

ANTECEDENTS OF TURNOVER INTENTION: A META-ANALYSIS STUDY IN THE UNITED STATES

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Abstract: The purpose of this paper was to determine the direction and effect size of the relationships between turnover intention and its main antecedents in the United States. The main predictors of turnover intention are chosen as job satisfaction, organizational commitment and empowerment. The studies which are published between 1998 and 2018 are reviewed. ScienceDirect, Scopus, and ProQuest databases were searched and 2.356 studies are screened. The meta-analysis software package, Comprehensive Meta-analysis Software (CMA), was used for the meta-analysis. 101 studies were suitable and the three data sets are formed: first set included 312,261 subjects and 91 studies relating job satisfaction to turnover intention, the second set included 13,502 subjects and 29 studies relating organizational commitment to turnover intention, and the third set included 997 subjects and 5 studies relating empowerment to turnover intention. Each data was heterogeneous significantly and the random effects model was used. Publication bias is analyzed for each data set and no evidence of publication bias was detected. The results revealed that the overall relationship between turnover intention and the selected three constructs was negative and significant: the power of the job satisfaction's effect and organizational commitment's effect are almost the same (-.52), and the power of the empowerment's effect is weaker (-.22). Job satisfaction and organizational commitment have a large impact and empowerment has a small effect on turnover intention. The moderator analysis determined that type of industry and region are the moderators affecting the relationship between job satisfaction and turnover intention. The findings also provide guidance for the managers working in the United States who need to keep turnover under control.

Keywords: Job satisfaction, organizational commitment, empowerment, turnover intention.

JEL Classification: D23, J63.

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Introduction

In mature markets such as the markets of the United States, the organizations aim to form the best teams to be more effective in a competitive

environment. But turnover is a threat to effective organizations. It is also an extra cost for the institutions. Therefore the managers try to keep turnover under control. But it is a challenging

task because there is a lot of variables that influence turnover intention.

Job satisfaction, organizational commitment, and empowerment are chosen as the main antecedents of turnover intention. Meta-analysis studies showed that organizational commitment and job satisfaction are the strongest predictors of turnover intention (Tett & Meyer, 1993; Choi & Kim, 2016; Coomber & Barriball, 2006; Kim & Kao, 2014). Tett and Meyer (1993) reported that job satisfaction and turnover intention had the highest negative correlation among the other factors affecting turnover intention. The meta-analysis study of Pagilagan (2017) accepted organizational commitment and empowerment as the main antecedents of turnover intention.

Job satisfaction can be described as the positive development on the emotional state of the employees, which results from their job. Two Factor Theory of Frederick Herzberg (1966), put emphasis on the factors affecting job satisfaction and classified these factors in two groups: motivational factors, such as responsibility and achievement and hygiene factors, such as pay and supervision. The classification of satisfaction and dissatisfaction was prevalent in the 1950s (Weitz, 1952) and somehow these two groups were also related to this classification. The existence of motivational factors can lead to satisfaction and non-existence of hygiene factors can lead to dissatisfaction. Hygiene factors are also called extrinsic factors and motivational factors are also called intrinsic factors. Some researches focused on intrinsic and extrinsic job satisfaction and related each of them to turnover intention (Karsh et al., 2005; Brough & Frame, 2004; Wang et al., 2012). This research included studies relating total job satisfaction to turnover intention.

Organizational commitment is the employee's adherence to the organization and it is a kind of psychological attachment (Meyer & Herscovitch, 2001). Organizational commitment studies are improved with side-bet theory (Becker, 1960), and commitment is classified as occupational commitment and organizational commitment (Ritzer & Trice, 1969). According to the three-component model, there are three kinds of organizational commitment: affective commitment, continuance commitment and normative commitment (Meyer & Allen, 1991). The employees experiencing self-esteem, sense of belonging and safety, starts to get

committed to that organization. If the company meets the requirements of the employee, then the employee deciding to quit will put these advantages in danger (Cho et al., 2009). Therefore organizational commitment plays a great role in quitting decisions.

Organizational commitment can be described as 'relative strength of an individual's identification and involvement in an organization' (Mowday et al., 1979, p. 226). Continuance commitment is about the fear of losing his job or position in the company, and normative commitment is about the norms and ethical rules of the individual which forces him to keep on working for that company. But affective commitment includes the factors that make an organization attractive to an employee. Continuance commitment and normative commitment affect staying as a member of the organization, but both of them are affected by the other factors which are not related to the organization. For this reason, the studies using affective commitment measurements are used together with other studies using organizational commitment measurements in this research.

Empowerment of employees includes a set of progressive and advanced human resources management practices transferring a considerable amount of power and decision-making rights from higher-level managers to lower-level employees (Kanter, 1977; Yin et al., 2019). Empowerment aims to increase the ability of employees to influence the outcomes. Some researches accepted empowerment as an important antecedent of turnover intention (Hauck et al., 2011; Thurston & Glendon, 2018). Empowering the employees can reduce turnover intention (Martin, 2010). Thus empowerment is also chosen as a variable of this meta-analysis study. The aim of this paper, which uses meta-analysis method, is to determine the effect size of the correlations between job satisfaction and turnover intention, between organizational commitment and turnover intention, and between empowerment and turnover intention.

1. Conceptual Relationships and Hypothesis Development

Employees can be the most important assets of the organizations depending on the industry (Elci et al., 2018). Therefore turnover intention cannot be neglected by the managers. To see the big picture, previous research findings

should be integrated quantitatively by using meta-analysis (Hedges & Olkin, 1985). For example, some researchers used meta-analysis method to reveal factors that affect turnover (Irvine & Evans, 1995; Mor Barak et al., 2001; Griffeth et al., 2000).

Humborstad and Perry (2011) related empowerment, organizational commitment and job satisfaction to turnover intention, and they found that these constructs have a negative and significant effect on turnover intention. The direction of the relationship between job satisfaction and turnover intention is mostly negative (Huang, 2006; Yang, 2008), and most researchers suggested that the direction of the relationship between organizational commitment and turnover intention is negative (Walsh, 2016; Wayne et al., 2006; Lentz & Allen, 2009). Empowerment also influenced turnover intention negatively in some researches (Force, 2008; Keller, 2005; Okuyucu, 2014). Consequently, the hypotheses below can be tested:

H1: Job satisfaction has a negative effect on turnover intention.

H2: Organizational commitment has a negative effect on turnover intention.

H3: Empowerment has a negative effect on turnover intention.

Some academicians studied the relationship between job satisfaction and turnover intention among managers (Spector et al., 2007; Masuda et al., 2012). Another research showed that collar color affects the relationship between job satisfaction and turnover intention (Huang, 2011). Kumar et al. (2018) suggested that the impact of job level on the relationship between turnover intention and its antecedents depends on managerial support. Gong et al. (2018) revealed the moderating effect of managerial positions on the relationship between job satisfaction and turnover intention. These findings indicated that collar color can be a moderator of the relationships between turnover intention and its antecedents. Thus the hypotheses below will be tested:

H4a: Collar color is a moderator for the effect of job satisfaction on turnover intention.

H4b: Collar color is a moderator for the effect of organizational commitment on turnover intention.

H4c: Collar color is a moderator for the effect of empowerment on turnover intention.

The impact of the workplace on the relationship between job satisfaction and

turnover intention was a significant concern of some researchers (Decker et al., 2009; Dickey et al., 2011). Occupational differences can also affect the relationship between job satisfaction and turnover intention (Frenkel et al., 2013). Alexe and Alexe (2018) claimed that a broader perspective is necessary and they revealed the impact of industrial differences on similar relationships. To be able to analyse the moderator effect of industry, a relatively huge data is necessary. The data of this study seems to be big enough to reveal the moderator effect of industry. Hence this meta-analysis study will analyse the moderator effect of industry on the surveyed relationships:

H5a: Type of industry is a moderator for the effect of job satisfaction on turnover intention.

H5b: Type of industry is a moderator for the effect of organizational commitment on turnover intention.

H5c: Type of industry is a moderator for the effect of job empowerment on turnover intention.

Doede (2017) has shown that race can be a predictor of the relationship between job satisfaction and turnover intention. It is suggested that the relationship between job satisfaction and turnover intention can be significantly different in different countries (Huang, 2011; Luu & Hattrup, 2010). Guchait and Back (2016) collected data from the United States (US), South Korea and India, and surveyed the impact of the country on the relationship between organizational commitment and turnover intention. Alas and Edwards (2011) suggested that job satisfaction and organizational commitment are influenced by continents. Job satisfaction of nurses working in Africa are compared to the job satisfaction of the ones working in Europe and significant differences are revealed (Van der Hoef et al., 2012). Jones and Sloane (2009) suggested that regional differences affect the job satisfaction even in the same country. It is also suggested that organizational commitment may vary from a region to the other in the same country (Kokubun, 2017). In the light of these studies, the moderating effect of region on the surveyed relationships will be tested. In accordance with the purpose of testing the hypotheses below, the data which belong to the US should be classified into two groups, and the Southern US will be compared to Northern US to observe the impact of the region:

H6a: Region is a moderator for the effect of job satisfaction on turnover intention.

H6b: Region is a moderator for the effect of organizational commitment on turnover intention.

H6c: Region is a moderator for the effect of empowerment on turnover intention.

2. Methodology

2.1 Study Design

In our study, the correlation between job satisfaction and turnover intention, the correlation between organizational commitment and turnover intention, and the correlation between empowerment and turnover intention are tested by using meta-analysis method and this meta-analysis study was designed and conducted according to Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines (Moher et al., 2009). The literature review was made in ProQuest, ScienceDirect and Scopus databases.

The inclusion criteria for this study can be defined as below:

- The researches were conducted in a 20 year period, which is between 1998 and 2018.
- The studies include correlation value, which is required for the meta-analysis of this study.
- The included correlation value should be computed by using total job satisfaction score and total turnover intention score.
- The construct job satisfaction should be overall job satisfaction, not a subscale.
- The data of the study should not be used twice.

2.2 Search Strategy

The data includes studies together with their samples from the US. The literature review was made in ProQuest, ScienceDirect, and Scopus databases. 212 studies from ScienceDirect, 1,141 studies from Proquest, and 1,003 studies from Scopus are reviewed. This study includes proceeding papers, articles published in non-refereed and refereed journals, master theses and doctoral dissertations. "Organizational commitment", "empowerment", and "turnover intention" are the keywords used during the search for data.

All 2,356 abstracts were reviewed for inclusion in the meta-analysis. Of these, 1,759

ones were excluded because they did not relate the chosen constructs to turnover intention or to each other. After this process, 597 studies remained. 227 studies are excluded from these remaining studies, because 207 of them provided no correlation value between job satisfaction and turnover intention, 1 of them used the data and the results of a previous study which already existed, 3 studies correlated only the questions of the scale to turnover intention, 16 studies correlated only the subscales of job satisfaction to turnover intention. Among the remaining 370 studies, 269 of them were not conducted in the US and they are excluded. These 101 studies formed the final set, and they provided 91 correlation values for the relationship between job satisfaction and turnover intention, 29 correlation values for the relationship between organizational commitment and turnover intention, and 5 correlation values for the relationship between empowerment and turnover intention.

2.3 Coding Process

To design a data coding form one professor from the vocational school of health services, a quantitative research expert assisted the authors who performed the coding. The coding process aimed to extract the necessary information from the chosen studies. All the distinctive characteristics of the studies are written on the coding form, and it included the following components: References of the study, characteristics of the sampling, type of the measurement tool, correlation values, and sample size.

In the coding for the 101 studies, there was 98.7% agreement between the authors at the beginning, but authors reached a consensus for the items where disagreement existed. The quality evaluation of these studies was conducted using the quality rating scale of Zangaro and Soeken (2007). This scale includes 10 items which are used to score the study between 1 and 9, the last item is the total score shown in table 1. A score between 1–4 means low quality, 5–7 means medium quality, 8 or 9 means high quality. Two researchers scored the studies, overall there was 99.8% rater agreement across the items. The study of Khanin et al. (2012) was scored as 9 by a researcher and 8 by the other researcher, and the average is taken as 8.5 (high). The studies of Diamond (2005), Dole and Schroeder (2001),

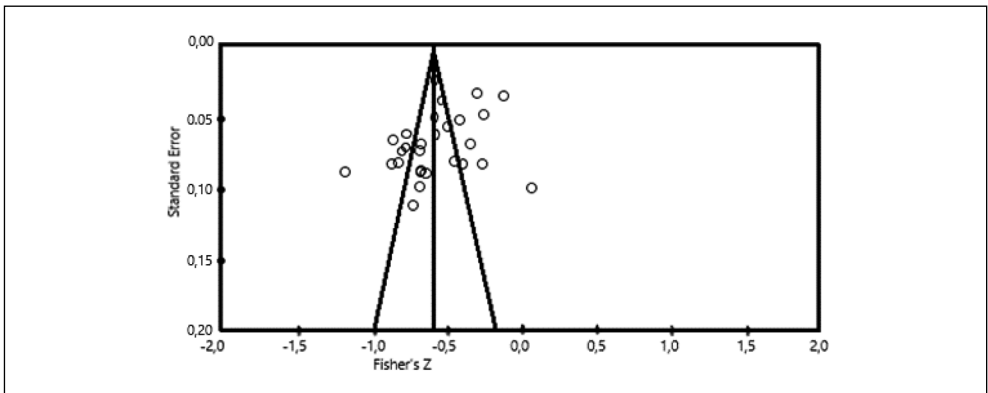
Force (2008), Harris et al. (Harris, Brouer, & Harris, 2009), Mattila (2006), Rode et al. (2007) and Tull (2004) are scored as 8 (high), the studies of Junak (2007), Laux et al. (2016), Osborne (2002) and Waul (2007) are scored as 7 (medium) and the rest of the studies are scored as 9 (high) by the authors. According to the quality analysis of the studies, 96.04% of the collected studies have high quality and only 3.96% of them have medium quality.

3. Findings

3.1 Publication Bias and Heterogeneity

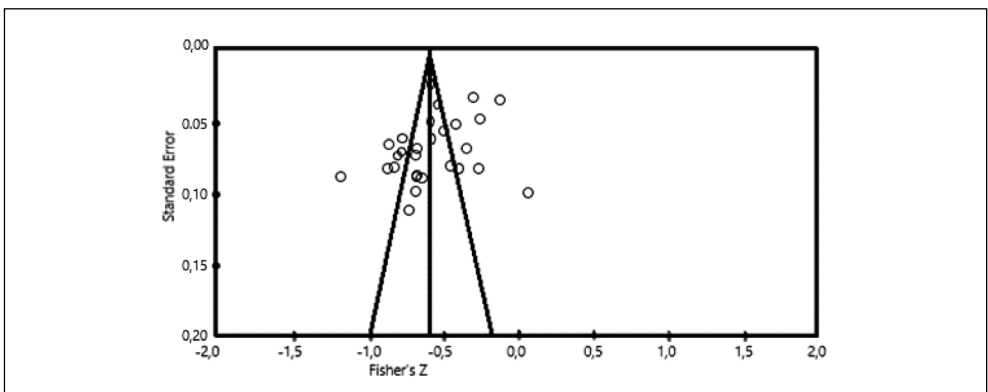
Comprehensive Meta-analysis Software (CMA) is used to analyze the data provided by 52 articles, 46 doctoral dissertations, and 3 master theses. 3 data sets are used: 1st data set regarding the correlation coefficients regarding the relationship between job satisfaction and turnover intention, 2nd data set regarding the correlation coefficients regarding the relationship between organizational

Fig. 1: Funnel plot of 1st data set (job satisfaction – turnover intention)



Source: own analyses

Fig. 2: Funnel plot of 2nd data set (organizational commitment – turnover intention)



Source: own analyses

commitment and turnover intention, 3rd data set regarding the correlation coefficients regarding the relationship between empowerment and turnover intention.

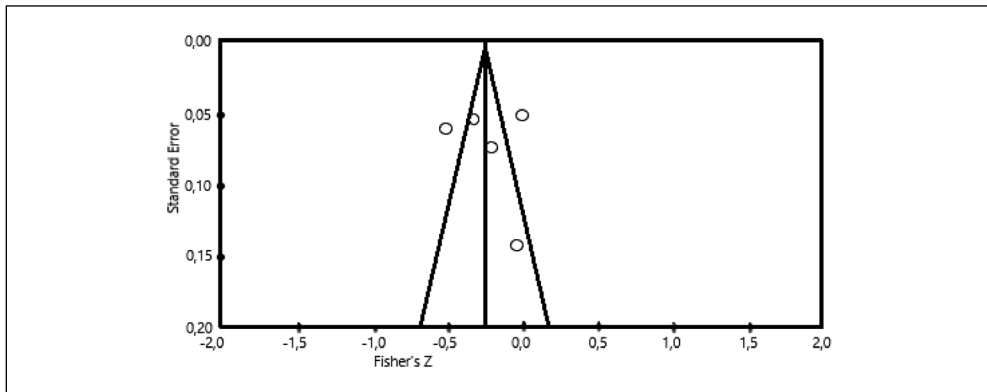
Publication bias can be defined as lost data or as the possibility that all the researches related to the subject of the meta-analysis study, are not published. It is one of the significant limitations of meta-analysis studies. Funnel plot, which is the most common method, is used to observe publication bias. Asymmetrical distribution of the studies on the funnel plot is accepted as a sign of publication bias, and the funnel plot of the first data set regarding the relationship between job satisfaction and turnover intention shown in Fig. 1 included no evidence of publication bias.

Heterogeneity analysis results of the 1st data set suggested that this data is significantly heterogeneous at .01 level. I^2 statistic of this data, which indicates the percentage of

variability that is due to the differences between studies compared to the variance of sampling, is 94.374%. This value varies between 1–100% and higher values indicate higher heterogeneity. According to the test results, the heterogeneity of second data is significant at .01 level and I^2 statistic of this data is 91.338%. The funnel plot of the second data set regarding the relationship between organizational commitment and turnover intention is shown in Fig. 2. There is no evidence of publication bias in this funnel plot.

Analysis results showed that heterogeneity of the data including correlation values between empowerment and turnover intention is significant at the .01 level. I^2 statistic of third data is 83.47%. All the data sets are heterogenous, therefore random effects model is used. Fig. 3 showed the funnel plot of the third data set, which indicated symmetrical distribution. To get accurate results, Duval and Tweedie's trim and fill test is carried out using the random effects model.

Fig. 3: Funnel plot of 3rd data set (empowerment – turnover intention)



Source: own analyses

Tab. 1: Duval and Tweedie's trim and fill test results of 1st data set (job satisfaction – turnover intention)

N = 312261	Trimmed studies	Point estimate	Confidence interval (CI)		
			Lower limit	Upper Limit	Q value
Observed values		-.54879	-.56342	-.53381	1,599.80561
Adjusted values	0	-.54879	-.56342	-.53381	1,599.80561

Source: own analyses

Tab. 2: Duval and Tweedie's trim and fill test results of 2nd data set (organizational commitment – turnover intention)

N = 13502	Trimmed studies	Point estimate	Confidence interval (CI)		
			Lower limit	Upper Limit	Q value
Observed values		-.54748	-.59022	-.50168	323.25876
Adjusted values	0	-.54748	-.59022	-.50168	323.25876

Source: own analyses

In Tab. 1, the results of this test, which is carried out for the first data set, are given. According to the results, there is no sign of publication bias in this data set including the correlation values between job satisfaction and turnover intention. The artificial effect size which is formed to fix the impact of publication bias is compared to the observed effect size and no difference is detected. The reason for non-existence of any difference is the symmetrical distribution of researches on both sides of the central line. As there is no evidence of lost data on both sides, no difference appeared between adjusted values and observed values.

In Tab. 2, the results of Duval and Tweedie's trim and fill test are indicated for second data set regarding the relationship between organizational commitment and turnover intention. These results indicated that there is no publication bias in second data set. The analysis results of Duval and Tweedies' trim and fill test which is carried out for third data set is shown in Tab. 3. No sign of publication bias is detected for the relationship between empowerment and turnover intention as there is no difference between the observed values and adjusted values.

3.2 Findings Related to Effect Sizes

The standard measure of the meta-analysis is the effect size, and it is used to determine

the surveyed relationship's strength and direction (Borenstein et al., 2009). Pearson correlation coefficient values are collected to find the effect size. The effect size of the first data set is negative and H1 is accepted. The effect of job satisfaction on turnover intention is $-.55$ ($r = -.549$) and it reveals that job satisfaction has a *large*-level effect on turnover intention (see Cohen, 1988).

The effect size of the second data set is also negative and H2 is accepted. The effect of organizational commitment on turnover intention is $-.55$ ($r = -.547$) and it is almost the same with the effect of job satisfaction. This value also reveals that organizational commitment has a *large*-level effect on turnover intention (see Cohen, 1988). The effect of empowerment on turnover intention is negative and H3 is also confirmed. The effect size is computed as $-.22$ ($r = -.215$), which indicates that the power of this effect is *small* (see Cohen, 1988).

Tab. 4 showed the analysis results of the first data. The impact of collar color is not significant, and the moderator analysis results did not support H4a, which asserted that the collar color is a moderating variable for the effect of job satisfaction on turnover intention ($Q_b = 0.233$, $p > .05$). According to the results of moderator analysis, type of industry is a moderator of the first data set ($Q_b = 46.175$, $p < .01$). This finding supported H5a.

Tab. 3: Duval and Tweedie's trim and fill test results of 3rd data set (empowerment – turnover intention)

N = 997	Trimmed studies	Point estimate	Confidence interval (CI)		
			Lower limit	Upper Limit	Q value
Observed values		-.22075	-.27936	-.16050	24.19853
Adjusted values	0	-.22075	-.27936	-.16050	24.19853

Source: own analyses

Tab. 4: Moderator analysis results of 1st data set

Concepts	k	N	r	CI		Q	Q _b
				Lower limit	Upper limit		
Job satisfaction	91	312,261	-.549*	-.563	-.534	1,599.81	
<i>Collar color</i>							0.233ns
White collar employees	2	2,639	-.516	-.562	-.467		
Blue collar employees	15	309,622	-.594	-.596	-.592		
<i>Moderator (industry)</i>							46.175*
Civil transport	2	300	-.654	-.741	-.545		
CRM	2	218	-.654	-.742	-.545		
Education	12	2,782	-.581	-.620	-.539		
Financial sector	2	1,607	-.636	-.703	-.559		
Health	26	291,251	-.568	-.591	-.544		
Information	6	1,070	-.535	-.593	-.471		
Non-profit	3	354	-.475	-.574	-.361		
Police	2	669	-.587	-.665	-.496		
Public	7	2,766	-.514	-.562	-.462		
Security	3	1,029	-.505	-.580	-.421		
Sport	2	624	-.455	-.551	-.349		
Tourism	6	2,810	-.425	-.483	-.364		
Various	18	6,781	-.551	-.581	-.519		
<i>Moderator (region)</i>							12.056*
Northern US	27	6,008	-.524	-.542	-.506		
Southern US	32	9,681	-.597	-.610	-.584		
Other	32	296,572	-.595	-.597	-.592		

Source: own analyses

Note: *p < .01; ns: not significant.

Some studies are conducted in the Southern US and some of them are conducted in the Northern US. But first and second data included some studies which collected data from the whole US or which did not mention which part of the US is used to collect data. This group is called "other". Moderator analysis results of the first data set shown in Tab. 4 supported H6a and region is a moderating variable for the effect of job satisfaction on turnover intention (Q_b = 12.056, p < .01).

Tab. 5 indicated the analysis results of the second data. The moderator analysis results did not support H4b and the moderator effect

of collar color is not significant (Q_b = 0.531, p > .05). There were not enough studies in the second data set to test H5b. According to the moderator analysis results, the region is not a moderator for the second data set and H6b was not supported (Q_b = 0.494, p > .05).

The moderator analysis results of the third data set are shown in Tab. 6. This data set did not include adequate studies to test H4c and H5c. The moderator analysis results did not support H6c, which asserted that the region is a moderating variable for the effect of empowerment on turnover intention (Q_b = 0.083, p > .05).

Tab. 5: Moderator analysis results of 2nd data set

Concepts	k	N	r	CI		Q	Q _b
				Lower limit	Upper limit		
Organizational commitment	29	13,502	-.547*	-.590	-.502	323.26	
<i>Collar color</i>							0.531ns
White collar employees	2	250	-.611	-.684	-.527		
Blue collar employees	27	13,252	-.532	-.544	-.519		
<i>Moderator (region)</i>							0.494ns
Northern US	27	6,008	-.497	-.635	-.328		
Southern US	32	9,681	-.554	-.485	-.485		
Other	32	296,572	-.553	-.623	-.474		

Source: own analyses

Note: *p < .01; ns: not significant.

Tab. 6: Moderator analysis results of 3rd data set

Concepts	k	N	r	CI		Q	Q _b
				Lower limit	Upper limit		
Empowerment	5	997	-.215*	-.36	-.06	24.19853	
<i>Moderator (region)</i>							0.083ns
Northern US	2	586	-.248	-.346	-.145		
Southern US	3	413	-.206	-.279	-.131		

Source: own analyses

Note: *p < .01; ns: not significant.

Discussion and Conclusions

The results of the meta-analysis showed that job satisfaction, organizational commitment, and empowerment had a negative impact on turnover intention. Job satisfaction and organizational commitment had a *large* impact on turnover intention and empowerment had a *small* impact on turnover intention. The effect size of job satisfaction and organizational commitment are almost the same. These results improved the findings of the previous studies (Tett & Meyer, 1993; Choi & Kim, 2016), which were in the health industry. Choi and Kim (2016) suggested that job satisfaction is the strongest predictor of turnover intention in the health industry. The findings of this study

showed that organizational commitment and job satisfaction are both the strongest predictors of the turnover intention in the US. Such meta-analysis studies are very rare. To the best of our knowledge, any similar meta-analysis studies are not conducted to review the studies collecting data from the US.

Tab. 7 shows the analysis results of the hypotheses. 12 hypotheses would be tested, but 9 of them could be tested. H1, H2, H3, H5a, and H6a are supported. H4a, H4b, H6b, and H6c are rejected. The data was not suitable to test H4c, H5b, and H5c.

Pagilagan (2017) accepted organizational commitment and empowerment as main factors that affect turnover intention. The findings

Tab. 7: Summary of hypotheses test results

Hypothesis	Test result
H1	Confirmed
H2	Confirmed
H3	Confirmed
H4a	Rejected
H4b	Rejected
H4c	Not adequate data
H5a	Confirmed
H5b	Not adequate data
H5c	Not adequate data
H6a	Confirmed
H6b	Rejected
H6c	Rejected

Source: own analyses

of this study supported that organizational commitment is a strong antecedent of turnover intention, but the effect of empowerment is not as strong as organizational commitment. The effect size of organizational commitment is -.55 and the effect size of empowerment is -.22.

Different industries have different working conditions, and these changing conditions may affect how job satisfaction affects turnover intention. Estorninho (2013) determined that job satisfaction of the managers working in different industries can be significantly different. The results of the moderator analysis are in line with this study, and they indicated that industry is a moderating variable on the relationship between job satisfaction and turnover intention. The main limitation of analyzing the moderating effect of this variable was the size of data, and the other data sets did not include adequate studies for such an analysis testing the moderating effect of industry.

The region is important in the US. The temperature difference Northern US and Southern US is significantly high. Besides, the Southern US is affected by the hurricanes. If these conditions affect the quality of working life, they can also affect turnover intention. Because the direct effect of working life on turnover intention is significant (Celik & Oz, 2011). The region has a moderating effect on

the relationship between job satisfaction and turnover intention: Northern US has lower effect size comparing to Southern US. Anyway region is not a moderator of the relationship between organizational commitment and turnover intention and it is not a moderator of the relationship between empowerment and turnover intention. The reason for these results might be related to the structure of the constructs. The environment can influence job satisfaction significantly, for example, the police officers and employees of civil transport can be affected by the environment. But empowerment and organizational commitment are influenced by the organizations, rather than the environmental factors, such as climate.

Turnover intention is a threat to the institutions of the US, especially for the quality of labor-intensive companies' operations. The managers who are responsible to keep turnover under control should be aware of the factors affecting turnover intention. This study reveals the main predictors of turnover intention and the power of their effect. The managers can prepare their policy to keep turnover intention by using the knowledge provided by this meta-analysis.

Limitations and Future Research

The main aim of this meta-analysis study was reaching all the studies worldwide. Although

the strategies were developed in order to review more studies, it was not possible to review some of them as all the studies were not in English. 1 study was in Korean, 1 study was in Chinese, 1 study was in German and 1 study was in Turkish. The authors could review the studies which were in Turkish and German, but they could not review the studies in Korean and Chinese, which may contribute to this meta-analysis. In the future, some other authors can conduct national meta-analysis researches by reviewing studies in different languages. For example, Choi and Kim (2016) conducted a meta-analysis study by reviewing the studies in English and in Korean to evaluate the relationship between job satisfaction and turnover intention. Collaborations between authors can open the way for the authors to conduct more advanced researches.

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