

**The impact of Individual Characteristics and
Leader-Member Exchange on Creative Work
Involvement**

by

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DEDICATION

To

My wife Hasni Hamid,

and my children

Mohd Khairul Amrin,

Nur Aliah Khairina

and

Wardah Sakinah

ACKNOWLEDGEMENT

With the completion of this thesis, first of all, I would like to thank Allah, for giving me the courage, and the patience to complete my MBA program. Secondly, I would like to thank my family for their patience and understanding throughout these challenging three years completing the program.

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“May Allah Bless Us All”

Table of Contents

TITLE PAGE	i
DEDICATION	ii
ACKNOWLEDGEMENT	iii
TABLE OF CONTENTS	iv
LIST OF TABLES	vii
LIST OF FIGURES	viii
ABSTRAK	xi
ABSTRACT	x

1.0 INTRODUCTION

1.1 Background to the Research	1
1.2 Problem Statement	4
1.3 Research Objectives	5
1.4 Research Questions	5
1.5 Scope of the Study	5
1.6 Significance of the Study	6
1.7 Definition of Key Terms	8
1.8 Organization of Remaining Chapters	8

2.0 LITERATURE REVIEW

2.1 Introduction	9
2.2 Creative Work Involvement	9
2.3 Definition of Creativity	10
2.4 Why is Creativity Important ?	11
2.5 How to Gain Creativity ?	13
2.6 Creativity Theory	16
2.7 Creativity Measurement	16
2.8 Impact of Leadership on Creativity	17
2.9 Impact of Individual Characteristics on Creative Work Involvement	20
2.10 Impact of LMX on Creative Work Involvement	22
2.11 Theoretical Framework	23
2.12 Hypotheses	24
2.13 Summary	25

3.0 METHODOLOGY	
3.1 Introduction	26
3.2 Research Design and Procedure	26
3.3 Population and Sample	27
3.4 Measurements	28
3.4.1 Demographics Measurements	28
3.4.2 Leader-Member Exchange Measurements	29
3.4.3 Creative Work Involvement Measurements	30
3.5 Statistical Analysis	31
3.5.1 Descriptive Statistics	31
3.5.2 Factor Analysis	32
3.5.3 Reliability Analysis	32
3.5.4 Correlation Test	32
3.5.5 Hierarchical Multiple Regression Analysis	33
3.6 Summary	33
4.0 RESULTS	
4.1 Introduction	34
4.2 Profile of Respondents	34
4.3 Goodness of Measures	36
4.3.1 Factor and Reliability Analysis on LMX	36
4.3.2 Factor and Reliability Analysis on Creative Work Involvement	38
4.4 Hypotheses Testing	39
4.4.1 Correlation Test	39
4.4.2 Multiple Regression Analysis	40
4.5 Summary	43

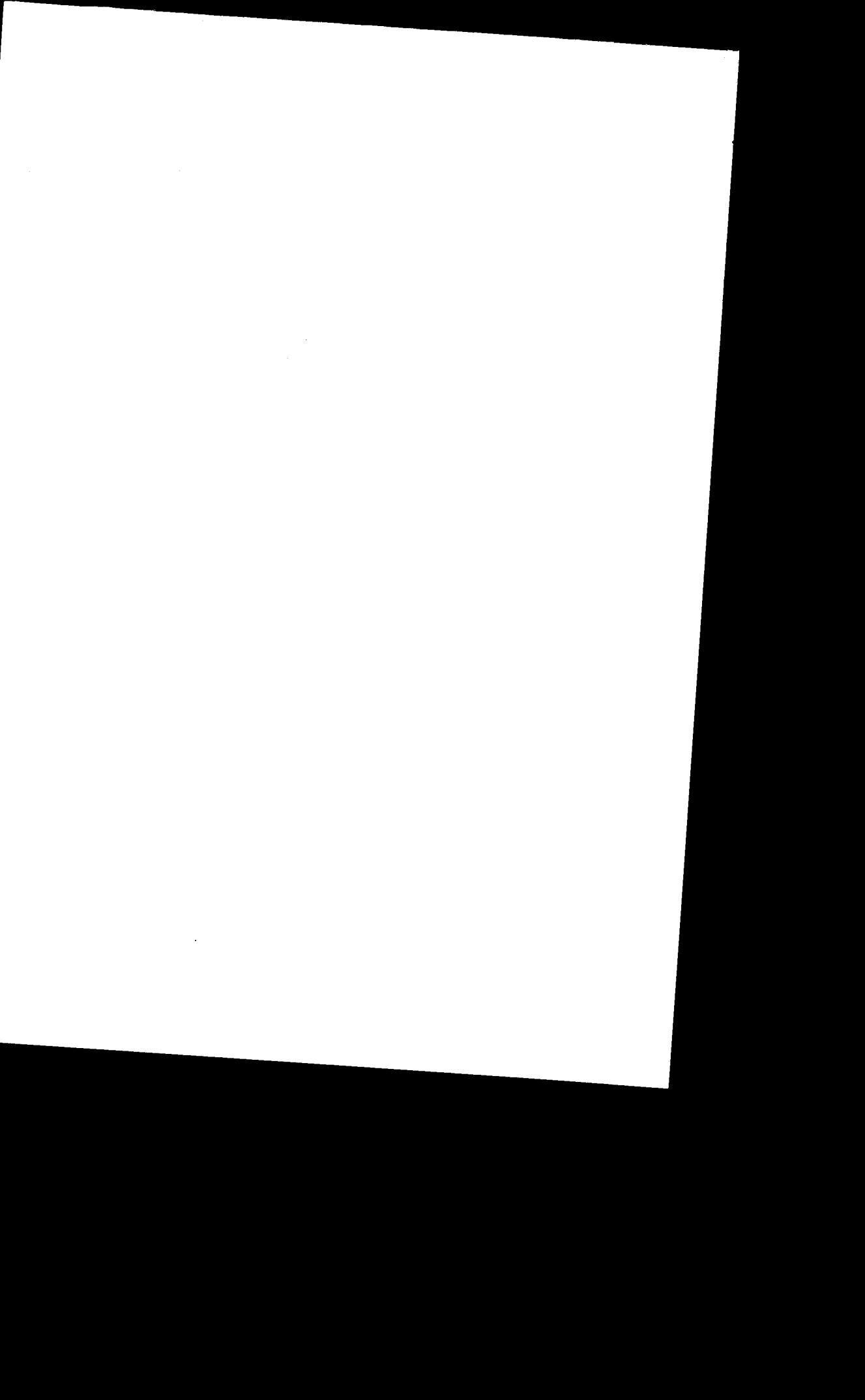
5.0 DISCUSSION AND CONCLUSION	
5.1 Introduction	45
5.2 Recapitulation of the Study Findings	45
5.3 Discussion	46
5.4 Implication	49
5.5 Limitations of the Study	51
5.6 Suggestions of Future Research	52
5.7 Conclusion	53
REFERENCES	54
APPENDICES	
I RESEARCH QUESTIONNAIRE	58
II SPSS – DEMOGRAPHICS ANALYSIS	62
III SPSS – FACTOR ANALYSIS	65
IV SPSS – RELIABILITY ANALYSIS	70
V SPSS- PEARSON CORRELATION COEFFICIENT	75
VI SPSS – MULTIPLE REGRESSION	76

LIST OF TABLES

Table 3.1	Data Collection Response Result	27
Table 4.1	Demographic Profiles of Respondents	35
Table 4.2	Rotated Component Analysis for Leader-Member Exchange	37
Table 4.3	LMX Factors and Reliability Test summary	38
Table 4.4	Summary of Pearson Correlation Coefficient	39
Table 4.5	Summary for multiple regression result	40
Table 4.6	Summary of Hypothesis Testing Results	44

LIST OF FIGURES

Figure 2.1	The organizational affect-creativity cycle	18
Figure 2.2	Research model	24



Kesan Perwatakan Individu dan “Leader-Member Exchange” kepada Penglibatan Kerja Kreatif

ABSTRAK

Daya kreatif memang telah menjadi fokus bagi organisasi seluruh dunia. Disebabkan daya kreatif mempunyai beberapa peringkat; individu, kumpulan dan organisasi; fokus perlulah diberikan kepada peringkat daya kreatif ini untuk mendapatkan kejayaan bagi sesuatu organisasi. Kajian ini akan memberi perhatian kepada individu dan “leader-member exchange” (LMX) dari perspektif daya kreatif kumpulan. Fokus asasnya adalah kepada Penglibatan Kerja Kreatif (Creative Work Involvement) dalam kategori daya kreatif organisasi. Dari sudut personaliti individu, kajian ini memfokuskan kepada umur, tahap jawatan, pengalaman berkaitan, dan jantina untuk meramalkan Penglibatan Kerja Kreatif (Creative Work Involvement). Untuk LMX, konsep pelbagai-dimensi digunakan yang termasuk “Affect”, “Loyalty”, “Contribution”, dan “Professional Respect”. Kajian ini dibuat di Jabatan “Research and Development” sebuah syarikat multinasional. Responden kepada kajian ini terdiri daripada seluruh para pengurus dan para jurutera yang perlu mempamerkan Penglibatan Kerja Kreatif untuk mencapai matlamat syarikat.

The impact of Individual Characteristics and Leader-Member Exchange on Creative Work Involvement

ABSTRACT

Creativity has long been a major focus of organizations around the globe. Since creativity has a few levels (Woodman et al. 1993); namely individual creativity, group creativity and organizational creativity, proper focus needs to be put in these areas to achieve the organizational creativity which will be the eventual result targeted from the organizations points of view. This study will focus on individual characteristics of individual creativity portion, as well as Leader-Member Exchange (LMX) from the group creativity portion focusing on group dynamics. The result will be Creative Work Involvement within the organizational creativity setting. For the individual characteristics portion, focus will be put on age, level of position, years of relevant experience, and gender as the predictors to Creative Work Involvement. As for the LMX, the multidimensional model was used which comprises of Loyalty, Affect, Contributions and Professional Respect dimension. This study was being carried out in a Research and Development department of a multinational company. The respondents of this study are the entire management staff and engineers who needs to demonstrate creative work involvement to achieve the organizational goals.

Chapter 1

INTRODUCTION

1.1 Background to the Research

In today's challenging world, creativity is one of the most sought after attributes of an individual, group or organizations. It is a very important aspect for organizations to be competitive in the market place, even more so for a research and development organization. Organizations rely on, among other major factors, the creativity of their engineers and managers to be translated into innovative products as a competitive edge to beat their competitors in the market place. The creativity "juice" needs to continue to flow and organizations invested in a big way to ensure that it is. We have heard of brain-drain organizations, and even the whole country, not being able to generate new breakthrough ideas to be competitive. Indeed, that is a very scary thought.

Researches over the years have repeatedly shown that creativity is influenced by a few factors, both for and against it. To cover the negative part first just for the sake of argument, one of the potential stumbling blocks, or barriers to creativity, is persistently unmanaged environment. Creative environment will result in employees showing creative tendencies as noted by Al-Beraidi and Rickards (2003). Creativity of individuals and organization needs timely and purposeful catalyst to flourish. Personal creativity will not result in organizational creativity if the environment does not allow it. Amabile, Schatzel, Moneta and Kramer (2003) reiterate that leaders and managers have great influence in employees' creative involvement. In a research done on twenty six high-powered project teams, it was found that leaders and managers routine and casual interactions with employees can both support or hamper creativity.

A creative person might not get involved in a creative process in the work place. Carmeli and Schaubroeck (2007) defined creative work involvement as extent of employees engagement in creative process at the work place, using resources made available to them. Leaders also have strong interactive influence on employees creative work involvement, to be balanced with high leaders' expectations for creative involvement. Hence, it is very important for us to understand the impact to creative work involvement.

To achieve the ultimate result of being the best in the industry, it really requires organization members' individual creativity and group creativity which in turn will translate into organizational creativity which is very visible by the public and defines corporations bottom-lines. Thinking ability and tendency to be creative maybe impaired if put under highly stressful conditions. Mandler (1979, 1984) noted that individuals under stress will exhibit a narrowing of focus and stereotyped responses. According to Hogarth (1987), higher thinking processes require a variety of cognitive processing abilities (problem solving, creativity, memory and decision making). Creativity reduced in stressful environment, and adaptive behavior maybe impaired.

Less experienced people is more susceptible to external stimulant impacting creativity (Shanteau and Dino, 1993). Modern creativity process as outlined by Plasek (1996) as mentioned by Stamm (2003) indicates that balance of imagination and analysis (involves purposeful analysis, idea generation, and critical evaluation), generation of ideas (under direct ctrl of thinker) and a drive to action and the implementation of ideas (do more than imagine new things, work to make them concrete realities). Leaders should be open towards creative people and acknowledge their contribution. Protection of lower level employees from bureaucracy and legalism by leaders, help protect great ideas. However, creative people can't be given carte-

blanche i.e. creative people needs constraints and they renew themselves through constraints. Vogelaar (2007) noted that leader-subordinate trust is very crucial to conjure creative solutions. Leadership from the edge concept was put forth which entails empowerment and trust to subordinates to deal with situations and challenges they face at the work place.

In the Asian context, the economy and industry focus now shifted more than ever from North America and Europe to Asia. The question remains whether Asia is ready to take on these responsibilities from the well known highly structured, creative and innovative counterparts in United States and Europe. Japan, Taiwan and Korea were among the few Asia countries that have been able to convince the world that they are up to the challenge. In the same view, looking at Malaysia as one of the crucial component of multinational companies' setup worldwide, it is very critical for Malaysia to have a huge pool of creative talents within the country to be considered as a likely bearer of these gargantuan challenges.

For this study, the setting is a large research and development center for an Electrical and Electronics multinational company, head-quartered in United States of America and located in Penang Free Industrial Zone. This huge research and development center has been undergoing massive growth, taking up design responsibilities for highly visible and complex product design from US and Europe design centers. These design responsibilities require high level of creativity and innovation by all the research and development managers and engineers in this center. This study will look at the focus should be put to ensure the local research and development center maintains and enhances creative work involvement for all its managers and engineers. Failing to do so will result in lesser complexity products

being transferred here which reduces Malaysia's ability to grow high-technology capabilities within the country.

1.2 Problem Statement

In the Electrical and Electronics industry today, the challenge for companies to stay competitive is greater than ever. As discussed by Martins and Terblance (2003), creativity and innovation is the key in process change for survival. This means that organizations would need to really go to the depth of identifying the factors affecting creativity, improving and developing the organizational members, at all levels and position (Mostafa, 2005). The whole process would require a focused study of employees' individual characteristics and personalities required, not to mention group and organizational characteristics which involves effective organization environment to ensure the creative environment is preserved. In order for organizations to leverage on creativity, the origin of creativity needs to be understood.

The organization would need to have people characteristics inventory as well as organizational characteristics to match with the actual result, and predict future results. After all, the whole process is aimed at improving the organizational bottom-line goals. The result of focusing on this has huge impact on the ability of the organization to compete.

Leaders have a great influence on employees' creative outcome. Tierney, Farmer and Graen (1999) found that even if employees have the capacity to be creative at work, managers need to focus on employees' motivation and leader-member interaction, or LMX, to get the best of the employees. Employees' with great personal creativity would choose not to engage in creative process at the work place if the environment does not encourage creative involvement. Leaders-members

exchange (LMX) has been researched in relation to a great many results such as job satisfaction (Amararajan, 2004) and creativity (Tierney, Farmer and Graen, 1999). This study aims at looking at the impact of LMX on creative work involvement.

Therefore, the problem being investigated in this study is the relationship between individual characteristics and LMX to creative work involvement.

1.3 Research Objectives

The objectives of this study are as below:

- a) To identify which factors of individual characteristics are impacting creative work involvement in the work place
- b) To assess the positive impact of LMX multi-dimensions towards creative work involvement

1.4 Research Questions

The research questions this study will answer are :

- a) Which individual characteristics are impacting creative work involvement in the work place?
- b) Do LMX multi-dimensions contribute towards creative work involvement?

1.5 Scope of the Study

This study is focusing on creative outcome in the work place. To ensure variations are minimized, the setting for this study is a large research and development center for an Electrical and Electronics multinational company, located in Penang Free Industrial Zone. The population of this research and development center makes it among the biggest in the country.

1.6 Significance of the Study

As mentioned previously, it is really crucial for organizations to understand the personal and organizational characteristics inventory within their organization to enhance creative work involvement. It is very important that organization realizes that having employees with great personal creativity characteristics does not result in organizational creativity if the organizational creativity climate or environment is not being addressed accordingly.

With regards to the work settings, Amabile et al. (2005) noted that there is a purely linear relationship between leaders-member affect and creativity such that the more positive the affect, the more creative a person is at work. Emotions, however, do not influence this relationship. Affect patterns of influence showed up in four patterns which are: affect can operate as an antecedent to creativity; affect can operate as a direct consequence of creativity; affect can operate as an indirect consequence of creativity; and affect can occur simultaneously with creative activity. Motts (1972) defines effective organization as simultaneously efficient and creative. This would really bring wonders to the companies' profitability. Cook (1998) stated that, six key drivers of future success according to Corporate Research Foundations are structural flexibility (including creativity), innovative power (including creativity), international orientation, human resources, growth market, and quality of management. This research will shed some light on how the matching of the personal and organizational characteristics optimize or dampen the overall creative result and bottom-line goal of any particular organization. Abu-Taieh (2003) noted that statistically significant relationship was found between leadership power and individual innovative behavior while no statistically significant relationship was found between legitimate and

reward power, on one hand, and individual innovation behavior on the other hand (Mostafa, 2005).

As mentioned by Csikszentmihalyi (1999), it does not take a genius to be creative. Creative individuals have curiosity and interest, and also a certain blend of characters often thought of as opposites. This includes divergent and convergent thinking (think outside the box, also good at synthesizing a number of ideas into a single concept), energy and idleness (high level of energy even at great age, also sometimes seen as being lazy, does not let being pushed, does not keep a routine), introversion and extroversion (caught up in themselves, also interested in wide range of things, interacting with others and seeking stimulation), masculine and feminine (physically androgynous i.e. men who are shy, less aggressive, sensitive; women who are feminine but also dominant), passionate and detached (highly intrinsically motivated, loving what they do, also able to stand back especially when it comes to evaluation), and rebellious and traditional - confronting and challenging the existing; also building on the past

All these signify that individual characteristics and strong leadership is the essence of greater organizational creative outcome.

1.7 Definition of Key Terms

This section will present the definition of key terms used throughout this report. This is to allow better understanding of the discussions presented.

Leader-Member Exchange (LMX) : Dansereau, Graen and Haga (1975) conceptualized LMX theory and it was being refined multiple times. This theory revolves around the multi-faceted leadership concept of leader, follower and relationship; which looks at empowerment, situational leadership, and leader-member relationship to achieve organizational outcome.

Creative Work Involvement : Carmeli and Schaubroeck (2007) defined creative work involvement as extent of employees engagement in creative process at the work place, using resources made available to them.

1.8 Organization of Remaining Chapters

Creativity has been well researched over the years with multitude of approaches. This particular study is aimed at determining the relationship between individual characteristics and Leader-Member Exchange towards creative work involvement. Chapter 1 of this report provides the research overview. Chapter 2 reveals all the past researches done on this topic. Chapter 3 will discuss the methodology used in this study. Chapter 4 will look at the analysis and results of this study. Chapter 5 will discuss about the findings and recommendations concluded from this study.

Chapter 2

LITERATURE REVIEW

2.1 Introduction

This chapter will discuss all the researches and studies made on creativity and its relevant outcomes and influences. Theories of creativity will also be discussed. The major high-light of this chapter is the formation of theoretical framework for this study. Individual characteristics, LMX, and other factors impacting creativity will also be discussed.

2.2 Creative Work Involvement

Carmeli and Schaubroeck (2007) defined creative work involvement as extent of employees engagement in creative process at the work place, using resources made available to them. Leaders also have strong interactive influence on employees creative work involvement, to be balanced with high leaders' expectations for creative involvement. Carmeli and Schaubroeck (2007) also cited that other researches done on creative work involvement are from the various perspectives including individual characteristics differences (Feist, 1999) and leaders-members affective traits (Amabile et al., 2005). Amabile (1998) noted that a person's internal desire (which relates to individual characteristics) to contribute creatively causing them to engage in creative work process for the challenge and enjoyment of it. The work itself is motivating.

Tierney, Farmer & Graen (1999) developed a 9-item instrument to measure creative work involvement. The measurement focuses on the extent of respondents showing of creative behaviors that are indicative of creative work involvement. The behaviors include demonstrating originality at work, and generating novel, but

operable work-related ideas. The instrument uses a Likert scale ranging from strongly disagrees to strongly agree.

2.3 Definition of Creativity

To date, there are numerous ways that creativity is being defined. Often times creativity are loosely interchanged with innovation. Amabile and Roberts (2006) casually defines creativity as producing novel, workable ideas and solutions to problem. Innovation is implementing those creative ideas within organizational context to meet organizational goals. Mostafa (2005) links creativity and innovation as systematic development and practical applications of new ideas.

Individuals and organizations went through a creativity process to really challenge and stay ahead of their competitors on all fronts. Creative performance by individual or organizations is the manifestation of the whole creativity concept. Origins of creative performance are task motivation, domain relevant skills, and creativity relevant skills. To explain motivation further, intrinsic motivation enhances creativity, while extrinsic motivation hampers creativity (Amabile, 1998).

Creativity is often considered unique to artists, writers and musicians. However, it is also essential to those who plan business projects; identify market niches, motivate employees, structure deals and take responsibility for the daily operations. Based on the definition by Koontz, O'Donnell and Weihrich (1980), creativity is internal and intellectual process of bringing about new ideas, while innovation is the practical application of the new ideas. Most other definitions also are along those lines. True to the trend, definition of creativity in the work-place also varies. Some define it as attributes, conceptual skills, behavior, abilities, technology, empowerment, process of experience, and external influences (Mostafa, 2005).

Cook (1998) describes organizational creativity as a process where creativity is the input to the process that leads to innovation, competitiveness and return on investment. Creativity (the thinking of novel and appropriate ideas) leads to innovation (successful exploitation of creative ideas), growth and return on investment. Creativity in organizations has much to do with "context" rather than "creativity techniques". Organizations need a strategy to convert creativity into innovation. This is summarized by 80:20 creativity formulas (creativity equal to 80% context and 20% techniques).

2.4 Why is Creativity Important ?

Creativity is very vital to every organization. That is the very reason why organizations are really focusing on a perennial search for employees, and environment that enhances or promotes creativity, and investing much more to retain them. According to Herbig and Jacobs (1996), creativity is the key to market success and improving operating efficiencies. Long term survival in the market place really pushes creativity to the fore with regards to organizations focus and strategy. To explain organizational creativity, Mott (1972) says that organizations creativity is deliberately changing current methods to make new levels of quantity, quality, cost and customer satisfaction possible. New methods and new products result from creativity (Mostafa, 2005).

Tierney, Farmer and Graen (1999) found that even if employees have the capacity to be creative at work, managers need to focus on employees' motivation and leader-member interaction, or LMX, to get the best of the employees. Among the recommendations was to use situational leadership to handle employees interactions and handling work operations.

According to Wong and Pang (2003), in today's rapidly changing business climate, organizations' success is more dependent than ever on creativity and innovation. Creativity is no longer "nice to have", it is for business survival and the need to stay ahead of the game within leading organizations. It is the source of competitive strength within organization that faces discontinuous or chaotic environment or where there is little or nothing to differentiate the product or service from competitors (Cook, 1998). This is the competitive advantage that all organizations need to have to be successful in the market place.

With the great impact creativity has on sustainability and growth, it is no wonder organizations are really striving for creativity environment. The more organizations know of how creativity is perceived, the more quickly and efficiently creativity can be stimulated. In today's business environment, an essential element to an organizations' success is adaptability - people must be able to manage at the speed of change, and managing the super fast changes requires creativity and innovation. Isaksen and Lauer (1999) translated and tested Ekvall (1983) tool for validity to measure creative climate, which is called Situational Outlook Questionnaire (SOQ). SOQ outlines 9 dimensions of creative climates which are emotional involvement, autonomy / freedom, trust / openness, time for idea, playfulness / humor, conflict, idea support, debate and risk taking.

The matter of fact is, to date, there is still limited creative outcome research being done in a research and development environment. This study will contribute to the limited information with regards to creativity dynamics in a research and development center. In a research and development organization especially, the pressure is so great for the organization to deliver new and marketable products in the shortest time possible. Jalan and Kleiner (1995), noted that corporations are being

challenged by integrating the management brains together with creativity in today's world. With the rapidly changing technology and shorter product life-cycle, corporations need to address the challenge more creatively (Wong and Pang, 2003).

2.5 How to Gain Creativity ?

People's creativity may be affected by various attributes, including individual personality (Amabile, 1998), social environment and working environment (Amabile et al., 1996; and Amabile, 1997). With all the positive vibes of creativity, research after research has been carried out with lots of organizations sponsoring them. In organization characterized by coercive management, a high level of negative energy grows. People use their creativity to work against autocratic leaders or in spite of them; refusing to contribute positively to the organization (Wheatley, 1999).

To the question of “can creativity be taught”, the answer is a resounding “YES”. As noted by Basadur, Pringle and Kirkland. (2002), creativity can be developed, increased and managed by organizations. Results from increasing organizations creativity can be identified, for example by new products and methods, increasing efficiency, greater motivations, job satisfaction, teamwork, a focus on customer satisfaction and more strategic thinking at all levels. Whereas creativity has been thought off in terms of divine quality or luck, it can be studied like any other discipline, and organizations must learn to think of creativity as a core capability (Cook, 1998).

Taking a more leadership and management route, organizations environment also plays a major role to determine whether creativity will flourish. Creative performance of teams could be stimulated by leadership intervention. Environmental factors affect inclination towards creativity. This includes group climate, freedom,

autonomy, supervisor support and rewards (Amabile, 1998). Most significant obstacles to creativity are those related to organizational climate (Awamleh, 1994). Isaksen and Lauer (2002) states that in a creative team, leaders encourage new ideas and provide clear guidance to team members; while in a least creative teams, leaders disregard good feedback and creates dissonance in the team by creating distrust and kill others' ideas while not taking action himself. In an Arabic journal by Makhmerah and Al-Dahhan (1988), it was noted that innovation is affected by managerial attitudes, the establishment of objective criteria and encouragement of employee interventions and exchange of ideas. Another major aspect to consider when discussing about creativity is barriers to creativity. Barriers to creativity are found to be low commitment to organization and lack of management support, risk aversion and time pressure, threatening evaluation, and rigid rules (Mostafa, 2005). Rigid rules are inversely related to creativity and innovation. A potential block to creativity is whether or not management uses the creative suggestions to the advantage of the customers, the owners, and the providers of the ideas. Another block is how creative people are viewed and rewarded and whether they are criticized if a creative idea is unsuccessful. If they are heavily criticized, and constantly reminded that it was their idea that did not work, then they stop being creative.

To further discuss the importance of leadership on creative outcome, Wong and Pang (2003) states that thorough communication leads to better morale; which in turn leads to employee to be more willing to commit to company and reduce obstacles to creativity. Based of prior few researches, they cited nine qualities of environment that served to inhibit creativity including various organization characteristics (e.g. inappropriate reward system), constraint (e.g. lack of freedom), organization disinterest, poor project management, evaluation, insufficient resources, time

pressure, over-emphasis on status-quo, competition (Amabile and Gryskiewicz, 1987, 1989). Four environmental obstacles to creativity are time pressure, evaluation, status quo, and political problems. Because environment has different impact to different people, there are infinite numbers of obstacles to creativity. The environment affects individuals differently (Weiner, 2000)

Context plays a very critical role in creativity adoption. As Cook (1998) noted, creativity can't be forced through techniques; it depends on setting of an appropriate context for ideas to emerge and their subsequent mobilization into innovative products and services. When the context is right, techniques can play the part in raising the level and type of creativity within organization. Creative organizations build strategy on a flexible context which includes culture, leadership style and values; structure and system, skills and resources. Also, factors that make organizational creativity flourish including setting an appropriate culture, leadership style and living values focus more on informal structure (networking, info structure and communications than formalization; devising system of reward and personal growth that fit in the strategy; and encourage diversity of people and skills, tolerating conflict that resulted. Creative leaders are said to be doing differently than others by setting direction that excites others, rather than bland "mission" statement; being idea advocates, sensing and moving ideas around to gain acceptance; encouraging risk taking.

To some extent, Amabile (1998) disagreed with Cooks (1998) observation that rewards systems needs to be in place to enable creativity to continuously flourish. Amabile notes that extrinsic motivation, in fact, hampers creativity. Based on the reviews conducted, there are a lot of potential variables to understand and control creativity. Apparently, science and engineering people are more creative compared to

others. Mostafa (2005) cited a few journals as below which mentioned that technical people have the tendency to be more likely to adopt creative roles because innovation is an important part of many technical jobs (Chakrabarti, 1974). People with science and engineering background tend to be more supportive of innovation and strategic changes (Hambrick and Mason, 1984).

2.6 Creativity Theory

LMX theory was conceptualized by Dansereau, Graen and Haga (1975) and was being refined multiple times. This theory revolves around the multi-faceted leadership concept of leader, follower and relationship. LMX theory will move along the lines of empowerment, situational leadership, and leader-member relationship to achieve organizational outcome.

Another theory quite relevant to this study is Self-Determination Theory. This theory revolves around individual motivations to carry out tasks. Ryan and Deci (1985) describes that motivation has a lot to do with goals and the attitude giving rise to action. This theory also revolves around intrinsic and extrinsic motivation, which will result in creativity.

2.7 Creativity Measurements

There are a few validated instruments mentioned in Carmeli and Schaubroeck (2007) study, some of which will be used in this study. Among them are:

- Creative Work Involvement (Tierney et al., 1999) - 9 items, alpha = .92
- Creative Self-Efficacy (Chen, Gully and Eden, 2001) - 8 items, alpha = .93
- Expectations for Creativity (Farmer, Tierney, Kung-McIntyre, 2003)

- Family Expectations for Creativity : 4 items, alpha = .85
- Leader Expectations for Creativity : 4 items, alpha = .87
- Customer Expectations for Creativity : 4 items, alpha = .82
- Self- Expectations for Creativity : 3 items, alpha = .91

Some existing measurement model to understand the level and impact of creativity in organizations has also been developed. As cited by Mostafa (2005), these include :

- 24-item Basadur Preference Scale (Basadur and Housdorf, 1996)
- BOCI (Business Organization Climate Index) (Payne et al., 1971)
- CCQ (Creative Climate Questionnaire) (Ekcall et al., 1983)
- TCI (Team Climate Inventory) (Anderson and West, 1994)
- TFI (Team Factors Inventory) (Rickards and Moger, 1999)
- KEYS (Amabile et al, 1996)
- BTC (Barriers to Creativity) (Wong and Pang, 2003)
- WEI (Work Environment Inventory) (Amabile and Gryskiewicz, 1989)
- 32 Traits of Creative People - (Robert Alan Black, 1990)

2.8 Impact of Leadership of Creativity

Amabile (1999) formulated that there are three components of creativity which are expertise and knowledge (technical, procedural and intellectual), creative thinking skills and motivation. It is more feasible to change intrinsic motivation rather than any other variables. To change intrinsic motivation, some of the steps possible are

controlling amount of challenge to employees, improving degree of process freedom, optimize work group design, improving encouragement level, and enhancing organization support nature.

Amabile et al. (2005) found that positive relationship exists between positive affect and creativity and no evidence of a negative relationship. The study was done in a normal environment of business organizations, where people do creative thinking to solve problems in their work; not at a controlled laboratory. It is not surprising that Amabile result is quite similar to LMX multi-dimensions. The research also shows the following relationship between affect and creativity as portrayed in Figure 2.1.

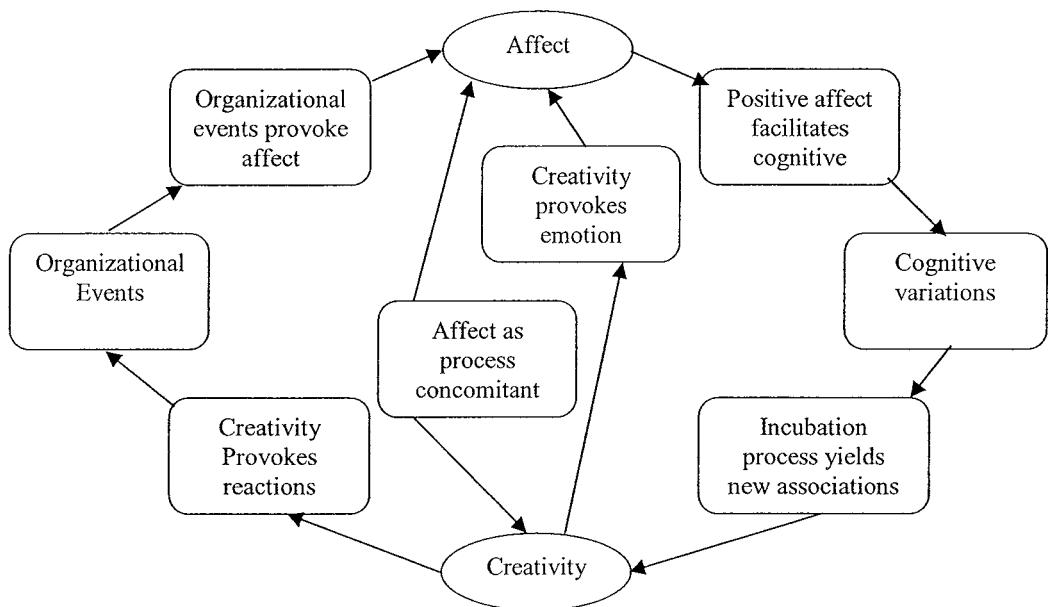


Figure 2.1 The organizational affect-creativity cycle (Amabile et al., 2005).

In a research done on several companies in three different industries impacting 238 highly educated professionals, Amabile (2006) found that leader's behaviors very significantly impact team creativity. According to Amabile, there are five positive leaders' behaviors which will result in creativity which are providing emotional support; positive monitoring (positive feedback, info to help working better);

recognizing good performance, especially in public settings; soliciting team member's views, respecting opinions; and personally collaborating.

In the same research, Amabile (2006) noted that there are three negative leaders behaviors which hampers creativity which are under / over guidance, over constraint of assignment; negative monitoring (too often, not often enough, too detailed, unconstructive feedback); avoiding problem solving or creating problems.

Woodman, Sawyer and Griffin (1993) states that creativity interactions links individual creativity to group creativity and linked again to organizations creativity.

2.9 Impact of Individual Characteristics on Creative Work Involvement

In this study setting, it is very crucial to determine the impact of individual characteristics to creative work involvement. This relationship has great bearing on the employee selection process and management practices. Most importantly, it is very crucial for the research and development organization being studied to convince the parent company that the design center is in fact full of creative and talented people and are ever willing and able to take up greater challenges to move the corporations forward with great creativity and high technology and high quality products. As mentioned by Woodman, Sawyer and Griffin (1993), individual creativity interacts with organizational creativity which in turns becomes visible to the senior leadership team of the company.

It has been long hypothesized that gender has a significant impact on creativity. This angle of research of comparing gender impact on an aspect as significant as creativity, as in any other consequences, is normally taken with some controversial twist. Keong and Soon (1996) cited that an experiment done by Richardson (1986) with 320 Jamaican adolescents to determine gender differences in

creative performance. The female sample was found to fare significantly better than the male counterpart on five creativity tests. Mostafa (2005) in a study in the Arab states notes that males have more favorable attitudes towards creativity. Social expectation, conformity pressures and attitudes toward women in Arab countries may create "cultural blocks" to female creativity. With regards to gender, the effect towards creativity is summarized by Instone, Major and Bunker (1983), men and women use different influence strategy in business activities. Men and women have different norms about how rewards should be used to influence creative organization behavior.

According to Fennema and Carpenter (1998), gender is one of the most important variables in creativity research. Gender is important in studying organizational creativity since creativity requires many behavioral patterns in which men and women differ (Mostafa, 2005). The importance of examining creativity in relation to gender is based primarily on the socio-cultural differences among females and males (Abra, 1991).

Younger and less experience managers are more likely to pursue creative strategy since older managers dislike change from status quo and show greater adherence to the norms of the organization (Hambrick and Mason, 1984). Work domain expertise is also found to be a major predictor to creativity (Oldham and Cummings, 1996; Tierney and Farmer, 2004). Less experienced people is more susceptible to external stimulant impacting creativity (Shanteau and Dino, 1993).

Organizational level or level of position also plays a role in creativity adoption. As mentioned by Van de Ven (1986), people in management functions are more likely to adopt creative behavior because they have positions within the organization hierarchy that allow them to reward innovators and punish protectors of

the status quo. Upper management may carry varying attitudes towards creativity and innovation. They may be conservative or they may encourage change (Dewar and Dutton, 1986). Managers with favorable attitudes towards change foster an internal climate that is conducive to innovation and the continuous adoption of new ideas. The importance of positive attitudes towards change stems from the belief that such attitudes will provide the managerial support necessary for conflict resolution and coordination (Mostafa, 2005). Research findings have identified different personality characteristics which relates to creativity capacity. Functional culture or cultural aspects of whether one's viewed as manager or non-manager within organizations may affect one's attitudes towards creativity and innovativeness. Managers display less positive attitudes towards creativity and divergent thinking. Those in higher organizational positions maybe more conservative than lower positions (Basadur, Taggart and Pringle 1999).

Educational level may influence creative behavior was established by Amabile (1988) and Tierney and Farmer (2004). Mostafa (2005) indicates that functional areas do affect attitudes towards organization creativity and the more educated a person is, the more likely he / she will be adopting creative innovative activities. Organizational members' education levels are also found to be a major factor to determine success in developing creative environment. Mostafa also cited a few relevant studies which established that education is associated with positive outlook towards creativity and innovation (Kimberly and Evanisko, 1981). Highly educated managers will be more open towards creativity and innovativeness compared to less educated managers. Male managers have significantly favorable attitudes towards creativity compared to female managers. Individual characteristics impacts creativity such that the greater the education of a manager, the more likely to adopt innovative activities and the more

accepting of ambiguity (Hambrick and Mason, 1984). In the research and development organization being studied, high majority of the managers and engineers possesses a bachelor's degree which renders the education level insignificant in this study.

2.10 Impact of LMX on Creative Work Involvement

Howell (2005) noted that creative and innovative ideas require a “champion” to ensure that it becomes a success. A “champion” would go all out and risk personal gains to ensure creativity and innovation’s success. He or she would use leadership strategies in the innovation process to get stakeholders support by showing confidence, enthusiasm and persistence. Tierney, Farmer and Graen (1999) found that LMX explains the critical link between supervisor-employees interactions to employees’ creativity. This however is undermined by employees’ cognitive ability such that cognitive innovators have high creative output propensity regardless of the relationship with their supervisors. However, positive LMX was found to have strengthened the creative output of cognitive innovators. High LMX leaders does support employees preferred performance area as long as it falls within role of expectation. Both leaders and subordinates assess LMX using the same dimensions of affect, loyalty, contribution, and professional respect (Greguras and Ford, 2006). Collecting both leaders’ and members’ perspectives, however, is very important to ensure full understanding of leader-member relationship is attained. Liden and Maslyn (1998) noted that performance ratings given by supervisors have direct relationship with loyalty and contribution dimension of LMX. Contribution and professional respect dimensions, on the other hand, result in better organizational commitment. Boies and Howell (2006) relate that lower LMX subordinates compete

to win leaders favor causing conflicts. Less tension is observed with subordinates with higher LMX score. Scandura and Lankau (1996) noted that benefits of LMX have a very high impact on organizational effectiveness. Employees with high LMX feel wanted and valuable. This would reduce absenteeism and turnover.

2.11 Theoretical Framework

A quick look at past study done on LMX in University Science of Malaysia reveals that there were numerous researches done in this field. The fact remains that there was no such study linking LMX to creativity done in this esteemed institution. In a study done by Amararajan (2004), LMX was linked to job satisfaction, both intrinsic and extrinsic. Along this line, this particular study aims at adding another dimension of LMX study in University Science of Malaysia, in linking LMX to creative work involvement.

Weighing on numerous past researchers presented in this chapter on impacts of personal and group creativity on organizational creativity, a research model for this study was developed in Figure 2.2 below. Individual Characteristics and LMX plays critical role in predicting creative work involvement. As mentioned by Woodman, Sawyer and Griffin (1993), there is a critical interaction between individual creativity, group creativity and creative outcome. For the individual creativity, this study will approach it from the individual characteristics relationship to creative work involvement. For the group creativity, this study will look at the leader-member interaction in this study setting of research and development department. Both these variables will be used as independent variables and their relationship with creative outcome in the form of creative work involvement will be studied.

Independant Variable

Dependent Variable

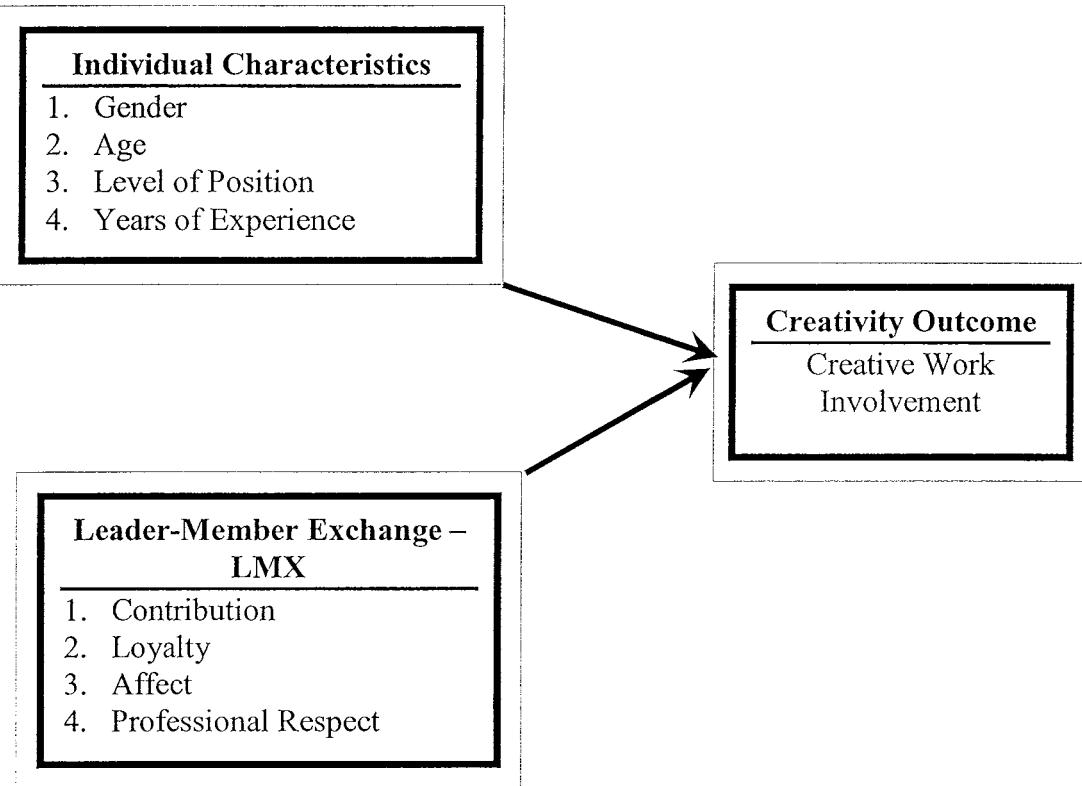


Figure 2.2 Research Model.

2.12 Hypotheses

The literature presented in this chapter has given us multiple angles of the influences to creative work involvement. For this study, we will focus on how individual characteristics (gender, age, level of position, years of experience) and LMX multi-dimensions (contribution, loyalty, affect, professional respect) relates to creative work involvement.

H1 : There is a significant relationship between individual characteristics and creative work involvement

H1a : Females shows more tendency for creative work involvement than males