

META ANALYSIS RELATIONSHIP BETWEEN LEADERSHIP MEMBER EXCHANGE (LMX) WITH LIKES (LIKING)

**Kabul Wahyu Utomo, Universitas Trilogi
Ludwina Harahap, Universitas Trilogi**

Abstract

Study about relationship between leader and direct member or leader member exchange (LMX) is one of interest topic in leadership study. Differentiated treatment form of a leader to members makes a real phenomenon in-group and out-group in organization. In many research found that LMX has relation with organization performance as consequent. But, not only relation with performance, also many antecedent. At this time, the researchers make analysis about LMX from many artikel and then make meta analysis form one of antecedent (Liking).

Key word: Leader Member Exchange, Meta Analysis, Liking

INTRODUCTION

Research in the field of leadership associated with the influence of individual supervisors on subordinates within the organization becomes an interesting topic to discuss or study. This is because in various studies showed an significant evidence of relationship between leadership and organizational performance (Ilies, Nahrgang, & Morgenson, 2007). Leadership is essentially influence of the leader against his subordinates. Through the influence of the supervisor (leader), a subordinate (subordinate) will have the behavior as desired leader. This influence whether it is big or small then it determines the size or gap between the various things desired by leader compare to various things done by subordinates.

The study of leadership generally consists of two distinct focuses: focus on general leadership influence and assume that subordinates are homogeneous. Furthermore the next focus is on the assumption that subordinates are considered heterogeneous. When subordinates are assumed to be heterogeneous, then makes an assumption that boss makes a unique relationship to each subordinate. The unique relationship between each subordinate and the leader then becomes the basic principle of Leader Member Exchange (LMX). In the LMX approach, leaders build different types of exchange relationships with each subordinate that impact on the behavior and attitudes of subordinates (Liden, et al., 1997).

In the reality of organizational life, the phenomenon of the relationship between the leader and the direct subordinate can appear with high quality (commonly named ingroup) or low quality (named outgroup). Interested to the phenomenon and the number of LMX studies, this study wants to review the theory of leader member exchange (LMX) and try to conduct a meta-analysis of one of the antecedent variables of LMX.

Meta-analysis method is a statistical technique for amalgamating, summarising, and reviewing previous quantitative research. Meta-analysis refers to the analysis of analyses, the statistical analysis of a large collection of analysis results from individual studies for the

purpose of integrating the findings. The research object is LMX (Leader Member Exchange). The purpose of meta-analysis is to analyze data from various primary studies and the results used to accept or support a hypothesis or to reject a hypothesis. This study is expected to provide some guidance for further research related to LMX.

Gestner and Day (1997) have conducted analysis and review of Leader member exchange, but the analysis is more on issues of correlation and construct, while Ilies, Nahrgang and Morgenson (2007) conducted an analysis study related to Leader member Exchange relationship with Citizenship Behaviors.

Formulation of the problem

This research aim to see the relationship of one LMX antecedent of liking and explain the relationship it to the quality of leader-direct relationships by using meta-analysis. The meta-analysis are a method to see LMX as an important leadership approach which is strongly influenced by antecedents as evidenced by some previous research, and then reinforced by research using meta-analysis methods. There are some of limitation of the research :

- a. The leadership are limited to matters between the boss and the direct subordinate (LMX).
- b. Data sources taken from 1975-2010 especially those using Vertical Dyad Linkage and Leader Member Exchange keywords.
- c. The only LMX antecedent variables are liking

Research Objectives

This study aims to conduct a review of the relationship between Leader Member Exchange with one of the antecedents associated with LMX is likes uses meta-analysis method. The meta-analysis method was performed based on existing data in the previous primary study related to LMX.

DISCUSSION

Leadership

Leadership by Hemphill and Coons (1957) in Yukl (1989) is "the behavior of an individual when he is directing the activities of a group toward a shared goal" or it can be said that leadership is an individual behavior when he directs group activities for a purpose. Graen and Uhl-Bien (1995) led to the classification of domains to study leadership. With the classification of domains according to Graen and Uhl-Bien (1995), the leadership includes three domains: domain leaders, subordinate domains (followers) and domain relationships between leaders and subordinates. Each domain examines something different.

Leader Member Exchange (LMX) / Leadership and Subordinate Relationships

The LMX definition (Henderson et al., 2009) is a leader's process involved in different types of exchange patterns with subordinates. The exchange is divided into various forms of relationship quality (ranging from low to high). LMX refers to a set of dynamic and interactive exchange results that occur between leaders and subordinates, the nature of different exchanges can occur within the dyadic working group. Dansereau, et al. (1975),

Graen and Scandura (1987) say that the LMX approach is an alternative approach to previous leadership studies that focus more on Average Leadership Style (ALS). The ALS approach is a leadership study that views a leader as a homogeneous leadership type in a group. While LMX emphasizes more on the argument that leadership conducted by a leader can be different between subordinates to each other. It then determines the quality of individual exchanges between leaders and subordinates.

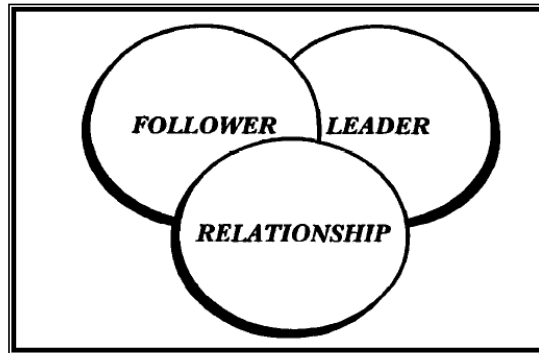


Figure 1. The Domain of Leadership (Graen, & Uhl-Bien, 1995)

Dansereau, et al. (1975) found that a leader in a group can treat subordinates differently. This is in contrast to the traditional approach that considers leadership is homogeneous, better known as (Average Leadership Style / ALS). The emergence of a leader's thinking of treating his subordinates is different due to the assumption that the leader has limited time to carry out all of his work, whereas the leader is required to take responsibility for his work. Therefore a leader usually then delegates some of their work to people who are deemed skilled and trustworthy. Furthermore, the delegation carried out by the leader against his subordinates raises some subordinate individuals who have a tendency to have intense relationships with leaders and some other subordinate individually who have low intensity with leaders. In the study Dansereau, et al., found the evidence that leaders treat their subordinates differently. The differences that arise then underlie the LMX approach. The relationship between a leader with a high-quality subordinate is called an in-group, and others whereas subordinates with low quality relationships are called out-groups.

Some research on LMX argues that subordinates with high quality relationships with their leaders are likely to show higher performance ratings, because they get more information, intense interaction, the attention of larger leaders, and others which make relationships to be higher quality (Dansereau, et al., 1975; Graen & Ginsburgh, 1977; Liden & Graen, 1980). High-quality exchange relationships, in some other studies are assumed to relate to several job-performance variables such as job satisfaction (Duchon et al., 1986; Graen, 1982), performance ratings (Wayne, & Ferris, 1990; Wayne 1997). In addition, the interaction between leadership and subordinates is also associated with affective responses of both leaders and subordinates such as leaders interested in subordinates (Wayne & Ferris, 1990).

From some of the above mentioned studies and also from the review of Leader-Member Exchange (LMX) theory, it can be concluded that the relationship between subordinates is important in leadership, and the most important factor of leadership and subordinate relationship is the high quality of a relationship . The higher the quality of the

relationship (in-group) then the relationship has an impact on the increasing outcome organization, and vice versa.

LMX describes the process of creating roles / tasks between leaders and each subordinate individual and the exchange relationships over time. (Denserau, et al., 1975; Graen & Cashman, 1975 on Yukl, 1989; Bhal, K.T. 2006). Graen and Cashman, 1975 on Yukl 2006 recommended that exchange relations be the result of the basis of individual conformity and subordinate competence and dependence. The vertical dyad concept refers to the relationship between leaders and subordinates individually (Miner, 1980).

Previous research on LMX says that a high member exchange quality can support organizational benefits (such as research: Liden & Graen, 1980; Yukl, 1994 on Deluga, 1998). Detailed results from the LMX relationship studies can be found in several variations of LMX relationship articles with various variables (Erdogan & Liden 2002; Gerstner & Day 1997; Liden, Sparrowe & Wayne 1997; Schriesheim et al., 1999 on Yukl 2006). The results of Deluga (1998) showed that the quality of LMX has a significant relationship with OCB (organizational citizenship behavior) of direct subordinates and the effectiveness of supervision. Pellegrini and Scandura (2006) conducted a study linking LMX with paternalism and delegation to the Turkish business culture and resulted in a significant relationship between LMX with both.

In the LMX theory, leaders develop different exchange relationships with each subordinate, and most leaders make closer exchange relationships with some of their subordinates (high quality relationships), and at the same time leaders make the exchange relationship farther (have low quality) called out group. In high-quality exchange relationships are usually based on personal suitability and competence and ability. Whereas in the relationship of low quality exchanges required only formal roles such as obligations, rules, standard procedures, and direction of leadership, as far as subordinate to implement everything then subordinates will be awarded by default (according to salary).

The low-quality of the out-group has the characteristics of limited levels of reciprocal influence and support. Leaders seek formal organizational authority and provide a standard organizational benefit subordinate. (Graen & Cashman, 1975 on Deluga, 1998; Lo et al., 2006). While the quality of in-group exchange refers to a mutually supportive relationship between leader and subordinate. This exchange relationship takes place by considering interest and mutual trust (Denserau, et al., 1975 and Liden & Graen, 1980 on Deluga, 1998), strong loyalty, comfortable communication, and outside influences (Dienesch & Liden, 1986 on Deluga, 1998).

The contribution of the relationship between leader and subordinate allows leadership to be viewed from the perspective that leaders use or treat different types in relation to one's subordinates and the other. It can be concluded that LMX theory refers to the quality of the relationship between the leadership with subordinates and is categorized to in-group and out-group.

Analysis Method

This study is a literature study conducted by collecting various published articles in international journals from 1975 to 2010. This study uses meta analysis. By definition,

the meta-analysis proposed by Glass (1976) in De Coster (2004), is a statistical analysis of many sets of analytical results aimed at integrating findings. The results of the analysis of the meta-analysis are used as the basis for acceptance or rejection of the hypothesis, and also aim to provide guidance for further research. The analysis was done by doing meta-analysis on 5 primary data from 5 research. Those articles would be reviewed, when it was searched using keywords vertical dyad linkage, leader member exchange, and liking.

In performing data analysis using meta analysis, there are several stages:

1. Transform F value into t, d and r
2. Sample error correction (bare bone meta-analysis)
3. Correct measurement error

RESULT AND ANALYSIS

Like (liking)

Of the 152 research articles found with the keyword leader member exchange, vertical dyad linkage and liking, there are three research articles linking LMX with liking as antecedents. Wayne, et al. 1997 says that the degree of love affects a dyed relationship. The relationship between love with a dyadic relationship can be understood as a process that will indirectly also affect the quality of the relationship between the boss and the subordinate. The relationship becomes an in-group, or out-group, depending on the high degree of taste. The research that links the likes of the quality of leader and subordinate relationships is done by Wayne and Ferris 1990, Engle and Lord 1997, Wayne, et al., 1997.

Methodology in LMX research

LMX research that done since 1975 then developed especially in the measurement variable. Various measuring tools are used to measure the quality of the relationship between the leadership with subordinates. Dansereau et al. (1975) using two negotiating latitude items to measure the presence or absence of differences between in-group and out-group, then came the research using a 4 item negotiating latitude. In 1982 Graen, et al. Using 5 items to measure the relationship between leader and subordinate, the measuring tool is then referred and used by some subsequent researchers. In 1984 Scandura and Graen developed 7 items as a measuring tool to measure the relationship of leadership and subordinates. Then came 12 items of MDM LMX from Liden and Maslyn (1993) to measure the relationship of leadership and subordinates. There are also 6 items from Dienesch and Liden (1986).

Another interesting issue in the discussion of measuring instruments is that most of the LMX studies use workers' perceptions to assess the quality of relationships between leaders and subordinates. Schriesheim et.al. (2001) says that if based on the concept of LMX is dyad then actually a good measurement is that pay attention not only from the perception of subordinates only but also the perception of the leadership. When viewed from the research sample from LMX research it has been seen that there are different research samples and varied from student, MBA student, employee and workers from various industry and service sectors as well as some research using military samples in his research.

Meta-analysis LMX Relationship and Liking / likes

In this analysis there are 5 studies connecting LMX and liking as antecedents. The relationship between the LMX and liking then analyzed by using meta-analysis method to analyze the relationship between LMX and Liking. One of stage in meta-analysis is data coding which done after collecting the result of primary study. Even all studies are not correlation studies, some are comparison studies, but it doesn't matter when the value is F, justification is still possible.

The relationship between LMX and liking as antecedents will be further analyzed by using meta-analysis method. Table 1 shows meta-analysis the relationship between LMX and Liking

Rx	Ry	R	F	t	N	Measurement	X	Position		Researcher
0.86	0.91			4.74	188	16 item LMX	liking	Graduate of psikolog	Laboratory	Dockery & Steiner, 1990
0.94	0.77			7.077	96	LMX 7 item	liking	student	Laboratory	Wayne & Ferris, 1990
0.86	0.81			4.787	84	LMX 7 item	liking	Bank employee	Field	Wayne & Ferris, 1990
0.88	0.91		5.47		76	LMX 7 item	liking	supervisor	Field	Engle, & Lord, 1997
0.94	0.88		3.42		76	LMX 7 item	liking	subordinate	Field	Engle, & Lord, 1997

Tabel 1. Meta analysis of The Relationship between LMX and Liking

Next are to transform value F to t, d and r using formulation below :

$$F = t^2 \text{ atau } t = \sqrt{F}$$

$$d = \frac{2t}{\sqrt{N}}$$

$$r = \frac{t}{\sqrt{t^2 + (N-2)}}$$

Correction to sample error (BareBone Meta-analysis)

a. Mean of Population Correlation (r_{xy} atau $\tilde{n}_{xy}$) :

$$\rho_{xy} = \frac{\sum N_i r_i}{\sum N_i}$$

	N	F	t	d	Rxy	N x d	N x Rxy
1	188		4.74	0.695	0.328	130.680	61.719
2	96		7.077	1.460	0.590	140.148	56.600
3	84		4.787	1.057	0.467	88.811	39.258
4	76	5.47	2.339	0.544	0.262	41.326	19.939
5	76	3.42	1.849	0.430	0.210	32.677	15.973
JML	520				1.858	433.642	193.488
Rata	104				0.372	0.834	0.372

Tabel 2. The Result : Correction to sample error

We can see the result of mean population correlation with n sampel (r_{xy}) are **0,372**.

b. Varians r_{xy} ($\sigma^2 r$)

$$\sigma^2 r = \frac{\sum [N_i (r_i - r)^2]}{\sum N_i}$$

	N	F	t	d	Rxy	N x d	N x Rxy	(Ri - Rxy)	(Ri - Rxy)^2	N (Ri - Rxy)^2
1	188		4.74	0.695	0.328	130.680	61.719	0.04	0.002	0.361
2	96		7.077	1.460	0.590	140.148	56.600	-0.22	0.047	4.541
3	84		4.787	1.057	0.467	88.811	39.258	-0.10	0.009	0.762
4	76	5.47	2.339	0.544	0.262	41.326	19.939	0.11	0.012	0.915
5	76	3.42	1.849	0.430	0.210	32.677	15.973	0.16	0.026	1.992
JML	520				1.858	433.642	193.488			8.571
Rata	104				0.372	0.834	0.372			0.016

Tabel 3 Varians (r_{xy})

The result of Varians r_{xy} or $\sigma^2 r$ is 0,016.

c. Varians of Sampling Error

$$\sigma^2 e = \frac{(1 - r^2)^2}{(N - 1)}$$

The value of sampling error ($\sigma^2 r$) is **0,00143**

d. Corrected Varians or actual varians

$$(\sigma^2 \rho_{xy}) = \sigma^2 r - \sigma^2 e$$

The value of Corrected Varians or actual varians is **0.01505**

e. Effect of Sampling Error

$$\sigma^2 e = \frac{\sigma^2 e}{(\sigma^2 \rho_{xy})} \times 100\%$$

The result is **9,500808 %**

3. Correction of Error of Measurement

a. Mean of Total

$$A = \text{Ave (a)} \times \text{Ave (b)}$$

$$A = 0,9464 \times 0,9247 = 0,875105713$$

b. Corrected Population Correlation of Sampling Error

$$\rho = \text{Ave}(\rho_i) = \frac{\text{Ave } r}{A}$$

$$\rho = \frac{0.3721}{0.87510} = 0.4252$$

Rx	Ry	Rxy	(a)	(b)	N x Rxy
0.86	0.91	0.3283	0.9274	0.9539	61.719
0.94	0.77	0.5896	0.9695	0.8775	56.600
0.86	0.81	0.4674	0.9274	0.9000	39.258
0.88	0.91	0.2624	0.9381	0.9539	19.939
0.94	0.88	0.2102	0.9695	0.9381	15.973
		1.8578	4.7319	4.6235	193.488
		0.3716	0.9464	0.9247	0.372

Table 4. Correction of Error of Measurement

c. Confidence Interval (95%)

$$\begin{aligned} M\rho &= \rho \pm 1.96 (\text{SD}) \\ M\rho &= \rho \pm 1.96 (\text{SD}) \\ &= 0.4252 \pm 1.96 (0.25) \end{aligned}$$

Confidence interval $-0.0648 < \rho < 0.915198$

With 95 % of accepted area is $-0.0648 < \rho < 0.915198$; while value of ρ is 0.4252.

d. Effect of variance reliability

$$(S^2_2) = \frac{\rho^2 A^2 V}{(\sigma^2_{\rho xy})}$$

$$V = \frac{SD^2}{Ave^2}$$

Varians of Varians Artefak X 100%
Corrected Population Correlation

$$\frac{0.009887}{0.425198} \times 100\% = 2.3257\%$$

Using meta-analysis above, the effect of variation caused by variation of reliability is 2.3257% and the variance caused by the variance of artifact is 0.009887.

CONCLUSION AND SUGGESTION

From result of analysis of review to LMX and its relation with liking, hence can be concluded some interesting thing that is:

1. In several the LMX study, research methodology use variety of measuring instruments, ranging from 2 items (negotiating latitude), 3 items, 4 items, 5 items, 7 items, 8 items, 12 items, 16 items up 20 items. The most commonly used measuring tools are 7 items from Scandura & Graen 1984, Graen & Uhl-Bien 1995
2. Some of studies measured the quality of leadership relationships and subordinates based on the perception of subordinates only, whereas based on the theory of LMX is dyad, then the quality of the relationship between leaders and subordinates is measured based on both parties' perceptions (leader perceptions and also subordinate).
3. Most of the LMX research is done using a certain time, whereas if it is related to the LMX theory whereis the relationship comes on all the time then the research should be done by longitudinal method.
4. The result showed by using meta analysis to conduct the relationship between LMX and Liking are as follows: with the reception area of 95%, interval is $-0.0648 < \rho < 0.915198$; While the value of ρ is 0.4252 then the correlation obtained after corrected by measurement error, entering in the confidence interval area of 95%, it can be said that the hypothesis connecting LMX with Liking is acceptable, means there is a relationship between LMX and Liking as antecedent.
5. With a meta-analysis study of LMX and Liking relationships, it was found that the correlation variation caused by sampling error was 9,5008%. There is a need for improvement in sampling, since the samples have been obtained from one party (subordinate or leader), perhaps should be considered for dyad sampling (using two-way perceptions); perceptions of subordinates as well as leaders, to minimize sampling error.
6. The error measurement of independent and dependent variables are 2.325%

There are some suggestions, here are :

1. Related research to note related to LMX is: LMX research can still be developed and done, if this research performs meta-analysis on LMX associated with liking, then there are still many antecedent or other consequent that can be done related meta analysis Its relationship with LMX.
2. In the future LMX research, the thing to note is that the measuring instruments used should use the measurement of the dyads, the methods performed if it can be cultivated longitudinally and with careful attention to the level of analysis of the research of each variable.

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