Analysis Supply Chain Management Factors of Lecturer’s Turnover Phenomenon

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Abstract—Inventory management is vital in supply chain performance of a firm. The inventory turnover ratio measures the number of times a company sells its inventory during the year. This study aims to determine the factors that directly affect the intention of turnover of lecturer’s with the dimensions of work-life balance, job satisfaction, work engagement, and organizational commitment. The research design is used a quantitative approach, survey method, stratified random sampling, with path analysis model. The results of the study indicate that work-life balance has a direct effect on job satisfaction, job satisfaction has a direct effect on work engagement, and job satisfaction through work engagement has an effect on organizational commitment. Job satisfaction through organizational commitment has an effect on turnover intention. This study is in accordance with the results of previous studies but with different indicators. Lecturers as a social human with collectivism culture as Indonesia needs policies in managing them without ignoring what they need in work, family, and personal in a global era, AEC, ICT, regulation changes, and competitiveness.

Keywords—Inventory turnover ratio, Supply chain performance, Job Satisfaction, Work Engagement, Organizational Commitment, Turnover Intention.

1. Introduction

Dominance in the supply chain has shifted throughout history. Dominance or power in supply chains concern the extent of influence one participant in the chain has over one or more participants. Lecturer as human capital is an important element of the intangible assets of an organization of the three elements that’s intellectual capital, social capital, and organizational capital [5]. Human resource development strategies aim to attract and retain human capital as well as develop it.

Turnover and turnover intention are two serious problems in the global era. Turnover is the degree of employees leaving the company, where each industry varies, High turnover indicates an indication of human resource management misalignment and employee dissatisfaction with the organization. The average educational service turnover is 12%, [10], in the United Kingdom (15.7%) and the average cost for every leaver was £6.150 [3]. The globalization and information in technology development can cause increasing turnover lecturers’. Job satisfaction, psychological well-being, and turnover intentions are the best predictors of early signals of employee turnover, [46],[49]. The tendency to increase the turnover of the lecturer is allegedly caused by the unbalanced work-life, the dissatisfaction with the management and the policy, which can lead to the lecturer's work engagement and organizational commitment, is low. Lowering turnover of lecturers is very important as a strategy of managing human resource institution to improve lecturer’s performance.

Tandung the results of research in Netherland show that human resource attributions can affect the employees’ turnover intention, through of job satisfaction [41]. Job satisfaction on payment and nature of work, organizational commitment, and attitude of job-hopping can affect Taiwanese IT general employees and repatriates’ intention to leave the organization, [9]. Tran, H., finds evidence to suggest that high school principals’ pay satisfaction is influenced by the salaries of comparative peers and is negatively associated with principals’ intention to turnover, and achievement was not found to be related to turnover intentions [42],[48]. Beh, L.S. & Shah, S.H.A. finding that indirect effect of skills enhancing practices on turnover intentions through affective commitment is significant and negative [7].

The limited research on the effects of work-life balance, work engagement, job satisfaction, and organizational commitment, on turnover intentions, and the application of government rules on student-lecturer ratios make many private universities offer competitive rewards for qualified and professional lecturers, so there are fears of piracy only for managerial personnel but also for academic
personnel, this phenomenon becomes interesting to investigate. The purposes of this study were to (1) investigated levels of work-life balance, job satisfaction, work engagement, organizational commitment, and turnover intention of lecturers; and (2) analyze the direct effect of work-life balance, job satisfaction, work engagement, and organizational commitment to the turnover intention of lecturers.

2. Literature Review

According to [5], demand management, marketing management, supply management, and supply chain management operate together to build customer relationships, develop customer prioritization strategies, provide accurate information to consumers, and establish intra- and inter-firm relationships or joint actions to balance value requirements and operational capabilities. Lambert et al., defines the intention of turnover as an employee's thoughts or plans to voluntary exit an organization. The employee's desire to leave or leave the company is conscious and deliberate (voluntary), which can be caused by dissatisfaction and job opportunities outside the company. Turnover intention indicators: (1) thinking of quitting, (2) intention to search, (3) intention to quit [20].

Job satisfaction is a result of employee perception of how well their job is important. Luthans adds important characteristics of job satisfaction are: the job itself, payment, promotion opportunities, supervision, and co-workers [22].

Work engagement is an important element that affects organizational effectiveness, innovation, and competitiveness. The notion of work engagement not only increases employee well-being in the workplace but also improves practical utility. In line with that put forward by Kataria, et al., engagement refers to the cognitive, emotional behavior of employees as individuals who are directed towards achieving organizational goals [18]. Work engagement is a positive state associated with work, characterized by (1) vigor, (2) dedication, and (3) absorption, [4].

2.1 Work-Life Balance and Turnover Intention

Noor, S. & Maad, N., found that work and family conflicts, stress, have a significant relationship to turnover intention [32]. Noor, K.M., was found that work-life balance was negatively correlated with turnover intentions in academia. If the lecturer feels the balance of life at work, does not cause many conflicts in the workplace and not many problems outside the workplace the intention to exit or leave the company will be lower, and vice versa if many problems at work also many problems outside the workplace affect the implementation of the work then this imbalance can make employees leave the company [31].

H1: work-life balance has a direct negative effect on job satisfaction

2.2 Job Satisfaction and Turnover Intention

Job satisfaction has a significant negative association with intention of turnover the highest correlation was of pay, promotion, fringe benefits and contingent rewards [2]. Pan, et al., suggests that job characteristics and demography are factors that are closely related to job satisfaction. Revenue accepted organizational support, and psychological capital has a positive relationship with job satisfaction and job satisfaction has a negative relationship with turnover intention [34],[50].

Therefore, the following hypothesis was proposed:

H2: job satisfaction has a direct negative effect on turnover intention

2.3 Work Engagement and Turnover Intention

Schilling, K. results, there is a strong and negative relationship between employee engagements with turnover intentions [37]. Employee Engagement is one way to get employees to have high loyalty, such as Macey, et al. opinion, which states that employee engagement makes employees have a higher loyalty that reduces the desire to leave the company voluntarily [23]. Several studies have shown that work engagement has a positive relationship with customer performance and loyalty. The research result Mangi, & Jalbani, pointing out that work engagement as a mediation between emotional exhaustion, and cynicism
towards turnover intentions [26],[51]. Therefore, the following hypothesis was proposed:

H3: work engagement has a direct negative effect on turnover intentions

2.4 Organizational Commitment and Turnover Intention

The organizational commitment will occur if employees are satisfied with the work in which they work, this is because they feel involved in activities and decision-making companies, and the low conflicts or problems in the workplace, it is expected to reduce the turnover rate. Jaros was found, Meyer-Allen’s three-components model of organizational commitment affective commitment, continuance commitment, and normative commitment have become the dominant model for the study of workplace commitment [16]. Therefore, the following hypothesis was proposed:

H4: organizational commitment has a direct negative effect on turnover intentions.

2.5 Work-Life Balance and Job Satisfaction

Work-life balance policy as a corporate strategy is done to achieve a balance between professional work and other activities. This strategy is done in order to balance work activity with other activities outside the work, with the aim to improve job satisfaction and performance. Maurya, et al., found that work-life balance policy is a predictor of job satisfaction, performance, and productivity [28]. Therefore, the following hypothesis was proposed:

H5: work-life balance has a direct negative effect on job satisfaction.

2.6 Work-Life Balance and Work Engagement

The balance of working life is unique to every individual. Various policies have been made by the company as a form of concern for work-life balance and employee career development, including flexible work options (ease of working hours, or part-time work), non-standard work arrangements (job characteristics increasingly preferred by employees). Thus it is expected to decrease the conflict between work and family, decrease personal stress level, and increase work engagement of employees [33],[53]. The following hypothesis was proposed:

H6: work-life balance has a direct negative effect on work engagement

2.7 Work-Life Balance and Organizational Commitment

In terms of job attitudes, employees reporting high levels of both work-to-life and life-to-work conflict tend to exhibit lower levels of job satisfaction and organizational commitment, [6]. If there are not many problems faced by employees in the workplace or outside the workplace, so they can work comfortably performing their tasks well, it can work calmly and able to increase the commitment of the employee organization to do the best for the organization. Therefore, the following hypothesis was proposed:

H7: work-life balance affects organizational commitment

2.8 Job satisfaction and work engagement

Engagement shows a dynamic working relationship. Organizational concepts that place flexibility, change and continuous improvement make an employee satisfied with their work. Gatenby, et al. defines that: engagement as' being positively present during the performance of work by willingly contributing intellectual effort, and experiencing both positive emotions and meaningful connections to others [13],[52]. Therefore, the following hypothesis was proposed:

H8: job satisfaction has a direct negative effect on work engagement.

2.9 Job satisfaction and organizational commitment

Masum, Azad, and Beh define job satisfaction is defined as the emotional status and attitude of an employee towards his work. In the world of education, an academic staff does not just have the thoroughness and commitment in teaching but there is more important that is to have a commitment mentality and loyalty than just a physical presence alone [27]. Therefore, the following hypothesis was proposed:
H9: job satisfaction has a direct negative effect on organizational commitment.

2.10 Work engagement and supply chain management

Alignment of individual and organizational goals is one form of employee commitment to the organization, which is manifested through job involvement within the organization. More involvement is active to do the best, and try to help the achievement of corporate goals. Employees who have high work involvement can certainly be committed to the achievement of organizational goals. [23].

Organizational commitment by Mowday, Porter, and Steers, Srivastava that organizational commitment as a relative strength of individual identification and involvement in organizations [29], [38]. Therefore, the following hypothesis was proposed:

H10: supply chain management has a direct negative effect on organizational commitment

3. Methodology and Data

3.1 Participants

The participant consisted of 141 Indonesian private college lecturers. Lecturers teach in universities across the Greater Bogor, Indonesia. Convenience and snowball sampling were used in each university, to provide greater access to large-scale participation.

3.2 Data Collection

All data collection instruments (questionnaires) were adapted from existing ones and reworked to fit the participant and context of the study. Item validities were tested using corrected item-total correlation index criteria (CIT > 0.250). The reliability of each instrument was tested against Cronbach’s alpha criteria (α > 0.600). The developed constructs were operationalized using existing scales identified in the literature. The scales for work-life balance and intention turnover consisted of 5 items Likert-scales, which ranged from 1 (never) to 5 (always). The scale that measures to the job satisfaction with Likert-scales that ranged from 1 (strongly dissatisfied) to 5 (strongly satisfied). The scale for work engagement and organizational commitment consisted of 5 items Likert-scales which ranged from 1 (strongly disagree) to 5 (strongly agree). Five items were omitted during reliability and validity testing, resulting in 171 items in the final version of the instrument, with a reliability index of α range from 0.881 to 0.959 and the CIT ranged from 0.382 to 0.849.

3.3 Data Analysis

The design involved a quantitative, non-experimental approach using the predictive correlation method. Data analysis techniques used are descriptive statistics and inferential statistics. Hypotheses were tested by normality test of estimate error, simple regression, linearity test, simple regression significance, and path analysis. The data obtained were analyzed using a path analysis model, supported by the SPSS version 22.00 for Windows [12].

4. Empirical Results and Discussion

Sixty-two percent of the respondents female, as lecturers with double career or single parents. Fifty-six percent aged more than 40 years old, 45% have work experience of more than 30 years, and 81% have married status. Generally, most respondents are female, productive, have work experienced, and married.

The results of the assumption test showed that the data distribution was normal, free from heterscedasticity, and all independent variables were free from multicollinearity. Results of regression significance and linearity test are fit to this research (Table 1).
Table 1. Results of regression significance and linearity test

<table>
<thead>
<tr>
<th>Regression</th>
<th>Significance test</th>
<th>Linearity test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>F</strong></td>
<td><strong>F α = 0.05</strong></td>
</tr>
<tr>
<td>Y on X_1</td>
<td>Y = 48.12 + 0.63X_1</td>
<td>49.71 **</td>
</tr>
<tr>
<td>Y on X_2</td>
<td>Y = 57.00 + 0.55X_2</td>
<td>47.59 **</td>
</tr>
<tr>
<td>Y on X_3</td>
<td>Y = 59.65 + 0.48X_3</td>
<td>53.12 **</td>
</tr>
<tr>
<td>Y on X_4</td>
<td>Y = 52.06 + 0.57X_4</td>
<td>67.66 **</td>
</tr>
<tr>
<td>X_4 on X_1</td>
<td>(\hat{X}_4 = 60.66 + 0.44X_1)</td>
<td>22.83 **</td>
</tr>
<tr>
<td>X_4 on X_2</td>
<td>(\hat{X}_4 = 65.58 + 0.40X_2)</td>
<td>22.32 **</td>
</tr>
<tr>
<td>X_4 on X_3</td>
<td>(\hat{X}_4 = 67.47 + 0.34X_3)</td>
<td>24.24 **</td>
</tr>
<tr>
<td>X_3 on X_1</td>
<td>(\hat{X}_3 = 60.66 + 0.44X_1)</td>
<td>12.49 **</td>
</tr>
<tr>
<td>X_3 on X_2</td>
<td>(\hat{X}_3 = 65.58 + 0.40X_2)</td>
<td>12.22 **</td>
</tr>
<tr>
<td>X_2 on X_1</td>
<td>(\hat{X}_2 = 73.72 + 0.25X_1)</td>
<td>6.92 **</td>
</tr>
</tbody>
</table>

** : significance  
ns : non significance

The prediction's path coefficient magnitude and the t value of significance were obtained for path analysis using SPSS version 22.00 for α 0.05, the critical value of t = ±1.98 (Table 2), was used for judging the statistical significance of the path coefficients [35].

Table 2. Path coefficient and hypotheses test results

<table>
<thead>
<tr>
<th>No.</th>
<th>Direct effect</th>
<th>Coefficient</th>
<th>Dk</th>
<th>T</th>
<th>(\frac{\bar{F}}{\alpha = 0.05})</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>X_1 to Y</td>
<td>-0.284</td>
<td>124</td>
<td>-4.51 **</td>
<td>-1.98</td>
</tr>
<tr>
<td>2.</td>
<td>X_2 to Y</td>
<td>-0.275</td>
<td>124</td>
<td>-4.38 **</td>
<td>-1.98</td>
</tr>
<tr>
<td>3.</td>
<td>X_3 to Y</td>
<td>-0.271</td>
<td>124</td>
<td>-4.24 **</td>
<td>-1.98</td>
</tr>
<tr>
<td>4.</td>
<td>X_4 to Y</td>
<td>-0.264</td>
<td>124</td>
<td>-3.88 **</td>
<td>-1.98</td>
</tr>
<tr>
<td>5.</td>
<td>X_1 to X_3</td>
<td>0.258</td>
<td>125</td>
<td>3.27 **</td>
<td>1.98</td>
</tr>
<tr>
<td>6.</td>
<td>X_2 to X_4</td>
<td>0.255</td>
<td>125</td>
<td>3.22 **</td>
<td>1.98</td>
</tr>
<tr>
<td>7.</td>
<td>X_3 to X_4</td>
<td>0.248</td>
<td>125</td>
<td>3.07 **</td>
<td>1.98</td>
</tr>
<tr>
<td>8.</td>
<td>X_1 to X_2</td>
<td>0.245</td>
<td>126</td>
<td>2.89 **</td>
<td>1.98</td>
</tr>
<tr>
<td>9.</td>
<td>X_2 to X_1</td>
<td>0.241</td>
<td>126</td>
<td>2.84 **</td>
<td>1.98</td>
</tr>
<tr>
<td>10.</td>
<td>X_3 to X_2</td>
<td>0.227</td>
<td>127</td>
<td>2.63 **</td>
<td>1.98</td>
</tr>
</tbody>
</table>

** = significant (t < -t_α=0.05) negative effect  
** = significant (t > t_α=0.05) positive effect

Based on the results of hypothesis testing with SPSS version 22.00 for windows, empirical causal models work-life balance (X_1), job satisfaction (X_2), work engagement (X_3), and organizational commitment (X_4) with turnover intention (Y), are described as Figure 1:
4.1 Discussion

Work-life balance has direct negative effect on turnover intention ($\beta = -0.284; t$-value $= -4.51; p < 0.05$), thereby supporting H1. This is in accordance with the results of previous studies such as Wessels; Brough; Noor; Mukhtar, if the organization is able to provide a balance between work and family needs or is able to minimize the conflict between work and family roles, the ability to maintain labor organizations with higher education and turnover will get lower [8],[30],[31],[44].

Job satisfaction has direct negative effects turnover intention ($\beta = -0.275; t$-value $= -4.38; p < 0.05$), there is supporting H2. The results of this study are in accordance with the opinion of Vanderberghe and Tremblay; Malik, et al. that job satisfaction negatively affects the intentions of turnover, the lower the job satisfaction the desire to move or leave the organization will be greater [25],[43],[56]. This is supported by Pan et al., job satisfaction lecturers negatively affect the intention of turnover, and Stahl, et al., predictors of employee desire out or move the workplace such as satisfaction which is low on career advancement opportunities compared to elsewhere [34],[39],[54].

Work engagement has direct negative effects turnover intention ($\beta = -0.271; t$-value $= -4.24; p < 0.05$), there is supporting H3. The higher the work engagement measured with vigor, dedication, and absorption, the lower the willingness to leave the organization. Several research findings, Federman; Mangi and Jalbani; Macey, et. al., Hakanen and Lindbohm; Schilling’s research results, work engagement, in the long run, can improve employee performance, profit, and loyalty [11],[15],[23],[26],[37].

Organizational commitment has direct negative effects turnover intention ($\beta = -0.264; t$-value $= -3.88; p < 0.05$), thereby supporting H4. The higher the organizational commitment as measured by affective commitment, continuance commitment, and normative commitment, the lower the willingness to move. In line with Gibson, Ivancevich, & Konopaske.; Robbins and Judge, and Armstrong, a commitment to the organization can lead to the loyalty of attitudes, discretionary effort, and stay with the organization [3],[14],[36],[55].

Work-life balance has direct positive effects organizational commitment ($\beta = 0.258; t$-value $= 3.27; p < 0.05$). The higher the work-life balance as measured by the flexibility aspect or program, social support, financial support, as well as recreational and sporting programs provided by the university, the organization commitment increases, and vice versa. Yusoff, Rimi, & Meng, finds the relevance of social work life and the integration of social life and work relating positively to organizational commitment [47].

Job satisfaction has direct positive effects organizational commitment ($\beta = 0.255; t$-value $= 3.22; p < 0.05$), this means job satisfaction has a
positive direct effect on the lecturer's organizational commitment organization. The higher the job satisfaction measured from the aspect of payment, promotion opportunities, the job itself, the employer, the status, the altruism, and the work environment, the lecturer's organizational commitment increases.

Work engagement has direct positive effects organizational commitment ($\beta = 0.248$; $t$-value $= 3.07$; $p < 0.05$), this means work engagement has a positive direct effect on the organizational commitment of the lecturers. The higher the work engagement measured from the aspect of the spirit, dedication, and absorption, organizational commitment of the lecturers is increasing. This is consistent with the results of Hakanen and Lindbohm work engagement is positively related to organizational commitment and performance [15].

Work-life balance has direct positive effects work engagement ($\beta = 0.245$; $t$-value $= 2.89$; $p < 0.05$), this means that the higher the work-life balance so work engagement of lecturer is increasing. That the decrease in the conflict between work and family decreased personal stress levels and increased employee involvement. Linearity with Armstrong; Omar; Kangure, there is a linear and positive relationship between work-life balance policies and employee engagement [1],[17],[33]. Day-to-day universities management should be designed to work in accordance with the employee's wishes, such as flexible working arrangement can increase lecturer engagement.

Job satisfaction has direct positive effects work engagement ($\beta = 0.241$; $t$-value $= 2.84$; $p < 0.05$), there is supporting H9. The higher the job satisfaction measured from the aspect of payment, promotion opportunities, the job itself, the employer, the status, the altruism, and the work environment the lecturer's work engagement increases, and vice versa. Some research has support, Bakker; Gatenby, et. al., that job satisfaction affects strong engagement in work. Employees who are satisfied with the job will do their best for the job [4],[13].

Work-life balance has direct positive effects job satisfaction ($\beta = 0.227$; $t$-value $= 2.63$; $p < 0.05$), there is supporting H10. The higher the work-life balance, job satisfaction lecturer is increasing, and vice versa. Work-life balance is related to a culture where most of the Indonesian is society collectivism culture hence the demand for the balance of work life and family life is increasing. The minimal role conflict is very important to be considered by every organization. This is accordance with WorldatWork; Wessels; Kossek; Mukhtar, and Maurya, et. al., found that work-life balance policy is a predictor of job satisfaction, performance, and productivity [19],[28],[30],[44],[45]. And also supported by previous research, namely ; Maida, Sulistiorini, Ali, and Limakrisna [1],[21],[24],[40]

5. Conclusion and Suggestion

In the recent years, firms and companies have been facing different challenges and difficulties due to the ever increasing changes in individual customers' needs which have their implications on supply chain management processes and systems. The results show that empirical data support all hypotheses and models construct, that the work-life balance, job satisfaction, work engagement, and organizational commitment have an influence on turnover intentions. Policies in managing lecturers to have a high commitment and loyalty to the organization are done with efforts to meet the needs of lecturers in work without ignoring the interests of the family as a social human with collectivism culture. In the era of technological advancement and the increasing quality and competence of lecturers to increase creativity and innovation in learning and research activities become one of the policies that must be considered to improve the satisfaction and supply chain management of system.

References


[44] Wessels, C., “How work engagement and its Influencers affect work-life balance and job satisfaction and the moderating role of


