Providing strategic method to increase performance in execution and management of high-rise building

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Abstract. In current situation, high-rise building projects execution seems difficult issue. These problems cause to increase duration, possible delay, and increasing project costs. The main goal of this research is prediction of possible accidents in respect of intellectual, behavioral and structural dimensions which establishes various problems such as time, cost, quality and etc in high-rise building execution. Therefore, it should be provided a model which can make suitable and on time various decisions and strategies in least of possible time and cost in case of satisfying impact episodes during project execution and can control deviations and manage executive plans in regard of suitable reliable performance for projects. This article is applicable method in regard of goal and is descriptive-exploratory method in regard of method and form. First, key activities in project are evaluated. Then, interior and exterior environmental factors, duration and the cost of project execution are considered by their impacts to each other, current obstacles in project execution are identified and studied in frame of professional variables of executor organizations. Finally, the technique of partial minimum squares in combination of meaningful non-parametric tests are approved by using Azar board Company (high rise-building company) engineers as statistical society.

1. Introduction

Making suitable decision and giving strategies is important issue. This is possible when mentioned organizations list possible items in various civil projects as effective occurrences or predict encounter type and selecting suitable methods to interact them in various dimensions by considering to variance environment and contingency condition. Not only there are most precision to establish, execute and evaluate strategy but also non-predictive occurrences can face strategies to problems. To minimize potential impacts of threats, organizations must have contingency plan and include it as part of the evaluative procedure in strategy [1]. Therefore, the risks of predicted execution must be identified and studied to be able to operate the best possible solutions. In other words, it can be mentioned that project management is a type of strategic plan. The importance of development in project based world is that you don’t require asking someone who need to understand project management. The skills of project management cause to increase partnership among individuals and therefore in organizations specifically civil ones it’s necessary to obtain it for everybody [2]. In current situation (i.e. economic, social and political situation) in our country, high-rise building projects execution seems difficult issue. These problems cause to increase duration, possible delay, and increasing project costs. It’s possible to decrease negative dimensions of execution methods of projects by exact planning and predicting effective parameters in executive procedures in respect of time, costs and in other words requires resources. The important issue in project execution is prediction, codification and selecting suitable
strategies which are proportional to development procedure in project which are effective in specific
times. It can decrease possible delays, increased costs and finished prices by considering to temporal
and spatial conditions. This type of method can increase to make decision rapidly in critical times. In
other words, in project execution, we must have plan for seconds and predict possible occurrences. The
longest route to victory is strategy without tactic and a tactic without strategy is rush to failure. Strategic
management and performance management are different discussions which they are required by
organizations and their projects. They must be used together.

Micheal porter said that operational effectiveness and strategically effectiveness are so necessary to
organization success. But it must be said that each of them behave completely separately. In case of
excelling in occupation, costs can be decreased, quality has improved, execution time in procedures
would be suitable and delays would be minimized. But it must be noted that there isn’t stable success
for organization and its project without any viewpoint and only by relying to occupation improvement.
One of the senior researchers in strategic management science said that its possible you can compile the
best world' procedures but you will not be able to think optimal success until managerial procedures
don’t set in the way of achieving organization goals [14].

Specific cost and quality in specific results are caused by project management, planning and directing
it in time framework. Project management is composed of planning, organizing activities, supervision
and direction in execution. It tries to deliver identified expected results in identified time by previous
set date by applying resource correctly. In other words, project management is using knowledge, skills
and required tools and techniques in administrating actions to satisfy stakeholders’ needs and their
expectations [3]. Too last projects’ execution time, observed qualitative weaknesses in executed projects,
too high finished costs of projects in comparison to first estimation, the lack of strong strategy to perform
projects, education weakness to exploit executed projects are evaluated as part of important problems
chain in country projects [3]. The important characters in civil project execution are time control and
predicted costs which are considered in execution plans. It includes compiled exact program which
composed of the detail of human force estimation, budget, necessary equipment and required materials.
Since ideal plan is the basis of development measurement in project, it can perform as warning system
to delayed or extra- budget plans [2]. Therefore, this research in field of high- rise building can be
important issue to study current situation in project and identify different strategies to adopt suitable
strategy in executing projects. The innovation of this research is that projects execution methods aren’t
seen in this viewpoint. In other words, occupational performance in high- rise building project is
explained in a way that project execution procedure is supervised and controlled in multi- dimensional
area and in various dimensions, i.e. from beginning project development is monitored as identified
scheduling. In case of predicted possible problems raised, corresponded executions are provided in
making decisions based on priorities and allocated scores by considering to related occurrences and
interior- exterior project environment.

2. Study theoretical literature

2.1. The explanation of project management
Project management is planning and directing project in frames of identified time, cost and quality
toward establishing identified results. Project management composed of project planning, organizing,
supervising execution and directing it. By correct applying resources, it tries to deliver specific expected
results in preset agreed costs timely. In other words, project management is using knowledge, skills and
required tools and techniques in administrating actions to satisfy stakeholders' needs and their
expectations. Project management enlist to two powerful aspects planning and project control to perform
this important issue. According to project management international institute explanation (PMI), project
management is using knowledge, skills and required tools and techniques in administrating actions to
satisfy stakeholders' needs and their expectations. Setting goal based system in regard of project
management, is able to provide necessary knowledge to direct and manage them in related industry and
identify occupation proximity to organizational goals moreover planning and directing issues. The
management of tire production factory, damming up plant, raw gas or oil pipeline, introductory plant of new products, founding university, surgery operation, educational or cultural plan implementation or many other examples are small and large samples of managing plants, installations and organizations which are not possible in regard of execution, administration and exploiting them unless applying project management techniques and simple relying to traditional management methods aren’t enough to their optimal implication [3].

Performance method selection is one of the strategic decisions in project. At the end, justificatory studies concurrently or following deciding about financing method are performed. The method of project execution is general term which imply exhaustive procedures of designing and construct and is composed of all methods, actions, occupation sequences, contract relationship in commitments, interactions and its different types which all of them are applied to complete successfully designing and constructing projects. The method of project execution means combining and organizing method of designing services, good supplies (materials and equipments), manufacturing (building and equipment installation), installation exploitation and maintenance in project which is done by employer or by employing other institute. Therefore, the method of project implication includes designing, supplying, manufacturing, exploitation and maintenance areas. In project life-cycle, there are other areas such as occurrence, justificatory studies, management and financial support moreover mentioned areas [4].

2.2. Suitable performance in project execution
Most of the time, about performance measurement, it’s said that if some thing can’t be measured, it can’t be managed and whatever are measured, are implacable and it can’t be improved until current performance can’t be identified. Or it can be said that organizational performance measurement is systematic attempt to understand whether provided services by organizations satisfy customer needs and be able to satisfying them. Although this explanation point to dimension of performance measurement, it doesn’t mention a concept clearly which is issued as performance measurement. More obvious explanation in performance measurement is applying multidimensional collection of performance indexes- multidimensional indexes mean (non) financial indexes, retrospective and prospective indexes which all organizations perform it in a way. Organizations may perform it in systematic complete way or perform it in superficial way because of specific reason. It means that continuously, all organizations and companies inevitably measure the level of obtaining to set goals because otherwise can’t be understood to obtaining to self goals. Therefore, they can't be aware of their weakness and strengths and continue to their life, as a result, performance measurement is the part of today’s integral component [5].

2.3. Study background
By considering to research innovation in strategic performance in relation to high-rise building project management and related items to it, the study of this item by this view is performed rarely. Operational performance in project management can be explained in a way that in multidimensional area and in different dimensions, executive procedure in project is supervised and controlled. It means from beginning to the end of the project and according to preset scheduling, project development is monitored as identified scheduling. In case of predicted possible problems raised, corresponded executions are provided in making decisions based on priorities and allocated scores by considering to related occurrences and interior-exterior project environment. In performed studies, it’s obvious that most articles and researches in this respect are interior and foreign articles are belong to Iranian researchers. In following sections, some articles are provided which are done inside and outside the country.

Lotfi and Mahdi Mortaheb [6] consider to an article which provide suggestive solutions for managing high-rise building management in Tehran. In this article, to analyze data analysis- descriptive method and field method are applied which composed of observing, written questionnaire and semi-organized interview are applied, and strengths and weakness points are identified and its optimal level in current methods are identified and finally they combine each other, optimal solutions are suggested to executive management in buildings.
In an article termed a model to prevent project delays with potential decision performance, Moemeni and Kherkhah [7] mentioned that there are delays in calculation, their cost and organizational decision procedure even by considering to effective role in on time dates and project delivery opportunity. But the main basis in their decision is organizational strategies accomplishment which are toward obtaining long term goals. Moreover they recognize project delays as one of the most current project management issue which can be resulted by various factors which can be controlled by suitable management. They also explain that one of the most important indexes in project success is their scheduling performance which can prevent to individual delays if there will be a suitable decision model to control the project collection. Organization limitations and abilities are transiting continuously in executing projects. Moreover, occurred environmental and technological changes can transit organizational strategies by passing time.

Golbaba pour [8] proved that design- built method is as management novel method and project execution although it delivers all project actions (like design, equipment buying, manufacturing, installation and initiation) to contractors and give up employers from large management responsibility constraints and projects execution which are out of their authorities because of job is too professional and technology is too complex and transfer project risks to contractors. Moreover, by establishing coordination and consolidation among manufacturing and designing procedures, there is possible to executive jobs start before ending designing completely and decrease the least duration in project execution. According to employer views, the most important current problem in this mentioned method in Iran (1) required design level to start build and designing project, (2) employer interfere level in project executive procedure, (3) needing or non- requirement to counselor and supervision system and needing or non- needing manufacturing manager.

In an article termed obtained value analyze model in project basket, Moshiri&Zamani [9] present that the factors such as (1) suitable precious presentation from project development status, (2) obtaining procedure to strategic goals, (3) controlling organizational macro investment risks in project- ns because of projects multiplicity.

In scientific article, Dorudian, Farahani and Safayi [10] provide a research termed the review project performance evaluation methods and evaluative methods introduction in the end of project. They explained that project evaluation is effective to recognize weakness and improvement different methods and performances and provide better adoption methods in future management.

Pinto [11] perform researches and stated that the first step to research management variable relations to project success standards is agreement about success content explanation. Although there are many years that in respect of organization effectiveness, researches are placed in the heart of organizational theory center, limited studies are provided in respect of project success to provide standard or even applicable framework. Before, project success is more important than satisfying time, budgeting goals and executive performances.

Based on research studies, Arab zade, Ghorbani and ShiruyeZad [12] approved that success is related to interior and exterior factors therefore, considering to strategic performance is important issue in projects. To obtain their strategic goals, organizations explain and execute projects. This goal is obtained first by developing general goals in organizations based on strategy and then by explaining plans and finally by designing projects. In this way, projects are more consistent to strategic goals and have more productivity which cause to better and quicker achievement goals and satisfying organizational goals.

Tajfar [13] recognized that project strategic management as new replaced method to perform scientific actions which develop in various industries rapidly. Although strategic management in project is recognized as subject, there are many uncertainty and ambiguities about its practical and effectiveness. In strategic management in project, focus and success standard are transited from necessities in time and budgets and are shared in organization strategies and its success. Strategy plays an important role in strategic management and need to some general changes in planning, explanations, budget specifications and success measurement.
3. Research contextual model

3.1. Study method
Since the subject of this study is about high-rise building projects execution, a suitable method can be based on two items: aim, method and nature. In this way, applicable research method is used based on aim and descriptive-exploratory research method is used in method and nature. In respect of execution, the projects have scheduled plan which the method of operating phases are explained and according to it, project development is measured. To study this subject, executive plans are explained by considering to prerequisite and relationship among actions and phases.

3.2. Statistical society and sampling method
The statistical society in this study is Azar Board Company which facilitate this possibility by performing effective actions in direction of identified goals until obtain to self-interested satisfaction by developing actions and relying on desirable quality and accepted standards. To select sample, according to Morgan table, statistical society includes 124 individuals who know high-rise building and its execution methods. The questionnaires are distributed in 110 individuals and 92 individuals answer to identified sample. Questionnaire validity and their reliability are studied by face validity and in other words professionals consensus about measurement tool are noticed. The mentioned questionnaire reliability uses the partial least squares in a way that first relationship among factors (latent variable) and observable variable are studied by load factor and meaningful test is studied. Related computed Cronbach' alpha is about 0.78 which is acceptable.

3.3. Tools and methods of collecting research data
To collect data related to research, first identified questionnaires are prepared and then are delivered to Sidel expert center and then are received from them and collect. To complete questionnaire, the experts who have problem or ambiguity, complete questionnaire following complementary explanation by researchers and removing ambiguity. The data gathering methods include library survey which composed of literature research and document research, observation, interview and questionnaire.

Due to lack of standard tools, researchers made tools are applied as research tool which is designed to this research. Applied researcher made tool is questionnaire questions which are set as the written questions collection about research variables which replier complete it. Questionnaire origin is library field studies and is prepared based on Likert scale.

3.4. Analysis methods
To analyze research, inferential statistics and partial least square (PLS) are used. Moreover, related necessary software are applied SPSS, Smart PLS.

3.5. The analysis research data
In this project, the level of variables relations and their prediction are measured by using statistical suitable tests. Obtained raw data are analyzed from statistical society, suitable statistical techniques and SPSS software and Smart PLS.
4. Results
The use of sections to divide the text of the paper is optional and left as a decision for the author. Where the author wishes to divide the paper into sections the formatting shown in table 2 should be used.

4.1. Descriptive statistics
Generally, in this research 90 experts are applied which some of them participated in 2 or 3 questionnaires. Therefore, demographic data about expert members are provided in following tables (Tables 1-3):

Table 1. The frequency of the gender of participants

| sex            | frequency | percentage |
|----------------|-----------|------------|
| Female         | 30        | 33.34      |
| Male           | 60        | 66.66      |
| Totally        | 90        | 100        |

Table 2. The frequency of academic certificate participants

| Educational level | frequency | Frequency percentage |
|-------------------|-----------|----------------------|
| Bachelor          | 44        | 48.88                |
| Masters           | 34        | 37.77                |
| Doctoral          | 12        | 13.33                |
| totally           | 90        | 100                  |
Table 3. The frequency of length of employment of participants

| Length of employment | Frequency | Frequency percentage |
|----------------------|-----------|----------------------|
| 5 to 9 years         | 21        | 23.33                |
| 10 to 14 years       | 27        | 30                   |
| 15 to 19 years       | 18        | 20                   |
| 20 to 24 years       | 13        | 14.44                |
| >25                  | 11        | 12.22                |
| totally              | 90        | 100                  |

4.2. Partial least squares techniques and research assumption tests
Each of the research assumptions are analyzed separately by using partial least squares techniques. Finally, general model of research is tested by this technique. In this technique, some points are so important:

- Power relationship among agent (latent variable) and observed variable is presented by factor load. Factor load is accepted between 0.3 to 0.6 which is desirable if its value will be more than 0.6.
- When observed correlation use to boot strap or jack knife cross cutting. In this study, boot strap method is used which give t statistics. In 0.5 error level, if boot strapping value will be more than 1.96, observable correlation is meaningful.

Generally, the relationship among variables is two parts in partial least squares techniques.

4.3. Exterior model (measurement model)
In this study, to measure latent variable relationship and their measurement statement, exterior model is used. The relationship exterior model is statement or same questionnaire questions which is studied by organizations. In fact, it can't be tested relationship until questionnaire questions measure latent variable. It is presented that exterior model is used to present that latent variable is measured accurately. Rig results are provided in table 4.

4.4. The analysis research data
In this project, the level of variables relations and their prediction are measured by using statistical suitable tests. Obtained raw data are analyzed from statistical society, suitable statistical techniques and SPSS software and Smart PLS.

According to results of measurement model which are listed in table 4, in all cases observed load factor has the value more than 0.3 which presents that there is suitable correlation among observed variables to related hidden variables. Moreover according to results which are listed to table 5, boot strapping value is more than critical value (1.96) which presents that there is correlation among observable variables and related hidden variables. Therefore it can be concluded that each of the main variables are measured correctly. Project assumption can be tested by considering obtaining findings by this measurement.
4.5. Research assumptions test

The relationship among studied variables in each of assumptions is tested based on causal structure by PLS partial least squares. Separated research model is based on tested relations among each of variables. In general model, the research is sketched in final figure. The mean of replication to observed variable in each of latent variable is computed and finally, each latent variable is used as observable variable to its main structure. T statistics is computed to measure meaningful relationship.

4.5.1. First assumption test

The proficiency in executive organizations in high-rise building projects impact to suitable performance in project execution.

To measure structure, the proficiency of executive organizations in project applied to 4 observable variables (question 1 to 4). The relationship among proficiency of executive organizations variable and suitable performance variable is computed as 0.331 which considered as acceptable value. (figure 2).

The statistics of the test is obtained as 2.872 which is more than t value (critical value) in error level of 5%, t value was 1.96 which means that observable correlation is meaningful. (figure 8). Therefore, the proficiency of executive organizations in projects impacts to suitable performance in project execution.

Table 5. boot strapping value in partial least squares in effective factors to suitable performance

Table 4. exterior model in partial least squares to effective factor in suitable performance

| Y  | A5 | A4 | A3 | A2 | A1   |
|----|----|----|----|----|------|
|    |    |    |    |    | 0.274353 |
|    |    |    |    | 0.610396 |
|    |    |    | 0.657692 |
|    |    | 0.738919 |
| 0.817831 |    |    |    |    |
| 0.545381 |    |    |    |    |
| 0.457803 |    |    |    |    |
| 0.55865 |    |    |    |    |
| 0.34558 | 0.510052 |
| 0.644784 | 0.803062 |
| 0.645882 |
| 0.845749 |
| 0.826741 |
| 0.762935 |
| 0.454936 |
| 0.864261 |
| 0.847934 |
| 0.691093 |
| 0.816847 |
| 0.848141 |
| 0.641952 |
| 0.844815 |

| Y  | A5 | A4 | A3 | A2 | A1   |
|----|----|----|----|----|------|
|    |    |    |    |    | 13.313692 |
|    |    |    |    | 5.858591 |
|    |    | 6.268347 |
|    | 9.799531 |
| 4.064519 |    |    |    |    |
| 1.119083 |    |    |    | 1.511023 |
| 2.612173 |
| 1.728077 |
| 2.666663 |
| 4.704734 |
| 9.324008 |
| 9.153983 |
| 29.477489 |
| 14.98214 |
| 11.64297 |
| 4.343659 |
| 23.128818 |
| 17.627176 |
| 7.623353 |
| 18.395501 |
| 23.048049 |
| 25.313009 |
| 19.000059 |
Figure 2. Load factor in relationship between executor organization proficiency in high-rise building projects and suitable performance

Figure 3. t-value statistics: relationship among executor organizations proficiency in high-rise building projects and suitable performance

4.5.2. Second assumption test
The transitions and the parameters of exterior environment impact to executor project in high-rise building projects performance.
To measure exterior environment parameters and transition structure, 4 observable variables are used (questions 5 to 8). The power of relationship among transitions variables and suitable performance variable is computed equals to 0.257 which considers relative small medium value. (Fig 3). Test statistic is equal to 3.698 which is more than t critical value in 5% error level, I.e is 1.96 which presents that observable correlation is meaningful (Fig 10). Therefore, the transitions and the parameters of exterior environment impact to executor project in high-rise building projects performance.

Figure 4. Load factor in relationship among transitions and exterior environment parameters and suitable performance

Figure 5. t-value statistics: the relationship among transitions and exterior environment parameters and suitable performance.

4.5.3. Third assumption test
The transitions and the parameters of interior environment impact to executor project in high-rise building projects performance.
To measure exterior environment parameters and transition structure, firstly, 4 observable variables are used. The power of relationship among transitions variables and suitable performance variable is computed equals to 0.376 which considers too small medium value. (Fig 6). Test statistic is equal to 7.350 which is more than t critical value in 5% error level, I, e is 1.96 which presents that observable correlation is meaningful (Fig 7). Therefore, the transitions and the parameters of exterior environment impact to executor project in high-rise building projects performance.

![Figure 6. Load factor among transitions and interior environment parameters and suitable performance](image)

![Figure 7. Transitions and parameters in interior environment to suitable performance in executing high-rise building projects](image)

4.5.4. Forth assumption test
The duration of project execution impacts to suitable performance in high-rise building projects execution.

To measure exterior structure, duration of project execution firstly, 4 observable variables are used (question 13 to 16). The power of relationship among the duration project execution variables and suitable performance variable is computed equals to 0.317 which considers acceptable value. (Fig 8). Test statistic is equal to 6.340 which is more than t critical value in 5% error level, I, e is 1.96 which presents that observable correlation is meaningful (Fig 9). Therefore, the duration of project execution impacts to projects performance in project execution.

![Figure 8. Load factor in relationship between project execution duration and suitable performance](image)

![Figure 9. t-value statistics of relation between project execution duration and suitable performance](image)
4.5.5. Fifth assumption test
The cost of high-rise building project execution impacts to projects execution.

To measure structure, the cost of project execution, 4 observable variables are used (question 17 to 20). The power of relationship among the cost of project execution variables and suitable performance variable is computed equals to 0.379 which considers acceptable value. (Fig 10). Test statistic is equal to 8.146 which is more than t critical value in 5% error level, i.e is 1.96 which presents that observable correlation is meaningful (Fig 11). Therefore, the cost of project execution impacts to suitable performance in project execution.

![Figure 10. Load factor of relationship among high-rise building project execution and suitable performance.](image)

![Figure 11. t-value statistics in relationship among project execution cost and suitable performance.](image)

4.6. The study of cost and time mediator role
The power of relationship among the executor proficiency variable in high-rise building and time variable is 0.567 and is obtained 0.592 by execution cost variable. Test statistic value is obtained 4.868 and 5.470 respectively which is more than t critical value. It presents that observable correlation is meaningful. Therefore, project executor's proficiency has meaningful positive impact on time and cost variables.

The power of relationship among interior factor and time variable is obtained 2.615 and 2.169 respectively. Test statistic value is obtained 5.470 for execution cost which is more than t critical value. It presents that observable correlation is meaningful. But test statistic value is obtained 1.221 for project execution time which is less than critical value. Therefore, interior factor has positive meaningful impact on project execution cost and time variable. Table 6 is the summary of meaningful test results in mediator variables relationship.

Table 6. changes and parameters of the internal environment on proper performance

| results | t statistics | Load factor | Mediator variable | Independent variable |
|---------|-------------|-------------|-------------------|----------------------|
| approved | 4.868       | 0.567       | Project execution time | Project executor proficiency |
| approved | 5.470       | 0.592       | Project execution cost | Project executor proficiency |
| rejected | 1.221       | 0.150       | Project execution time | Exterior factor |
| approved | 5.470       | 0.314       | Project execution time | Exterior factor |
| approved | 2.615       | 0.346       | Project execution time | Interior factor |
| approved | 2.169       | 0.319       | Project execution cost | Interior factor |
In final structural model (figures 12, 13), since duration latent variable and project execution cost as mediator variable aren’t zero and are impacted by latent variables (the proficiency of executor organizations in project, exterior-interior environmental parameters and transitions). Since suitable performance variable as latent one is affected by other latent variables concurrently in high-rise building projects, isn’t zero and its numerical value is more than mediator latent variable.

Latent variable A1: (independent variable in projects executor organization proficiency (project-based)): 0.000
Latent variable A2: (transitions independent variable and exterior environmental parameters in projects): 0.000
Latent variable A3: (transitions independent variable and interior environmental parameters in projects): 0.000
Latent variable A4: (independent variable and mediator in project execution time): 0.335
Latent variable A5: (independent variable and mediator and project execution cost): 0.300
Latent variable Y: (independent variable in suitable performance in EPCC project execution): 0.915

Figure 12. The least partial squares in research general model.

Figure 13. t-value statistics in project general model.
4.7. Research final model
In this study, the impact of 5 variables (executor organizations proficiency in project, exterior environmental parameters and transitions, interior environmental parameters and transitions, project execution duration and the cost of high-rise building projects) on suitable performance are studied. Finally in this part, research is studied by considering to research general model in fig 14 and by using partial least squares technique, general impacts of variables are studied by considering to concurrent impacts of other variables in final research model. Finally each latent variable is used as observable variable for its main structure I, e latent variable X. t statistics is computed to measure meaningful relationship (Figure 14 and 15).

The mean replication to observable variables A1: X1
The mean replication to observable variables A2: X2
The mean replication to observable variables A3: X3
The mean replication to observable variables A4: X4
The mean replication to observable variables A5: X5

Figure 14. The least partial squares in research general model.

Figure 15. t-value statistics in research main assumption.

5. Conclusion
5.1. First assumption replication
Executor organizations proficiency impact to suitable performance in project.
According to performed computations and studies, in first assumption and chapter 4, its identified that executor organizations proficiency variable (project based) in project on suitable performance variable, project elements and finally its four elements factors (I, e time, cost, physical development and flexibility) by considering to acceptable relationship power among variables and their correlation meaningful. By consider to performed research background, they are acceptable.
5.2. Second assumption replication
Exterior environment parameters and transitions impact to suitable performance in project.

According to performed computations and studies, in second assumption and chapter 4, its identified that exterior environmental parameters and transitions variable impacts in project on suitable performance variable, project elements and finally its four elements factors (I.e time, cost, physical development and flexibility) by considering to acceptable relationship power among variables and their correlation meaningful. By consider to performed research background, they are acceptable.

5.3. Third assumption replication
Interior environment parameters and transitions impact to suitable performance in project.

According to performed computations and studies, in third assumption test, its identified that interior environmental parameters and transitions variable in project on suitable performance variable, project elements and finally its four elements factors (I.e time, cost, physical development and flexibility) by considering to acceptable relationship power among variables and their correlation meaningful. By consider to performed research background, they are acceptable.

5.4. Forth assumption replication
Project execution duration impacts to suitable performance in execution project.

According to performed computations and studies, in forth assumption test chapter 4, its identified that project execution duration variable in project on suitable performance variable, project elements and finally its four elements factors (I.e time, cost, physical development and flexibility) by considering to acceptable relationship power among variables and their correlation meaningful. By consider to performed research background, they are acceptable.

5.5. Fifth assumption replication
Project execution cost impacts to suitable performance in execution project.

According to performed computations and studies, in fifth assumption test chapter 4, its identified that project execution cost variable in project on suitable performance variable, project elements and finally its four elements factors (I.e time, cost, physical development and flexibility) by considering to acceptable relationship power among variables and their correlation meaningful. By consider to performed research background, they are acceptable.

5.6. General conclusion
By considering to five- factors assumptions tests and measuring suitable structure performance in project execution by four factors, time, cost, physical development and flexibility, its obvious that relationship among them is causal, I.e high-rise building project executor proficiency, exterior environment parameters, interior environment parameters, duration and project execution cost are acceptable by suitable performance and its value is considerable. Moreover, its coefficient is meaningful. By studying high- mentioned items, its identified that casual variables impact to suitable performance in project execution. This item is acceptable and doesn’t conflict to performed research background.

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