



Structural Model of the Impact of Autonomy and Career Satisfaction on Job Satisfaction in Teleworking Context

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Abstract

The study of a structural model evaluating the impact of autonomy and career satisfaction on job satisfaction in teleworking context aimed to scrutinize the casual relationship among autonomy, career satisfaction and job satisfaction. The research used a 2-step structural equation modelling approach based on review of related literature. The population and samples were selected from teleworking professionals in Thailand. Research tools were questionnaire with rating scales and a simple random sampling. The model fit, reliability and validity were analyzed by using a confirmatory factor analysis technique. A causal relationship was analyzed by structural model and path analysis. The results portrayed that the model was fitted with empirical data and yielded moderate reliability and validity. The results show a positive direct effect of autonomy to job satisfaction. Moreover, career satisfaction played as a partial mediator or indirect effect on the relationship between autonomy and job satisfaction. Based on the results, the organization should promote a high level of autonomy in a teleworking environment to ensure job satisfaction. Future research should be qualitative or mixed method to reach deep down for a richer result interpretation and a cohort or longitudinal research should be done so as to scrutinize these effects in the long term.

Introduction

Presently, there are many fields of work that are prevailing and expanding where employees are not mandated to be in an office. Traditionally, these jobs were widely related to work where employees were required to be at their customers' office. In an age of digital transformation, a high-performance human capital requires mass investment by an organization both time and financial resource. A development of human capital has certainly become an essential factor promoting

organization professional goal. In order to meet a high expectation at work, an organization is demanded to invest on individual employee and train them in many aspects regarding work so as to make sure that they meet expectations. The problem is what if all those expensive investments have been in vain by a resignation of those good work forces. In accordance with a digital transformation and the coming of advance internet and mobile technologies, workers and workplaces are currently disrupted. There are several fields of works the

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can work anywhere outside the typical workplace. This is a pertinent situation given that teleworking is currently becoming a new normal due to the digital transformation wave. In fact, presently, many professions are not required to work in the office due to the technological advancement and mobility of internet. While much of the work continues to be practically the same as before, these employees are able to work remotely to finish their work assignments. For instance, medical representatives in healthcare industry travel to many hospitals to engage the prospect health care professionals but do not need to travel back to their office as they can send back reports to their managers via email from mobile device or personal laptop computer. Financial auditors and professional lawyers work mostly at client sites to gain insights into their financial and legal issues for their business and remotely contact with their managers by using online live streaming conference systems. A modern-day working environment has been changing from functional-based work to a project-based or collaborative task. Therefore, employees do not need to stay at the office to finish their job anymore. In this situation, autonomy is considered as a factor relating to modern-day teleworking environment. Autonomy at work can promote a freedom to each employee to design their own work role or even a work schedule. To be free is considered as the most basic need of every human. Therefore, the coming of this new work practice can possibly promote satisfaction at their work. The more employee feels satisfy in their role and job, the less chance that these workforces will leave an organization (Gajendran & Harrison, 2007). Hence, this phenomenon pays off an organization investment in human capital and retains high performance workforces to stay within an organization even longer.

According to previous researches, job demands and resources theory is a classic and all-time famous theory that mostly cited as the main framework for a work-related issue in organization. The theory divided into 2 factors which were job demands and job resources (Demerouti, Bakker, & Leiter, 2014). Job demands indicate that the company expects employee to put an effort on their work while job resources, on the other hand, means the supporting environment at work (Lesener, Gusy, & Wolter, 2019).

In accordance with self-determination theory (Ryan & Deci, 2000), autonomy is a form of freedom at work that can help promote employee to manage work on their own. This can also be linked to a hierarchy of

needs; as need for autonomy, need of competence, and need for relatedness are the component of cognitive evaluation theory.

There are several recent published academic manuscripts studying the effect of autonomy in job satisfaction as this factor shows several positive results. Autonomy can increase work efficiency seeing that employees can perceive a reliability and trust from their management. This perception leads to an intrinsic motivation and results in a positive work performance (Narayanan, Menon, & Plaisent, 2017).

In general, job satisfaction was portrayed as mental and physical satisfaction at work. This factor is quite self-explanatory. In other studies, this was described as a perception of a work value in an individuals' mind resulting in a pleasurable and satisfactory emotional state. Job satisfaction is a quintessential construct in many human resource practices as it is positively correlated to each employee well-being psychologically and physically (Inauen, Jenny, & Bauer, 2015). Furthermore, career satisfaction has a wider meaning as it is an overall satisfaction that is related to their professional entitlement. For instance, if an employee works as a representative, he or she can feel satisfied to what he or she has done as a representative not just a job itself but the overall assignment relating to this title. Previous studies also indicated that career satisfaction was predicted by work-personal life balance enrichment (Rastogi, Karatepe, & Mehmetoglu, 2019).

There are many academical manuscripts that emphasize on causal relationship among autonomy, career satisfaction and job satisfaction. Nevertheless, there are a few studies that mostly emphasize on the causal relationship of these factors in a teleworking context. According to the reasons mentioned above, this study aims to shed light on the question: Does autonomy directly affect job satisfaction and does career satisfaction play a mediating role between autonomy and job satisfaction in a teleworking context?

According to an extensive review of related literature stated above, it is noted that autonomy, career satisfaction and job satisfaction is correlated in some way. Thereby, the hypothesis of the study can be developed in the way that autonomy is directly affecting job satisfaction and career satisfaction plays a mediation role and indirectly affects relationship between autonomy and job satisfaction.

Objective

According to the research topic and issues stated above, the objective of the study is to evaluate the impact of autonomy and career satisfaction on job satisfaction in teleworking environment.

Conceptual framework

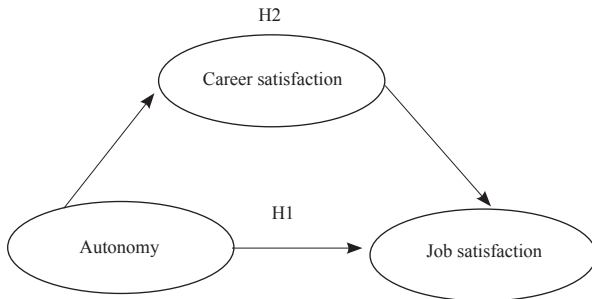


Figure 1 Conceptual framework

Research methodology

1. Population and samples

This research is considered as a multidisciplinary social science survey with a quantitative methodology. Population of the study are workers that are always assigned to work outside office, including but no limited to salesperson, representatives, consultants and other teleworking jobs. A simple random sampling method was utilized and only those teleworking professionals are included. would be selected.

2. Research instrument

For the measurements, Autonomy consists of 5 items scale by Anja Van Dec Broeck (Van den Broeck, Vansteenkiste, De Witte, Soenens, & Lens, 2010) to measure a level of autonomy. An example item is: "I can design work schedule on my own". Career satisfaction consists of 5 items scale by Greenhaus (Greenhaus, Parasuraman, & Wormley, 1990) to measure career satisfaction. An example item is: "I am satisfied with my career achievement". Job satisfaction is rated with a reduced version of Minnesota Satisfaction Questionnaire (MSQ) (Weiss, Dawis, & England, 1967) to measure overall job satisfaction in work. An example item is: "I am satisfied with my current job".

3. Collection of data

The researcher used a self-administrated questionnaire to collect the data. The self-administered 500 survey questionnaires were distributed and classified into 3 parts, autonomy, career satisfaction, job satisfaction

and demographic information. After detecting outlier in the data, imputation of missing value and deleting duplicated information, only 420 samples were qualified for the statistical analysis. The number of sample size were calculated by 10 times number of manifest parameters but no less than 200 as suggested by Hair, Black, Babin, & Anderson (2013). The questionnaires were managed in accordance with actual Thai social context, tradition and local culture. Therefore, all the measurements were translated and back-translated from English to Thai.

4. Data analysis

For the data analysis process, the data of 420 samples were analyzed by using 2-step structural equation modelling technique to test the research hypotheses. The main purpose behind the utilization of this statistical approach is that it provides for testing multiple latent variables causal relationship. According to the objective of the study, firstly, basic descriptive statistics of each scales was calculated to portray an overall snapshot of the data and assumption requirement such as normality and correlation significant. Secondly, confirmatory factor analysis were analyzed to check for scale reliability and validity then a structural equation model was developed to hypothesize the study by analyzing a path model. The analysis process from data preprocessing to structural equation model and data visualization were totally conducted by R, a powerful yet free statistical computer language (R Core Team, 2019).

Result

Regarding the data analysis, the results were separated into 2 parts consisting of descriptive statistics and inferential statistics. The 420 samples were input into the statistical analysis. For the descriptive part, most of the sample are female (56.9%), holding above bachelor degree (55.2%), working in operational level position (59.5%) and single (63.8%). Half of the samples are currently working in private sector (49.5%). Mean age of the sample was 37.22 years with standard deviation of 11.27 years, average work experience was 13.84 years with standard deviation of 11.07 years. According to table 1, descriptive statistics for scales is described including means and standard deviation. In almost every inferential statistic methodology, normality of variables should be expected. Skewness and kurtosis of each variables should not exceed plus or minus 2 and range of skewness and kurtosis of these variables are in range plus or minus 2. Moreover, correlation among factors

are all statistically significant with moderate level of correlation except for career satisfaction and job satisfaction that are highly correlated.

Table 1 Descriptive statistics for scale, skewness, kurtosis and correlation matrix of constructs

Construct	Mean	S.D.	Skew	Kur	Autonomy	Career satisfaction	Job satisfaction
Autonomy	3.31	0.94	-0.31	-0.45	1	0.45***	0.47***
Career satisfaction	3.62	0.82	-0.69	1.17	0.45***	1	0.74***
Job satisfaction	3.59	0.86	-0.62	-0.62	0.47***	0.74***	1

*** p < 0.000 (Correlation is significant at the 0.000 level (2-tailed))

To check the model fitness with the empirical data, the confirmatory factor analysis of overall model were analyzed. This included a validation of the model on each latent variable to scrutinize the relationship among manifest variables by using correlation. The several presumptions of both absolute fit and relative fit indices criterion and model fit statistics are described in table 2. According to measurement model fit indices, the model are considered fit with empirical data as almost all fit indices are satisfied with the criteria except Chi-square test; now that this index was highly sensitive to big sample size. Therefore, no modification was required. Therefore, the measurement model is visualized as figure 2.

Table 2 Measurement model fit indices criteria: Hair et al (2013), Bagozzi & Yi (1988), Browne & Cudeck (1993)

Fit indices	Measurement model fit statistics	Criterion
Chi-square	261.224***	Not significant
Relative Chi-square	3.002	Less than 5
Comparative Fit Index (CFI)	0.948	More than .90
Tucker-Lewis Index (TLI)	0.937	More than .90
Root Mean Square Error of Approximation (RMSEA)	0.069	Less than .08
Standardized Root Mean Square Residual (SRMR)	0.043	Less than .08

*** p < 0.000 (Chi-squared test is significant at the 0.000 level)

In accordance with table 3, overall model of confirmatory factor analysis estimated and standard coefficients, the reliability coefficient of internal consistency or Cronbach's Alpha, composite reliability, convergent validity and discriminant validity are displayed. All coefficients are statistically significant. Cronbach's Alpha was used to estimate the reliability of internal consistency among questionnaire rating scale and it found that all parts of the questionnaire measurements considered reliable. Composite reliability score was also calculated to check measurement reliability. Both standard minimum threshold for Cronbach's Alpha and composite reliability was 0.7 or higher to indicate a suitable reliability.

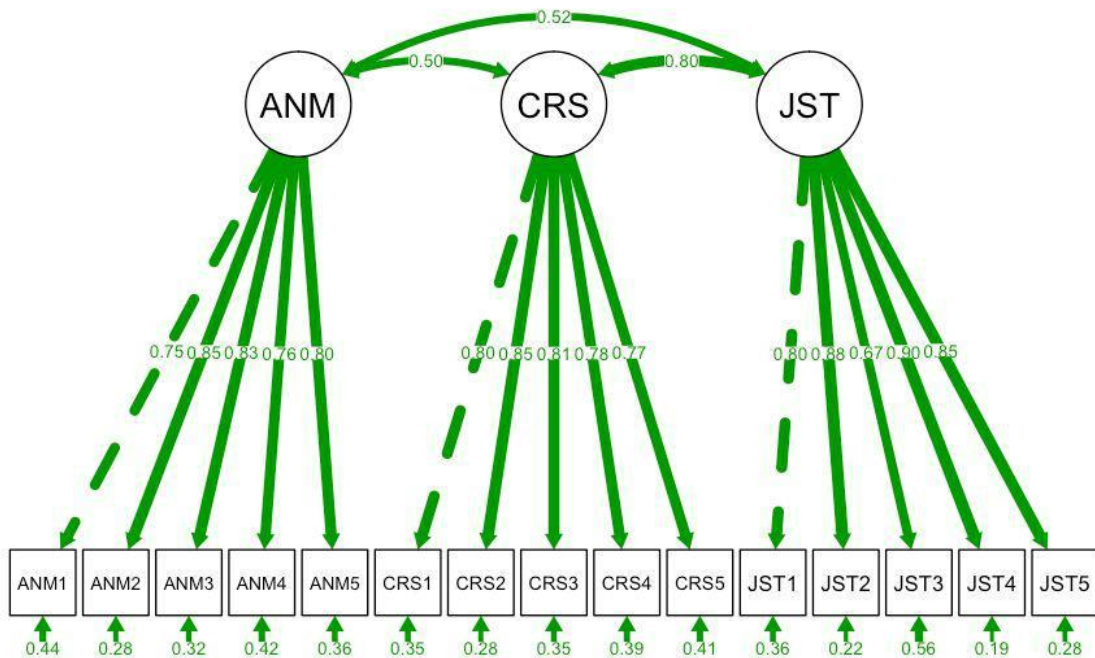


Figure 2 Measurement model of autonomy, career satisfaction and job satisfaction

Convergent validity means the extent to which observed variables of a latent variable converged or shared a level of proportion of variance in common (Hair, Black, Babin, & Anderson, 2013). Convergent validity was analysed through factor loadings and average variance extracted (AVE). Standard minimum cut off for average variance extracted was 0.5 or higher indicating adequacy of convergence.

Discriminant validity refers to the extent to which indicators of a construct is distinctively discriminating from other constructs. The criteria included that AVE should be greater than the Maximum Shared Variance (MSV) and Average Shared Variance (ASV) in order to ensure adequacy of divergence (Fornell & Larcker, 1981).

The scales in the model were found to have a high internal consistency and the model was considered reliable and valid, convergently and divergently.

Table 3 Confirmatory factor analysis, reliability, convergent validity and discriminant validity

Construct	Estimate	Standard	SE	Z	Alpha	CR	AVE	MSV	ASV
ANM					0.896	0.896	0.635	0.266	0.392
ANM1	1.00	0.75							
ANM2	1.11	0.84	0.05	20.53					
ANM3	1.09	0.82	0.06	17.51					
ANM4	1.06	0.76	0.07	14.00					
ANM5	1.10	0.80	0.07	14.99					
CRS					0.899	0.899	0.643	0.640	0.446
CRS1	1.00	0.80							
CRS2	1.05	0.84	0.04	25.80					
CRS3	1.06	0.80	0.04	16.34					
CRS4	1.00	0.78	0.06	14.71					
CRS5	0.94	0.76	0.05	17.93					
JST					0.910	0.914	0.684	0.640	0.453
JST1	1.00	0.80							
JST2	1.06	0.88	0.04	22.76					
JST3	0.79	0.66	0.06	11.55					
JST4	1.12	0.90	0.05	21.13					
JST5	1.08	0.85	0.05	19.03					

Note: ANM = Autonomy, CRS = Career satisfaction, JST = Job satisfaction

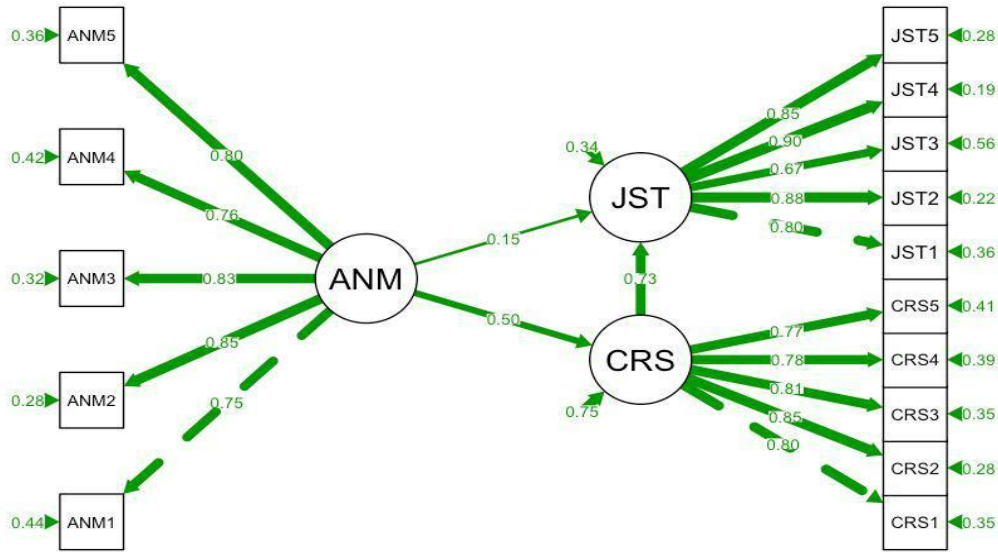


Figure 3 Structural model of autonomy, career satisfaction and job satisfaction

After the process of confirmatory factor analysis, structural regressions model was fitted and visualized. The results of the analysis and model fit indices indicated that the structural model was also according to the empirical data, according to table 4 and figure 3.

Table 4 Structural model fit indices criteria: Hair, Black, Babin, & Anderson, (2013), Bagozzi & Yi (1988), Browne & Cudeck (1993)

Fit indices	Measurement model fit statistics	Criterion
Chi-square	261.224***	Not significant
Relative Chi-square	3.002	Less than 5
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*** p < 0.000 (Chi-squared test is significant at the 0.00 level)

As per table 5, all estimated and standard coefficient of structural model were significant. Besides, considering the value for coefficient of determination of the structural equation, it was found that the amount of variability of job satisfaction was determined by career satisfaction and autonomy by 66.2 percent and the amount of variability of job satisfaction was determined by autonomy by 25.3 percent.

Table 5 Structural equation model of autonomy, career satisfaction and job satisfaction

Structural regressions	R-squared	Estimate	Standard	SE	z-value	p-value
Job satisfaction	0.662					
Career satisfaction		0.772	0.729	0.061	12.678***	0.000
Autonomy		0.146	0.149	0.053	2.779**	0.005
Career satisfaction	0.253					
Autonomy		0.466	0.503	0.066	7.080***	0.000

*** p < 0.000, ** p < 0.010

The analysis of path coefficient results of direct effect, indirect effect and total effect of the structural regressions model are shown in table 6. All coefficients, both estimated and standard, were statistically significant. Path analysis R-squared on job satisfaction was 56.8 percent and path analysis R-squared on career satisfaction was 19.8 percent. Indirect effect or mediation effect of career satisfaction on autonomy and job satisfaction was significant and direct effect of autonomy on job satisfaction was also significant and noted from the 95% confident interval for each path that the interval did not include 0 indicating a statistical significance. Moreover, the total effect of the model was significant. This portrays that career satisfaction has a partial mediating role in the relationship between autonomy and job satisfaction as the indirect effect path is statistically significant. Therefore, both research hypotheses are totally supported.

Table 6 Model paths analysis of autonomy, career satisfaction and job satisfaction

Model paths analysis	Estimate	Standard	SE	z-value	Lower CI	Upper CI
Autonomy job satisfaction	0.157	0.172	0.033	4.801	0.093	0.221
Career satisfaction Job satisfaction	0.692	0.661	0.038	18.452	0.619	0.766
Autonomy career satisfaction	0.388	0.445	0.038	10.185	0.314	0.463
Direct effect: ANM JST	0.157	0.172	0.033	4.801	0.093	0.221
Indirect effect: ANM CRS JST	0.269	0.294	0.030	7.917	0.210	0.328
Model total effect	0.426	0.466	0.039	10.799	0.349	0.503

According to the analysis result stated above, the confirmatory factor analysis was conducted and structural equation model with path analysis was developed and both were fitted with empirical data. The unique point of this research is the context of the study is derived from total samples of teleworking professionals. The study sheds a light on a significant indirect effect or mediation role of career satisfaction on relationship between autonomy and job satisfaction. This implies that autonomy stemmed from teleworking not only led to job satisfaction but also mediated by career satisfaction. As it is hypothesized earlier, autonomy and autonomy together career satisfaction led to job satisfaction. This findings is interpreted the same way as previous study (Joo & Park, 2010). This study confirmed that even in the modern-day working environment that some kinds of employees were allowed to work from anywhere, autonomy together with career satisfaction could still lead to job satisfaction.

Discussion

As mentioned earlier, the main objective of the study is to develop a structural equation model in a teleworking context and this research was set to answer the question: "Does autonomy directly affect job satisfaction and does career satisfaction play a mediating role between autonomy and job satisfaction in a teleworking context?" According to the analysis result, the objective was achieved and the study result also reveals that career satisfaction plays a mediation role on the relationship between autonomy and job satisfaction and autonomy also directly affects job satisfaction. Moreover, in accordance with the proposed structural model mentioned in the previous section, it was obvious that autonomy and career satisfaction were still the factors that affected job satisfaction even in the modern working practice like teleworking. Furthermore, job satisfaction was said to be a favorable factor regarding employee work performance and led to positive work performance physically and mentally and finally brought an intention to retain in the organization rendering all staff training investment useful (Wang & Hsieh, 2012). According to paths analysis results, autonomy had a significant direct effect on job satisfaction. Besides, career satisfaction had a significant indirect effect on the relationship between autonomy and job satisfaction. This implies that not only an autonomy from teleworking practice affects a level of job satisfaction but also is mediated by career satisfaction. This is in accordance

with the previous study of Grandey, Cordeiro, & Crouter (2005). According to previous studies (Demoussis & Giannakopoulos, 2007), all the positive work-related factors namely job satisfaction once again were confirmed. There is a recommendation to these phenomena. The company should continue to promote autonomy at work even in a teleworking environment to support job satisfaction.

To generalize, when staff feel satisfied with their job and career, they feel less burnout (Hoff, Carabetta, & Collinson, 2019).

Suggestion

Ultimately, there are two major limitation recommended for future study. Firstly, this research is quantitative. Future research should use qualitative research as a method to possibly reach deep down into richer results as qualitative research strength is the in-depth interview and focus group discussion. This can proved useful to gain more insight regarding results. Secondly, this research is cross-sectional. The result only yields a snapshot picture at a time. Future research should be cohort or longitudinal to study these positive effects for the long term.

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