Leadership Style of Project Manager and Team’s Work Environment In An Information Technology Project: Study Case In PT XYZ

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Project manager’s leadership style was the main focus in this research that had influences on leadership outcome (effectiveness, extra effort, and satisfaction). Based on personal interview with 14 employees in PT XYZ, they perceived that there were some problems toward their project managers. This research was addressed to examine the leadership styles of project managers and the outcome related to their leadership styles in this company and also to see the characteristic of the team’s current work environment while they were in the software development project. The data were collected using questionnaires, Multifactor Leadership Questionnaire (MLQ) and Work Environment Scale (WES). The result of leadership style was the project manager implemented idealized behavior, idealized attribute and management by exception active as perceived by the team members. The leadership trait that was the most significant in influencing the outcome, effectiveness, was laissez-faire (negative). The most significant in influencing the outcome, extra effort, was individualized consideration. The most significant in influencing the outcome, satisfaction, was idealized behavior. The work environment perceived by the team members was characterized by relationship dimensions (involvement, peer cohesion, and supervisor support) and some personal growth dimensions (autonomy and work pressure).

Keywords: Leadership, Multifactor Leadership Questionnaire, Work Environment Scale, IT Project, Project Manager Leadership

BACKGROUND

PT XYZ, an Information Technology (IT) company is having internal issues in project management that sometimes makes its clients unsatisfied, and creates bad perceptions for its employees. This problem could possibly make this company cannot optimize its business in software development project because of project delivery and even project failure. Project delivery and project failure made the clients unsatisfied and created bad perceptions for employees of PT XYZ.
Based on personal interview with 14 employees, some of them had certain expectation through software development project they involved. For example in a project that would implement new technology, the employee involved in the project would be challenged to explore more about the technology. When the project is successfully deployed, the employee will gain achievement for his/her career, while project failure gives him/her no achievement.

In project delivery or even project failure, the management tended to blame the programmers. They said that programmers did not perform well. It was very rare that the management evaluated the project managers as the leader of software development project. On the other words, the management rarely realized the role of project managers in leading the team members.

From those happenings, the employees felt disappointed of management’s one-sided judgments. There were not few of them chose to resign because of this issue. Thus employee turnover was quite high in a year which most of them were programmers.

In a software development project, a project manager is assigned by the company to lead the project to success. The project manager is the one who responsible in managing the project team as a whole; directing them to achieve goal, taking decisions, and monitoring the project continuously (PMI, 2008). Managing a project team is different from managing team in usual business activity because sometimes it needs different approach to match the project’s characteristics which are temporary and unique (PMI, 2008). A leadership is one of important interpersonal skills that a project manager must have in effectively managing the project (PMI, 2008).

Project manager as the top leader must have competencies on hard skills and soft skills (Smith, D.C., Bruyns, M., & Evans, S., 2009). According to Arnold (2008), Fielder (1967), Krahn (2005), Pinto et al. (1998), Reilly (2007), Turner & Muller (2006), Shenhar et al. (2007b), Shi & Chen (2006), Slevin & Pinto (1991), Williams (1989), an environment that is created where project succeed is when the leadership element is included in the project itself and implemented in the proper way in practices and strategies (Toth, 2011, p.3).

This research will focus on the leadership style of project managers at PT XYZ and the outcomes of leadership style based on Bass’ and Avolio’s theory. And this research will also give some findings about the work environment from subordinates’ point of view while they are in the software development project team. These two kinds of things, however, cannot be correlated to each other because of different scales in measurement.

**Problem Identification**

PT XYZ is now bigger than the previous year. It is shown by increasing number of employees from 190 to 300 employees this year. The number of programmers is increasing as well, from 23 to 54 programmers. And the number of project managers is increasing from 4 to 7 project managers. However, there was no special attention from PT XYZ about project manager’s leadership. In this case, the problems occur when we are in a project management life cycle where a project manager cannot drive the team properly and sometimes lose the control of it. The research will discuss about the common leadership behavior of project
manager in this company as the top leader from a functional structure.

Based on personal interview with 14 employees, there were some negative judgments from the employees about their project manager in this company. Some of employees perceived that their project manager only gave orders while the team took the orders like in a restaurant; some project managers could not firm on some decision-making to avoid wrong decision, thus they asked the team to make a decision; some project managers assume that each developer can do the tasks without making mistakes.

Those negative judgments above showed that the employees had a negative perception toward their project managers. This research is going to find out how leadership traits of project managers influence the outcomes, and what the outcomes are available in this study.

RESEARCH OBJECTIVE

This research will give result of leadership styles of project managers in the company and the related outcomes that gives benefits to the company for a better management in software development projects.

RESEARCH METHODS

The team members (programmers, system analysts, testers, and technical writers) will be given this questionnaire (MLQ) to rate their project managers as a leader in a project. At the same time, they will also be given another questionnaire (WES) to assess their work environment during working together with the project managers.

Leadership Style

Leadership styles that are used in this research are proposed by Bernard M. Bass and Bruce J. Avolio in the Multifactor Leadership Questionnaire (MLQ Form 5X-Short). The leadership styles are Transformational Leadership Style (Idealized Influence, Inspirational Motivation, Intellectual Stimulation, and Individualized Consideration) and Transactional Leadership Style (Contingent Reward, Management by Exception and Laissez-Faire). The outcomes measured according to MLQ are Extra Effort, Leader’s Effectiveness, and Subordinates’ Satisfaction (Bass & Avolio, 2004).

According to Avolio (1996), the leadership styles have evolved following the nature of the relationship between leaders and followers (Ng, & Walker, 2008, p.406) as shown in Figure 1. It can be concluded that leadership style could be shaped by leaders’ behavior and followers’ perceptions. Starting from Laissez-Faire where someone avoids of being a leader, then moving through Passive Management-by-Exception and Active Management-by-Exception. In Management-by-Exception, a leader will only intervene when something is not going right. From this Management-by-Exception, leadership style then moves to
Constructive Transaction where roles are well-defined, then moving through more complex style that considers many aspects in the relationship of leaders and followers, 4Is. The 4Is or could be said as Transformational consists of idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration. This research only focuses on the transformational leadership, transactional leadership, and laissez-faire.

4Is

- **Idealized Influence**: Articulating the future desired state and a plan to achieve it
- **Inspirational Motivation**: Questioning the status quo and continuously innovating, even in the face of success
- **Intellectual Stimulation**: Encouraging people to develop and achieve their full potential
- **Individualized Consideration**: Managing by exception (active) - Scrutinizing for what's done wrong, not what's done right

Source: Avolio (1996)

**Figure 1. Leadership Style Progressions**

Work Environment

Work environment in this research refers to the social environment or work settings proposed by Rudolf H. Moos in his Work Environment Scale (WES). The dimensions of work environment are relationship dimensions, personal growth or goal orientation dimensions, and system maintenance dimensions (Moos, 2008).

Relationship dimensions explain about the relationship among the employees and the commitments of the employees (Moos, 2008). The relationship among the employees shows how is communication happens between each other and how supportive are they to each other. Personal growth or goal orientation dimensions explain about employees’ perception about the task assigned to them and how they would be encouraged to do the task (Moos, 2008). And system maintenance dimensions explain about the rules and policies communicated among the employees, and the physical comfort of work environment (Moos, 2008). Managers and supervisors are responsible to create a good work environment to keep motivating the workforce (Al-Anzi, 2009), so that the employees will somehow enjoy to their work environment.

However, the relationship among employees is one of the factors influencing the success of project management based on the study of Dwivedula & Bredillet (2009). The study was about the relationship between work motivation and project management success. Work climate, one of work motivation’s dimensions, was more about formal and informal communication in the project team. And project management success’ dimensions were customer satisfaction, implementation success, and project quality. The study found that work climate has become a strong predictor of customer satisfaction and project quality.

According to Al-Anzi (2009), Robert Half International Inc. surveyed that one-third of executives now say that the most critical factor in keeping an employee satisfied in today’s business world is the work environment. The employee turnover is expected to be reduced if the management could provide a good work environment to the employees, by not ignoring the other factors such as praise and recognition, as well as compensation and benefits.

As quoted from Barry L. Brown, President of a Florida-based consulting group, a supervisor behavior will impact to the subordinates’ productivity that a good supervisor will motivate, inspire, encourage and reward good performance
while the opposite will not (Al-Anzi, 2009). A happy employee usually has a positive attitude that triggers him to do an extra effort to maximize his contribution. And the working condition is one factor that can make employee happy in doing their activities for the company.

**Multiform Leadership Questionnaire (MLQ)**

The Multiform Leadership Questionnaire (MLQ Form 5X-Short) is one of research instruments that are used to measure the leadership styles. The MLQ Form 5X was purchased from MindGarden. This questionnaire was developed by Bernard M. Bass (1985) of the Center for Leadership Studies at Binghamton University. The MLQ helps individuals discover the characteristics of a transformational leader and measure it up within 15 minutes completion (MindGarden, 2012a). The participants of this questionnaire will indicate how frequently their superior display in each item, and the answer will be scaled from 0 (means “not at all”) to 4 (means “frequently, if not, always”).

There are two MLQ (5X-Short) forms available to measure the leadership styles and leadership outcomes, a rater form and a leader form. The rater form is used to assess leadership style of a leader from a subordinate and the leader form is used to assess leadership style of a leader from his/her self on a leadership style constructs. The form used in this research was the rater form to assess leadership style of project manager from his/her team members.

According to MindGarden (2012a), the MLQ evaluates different type of leadership styles that is shown in table 1. There is one sample of statement for each style quoted from the MLQ as shown in table 1.

<table>
<thead>
<tr>
<th>Description</th>
<th>Example Statement</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Transformational Leadership</strong></td>
<td></td>
</tr>
<tr>
<td>Idealized attributes</td>
<td>Instills pride in me for being associated with him/her</td>
</tr>
<tr>
<td>Idealized behaviors</td>
<td>Talks about their most important values and belief</td>
</tr>
<tr>
<td>Inspirational motivation</td>
<td>Talks optimistically about the future</td>
</tr>
<tr>
<td>Intellectual stimulation</td>
<td>Re-examines critical assumptions to question whether they are appropriate</td>
</tr>
<tr>
<td>Individualized consideration</td>
<td>Spends time teaching and coaching</td>
</tr>
<tr>
<td><strong>Transactional Leadership</strong></td>
<td></td>
</tr>
<tr>
<td>Contingent reward</td>
<td>Provides me with assistance in exchange for my efforts</td>
</tr>
<tr>
<td>Management-by-exception (active)</td>
<td>Focuses attention on irregularities, mistakes, exceptions, and deviations from standards</td>
</tr>
<tr>
<td><strong>Passive/Avoidant</strong></td>
<td></td>
</tr>
<tr>
<td>Management-by-exception (passive)</td>
<td>Fails to interfere until problems become serious</td>
</tr>
<tr>
<td>Laissez-faire</td>
<td>Avoids getting involved when important issues arise</td>
</tr>
</tbody>
</table>
The MLQ has been used in many researches in military, government, educational, manufacturing, high technology, church, hospital, and volunteer organizations for the last 25 years. It has been reliable to differentiate the effective leaders from ineffective leaders (Bass & Avolio, 2004).

### Work Environment Scale (WES)

The Work Environment Scale (WES) is a research instrument developed by Rudolf H. Moos in 1994, which is used to measure the employees’ current work environment from their perception. The WES was purchased from MindGarden. This instrument measures the productivity, employee’s satisfaction, and employee’s expectations to their current work environment (MindGarden, 2012b). The participants of this questionnaire will indicate how their work environment is displayed in each item, and the answer will be true or false.

The WES by default has three kinds of forms: the Real Form (Form R), the Ideal Form (Form I), and the Expectations Form (Form E). Form R is used to measure employees’ perceptions of their current work environment; Form I is used to measure employees’ perceptions of their ideal work environment; and Form E is used to measure employees’ perceptions of their expectations about the work environment (Moos, 2008). In this research, the researcher intended to assess only the current work environment (Form R) perceived by the employees’ while they were working with their project manager.

According to MindGarden (2012b), the WES measures 10 subscales that each subscale is grouped into 3 dimensions: Relationship, Personal Growth or Goal Orientation, and System Maintenance and System Change as pointed below and the sample of statement for each subscale (Form R) is shown in table 2.

<table>
<thead>
<tr>
<th>Relationship Dimension</th>
<th>Personal Growth/Goal Orientation Dimension</th>
<th>System Maintenance and System Change Dimension</th>
</tr>
</thead>
<tbody>
<tr>
<td>Involvement: the measurement of employees’ commitment and concern to their jobs.</td>
<td>Autonomy: the chance for employees to be self-supporting to make their own decision.</td>
<td>Clarity: how the employees understand about what to expect in their daily routine and their outcomes of leadership.</td>
</tr>
<tr>
<td>Coworker Cohesion: the relationship among employees in a work setting to support each other.</td>
<td>Task Orientation: the concern in making a good planning, efficiency in working, and getting the job done.</td>
<td></td>
</tr>
<tr>
<td>Supervisor Support: the relationship between management and employees.</td>
<td>Work Pressure: how the work pressure and time urgency dominate the work environment.</td>
<td></td>
</tr>
</tbody>
</table>

#### Outcomes of Leadership

<table>
<thead>
<tr>
<th>Extra effort</th>
<th>Satisfaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gets me to do more than I expected to do</td>
<td>Uses methods of leadership that are satisfying</td>
</tr>
</tbody>
</table>
understanding on the rules and policies.

• Control: how the employees respond to management’s rules and policies and how the management uses the rules and regulations to keep their employees under control.

• Innovation: the concern in variety, change, and new approaches in a work setting.

• Physical Comfort: the contribution of physical environment to the work environment.

Table 2. WES Sample Question (Form R)

<table>
<thead>
<tr>
<th>WES Subscale</th>
<th>Example Statement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Involvement</td>
<td>The work is really challenging</td>
</tr>
<tr>
<td>Peer Cohesion</td>
<td>People go out of their way to help a new employee feel</td>
</tr>
<tr>
<td></td>
<td>comfortable</td>
</tr>
<tr>
<td>Supervisor Support</td>
<td>Supervisors tend to talk down to employees</td>
</tr>
<tr>
<td>Autonomy</td>
<td>Few employees have any important responsibilities</td>
</tr>
<tr>
<td>Task Orientation</td>
<td>People pay a lot of attention to getting work done</td>
</tr>
<tr>
<td>Work Pressure</td>
<td>People pay a lot of attention to getting work done</td>
</tr>
<tr>
<td>Clarity</td>
<td>Things are sometimes pretty disorganized</td>
</tr>
<tr>
<td>Control</td>
<td>There’s a strict emphasis on following policies and</td>
</tr>
<tr>
<td></td>
<td>regulations</td>
</tr>
<tr>
<td>Innovation</td>
<td>Doing things in a different way is valued</td>
</tr>
<tr>
<td>Physical Comfort</td>
<td>It sometimes gets too hot</td>
</tr>
</tbody>
</table>

RESEARCH MODEL

The research model in this study is based on Avolio’s & Bass’ theory about leadership styles (transformational, transactional, and passive/avoidant) related to their outcomes (extra effort, effectiveness, and satisfaction) in Multifactor Leadership Questionnaire (MLQ).

This model is applied in the environment of project management especially Information Technology (IT) project management, where the leadership styles are measured from the project manager’s behaviors as perceived by the project team (subordinates). The outcomes of these leadership styles are the willingness of subordinates to exert extra effort, the perception of project manager’s effectiveness, and the subordinates’ satisfaction with the project manager. In this research model, each leadership styles dimensions will be the independent variables and each dimension of leadership outcomes will be the dependent variables.

Hypotheses were created to answer the research questions described in chapter I of this study as follows:

Extra Effort:

H₀: There are no leadership traits of project managers that influence team members’ exertion of extra effort, team members’ perception of their project managers’ effectiveness, team members’ satisfaction with their project managers.
H1: There are leadership traits of project managers that influence team members’ exertion of extra effort, team members’ perception of their project managers’ effectiveness, team members’ satisfaction with their project managers.

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**LEADERSHIP STYLE DIMENSIONS**

- Idealized influence (Attributes)
- Idealized influence (Behaviors)
- Intellectual stimulation
- Inspirational motivation
- Individual consideration
- Contingent reward
- Management by Exception (Aktive)
- Management by Exception (Passive)
- Laissez-faire

**LEADERSHIP OUTCOMES**

- Extra Effort
- Effectiveness
- Satisfaction

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**DISCUSSION ON LEADERSHIP STYLES AND OUTCOMES**

From descriptive statistics as shown in table 3, the three highest leadership traits in PT XYZ are identified as Idealized Attribute, Idealized Behavior, and Management by Exception Active. Idealized influence (attribute and behavior) dimension measures the leader’s social charisma that was perceived by the followers, and active management by exception dimension measures the leader’s action of problem occurs. The leader continuously monitors the follower and immediately takes action when a problem occurs.

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**Table 3. Leadership Style and Leadership Outcome in PT XYZ**

<table>
<thead>
<tr>
<th>Items</th>
<th>Mean</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Idealized Behavior (IB)</td>
<td>2.1800</td>
<td>High</td>
</tr>
<tr>
<td>Idealized Attribute (IA)</td>
<td>2.0750</td>
<td>High</td>
</tr>
<tr>
<td>Management-by-Exception Active (MA)</td>
<td>2.0500</td>
<td>High</td>
</tr>
<tr>
<td>Inspirational Motivation (IM)</td>
<td>2.0400</td>
<td>Low</td>
</tr>
<tr>
<td>Intellectual Stimulation (IS)</td>
<td>1.9500</td>
<td>Low</td>
</tr>
<tr>
<td>Contingent Reward (CR)</td>
<td>1.9250</td>
<td>Low</td>
</tr>
<tr>
<td>Management-by-Exception Passive (MP)</td>
<td>1.9150</td>
<td>Low</td>
</tr>
<tr>
<td>Individualized Consideration (IC)</td>
<td>1.8650</td>
<td>Low</td>
</tr>
<tr>
<td>Laissez-Faire (LF)</td>
<td>1.4700</td>
<td>Low</td>
</tr>
<tr>
<td>Extra Effort (EE)</td>
<td>1.9267</td>
<td>Low</td>
</tr>
<tr>
<td>Effectiveness (EF)</td>
<td>1.9550</td>
<td>Low</td>
</tr>
<tr>
<td>Satisfaction (SA)</td>
<td>1.7800</td>
<td>Low</td>
</tr>
</tbody>
</table>
In this research, the team member in a software development project perceived their project managers were a charismatic leader through their behaviors and attributes. It is considered as good since this idealized influence determines the quality of the project managers in PT XYZ in terms of charismatic aspect. The team members in a project have a big trust to their project managers in leading the software development projects. As a role model perceived by the team members, the project managers should be able to bring radical transformation in this company through charismatic leadership. Charismatic leaders really influence the followers in extraordinary way that inspired them with moral inspiration and purpose (Bass, 1990).

However, some project managers in PT XYZ were worried of project execution failure. They tended to continuously monitor the follower through weekly meeting with the team members or through online project management monitoring application (e.g. Redmine). Although there are many forms of monitoring behavior, monitoring term in management by exception active is defined as looking for mistakes and enforcing rules to avoid mistakes (Yukl, 2010).

A low interpretation of laissez faire behavior in this research is considered as good since laissez-faire leadership is only exercised by project managers who avoid from being a leader, leaving the responsibilities as a leader and avoid providing direction to team members. A project manager who practices this style often lets the team members take their own decisions to achieve goals. This kind of team members are usually highly motivated to do so and thus the existence of project manager is considered as unnecessary.

The project managers’ effectiveness as perceived by the team members indicates the project managers’ ability to meet the team members’ expectations and needs, to represent the team members to higher management, to lead the team, and to meet the company’s requirements. In this company, project managers tended to be more effective in meeting the team members’ needs related to work than in leading the team and in representing the team members to higher management (e.g. performance reports). In PT XYZ, project managers rarely give performance report of each team member to higher management. Thus, performance is less appraised objectively in this company. In addition to it, this company does not have exact measurement tool to measure the performance of its employees, especially programmers.

The team members’ extra effort indicates their willingness to do more than they expected to do, their desire to succeed, and their willingness to try harder. In PT XYZ, project managers tended to encourage the team members to try harder in doing their assignments in order to success. In encouraging the team members, project managers often delegate some critical assignments and sometimes express satisfaction to team members when they are success in achieving something. However the interpretation of extra effort was considered as low in this company.

The satisfaction outcome expressed the satisfaction of team members toward the project managers’ method of leadership and the project managers’ way of work with others. In this research, the team members in this company are mostly dissatisfied with the project managers’ method to guide and direct them in software development project.
Discussion on the Influence of Leadership Style Dimension to Leadership Outcome

The association between leadership styles and leadership outcomes could be analyzed using regression analysis. The influence of leadership style dimension to the first leadership outcome, extra effort is shown in table 4. It indicates that individualized consideration is the most significant variable that showed a strong significant influence to extra effort ($P < 0.05$). The association between individualized consideration and extra effort is significantly positive, which means that if the project managers exercise more individualized consideration then more extra efforts will be exerted by the team members.

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Std. Coef.</th>
<th>t</th>
<th>Sig.</th>
<th>Collinearity Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Tol.</td>
</tr>
<tr>
<td>1 (Constant)</td>
<td>-.349</td>
<td>.371</td>
<td>-.940</td>
<td>.353</td>
<td></td>
</tr>
<tr>
<td>Idealized Attribute (IA)</td>
<td>.234</td>
<td>.186</td>
<td>.189</td>
<td>1.259</td>
<td>.215</td>
</tr>
<tr>
<td>Idealized Behavior (IB)</td>
<td>.118</td>
<td>.171</td>
<td>.089</td>
<td>.692</td>
<td>.493</td>
</tr>
<tr>
<td>Inspirational Motivation (IM)</td>
<td>.237</td>
<td>.236</td>
<td>.186</td>
<td>1.004</td>
<td>.322</td>
</tr>
<tr>
<td>Intellectual Stimulation (IS)</td>
<td>.156</td>
<td>.171</td>
<td>.114</td>
<td>.909</td>
<td>.369</td>
</tr>
<tr>
<td>Individual Consideration (IC)</td>
<td>.418</td>
<td>.169</td>
<td>.382</td>
<td>2.478</td>
<td>.018</td>
</tr>
<tr>
<td>Contingent Reward (CR)</td>
<td>.223</td>
<td>.218</td>
<td>.200</td>
<td>1.022</td>
<td>.313</td>
</tr>
<tr>
<td>Management-by-Exception Active (MA)</td>
<td>-.216</td>
<td>.154</td>
<td>-.179</td>
<td>1.403</td>
<td>.168</td>
</tr>
<tr>
<td>Management-by-Exception Passive (MP)</td>
<td>-.068</td>
<td>.124</td>
<td>-.047</td>
<td>-.551</td>
<td>.585</td>
</tr>
<tr>
<td>Laissez-Faire (LF)</td>
<td>.076</td>
<td>.121</td>
<td>.053</td>
<td>.626</td>
<td>.535</td>
</tr>
</tbody>
</table>

Individualized consideration is a behavior which the project managers treat each team member equally as an individual. Sometimes the project managers use delegation to support the team members to grow and mature in term of competencies. This behavior of transformational leadership was perceived as favorable by the team members to exert extra effort.

The influence of leadership style dimension to the second leadership outcome, effectiveness is shown in table 5. It indicates that laissez-faire is the most significant variable that shows a strong significant influence (negative) to project managers’ effectiveness as perceived by the team members ($P < 0.05$). The association between laissez-faire leadership and project managers’
effectiveness is significantly negative, which means that if the project managers exercise less laissez-faire leadership then more effectiveness will be perceived by the team members to their project managers.

Table 5. Coefficients of Leadership Style Dimension on Effectiveness

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Std. Coef.</th>
<th>t</th>
<th>Sig.</th>
<th>Collinearity Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
<td>Tol. VIF</td>
</tr>
<tr>
<td>1 (Constant)</td>
<td>.316</td>
<td>.290</td>
<td></td>
<td></td>
<td>.282</td>
</tr>
<tr>
<td>Idealized Attribute (IA)</td>
<td>.152</td>
<td>.145</td>
<td>.157</td>
<td>1.048</td>
<td>.301 .268 3.738</td>
</tr>
<tr>
<td>Idealized Behavior (IB)</td>
<td>.224</td>
<td>.133</td>
<td>.216</td>
<td>1.681</td>
<td>.100 .364 2.745</td>
</tr>
<tr>
<td>Inspirational Motivation (IM)</td>
<td>.031</td>
<td>.184</td>
<td>.032</td>
<td>.171</td>
<td>.865 .175 5.706</td>
</tr>
<tr>
<td>Intellectual Stimulation (IS)</td>
<td>.131</td>
<td>.134</td>
<td>.123</td>
<td>.981</td>
<td>.332 .383 2.612</td>
</tr>
<tr>
<td>Individual Consideration (IC)</td>
<td>.095</td>
<td>.131</td>
<td>.112</td>
<td>.724</td>
<td>.473 .254 3.933</td>
</tr>
<tr>
<td>Contingent Reward (CR)</td>
<td>.321</td>
<td>.170</td>
<td>.369</td>
<td>1.886</td>
<td>.067 .158 6.348</td>
</tr>
<tr>
<td>Management-by-Exception Active (MA)</td>
<td>-.088</td>
<td>.120</td>
<td>-.093</td>
<td>-.733</td>
<td>.468 .373 2.682</td>
</tr>
<tr>
<td>Laissez-Faire (LF)</td>
<td>-.227</td>
<td>.094</td>
<td>-.202</td>
<td>-2.401</td>
<td>.021 .854 1.171</td>
</tr>
</tbody>
</table>

Laissez-faire leadership indicates that the project managers are avoiding the responsibilities to be a leader and avoiding in providing direction to the team members. In PT XYZ, there was only few project managers exercised this style of leadership. They used to delegate the executive decisions to system analyst or development leader, even there was once a case when a project manager delegated the decision of development execution to a group of programmers. This dimension of passive/avoidant behavior was perceived by the team members as a correlated factor to project managers’ effectiveness.

The influence of leadership style dimension to the last leadership outcome, satisfaction is shown in table 6. It indicates that there were two leadership style dimension, idealized behavior and contingent reward that show strong significant influences to the team members’ satisfaction. Idealized behavior showed .006 of significant influence while contingent reward showed (P < 0.05) of significant influence. The association between both leadership style dimensions (idealized behavior and contingent reward) and the team members’ satisfaction is significant, which means that if the project managers exercise more idealized behavior then more satisfaction will be perceived by the team members. The same relation is applied for the association between contingent reward and satisfaction.
Table 6. Coefficients of Leadership Style Dimension on Satisfaction

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Std. Coef.</th>
<th>t</th>
<th>Sig.</th>
<th>Collinearity Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
<td>Tol.</td>
</tr>
<tr>
<td>(Constant)</td>
<td>-.013</td>
<td>.339</td>
<td>-.039</td>
<td>.969</td>
<td></td>
</tr>
<tr>
<td>Idealized Attribute (IA)</td>
<td>.284</td>
<td>.169</td>
<td>.238</td>
<td>1.679</td>
<td>.101</td>
</tr>
<tr>
<td>Idealized Behavior (IB)</td>
<td>.453</td>
<td>.156</td>
<td>.353</td>
<td>2.909</td>
<td>.006</td>
</tr>
<tr>
<td>Inspirational Motivation (IM)</td>
<td>-.053</td>
<td>.215</td>
<td>-.043</td>
<td>-.245</td>
<td>.808</td>
</tr>
<tr>
<td>Intellectual Stimulation (IS)</td>
<td>.167</td>
<td>.156</td>
<td>.126</td>
<td>1.067</td>
<td>.292</td>
</tr>
<tr>
<td>Individual Consideration (IC)</td>
<td>.055</td>
<td>.154</td>
<td>.052</td>
<td>.357</td>
<td>.723</td>
</tr>
<tr>
<td>Contingent Reward (CR)</td>
<td>.489</td>
<td>.199</td>
<td>.454</td>
<td>2.460</td>
<td>.018</td>
</tr>
<tr>
<td>Management-by-Exception Active (MA)</td>
<td>-.263</td>
<td>.141</td>
<td>-.224</td>
<td>-.187</td>
<td>.069</td>
</tr>
<tr>
<td>Management-by-Exception Passive (MP)</td>
<td>-.192</td>
<td>.113</td>
<td>-.136</td>
<td>-1.702</td>
<td>.097</td>
</tr>
<tr>
<td>Laissez-Faire (LF)</td>
<td>-.095</td>
<td>.110</td>
<td>-.068</td>
<td>-.858</td>
<td>.396</td>
</tr>
</tbody>
</table>

Idealized behavior is a part of idealized influence that is generated from the subordinates’ perceptions of leader’s behavior. Based on descriptive analysis above, the project managers in PT XYZ often exercise this behavior to their team members. It means that statistically they were showing their charisma to influence their team members to achieve goals. In team members’ perceptions, among the dimensions of transformational leadership, idealized behavior was considered to be one of factors that influenced the team members’ satisfactions mostly.

Contingent reward is one of transactional leadership dimension that is often used by the project managers to motivate the team members in achieving goals. The reward could be in term of monetary, promotions or recommendations. In PT XYZ, the implementation of contingent reward could be seen in an offering of project incentive. In team members’ perception, the contingent reward was also considered to be another factor that influences the team members’ satisfactions.

The following research question is answered based on discussion above: Question 1: What is the project manager’s leadership style and what is/are the outcome(s) related to the leadership style in this company?

Based on the team members’ perception, statistically the project managers in PT XYZ tended to exercise idealized influence traits (attribute and behavior) and management-by-exception active. While the leadership outcomes perceived by the team members in relation with the leadership styles (the most significant) are effectiveness had opposite relationship with laissez-faire, extra effort had unidirectional relationship with
individualized consideration, and
satisfaction has unidirectional relationship
with idealized behavior and contingent
reward.

Discussion and Finding about Work
Environment

There is also finding in this research
that related to the work environment
experienced by the team members. The
team members evaluated their work
environment based on their involvement
in the software development project, and
during working together with the project
manager whom they evaluated as the object
of this research.

The outcome of this work environment
comprises three set of dimensions: the
relationship dimensions, the personal
growth or goal orientation dimensions, and
the system maintenance and system change
dimensions. The relationship dimension
comprises involvement, peer cohesion, and
supervisor support. The personal growth or
goal orientation dimension comprises
autonomy, task orientation, and work
pressure. While the system maintenance and
system change dimension comprises clarity,
control, innovation, and physical comfort.

The Real Form (Form R) of the Work
Environment Scale (WES) was completed
by 50 employees who were involved in a
project. The WES profile in PT XYZ is
shown in figure 5. It shows that the team
members’ perception of their current work
environment while they were working in a
software development project.

The relationship dimension showed
moderate emphasis: involvement and
supervisor support were average and peer
cohesion was above average. On the
personal growth dimension: autonomy was
average, work pressure was above average,
but task orientation was well below
average. On the system maintenance and
change dimension: clarity showed
considerably below average, managerial
control was below average, innovation was
average, and physical comfort was well
below average.

Thus, the work environment was
characterized by relationship dimensions
(involvement, peer cohesion, and
supervisor support) and some personal
growth/goal orientation dimensions
(autonomy and work pressure). Although
the work pressure was above average, the
team members experienced lack of task
orientation. They also did not understand
what to expect in their daily routine which
made them confuse of what to do and the
low physical comfort made them
uncomfortable in their work environment.

![WES Profile in PT XYZ](image.png)

Figure 5. WES Profile in PT XYZ


Involvement

The involvement subscale measures team members’ commitment and concern to the job. In this company, involvement perceived by the team members was average which means most of them felt that the work was so challenging that they put quite a lot of effort into what they did, they felt the spirit of working as group, they easily did any extra work, and they felt that the work was interesting.

Peer Cohesion

The peer cohesion subscale measures team members’ relationship to each other in order to support or to share something. In this company, peer cohesion perceived by team members was above average. It was a good sign indicated that they were friendly to each other, they shared the same interest, and they hung out together after work and often ate lunch together.

Supervisor Support

The supervisor support subscale measures the relationship between management and employees in term of supporting each other at work. In this company, supervisor support was considered to be average by the team members. Their supervisor in this research referred to the project managers. The project managers tended to treat them very well and gave compliment when they did something well.

Autonomy

The autonomy subscale assesses the emphasis of employees in being of self-sufficient to make their own decision. In this company, autonomy was considered to be average by the team members. The team members were having a great deal of freedom to do as they like, they could use their own initiative to do things, they were encouraged to learn things, and there were some time to discuss the future work goals with their project managers.

Task Orientation

The task orientation subscale measures the concern in making a good planning, efficiency in working, and getting the job done. In this company, task orientation perceived by team members was well below average. The team members had a strong attention to getting work done but they perceived that there was a lot of time wasted because of inefficiencies. Some employees liked to come late to the office because of many reasons or just without any reason at all. It had been a habit to come late for team members because the emphasis of working was only to get the job done or sometimes we called as result oriented work. Though there is always a debate among management about this type of work, but some team members just keep doing what they want to do. The rules and policies are not strictly implemented: there is no pay cuts for those who always come late to the office because there is no absence system for the employees.

Work Pressure

The work pressure subscale measures how the work pressure and time urgency dominate the work environment. In this company, work pressure was considered as above average by the team members. The team members really could afford to relax but there were always deadlines to be met. They perceived that nobody worked too hard but there was always urgency about everything that in the end they had to work overtime to get their work done.

Clarity

The clarity subscale measures how the employees understand about what to
expect in their daily routine and their understanding on the rules and policies. In this company, clarity perceived by team members was considerably below average. They perceived that things are sometimes pretty disorganized which made their daily routine unorganized. They also perceived that the rules and regulations from the management were somewhat ambiguous.

**Control**

The control or managerial control measures how the employees respond to management’s rules and policies and how the management uses the rules and regulations to keep their employees under control. In this company, managerial control was considered as below average. There were some team members who used to wear wild looking clothing or informal shirt while at work. The project managers seemed not to watch their team members strictly about this and there were lack of project managers’ attention and response when the rules and regulation from the company was breached by the team members, for example there was no punishment for some fouls. However, some team members who came in late could make it up by staying late at the office by their own initiative.

**Innovation**

The innovation subscale assesses the emphasis of variety, change, and new approaches in a work setting. In this company, innovation perceived by the team members was on average. Team members often tried new and different ideas. It was shown on every technical discussion between programmers and system analyst in solving problems. Though sometimes some of them did not agree of it because of the reliability of the ideas had not tested yet.

**Physical Comfort**

The physical comfort subscale measures the contribution of physical environment to the work environment. In this company, physical comfort perceived by the team members was well below average. The workspace was awfully crowded sometimes when some of onsite employees were returning to the office. The team members perceived that the room needed some air purifier or good air ventilator because sometimes there were some employees smoking inside the air-conditioned room. And they perceived that the office really needed some new interior decorations.

The following research question is answered based on finding and discussion above:

**Question 2:** What is the result of team’s perception about their work environment while they are in the software development project team?

Based on the team members’ perception, the work environment was characterized by the relationship dimensions (involvement, peer cohesion, and supervisor support) and some personal growth dimensions (autonomy and work pressure). The involvement was about the team members’ commitment and concern to the job. The peer cohesion was about the relationship between each member to support or to share something. The supervisor support was about the relationship between project managers and team members in term of supporting each other at work. The autonomy was about the encouragement for employees to make their own decision. And the work pressure was about the emphasis of which the work pressure and time urgency dominate the work environment.
CONCLUSION AND RECOMMENDATION

Conclusion

• In PT XYZ, IT Company, the leadership style dimensions used by the project managers were idealized influence (attribute and behavior) and management-by-exception active. The leadership style dimensions perceived by the team members (the subordinates) are related to the project managers’ effectiveness, the willingness of team members in exerting extra effort, and the team members’ satisfaction to the project managers.

• The laissez-faire behavior is the most significant factor that influences the project managers’ effectiveness. It has a negative influence which means if project managers exercise less laissez-faire style (avoiding style), and then the team members will perceive more about project managers’ effectiveness.

• The individual consideration is the most significant factor that influences the team members’ willingness to exert extra effort. It has positive influence which means if project managers exercise more individualized consideration, then the team members will exert more extra effort. Individualized consideration is about caring about the team members’ competencies and supporting them to grow and mature in term of competencies.

• The idealized behavior is the most significant factor that influences the team members’ satisfaction to the project managers. Another significant factor is the contingent reward. Both of them have positive influence which means if project managers exercise more idealized behavior or more contingent reward, then the team members will perceive more satisfaction to the project managers’ leadership. Idealized behavior is about to be the role model for the team members, respects, faith, and pride (charismatic behavior). And contingent reward is about giving rewards to the team members for task completion.

• The work environment in PT XYZ perceived by the team members was characterized by relationship dimensions (involvement, peer cohesion, and supervisor support) and some personal growth dimensions (autonomy and work pressure).

Recommendation

Based on the conclusion above, PT XYZ has to do some improvements on some leadership style dimensions that have significant influences on the leadership outcomes. The improvement is expected to increase the quality of leadership of the project managers, for example through training or seminars about leadership. Leadership is considered to be important based on analysis of this research that showed the correlation between leadership style and leadership outcome, and a survey of job satisfaction conducted by Bergen (1939), Houser (1927), Kornhauser and Sharp (1932), and Viteles (1953), that uniformly reported that the employees’ job satisfaction and the productivity of the work group were found to be contributed by the leadership behaviors of leader favored by the employees (Bass, 1990).

The first and easy thing to do is explaining the project managers about the laissez-faire leadership that is not favored by the team members. This action can be done by doing an internal meeting moderated by the Project Management Officer (PMO). This meeting is not
conducted to blame some project managers but to explain the impact of laissez-faire leadership to the project managers’ effectiveness. By being effective project managers, they will capture the team members’ expectations and needs. They also can represent the team members to higher management, such as providing performance report of team members.

After explaining about laissez-faire leadership, PMO has to be able to motivate the project managers to take action to the competencies development of the team members by coaching them and teaching them. This action is related to the individualized consideration dimension of transformational leadership. Being a project manager is not always concerning about the project, but the people working on that project through supporting and developing as parts of individualized consideration (Yukl, 2010). Next step after doing explanations, PMO can put the project managers to any trainings or seminars about leadership to sharpen their understanding about leadership.

To increase the team members’ satisfaction, PMO must discuss with the management to provide better performance appraisal instead of providing project incentive only. The contingent reward is an easy way to boost team members’ satisfaction, and indirectly motivate them to perform better to get a reward. It will be very helpful for a leader to lead a team if the team is satisfied by the leader’s method of leadership.

Based on finding about work environment perceived by the team members, PT XYZ must consider the characteristic of the workplace that are most important to the organization. For example is to increase the managerial control and clarity about the organization’s rules and regulations, the company should make strong procedures of doing things like Standard Operating Procedure (SOP). The researcher recommends the company to increase the clarity first, managerial control, task orientation, and then the last is physical comfort. Task orientation will be easier to be increased when there is guidance or SOP for doing things. Since there are a lot of smokers in the company, to improve the physical comfort is by providing smoking room inside the building so the smokers can still work while they are smoking. And the non-smokers will not be bothered by the unpleasant smell of cigarettes.

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