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# An Analysis of the Project Management, Leadership and Skills: A Case Study

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**Abstract:** *This paper discusses important aspects of projects under the Project Management, Leadership and Skills: Planning and Control section of the project. This paper consists of three parts. Part one is about development of network diagram to establish the logic of the project with detailed explanation about advantage of using critical path analysis as well as detailed justification for using constraint (resource & time) for renovation of house plan project. Under part two of the paper, a project risk management plan with justification for the risk score and identification of opportunities by considering top five risks which shall be relevant to the house renovation project have been detailed. part three of the paper discuss the motivation and leadership relationship by identifying various theories. By using a case example, recommendation is provided regarding employee motivation through identified motivation and leadership theories to improve the employee's job performance and achieve the project goal within planned time and budget.*

**Keywords:** analysis, project management, leadership, skills

## INTRODUCTION

In part one of this paper the project execution logic is defined by development of network diagram using activity on network (A-O-N) as per the Precedence Diagram Method (PDM) and later forward pass and backward pass is used to calculate the float so that the minimum time during which the project can be completed in the critical path is determined. Under the next section, the advantage as well as disadvantages of using critical path method is critically analysed. Detailed justification for using resource constraint of two teams with time constraint of six weeks is justified based on result received after development of the network diagram using critical path method for Renovation of house plan project.

In part two of the paper, risk management plan for the house renovation project is prepared by identifying five relevant risks. Risk analysis & risk score justification is provided by using numerous literature review and accordingly risk management strategies: monitoring & control is devised. Lastly, possible opportunities within five identified risks has been discussed.

Part three of the paper is about leadership and motivation. Under this section, theories related to leadership and motivation have been reviewed. The case study of Kevin, who is a retired ex-lecturer in project management but hired to work as project team member for the house build project, having lack of motivation leading to collapse of his career and posing significant threat to the project success is performed. Hence, the need for identification

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of the possible reasons behind his lack of motivation are analysed and recommended ways to motivate Kevin are suggested.

## Development of Network diagram with critical path analysis

The project plan is devised with the help of A-o-N technique. The work breaks down structure is used for identification of integral activities, the activity sequence and the estimated activity duration. The project manager is able to develop a diagram of the logic of the project once it is identified. The activities can thereafter be analysed effectively.

**A. Developing level-4 activities:** Each WBS of the project would be split into the level-4 activities.

**B. Estimate duration of each activity:** The duration for each activity is calculated by following method,

$$\text{Duration (D)} = \frac{O + 4L + P}{6}$$

( With 'O' being optimistic, 'L' being likely, and 'P' being pessimistic time)

**C. Logical sequencing of activities:** The activities are logically sequenced by assigning predecessors based on their technical dependencies.

**D. Draw the network diagram :** Activities are positioned in the form of 'Activity on Node' as per the Precedence Diagram Method (PDM) and are linked to each other via arrows according to their dependencies as shown in diagram 01. Duration is filled in the duration box for each activity. Next step is forward pass by using largest numbers for calculation of earliest start time (EST) and earliest finish time (EFT) by (EST+D=EFT). After that backward pass is initiated by using smallest numbers for calculation of latest start time (LST) and the latest finish time (LFT) by (LFT – D = LST). Lastly the float is calculated by (LST – EST = TF) to determine the minimum time in which the project can be completed in the critical path.

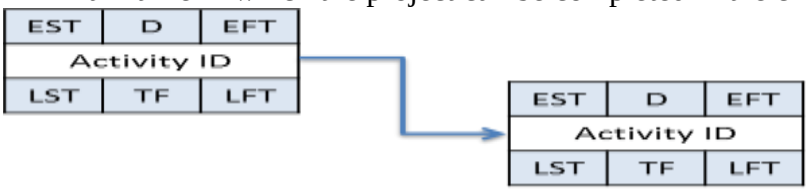


**Diagram 01 -Network diagram (Precedence Diagram Method)**

### Development of Network diagram for Renovation of house plan project

The network diagram is developed by using the above-mentioned procedure, since the activities breakdown along with estimated duration has already been calculated by the property owner, therefore the tasks that need to be performed are logical sequence of activities with assignment of predecessor and development of network diagram.

- **Logical sequence of activities (assignment of predecessors):** The below chart displays the logical sequence of activities with their predecessors. The sequence is developed considering two teams.

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| Act. ID | Activities | Dur. (days) | Week-1 | | | | | | | Week-2 | | | | | | | Week-3 | | | | | | | Week-4 | | | | | | | Week-5 | | | | | | | Week-6 | | | | | | | Precedent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Mon | Tues | Wed | Thur | Fri | Sat | Sun | Mon | Tues | Wed | Thur | Fri | Sat | Sun | Mon | Tues | Wed | Thur | Fri | Sat | Sun | Mon | Tues | Wed | Thur | Fri | Sat | Sun | Mon | Tues | Wed | Thur | Fri | Sat | Sun | Mon | Tues | Wed | Thur | Fri | | |
| A1 | Internal structural work | 7 days | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | None |
| A2 | Substantial repairs to the roof | 5 days | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | None |
| A3 | Electrical work | 5 days | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | A1,A2 |
| A4 | Plumbing | 2 days | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | A1,A2 |
| A5 | Plastering | 3 days | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | A3,A4 |
| A6 | Installing a new kitchen | 3 days | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | A5 |
| A7 | Installing a new bathroom | 4 days | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | A5 |
| A8 | Internal decoration | 6 days | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | A6,A7 |
| A9 | Garden | 4 days | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | A10 |
| A10 | Change windows | 2 day | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | A4 |
| A11 | Fitting carpets | 2 day | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | A8 |
| A12 | Outside paintwork | 5 days | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | A10 |

Chart 01 -Logical sequence of activities for Renovation of house plan project

- **Network diagram:** Reference to the below network diagram, the critical activities and critical path are as follows: **A1-A3-A5-A7-A8-A11** (all activities with '0' total float) and the total minimum duration required to execute the house renovation project is **27 nos of days**.

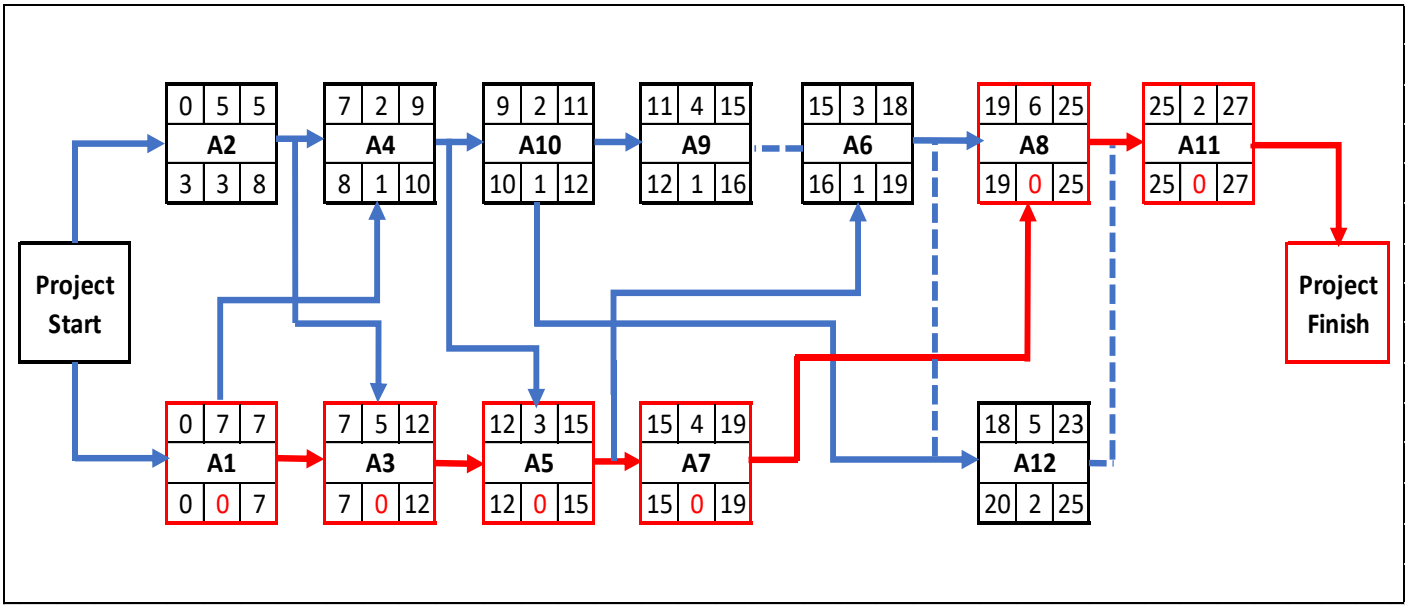


Diagram 02 -Network diagram for Renovation of house plan project

**Advantage of using critical path analysis for renovation of house plan project**

The prerequisites in strategic planning, scheduling and control of construction are knowledge of critical path and correct float data. This information is incumbent for project control otherwise all activities of the project schedule could be treated as a critical activity. The Critical path analysis would be helpful in identifying alternate paths that could be embarked on in order to minimize the obstacles that might come up while executing this house renovation project. It is also highly beneficial for the purpose of categorizing the non-critical activities and critical activities.

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Hegazy and Menesi (2010), advised that in projects that are small, and resource constrained, the setting of priorities for activities as well as minimum free float can be performed through CPM. It would, therefore, be highly advantageous to use the critical path analysis for renovation of house plan project as it is small and having constraint of time and resources. According to Stelth & Roy (2009), CPM also allows one to optimize the time-cost relationship, as project team can visually identify those activities that could create a problem if left unmanaged and unmonitored.

However, there are also some disadvantages with CPM, as project manager is generally focused on the variances and deviations of the activities from the original schedule, (Galloway, 2006), this this could result in project team tracking only those activities that are on the critical path resulting in negligence of non-critical activities thereby turning them critical. Another limitation that can be identified with the CPM is that it does not focus on the uncertainties in activities and their duration: therefore, it is deemed unfit for those projects which require multitasking and have hundreds of dependencies (Hegazy and Menesi, 2010).

**Detailed justification for using constraint for renovation of house plan project**

Application of resource constraints is needed in construction scheduling for it to be realistic, as resources are highly limited in construction projects. Reference to network diagram in section 1.1, it can be concluded that by applying the constraint of only two workers and the deadline of six weeks the project can be achieved in less than six weeks.

The two main concerns in any construction project are basically cost and time. If resources assigned to an activity are increased, the time period required to complete it would be reduced but this would result in increased cost (Zhang and Li, 2010). But there might be some drawbacks due to constraint, for e.g., if a project is experiencing resource constraint, this would lead to critical tasks forming a critical sequence, as emphasised by Rivera and Duran, (2004). Research has also proven that various mathematical models are instrumental in achieving time-cost optimisation.

One such model is presented by Que (2002). This approach performs optimisation based on the genetic algorithm (GA) that is practical in solving real-world problems. A hybrid approach presented by Feng et al. (2000) uses a combination of genetic algorithms and simulation techniques for resolution of the problems concerning time-cost trade-off under uncertainty

## Risk management for the renovation of house plan project

The construction phase of house renovation project can involve significant hazards and risks. The possibility of complications arising during the execution of a project that might threaten project objectives is termed as risk (Houston, 2004). The dynamic and complex environment of construction projects make them vulnerable to risks (Adedokun et al., 2019).

**Risk identification & response**

The table below identifies five major risks related to the house renovation project:

Table 01 -Risk identification & response

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| Risk No | Risk Description | Risk Response |
|---|---|---|
| 1 | Delay in payments | Risk avoidance |
| 2 | Tight project schedule | Risk acceptance |
| 3 | Scope Creep | Risk mitigation |
| 4 | Time & Cost overrun | Risk avoidance |
| 5 | Health, Safety & Environmental issues | Risk mitigation |

**Risk analysis & risk score justification**

**Risk register:** The below table is the risk register for the house renovation project:

Table 02 -Risk register

| Risk No | Risk Description | Probability | | Impact | | Risk Score | Risk Assessment | Risk Response |
|---|---|---|---|---|---|---|---|---|
| 1 | Delay in payments | 5 | Very high | 5 | Very high | 25 | Very high | Risk avoidance |
| 2 | Tight project schedule | 4 | High | 5 | Very High | 20 | High | Risk acceptance |
| 3 | Scope Creep | 4 | High | 3 | Medium | 12 | Medium | Risk mitigation |
| 4 | Time & Cost overrun | 2 | Low | 4 | High | 8 | Medium | Risk avoidance |
| 5 | Health, Safety & Environmental issues | 1 | Low | 5 | Very high | 5 | Low | Risk mitigation |

**Risk Analysis:** The below chart is used for risk scoring:

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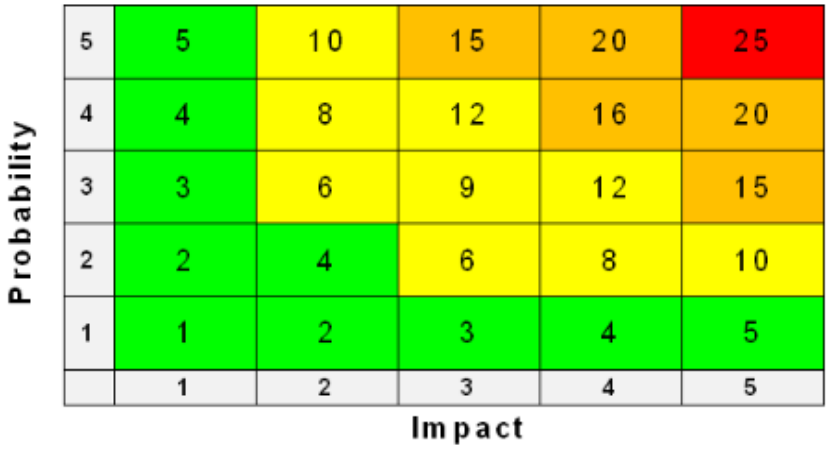


**Chart 02-Risk analysis**

**Risk score justification:**

**Delay in payments:** Delay in payments can threaten the overall productivity and efficiency of an industry (Cheng et al., 2009). Research performed by Rostami, A., and Oduoza, C. F. (2017), revealed that 14 out of 16 construction projects identified delay in payment by client as the key risk in project. The study further suggested that 88% of contractors' experience payment delays in their projects. Cash flow problems can arise from delay in payments.

**Tight project schedule**: (Zou et al., 2007), mentions that time is considered as money in construction projects, therefore clients expect projects to be completed very quickly but they do not consider the nature and processes of construction activities. This factor poses as a serious risk to projects making it incumbent to devise a functional schedule that would allow enough time for the accommodation of all construction activities.

**Scope creep:** Scope creep is acknowledged to be a significant risk in construction projects resulting from variations by stakeholders. Redirection of work due to change orders can cause disruptions resulting in increased work duration which can adversely affect labour productivity and procurement activities. The results obtained by Assaf and Al-Hejji (2006) and Goh and Abdul-Rahman (2013), confirmed the negative impact created by frequent change orders requested by stake holders.

**Time & Cost overrun:** Cost overrun issue is increasingly becoming a cause of concern owing to dynamism and complexity of projects in construction. Doloi (2012), indicated that the critical parameters used in the measurement of success in delivery of project are cost and time.

**Health, Safety & Environmental issues:** Due to manpower constraint (only 2 workers assigned), there can be threat from worker getting injured or sick while at work. Environmental issues in the construction projects like hostile weather conditions, unanticipated conditions on site and issues with neighbors, changes in regulatory bodies etc. are generally outside the control of project teams and could adversely affect the performance of project

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(Assaf and Al-Hejji, 2006; Sambasivan and Soon, 2007). However, the probability of such an occurrence is low hence it is ranked low.

**Risk management strategies: monitoring & controls**

Researchers worldwide agree that an important element of project risk management is the selection of appropriate risk response strategy. Satyendra and Niranjan (2011) opine that practical experience and training in risk management techniques is mandatory to be able to balance the cost that could incur from the management of risk in comparison to the expected benefits from risk.

**Following are risk management strategies:**

**Delay in payments:** this risk can be avoided by putting payment delay clause in contract. According to Varma, M.K. and Shukla, A. (2020*), the Contractor may request the client to put the Standard Clauses for Delay in Payment such as referred in Fidic which will help to seek the compensation in the form of financing charges compounded on per month basis during the total delay duration.*

**Tight project schedule:** this risk can be accepted if the project management team pays close attention to not only the original baseline schedule critical path but also all other paths close to zero total float which might become critical. Preplanning will also help to avoid tight project schedule related risk as meticulous planning can decrease the probability of project delay.

**Scope creep:** this risk can be mitigated by contingency fund. Lee et al. (2017), propose allowing reserves during the bidding stage to mitigate scope creep, a contingency reserve for the purpose of covering potential changes and a management reserve to deal with unexpected changes.

**Time & Cost overrun:** this risk can be avoided by adopting various techniques and models. Fang et al. (2013), proposed an integrated decision support system (DSS) for the purpose of controlling cost overrun in construction, while a new fuzzy logic model containing features of strategic cost and time estimates at completion has been introduced by Naeni et al. (2014). The use of EVM concept has been advised by Najafi and Azimi (2016).

**Health, Safety & Environmental issues:** this risk of health can be mitigated by giving attention to the welfare of the workers. Safety related risk can be mitigated by implementation of Safety plan and trainings. To mitigate the risk arising from environmental issues, efforts must be made to minimize the noise pollutions through the use of equipment that would create less noise and avoidance of activities that could harm the environment.

**Opportunities discussion**

The multifaceted concept of risk is a source of concern for organisations. As risks are unavoidable in the construction industry and tend to be present during the project's life cycle, it is imperative for the organisations to manage them proactively (Goh et al, 2013; Zhao et al, 2013). Risk does not always result in negative outcomes, there's also a possibility of positive outcome from risk in the form of opportunity.

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Tight project schedule with time & resource constraint risk can generate opportunity to complete the project within planned budget, however there is probability of risk if any of the workers fall ill or any safety hazard occurs. If these opportunities are seized, they can create value for the project in the form of time and money saving. In spite of this, people tend to view risks as an unpleasant occurrence (Baloi and Price, 2003).
Scope creep also can turn in profitable if it is out of scope and was not defined properly in contract and that could be subject to successful negotiation with client.

## Leadership and Motivation

### Review of theory relating to leadership and motivation

The concept of motivation is characteristically multifaceted. It may be considered as a consequence of the interaction between internal psychological developments and the individual's external environment. The differentiation between extrinsic and intrinsic motivation is performed remarkably well by the cognitive evaluation theory (CET) and self-determination theory (SDT) (Deci & Ryan, 2008). Tasks performed for the sake of their inherent satisfaction may involve the core procedure of intrinsic motivation while tasks performed for the realisation of a distinguishable anticipated result are an outcome of extrinsic motivation.

The intensity, direction and persistence in the performance of behaviour is guided by motivation (Deci et al., 2017). The research by Gagne´ and Deci (2005) has proved that employees who are intrinsically motivated are more efficient in their job performance and have a higher rate of goal attainment as compared to those employees whose level of intrinsic motivation is low, it is also supported by Lee and Raschke, (2016). When leaders display empathy and effectively manage relationships, employees are more likely to find work intrinsically motivating because their three innate psychological needs, competence, autonomy, and relatedness, are met (Gagne and Deci, 2005), which results in enhanced performance, persistence, and creativity (Deci and Ryan, 2008).

Leadership is an activity that influences people, so the people want to work together to achieve the desired goals (P. Lok and J. Crawford, 2003). From this theory it can be concluded that leadership is an art owned by a leader in influencing the behavior of subordinates. It is the responsibility of the leaders to motivate their team. Jogulu (2010) noted that as the organisation's culture changes, it brings a change in leadership style. This view is also supported by Sabir et al. (2011), who further added that leadership style also impacts culture. It has also been proven by Zabihi and Hashemzehi (2012), that leadership style has significant impact and partially influence the employee behaviour.

### Identification of possible reasons behind Kevin's lack of motivation

**Lack of people skills and social skills (soft skills):** Although Kevin is very good in solving technical project problems due to his vast academic experience in Project management subject area, it implies that he is possesses good hard skills, but he tends to lack people skills and social skills (soft skills). He seems to be finding it difficult to work in team and is therefore giving constant negative feedback on his co-workers.
**Lack of work disciplines and less conducive work environment**: As Kevin was previously an academician, he was used to dealing with students and receiving utmost respect and esteem. After being appointed in the house build team, Kevin is finding it difficult to adjust with his co-workers due to the work discipline as well as less conducive work environment. He continues to expect the similar behaviour from his co-workers which he got

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from his students, leaving him frustrated. Pawirosumarto et al. (2017), emphasized the positive impact of a conducive work environment on work continuity while warning about the negative effect of less conducive environment on work continuity of employee.

**Leadership issues:** lack of appreciation from the leader can demotivate the team. Absence of proper leadership and motivation reduces the efficiency of employees. The problem with Kevin's team could be ineffective leadership. Hersona, S. and Sidharta, I. (2017), have stressed the fact that employee performance is significantly influenced by motivation, leadership function and work discipline. This theory is further confirmed by the research of Lutfi, Rivai, A., & Widodo, D. S. (2018) and Shokory et al., (2019). The research of Natsir, Riduwan, & Ujianto (2018), however, presents a different view stating that leadership style had no significant impact on employee performance.

**Recommended ways to motivate Kevin**

As discussed in the section 3.2 that Kevin has lack of people skills and social skills (soft skills), therefore the management needs to understand and identify this fact and arrange necessary training to restore his lack of motivation. Employees who have high work motivation will affect the performance of other employees (Ronny and Susanti, 2019). According to Purba, k. and Sudibjo k. (2020), to increase work motivation; management better understands the needs of each member in accordance with the conditions and situation of each so that they are able to design work programs that can motivate employees to work more optimally.

The potential of improvement in employee performance lies in strategic leadership, effective motivation of employee and work discipline. If a leader succeeds in influencing his team with his vision and being an inspiration and respecting his team members, he can be sure that employees will work sincerely and honestly for the company so that their performance increases. Leadership style is one of the basic factors influencing employee attitudes in organizations. Businesses must ensure that the leaders possess leadership style that is suitable for the requirements of the organization.

Solid, interaction with subordinates also leads to the creation of the concept of partnership for each employee and will groom employee behaviour and this will lead to improvement in the performance and behaviour of Kevin.

## CONCLUSION

After discussing the development of Network diagram with critical path analysis which is presented in the part one of this paper and by performing risk analysis for the Renovation of house plan project which is presented in part two and after that discussing the leadership and motivational theory in the part three of this paper, it is concluded that the role of employee's motivation and effective leadership play significant importance towards the successful completion of the project. Project might not yield as planned in spite of proper monitoring & control as well as by implementing effective risk management plan unless employees are motivated and supported by strategic leadership possessing hard skills as well as soft skills.

## REFERENCES

Adedokun, O.A., Aje, I.O. and Agboola, O.J. (2019), "Investigation into the severity of factorspredisposing", Journal of Building Performance, Vol. 10 No. 1,

Received: 20th June, 2025: Revised: 23th April, 2026;

Accepted: 5th May, 2026; Published 15th May ,2026

Assaf, S. and Al-Hejji, S. (2006), "Causes of delay in large construction projects", International Journal of Project Management, Vol. 24 No. 4,

Baloi, P., & Price, A. (2003). Modeling global risk factors affecting construction cost performance. International Journal of Project Management , 21(4),

Cheng, T., Soo, G., Kumaraswamy, M. and Jin, W. (2009), "Security of payment for Hong Kong construction industry – workable alternatives and suggestions", Building Journal Hong KongChina, Trend Publishing (HK) Ltd.

Deci, E. L., Olafsen, A. H., and Ryan, R. M. (2017). Self-determination theory in work organizations: the state of a science. Annu. Rev. Organ. Psychol. Organ. Behav. 4, 19–43.

Deci, E. L., & Ryan, R. M. (2008). Self-determination theory: A macrotheory of human motivation, development, and health. Canadian Psychology/Psychologie Canadienne, 49(3)

Doloi, H. (2012), "Understanding impacts of time and cost related construction risks on operational performance of ppp projects", International Journal of Strategic Property Management,Vol. 16 No. 3,

Fang, C. and Marle, F. (2013), "Dealing with project complexity by matrix-based propagation modelling for project risk analysis", Journal of Engineering Design, Vol. 24 No. 4,

Feng, C-W., Liu, L. and Burns, S-A. 2000: Stochastic construction time-cost trade-off analysis. Journal of Computing in Civil Engineering 14 (2)

Galloway, P. (2006), "Survey of the construction industry relative to the use of CPM scheduling for construction projects" Journal of Construction Engineering and Management, 132(7),

Gagne´, M. and Deci, E.L. (2005), "Self-determination theory and work motivation", Journal of Organizational Behavior, Vol. 26 No. 4,

Goh, C. and Abdul-Rahman, H. (2013), "The identification and management of major risks in the Malaysian construction industry", Journal of Construction in Developing Countries, Vol. 18, No. 1,

Goh, C. S., Abdul-Rahaman, H., & Abdul Samad, Z. (2013). Applying risk management workshop for public construction projects: case study. Journal of Construction Engineering and Management, 139,

Hersona, S. and Sidharta, I. (2017)." Influence of leadership function, motivation and work discipline on employees' performance". Journal of Applied Management (JAM) Volume 15 (3)

Hegazy, T. and Menesi, W. (2010), "Critical path segments scheduling technique", Journal ofConstruction Engineering and Management,136(10),

Houston, M.B. (2004), "Assessing the validity of secondary data proxies for marketing constructs",Journal of Business Research, Vol. 57 No. 2,

Jogulu, U. D. 2010. " Culturally Linked Leadership Style. "Leadership and Organizational Development Journal 31(8),

Lee, K.P., Lee, H., Park, M., Kim, D.Y. and Jung, M. (2017), "Management-reserve estimation for international construction projects based on risk-informed k-NN", Journal of Management in Engineering, Vol. 33 No. 4,

Lee, M.T. and Raschke, R.L. (2016), "Understanding employee motivation and organizational performance: arguments for a set-theoretic approach", Journal of Innovation & Knowledge,Vol. 1 No. 3,

Lutfi, Rivai, A., & Widodo, D. S. (2018). Effect of Work Discipline and Leadership Style On The Performance Of Employees Motivation As Variable Mediation In Office Ministry Of Justice And Human Rights Bangka Belitung Indonesia. International Journal of Engineering and Science (IJES), 7(7),

Naeni, L.M., Shadrokh, S. and Salehipour, A. (2014), "A fuzzy approach for the earned valuemanagement", International Journal of Project Management, Vol. 32 No. 4,

Najafi, A. and Azimi, F. (2016), "An extension of the earned value management to improve the accuracy of schedule analysis results", Iranian Journal of Management Studies, Vol. 9 No. 1, Natsir, M., Riduwan, A., & Ujianto. (2018). Employee Satisfaction and Performance: The Impact Analysis On Leadership, Work Motivation, Work Discipline And Compensation. IOSR Journal of Business and Management, 20(4),

Received: 20th June, 2025: Revised: 23th April, 2026;

Accepted: 5th May, 2026; Published 15th May ,2026

Pawirosumarto, S., Sarjana, P. K., & Gunawan, R. (2017). The effect of work environment, leadership style, and organizational culture towards job satisfaction and its implication towards employee performance in Parador hotels and resorts, Indonesia. International Journal of Law and Management, 59(6),

P. Lok and J. Crawford (2003). "The effect of organisational culture and leadership style on job satisfaction and organisational commitment A cross-national comparison," Journal of management development, vol. 23, no. 4,

Purba, K. and Sudibjo K. (2020), "The Effects Analysis of Transformational Leadership, Work Motivation and Compensation on Employee Performance in PT. Sago Nauli". Budapest International Research and Critics Institute Journal (BIRCI-Journal),Vol. 3 (3)

Que, B-C. 2002: Incorporating practicability into genetic algorithm-based time-cost optimization.Journal of Construction Engineering and Management 128 (2),

Rivera, F. A. and Duran, A. (2004) Critical clouds and critical sets in resource-constrained projects International Journal of Project Management, 22, 489,

Ronny, Yusuf Edward & Susanti. (2019). The Effect of Organizational Culture and Work Motivation on Employee Performance with Job Satisfaction as an Intervening Variable at PT. Berkat Bima Sentana. IOSR Journal of Business and Management. Vol 21, No.3

Rostami, A., and Oduoza, C. F. (2017), "Key risks in construction projects in Italy: Contractors' perspective," Engineering, Construction and Architectural Management, vol. 24, no. 3,

Sabir, M.S, Sohail, A & Khan, M.A. 2011. "Impact Leadership Style on Organization Commitment: InA Mediating Role of Employee Values." Journal of Economics and Behavioral Studies, 3(2)

Sambasivan, M. and Soon, Y. (2007), "Causes and effects of delays in Malaysian construction industry", International Journal of Project Management, Vol. 25 No. 5,

Satyendra, K.S. and Niranjan, S. (2011), "Risk management in construction projects", Asia PacificJournal of Management Research and Innovation, Vol. 7 No. 3,

Shokory, S. M., Hamid, S. A., Awang, M., & Hudin, N. S. (2019). The Impact of the Leadership of the Head of Department on Administrative Staff's Performance in Malaysian Premier Education University. International Journal of Academic Research in Business and Social Sciences, 9(3),

Stelth, P. and Roy, G. L. (2009)." Projects' Analysis through CPM (Critical Path Method)". School of Doctoral Studies (European Union) Journal - No. 1,

Varma, M.K. and Shukla, A. (2020). "Financial Risks Mitigation for Greenfield InfrastructureContracts". International Journal of Recent Technology and Engineering (IJRTE) 8 (5),

Zabihi, M. & Hashemzehi, R. 2012. "The Relationship Between Leadership Styles and Organizational Citizenship Behavior." African Journal of Business Management 6(9),

Zhang, H. and Li, H. (2010), "Multi-objective particle swarm optimization for construction time cos Trade off problems", Journal of Construction Management and Economics, Vol. 28 No. 1,

Zhao, X., Hwang , B.-G., & Low, S. (2013). Developing fuzzy enterprise risk management maturity model for construction firms. Journal of Construction Engineering and Management., 139,

Zou, P.X.W., Zhang, G. and Wang, J. (2007), "Understanding the key risks in construction projects inChina", International Journal of Project Management, Vol. 25 No. 6