

Study Importance

The importance and value of this study stem from several reasons. First, people are considered the most vital and valuable resource for any organization, and that work groups/teams play a critical and key role in organizational success and effectiveness. Second, construction firms are relying more and more on team-based structures and designs. Also, empirical research on empowerment and its effect on team and organizational effectiveness is still very scarce, especially in construction industry. Third, to the best of the researchers' knowledge, there has not been any empirical research on the subject in the Jordanian setting, at the

time of writing this paper, except for one study (Melhem, 2003).

Accordingly, this study, hopefully, will make a modest contribution both at the theoretical and empirical levels. Not to mention that it will stimulate further research on the subject in construction industry as well as other areas and sectors. Consequently, this will help managements in various organizations in Jordanian, as well in the Arab world, become more aware of and committed to employee empowerment and teamwork.

Research Problem

This study seeks to answer the following questions:

1- What is the level of employee empowerment practiced by managements of Jordanian Construction firms?
2- How well effective are work groups/teams in Jordanian Construction firm?
3- How much impact employee empowerment has on group/team effectiveness in Jordanian Construction firms?

Purpose of Study

This research will attempt to achieve the following objectives:

1- To examine the extent of employee empowerment provided by managements of Jordanian Construction firms.
2- To assess the level of effectiveness of groups/teams in Construction firms.
3- To examine the impact of employee empowerment on group/team effectiveness in Construction firms.

2. LITERATURE REVIEW

This part of the study discusses the meaning, antecedents, and potential benefits of empowerment and what makes a team effective.

What Is Employee Empowerment?

Literature is overflowing with articles and books on empowerment, suggesting competing definitions and models which vary greatly, leading to confusion instead of clarity (Cacioppe, 1998). The meaning of empowerment has been the subject of great debate and remains, at present, a poorly defined concept (Cunningham et al., 1996; Dainty et al., 2002; Psoinos and Smithson, 2002). The multiple dimensions of empowerment make it a difficult concept to define. Practically, it needs a daunting effort to find an exact definition of empowerment (Honold, 1997).

According to (Menon, 2001), definitions of empowerment can be grouped under three perspectives:

1- Empowerment as an act: the act of granting power to the person(s) being empowered;
2- Empowerment has been considered as a process: the process that leads to the experience of power;
3- It has been also considered as a psychological state that manifests as cognitions that can be measured.

The various definitions and descriptions of empowerment followed two lines of research (Dee et al., 2003; Özaralli, 2003):

1- Structural/managerial frame;
2- Psychological/motivational frame.

A structural/managerial perspective, which is the traditional perspective, focuses on the concept of sharing or transferring power from higher to lower organizational echelons (Hollander and Offerman, 1990); the focus is on the actions of the "powerholders" who transfer power to the less powerful. Structural empowerment is viewed as the process by which the managers grant power and decision-making authority down the organizational hierarchy and grant employees the ability to significantly affect organizational outcomes (Dee et al., 2003). London (1993) states that empowerment is "ensuring that the employee has the authority to do his/her job".

The psychological motivational perspective has received comparatively less attention. It focuses on the intrinsic motivation rather than on the managerial practices used to increase individual's levels of power. Empowerment is conceptualized, here, as a mind-set that employees have about their organization, rather than what management does to its employees (Dee et al., 2003).Through such an approach, the emphasis is being placed upon "perceptions and beliefs of power,

competence, control and self-efficacy" (Psoinos and Smithson, 2002).

Conger and Kanungo (1988), who are considered the pioneers of a psychological/motivational perspective, viewed empowerment as psychological enabling process rather than a delegating process, and they claimed that empowerment involves a motivational concept of self-efficacy. They defined empowerment as: "a process to enable feelings of self-efficacy among organizational members through the identification of conditions that foster powerlessness. Empowerment, in this sense, depends on the creation of conditions appropriate for "heightening" motivation for task accomplishment through the development of a strong sense of personal efficacy". In this context, (Potterfield, 1999) argues that empowerment involves "a subjective state of mind where employees perceive that they are exercising efficacious control over meaningful work".

Thomas and Velthouse (1990) refined and expanded the notion of Conger and Kanungo, and developed a cognitive model of empowerment, as a multi-dimensional construct. They defined empowerment as a "cognitive state that results in increased intrinsic task motivation manifested in four cognitions:

1- Meaning (value of work goal or purpose);
2- Competence (self-efficacy);
3- Self-determination (autonomy in initiation and continuation of work behaviors);
4- Impact (the degree to which the individual's behavior makes a difference and influence on work outcomes).

Thomas and Velthouse asserted that empowerment is not an enduring personality trait that is identified across situations, but a set of cognitions created by the work environment or context.

Spreitzer (1995) built upon Thomas and Velthouse's model, as he defined psychological empowerment as a motivational context manifested in four cognitions: meaning, competence, self-determination, and impact. "These four cognitions reflect an active, rather than passive, orientation to a work role". An "active orientation" is a manifest in individual desires and feelings that he/she is able to influence his/her work role and context. Spreitzer argued that the four cognitions, or dimensions, can be combined to create an overall construct of psychological empowerment where the lack of any one dimension will reduce, though not entirely eliminate, the overall extent of empowerment. Last, Spreitzer viewed empowerment as a continuous rather than dichotomous variable; employees may perceive different degrees of empowerment, rather than simply feel like they are, or are not empowered.

Besterfield et al. (2005) suggested an operational definition of empowerment, "empowerment is an environment in which people have the ability, the confidence, and the commitment to take the responsibility and ownership to improve the process and initiate the necessary steps to satisfy customer requirements within well-defined boundaries in order to achieve organizational values and goals".

It appears that the term "power" is common through the various definitions and descriptions of empowerment. The focus of the concept is the dynamic process of redistribution of power between management and employee (most commonly in the form of increasing employee authority and responsibility) (Greasley et al., 2005).

Antecedents of Empowerment

Effective empowerment is by no means an easy endeavor, and will not happen naturally overnight in organizations. It requires an enormous commitment on behalf of managements and the resulting programs need to be nurtured and maintained (Cacioppe, 1998). Nesan and Holt (2002) argue that successful empowerment requires: "commitment by both management and the workforce to improve business processes; participative leadership styles, lean organizational structures, self-directed work team, continuous education of employees, and measurable empowerments". Vertical hierarchies-mechanistic systems that encourage passive mindsets and behaviors may yield to organic structures with flexible lines of authority, low formalization, and wide span of control (Courtright et al., 1989).

Empowerment is affected by several organizational characteristics and factors. These include: employees understanding of the vision and goals of top management, emphasis on openness and teamwork, and the nature of lateral and horizontal communications within the organization (Quinn and Spreitzer, 1997). Schermerhorn (1999) argues that the "best" organization cultures are those that value the talents, ideas, and creative potential of all members. They allow all the human resources of an organization to be utilized to their fullest potential, and they allow people involved to feel good about it.

Furthermore, Foster-Fishman and Keys (1995) argue that unless the culture of an organization is appropriate, employee empowerment efforts are doomed to failure. There must be an environment of trust and inclusion (employee involvement as well as a tolerance of risk-taking).

The following requirements for empowerment are suggested by Honold (1997):

1- Leadership focused on the development of individuals through the organization, creating a vision and developing common goals, and continually scanning the environment and adapting to it.

2- Teams and collaborative working arrangements.

3- Personal responsibility for performance exemplified in job autonomy, control over decisions directly relating to one's work, job enrichment through multi-skilling and cross training, access to information to measure one's performance and make good decisions, and allowance of risk taking.

4- Structure that is decentralized has controls based on checks and balances, and is flexible allowing for development over time.

5- Contingent reward system with such components as employee stock option programs, pay for performance, and win-win strategies.

The role of technology in employee empowerment can't be ignored. As communication costs continue falling down, independent agents can be connected through relatively inexpensive communication channels; consequently, decision making should once again be decentralized allowing for more solutions to be made at a local level (Malone, 1997).

Wat and Shaffer (2005) pointed to the influence of social context manifested in: perceived fairness, trust in interpersonal relationships, particularly in supervisor – subordinates relationships.

The dynamic relationship between the leader/manager and employees is frequently cited as crucial in the empowerment literature. Managers/leaders may influence individual perceptions of empowerment in many ways (Greasly et al., 2005; Dainty et al., 2002; Honold, 1997).

It can be concluded from the discussion of empowerment antecedents that empowerment is a multi-faceted, difficult and complicated process, and that effective and successful empowerment depends largely on creating an organizational environment that facilitates, encourages, supports and rewards empowerment. This organizational environment covers a wide range of factors related to organizational structure, processes, culture, job design, technology, … etc.

Potential Rewards/Benefits of Empowerment

At present, a great number of scholars, researchers, consultants and managers recognize that people in organizations are its only sustainable competitive advantage. An organization, in order to succeed, prosper and grow, needs to tap the huge potential contribution that lies within every individual employee. In a competitive environment in which organizations must be faster, leaner, provide better service quality, be more efficient, and more profitable, an empowered and proactive service worker is thought to be essential (Melhem, 2003). A similar view is proposed by Schermerhorn who stressed that worker involvement and empowerment are critical building blocks of organizational success. Full human resource utilization increasingly means changing the way work gets done in organizations and pushing decision making authority to the point where the best information exists – with the operating workers (Schermerhorn, 1999).

Despite the conflicting and competing definitions and descriptions of the employee empowerment concept

suggested by various scholars, most of them agree that empowerment has great potential benefits/rewards, at the individual, group and organizational levels. Conger and Kanungo (1988) stated that empowerment is "a principal component of managerial and organizational effectiveness, (and) empowerment techniques play a crucial role in group development and maintenance". Empowering employees has shown to improve efficiency and reduce costs (Suzik, 1998). Furthermore, empowering employees affects employee satisfaction, loyalty, performance, service delivery and concern for others (Fulford and Enz, 1995). Empowerment can work as an effective buffer against stress, as it helps people cope with stressful events, because it provides them with important resources such as autonomy, participation in decision making and a sense of competence (Spreitzer et al., 1997). Empowerment was found to have a positive effect on employees' performance both directly (Bradly and Sparks, 2002; Liden et al., 2000) and through its effect on the service provider's sense of job-related control (Yagil, 2002), and is therefore expected to be associated with customers' satisfaction.

Savery and Luks (2001) pointed out that empowerment can positively influence employees' self-esteem of competence and security giving them a clear sense of the contributions they can make to the company directly leading to increasing productivity. Empowerment can be a powerful tool of organizational change, employee participation and customer satisfaction (Cacioppe, 1998). Employee empowerment opens up many more opportunities for employees to exercise creativity, flexibility, and autonomy on the job. This is believed to have beneficial effect on employee self-esteem, as employees who feel better about themselves will be better prepared to serve customers (Cacioppe, 1998). Applebaum et al. (1999) argue that empowered organizations have demonstrated improvement in various economic performance areas.

Bushe et al. (1996) reported that empowering employees led to increased productivity and efficiency measured by reported increased customer satisfaction and innovation. Further, stress was reduced when a person no longer had to report to a person daily. The organizational outcomes were found to have increased productivity and efficiency.

Team Effectiveness

Much has been said and written about the importance of teams in the success of organizations, and emphasis has been given to the benefits of team-building activities to achieving both team and organizational effectiveness (Bateman et al., 2002). The pressures of global competition, the need to consolidated business models in the complex and shifting environments and the pursuit of continuous innovation have led to a reappraisal of the team as a key element of the basic organizational architecture (Kozlowski and Bell, 2003). In a similar view, Tjosvold et al. 2003) pointed that: the modern organization must respond more quickly, flexibly and adaptively to shifting circumstances and demands that are often difficult to foresee, such situations can only be successfully addressed through effective work teams (Tjosvold et al., 2003). As more organizations have adopted team-based designs, empowerment has become important at both individual and team levels. Empowerment is a principal component of managerial and organizational effectiveness, (and) empowerment techniques play a crucial role in group development and maintenance (Conger and Kunango, 1988). Empowered teams, self-managing teams, are seen as a solution for organizational problems and are often introduced simultaneously to improve organizational productivity as well as employee's quality of life (Hut and Mollenman, 1998). Siegall and Gardner go future and argue that to be successful an organization should strive to become one large empowered team (Siegall and Gardner, 1999).

What Makes a Work Team Effective?

Different scholars and researchers suggested different models and definitions of team effectiveness; some vary greatly. Team effectiveness is defined as: team performance, team members' satisfaction, and team viability (Hackman, 1987; Guzzo and Dickson, 1996; Hyatt and Rudy, 1997; Kline and Mcleod, 1997).

A fourth measure that is sometimes applied to assess team effectiveness is the degree of innovation (Unsworth and West, 2000). Another model of team effectiveness included six core themes/areas: team synergy, performance objectives, skills, use of resources, and quality (Bateman and Wilson, 2002). According to Schermerhorn, an effective team is one "that achieves and maintains high levels of both task performance and human resource maintenance. A task activity is an action that contributes directly to the group's performance purpose. A maintenance activity supports the emotional life of the group (Schermerhorn, 1999).

Salas et al. (2004) classified the various models of team effectiveness into two broad integrative frameworks:

The first group of models follow the "input-process-out put" structure, and usually defines the following three criteria for measuring team effectiveness: productive results, member outcomes, and team viability (Guzzo and Dickson, 1996).

The second group of models as suggested by Salas et al. includes the theoretical "meta" framework for team effectiveness proposed by Campion et al. (1996). These scholars identified five major variables of team effectiveness: job design, interdependence, composition, context and process.

Considering the various measures of team effectiveness that are cited frequently in the different models, the writers of the present research suggest an integrative broad framework of team effectiveness. This framework includes four major themes/areas: team performance, innovation, communication and use of resources.

Study Hypotheses

Considering the problem statement of the study, and in light of literature review, the main hypothesis of the study is stated in the null form as follows:

Ho: Overall employee empowerment (the four subscales/dimensions together: impact, self-determination, competence and meaning) has no significant effect on overall team effectiveness (manifested by: performance, innovation, communication and use of resources subscales together).

The following minor hypotheses are derived from the stated main hypothesis:

Ho-1 Employee empowerment has no significant effect on team performance.

Ho-2 Employee empowerment has no significant effect on team innovativeness.

Ho-3 Employee empowerment has no significant effect on team communication.

Ho-4 Employee empowerment has no significant effect on effective the use of resources by the team.

3. METHODOLOGY AND PROCEDURE

It is an empirical research that focuses on examining the status of employee empowerment in Jordanian private construction firms. It analyzes the effect of empowerment on the success and effectiveness of work groups/teams in these firms.

Study Population and Sample

The research was conducted with a convenience sample of (182) participants representing (20) Construction firms in Jordan. Researchers selected Jordanian Construction firms as study population because Construction sector in Jordan is constantly expanding and the number of Construction firms has been steadily increasing. Construction industry is playing an important role in Jordanian economy. Another reason for selecting Constructing firms is that team–based work designs are very common in construction industry, which makes it an attractive and suitable environment for studying and investigating employee empowerment and its effect on team effectiveness. Respondents were assured that their responses will remain confidential and will not be shared with any other party or with management. One-Sample Kolmogorov-Smirnov Test was used to ensure that the study sample has normal distribution, and the test results ranged between (2.87–5.66) at (p $\leq$ 0.05).

Table (1) displays certain demographic characteristics of research respondents. Male respondents represented (69%) of total sample; (39%) of respondents were of the age group (30 years and less), bachelor degree holders represented (46%) of sample, and finally (42%) of respondents had less than (5 years) of experience.

Table (1): Demographic characteristics of study sample

Sex	Male			Female		
	n	%		n	%	
	126	69		56	31	
Age	Less than 30 years		30-40 years		41-50 years	51 years and above
	n	%	n	%	n	%	n	%
	70	39	49	27	28	15	35	19
Education	Secondary and below		Community college diploma		Bachelor	Postgraduate
	n	%	n	%	n	%	n	%
	28	16	35	19	84	46	35	19
Experience	Less than 5 years		5-10 years		11-20 years	21 years and above
	n	%	n	%	n	%	n	%
	77	42	42	23	35	19	28	16

Data Collection

A questionnaire was developed for the purpose of collecting field data. The questionnaire consisted of three parts. The first covered certain demographic data about the respondents. The second part included (20) items measuring the empowerment's four dimensions (impact, self-determination, competence, meaning) (Spreitzer, 1995; Dee et al., 2003; Cacioppe, 1998; Melhem, 2003). The third part measured team effectiveness, and included (26) items covering the four dimensions of effectiveness (performance, innovation, communication and use of resources) (Bateman et al., 2002; Brach-Zahavy and Somech, 2002; Piccoli et al., 2004; Chan et al., 2003). The questionnaire was translated into the Arabic language which is the native language of the study sample.

Cronbach Alpha reliability coefficients were calculated for all dimensions of empowerment, (Impact = 0.86, Self-determination = 0.68, Competence = 0.90, Meaning = 0.89). Also, Cronbach Alpha reliability coefficients for all the dimensions of team effectiveness were found as follows: Performance = 0.81, Innovation = 0.87, Communication = 0.80, Use of Resources = 0.85), see Table (2), knowing that the minimum accepted percentage is (60%) according to (Sekaran, 2006).

Study Variables

The study, as shown in Figure (1), embodies two types of variables: the independent and dependent variables. Independent variable is employee empowerment which includes: impact, self-determination, competence and meaning. Team effectiveness is the dependent variable, and it comprises four dimensions: performance, innovation, communication and use of resources.

Statistical Methods and Tools

For the purposes of examining and analyzing study variables, and hence testing of hypotheses, the following statistical tools and tests were used:

- One-Sample Kolmogorov Smirnov Test to ascertain normal distribution of study sample.
- Frequency Distribution and Percentages to describe demographic data of respondents.
- Mean and Standard Deviation to calculate central tendency and dispersion (variance) of responses of study sample to the various items of the questionnaire.
- Cronbach Alpha Correlation Coefficient to ensure reliability of questionnaire.
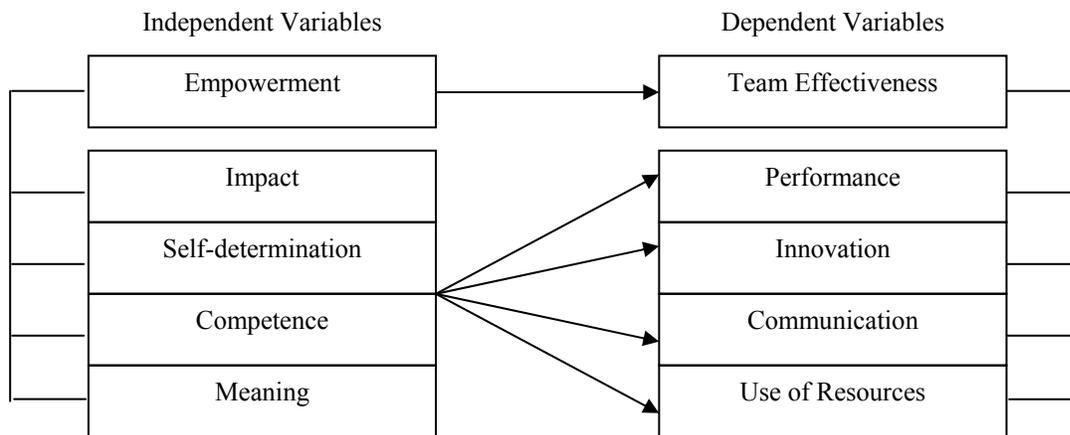
Independent Variables   Dependent Variables

Figure (1) Study Variables

- Multiple Linear Regression to test the four minor hypotheses "the effect of empowerment on the four dimensions/factors of team effectiveness".

4. DATA ANALYSIS

Empowerment

Table (2) presents the results of descriptive statistics of research variables and their dimensions. It displays mean (m), and the standard deviation (SD) of the two main variables/measures (empowerment and team effectiveness), and the dimensions/subscales of each.

The mean (m) of overall employee empowerment reached (3.99) and the (SD) was (0.75). This indicates that respondents perceived there was a relatively high level of employee empowerment. Among the four subscales of empowerment, Meaning scored the highest mean (m = 4.26), (SD = 0.58). This means that employees were highly proud of their jobs and companies, and realized there was a good match between their values, beliefs and norms on one hand, and their jobs on the other. The second highest subscale/dimension of empowerment was competence, with a mean of (4.24) and SD (0.69). This indicates that respondents had strong belief in their capacities, and were certain they had the knowledge and skills required to perform their jobs well. The mean (m) of responses to self-determination and

impact subscales were (3.75) and (3.72), respectively. This indicates that employees perceived they had moderate influence on what happens in their teams and their organizations, at large. As for self-determination, employees believed they had moderate independence and freedom in determining how to do their jobs.

Team Effectiveness

Results in Table (2) showed that the mean (m) of overall team effectiveness reached (3.75), with SD (0.74). This indicates that employees perceived their team overall effectiveness as above moderate. The level of effectiveness as perceived by employees was also moderate for each of the four subscales (performance, innovation, communication, and use of resources). There were minor variations among the four subscales, the highest was team performance with a mean (3.95), and the lowest was innovation scoring a mean of (3.66).

5. HYPOTHESES TESTING

Ho: Overall employee empowerment (the four subscales/dimensions together: impact, self-determination, competence and meaning) has no significant effect on overall team effectiveness (manifested by: performance, innovation, communication and use of resources together).

Table (2): Descriptive statistics of the study variables

Variables		Items	Cronbach Alpha	Mean	Standard Deviation
Empowerment	Impact	5	0.86	3.72	0.92
	Self-determination	5	0.68	3.75	0.80
	Competence	5	0.90	4.24	0.69
	Meaning	5	0.89	4.26	0.58
	All subscales together	20	0.87	3.99	0.75
Team Effectiveness	Performance	7	0.81	3.95	0.65
	Innovation	6	0.87	3.66	0.79
	Communication	7	0.80	3.73	0.73
	Use of Resources	6	0.85	3.67	0.80
	All subscales together	26	0.89	3.75	0.74

The statistical results of the regression test, as shown in Table (3), indicate that coefficient of determination (R^2) was calculated as (0.36), which means that (36%) of the variation in the overall team effectiveness (all subscales together) was explained by the variation in overall employee empowerment (all subscales together). Unstandardized Coefficient (B) was calculated as (0.57) which means that a change of (0.57) in team effectiveness was due to a corresponding change in one unit of empowerment. Since calculated (F) was (100.16) at ($p \leq 0.05$), the null hypothesis is rejected. Thus, overall employee empowerment (all subscales together) as perceived by employees of construction firms in Jordan had significant effect on overall team effectiveness (all subscales together).

Table (3): The impact of empowerment on team effectiveness

R^2	B	F	Sig.
0.36	0.57	100.16	0.00

Table (4): The impact of empowerment on team performance

Empowerment Dimensions	B	T	Sig.
Impact	0.12	2.03	0.05
Self-determination	0.15	2.38	0.02
Competence	0.01	0.31	0.76
Meaning	0.46	6.78	0.00
R^2 = 0.51	F = 15.17	Sig. = 0.00	

Ho-1 Employee empowerment has no significant effect on team performance.

Results of the multiple regression test, as shown in Table (4) indicate that coefficient of determination (R^2) of all empowerment subscales together was calculated as (0.51), which means that (51%) of the variation in team performance-attaining goals, financial and work activities, etc.- was explained by the variation of overall empowerment (all subscales together).

As calculated F was (15.17) at ($p \leq 0.05$), the hypothesis should be rejected, and instead, it can be said that employee empowerment has a significant effect on

team performance.

When employee empowerment subscales are taken separately, (B) calculations showed that Meaning, Self-determination and Impact had differential effects on team performance, with the highest being Meaning's. Competence, as results showed, had no effect on performance. It seems that other factors such as motivation, incentives, job security, etc. do affect performance.

Ho-2 Employee empowerment has no significant effect on team innovativeness.

As it appears from the results of regression test in Table (5), all empowerment subscales: Impact, Self-

determination, Competence and Meaning had significant effect on team innovativeness at ($p \leq 0.05$), but with variation from one subscale to another. The highest was explained by Meaning (B = 0.70), next came Self-determination (B = 0.53), and the least was impact (B = 0.13). Coefficient of determination R^2 for overall empowerment (all subscales together) was calculated as (0.48), meaning that (48%) of the variation in team innovation was explained by variation in overall empowerment. F calculated value was (41.02) at ($p \leq 0.05$), so the hypothesis can not be accepted, and we can conclude that employee empowerment has a significant effect on team innovativeness.

Table (5): The impact of empowerment on team innovation

Empowerment Dimensions	B	T	Sig.
Impact	0.13	2.09	0.05
Self-determination	0.53	7.29	0.00
Competence	0.36	5.40	0.00
Meaning	0.70	8.96	0.00
$R^2 = 0.48$	F = 41.02	Sig. = 0.00	

Ho-3 Employee empowerment has no significant effect on team communication.

Results of regression test, displayed in Table (6), indicated that only Self-determination and Meaning of empowerment had significant effect on team communication, the highest impact came from Self-determination (B = 0.41), then Meaning (0.23). The other two subscales: Impact and Competence, had no significant

effect on team communication. Considering overall empowerment (the four subscales together), coefficient of determination (R^2) was calculated as (0.26); which means that (26%) of the variation in team communication was explained by variation of overall empowerment. And as calculated (F) was (15.73) at ($p \leq 0.05$), this calls for the rejection of the hypothesis. Thus, overall empowerment has a significant effect on team communication.

Table (6): The impact of empowerment on team communication

Empowerment Dimensions	B	T	Sig.
Impact	0.01	0.03	0.97
Self-determination	0.41	5.93	0.00
Competence	0.02	0.31	0.75
Meaning	0.23	3.15	0.00
$R^2 = 0.26$	F = 15.73	Sig. = 0.00	

Ho-4 Employee empowerment has no significant effect the on the effective use of resources by the team.

Results of regression test in Table (7) showed that three

subscales of empowerment had significant effect on how team members use available resources; these subscales were Meaning (B = 0.44), Self-determination (B = 0.23),

and Competence (B = 0.19), the fourth subscale (Impact) has no significant effect. Overall empowerment (the 4 subscales together) explained (27%) of the variation in the use of resources by the team ($R^2 = 0.27$). Considering

that the result of F test was (16.37) at ($p \leq 0.05$), the hypothesis cannot be accepted, and thus it can be said that empowerment has a significant effect on how resources are utilized by team members.

Table (7): The impact of empowerment on effective use of resources by the team

Empowerment Dimensions	B	T	Sig.
Impact	0.04	0.69	0.49
Self-determination	0.23	2.76	0.00
Competence	0.19	2.18	0.04
Meaning	0.44	4.84	0.00
$R^2 = 0.27$	F = 16.37		Sig. = 0.00

6. DISCUSSION

The present study examined the effect of employee empowerment on team effectiveness in Jordanian construction firms. Four subscales/dimensions were used to assess employee empowerment: Impact, Self-determination, Competence and Meaning. Team effectiveness was assessed by four subscales/dimensions: performance, innovation, communication and use of resources.

It was found that management of construction firms in Jordan provided a relatively high level of empowerment, the mean of overall empowerment reached (3.99). Overall team effectiveness scored a reasonably good level (3.78). Overall empowerment was found to have a moderate positive effect on overall team effectiveness ($R^2=0.36$, Table 3). Research subjects in construction firms who perceived they were empowered (holding meaningful, valuable jobs, feeling proud of their jobs, independent and decide by themselves how to carry their jobs, … etc.) rated their teams' effectiveness favorably. They expressed an above-moderate level of performance, communication within the team, innovation and use of resources. This result supported prior findings and arguments proposed by empowerment and team effectiveness researchers (for example: Conger and Kunango, 1988; Spreitzer et al., 1997; Hut and Mollenman, 1998; Cacioppe, 1998; Applebaum et al., 1999; Greasley et al., 2005; Özaralli, 2003).

In the study, a closer look was made at employee

empowerment subscales and the effect of each on team effectiveness and on each of its subscales.

It was found that employee empowerment had a positive effect on team performance ($R^2=0.51$, Table 4). All empowerment subscales, except Competence had significant impact on team performance. But Meaning made the greatest effect (B=0.46). Research subjects perceived they had meaningful jobs and responsibilities, valuable jobs, their jobs matched their personal goals and values, and they were proud of their jobs and firms. This urged and stimulated people to attain team's goals, meet established quality standards, respond promptly to customers' needs, being aware of organizational goals and contribute to attain these goals. This result confirmed prior findings and arguments proposed by Savery and Luks (2001).

Another finding was that empowerment had a positive effect on team's innovation ($R^2=0.48$, Table 5). All empowerment subscales had significant impact, but the greatest impact was attributed to Meaning (B=0.70), followed by Self-determination (B=0.53) and then Competence (B=0.36). Respondents perceived they had meaningful and valuable jobs, they were independent, autonomous, decided by themselves how to do their jobs, handled by themselves job-related problems, and they felt they had the knowledge, capabilities and skills to carry out their jobs successfully. Thus, team members looked at new ways of improving products, systems, policies and others participated in developing new

products, strategies, processes and quickly identified and addressed work problems, as innovation was rewarded and recognized by the team. This result was supported in the literature (Özaralli, 2003; Savery and Luks, 2001).

As for team communication, results shown in Table (6) pointed a positive effect of empowerment on team communication (R^2=0.26). Only Self-determination (B=0.41) and Meaning subscales of empowerment had an effect of statistical significance. Self-determination had the highest effect. Research subjects perceived they were independent, free, decided by themselves how to carry out their jobs, and handled job-related problems by themselves. This encouraged and stimulated team members to communicate openly and freely among themselves and with their managers, they constantly received useful feedback from their managers, they were kept well-informed of any changes in strategies, policies, procedures, they exchanged constructive feedback and they had quick and easy access to job-related information.

Study results also indicated a positive effect of empowerment on the use of resources by the team (R^2=0.27, Table 7). All empowerment subscales, except Impact, had an impact on resources utilization by the team, but with varying degrees. Meaning subscale of empowerment made the highest contribution to effective use of resources (B=0.44), Self-determination came the second (B=0.23). Research respondents perceived they were independent, autonomous, free to decide how to do their jobs, and solved job-related problems by themselves. They also perceived their jobs were meaningful and valuable and they felt proud of their jobs and firms. Respondents expressed that their teams utilized available resources effectively, keeping wastage to a minimum, they made the maximum practical use of that resources, and applied proper control measures to ensure that resources are used

adequately.

Looking closer at the results of regression analyses in Tables (4, 5, 6, 7) we find that among the four empowerment subscales, Meaning made the highest contribution to overall team effectiveness and to all team effectiveness subscales, except communication. Self-determination subscale of empowerment was perceived by respondents to have the second highest impact on team effectiveness and its measures separately, except communication within the group, to which Self-determination made the highest contribution, higher than Meaning.

7. RECOMMENDATIONS

Management of construction firms may first identify the least empowered teams and provide more empowerment to such teams. There is still an opportunity and, indeed, necessity to expand current empowerment practices. Focus and special emphasis should be placed on Meaning, as results indicated that it (Meaning) made the highest contribution to team effectiveness and to each of its subscales. Another empowerment subscale of high importance and deserves special attention and concern is Self-determination, which, as results indicated, made the second highest effect on effectiveness and on each of its subscales. Managers need to be fully aware of and recognize the importance of empowerment, and be trained on how to implement it successfully. Encouraging and supporting expanding empowerment practices may require certain changes in organizational structure, culture, systems, regulations, … etc.

This study, hopefully, will encourage and stimulate more researchers to study the subject in construction industry and other areas, using multiple methods for data collection to ensure the collection of reliable and deeper information.

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