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TRUSTING PEOPLE YOU DON'T KNOW MORE THAN TRUSTING YOUR MANAGER – A PARADOX OR IS IT POSSIBLE TO EXPLAIN? LESSONS FROM CROSS-CULTURAL STUDIES ON TRUST

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Abstract

The main purpose of this paper has been to explore the results from two cross-cultural studies of trust; one about generalized trust on country level, and one about subordinate-manager trust on organizational level. The paper attempts to answer two questions: (1) How is the relationship between societal and interpersonal trust, and (2) does levels of subordinate trust in manager vary significantly across countries and cultures, and if so how is it possible to explain these variations. The study somewhat surprisingly revealed a negative relationship between scores on generalized trust and scores on interpersonal trust. In order to explain these results, it has been necessary to employ cross-cultural theories, as well as to critically evaluate the research methods used in the trust studies. The assumed explanation of the findings are believed to be the moderating effect of culture on manager-subordinate relationships. The cultural dimensions "Power Distance" and "Collectivism/Individualism" are believed to have the most profound impact on the trust relationship between subordinates and managers.

Keywords: trust, culture, leader-subordinate relationship

INTRODUCTION

According to the introductory article of the special issue on trust of the Academy of Management Review (Rousseau et. al., 1998), trust is a multidimensional and multidisciplinary concept which requires theory and research methodology that reflects trust's many faces and levels. In spite of this acknowledgement, the authors of the introductory article have to admit that the focus of a great majority of articles in the special issue of AMR have an often exclusive focus on the individual. Also in the special issue only two out of twelve articles pay attention to possible interconnections between trust and national cultures. Consequently the conclusion of Rosseau et.al (op.cit., p. 402) where they state that "... The scholars who have contributed to this special issue have undertaken the challenge to be consciously integrative in their approaches to fundamental problems surrounding trust in organizational settings" is underestimating the fact that several important trust-related problems have barely been touched by the authors. Consequently in the special AMR issue, which to this day continues to be used as a central reference by scholars focusing on the concept of trust (see e.g. Becerra et al., 2008; Lewicki et.al., 2006; Akinnukave et. al., 2009), questions concerning important issues such as the relationships between different levels of trust (societal and individual) as well as the nature and level of trust in different cultural contexts, were not attracting much attention. It may be a coincidence, but the fact remains that with a few notable exceptions, there is still a paucity

of research in the area of national culture's effects on trust (Wei Hua, 2003, see also Ping Li, 2010). Therefore it is still not clear whether national culture has a main or moderating effect on trust, which at least raises the question of generalizability of US-based trust models across cultures. As for the relationship between societal or generalized trust and interpersonal or individual trust, the situation is even poorer. The main reason for this is probably because the two types of trust have often been studied separately (Jennings et.al., 2009), and, one may add, by scholars belonging to disciplines that almost never communicate. Typically trust on a societal level is primarily studied by political scientists and sociologists and articles are published in journals such as *European Sociological Review*, *American Journal of Political Science*, or *Political Science Quarterly*. Interpersonal trust, on the other hand, is typically studied by psychologists and organization scientists who publish in journals such as *Human Resource Management Review*, *Journal of Applied Psychology*, or *Journal of Business Research*. And the two groups rarely meet. It is almost as C.P. Snow's famous essay of "two cultures" (1959) can be used to describe this situation.

In this paper a truly integrative perspective on trust is chosen. Within a cross-cultural context both societal trust and individual trust, and not least the relationship between the two, are examined. Societal trust is in the present paper defined as the belief that others will not deliberately or knowingly do us harm, if they can avoid it, and will look after our interests, if this is possible (Delhey and Newton, 2005). Individual trust is defined as "willingness to be vulnerable", as proposed by Mayer, Davis, and Schoorman (1995). While the societal trust concept is defined and examined based on conventional definitions and empirical examples of variations in the level of societal trust across countries, we have chosen to examine interpersonal trust in an organizational context, i.e. as subordinate trust in manager. The reason for this particular approach is twofold: While past research has offered multiple perspectives to advance our understanding about the nature of trust relationships in an organizational context (Bachmann and Zaheer, 2006), focusing on interpersonal trust in a hierarchical relationship may contribute to refining our understanding of personal trust in organizational settings. Also the fact that this author has been co-author of a paper of trust in manager-subordinate relationships in eighteen countries (Akinnukawe et.al., 2009), and thus has access to fresh empirical data of these relationships has obviously influenced this choice. The fact that sixteen of the eighteen countries in the manager-subordinate study are also represented in what is probably the most cited societal study of trust, the World Values Survey, see e.g. Inglehart and Klingelman,(2003), Delhey and Newton, (2005), made it possible to analyze the relationship between societal and individual trust, and thus get further insights into how the two may be dependent of each other, or, in other words, to what extent high or low levels of social trust correlate with high or low levels of interpersonal trust across cultures.

ON TRUST

According to Delhey and Newton (2005), in spite of all that has been written about social trust in recent years, there is still no general theory of societal trust to be found. On the other hand there exist a variety of theories that may have implications for such a general theory. One approach looks to social-psychological belief-congruency theory which argues that there is "a natural tendency to people to associate with, socialize with and be more comfortable with others having similar belief systems (Rockeach et al., 1960:161). Based on the assumption that collective trust is a social property it is also likely to be influenced by social institutions and structures. Consequently we also find approaches to social trust which focus on economic development and modernization, democracy and good government, voluntary organizations and civil society, and religion and culture, see e.g. Paxton,(2002); Inglehart, (1999); Uslaner, (2002), and Fukuyama (1995). As social or generalized trust is

trust in people we may not know (as opposed to personal trust) it is not surprising that the level of generalized trust rises where ethnic homogeneity is strong (see Rockeach et.al., above), democracy is well-established (which encourages trust between individuals who are given the same rights and duties of citizenship, see e.g. Levi and Stoker, 2000), equality is strong, and where institutional structures are generally believed to support, not suppress civic engagement (Fukuyama,1999).

What is particularly interesting is that the above mentioned theories of general trust also emphasize aspects like ethnic homogeneity. This implies that generalized trust is strongest where we have something in common with others, especially where we are from the same ethnic background (Delhey and Newton, 2005). But this similarity-attraction paradigm is often associated with personal trust as well (Thomas and Ravlin, 1995), which may lead to the assumption that generalized and personal trust are somehow associated.

As is the case with societal trust, to date a universally accepted scholarly definition of personal trust does not exist (Rousseau et.al., 1998). The "willingness to be vulnerable", however, which means to accept vulnerability based upon positive expectations of behavior of the other, is probably the closest we come to an universally accepted definition (Rousseau et.al., *ibid*).

(Inter)personal trust is reciprocal of nature (Schoorman et. al., 2007). In an organizational setting, the hierarchy of supervisors and subordinates is the most important and prevalent form of relationship. Hierarchical relationships are characterized as profound and consequential differences in the power, status, dependence, and control that subordinates and their supervisors enjoy. In such relationships, because of the vulnerabilities and uncertainties that are always inherent here, obviously trust will play a central role (Sitkin and Roth, 1993).

WHY TRUST MATTER

Trust is important to study because it is a necessary component of all human relationships, and a necessary component of all human organizations. Trust is increasingly important in the business world, not least because globalization has allowed us to interact with a number of dissimilar cultures. This also emphasizes the need for more knowledge of the meaning of trust and the role trust plays in personal relationships across cultures. What we know is that trust is a valuable contributor to many forms of exchange. In interfirm relationships it is well known that researchers credit trust with lowering transaction costs (Williamson, 1975), and relationships between managers and employees where mutual trust exist are known to lead to improved employee job satisfaction, commitment, organizational citizenship behavior and perceived organizational effectiveness (Money et.al., 1997; Euwma et. al., 2007). Societal trust, on the other hand, is particularly important in large-scale societies where personal relationships are weak, but extensive (Granovetter, 1973), and where society is mobile, differentiated, heterogenous, and individualistic, because high or low levels of societal trust influence a wide range of significant economic and political phenomena (Glaeser et.al., 1999). Also studies of trust both on the level of societies and organizations associate trust with social capital. Social capital – which is often measured with questions about the level of trust – enables participants to act together more effectively to pursue shared objectives (Putnam, 1995). In short, the economic function of social capital is to reduce the transaction costs associated with formal coordination mechanisms like contracts, hierarchies, bureaucratic rules, and the like (Fukuyama, 1999). On the societal level, the importance of an abundant stock of social capital produces a dense civic society which in turn has been almost universally seen as a necessary condition for democracy (Fukuyama,1999), while on

the organizational level social capital, whether it is used as a metaphor or a network structure, facilitates advantageous performance among the members of an organization (Lin, Cook and Burt, 2001, Adler and Kwon, 2000).

CULTURE AND TRUST

It has been asserted that in the trust literature too little attention has been on cross-cultural issues of trust. For example, in his comment to the Special Topic Forum on Trust issue of AMR (1998), Noorderhaven (1999) criticizes the fact that only two of the twelve articles pay attention to the issue of culture and trust. Also the current situation is such that while surveys of social trust normally deal with similarities and differences across cultures, i.e. whether people in general agree or disagree with statements like "most people can be trusted" (see e.g. World Values Surveys, 1990, 1996; Glaeser et.al., 1999). cross-cultural studies of trust on the organizational level, however, are rare. Thus In spite of the fact that past research has offered multiple perspectives to advance our understanding about the nature of trust relationships in an organizational context (see Bachmann and Zaheer, 2006 for a comprehensive review) there is still some rather unanswered questions that deserve further attention (Akinnukawe et. al., 2009). Studying trust in the dyadic hierarchical relationship between managers and subordinates across several cultures could refine our understanding of trust in organizational settings, and not least, allow us to look further into the relationship between societal and interpersonal trust.

Building on these arguments this study attempts to (1) investigate the relationship between social and interpersonal trust, and (2) compare levels of manager-subordinate trust across cultures in order to improve our understanding of how subordinates from different cultures evaluate a potential trustee. By doing this, hopefully more light can be shed over trust-related issues that are viewed as important, but where our current understanding is limited (Browwer, Schoorman and Tan, 2000; Schoorman et.al., 2008; Tsui, Nifadkar and Ou, 2007).

THE RELATIONSHIP BETWEEN GENERALIZED, SOCIAL TRUST AND INTERPERSONAL TRUST

According to Delhey and Newton (2005), generalized trust is harder to understand than personal trust. While general trust expresses itself as the answer given by country-representative samples on the question:

"Generally speaking, would you say that most people can be trusted or that you can't be too careful in dealing with people?" (World Values Survey, Wave III; see also Uslaner, 2004), interpersonal trust is more easily understood because it is strongest in close personal relationships. While generalized trust is trust in people we may not know and who may not be like us, interpersonal trust is trust in people we know, or who are like us. Thus there could well be a theoretical argument that generalized and personal trust constitute two different kinds of trust. But at the same time, research clearly documents that generalized trust is highest in the Nordic countries, and one of the independent variables which demonstrate the strongest positive correlations with generalized trust (alongside income equality) is ethnic homogeneity. This means that generalized trust is strongest where we have something in common with others, especially where we are from the same ethnic background (Ingelhart and Klingemann, 2003). But this is also the condition many associate with interpersonal trust because social psychological theory and research have stressed that common identities in groups create the basis for trust among group members (Kramer et.al., 1996). What this implies is that in spite of what was argued above, there seems to be a

relationship between generalized societal trust and particularized interpersonal trust, meaning that the difference between the two concepts is more a difference in degree, rather than in kind (Delhey and Newton, 2005). Another interesting observation is that generalized trust on the macro level aligns to "dispositional trust" on the micro level (Helm, 2004; Bianchi and Brockner, 2009). Contrary to the mainstream trust literature where trust is consistently represented as a relationship-specific construct, dispositional trust is described as "an individual difference variable" which impacts the way individuals interpret actions, and their expectations for trustworthy behavior (Helm, op.cit, p. 345). Dispositional trust could just as well be labeled "initial trust" (see e.g. McKnight et. al., 1998), meaning that inter-personal trust does not necessary begins at a zero baseline and develops gradually over time. In fact, several studies (Kramer, 1994, Meyerson et. al., 1996) demonstrate that even where no interaction history exists, participants often show remarkably high trust for each other. While disposition for trust is partly grounded in personality factors, still some societal cultures tend to be more trusting than others (Fukuyama, 1995). Dispositional trust is often measured the same way as generalized trust (Bianchi and Brockner, op.cit), which means that high generalized trust could in fact be the aggregated result of high dispositional trust. Consequently a sensible hypothesis would be that: *In homogenous countries with high dispositional / generalized trust, we will also find high inter- personal trust.*

TESTING THE HYPOTHESIS. THE CASE OF NORWAY

Norway seems to be a near perfect case in order to test the above formulated hypothesis. The results of the World Values Survey (1990 and 1995-7) show that Norway has the highest level of generalized trust of all (the 60 countries surveyed) as 65% of the population express such trust. Based on the above assumed connections between generalized and dispositional trust, this also suggests that Norwegians as individuals generally tend to be trusting. Also Norway, as is the case with the other Nordic countries which all score high on generalized trust, is an ethnically homogenous country. If the hypothesis assuming a positive relationship between generalized and interpersonal trust in homogenous countries holds, then the Norwegian level of interpersonal trust, should indeed be high too. Data on interpersonal trust in Norway are scarce. However, having access to the results of the recent cross-cultural study of subordinates' trust in supervisors (Akinukawe et.al, 2009), which also includes data from Norwegian supervisors and subordinates, makes it possible to test the hypothesis stated above.

DATA AND METHOD OF THE CROSS-CULTURAL STUDY OF GENERALIZED, SOCIETAL TRUST

As is mentioned above, a measure of trust is available for 60 countries based on the World Values Survey (1990 and 1995-7). The WVS questionnaire asks the tried and tested standard question: "Generally speaking, would you say that most people can be trusted or that you can't be too careful in dealing with people?"

Even if the WVS is assumed to have some problems because urban and high income groups tend to be over-represented in some countries (Delhey and Newton, 2005), these problems do not seriously detract from the randomness of the samples. WVS is the only survey available covering a wide range and large number of countries, and are therefore heavily used in work on trust.

DATA AND METHOD OF THE CROSS-CULTURAL STUDY OF MANAGER-SUBORDINATE TRUST

In the study by Akinnukave et al. (op.cit), data from manager-subordinate dyads covering a total of 18 countries from different regions of the world were collected. All in all 737 managers and 2111 subordinates participated in the study. The sample represents a wide variety of sectors and organizations. Both middle and top managers working in both public and private sectors are included in the sample. Questionnaires were constructed in English and then translated into the local language, using back-translation method (Brislin, 1986). Each country collaborator subsequently checked the quality of the translation before starting data collection. Data collection was based on the use of two separate surveys; one for the managers and one for the subordinates. Managers were contacted directly by the researchers in each respective country and then asked to identify up to three subordinates to whom the subordinate survey was forwarded. The managers' and subordinates' surveys were identical: managers were asked to rate their trust in their subordinates, while subordinates were asked to rate their trust in their managers.

All variables were measured using multi-item 5-point Likert scales. Items were placed in random order in the questionnaire.

In order to measure subordinate trust in manager a 4-item measure adapted from McAllister (1995) was used. Each of the items reflected statements of various ways of subordinates being vulnerable to their direct manager. An example of the items is: " I can talk freely to this individual about difficulties I am having at work and know that she/he will listen". Cronbach's alpha for the subordinate trust in manager scale was .83.

RESULTS OF THE TWO CROSS-CULTURAL STUDIES

As for the variable "subordinate trust in manager" the results revealed a mean score of 3.96. Among the 18 countries participating in the study, Russia had the highest score (4.22) and Norway the lowest (3.46).

Table 1: Mean scores for Subordinate trust in manager

Brazil	4.15
China	3.78
Colombia	4.17
Germany	3.88
Greece	3.66
Ireland	4.10
Mexico	4.18
Norway	3.46
Pakistan	3.68
Peru	4.13
Phillipines	4.15
Poland	3.91
Romania	3.91
Russia	4.22
Spain	4.09
Thailand	3.71
United States	4.08
West Africa	4.05

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These results stand in sharp contrast to the results of the World Values Survey on trust where Norway has the highest score of all and was labeled a "high-trust society" with its score of 65% (agreement with statement "most people can be trusted"), while Russia was labeled a "low-trust society" based on its score of 24%. Based on the results from the two surveys on trust, Brazil represents perhaps the most striking example of this lack of a positive relationship between the two trust-surveys as Brazil has the lowest score of all on the WVS-survey with a meager 3% (which labels Brazil a "no-trust society"), while the Brazilian score of subordinate trust in manager is 4.15 which puts Brazil in the fifth highest position among the 18 countries. The result of a unrelated t-test shows that Brazilian subordinates' trust in their manager were significantly higher ($t = 7.395$, $DF = 235$, $p < .01$) than the Norwegians. Also, the Norwegian level of trust is found to be significantly lower than the overall mean of 3.96 among the 18 countries included in the survey ($t = 7.575$, $DF = 2109$, $p < .01$).

The fact that sixteen of the eighteen countries surveyed in the manager-subordinate study are also included in the WVS, makes it possible to rank the scores of the two surveys. A rank order calculation resulted in a Rho of $-.33$, meaning that for this sample a fairly strong negative correlation between trust on a societal level and interpersonal trust was found.

Table 2: Rank orders of 16 countries on Social Trust and Subordinate trust in manager

Rank Social Trust		Rank Trust in manager
Norway	1	16
China	2	14
Irland	3	7
Germany	4	12
USA	5	10
Spain	6	8
Mexico	7	2
Russia	8	1
Romania	9	13
Poland	10	11
Pakistan	11	5
W.Africa	12	9
Peru	13	6
Columbia	14	3
Phillipines	15	5
Brazil	16	3

What this reveals is that high country scores on societal trust, i.e. trust on a macro level, give no basis for predicting high scores on subordinate trust in manager, i.e. interpersonal trust within a formal hierarchy. On the contrary, the comparison of the results of the two studies indicate that high scores on societal trust go together with low scores of subordinates' trust in managers. Consequently the hypothesis stating that we will find a positive relationship between societal trust and interpersonal trust – at least when the latter is measured in an organizational context - has to be rejected.

DISCUSSION

To the best of our knowledge, this is the first study that focuses on the relationship between societal trust and interpersonal trust within a cross-cultural context. The study reveals the somewhat surprising result that there seems to be a negative association between trust at the societal level, and interpersonal trust within an organizational context.

Based both on social-psychological belief-congruency theory, and social identity theory, the hypothesis that the greater the perceived similarity of other people, the more they are trusted, is expected to reveal high trust both on the individual- and a societal level, while the greater the dissimilarity, the more suspicion and distrust. Of the countries included in the present comparative study, according to Delhey and Newton (op.cit), Norway and China are the only "high trust societies" with 65 and 52 percent respectively agreeing with the statement "most people can be trusted". Of the eighteen countries participating in the "manager-subordinate study", however, Norway and China are ranked as no 18 and 14 respectively when "subordinate trust in manager" is measured, both with scores significantly below the mean. Particularly the fact that Norway, being a homogenous, democratic, and equality-based country (Grenness, 2003; Scramm-Nielsen et.al., 2004), has the lowest level of subordinate trust in managers of all the eighteen countries surveyed comes as a surprise. Also the fact that the number one and two ranked countries of the "subordinate trust in manager-study", Russia and Mexico, are both named "low-trust societies" on the WVS, give reason for some afterthought.

In order to explain results of cross-cultural studies, the use of cross-cultural theories as well as critically evaluating methodological practices are commonly recommended (see e.g. Schaffer and Riordan, 2003, Tsui et. al.,2008). Cross-cultural studies in cross-national contexts require both cross-level theorizing and research methods by relating national level characteristics to individual or team-level responses (Tsui et. al., 2007). Also cross-national data collection introduces a host of issues which have been documented in several reviews of cross-cultural management research that have been published in leading management journals (see e.g. Earley and Gibson (1998), Werner (2002), Schaffer and Riordan (2003), and Gelfand, Erez, and Aycan (2007). The importance of not overlooking potential methodological challenges when doing cross-cultural research is well put by Schaffer and Riordan (2003:169) as they state " If researchers ignore the methodological issues common to cross-cultural research, they risk interpreting findings that may actually be meaningless, inconclusive, or misleading ". Among such issues that are often mentioned are matching samples, conceptual equivalence, semantic equivalence, scale equivalence, survey administration, in particular what Schaffer and Riordan label levels of rapport with respondents which refers to the respondents' confidence in the researchers, and level of analysis.

While the measurement of generalized trust uses a relatively simple one-item instrument ("Most people can be trusted"), interpersonal trust measures are generally much more complex. In their study Akinnukawe et. al (2009) use a four item questionnaire designed in order to reveal *vulnerability*. (See appendix I).

But according to the trust literature trust is not only about vulnerability (Mayer et.al.1995, Davis et.al., 2000). In order to trust someone, the trusting party's perception that the trustee cares about you (benevolence), and will not take advantage of your vulnerability is certainly important, but characteristics such as ability, i.e. the trustee has the necessary skills and competencies, and integrity i.e. the trustee adheres to a set of acceptable principles also play significant roles in trust formation (Mayer et.al., 1995). As a matter of fact, in their study of trust in managers (Mayer and Gavin, 2005), their findings reveal that the

correlations of subordinates' perceptions of supervisors' ability and integrity with subordinates' trust in them are stronger than the perceived benevolence (.38, .39 and .22 respectively). The fact that supervisors' benevolence is the only aspect of trust which has been measured in the Akinnukawe (op.cit) study may thus have an effect on the outcomes as the benevolence aspect of the trust concept may be perceived as of being of different importance across cultures. The fact that the study took place within the framework of the hierarchical relationships between managers and subordinates, which is well known to vary with variations of levels of Power Distance (Hofstede, 1984, House et. al., 2004), may further have modified this relationship, and thus affected the results. There is ample evidence that relations between leaders and followers vary across cultures (Javidan et.al., 2006, Hofstede, 2007, House et. al., 2004). From Hofstede's well known cultural framework, the dimensions "individualism" and "collectivism" together with "power distance", have shown to have the most profound impact on these relationships (Hofstede, 2007). While in individualistic countries ties between individuals are loose, in collectivistic countries individuals are integrated into strong cohesive in-groups, which throughout their lifetime continue to protect them, in exchange for unquestioning loyalty (Hofstede, *ibid*). Markus and Kitayama (1991:229) put it this way when discussing people's relatedness with others: "Although people everywhere must maintain some relatedness with others, an appreciation and a need for people will be more important for those with an interdependent self than for those with an independent self". According to Brockner et. al., (2000: 141), this means that " Thus, differences in the nature of the social exchange, such as the degree of trust inherent in the relationship, are more significant and therefore more likely to have an impact on people from cultures that foster interdependent self-construals". And they continue: "Consistent with this reasoning, people from cultures fostering interdependent self-construals should make more of their distinctions of their exchanges with in-group members (in which trust is relatively high), than their exchanges with out-group members (in which trust is relatively low) than do those from cultures that foster independent self-construals". As for differences in power distance, individuals from high power distance cultures tend to behave submissively around managers and avoid disagreements (Hofstede, 2001).

Among the countries surveyed in the Akinnukawe study, Norway represents a typical individualistic, low power-distance culture, while Brazil represents a typical collectivistic, high power-distance culture (see e.g. Hofstede, 2001). In their discussion of the results of the GLOBE (2004) study, Javidan et.al.,2006 : 76) write that: "Brazilians believe that people in position of authority deserve to be treated with respect and deference". This description of manager-subordinate relationships stand in sharp contrast to how Schramm-Nielsen et. al., (2004) describe the relationship between leaders and subordinates in Scandinavia. Here subordinates' attitudes to "the higher ups" are described as non-deferential, loyalty to the decision process may in many cases be stronger than loyalty to particular leaders, and personal problems are generally dealt with on a general level. Although none of the two studies deal particularly with manager-subordinate trust, the implications of the descriptions give reason to assume that the formation of trust, as well as what manager-subordinate trust is about, varies between the two. As have been pointed out above, the trust measure used in the Akinnukawe study covers one dimension of trust, vulnerability, which is probably more align with what Brazilian subordinates tend to associate with trust in their managers, than is the case in Norway, where trust in your manager is less based on emotions and respect, but is more a question of whether one has trust in the competence and ability of a manager (Schramm-Nielsen et.al., 2004). Similarly, Chen, Chen, and Meindl (1998) posited that because cognition-based trust is based on knowledgeable role performance whereas affect-based trust is based on emotional bonds, cognition-based trust will be a stronger determinant of relationships in individualistic cultures than in collectivist cultures, whereas affect-based trust will be a stronger determinant of relationships in collectivist than

individualist cultures. Another point worth noticing is that the fact that the Brazilians' low score on the WVS, which made Delhey and Newton,(2005) to label Brazil a "no-trust" country, may have affected the answers from the Brazilian subordinates participating in the manager-subordinate trust survey. As was mentioned above, according to Schaffer and Riordan (2003), respondents' confidence in the researchers is an issue when doing cross-cultural research. In the Akkinukawe study, the way the surveys were administrated implied that the researchers often came to be in direct, face-to-face contact with the managers in each country. In a "no-trust" country like Brazil, this could obviously lead subordinates to question the confidentiality of the survey, and as a consequence of this, to answer the questions in a way that would cause no problems if their managers got access to them.

The fact that the Russian subordinates show the highest level of trust in their managers (4.22), while at the same time the Russian result of the WVS puts Russia in the "low-trust country" department obviously needs to be discussed as well. Based on the results of the GLOBE study, contemporary Russia revealed several extreme scores: very low on Uncertainty Avoidance, Future orientation, Performance Orientation, and Humane orientation, and very high on Power Distance. As for the scores on GLOBE's leadership dimensions, Russian managers would typically be described as autocratic, non-participative, and self protective, Grachev (2006). What matters is a good "image" (linked to success, competency, and personal and social recognition), however in his/her actions there is not much interest in humane orientation to others (Grachew, *ibid*). As for the relationship between managers and subordinates, this is characterized by subordinates exercising caution and formal obedience to those with (formal) authority (Bergelson, 2004). Probably most important in order to explain the high Russian scores on subordinates trust in managers is the term "Social politeness" (Brown and Levinson, 1987). According to these authors there is a linear relationship between relative social power and politeness investment from the part with the least power, and according to Leontovitch, (2002), Russians are typically insistent on expressing positive politeness and on expecting it. Finally, most social politeness appear to be expected in relationships with familiars, but non-intimates, as would be the case in a subordinate manager relationship (Bergelson, 2003). The low Russian score on generalized trust, however, is probably a consequence of the still lasting effects of the Communist regime of the 20th century when the general feeling certainly was that "you can't be too careful when dealing with other people". According to Mikheyev, (1987), there was at the time a general perception of the environment as hostile and dangerous.

Together with Norway, China (PRC) was the only country participating in the Akkinukawe (2009) survey which was labeled a "high trust" society based on the results on the WVS. As is the case with Norway, Chinese subordinates demonstrated relatively low trust in their managers (ranked 14 of the 18 countries). In order to explain this we have to look at the influence of Chinese Confucian values and principles of interpersonal relationships which reinforce the subservience of subordinates and their dependence on superiors (Bond and Hwang, 1986). As such, Chinese organizations tend to be characterized by vertical relationships that promote a top down hierarchy featuring work situations that are highly structured where subordinates are told what to do (Redding, 1990). That Chinese subordinates find themselves in a high power distance collectivistic culture (Hofstede,1980), results in a paternalistic work relationship between superior and subordinate. Typical for a paternalistic relationships between leaders and subordinates is that subordinates develop a feeling of obligation, obedience and respect for hierarchical relations (Pellegrini et. al.,2008). Also, this type of relationship is based on the assumption of a power inequality between a leader and his/her subordinates which is accepted in high-power distance societies (Ayca, 2006). The relatively low trust in managers among Chinese subordinates documented in the Akkiniwave (2009) study, might thus well be a consequence of the paternalistic relationship

where obedience, respect, and obligations on behalf of the subordinates are dominating aspects (Fahr and Cheng, 2000). While organizing dependent on personal relationships has long been recognized, and has been called organizing by trust (Arrow, 1974; Brandach and Eccles, 1989), many who have observed behavior in relationship-dependent societies have remarked on the lack of interpersonal trust among participants (Rao et.al., 2005), and Pearce (2001) suggests that such relationships are better described as relationships of mutual dependence rather than of trust. According to Casimir et al. (2006) in collectivistic cultures heavily influenced by Confucian values supportive on Power Distance, individuals may be more accepting of autocratic leadership practices, but acceptance does not necessarily translate into trust in the leader.

Because China is a highly relation-based society, the relatively high scores on societal trust could be viewed as something of a paradox as relation-based societies tend to lack public trust, i.e. trust in strangers (Li et.al., 2004). One likely explanation would be that within Confucian ideology, which largely portrays the state as an extension of the family, the traditional "strong-tie" trust that exists among family members and relatives is extended to also include outer layers of the social structure (Jennings and Zang, 2009).

KEY FINDINGS

The objective of this study has been to explore the relationship between societal trust and interpersonal trust, the latter defined as subordinate trust in manager, and to do so in a cross-cultural perspective. What was found was that in spite of the theoretically based assumption that we should expect to find a (positive) relationship between societal and interpersonal trust, no such relationship was found. As we have discussed above, the reason for this lack of relationship is most probable due to the moderating effect of national cultures on the relationship between a subordinate and the supervising manager. National cultures can be assessed along many dimensions (Hofstede, 1980; House et.al., 1999). Among the cultural dimensions, "Collectivism" and Power Distance" have shown to influence the relationship between subordinates and managers. Typically these relationships vary from being relationships between two (almost) equal parties where subordinates' attitudes to managers are non-deferential, and where subordinates are not dependent of the goodwill of the managers, to a highly asymmetric relationship where unequal distribution of power combined with a more paternalistic approach on behalf of the manager make the subordinate more dependent and vulnerable. These different forms of relationships seem to have consequences for the trust subordinates have in their managers. That the highest levels of subordinate trust in manager were found in collective and/or high power distance cultures such as e.g. Brazil and Russia may also be a result of the way trust has been measured in the Akinnukawe (2009) study. The fact that the four items used measured only affective trust (McAllister, 1995), may have distorted the results as subordinates in different cultures may have different feelings about being affectively related to their managers.

LIMITATIONS AND IMPLICATIONS FOR FUTURE RESEARCH

Unlike most previous studies of trust, this study has taken a truly integrative approach as the relationship between trust on a societal and an interpersonal level across 18 countries has been explored. Obviously this rather ambitious study is not without limitations. Typically cross-cultural studies are in the form of quantitative surveys using self-report questionnaires. The data used in the present study in order to discuss variances in subordinate trust in manager have been collected using a self-report questionnaire. It is disputable whether a self-report questionnaire is an effective way to measure culture (Shaffer and Riordan 2003). For example, simple double translation is not sufficient to ensure cross-cultural equivalence of survey instruments, equivalence of items functioning for versions of the survey in different

languages should also be established (Taras et.al., 2009). This would probably demand a more qualitative approach – at least in the form of a pre study. The operational definition of trust used in the Akkinukawe (2009) study, which focuses solely on the affective component of trust, could be a possibly explanation for some of the variances in subordinate trust in manager found across the eighteen countries. Thus these variances do not necessary imply that e.g. Russian subordinates have significantly more trust in their managers than Norwegian subordinates, but rather reflects that Norwegian subordinates are less emotionally attached to their managers than is the case in Russia. In order to find out if this is the case, a more emic approach will be necessary. This is in line with Li (2010) who claims that, while trust as a general notion may be conceptualized as etic (i.e. culture-general or universal), the specific forms and bases of trust as well as the specific mechanisms and phases of trust-building must be conceived as emic (i.e. culture-specific or indigenous). Consequently the general assumption underlying most cross-cultural surveys, i.e. that “trust is trust” and thus are referring to the same thing or being measured in the same manner across cultures is dubious. The cultural embeddednes of trust makes it hazardous to compare levels of trust across countries unless the different features of trust have been accounted for.

Future cross-cultural research on intra-organizational trust should take this into consideration. There is an increasing need for more cross-cultural trust research. More business is becoming global and international. As a result more managers will have to work with people from different cultures. This present unique challenges as employee behavior, expectations and values across cultures are likely to be different. Consequently issues of trust in inter- and intra-organizational relationships will be of increasingly importance. One implication of this study for future cross-cultural research on intra-organizational trust is the need to combine etic and emic perspectives. The trust measure used in the Akinnukawe (2009) study implies that this way of measuring trust is equally relevant to all cultures. The above discussion, however, suggests that the variance found in subordinate trust in manager across cultures may just as well indicate that the “universal” measure used did not produce comparable results. Another implication is to take into consideration the modifying role of culture on the relationship (and hence the level and form of trust) between subordinates and managers. Whether the culture to be studied is dominated by collectivistic or individualistic values, or is characterized by high or low power distance have obvious consequences for the relationship between a manager and his or her subordinates (Javidan and House, 2001). Consequently this will not only influence the level and forms of trust inherent in this relationship, it will also help explain the relationship (or lack of) between societal trust and interpersonal trust in an organizational setting.

REFERENCES

- Adler, P. S., & Kwon, S. (2000). Social capital: The good, the bad and the ugly. In: Lesser, E. (ed): Knowledge and social capital.
- Akinnukawe, E., Barzantny, C., Briscoe, J., Canela, M. et. al. (2009). Understanding trust in manager-subordinate relationship. Paper presented at AOM annual meeting. Chicago, Aug, 09-12.
- Bachmann, R., and Zaher, A. (Eds) (2006). Handbook of trust research. Cheltenham: Edward Elgar.
- Becerra, M., Lunnan, R., and Huemer, L. (2008). Trustworthiness, risk, and the transfer of tacit knowledge between alliance partners. *Journal of Management Studies*, 45 (4), June, 691-713.
- Bergelson, M. (2004). Russian cultural values, and workplace communication styles. Working Paper. Moscow State University.

Advances in Business-Related Scientific Research Journal (ABSRJ)
Volume 1 (2010), Number 2

- Bianchi, E., and Brockner, J. (2009). Dispositional trust predicts employees' perception of fairness. Paper presented at AoM Annual Meeting, Chicago, August, 09-12.
- Bond, M. H., and Hwang, K. K. (1986). The social psychology of Chinese people. In: Bond, M. H. (ed): The psychology of the Chinese people. Hong-Kong: Oxford University Press, 213-266.
- Brislin, R. W. (1986). Intercultural interactions. Beverly Hills, Sage Publications.
- Brockner, J., Chen, Y., Mannix, E. A., Leung, K., Skarlicki, D. P. (2000). Cross-cultural variations in the interactive relationship between procedural fairness and outcome favorability: the case of self-construal. *Administrative Science Quarterly*, 45, 138-159.
- Brower, H. H., Schoorman, F. D., and Tan, H. H. (2000). A model of relational leadership: The integration of trust and leader-member exchange. *Leadership Quarterly*, 11, 227-250.
- Brown, P., and Levinson, S. C. (1987). Politeness: some universals in language usage. New York: Cambridge University Press.
- Casimir, G., Waldman, D. A., Bartram, T., and Yang, S. (2006). Trust and the relationship between leaders and follower performance: Opening the black box in Australia and China. *Journal of leadership and Organizational studies*, 12 (3), 68-84.
- Chen, C. C., Chen, X. P., and Meindl, J. R. (1998). How can cooperation be fostered? The cultural effects of individualism-collectivism. *Academy of Management Review*, 23, 285-304.
- Davis, J. H., Schoorman, F. D., Mayer, R. C., and Tan, H. H. (2000). The trusted general manager and business unit performance: Empirical evidence of a competitive advantage. *Strategic Management Journal*, 21, 563-576.
- Delhey, J., and Newton, K. (2005). Predicting cross-national levels of social trust: Global patterns or Nordic exceptionalism? *European Sociological Review*, 21 (4), 311-327.
- Earley, P. C., and Gibson, C. B. (1998). Taking stock in our progress on individualism-collectivism: 100 years of solidarity and community. *Journal of Management* 24 (3), 265-304.
- Fahr, J. L., and Cheng, B. S. (2000). A cultural analysis of paternalistic leadership in Chinese organizations. In: Li, J. T., Tsui, A. S., and Weldon, E. (eds): *Management and organizations in the Chinese context*, 84-127. London: McMillan.
- Ferrin, D. L., and Gillespie, N. (2009). Trust differences across national-societal cultures: Much to do or much ado about nothing? Forthcoming.
- Fukayama, F. (1995). *Trust: The social virtues and the creation of prosperity*. New York: Free Press.
- Fukuyama, F. (1999). Social capital and civil society. IMF Conference on Second Generation Reforms.
- Gelfand, M. J., Erez, M., and Aycan, Z. (2007). Cross-cultural organizational behavior. *Annual Review of Psychology*, 58 (20), 1-35.
- Glaeser, E. L., Laibson, D., Scheinkman, J., and Souter, C. L. (2000). Measuring trust. *The Quarterly Journal of Economics*, 115, 811-846.
- Grachev, M. W. (2006). Russian organizational leadership: Lessons from the Globe study. *International Journal of leadership studies*, 1 (2), 67-79.
- Granovetter, M. (1973). The strength of weak ties. *American Journal of Sociology*, 78, 1360-1380.
- Grenness, T. (2003). Scandinavian managers on Scandinavian management. *International Journal of Value-based Management*, 16, 9-21.
- Hardin, R. (2001). Conceptions and explanations of trust. In: Cook, K. S. (ed): *Trust in society*. New York. Russel Sage Foundation, 3-39.
- Hill, L. A. (1992). *Becoming a manager*. Boston: Harvard Business School Press.
- Hofstede, G. (1984). Cultural dimensions in management and planning. *Asia Pacific Journal of Management*, 6, 81-99.

Advances in Business-Related Scientific Research Journal (ABSRJ)
Volume 1 (2010), Number 2

- Hofstede, G. (2001). *Cultures consequences*. 2. ed. Thousand Oaks, CA, Sage Publications.
- Hofstede, G. (2007). A European in Asia. *Asian Journal of Social Psychology*, 10 (1), 16-21.
- House, R., Javidan, M., Hanges, P., Dorman, P. (2004). *Culture, leadership and organizations: The GLOBE study of 62 societies*. Sage Publications.
- Huff, L., and Kelly, L. (2003). Levels of organizational trust in individualist versus collectivist societies: A seven nation study. *Organization Science*, 14, 81-90.
- Inglehart, R. (1999). Trust, well-being and democracy. In: Warren, M. E. (ed): *Democracy and trust*, 88-120. Cambridge, Cambridge University Press.
- Inglehart, R., and Klingemann, H. D. (2003). *Genes, culture and Happiness*. MIT Press.
- Javidan, M., Dorman, P. W., de Luque, M. S., and House, R. (2006). In the eye of the beholder: cultural lessons in leadership from project Globe. *Academy of Management Perspective*, February, 67-90.
- Jennings, M., and Zhang, S. (2009). Political, social, and personal trust in contemporary Chinese politics. Paper presented at the annual meeting of the ISPP 32nd Annual scientific meeting, July 14.
- Kodish, S. (2006). Antecedents of organizational trust. Working Paper presented at the International Communication Association.
- Kramer, R. M. (1994). The sinister attribution error: Paranoid cognition and collective distrust in organizations. *Motivation and Emotion*, 18, 199-230.
- Kramer, R. M. (1999). Trust and distrust in organizations: Emerging perspectives, enduring questions. In, Spence, J. T. (ed): *Annual Review of Psychology*, 50, 569-598.
- Kramer, R. M., Brewer, M. B., and Hanna, B. A. (1996). Collective trust and collective action: the decision to trust as a social decision, in: Kramer, R. M., and Tyler, T. R., (eds): *Trust in organizations: frontiers of theory and research*. Thousand Oaks, CA/ Sage.
- Kaase, M. (1999). Interpersonal trust, political trust and non-institutionalised political participation in Western Europe. *West European Politics*, 22 (3), 1-21. Legalistic "remedies" for trust/distrust. *Organizational Science*, 4, 367-392.
- Leontovitch, O. (2002). *Russkie I amerikanstsky: paradoksy mezhkul'turnogo obschenija*. Volgograd: peremena.
- Lewicki, R. J., Saunders, D. M., and Barry, B. (2006). *Negotiation*, (5th ed), New York.
- Li, S., Park, S. H., and Li S. (2004). The great leap forward: The transition from relation-based to rule-based governance. *Organizational Dynamics*, 33 (1), 63-78.
- Li, P. P. (2010). The integrative framework of inter-organizational trust: the micro-macro and diversity-unity metaemergence. Paper presented at the FINT Conference, Madrid, January, 28-30.
- Mayer, R. C., Davis, J. H., and Schoorman, D. (1995). An integrative model of organizational trust. *AOM Review*, 20, 709-734.
- Mayer, R. C., and Gavin, M. B. (2005). Trust in management and performance: Who minds the shop while employees watch the boss? *Academy of Management Journal*, 48 (5), 874-888.
- McAllister, D. J. (1995). Affect and cognition based trust as foundations for interpersonal cooperation in organizations. *Academy of Management Journal*, 38, 24-59.
- McKnight, D. H., Cummings, L. L., and Chervany, L. L. (1998). Initial trust formation in new organizational relationships. *Academy of Management Review*, 23, 473-490.
- Meyerson, D., Weick, K., and Kramer, R. (1996). Swift trust and temporary groups. In: Kramer, R., and Tyler, T. R. (eds): *Trust in organizations: Frontiers of theory and research*: 166-195. CA: Sage Thousand Oaks.
- Mikheyev, D. (1987). The Soviet mentality. *Political Psychology*, 8 (4), 491-523.
- Mo, P. H. (2007). The nature of Chinese collective values: formation and evolution. *International Journal Chinese culture and management*, 1 (1), 108-125.
- Morrow, Hansen, and Pearson (2004).

Advances in Business-Related Scientific Research Journal (ABSRJ)
Volume 1 (2010), Number 2

- Noorderhaven, N. G. (1999). National culture and the development of trust: The need for more data and less theory. *AOM Review*, 24 (1), 8-11.
- Paxton, P. (2002). Social capital and democracy: an interdependent relationship. *American Sociological Review*, 67, 254.
- Pellegrini, E. K., and Scandura, T. A. (2008). Paternalistic leadership: A review and agenda for future research. *Journal of Management*, 34, 566-593.
- Putnam, R. (1995). The case of the missing social capital. Mimeographed.
- Putnam, R. D. (1995). Bowling alone: America's declining social capital, *Journal of Democracy*, 6 (1), 65-78.
- Redding, S. G. (1990). The spirit of Chinese capitalism. New York: Walther de Gruyter.
- Rokeach, M., Smith, P. W., and Evans, R. I. (1960). Two kinds of prejudice or one? In Rokeach, M. (Ed.): *The open and the closed mind: Investigations into the nature of belief systems and personality systems*. New York: Basic Books, 191-209.
- Rosseau, D., Sitkin, S. B., Burt, R. S., Camerer, C. (1998). Not so different after all: A cross-discipline view of trust. *AOM Review*, 23 (3), 393-404.
- Schaffer, B. S., and Riordan, C. M. (2003). A review of cross-cultural methodologies for organizational research: A best-practices approach. *Organizational Research Methods*, 6 (2), 159-215.
- Schramm-Nielsen, J., Lawrence, P., and Sivesind, K. H. (2004). *Management in Scandinavia. Culture, context and change*. Edward Elgar.
- Sitkin, S. B., and Roth, N. L. (1993). Explaining the limited effectiveness of.
- Six, F. E., and Nooteboom, E. (2003). Conclusions. In: Nooteboom, B., and Six, F. E., (eds): *The trust process, empirical studies of the determinants and the process of trust development*, 223-230. Cheltenham: Edward Elgar.
- Snow, C. P. (1959). *The two cultures and the scientific revolution*. Penguin Books.
- Tsui, A. S., Nifadkar, S. S., and OU, A. Y. (2007). Cross-National, Cross-cultural Organization behavior research: Advances, gaps, and recommendations. *Journal of Management*, 33, 426-478.
- Tyler, T. R., and Kramer, R. M. (1996). Whither trust? In. Kramer, R. M. and Tyler, T. R. (eds): *Trust in organizations: frontiers of theory and research*, 1-15. Thousand Oaks, CA: Sage Publications.
- Uslaner, E. (2004). Corruption, inequality, and trust. In: Svendsen, G. T., and Lind, G: *The Handbook of Social capital*. London: Edward Elgar.
- Uslaner, E. M. (2004). Trust and corruption, in: Lambsdorf, J. G., Taube, M., and Scjhramm, M. (eds): *Corruption and the new institutional economics*. London, Routledge.
- Hua, Wei (2003). A social exchange model of subordinate's trust in supervisors. Working Paper, Singapore Management University.
- Werner, S. (2002). Recent development in international management research: A review of twenty top management journals. *Journal of Management*, 28 (3), 277-305.
- Whitener, E. M., Maznevski, M., Hua, W., Sæbø, S. R., and Ekelund, B. Z. (2001). Testing the cultural boundaries of a model of trust: Subordinate-manager relationships in China, Norway and the US. *Economic, Social, and legal issues in China's transition to a Market Economy*, UCLA AsiaInstitute.
- Williamson, O. E. (1985). *The economic institutions of capitalism*. New York: The Free Press.
- Zaheer, A., McEvely, B., and Perrone, V. (1998). Does trust matter? Exploring the effects of interorganizational and interpersonal trust on performance. *Organization Science*, 9 (2), 141-159.

APPENDIX I

The four items used in the Akkinukave et. al., (2009) study in order to measure subordinate trust in manager.

If I shared my problems with this person, I know s/he would respond constructively and caringly.

I can talk freely to this individual about difficulties I am having at work and know that s/he will listen.

We have a sharing relationship. We can freely share our ideas, feelings and hopes
We would both feel a sense of loss if one of us was transferred and we could no longer work together.

THE EFFECT OF TRAINING OF INTERPERSONAL SKILLS OF EMOTIONAL INTELLIGENCE ON JOB SATISFACTION AND ORGANIZATIONAL COMMITMENT IN EMPLOYEES OF INDUSTRIAL COMPANY

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Abstract

The purpose of this study was to investigate the effect of training of interpersonal skills of Emotional Intelligence (EI) on Job satisfaction and Organizational commitment of employees. The method of this study was experimental method using a pre-test and a post-test with control group and six weeks follow up. The study population consist of male employees of Oil Company in Ahvaz city at 2009. The sample consist of 32 employees who were selected randomly and then were randomly assigned to experimental and control groups. The Instrument used in this study were Job Descriptive Index (JDI) and Allen and Meyer organizational commitment (OC) Questionnaires. Interpersonal skills of EI were taught to the experimental group for 10 session of ninety minute. The end of course post tests got to two groups, Six weeks later follow up tests were did. The results showed that training of interpersonal skills of Emotional Intelligence effects on job satisfaction and organizational commitment of male employees and this result remained at least for six weeks after training.

Key words: Emotional Intelligence, Job satisfaction, Organizational commitment

INTRODUCTION

Nowadays all companies tend to utilize the forces that in spite of skill and specialty being committed to companies interests(profits) so as to they will not abandon their job if another job opportunity appears on same ways. In this way emotional intelligence (EI) has occupied the scholars minds, since as its name suggests, it takes rationality and sensibility together to be able to respond to this requirement by means using commitment with specialty.

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Interpersonal skills of EI are one of the EI's aspects which enables people with Learning and attention to empathy, interpersonal relationships and social responsibility, make environment which is full of appreciation, purity, intimacy and solidarity and they satisfy from being in such conditions and don't think to damage organization goals and benefits or leave their organization.

In regard to this need, in this study has been investigated the effect of training interpersonal skills of EI on job satisfaction and organizational commitment of the employees of Ahwaz oil company.

EI, the term originally conceived by Salovey and Mayer (1990) and later in 1996 being popularized by Goleman (Chapman, 2002), and has been increasingly gaining acceptance during the last years (Orme and Bar-on, 2002). Goleman started a debate on EI from the place that lesson scores, intelligence quotient or the results of Educational talent tests, in spite of their value can't have a correct prediction about who would be a successful man in life. Goleman for confirming his theory refers to Gardner's (1993) book entitled "form of mind" that was a statement which reject traditional view of IQ.

Gardner's ideology there isn't an intelligent that warranty success for people but it is a wide spectrum from intelligence that prepares people prosperity. Goleman regarded both cognitive and emotional intelligence as a factor for success. He considered EI as a combination of capabilities which contain perseverance, resistance for gaining aim, self actualization, ability to impulse control, temper regulation, Stress tolerance to make think facilitating about own and other's emotions (Bradbery and Graives, 2005; translated by Ganji, 2007). Goleman in his last review in 2004 suggested that EI aspects can be summarized into 4 cases including self- awareness, self- management, social awareness, relationship-management (Aghayar and Sharifi daramadi, 2007). Nowadays when was told about life improvement, function and job satisfaction of peoples, emotional intelligence is ability to perceive and express emotion, assimilate emotion in thought, understand and reason with emotion, and regulate emotion in self and others (Luthans, 2002).

Job satisfaction is a pleasurable emotional state resulting from the appraisal of one's job, an affective reaction to one's job, and an attitude towards one's job. Finally job satisfaction is an attitude that should be raised by means of emotions, beliefs and behaviors of person (Weiss, 2002).

Allen and Meyer (1990, as cited by Varmahmoodi, 2003), in their model divide organizational commitment into 3: affective commitment, continuance commitment and normative commitment. Affective commitment refers to affective dependence, simulation and employees involvement to organization. Continuance commitment regards profits and values that an employee loses who he leaves the organization; and normative commitment refers to the employee's necessity in regard to the organization. It is assumed that emotional intelligence is a powerful instrument for realizing emotions and excitements. In addition to concerns about well-being, stress levels and job satisfaction of job place provides a problem that is the focus of this research: Can organizations improve job satisfaction and organizational commitment of their employees by emotional intelligence?

Ricardo and Joaquin (2008) in an article entitled with "Emotional Intelligence and Job Satisfaction: The role of organizational Learning ability" suggest that learning ability has a significant effect on emotional intelligence and job satisfaction; in some conditions of learning ability, peoples with greater EI experience job satisfaction with greater possibility. Lee and Lee (2008) Studied the effect of emotional intelligence and organizational space on

job satisfaction of nurses, their study on 254 nurses showed that both emotional intelligence and organizational space has a meaningful effect on job satisfaction. Adeymo (2007) in a study investigated the mediating effect of emotional intelligence on the relationship between job satisfaction and organizational commitment. He according to findings of his study show that job satisfaction has meaningful effect on organizational commitment and emotional intelligence mediates between both variables; so Adeymo suggested that EI could be used as an intervention to enhance organizational commitment. In one survey entitled with " ", the mediatory effect of job satisfaction between emotional intelligence and organizational commitment of nurses conducted by Guleryuz, Guneyb, Aydem and Asan (2007) the effect of emotional intelligence and dimensions on job satisfaction and organizational commitment of nurses were studied. It was found that Emotional intelligence was significantly and positively related to job satisfaction and organizational commitment and job satisfaction is a mediator between emotional intelligence and organizational commitment. In Morrison's idea (2004) the informal relationships between employees of one organization can potentially facilitate the organizational function. So intimacy and opportunity for friendships, for employees relating to increasing job satisfaction, which this leading to increasing organizational commitment and decreasing turnover intentions. Abraham (2003) studied the relationship between emotional intelligence and Work attitudes, behavior and outcomes, the results indicate that EI augments positive work attitudes, altruistic behavior and work outcomes. Shoushtarian (2008) also considered the effect of emotional intelligence on attitudes function of the employees of productive industries. According to her findings were showed positive and meaningful relationship between EI and force's job satisfaction, but were not seen positive and significant relationship between EI and organizational commitment. Afkhami (2007) in a study entitled with "the relation of emotional intelligence with job satisfaction and organizational commitment of experts of education ministry" the relationship between job satisfaction and organizational commitment was studied, she found that has not relationship between EI, job satisfaction and organizational commitment. Sobhani Serati (2007) in a study showed that there is a positive and meaningful relationship between emotional intelligence and social skills of managers and the occupational attitudes of their subordinate such as job satisfaction, organizational commitment and job involvement; And finally, Zahra'ie (2008) in a research entitled with "The effect of training some aspects of emotional intelligence on job satisfaction and productivity of employees of Iranian Marine installations and construction company" selected 28 employees who earned the lowest score for EI. Then some aspects of EI were taught to the experimental group once a week for 10 sessions. The results showed that education did not increase employees' job satisfaction nor did it improve managers' evaluation. However, employees' productivity score after training sessions and managers' evaluation improved in the long run.

So the importance of this research and the benefits accruing on doing it are as follows.

1. Employee`s satisfaction is made clear from different aspects of their jobs, and thus the manager can differentiate the weak points of the organization from its strengths and plan in a manner that allows the removal of those weaknesses (remove those weakness).
2. Scale of job satisfaction and organizational commitment of employees and it's relation with interpersonal skills of EI is clarified. This in turn allows employees and managers to treat better than together.
3. Discovering the relationship between different aspects would make clear the relationship between diverse aspects of Employees job satisfaction or organizational commitment and their EI. Thus, if this relationship were (was) verified, it may (might) be possible that increasing the interpersonal skills of EI of employees

(employee`s interpersonal skills of IE) will increase the probability of their job satisfaction (and therewith increasing probability of their job satisfaction).

4. Considering the above, it can be said that the decrease in job satisfaction or organizational commitment of some employees may be due to their low interpersonal skills, thus, by training of this skills, an increase in their job satisfaction or organizational commitment may be expected.

Finally, it can be concluded that people with high EI (effective inter relationship, empathy and responsibility) and high job satisfaction and high organizational commitment perform their work much better than others, and thus increase the output of the organization, which is economically beneficial to the organization. At the same time, they enjoy working with each other, cooperation and developing relationships, and this is also beneficial to the organization.

Thus, in this research two hypotheses have been investigated (in this research): 1) training of interpersonal skills of emotional intelligence is effective on job satisfaction of employees of (employee`s job satisfaction of) oil company in Ahvaz. 2) Training of interpersonal skills of emotional intelligence is effective on organizational commitment of employees of (employee`s organizational commitment) oil Company in Ahvaz.

METHODS

This experimental study was designed using a pre-test, a post-test with control group and a six weeks follow-up. The control and experimental groups have randomly assigned. The study population was the male employees of oil Company with the average age of 43-47 years old. The sample consist of 32 men that they had at least diploma at most B.Sc., so they were randomly assigned into two groups: experimental and control. Both groups filed out a job satisfaction questionnaire (JDI) and organizational commitment questionnaire (OCQ), after interpersonal skills of EI were taught to experimental group and were done post-test for two groups. After six weeks both groups filed out follow-up questionnaires. Job satisfaction questionnaire (JDI) was designed by Smith, Kandall and Hulin (1963). This scale is one of the most common instruments for measuring job satisfaction. It has 71 items and 5 components which are: job nature, supervisor, salary, promotion and coworkers. Respondents selected "yes", "no" or "don't know" for each question. The lowest score is (0) and the highest one is (54) (Bahoosh, 2005). In this research reliability coefficient of JDI through split-behalves method was determined 0.84 and 0.82 through Cronbach alpha method which are satisfactory. The validity coefficients for JDI, ranged from 0.51 to .78 which was significant, at less than 0.05 statistical significant level. In order to measuring organizational commitment the questionnaire of Allen and Meyer (1984) was applied. In this scale, there are 24 questions that participant choose from a seven option scale from completely disagree (1) to completely agree (7) (Dehmollaei, 2004). Negative answers convert for scaling according to Likert from 7 to 1 (Gjharbaghizadeh, 2005). In this research reliability coefficient of affective commitment of organization, continuance commitment of organization and normative commitment of organization through split-behalves method was determined respectively 0.69, 0.45 and 0.76 and 0.83, 0.41 and 0.67 through Cronbach alpha method which are all satisfactory.

The construct validity of organizational commitment has fluctuated in a research by Samiee' (1996) in all aspects between 0.17 – 0.71 (Pasha, Khodadadi and Enayati, 2005)

PROCEDURE

After some sessions about understanding of the way of researching with the expert of oil company of Ahvaz, earning necessary credit for training in company, and assignment of samples' groups, researcher went to training place and after welcoming to the employees, the necessary explanation were given about file out the questionnaire. They were said their answers would be confidential. Training of interpersonal skills of emotional intelligence for experimental group was conducted in 10 sessions of 90 minute time.

DATA ANALYSIS

In order to analyze the data, in addition to descriptive statistics such as the standard deviation, the minimum and maximum scores, the way of inferential statistics like one-variable co-variate, multi-variable co-variate and independent t-test were applied so that the mean differences scores obtained from the pre-test and post- test were designed for experimental and control groups and t-test for independent groups was used to find out the differences between two groups.

FINDINGS AND DISCUSSION

The research statistical Population include of all personnel of Ahvaz oil company during the year of 2009. 32 employees were chosen through the random simple sampling. Amongst sample, 3.12% were between 33-37, 34.4% between 38-42, 40.6% between 43-47 and 21.9 between 48-52; 34.4% had diploma degree, 18.7 % were technicians, 43.7 % B.Sc. and 3.1% M.A. Also time of service was 28% between 14-18 years, 43.7% between 19-23 years, 18.7% between 24-28 years and 9.4% between 29-33 years. Furthermore the maximum age was 43-47 with 43/75% for the experimental and 37/5% for the control group. The maximum degree was Diploma and B.Sc. with 43/75% for the experimental group and B.Sc. with 43/75% for the control group. The maximum time for service was 19-23 years with 43/75% for the experimental and control group.

After analysis of the data, these results have been obtained:

1. Training of interpersonal skills of emotional intelligence is effective on total job satisfaction of the male staff of Oil Company. In addition it was found that based on the first hypothesis there is a significant difference between the control and experimental groups with pre-test co-varite. This difference is good for experimental group. In other words, the mean scores of total job satisfaction in post-test and follow-up test of the subjects of experimental group were significantly greater then control group. so, as it is shown in tables 1 and 2, the mean of scores of total job satisfaction of employees in experimental group in post-test and follow-test has been significantly more than control group and the result of independent group t-test for comparing the mean of follow-up test and post-test shows that by passing 6 weeks, there has still been continue a difference between the scores of experimental and control groups. These results are similar to Lee and Lee (2008), Adeyemo (2007), Gulerywz and et al (2007), Morrison (2004), Shoushtarian (2008) and Sobhani Serati (2007) and is dissimilar to Afkhami (2007) and Zahra'ie (2008). To explain this issue can be said that such employees by gaining the interpersonal skills, learns how to understand others and put himself in others shoes. He also accustom with principles of effective communication. He also learns not only language is explanatory but also body states are. He learns non-verbal communication, and learns how to communicate in difficult situations, that not only gain his rights but also not violate the right of others. He realizes the method of effective relationships and ultimately will be familiar with responsibility towards themselves and others. Here, he finds roots of delaying in the affairs and will ready to accept responsibility for decisions and his takes. Under such circumstances, positive feelings of prosperity, meaning and purpose will be revived in his hearts and he feels satisfied. Riggio(2003;

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translated by Hoseinzadeh, Labbadi and Salehi, 2007) believes that workers can effects on levels of his satisfaction by accepting responsibility.

Table 1: result of ANCOVA for comparing mean of post-test and follow-up test of total job satisfaction in male staff of experimental and control groups

Stage	Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Post Test	T1ToTalsat*	32338.324	1	32338.324	88.430	.000	.753
	Error	10605.113	29	365.694			
Follow up Test	T1ToTalsat	36233.906	1	36233.906	75.435	.000	.722
	Error	13929.594	29	480.331			

* T1ToTalsat: the scores of pre-test of total job satisfaction

Table 2: result of independent group t-test for comparing mean of follow-up test and post-test of total job satisfaction in male staff of experimental and control groups

Source	Levene's Test for Equality of Variances		t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
	F	Sig.					
T3 Total sat- T2Total sat**	1.36	0.253	-1.89	30	0.07	-12.3	6.5

** T3 Total sat- T2Total sat is subtracts of scores of follow-up test of total job satisfaction and post-test of it.

2. Training of interpersonal skills of emotional intelligence is effective on organizational commitment of the employees. Based on the results of the second hypothesis, it was found that by controlling the pre-test there is the meaningful difference between organizational commitment (effective, continuance and normative commitment) of experimental group and control group. In other words, as it is shown in tables 3-8, the mean of scores of affective commitment, continuance, and normative ones of employees in experimental group in post-test and follow-up test has been significantly more than control group and the result of independent group t-test for comparing the mean of follow-up test and post-test shows that by passing 6 weeks, there has still been continue a difference between the scores of experimental and control groups. So the second hypothesis considers the effect of training of interpersonal skills of emotional intelligence on organizational commitment of employees. The results show that organizational commitment of experimental group has been increased in three cases by controlling the pre-test. This result is similar to Abraham's results. Therefore, it can be concluded that the senses of job satisfaction and organizational commitment are depended to one another in spite of their differences. Researches show that is positive and high correlation between them; therefore employees have positive sense about their job and organization presumably lower do absence of their work and lower leave for another work to another organization. Emotionally intelligent individuals are optimistic, a trait that enables them to focus on the resolution, rather than the reasoning. The work in any organization imposes difficulties that may result in feelings of frustration. Emotionally intelligent individuals would know not to hold the organization responsible for every feeling of frustration (Abraham, 1999), In addition emotionally intelligent individuals would know how to avoid dysfunctional emotions and use them in adaptive ways to alleviate feelings of frustration, Thus emotional intelligence is expected to augment a higher level of affective commitment to the organization, and diminish the level of continuance commitment

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(Abraham, 2003). If an employee obtains friendly work environment, good wages and satisfied from his organization and leaving organization endanger these benefits, thus his continuance commitment to the organization will increase. Finally we can say the affective and normative commitment which has been confirmed by several investigations, as the interpersonal skills of emotional intelligence, round on increasing normative commitment is also effective.

Table 3: result of ANCOVA for comparing mean of post-test and follow-up test of affective commitment in male staff of experimental and control groups

Stage	Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Post Test	T1AC*	285	1	285	8.6	0.006	0.2
	Error	961.5	29	33			
Follow up Test	T1AC*	723	1	723	30	0.0001	0.5
	Error	691	29	23.8			

* T1AC: the scores of pre-test of Affective commitment

Table 4: result of independent group t-test for comparing mean of follow-up test and post-test of affective commitment in male staff of experimental and control groups

Source	Levene's Test for Equality of Variances		t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
	F	Sig.					
T3 AC- T2AC **	0.0001	0.9	-0.36	30	0.71	-0.68	1.9

** T3 AC- T2AC is subtracts of scores of follow-up test of Affective commitment and post-test of it.

To sum up, the result of this study showed the relationship between interpersonal skills of emotional intelligence, job satisfaction and organizational commitment. In regard to the results, it is suggested that interpersonal skills of emotional intelligence can be targeted for Employee`s job satisfaction and commitment to organization and so improvement of organizational function; also it can be an important component of an organization.

Table 5: result of ANCOVA for comparing mean of post-test and follow-up test of continuance commitment in male staff of experimental and control groups

Stage	Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Post Test	T1CC*	230	1	230	5.5	0.02	0.16
	Error	1209	29	41.7			
Follow up Test	T1CC*	211.6	1	211.6	4.8	0.03	0.14
	Error	1278.2	29	44			

* T1CC: the scores of pre-test of Continuance commitment

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Table 6: result of independent group t-test for comparing mean of follow-up test and post-test of continuance commitment in male staff of experimental and control groups

Source	Levene's Test for Equality of Variances		t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
	F	Sig.					
T3 CC- T2CC **	0.15	0.69	0.6	30	0.54	1.3	2.1

** T3 CC- T2CC is subtracts of scores of follow-up test of Continuance commitment and post-test of it.

Table 7: result of ANCOVA for comparing mean of post-test and follow-up test of normative commitment in male staff of experimental and control groups

Stage	Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Post Test	T1NC*	233.8	1	233.8	13	0.001	0.31
	Error	519.5	29	17.9			
Follow up Test	T1NC*	99.4	1	99.4	4.1	0.05	0.12
	Error	687	29	23.7			

* T1NC: the scores of pre-test of normative commitment

Table 8: result of independent group t-test for comparing mean of follow-up test and post-test of normative commitment in male staff of experimental and control groups

Source	Levene's Test for Equality of Variances		t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
	F	Sig.					
T3 NC- T2NC **	1.5	0.2	0.8	30	0.4	1.5	1.9

** T3 NC- T2NC is subtracts of scores of follow-up test of normative commitment and post-test of it.

development program. Research evidence suggests that interpersonal skills of EI are related to Employees effectiveness and are able to be improved through training intervention. In the other hands training of interpersonal skills of EI to managers and supervisors so as part of Employees also is necessary and facilitate understanding and empathy with their subordinates after leads to responsibility of employees for their organization. Finally these factors create intact, safety and effective organizational space.

Practical implications: suggestion is training workshops for managers of companies and the supervisors of different units to be held to make them familiar with interpersonal skills of EI and efficacy of it to organization. In addition it is necessary to make employees motivated to take part in training classes to prepare them a kind of trend like considering them job promotion or giving them a week off.

Future research implications: doing another research with the same topic is be suggested on female employees for comparison of got result in two population and doing it in other organizations (for example governmental, nongovernmental and industrial organizations)

Limitations: The findings of this study should be interpreted in the light of these limitations. First, The most of previous research have been studied relation between EI and job satisfaction or organizational commitment of employees and only one research there was in experimental manner that has been studied the effect of training some aspects of

emotional intelligence on job satisfaction and productivity of employees which was not clear kind and number of aspects so this research is first one has clearly studied interpersonal skills of EI for investigating effect on job attitudes such as job satisfaction or organizational commitment then researchers faced with limitation in finding experimental literature and explanation them. Second, the study is based on limited occupations of public organization. Therefore, it could be argued that the work context of respondents may constrain the results being generalized to universal occupations and jobs. Third, Because of presence of oil Company employees in the most of time in outside of the office or city and their missions, were faced researchers with problems for regulating class time and doing tests.

REFERENCES

- Abraham, C. (2003). The Relationship Between Emotional Intelligence and Work Attitudes, Behavior and Outcomes. *Journal of Managerial Psychology*, 18 (8), 788-794.
www.Emerlandinsight.com/0268-3946.htm
- Abraham, R. (1999). Emotional Intelligence in organizations: a conceptualization, *Genetic, Social and General Monographs*, 125 (2), 209-224.
- Adeyemo, D. A. (2007). Emotional Intelligence and The Relationship Between Job Satisfaction & Organizational Commitment of employee in public parastatals in Oyo state, Nigeria. *Pakistan Journal of Social Sciences*, 4 (2), 324-330.
- Afkhami, P. (2007). Investigation of Relation Between Emotional Intelligence with job-satisfaction and organizational commitment of experts in education department. Supervised by Dr. Mahmood Shirazi, M. A. Thesis of management. Tehran: Governory office.
- Aghayar, S., and Sharifi Daramadi, P. (2007). *Organizational Emotional Intelligence*. Isfahan: Sepahan publication.
- Bahoosh, A. (2005). Study The Relation between Styles of Leading managers with job-satisfaction, job involvement and organizational commitment of employees of khouzestan electricity. Supervised by Dr. Abdolkazem Neissi, M. A. Thesis of administration management. Ahvaz: Islamic Azad University Science and Research Branch of Khuzestan.
- Bradberi, T., and Graives, J. (2005). *Emotional Intelligence (skills and Tests)*. Translated by Mehdi Ganji (2007). Second edition. Tehran: Savalan publication.
- Chapman, M. (2002). Emotional Intelligence: The challenge for HRM, *Competence and Emotional Intelligence Quarterly*, 10 (1), 25-28.
- Dehmollaei, M. (2004). Study the effect of relation between organizational- commitment and tendency to Leaving job in managers and teachers of Abadan city. Supervized by Dr. Mahmood Kazemi, M. A. Thesis of Management. Ahvaz: Faculty of psychology and Education, Shahid Chamran University.
- Ebadnaseri, M. (2008). Study the Effect of Training Assertiveness on Job Satisfaction and Employees Assertiveness of Khouzestan water and Electricity complex. Supervised by Dr. Manijeh Shehni Yeylagh, M.A. Thesis of General Psychology. Ahvaz: Faculty of Psychology and Education, Shahid Chamran University.
- Gharbaghizadeh, A. (2005). Study the Relation of Organizational Structure (Formality, Focus, Complexity) on Job Satisfaction and Organizational commitment of employees of Khouzestan Electricity Company. Supervised by Dr. Abdolkazem Neissi, M.A. Thesis of Administration management. Ahvaz: Islamic Azad university Science and Research Branch of Khuzestan.
- Guleryuz, Guldal. Guneyb, Semra, Aydin, Eren, Miski, & Asan, Oznur. (2008). The Mediating Effect of Job Satisfaction between Emotional Intelligence and Organizational Commitment of nurses: A questionnaire survey. *International Journal of Nursing Studies*, 45 (11), 1625-1635.

Advances in Business-Related Scientific Research Journal (ABSRJ)
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- Lee, M., & Lee, S. (2008). The Influence of Emotional Intelligence and Organizational Climate for nurses Job Satisfaction. *Cc. Feu. Edu. Tw*, 4 (1), 1-10.
- Luthans, F. (2002). Positive Organizational Behaviour: Developing and Managing Organizational Strengths. *Academy of Management Executive*, 16 (1), 57-75.
- Morrison, Rachel (2004). Informal Relationships in the workplace: Associations with Job Satisfaction, Organizational Commitment and Turnover Intentions. *Journal of Newzealand Psychological Society*.
www.Accessmylibrary.com/article-1g1-127433760-Informal-Relationships-workplace-Associations.html
- Orme, G., Bar-on, R. (2002). The Contribution of Emotional Intelligence and Organizational Effectiveness, Competence and Emotional Intelligence Quarterly, 9 (2), 22-28.
- Pasha, G., Khodadadi, F., and Enayati, M. (2005). Study of Relation between Personal and Job Features of Employees with Organizational Commitment. *Research in Psychology Quarterly*. Ahvaz: Islamic Azad university Science and Research Branch of Khuzestan, 1 (1).
- Ricardo, C., & Joaquin, A. (2008). Emotional Intelligence and Job Satisfaction: The rule of Organizational Learning Capability. *Journal of personal Review*, 37 (6), 680-701.
- Riggio, R. A. (2003). *Organizational Industrial Psychology*. Translated by Davood Hosseinzadeh, Zahra Labbadi and Parviz Salehi (2007). Tehran: Maziar Publication.
- Shoushtarian, Z. (2008). Study the Effect of Emotional Intelligence on Attitude and Function of Job Forces. *Kare salem Quarterly*, Second year, (8), 47-52.
- Sobhani Serati, S. (2007). Study of Simple and Multiple Relations between Emotional Intelligence and Social Skills of Managers in Jahadnasr Company. Supervised by Late Dr. Jamal Haghighi, M. A. Thesis of Organizational-Industrial Psychology. Ahvaz: Faculty of psychology and Education, Shahid Chamran University.
- Varmahmoodi, M. (2003). Study of the Relation between Organizational Commitment with Responsibility of Sanitation and treatment managers of Ahvaz Oil Company. Supervised by Dr. Jafar Mamizadeh, M. A. Thesis of Administration management. Ahvaz: Islamic Azad university Science and Research Branch of Khuzestan.
- Weiss, H. M. (2002). Deconstructing Job Satisfaction: Separating Evaluations, Beliefs and Affective Experiences. *Human Resource Management Review*, 12, 173-194.
- Zahra'ie, S. (2008). The Effect of Training some aspects of Emotional Intelligence on Job Satisfaction and Productivity of employees of Iranian Marine Installations and Construction Company. Supervised by Dr. Simin Hosseinian, M. A. Thesis on General Psychology. Tehran: Azzahra University.

DIVISION CHIEFS: CHALLENGES AND SUCCESSES TRANSITIONING INTO PHYSICIAN LEADERSHIP ROLES

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Abstract

This qualitative phenomenological study explored data that will be useful in evaluating the advantages and disadvantages of external recruitment versus internal development. The study identified challenges faced by the division chiefs with respect to their transition to leadership roles at an academic medical center. The occupational group interviewed included 20 division chiefs located in a northeastern Pennsylvania academic medical center. Because of these data collected and analyzed, four thematic categories emerged including (1) challenges to incoming faculty promoted to leadership positions; (2) methods to create potential new leaders; (3) competencies useful to ascending leaders; and (4) identification of potential internal candidates. The majority of the participants believe that understanding the key components to managing a business would have been helpful before or after the transition to leadership. Other key findings were the recommended strategies to identifying and developing internal talent for upward mobility.

Key Words: Transition, leadership, development

Topic Groups: management consulting, management education, training and development, human resource management and career development

INTRODUCTION

Academic healthcare organizations have division chief leaders with responsibilities for managing various clinical and research departments within the institution. Responsibilities include management of clinical areas, physicians, and scientists; teaching; and administrative responsibilities. Leaders in internal medicine have many responsibilities, which include educating medical students, residents, and fellows; patient care; and academic research (Nettleman & Schuster, 2007).

BACKGROUND OF THE PROBLEM

Organizational leaders will recruit externally to fill leadership positions rather than promoting from within. External recruitment efforts are increasing, and the talent and skills required for some positions can be found through external recruitment efforts (Gandossy & Kao, 2004). Leaders in healthcare organizations recruit externally to hire talented physician leadership to ensure continued infusion of external talent and knowledge into the organization (National Center for Healthcare Leadership, 2006). The leaders of the academic medical center studied initiate an external recruitment process for physician leadership positions because maintaining a strong presence and communicating ongoing physician leadership opportunities increase the possibility of recruiting talented physician leaders across the country (Chen, 2005).

Although the preferred recruitment method is external, administrators of academic medical institutions are being challenged by the available pool from which to choose physician leaders. The impact of baby boomer retirement has affected all organizational recruitment, including physicians (National Center for Healthcare Leadership, 2006). Merritt Hawkins and Associates (as quoted in Evans et al., 2006) stated, "Approximately 80 percent of physicians age 50 or over are considering retiring from full-time clinical practice over the next five years" (p. 10). The percentage of physicians retiring in a few years may also be a factor in the number of physicians from which to select.

The problem is that internal senior-level physicians are rarely promoted to division chief positions, resulting in high turnover (Ricketts & Randolph, 2008). Additionally, baby boomer retirement is resulting in a shortage of workers across industries, including available senior-level physicians (Sheldon, 2007). In this qualitative phenomenological study, the challenges and successes of senior-level physicians transitioning into division chief positions within academic medical institutions were explored. The results of these data may reveal information to executive leaders regarding skills and competencies for developing internal talent to use during recruitment replacements. Individuals within organizations develop new skills and abilities by modeling others and distinguish themselves by reacting to challenges and opportunities in the work environment (Ulrich, 1984).

Along with baby boomer retirement, officials of academic institutions are faced with competing academic institutions and shifts in healthcare that are potential impacts on recruitment. More specifically, the number of non-physician providers has increased, limiting the need for general care provided by physicians. The responsibilities of non-physician providers continue to broaden. Many states have allowed non-physician providers to expand their scope of responsibility (Evans et al., 2006).

Although the paradigm shift may be viewed as a negative change by some physicians, using nonphysician providers for general care may result in more opportunities for physicians to develop the administrative skills needed in senior-level management roles (Evans et al., 2006). In today's work environments, businesses are faced with an increase in global competition, which may continue to cause shifts in the workplace (McCauley & Wakefield, 2006). Because of the potential for limited numbers of physicians to fill leadership positions, internal development and succession planning may be options for academic healthcare institution officials (Benson, 2009).

Senior-level physicians selected for division chief positions must demonstrate leadership abilities. The physician population that worked in small practices will need to build and develop new skills to manage a large number of employees, particularly in complex medical institutions (Henochowicz & Hetherington, 2006). According to Kaplan (2006), to lead large complex organizations, leading and motivating staff are critical. Along with managing administrative responsibilities, the division chief must focus on the development of staff, which requires leadership abilities. Furthermore, the development of staff can be used in succession planning to build an internal talent pool for open positions that arise. Developing charismatic leadership increases leaders' abilities to become role models for employees. Additionally, followers trust, respect, and admire those leaders. Senior-level physicians following charismatic leaders may develop skills and abilities, including leadership abilities, through imitating physician leaders (Conger, 1999).

Along with developing charismatic leadership skills, transformational leadership abilities are critical to success in executive leadership positions. According to Avolio, Bass, and Jung

(1999), the six-factor model for transformational and transactional leaders includes "charisma/inspirational, intellectual stimulation, individualized consideration, contingent reward, active management by exception, and passive-avoidant leadership" (p. 444). Although charismatic leadership is only one aspect of the model, the importance of developing transformational leadership abilities is important to effective leaders.

According to studies of the value of a transformation leader, continued change within an organization demonstrates the importance of building and developing transformational leadership abilities (Krishnan, 2001). As Bass (as quoted by Krishnan, 2001) stated, "Superior performance or performance beyond normal expectations is possible only by transforming followers' values, attitudes, and motives from a higher plane of arousal and maturity" (p. 1). Transformational leadership abilities may be competencies and skills that can be used to develop senior-level physicians.

STATEMENT OF THE PROBLEM

Academic medical center administrators recruit externally and fill vacant physician positions with external candidates (National Center for Healthcare Leadership, 2006). While the external recruitment process can be effective and address organizational leadership gaps, hiring externally can have a negative impact on retention (Ricketts & Randolph, 2008). Other factors, including, cost/reimbursement issues, global trends impacting healthcare, and nursing shortages can affect physician retention (Cohn, Bethancourt, & Simington, 2009). The external recruitment process is another factor; therefore, internal development of physicians may present an opportunity to have a positive impact on retention (Ricketts & Randolph, 2008).

Senior leaders within academic healthcare organizations spend more time and money on developing the skills and abilities of recent graduates with doctorate and medical degrees than on mentoring and developing high-potential senior-level physicians (Chen, 2005). According to Gray and Armstrong (2003), faculty early in their careers needs good mentors to build their skills. Effective mentoring and development of all physicians may result in upward mobility and a decrease in the loss of talented staff.

Because of the external recruitment process, academic healthcare institution officials have high turnover in senior-level physician positions. Pediatric departments have high turnover in leadership positions. Therefore, individuals holding these positions should develop leadership ability and have their personal and professional qualities assessed to determine potential leadership gaps. Identifying competencies and skills may potentially result in retention of physician leaders. (Stapleton, Jones, & Fiser, 2005).

In this qualitative phenomenological study, the research explored the perceptions and lived experiences of division chiefs in an academic medical center in northeastern Pennsylvania to understand better their successful or challenging entries into leadership roles. These data may result in useful information for senior leaders in academic medical centers in the identification of leadership competencies that can be used to develop faculty for potential advancement to division chief positions.

SIGNIFICANCE OF THE PROBLEM

The qualitative phenomenological research will be a contribution to the current body of knowledge as well as the basis for useful data to be used by hiring managers seeking qualified physicians to fill division chief positions. As the war for talent continues and baby

boomers retire, hiring managers may need to expand their recruitment process to include internal development of physicians. Although recruitment challenges exist, academic medical institution officials want to ensure that the right candidate is selected for the division chief position. Organizational leaders want to have talented staff on board, possibly requiring leaders to review the organization's recruitment process and review of talent (Gandossy & Kao, 2004). In 2011, the baby boomer generation will approach age 65, which may present gaps in the available pool of qualified physician leaders. Organizational leaders in academic medical centers may need to focus more attention on internal development versus externally recruiting for physician leadership roles (Institute of Medicine, 2008).

In addition to the data being useful in support of recruitment processes, these data will be useful in ensuring successful entry into leadership positions, whether the candidates are recruited externally or internally. Researching the leadership abilities and challenges of current division chiefs will result in leadership development framework for an effective performance management system, succession planning, and talent management process. Individuals within organizations develop new skills and abilities by modeling others and distinguish themselves by reacting to challenges and opportunities in the work environment (Ulrich, 1984). Administrators in the northeastern Pennsylvania-based academic medical center recruit externally to hire talented staff and remain an employer of choice for skilled medical professionals. However, the potential gap of recruiting qualified physician leaders should be considered. These data may be useful in developing a leadership development process to retain qualified staff and address future shortages of qualified physician leaders (Institute of Medicine, 2008).

SIGNIFICANCE OF THE STUDY TO LEADERSHIP

Although healthcare organization administrators find value in obtaining new and creative ideas through hiring external talent, challenges exist with external talent entering leadership positions within the organization (Gilmore, 2003). In this study, the research explored the leadership challenges that externally hired division chiefs experienced while transitioning into leadership positions. Although knowledge from other institutions is valuable, external hires have a learning curve that can result in gaps in the leaders' abilities to demonstrate competency in the leadership roles. Leaders hired external to the organization may take longer to learn the business of the organization than an internal candidate. Internal hires are familiar with the healthcare organization; however, external institutional knowledge may be limited (Gilmore, 2003).

The results of the study may be used to support the development of staff internally to fill vacancies rather than hiring externally. The challenges that both internal and external hires have experienced may reveal details regarding the areas of focus for developing staff internally. According to Garman (2006), hospitals may seek to be recognized as particularly innovative, or alternatively as particularly customer focused. Each of these goals may suggest a profile of specific behaviors that would be important for leaders to master. More specifically, in the case of innovation, leaders should be particularly open to cutting-edge approaches and should foster a climate of creativity and a sense of safety in trying new things. (p. 14)

FINDINGS

This section presents the results of the phenomenological analysis of the participant interviews. The fluid nature of phenomenological research and the data collection process provides distinct advantages, and it is important to note that the chief advantage is that

responses to interview questions may touch on thematic characteristics of the research that are not specifically covered by any single research question or interview question, thus allowing new information to emerge. The characteristic of phenomenological research is an advantage because it does not confine the interviewee to a narrow set of answers; instead, he or she is allowed to express more fully individual perceptions, beliefs, and lived experiences.

Lived experiences are especially relevant to this study because, many times, the experiences that are acquired in one context can spill over into other contexts. The lived experiences become paramount in the context of this particular study because of the diversity of people interviewed. There were division chiefs from many different departments and specialties, and many of them had very different experiences surrounding their promotions to division chief. Therefore, the information compiled expresses a wide range of thoughts, feelings, and experiences about promotion and leadership challenges within the hospital.

FOUR THEMATIC CATEGORIES

Four thematic categories were identified when the invariant constituents were clustered and thematized. The four thematic categories were (1) challenges to incoming faculty promoted to leadership positions, (2) methods to create potential new leaders, (3) competencies useful to ascending leaders, and (4) identification of potential internal candidates. This section contains a review of each thematic category and the most significant invariant constituents of which they are composed.

Table 1: Challenges to Incoming Faculty

Challenges	# of participants to offer experience	% of participants to offer experience
Transition to business	12	60%
Getting subordinates to "buy in"	4	20%
New ideas	3	15%
Large scale organization	4	20%

Table 1 presents the most important invariant constituents that resulted in the first thematic category. The category contains a representation of the common challenges that the physicians faced when they were promoted to the role of division chief at the hospital. Participants reported many different challenges, but among those many, there were several that stood out as common and representative of the challenges that could be faced in any division.

The most common invariant constituent in this category was the challenge of transitioning to business, which had 12 participants (60%) address it. The analysis posed significant challenges because 19 of the participants were medical school graduates and one participant was a PhD. All the participants lacked many of the skills and training involved with business operations that are required of the division chief to run a hospital department.

The next two most common constituents both had 4 participants (20%). The first was trying to get subordinates to get on board with the new division chief and allow her or him to implement a particular style of management. Dealing with a large-scale organization was also a particular challenge that several of the participants had to deal with when ascending to the role of division chief. The last constituent discussed here is that of getting people to

accept new ideas. Three participants (15%) noted that they had trouble convincing people within their divisions to go along with the new ideas that they were trying to institute.

Table 2: Methods to Create Potential New Leaders

Methods	# of participants to offer experience	% of participants to offer experience
Leadership training	10	50%
Personal skills	9	45%
Business training	8	40%

Table 2 displays the major invariant constituents that resulted in the second thematic category. This category illustrates the various ideas that the division chiefs had about models the hospital could employ to help the growth of high-potential physicians at the hospital. The most common suggestions, feelings, and opinions from the participants are illustrated below.

The need for leadership training was a very important part of the model for 10 participants (50%). This need was important, according to participants, to give potential leaders introductions into some of the more difficult parts of the leadership that comes with being a division chief. The various aspects of the training would include conflict resolution, managing many people, and training potential candidates to be comfortable dealing with problems that may arise in leadership roles. The need to create a model to help potential candidates work on personal skills was also seen as very important by 9 participants (45%). Business training, such as familiarity with spreadsheets, budget balancing, and grant writing, was mentioned by 8 participants (40%) as something that the potential future leaders would need to engage in order to be effectively prepared for the role of division chief or other similar leadership positions.

The third thematic category, which is illustrated with the most common invariant constituents in Table 3, consists of particular skills that the participants identified as important knowledge that they would have liked to have had before they became division chiefs or competencies that were being targeted during their early tenure as chief.

As with the challenges, the most important competency that the participants noted should be targeted was that of providing business skills. The better understanding of budgetary concerns and business management was seen by 12 participants (60%) as the most important thing that a new leader should be confident with. The next highest was having a broad understanding of the system, which 7 participants (35%) noted was important. This would help new division chiefs to understand how the hospital system, in general, worked and how their divisions interacted with it. People management skills, which, included interpersonal skills and conflict resolution, were considered important by six participants (30%). Five participants (25%) thought that leadership training would have been more helpful when they were beginning in their new roles as division chiefs.

The final thematic category was made up of the invariant constituents that represented the ideas that the participants had about the identification of internal candidates that would be ideal for leadership positions. Table 4 outlines the most common invariant constituents.

Table 3: Competencies Useful for Ascending Leaders

Competencies	# of participants to offer experience	% of participants to offer experience
Business skills	12	60%
Broad understanding of the system	7	35%
People management	6	30%
Leadership training	5	25%

Table 4: Identification of Internal Candidates

Methods to identify	# of participants to offer experience	% of participants to offer experience
Lower level leadership positions	8	40%
Identifying leadership qualities	6	30%
Mentoring	5	25%

Providing potential candidates with lower level leadership positions was favored by 8 participants (40%). The results could mean giving them leadership positions in departments and providing opportunities to practice skills and to be included in decision making with the chiefs. Having the hospital create ways to identify leadership qualities in current employees was considered important to 6 participants (30%). The next most common constituent was creating ways for mentoring programs to identify potential candidates and provide them with mentors that could be advocates for the potential candidates within the hospital structure. Five participants (25%) favored this method.

LINK TO SPECIFIC AND GENERAL PROBLEMS

Organizational leaders continue to seek external candidates to fill leadership roles because of the different perspectives and skills that new talent can bring to a team (Chen, 2005). The results of external recruitment can have an impact on internal staff and cause low morale and low retention. Specifically, academic medical institutions recruit externally to fill division chief roles rather than establishing an internal leadership development model to consider internal talent (National Center for Healthcare Leadership, 2006).

The results of this study indicate that leadership development can assist physicians who transition from physician to physician leader. These data from this study demonstrate that division chiefs, whether recruited externally or internally, have challenges assuming physician leadership roles. The subjects identified specific leadership development needs that should be provided to physicians to prepare them for division chief positions. Many of the participants provided data that can assist with the identification of high-potential physicians as well as recommendations for providing leadership training while working as a clinician.

IMPLICATIONS

This study contributes to the understanding of the experiences of division chiefs transitioning to leadership positions in an academic medical center. These data and analyses may provide useful information to hiring managers while considering the appropriate recruitment process

for filling physician leadership roles. While new talent and skills can be found through the external recruitment process, external candidates may take longer to learn the organization (Gandossy & Kao, 2004; Chen, 2005; Gilmore, 2003). Hiring managers can use these data to focus on specific areas of development that may assist with successful entries into the leadership roles.

The platform used for this study can be used for future analysis in other academic medical centers so that recruitment of the most qualified leaders for the post of division chief may improve the overall level of hospital administration. As a result, these data may directly contribute to the well being of society. The use of a new population would expand the existing research base (Creswell, 2002).

While these data provide information on the challenges that division chiefs experience in transitioning to leadership positions, these data may assist senior leaders within an organization with developing physicians within the organizational setting. External recruitment of physician leaders may present challenges to leaders because of the baby boomer retirement, which will also affect the academic medical community (LaMascus et al., 2005; Sheldon, 2007; Swartz et al., 2007). Understanding the current challenges of the division chiefs' perceptions and lived experiences can assist with future recruitment efforts and developing internal staff. Furthermore, developing internal physicians to prepare them for future leadership opportunities may assist with the academic medical institution's retention efforts (Ricketts & Randolph, 2008).

SUMMARY

Division Chiefs in academic medical institutions have many responsibilities including teaching, clinical care, and research (Nettleman & Schuster, 2007). Such multiple responsibilities can limit the physician's ability to develop leadership skills. Along with multiple responsibilities, the approaching baby-boomer retirement may present challenges for filling open division chief positions vacated by current physician leaders. Because of the multiple responsibilities of physicians and the baby boomer retirement, leaders within academic medical institutions may be challenged with recruiting qualified physicians to transition to division chief positions ((Nettleman & Schuster, 2007; Institute of Medicine, 2008; Gilmore, 2003).

This study has offered a phenomenological analysis of the perceptions and lived experiences of division chiefs. Participants identified multiple challenges during their career transitions. The aligned perceptions were described as four themes of the study. The analysis led to the identification of the challenges, feelings, perceptions, opinions, and experiences of new division chiefs during their transition into leadership positions from clinical positions. Furthermore, physicians agreed that the transition from the academic and clinical arena to administrative duties was challenging. This study indicated that physicians needed training to perform managerial and administrative work. Working as an associate division chief was identified as an important way to acquire leadership skills and managerial experience. Further, these data collected may be beneficial to senior leaders in academic medical centers and may assist with the recruitment of future leaders and potential internal leadership development programs.

Although these data contained in this study focus specifically on the division chief population, the research framework provides a structure that may be useful outside of academic medical institutions with a focus on other organizational leadership positions. Additionally, these data collected include recommendations for identifying leaders internal to the organization and designing leadership development programs for identified staff. These recommendations

provide future opportunities for implementing new programs for new and existing leaders and conducting research to measure the results.

REFERENCES

- Avolio, B. J., Bass, B. M., & Jung, D. I. (1999). Re-examining the components of transformational and transactional leadership using the Multifactor Leadership Questionnaire. *Occupational and Organizational Psychology*, 72, 441-462.
- Benson, A. (2009). Time and space to think. *Nursing Management*, 15 (9), 10-11.
- Chen, K. P. (2005). External recruitment as an incentive device. *Journal of Labor Economics*, 23 (2), 1-25.
- Cohn, K. H., Bethancourt, B., & Simington, M. (2009). The lifelong iterative process of physician retention. *Physician Relations*, 54 (4), 220-226.
- Conger, J. A. (1999). Charismatic and transformational leadership in organizations: An insider's perspective on these developing streams of research. *Leadership Quarterly*, 10 (2), 1-28.
- Creswell, J. W. (2002). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research*. Upper Saddle River, NJ: Merrill Prentice-Hall.
- Evans, C. A., Ellis, M. S., Blight, C. O., Brooks, N. H., Johnson, H., Levin, S., et al. (2006a). *An environmental analysis report: Healthcare trends*. Chicago: American Medical Association.
- Gandossy, R., & Kao, T. (2004). Talent wars: Out of mind, out of practice. *Human Resource Planning*, 27 (4), 15-19.
- Garman, A. N. (2006). Leadership competencies: An introduction. *Journal of Healthcare Management*, 51 (1), 13-17.
- Gilmore, T. N. (2003). *Making a leadership change*. New York: Authors Choice Press.
- Gray, J., & Armstrong, P. (2003). Academic health leadership: Looking to the future. Proceedings of a workshop held at the Canadian Institute of Academic Medicine meeting Quebec, Canada. *Clinical Investment Medicine*, 26 (6), 315-326.
- Henochowicz, S., & Hetherington, D. (2006). Leadership coaching in health care. *Leadership and Organization Development Journal*, 27 (3), 183-189.
- Institute of Medicine. (2008). *Retooling for an aging America: Building the health care workforce (Report brief)*. Washington, DC: National Academies Press.
- Kaplan, A. S. (2006). Climbing the ladder to CEO part II: Leadership and business acumen. *The Physician Executive*, 32 (2), 48-50.
- Krishnan, V. R. (2001). Value systems of transformational leaders. *Bradford*, 22 (3), 1-7.
- LaMascus, A. M., Bernard, M. A., Barry, P., Salerno, J., & Weiss, J. (2005). Bridging the workforce gap for our aging society: How to increase and improve knowledge and training. Report of an expert panel. *American Geriatrics Society*, 53, 343-347.
- McCauley, C., & Wakefield, M. (2006). Talent management in the 21st century: Help your company find, develop, and keep its strongest workers. *The Journal for Quality and Participation*, 29 (4), 4-7.
- National Center for Healthcare Leadership. (2006). *Best practices in health leadership, talent management, and succession planning*. Chicago.
- Nettleman, M., & Schuster, B. (2007). Internal medicine department chairs: Where they come from, why they leave, and where they go. *The American Journal of Medicine*, 120 (2), 186-190.
- Ricketts, T. C., & Randolph, R. (2008). The diffusion of physicians. *Health Affairs*, 27 (5), 1409-1415.
- Sheldon, G. G. (2007). Workforce issues in general surgery. *The American Surgeon*, 73 (2), 100-108.

Advances in Business-Related Scientific Research Journal (ABSRJ)
Volume 1 (2010), Number 2

- Stapleton, F. B., Jones, D., & Fiser, D. H. (2005). Leadership trends in academic pediatric departments. *Pediatrics*, 116, 342-344.
- Swartz, J. E., Swartz, T. A., & Liang, P. (2007). Market meltdown: Recruiting qualified business faculty. *Journal of Education for Business*, 82, 337-342.
- Ulrich, W. L. (1984). HRM and culture: History, ritual and myth. *Human Resources Management*, 23 (2), 117-128.

CONCEPTUALIZING ENVY FOR BUSINESS RESEARCH

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Abstract

Envy is a pervasive emotion that has found attention in various disciplines from philosophy, anthropology, evolutionary and social psychology to political thought. Surprisingly, it has not been extensively treated in business research even though it can affect a large variety of business-relevant phenomena ranging from individual workplace behavior to the theory of the firm. In the comparably rare cases where envy is treated in business research, the term is often defined loosely and used rather inconsistently. This limits the comparability of existing research and hinders the aggregation of findings. This conceptual paper attempts to clarify the concept of envy for business research from a situational perspective. Thereto, it integrates research on envy from various scientific disciplines and introduces a novel graphical notation to conceptually distinguish the four distinct notions of envy proper, benign envy, spite, and jealousy. Thereby, it lays the groundwork for further analysis of the phenomenon of envy in business research.

Key Words: Envy, Jealousy, Conceptualization

Topic Groups: Managerial and organizational cognition and psychology, Organizational behavior

INTRODUCTION

The “resentment emotion” (Ortony, Clore, & Collins, 1988, p. 99) of envy is one of the most pervasive (Lindholm, 2008) and has been concerning humans for a long time. A classical depiction of this motive can for example be found in the biblical narrative of Cain’s slaying of Abel, whom he envied for God’s favoritism (also see Schoeck, 1966, pp. 123–131 for a brief account of actual crimes committed from the motive of envy). Other objects of envy, that is the “features we envy in others” (Elster, 1991, p. 50) and which are normally not intrinsically good or bad and valued only inside a certain milieu (Harris & Salovey, 2008), can be everything from food, children, and health in peasant societies to fine homes and clothing in modern society (Foster, 1972).

Not surprisingly, envy has long been a subject of debate in various disciplines from philosophy (see for example D’Arms & Kerr, 2008; Gillmann, 1996 or Schoeck, 1966 for an overview), anthropology (see for example Lindholm, 2008), and evolutionary (Hill & Buss, 2008) and social psychology (Smith & Kim, 2007) to political thought (Russell, 1930; Schoeck, 1966) and economics (Zizzo, 2008; Kolm, 1995). However, it has not received significant attention in the management literature (Mishra, 2009), as have emotions in general (see Delgado-García & De La Fuente-Sabaté, 2010 for a review of the extant empirical work).

This is despite the fact that envy can have important influences on many topics relevant to management research. These topics range from individual workplace behavior (Vecchio, 2000; Duffy, Shaw, & Schaubroeck, 2008; Mishra, 2009) to managerial decision making (Lister, 2001; Goel & Thakor, 2005; Moran & Schweitzer, 2008), consumer behavior (Young & Rubicam EMEA; Belk, 2008) and even the theory of the firm (Nickerson & Zenger, 2008).

It seems that one of the problems of management research on envy is that different research projects use different terms and conceptualizations of envy, be they explicit or only implicit. This limits the comparability of existing research and hinders the aggregation of findings. Some researchers are generally skeptical whether an unanimously accepted definition of what envy constitutes exactly will ever emerge (Harris & Salovey, 2008). However, the problem is not so much whether everyone will agree to the same meaning of the term "envy", but rather everyone making explicit their understanding of the term. To facilitate this, this paper attempts to conceptualize envy and related phenomena for management research.

SITUATIONAL CONCEPTUALIZATIONS OF ENVY AND RELATED PHENOMENA

Three different ways of interpreting envy are conceivable. One can either take a dispositional, a phenomenological, or a situational approach (Salovey, 1991). The dispositional approach understands envy as a person's sensitivity to envy-provoking situations and their tendency to harbor envious feelings. The phenomenological approach focuses on the specific feelings that people encounter when experiencing envy. The situational approach, in contrast, centers on the question which kinds of situations can arouse envy in individuals and what their desires in such situations are.

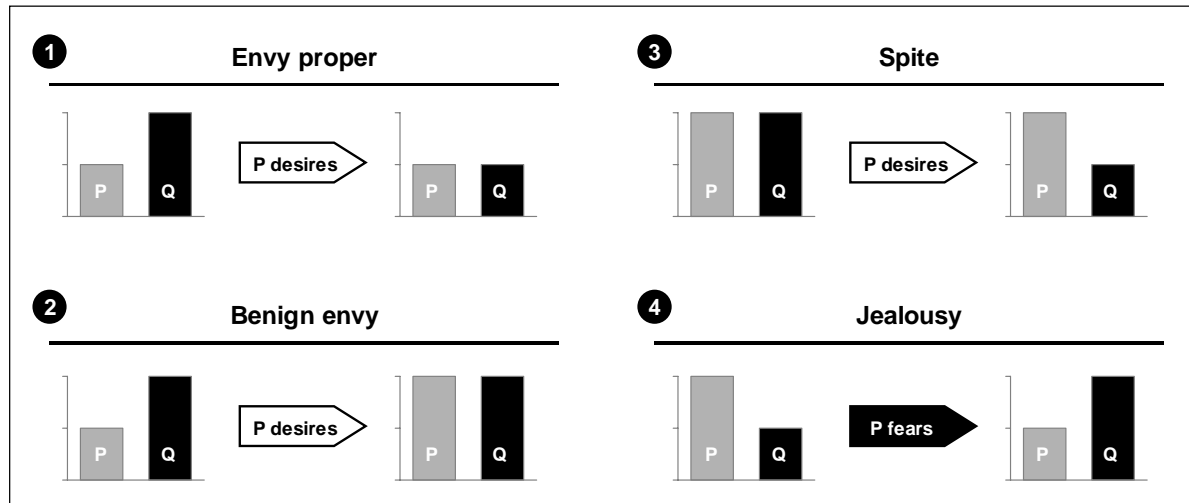
For most practical applications in a managerial context, the questions of individual envy propensity and the precise emotions felt by someone experiencing envy are subordinate to the question of which situations actually constitute envious situations. This is because until it is clarified which situation actually qualifies as involving envy, individual differences and the emotions felt are not relevant to management research. Consequentially, the situational approach to envy seems useful for management research and will hence be used in this paper.

When one disentangles the different ideas of envy that can be found in the literature, principally four different situations and corresponding terms describing them emerge. These are envy proper, benign envy, spite, and jealousy. Figure 1 introduces a novel graphical notation to display the four different concepts in terms of an interaction between two individuals P and Q with a current and a desired respectively feared potential future situation each. The size of the bars indicates the outcome of a social comparison performed by P using Q as a comparison standard. The following details these conceptions integrating research from various disciplines, including psychology, philosophy, and economics.

First, there is what is being referred to as "envy proper" (Smith & Kim, 2007, p. 47), "malicious envy" (Smith & Kim, 2008, p. 4; Parrott, 1991, pp. 9–12), or "destructive" or "black envy" (Grolleau, Mzoughi, & Sutan, 2006, p. 5). It describes the phenomenon that a person who made a disadvantageous comparison to another person has a desire to remove his or her relative disadvantage by making the comparison person worse off to overcome his or her feeling of inferiority (see illustration 1 in Figure 1). Elster maintains that such envy comes in two forms, namely weak and strong envy. Weak envy, on one hand, implies that the disadvantaged person enjoys seeing the other person's welfare diminished but is not willing to incur a cost for this to happen. Strong envy, on the other hand, implies that a

person is willing to incur a personal cost in order to have the other's welfare reduced (Elster, 1991). The latter constitutes the more common case and represents a trade-off between absolute and relative standing. This is clearly what scholars have in mind when they argue that "Envious agents

Figure 1: Situational conception of envy and its cognates



want to be better more than they want to be better off" (Goel & Thakor, 2005, p. 2262). An example for strong envy proper would be a company owner who exits a joint venture even though it was profitable for him only because the joint venture partner made even greater gains.

Second, there is what is called "benign envy" (Smith & Kim, 2008, p. 3, Smith & Kim, 2007, p. 47), "nonmalicious envy" (Parrott, 1991, pp. 9–12), "competitive" or "white envy" (Grolleau et al., 2006, p. 5), or "emulation" (Elster, 1991, p. 49; Miceli & Castelfranchi, 2007, p. 473). This concept refers to the reaction of a person that realizes his or her inferiority as compared to another person and develops the desire to eliminate this discrepancy by improving his or her own position with regard to the dimension of comparison (see illustration 2 in Figure 1). An example would be a manager that finds another person to be a better public speaker and then starts practicing to improve his or her public speaking skills. Some scholars, however, argue that this phenomenon does not really represent envy, as true envy does require some form of ill will directed towards the envied person (Smith & Kim, 2007; Miceli & Castelfranchi, 2007), rather than only a "longing" for the object of envy (Smith & Kim, 2007, p. 47; D'Arms & Kerr, 2008, pp. 45–48).

Third, there is the phenomenon of "spite" (Elster, 1991, p. 54), sometimes also referred to as "nastiness" (Abbink & Sadrieh, 2009, p. 306). Spite is the desire of one person to make another person worse off not to regain parity, but to gain superiority. While envy wants to eliminate the other's superiority, spite wishes for his or her inferiority (see illustration 3 in Figure 1). Normally, envy tends to bring spite with it (Elster, 1991). Similar to envy, spite can also be weak and strong, depending on whether the one person is willing to incur a cost to see the other person be made inferior (Elster, 1991). An example for weak spite would be a situation in which a manager is happy to see another colleague being demoted, while at the same time not being willing to incur a personal cost to make it happen.

Until now, it has always been assumed that the superiority or inferiority of one of the comparing individuals can be changed without explicitly transferring a good or property from the envied individual to the envying individual (this is possible because envy is not normally considered to presuppose a zero-sum view of the world; Elster, 1991). Some authors, however, have included the requirement in their definitions of envy that envy has to strive for the transfer of something between the persons (probably because they were thinking in terms of envy in romantic relationships, where the object of envy is singular, than in economic terms, where object of envy normally can be obtained without removing it from the other party; Salovey, 1991). A similar distinction is made when the terms "general envy" and "particular envy" are used (Rawls, 1999, p. 466). Whenever the object of envy that causes the discrepancy in standing between the two persons comparing is unique, envy and spite naturally coincide. Such an object can for example be a position in a ranking. If the person ranked second envies the person ranked first, the desire to gain first place naturally requires the other person to lose first place.

Fourth, there is the concept of jealousy. Although the word is oftentimes used synonymously with envy in colloquial language, it refers to a genuinely distinct concept (Foster, 1972). While envy relates to the desire to remove someone's superiority, jealousy refers to the fear of losing one's superiority to somebody else (Miceli & Castelfranchi, 2007; Smith & Kim, 2007); see illustration 4 in Figure 1. The two phenomena are interlinked in that when one person realizes that he or she is being envied, he or she might become jealous for that very reason. It is apparent that, even while envy and jealousy may be very similar in the feelings experienced (albeit in different intensities), they differ in that they occur in different situations (Salovey, 1991). It should be noted that jealousy is always the fear that the object of jealousy is being transferred from the jealous person to another, not merely being lost by one person. For example, one does not get jealous when the promised promotion gets cancelled, but only when the threat arises that somebody else might get it instead.

CONCLUSION AND IMPLICATIONS

This paper was motivated by the fact that while envy has been treated extensively in various scientific disciplines, it has been comparably neglected in management research. Since this is likely to be partially due to a confusion regarding the specific concepts associated with the term "envy", this paper set out to develop situational conceptualizations of envy-related phenomena for management research.

Thereby, the four distinct concepts of envy proper, benign envy, spite, and jealousy were identified through integration of literature from various scientific disciplines. Additionally, the four different concepts were illustrated and contrasted using a novel graphical notation. Thereby, this paper lays the groundwork for further analysis of the phenomenon of envy in business settings.

Several opportunities for future research exist. The framework which was proposed in this article could for example be used to categorize current business-related research on envy. This might allow the identification of research gaps with regard to envy in business. Another avenue for further research could be to further explore the exact psychological mechanisms driving the phenomena addressed in this contribution. Social comparison theory could, for example, provide such a theoretical basis (Festinger, 1954).

This paper's contribution to science and practice lies in the provision of a structured vocabulary which is hoped to further educated practical discussions and productive academic scholarship on the topic of envy in management. Specifically, managers may use this

vocabulary to address issues related to envy in the workplace, e.g. when discussing compensation schemes or information systems which may trigger envy and related phenomena. Theorists can benefit from the clear delineations set forth in this paper insofar as it provides them with a framework to distinguish emotions and patterns of behavior that were previously lumped together or only ill-defined. Therefore, this research offers insights that are meaningful from both a practical and a theoretical perspective.

REFERENCES

- Abbink, K., & Sadrieh, A. (2009). The pleasure of being nasty. *Economics Letters*, 105 (3), 306–308.
- Belk, R. W. (2008). Marketing and Envy. In Smith, R. H. (Ed.), *Series in Affective Science. Envy. Theory and Research*, 211–226. Oxford: Oxford University Press.
- D'Arms, J., & Kerr, A. D. (2008). Envy in the Philosophical Tradition. In Smith, R. H. (Ed.), *Series in Affective Science. Envy. Theory and Research*, 39–59. Oxford: Oxford University Press.
- Delgado-García, J. B., & De La Fuente-Sabaté, J. M. (2010). How do CEO emotions matter?: Impact of CEO affective traits on strategic and performance conformity in the spanish banking industry. *Strategic Management Journal*, 31 (5), 562–574.
- Duffy, M. K., Shaw, J. D., & Schaubroeck, J. M. (2008). Envy in Organizational Life. In Smith, R. H. (Ed.), *Series in Affective Science. Envy. Theory and Research*, 167–189. Oxford: Oxford University Press.
- Elster, J. (1991). Envy in Social Life. In Zeckhauser, R. J. (Ed.), *Strategy and Choice*, 49–82. Cambridge, MA: MIT Press.
- Festinger, L. (1954). A Theory of Social Comparison Processes. *Human Relations*, 7 (2), 117–140.
- Foster, G. M. (1972). The Anatomy of Envy: A Study in Symbolic Behavior. *Current Anthropology*, 13 (2), 165–186.
- Gillmann, M. A. (1996). Envy as a Retarding Force in Science. Aldershot: Avebury.
- Goel, A., & Thakor, A. (2005). Green with Envy: Implications for Corporate Investment Distortions. *Journal of Business*, 78 (6), 2255–2288.
- Grolleau, G., Mzoughi, N., & Sutan, A. (2006). Competitive versus Destructive Envy: An Insightful Distinction? *Cahiers du CEREN*, 15, 4–10.
- Harris, C. R., & Salovey, P. (2008). Reflections on Envy. In Smith, R. H. (Ed.), *Series in Affective Science. Envy. Theory and Research*, 335–356. Oxford: Oxford University Press.
- Hill, S. E., & Buss, D. M. (2008). The Evolutionary Psychology of Envy. In Smith, R. H. (Ed.), *Series in Affective Science. Envy. Theory and Research*, 60–70. Oxford: Oxford University Press.
- Kolm, S. C. (1995). The Economics of Social Sentiments: The Case of Envy. *The Japanese Economic Review*, 46 (1), 63–87.
- Lindholm, C. (2008). Culture and Envy. In Smith, R. H. (Ed.), *Series in Affective Science. Envy. Theory and Research*, 227–244. Oxford: Oxford University Press.
- Lister, E. A. (2001). Organizational Change: Tales of Intergenerational and Sibling Rivalry. *Journal of Organizational Change Management*, 14 (5), 468–479.
- Miceli, M., & Castelfranchi, C. (2007). The envious mind. *Cognition & Emotion*, 21 (3), 449–479.
- Mishra, P. (2009). Green-eyed Monsters in the Workplace: Antecedents and Consequences of Envy (Academy of Management Annual Meeting). Chicago, IL.
- Moran, S., & Schweitzer, M. E. (2008). When Better Is Worse: Envy and the Use of Deception. *Negotiation and Conflict Management Research*, 1 (1), 3–29.

Advances in Business-Related Scientific Research Journal (ABSRJ)
Volume 1 (2010), Number 2

- Nickerson, J. A., & Zenger, T. R. (2008). Envy, Comparison Costs, and the Economic Theory of the Firm. *Strategic Management Journal*, 29 (13), 1429–1449.
- Ortony, A., Clore, G. L., & Collins, A. (1988). *The Cognitive Structure of Emotions*. Cambridge, UK: Cambridge University Press.
- Parrott, W. G. (1991). The Emotional Experiences of Envy and Jealousy. In Salovey, P. (Ed.), *The Psychology of Jealousy and Envy*, 3–30. New York, NY: The Guilford Press.
- Rawls, J. (1999). *A Theory of Justice (Rev. ed.)*. Cambridge, MA: The Belknap Press of Harvard University Press.
- Russell, B. (1930). *The Conquest of Happiness*. New York, NY: Liveright Publishing Corporation.
- Salovey, P. (1991). Social Comparison Processes in Envy and Jealousy. In Suls, J., & Wills, T. A. (Eds.), *Social Comparison. Contemporary Theory and Research*, 261–285. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Schoeck, H. (1966). *Der Neid: Eine Theorie der Gesellschaft*. Freiburg im Breisgau: Verlag Karl Alber.
- Smith, R. H., & Kim, S. H. (2007). Comprehending Envy. *Psychological Bulletin*, 133 (1), 46–64.
- Smith, R. H., & Kim, S. H. (2008). Introduction. In Smith, R. H. (Ed.), *Series in Affective Science. Envy. Theory and Research*, 3–14. Oxford: Oxford University Press.
- Vecchio, R. P. (2000). Negative Emotion in the Workplace: Employee Jealousy and Envy. *International Journal of Stress Management*, 7 (3), 161–179.
- Young & Rubicam EMEA. All You Need Is Envy. London. Retrieved October 26, (2009), from <http://emea.yr.com/envy.pdf>
- Zizzo, D. J. (2008). The Cognitive and Behavioral Economics of Envy. In Smith, R. H. (Ed.), *Series in Affective Science. Envy. Theory and Research*, 190–210. Oxford: Oxford University Press.

IMPACT OF THE INFORMATION AND COMMUNICATION INFRASTRUCTURE ON MANUFACTURING TRADE

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Abstract

We investigate the impact of the information and communication infrastructure development (ICID) on the patterns of bilateral manufacturing trade between the developed OECD countries. More developed information and communication infrastructure provides externalities for the bilateral manufacturing trade due to a reduction in information and communication costs. We employ adapted gravity trade equations to identify the effects of the ICID on bilateral manufacturing trade. The ICID is positively associated with manufacturing trade for exporting countries, while results for importing countries are mixed. The sensitivity of the results is investigated, and the model is re-estimated estimating for the effect of the ICID on distance. The ICID causes to overcome the effects of the distance on manufacturing exports and strengthened import specialization. Gross domestic product positively effects manufacturing trade for exporters and importers. The distance cause negatively, while having a common language and regional free trade agreement membership cause positively manufacturing trade between the eighteen analyzed OECD countries.

Key Words: Information and communication, manufacturing, international trade, adapted gravity model, OECD countries

Topic Groups: Economics and business, International business

INTRODUCTION

Among possible explanation for the rise of manufacturing trade among developed countries is the decrease in transportation costs (e.g. Anderson and van Wincoop, 2004; Baier and Bergstrand, 2006). Tang (2006) offers an explanation for the increase of trade in differentiated products by the decrease in communication costs for fix telephone lines and the growing importance of mobile phones and the development of the Internet, which have changed the international communication system. Freund and Weinhold (2002, 2004) find that the development of the Internet has encouraged exports of goods and services as firms can use e-mails and websites to assist international sales at minimum cost. Bojnec and Fertő (2009, 2010) find that the development and use of the Internet have also encouraged exports of manufacturing and agro-food goods between the developed OECD countries.

This paper investigates the impact of the information and communication infrastructure development (ICID) on the patterns of bilateral manufacturing trade between the developed OECD countries. We expect that more the ICID is developed this provides also greater externalities for the bilateral manufacturing trade due to a reduction in information and communication costs. Katz and Shapiro (1985) argue that communications are subject to consumption externalities and network compatibility, while according to Harris (1995) communication costs are mainly a fixed cost. However, during the most recent years both information and communication infrastructure have developed rapidly. Tang (2006) demonstrates the decline in marginal international communication costs and its impact on the increases in the volume of trade in differentiated products. The impact of the ICID is bigger for small countries because technological advancement in information and communications allows the smaller country to overcome the existence of economies-of-scale disadvantage in communications.

The rest of the paper is organized as follows. In the next section we present the literature review on the impact of the ICID on manufacturing trade. After then we present methodology and data used focusing at the impact of the ICID on manufacturing trade in the adapted gravity regression analysis. The section, which follows, presents and discusses the regression results for alternative specifications of adapted gravity models without and with the presence of ICID. The final section gives concluding remarks and implications.

THEORY

One strand of the literature focuses on the entry costs and assumes that the ICID reduces the fixed entry cost of entering a particular market in explaining trade flows (Freund and Weinhold 2004). Baldwin (1988) argues that the fixed entry costs are sunk in explaining observed hysteresis in trade flows. Eichengreen and Irwin (1998) find the evidence that historical trade patterns play a significant role in determining current trade patterns, arguing that large entry costs are involved in setting up trade networks. The significance of sunk entry costs for export firms is argued by Roberts and Tybout (1997), and by Freund (2000) for trade flows between original members of the European Union. Quah (1999) argues that the ICID provides new way of trading information, which is changing the ways of business conduction.

Another strand of the literature focuses on the entry costs associated with imperfect information. To overcome these costs, Rauch (2001) emphasizes the importance of local networks such as the importance of family ties and Asian business groups in establishing trade links, colonial ties or a common language. Such local networks can expand the number of possible export markets in explaining trade patterns, especially for goods that do not trade on an organized exchange or have reference prices. The ICID reduces the entry costs associated with imperfect information since networks expand and improve the exchange of information. Goldberg and Knetter (1997) show the presence of imperfect competition and market segmentation in international trade. Freund and Weinhold (2004) argue that market segmentation and imperfect competition are important characteristics for markets with fixed costs. Low profits and large fixed costs discourage the export entry, but the ICIT might mitigate their effects. Fink *et al.* (2005) argue that ICID tends to reduce the marginal effort incurred in arranging the transport of any given shipment.

A market-specific fixed entry cost such as finding out information about the market, advertising the products, and establishing a distribution network, varies by foreign firms. Some firms are likely to have special information about a particular market due to the

manager contacts, relatives, friends or other unique market familiarities (Rauch and Trindade, 2000). The ICID improves market familiarities and increases trade.

This current paper aims to investigate the impact of the ICID as the determinants of the bilateral manufacturing trade flows between the eighteen OECD countries. We employ adapted gravity trade equations to identify the effects of the ICID on bilateral manufacturing trade. First, we investigate the relationship between ICID and manufacturing trade performance in the OECD countries by applying the baseline adapted gravity equation model. Second, we investigate the sensitivity of the results to the choice of ICID variable by the investigation of the ICID effects on distance. Finally, we check for the robustness of the results by comparing panel regression analysis with cross-section analysis by individual years.

METHODS

Traditional gravity trade theory points that bilateral trade (X) between host i and destination j countries in year t are to be positively associated with their national incomes and negatively associated with their geographical distance (e.g. Frankel and Rose, 2002). In our adapted gravity model we apply standard gravity model variables including market size (real gross domestic product (GDP)) of host i and destination j countries from the World Bank, World Development Indicators (WDI) database, geographical factors like the distance between capital cities (Distance) from the CEPII database, common cultural linkage (Language), and a dummy variable for Regional Free Trade Agreement (RFTA) membership as explanatory variables. We specify the following baseline adapted gravity model:

$$\ln X_{ij,t} = \beta_0 + \beta_1 \ln GDP_{i,t} + \beta_2 \ln GDP_{j,t} + \beta_3 \ln Distance_{ij} + \beta_4 \text{Language}_{ij} + \beta_5 \text{RFTA}_{ij} + u_t \quad (1)$$

where u_t is the stochastic element. Particularly, we are interested in for the role of the ICID variables on manufacturing trade between developed OECD countries. We employ an adapted gravity model with the ICID proxy variables:

$$\ln X_{ij,t} = \beta_0 + \beta_1 \ln GDP_{i,t} + \beta_2 \ln GDP_{j,t} + \beta_3 \ln Distance_{ij} + \beta_4 \text{Language}_{ij} + \beta_5 \text{RFTA}_{ij} + \beta_6 \text{ICID}_{i,t} + \beta_7 \text{ICID}_{j,t} + u_t \quad (2)$$

The sensitivity of the regression results on the ICID variables is investigated in two steps (Freund and Weinhold 2002, 2004). First, the model is re-estimated estimating for the effect of the ICID on the distance:

$$\ln X_{ij,t} = \beta_0 + \beta_1 \ln GDP_{i,t} + \beta_2 \ln GDP_{j,t} + \beta_3 \ln Distance_{ij} + \beta_4 \text{Language}_{ij} + \beta_5 \text{RFTA}_{ij} + \beta_6 \text{Longdistance}_{ij} + \beta_7 \text{ICID}_{i,t} + \beta_8 \text{ICID}_{j,t} + \beta_9 \text{ICID}_{i,t} * \text{Longdistance}_{ij} + \beta_{10} \text{ICID}_{j,t} * \text{Longdistance}_{ij} + u_t \quad (3)$$

where a dummy variable, Longdistance_{ij} , equals one if the distance between countries i and j exceeds the average distance between all countries in the data sample.

Second, we specify cross-section adapted gravity model across OECD countries to check sensitivity of results:

$$\ln X_{ij,t} = \beta_0 + \beta_1 \ln \text{Internet}_{i,t} + \beta_2 \ln \text{Internet}_{j,t} + \beta_3 \ln \text{Internet}_{i,t} * \text{Longdistance} + \beta_4 \ln \text{Internet}_{j,t} * \text{Longdistance} + \beta_5 \ln \text{Fixlines}_{i,t} + \beta_6 \ln \text{Fixlines}_{j,t} + \beta_7 \ln \text{Fixlines}_{i,t} * \text{Longdistance} + \beta_8 \ln \text{Fixlines}_{j,t} * \text{Longdistance} + \beta_9 \ln \text{Mobile}_{i,t} + \beta_{10} \ln \text{Mobile}_{j,t} + \beta_{11} \ln \text{Mobile}_{i,t} * \text{Longdistance} + \beta_{12} \ln \text{Mobile}_{j,t} * \text{Longdistance} + u_t \quad (4)$$

The trade data used is supplied by the OECD Bilateral Trade Database at the two-digit level of the ISIC in US dollars. We use data for the manufacturing trade. The sample contains 18 OECD countries¹ between 1995 and 2003 resulting 6,975 observations.

GDP is a proxy for the market size for both host exporter and destination importer countries. The Distance_{*ij*} variable measure the geographic distance between the countries capital *i* and *j*, whereas the other dummies reflect whether *i* and *j* share: a primary language (Language) and membership in a RFTA. The variables of particular interest are the proxy variables for the ICID: Internet, fix telephone lines, and mobile phones. The data for the ICID variables are from the World Bank WDI dataset. The data on the ICID includes three proxy explanatory variables: the number of the fixed telephone lines per 1000 persons, the number of the mobile phones per 1000 persons, and the number of the Internet hosts per 1000 persons from the WDI database, respectively. We expect that the development of information and communication technology and its use have a positive impact on the bilateral manufacturing trade between the OECD countries.

FINDINGS AND DISCUSSION

Summary statistics

Table 1: Summary statistics for 28 OECD countries

	Exports (USD)	Internet	Mobile	Fixlines
1995	3,275,123	32.1	74.8	455.3
1996	3,364,382	54.9	115.1	469.1
1997	3,506,367	95.2	167.3	491.0
1998	3,684,359	145.4	249.7	501.0
1999	3,856,899	215.1	386.7	513.6
2000	4,089,174	278.7	541.7	520.7
2001	3,944,070	321.0	651.3	517.5
2002	4,074,986	369.7	710.5	508.9
2003	4,606,636	413.3	775.0	510.4

Australia, Austria, Belgium, Canada, the Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, South Korea, Mexico, the Netherlands, New Zealand, Norway, Poland, Portugal, Spain, Sweden, Switzerland, Turkey, the United Kingdom, and the United States of America.

Source: Own calculations on the basis of the World Bank World Development Indicators.

Manufacturing trade between the OECD countries has increased over time in nominal and real terms when evidence in Table 1 is deflated for the USD inflation. Among the ICID variables, the rapid increase is seen for the Internet hosts and the number of mobile phones per 1000 persons, while the number of fix telephone lines per 1000 persons have stabilised. This implies that mobile phones have also substituted the use of fix telephone lines.

The baseline adapted gravity model estimations

The equation (1) in Table 2 shows the baseline adapted gravity trade model for manufacturing trade between the 18 OECD countries, which is specified without the ICID

¹ List of 18 OECD countries that are included in the data sample: Australia, Belgium, Canada, the Czech Republic, Finland, France, Germany, Ireland, Italy, Japan, South Korea, the Netherlands, Norway, Poland, Spain, Sweden, the United Kingdom, and the United States of America.

variables. The baseline adapted gravity trade model indicates that the OECD country's size of GDP has a positive and statistically significant association with the bilateral manufacturing trade for exporting and importing OECD countries. The size of the economy and its growth over time encourages bilateral manufacturing trade between the OECD countries. The Distance between the OECD countries' capitals has a negative and statistically significant impact on bilateral manufacturing trade between the OECD countries. A transport cost increases with distance, because it is more costly to ship manufacturing goods over long distances. Therefore, the empirical results confirm the importance of geographical proximity and trade costs in conducting international manufacturing trade businesses. The regression coefficients pertaining to the Language and RFTA dummies are of a positive sign and statistically significant confirming the importance of cultural proximity and the importance of bilateral and multilateral trade agreements for increases in bilateral manufacturing trade between the OECD countries.

Table 2: Effect of the information and communication infrastructure development on manufacturing trade

	(1)	(2)	(3)	(4)
	Baseline	Fixlines	Mobile	Internet
In GDP exporter	0.907***	0.895***	0.909***	0.909***
In GDP importer	0.936***	0.917***	0.928***	0.931***
Language dummy	1.053***	0.722***	1.032***	1.009***
RFTA dummy	0.988***	0.676***	0.922***	0.938***
In Distance	-0.817***	-0.868***	-0.832***	-0.809***
In ICID exporter		1.099***	0.152***	0.086***
In ICID importer		0.690***	-0.065***	-0.009
Constant	-29.756***	-39.269***	-29.729***	-29.884***
N	6975	6975	6975	6975
R ²	0.9866	0.9881	0.9862	0.9859
Rho	0.983	0.9836	0.9985	1

Notes: * p<0.1; ** p<0.05; *** p<0.01. Parameters are estimated by the Prais-Winsten estimator. The common AR(1) parameter is denoted by rho. The z values are computed from standard errors that are corrected for heteroscedasticity and contemporaneous correlation of error terms across panels.

The effects of the information and communication infrastructure on manufacturing trade

The equations from (2) to (4) in Table 2 extend the baseline adapted gravity model specification by the three additional proxy explanatory variables for the ICID, which are estimated separately by the three additional regression equations: (2) with the fix telephone lines, (3) with the mobile phones, and (4) with the Internet variable. The signs of the associations and statistical significance of the regression coefficients from the baseline adapted gravity trade model estimations have remained unchanged. The regression coefficients pertaining to the GDP exporters/importers, Language and RFTA dummies in the regression for the fix telephone lines are slightly lower than in the regressions for the mobile phones and the Internet, respectively. The negative association for the Distance variable has been strengthened in the regression with the fix telephone lines as the explanatory variable and to a lesser extent in the regression with the mobile phones as the explanatory variable. The regression coefficients that are pertained to the ICID variables are mixed. They are of a positive sign and statistically significant in the regression with the fix telephone lines both for exporter and importer countries. They are statistically significant in the regression with the mobile phones as well, but of a positive sign for the exporting countries and of a negative sign for the importing countries. The similar signs are for the estimated regression

coefficients in the regression with the Internet as the explanatory variable of a positive sign for the exporting countries, which is statistically significant, while of a negative sign for the importing countries, which is statistically insignificant. The results clearly confirm a positive and statistically significant association of manufacturing trade with the ICID variables for the exporting countries. The regression coefficient is by its relative size the highest for the fix phone lines, implying its crucial information and communication role during the analyzed period of the emerging adoption of the mobile phones and Internet. For the importing countries, the empirical results are mixed. The positive association is again found as the most important for the fix telephone lines. For the mobile phones, the association is negative, while for the Internet the association is also statistically insignificant. Therefore, the adapted gravity trade models with the ICID explanatory variables confirm the positive importance of the ICID variables for bilateral manufacturing exports between the OECD countries, while the results for the OECD importing countries are mixed and vary but the type of the ICID variable for the manufacturing import specialization.

The effects of the information and communication infrastructure on distance

The effects of the ICID on distance in bilateral manufacturing trade between the OECD countries are tested by the adjusted gravity trade model specification with the full set of control variables from our regressions in Table 2 with the additional explanatory variables for: first, the Longdistance between the capitals in the OECD countries vis-à-vis the average distance between the analyzed OECD countries capitals. A dummy variable Longdistance equals one if the distance between home reporter and destination partner OECD countries exceeds the average distance between all analyzed OECD countries in the sample. Second, the interaction affects of the Longdistance and the ICID variables. If a particular ICID variable has reduced (increased) the effect of distance on manufacturing trade then the regression coefficient on the interaction ICID *Longdistance term should be positive (negative).

The set of the control variables for the GDP variables have a positive and statistically significant association with the manufacturing exports between the OECD countries. The language and RFTA dummies have also a positive and statistically significant association with the manufacturing exports between the OECD countries. The estimated associations are a bit lower in the regression with the fix telephone lines variable. The empirical estimates confirm the negative sign for the Distance variable.

The results revealed that the ICID variables have a strong negative impact on the distance and thus encouraging bilateral manufacturing trade between the OECD countries. The ICID variables for exporting countries have a positive sign of the regression coefficient, which are statistically significant. The ICID variables for importing countries are mixed: of a positive sign and statistically significant for the fix telephone lines, of a negative sign for the mobile phones, and of a positive sign, but statistically not significant for the Internet. The interaction effect of the ICID*Longdistance is of a positive sign for exporting countries, but it is not statistically significant. The interaction effect of the ICID*Longdistance is statistically significant for importing countries, but of a mixed sign by the ICID variables: of a positive sign for the fix telephone lines, and of a negative sign for the mobile phones and for the Internet, respectively. These imply that the fix telephone lines have reduced, while the mobile phones and Internet have increased the affect of distance on bilateral manufacturing trade for importing OECD countries.

Table 3: Effect of the information and communication infrastructure development on distance in manufacturing trade

	(1)	(2)	(3)
	Fix lines	Mobile	Internet
In GDP exporter	0.926***	0.950***	0.948***
In GDP importer	0.907***	0.932***	0.930***
Language dummy	0.789***	1.065***	1.062***
RFTA dummy	0.692***	0.882***	0.899***
In Distance	-0.772***	-0.663***	-0.660***
In Longdistance	-2.746**	-0.148	-0.153
In ICID exporter	0.999***	0.140***	0.080**
In ICID importer	0.555***	-0.043*	0.017
In ICID exporter * In Longdistance	0.178	0.021	0.009
In ICID importer * In Longdistance	0.228**	-0.057**	-0.061**
Constant	-39.036***	-32.153***	-32.012***
N	6975	6975	6975
R2	0.9874	0.9861	0.9858
Rho	.9846	1	1

Notes: * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$. Parameters are estimated by the Prais-Winsten estimator. The common AR(1) parameter is denoted by rho. The z values are computed from standard errors that are corrected for heteroscedasticity and contemporaneous correlation of error terms across panels.

Robustness test

The panel regression specifications have been chosen to minimize the possibility of omitted variable bias and to capture some of the dynamic impact of the ICID variables. The cross-section estimation eliminates the possibility of co-trending variables over time and thus provides a useful robustness check of our results. Table 4 presents our cross-section adapted gravity regression results for manufacturing exports in OECD countries. The focus is on the ICID variables by individual years and over time.

The association between manufacturing exports and the Internet is of a positive sign and significant for both exporting and importing countries. The regression coefficient has increased over time. The size of the regression coefficient is higher for the exporting than for the importing countries. The regression coefficient for the interaction effect Longdistance*Internet switch from a negative to a positive sign over time for exporting countries, but has remained statistically insignificant. The similar switch is seen for importing countries, but a positive sign has become statistically significant. This implies that the Internet has reduced the affect of distance on manufacturing trade for the importing OECD countries.

On the contrary, the positive and significant size of the regression coefficient for the fix telephone lines has declined since 2000, but the size of the elasticity coefficient has remained close to the level for the Internet for the exporting countries and higher than for the Internet variable for the importing countries. The regression coefficient for the interaction effect fix telephone lines*Longdistance has explored shifts between positive and negative values. At the end of the analysed period, it has a positive significant sign for the exporting countries, and a positive sign, which is insignificant, for the importing countries. This implies that the fix telephone lines have reduced the affect of distance on manufacturing trade for the exporting OECD countries.

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Similar as for the Internet, also for the mobile phone, the regression coefficients are positive for the exporting and importing countries, and have increased over time. The size of the regression coefficient is higher for the exporting than for the importing countries, but this differential is smaller than in the case of the Internet. The interaction effect mobile phones*Longdistance is of a positive sign and significant for the exporting countries, while the results are mixed for the importing countries. This implies that the mobile phones have reduced the affect of distance on manufacturing trade for the exporting OECD countries, but the results are less clear for the importing countries.

Table 4: Cross-section estimations for the effect of the information and communication technology development on manufacturing trade

	1995	1996	1997	1998	1999	2000	2001	2002	2003
In Internet									
In Internet exporter	0.404***	0.409***	0.462***	0.464***	0.531***	0.615***	0.714***	0.731***	0.742***
In Internet importer	0.291***	0.271***	0.286***	0.314***	0.404***	0.389***	0.436***	0.388***	0.381***
Longdistance*In Internet exporter	-0.061	-0.026	-0.046	-0.087	-0.025	0.094	0.125	0.130	0.223
Longdistance*In Internet importer	-0.027	-0.021	0.028	0.059	0.034	0.166	0.163	0.263**	0.253*
In fix lines									
In fix lines exporter	1.282***	1.176***	1.275***	1.236***	1.234***	1.211***	0.974***	0.944***	0.701***
In fix lines importer	0.834***	0.823***	0.852***	0.948***	1.058***	0.956***	0.943***	0.830***	0.688***
Longdistance*In fix lines exporter	0.042	0.056	-0.148	-0.216	-0.243	-0.094	0.209	0.414*	0.680***
Longdistance*In fix lines importer	0.195	0.013	-0.089	-0.213	-0.365*	-0.292	-0.310	-0.072	0.125
In Mobile									
In mobile exporter	0.448***	0.440***	0.597***	0.626***	0.705***	0.815***	0.781***	0.707***	0.647***
In mobile importer	0.252***	0.271***	0.345***	0.421***	0.560***	0.581***	0.712***	0.639***	0.597***
Longdistance*Log Mobile exporter	0.137*	0.153**	0.123	0.270**	0.502***	0.613***	0.846***	1.046***	1.106***
Longdistance*Log Mobile importer	0.212***	0.185**	0.109	0.032	0.077	0.099	0.006	-0.066	0.030

CONCLUSIONS AND IMPLICATIONS

We investigate the impact of the ICID on the patterns of bilateral manufacturing trade between the developed OECD countries. The adapted gravity models confirm the importance of the size of the exporting and importing economies for increase of trade in manufacturing goods between OECD countries. The countries proximities by having a common language and free trade agreement also encourage manufacturing trade positively. As expected, the greater distance discourages manufacturing trade between the OECD countries.

We employ adapted gravity trade equations to identify the effects of the ICID on bilateral manufacturing trade between the OECD countries. First, we investigate the relationship between ICID and manufacturing trade performance in the OECD countries. The empirical results confirm that more developed ICID provides externalities for the bilateral manufacturing trade for the exporting countries. The regression coefficient is the highest for the fixed telephone lines, followed by the mobile phones, and the Internet. These results suggest that the ICID in the exporting countries is important for a reduction in information and communication costs. However, for the importing countries the results are mixed as only the fixed telephone lines have a positive sign. Second, we investigate the sensitivity of the results to the choice of the ICID variables by the investigation of the effects of ICID on distance. The results for the exporting countries have a positive sign, but are insignificant. The results for the importing countries are mixed: the fix phone lines have reduced, while the mobile phones and Internet have increased the affect of the distance on bilateral manufacturing trade for importing OECD countries. Finally, we check for the robustness of the results by comparing panel regression analysis with cross-section analysis by individual

years. The positive association of manufacturing trade with Internet and mobile phones has increased over time for exporting and importing OECD countries, while the relatively high coefficient of elasticity for fix telephone lines has been reduced for both exporting and importing countries. Internet has reduced the distance for the importing manufacturing OECD countries, while fix telephone lines and mobile phones have reduced the effect of distance on manufacturing trade for the exporting manufacturing OECD countries.

The contribution of the paper to is the advancement of manufacturing business trade and manufacturing business-related trade analyses and practices. Among possible explanation for the rise of manufacturing trade among developed OECD countries is the decrease in transportation costs. by the decrease in communication costs for fix telephone lines and the growing importance of mobile phones and the development of the Internet, which have changed the international communication system and encouraged exports of manufacturing goods as firms can use different ICID (mobile phones, e-mails, websites, and similar) to assist communication, information and international sales at minimum cost.

The implications for theory are in explaining the importance of different determinants of the bilateral manufacturing trade flows between the OECD countries focusing on the ICID effects and employing adapted gravity trade equations. In addition to the baseline adapted gravity equation model the sensitivity of the results to the choice of the ICID variable and its effects on distance are tested as well as the sensitivity and robustness of the econometric results by comparing the panel regression analysis with the cross-section analysis by individual years are investigated. Among limitations and future research possibilities are at least the following: first, to use the panel data set for more recent years. Second, to use the combined data set for OECD and non OECD countries such as for example to compare developed OECD countries with some developing countries. Third, to use some additional proxies for the ICID variable capturing not only the ICID use, but also for example costs of their usage. Finally, to use additional model specifications for explanatory variables as well as to apply some other estimation procedures.

REFERENCES

- Anderson, J., & van Wincoop, E. (2004). Trade costs. *Journal of Economic Literature*, 42, 691-751.
- Baier, S., & Bergstrand, J. (2006). The growth of world trade: Tariffs, transport costs, and income similarity. *Journal of International Economics*, 53 (1), 1-27.
- Baldwin, R. (1988). Hysteresis in import prices: the beachhead effect. *American Economic Review*, 78, 773-785.
- Bojnec, Š., & Fertő, I. (2009). Impact of the Internet on manufacturing trade. *Journal of Computer Information Systems*, 50 (1), 124-132.
- Bojnec, Š., & Fertő, I. (2010). Internet and international food industry trade. *Industrial Management & Data Systems*, 110 (5), 744-761.
- Eichengreen, B., & Irwin, D. (1998). The role of history in bilateral trade flows. In: Frankel, J. (Ed.), *The Regionalization of the World Economy*. Chicago, University of Chicago Press, 33-62.
- Fink, C., Mattoo, A., & Neagu, I. C. (2005). Assessing the impact of communication costs on international trade. *Journal of International Economics*, 67, 428-445.
- Frankel, J., & Rose, A. (2002). An estimate of the effect of common currencies on trade and income. *Quarterly Journal of Economics*, 437-466.
- Freund, C. (2000). Different paths to free trade: the gains from regionalism. *Quarterly Journal of Economics*, 115, 1317-1341.

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- Freund, C. L., & Weinhold, D. (2002). The internet and international trade in services. *American Economic Review*, 92 (2), 236-240.
- Freund, C. L., & Weinhold, D. (2004). The effect of the internet on international trade. *Journal of International Economics*, 62, 171-189.
- Goldberg, P., & Knetter, M. (1997). Goods prices and exchange rates: what have we learned? *Journal of Economic Literature*, 35, 1243-1272.
- Harris, R. G. (1995). Trade and communication costs. *Canadian Journal of Economics*, 28, 47-75.
- Katz, M., & Shapiro, C. (1985). Network externalities, competition and compatibility. *American Economic Review*, 75, 424-440.
- OECD (2006). ANBERD database. Paris, Organisation for Economic Cooperation and Development.
- Quah, D. (1999). The weightless economy in economic development. CEPR Discussion Paper #417, February (1999).
- Rauch, J. E. (2001). Business and social networks in international trade. *Journal of Economic Literature*, 39, 1177-1203.
- Rauch, J., & Trindade, V. (2000). Information and globalization: wage co-movements, labor demand elasticity and conventional trade liberalization. NBER Working Paper #7671.
- Roberts, M., & Tybout, J. (1997). The decision to export in Columbia: An empirical model of entry with sunk costs. *American Economic Review*, 87, 545-564.
- Tang, L. (2006). Communication costs and trade of differentiated goods. *Review of International Economics*, 14 (1), 54-68.

A MODEL OF PUBLIC RELATIONS PROCESSES FOR PERSUASION: IMPLICATIONS FOR INTEGRATED MARKETING COMMUNICATIONS IN THE INTERNET ERA

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Abstract

Public relations has gained popularity through the Internet where the general public receives news and information. Moreover, public relations has a strong potential to persuade the public to form attitude toward a brand. The paper intends to study the processes of persuasion in public relations and to come up with a model depicting the processes of public relations in persuading the target audience to accept the messages and creating relationships between the company and the stakeholders. The study will also discuss how public relations is changed in the era of the Internet and has a significant impact on integrated marketing communications as a whole.

Key words: public relations, persuasion, relationships, Internet, social media

Topic groups: marketing and consumer behavior, social science and business

INTRODUCTION

Public relations (PR) has remained one of the most mysterious communication mix elements for the business communities, as it is often utilized by the government agencies or not for profit organizations. When the integrated marketing communications concept started in the 1990's, PR has been applied for business. As PR focuses on soft sell and below-the-line strategies i.e. no need for corporations to pay the agency fee, it gains popularity over advertising as the efficient communications tool for business.

PUBLIC RELATIONS DEFINITION

We can trace the developments of the communication tools which also gradually adapt itself for the business community through its definition. Denny Grisworld, defined PR as "the management function that evaluate public attitudes, identifies the policies and procedures of an individual or an organization with the public interest, and plans and executes a program of actions to earn public understand and acceptance (Simon, 1980 p.8). The definition is very broad and can be applied for both public and private sectors. It emphasizes on PR's role as a long-term management function which requires planning, organizing, leading and controlling. The main point is to change public attitudes by evaluating and knowing what the public perceives and then planning and implementing policies and procedures to change the public attitudes. The main outcomes are public understanding and acceptance.

The emphasis on PR as a management tool can also be witnessed in James Grunig and Todd Hunt (1984, p.6)'s definition that "public relations is management of communication between an organization and its publics" This broad definition can be applied to any communication circumstances where the audiences are mass public and the organization has an intention to

communicate with them in a systematic way. The relationships between the source, an organization and the receivers, the publics, are clearly stated.

Hunt and Grunig (1994) further analyzed the public relations and came up with four characteristics: press agency/publicity, public information, two-way asymmetric and two-way symmetric communications. The analysis incorporated both one-way and two-way communications found in the PR of an organization.

1. Press agency/publicity. This is a one-way asymmetric communication in which the organization wants to communicate to the public for the purpose of propaganda. In this case, the organization does not normally need to know the needs of the public and it does not need to provide completely truthful information.
2. Public Information. It is another kind of one-way symmetric communication in which the organization disseminates information to the public with truthful information and concerns about the fairness in the information the receivers get.
3. Two-way asymmetric communication. The organization can decide to have a two-way communication with the public while the flow of communication can be stronger from the organization to the public because the former needs to persuade the public of certain issues e.g. When you drink, don't drive, smoking is hazardous to health, etc.
4. Two-way symmetric communication. The organization can conduct a two-way symmetric communication by gathering necessary information about public attitudes, assessing and understanding what the public needs. This allows the information to flow from the receivers to the sender before the organization changes the public's attitude. The objective of two-way symmetric communication is to create mutual understanding by enhancing relationships between the two parties allowing participation from the receivers.

Clarke Claywood (1997, p. XI) proposed the definition of public relations as " the profitable integration of an organization's new and continuing relationship with stakeholders including customers by managing all communications contacts with the organization that create and protect the brand and reputation of the organization". It focuses on the new and existing relationships between the organization and stakeholders including customers. This shows that PR can function as a communication tool that links between the organization and its customers. The benefits for the brands and the organization are indicated in this definition.

The Claywood's definition is consonant with Thomas Harris (1998)'s one. Harris proposed that PR can build brand equity through the outside-in approach where the company understands the needs of their customers through closer relationships between the two parties.

RELATIONSHIPS AND PUBLIC RELATIONS

Smith (2009) envisioned a new perspective of PR that serves the needs of an organization to persuade its customers and focuses on creating relationships which will be productive and beneficial to both the organizations and the publics.

From several definitions of PR, it can be witnessed that PR has turned from one-way to a two-way communication enabling the organization to assess the needs of the public audience and understand them much better.

In terms of the amount of information flow, it is obvious that the flow of information can be considered as two-way if the senders decide to study and get more information from their audience before it starts a plan to communicate with them. Through this well-planned

communication approach, public relations is considered a strategic management tool which aims to communicate with the public audience and create long-term relationship with them.

From the two-way symmetric communication perspective, the objective of mutual understanding has paved ways for PR to include the information about its public audience instead of sending the information directly without any assessment. Though this approach might take more time for the senders to communicate with its receivers, the communication between the two parties is expected to yield understanding between each other even more.

In integrated marketing communications, the relationship between the target audience and its sender is often a long-term result of a well-planned communication program. Marketers rely on databases to understand the need of audiences much better. PR has moved toward the Internet where relationships can be built through PR activities in on-line and social media websites e.g. facebook, twitter, myface, youtube, etc. (Solis & Breakenridge, 2009).

METHODS

This study intends to explore the conceptual framework of public relations' persuasion processes to understand how the new media, such as the Internet and social network, change the ways marketers and stakeholders utilize public relations to create and enhance relationships among one another. We will first explore the changes in communication environment and the effects on PR before coming up with a model.

Analysis of changes in communication environment and the effects on public relations

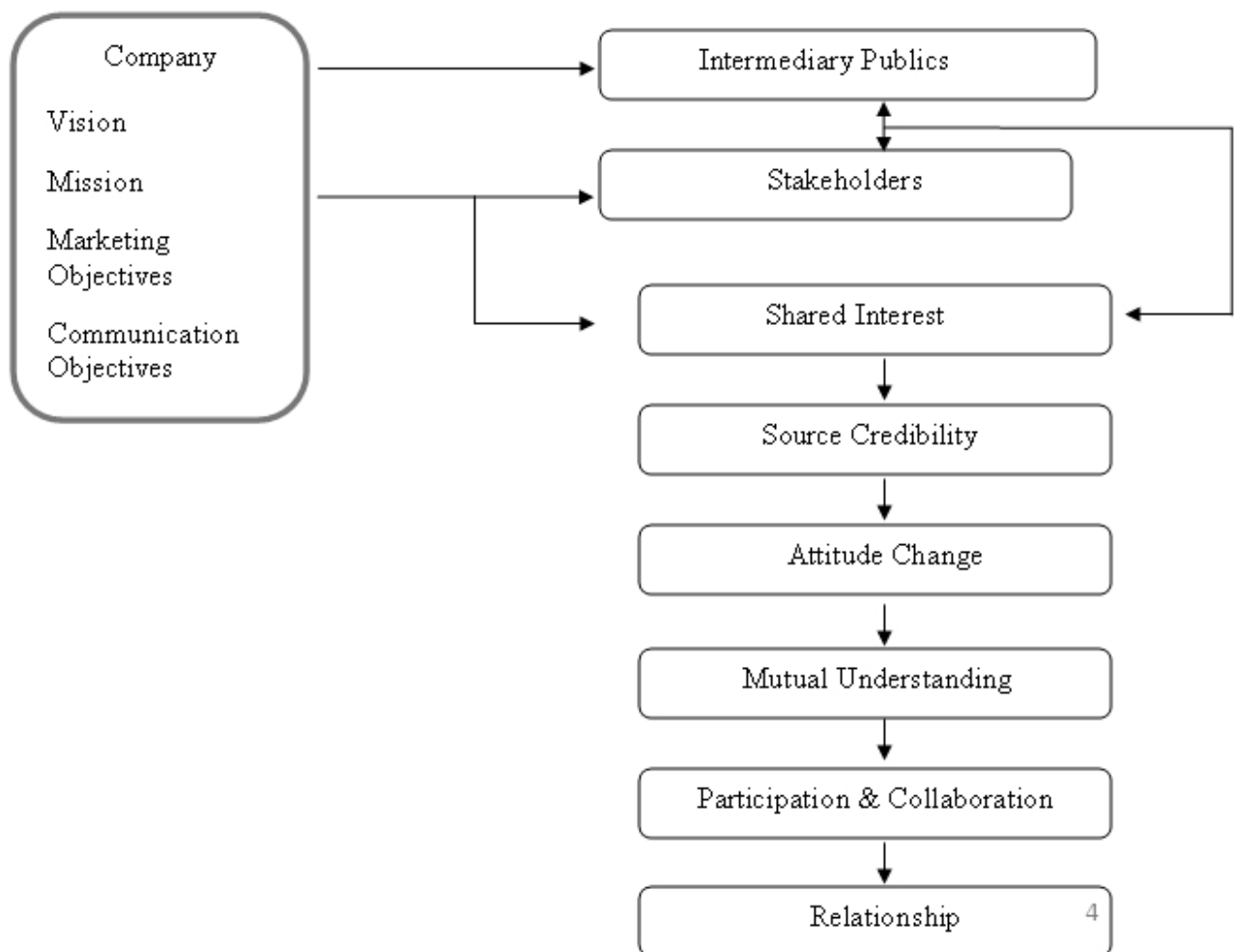
Public relations has evolved throughout the past decades. The media which are the main channel for public relations to communicate with the stakeholders do not function appropriately as communication specialists and marketers expect. There are certain reasons which can be analyzed by components in the communication process model.

1. Changes of Sender's roles in public relations. As two-way symmetric communication becomes popular, senders have a minor role in controlling the messages. They are expected to be more participative and collaborate with the audience. This is very different from the senders of PR in the old days when the objective was propaganda.
2. One to one communication with the target audience. Marketing managers find it very wasteful to use mass media to reach the target customers while the customers are getting smaller in groups. Moreover, marketers also find that advertising cannot reach their target market as effective as before, because they design products or service for specific groups of customers. Thus, communicating through advertising to a larger group of audience does not yield the results they expect. PR through mass media cannot differentiate itself from advertising in both the amount of budget spent and the effectiveness the marketers expect.
3. The demassification of the mass media. The mass media's environment is changing. As the target market is getting smaller, they now focus on some specific groups instead of general ones. This is the same trend as the target customers of most manufacturers. Thus, magazines can survive much better than newspapers which have broader audiences, while cable television and radio which have more specific groups of audience have more competitive advantage than over-the-air broadcast television. The Internet is the winner of all as it is a two-way communication medium. Its message can be designed to be very specific for smaller groups of audiences. Therefore, PR must adjust itself to this demassified media environment.

4. Reduction of Dependence on mass media. Throughout the past decades, Marketers using PR have depended on whether the message will be accepted to be published or broadcast, and, in most cases, they cannot specify timing. What marketers only know is the mass media have large groups of audiences and some of whom may be their target groups. This has led to the failing attempt for the marketers to use PR to reach the right groups of audiences especially in a cluttered mass media environment. With Internet and social media, marketers can reduce their dependence on mass media.
5. Brevity of message. As a result of overloaded information in the society, people prefer short messages that they can comprehend easily and suitable to their own lifestyle and preference. Senders cannot generalize the message with jargons and content which are not specifically appropriate to the receivers. It is likely that the public audience turn away from such type of message. Moreover, the mass media are also likely to reject messages which are not suitable to their target audience. Thus, apart from the preference of short messages by the target audience, the mass media are also forcing the senders to send only short messages to avoid rejection from their audience. This trend happens in the social media such as twitter which limit the words to 140 spaces. Youtube and myface also implicitly limit the content.

A Model of Public Relations Processes for Persuasion

Figure 1: A Model of Public Relations Processes for Persuasion



In the Internet, PR must adapt itself to the changing macroenvironment. Since public relations is an integrated marketing communication element, it requires strategic management planning. The PR campaign is generally a long-term, result-oriented plan and all the planned actions must be coordinated well with the directions of an organization (Bowker, 2004). A review of vision and mission of the organization and how it coordinates with the actions of the campaign should be explored from the beginning.

However, most organizations do not pay attention to the strategic management process that is linked directly with the PR department, leaving the PR managers to plan the campaign without considering the organization as a whole. Even though the organization has less control on the message, the PR department should be able to organize the direction of the PR campaign so it is consonant with the organization's mission.

Apart from the directions of the overall organization, PR managers also integrate their PR plans with the marketing plan and consider the marketing objectives of the organization. Since public relations has capabilities of brand building, PR managers always keep in mind that all the PR activities can affect brand equity one way or another.

One element in the marketing plan that affects public relations is the marketing communications. As integrated marketing communication tactics require marketers to consider all the integrated marketing communication elements together and make certain that all the elements integrate well, marketers would consider whether the IMC plan should include PR activities and how well the overall plan would be with PR as one of its communication mix elements.

This is what Harris (1998) mentioned when he called for the inclusion of public relations in marketing as he termed "Marketing Public Relations" or (MPR). The advantages of public relations are tremendous since it can save the organizations' advertising expenses and it can hit the target groups more directly with high power of persuasion. Public relations gradually can enhance other communication mix elements especially through the Internet and the social media.

In terms of persuasion, what the organization prepares to communicate with the public can result in source credibility, which is very important in changing the attitude of the audience. Source credibility in public relations generally means the credibility of the organization or companies that try to communicate with the public. Generally, source credibility can be the result of several factors including expertise and trustworthy. (O'Keefe, 2002). Both are normally interrelated. Source that is found to be an expertise is also trustworthy by the receivers too.

The magnitude of effects from source credibility is also a result of at least two factors i.e. personal relevance (Johnson & Scieleppe, 1969; Petty, Cacioppo & Goldman, 1981; Rhine & Severance, 1970) and the timing of source identification (Greenberg & Miller, 1966; Greenberg & Tannenbaum, 1961; Husek, 1965; Mills & Harvey, 1972; Sternthal, Dholakia & Leavitt, 1978; Ward & McGinnies, 1974). The first factor is personal relevance. The receiver judges whether the source is talking about something that is personally relevant to what the receiver wants to listen to. This is related to what the elaboration likelihood model of persuasion (Petty & Cacioppo, 1986) indicated that the central route of persuasion which uses a rational approach, and the receiver evaluates whether the persuasive messages are personally relevant to his or her needs.

In social media, the Internet open doors to the websites that the receivers can choose the cyber-communities that are most suitable to their needs. Thus, the Internet naturally offers

the environment that the traditional media have no capability of doing so. The traditional media which are mostly one-way do not allow their audience to choose the content and contribute to the content as much as the Internet. When the source offers the environments or websites that the receivers feel they are personally relevant to the needs, the engagement or participation between the two parties increase, which would lead to more cooperation and good relationships.

The second factor is the timing of source identification. Researchers found whether the persuasive messages identify the source at the beginning or at the end has influenced on source credibility. If the source is introduced from the beginning, the messages will be well received by the audience and the source credibility is high in such circumstance. If the source identity is not announced until the message is presented, the source credibility appears to be lower.

The persuasion of PR messages in the social media or the Internet generally take advantages of the timing of source identification as the source is generally known by the audience from the beginning, even those who speak on the source's side. The source credibility of the PR messages is higher as the receivers know what they expect to get.

On the receiver's perspective, one of the most distinguished features of public relations is the word "public" which PR is trying to address. John Dewey (1927) defined public as a group of people with a shared interest and the organization intends to do something about it. With a particular interest in certain topic, the public tends to follow the topic very closely. The groups within the public can also be called stakeholders (Smith, 2009). When an organization has a relationship with the public, it is a relationship based on mutual understanding and participation. The relationship between the public and the organization has been studied by several researchers in the past such as Esman (1972), Evan (1976), Grunig & Hunt (1984), etc.

There are various ways to categorize the publics e.g. internal versus external; primary, secondary, marginal; current versus future; etc. However, this study categorizes the publics according to the relationship they have with the organization. First, the relationship is divided into direct and indirect involvement with the organization. The direct involvement can be further divided into vertical and horizontal relationships. The vertical relationship can be divided further into upward or downward.

1. The upward vertical relationship. The groups that the organization has the upward vertical relationship are normally those that supply the raw materials, labor or capital for the organization. They include suppliers, financial institutions, stockholders and investors, employees,
2. The downward vertical relationship. This group receives the output of the organization. They are customers and distributors.
3. The horizontal relationship. Some groups of the public are surrounding the organization. Even though they may not contact the organization directly, the issues or the existence of the organization can affect the well-being of these groups. They include the community, trade and professional organization, government, competitors, accreditation or quality assurance agencies.

The indirect involvement includes the "intermediary" public. This group of people who are in-between the organization and the group who are directly involved with the organization function as a group who relay the messages that the organization has. In the today's environment, they can function to relay the message back to the organization. The

intermediary public is also termed "networked public" or "intercessory publics" (Smith, 2009). In general, the intermediary public includes the media, the social network and the opinion leaders.

The flow of information in the intermediary publics can go through several steps. Lazarsfeld, Berelson & Gaudet (1948) proposed the two-step flow of communication theory stating that the information from the mass media does not necessarily pass directly to the receivers but it can influence the opinion leaders who will then pass on the message and influence the receivers. This communication theory was also supported by the diffusion of innovation by Rogers (1995) whereby the adoption of new products or ideas can be influenced by the ones who adopted them earlier.

The characteristics of the communication between the intermediary public is in the form of a network. That is why the term "networked publics" exist. The most common communication means between the intermediary public that forms a network is word of mouth (WOM). Word of mouth exists as the most common form of communication between individuals who have a shared interest in a particular issue. Word of Mouth is defined as the personal communication that involves endorsing products or service without commercial benefit (Hongcharu & Eiamkanchanalai, 2006). WOM is now facilitated by the Internet allowing the words to spread more quickly and anonymously.

The persuasive effects of WOM is strong as it is regarded that the messages in the WOM without commercial benefits are neutral and gain more credibility. Part of the strength in magnitude of effects can be explained by the personal relevance and timing of the source identification which was elaborated earlier.

FINDINGS

As the model of PR processes for Persuasion is developed, we can come up with the processes of persuasion of PR which consist of the following factors between the sender and receiver in public relations which lead us to the end results of public relations---the relationships between the senders and the receivers. These factors are as follows:

1. Shared interest. The sender of the PR messages must realize there are people who are affected by the organization or the public and have an issue of concern with the organization. This is in the beginning where the organization must review its mission and business objectives so it can send the message with clear directions of the organization. At the same time, the receivers know they have a concerned issue with the organization and there are usually groups of people who have the same concern. These people can communicate among one another in a network or they might hear the story about the organization somewhere or through the mass media. Shared interest brings about the communication between the organization and its audience and among people in the public.
2. Source Credibility. On the sender's side, credibility is an issue where the receivers seek. Source credibility is a result of perceived expertise and trustworthiness by the receivers. Personal relevance and timing of source identification are the factors that strengthen the magnitude of source credibility.
3. Attitude Change. When receivers get the persuasive messages, they are likely to follow one of the two routes, according to the Elaboration Likelihood Model of Persuasion (Petty & Cacioppo, 1986). The first route to persuasion is the central route which uses the rational approach, depending on motivation and ability. The receivers must have motivation to process the messages including personal

relevance, issue involvement, need for cognition, etc. plus the ability to process including comprehensibility, issue familiarity, distraction, etc. If the receivers follow the central route to persuasion, the attitude change is likely to be enduring. In persuasion, even though the receivers are not persuaded by the central route, they still can be persuaded through the peripheral route using the emotional approach. The peripheral route includes the effects from source characteristics, peripheral cues such as music, executional impacts, light, sound, etc. All these peripheral elements can lead to temporary attitude change.

4. Mutual understanding. The sender and receiver are likely to have more mutual understanding of each other as the need for cognition has been fulfilled and the issues of common interest have been addressed.
5. Participation and Collaboration. When the two parties have mutual understanding, it is possible to strengthen the ties by engaging in common activities. PR messages are generally followed by some collaborative actions for both parties such as sports, causes, events, rallies, etc. In the social media, the receivers can participate through on-line activities such as expressing their opinions, rating, voting, purchasing, etc. The activities of the receivers benefit other intermediary public members, creating and strengthening relationship.
6. Relationship. As the name of the public relations suggests, PR intends to create relationships. This is the reason this study uses relationships as criteria to classify types of publics. However, the long term perspective of relationships makes it very difficult for marketers to assess a PR campaign, especially for brand loyalty. Public relations utilizes a strategic management approach which tries to create and sustain long term relationships with some groups of the publics and it is these relationships that strengthen brand equity for the organization in the long run. Moreover, it also contributes to shared interests that both parties intend to have from the beginning.

DISCUSSION

The persuasion process of public relations especially in the Internet and social media has completely changed the way we perceive and utilize public relations in several aspects. From the public to an individual. The communication between the organization and groups of the publics or stakeholders has become more and more individual by the Internet. Instead of communicating to large groups of audiences, the organizations are now able to communicate with the individuals who receive the message all at once. The Internet has opened the opportunities to address each person individually even though the message is emailed or sent to several people at the same time. Automobile manufacturers can recall damaged cars without making it known to some other groups who need not know the incident. Emailing or sending short messages to each affected individual is more discreet. The messages can be personalized and well received, increasing customer intimacy.

1. From one-way to two-way. Public relations which utilizes mass media and is only capable of one-way communications is turning to be more interactive after most of PR messages are transmitted in the websites (Solis & Breakenridge, 2009). The interactivity completely changes the PR industry. Through social media, intermediary publics can follow the news and PR messages from the organizations or their opinion leaders directly and can respond to those messages almost instantaneously. The anonymity of the Internet helps senders and intermediary publics gain more self-confident in expressing their unbiased opinions toward any issue.
2. From direct to indirect. The Internet has also allowed the organizations to connect with people who are not initially the groups the organizations view as related to them such as employees, stockholders, customers, suppliers, etc. They are people who do

not have any direct contact with the company or may be far away from the issues of the organizations. However, as communications technologies evolve, it is possible now for the new groups of intermediary publics to know about the issues surrounding the organizations that might affect their life. They may be the one who spread the news about the company. For instance, the company may suffer from an oil spill in northern Atlantic. The people all around the world including those in Australia and New Zealand can get the news and watch how the company handles the oil spill far away from their homes. The intermediary publics may decide to praise or criticize the company in a blog or after the news in websites such as cnn.com or bbc.com, etc. In short, the participation and relationships of the organizations are easily executed by the intermediary publics and they can spread the news through word of mouth and the Internet much easier than before.

3. From inactivity to involvement. Public relations' objectives generally do not require the publics to have any behavioral responses to the PR messages. As witnessed in the PR definition, the objectives of PR are mainly to create understanding and acceptance. Therefore, the stakeholders or groups of audiences of public relations do not have any activity after receiving the messages and the evaluation is mainly focus on changing public attitudes. However, the sender of the message normally anticipates some behavioral changes after the receivers are persuaded. However, the evaluation of PR does not typically cover to the extent beyond attitude change. With the changes in new communication technologies, the publics can immediately respond to the public relations campaign instantaneously and anonymously and they are likely to express their opinion interactively in the Internet, leading to activities beyond attitude change such as rating, voting, engaging in the activities that the organization proposes from forwarding the messages to purchasing the products. Public relations can encourage the publics to involve in the activities the organizations propose more effectively.

IMPLICATIONS AND CONCLUSION

Public Relations in the age of the Internet has changed dramatically and the marketers must realize this new developments as they can now reach the opinion leaders in a very subtle ways. This study has depicted the important trend in integrated marketing communications as public relations gradually targets for specific groups of stakeholders and reach them individually through the Internet. The target audience of public relations is no longer large mass public as most people understand. Moreover, the interactivity of the Internet helps enhance the relationships of the organization and its stakeholders.

This study attempted to understand the persuasion in public relations processes. Therefore, a model of public relations processes for persuasion is created outlining the steps where the company can affect the targeted intermediary publics or the stakeholders it selects. The factors which have led to the relationships between both the sender and the receivers include shared interest, source credibility, attitude change, mutual understanding, participation and collaboration and relationship eventually.

Marketers should explore the shared interest of the sender and receivers to see whether there is anything common that can lay a good foundation to build a strong relationship. For example, in the recent famous PR campaign in Thailand, a cosmetic firm utilized a former actress who is blind to promote its lipsticks. The actress received approximately 30,000 US dollars while the company donated about 30 US cents per each lipstick to the organization that helps the blind. The company found a common interest with the mass public to help

the blind and connected with its target audience. We can find the similar campaigns in several organizations e.g. Microsoft, Ben and Jerry, etc.

In the case of the cosmetic company in Thailand, the company selected the source who is credible because she is blind to communicate on behalf of the company. At the same the company also benefited from the cause because it actually helped raise the donation to the blind organization. This led to the attitude change of the intermediary publics and the stakeholders. Even those who never had a chance to buy the products such as men, also felt positive about what the company had done. This is the power of public relations that can affect the public attitude including those who are not a direct customer. The mutual understanding between the sender and receiver happen because the PR processes are able to change the attitude or persuade the receivers to understand what the company is trying to communicate. Therefore, we can expect to see more participation or collaboration between the sender and the receivers. Participation and collaboration can be in several forms and they are not limited to purchase activities. Several companies decide to form a club for customers and non-customers to participate in corporate social responsibility projects such as helping the poor, cleaning the streets, building schools, and shelters, etc. All these activities involve the company and the stakeholders to work together (collaboration) to reach a goal and they create a strong relationship between the two parties.

The relationships between the organization and the intermediary publics or stakeholders created by PR can be fostered and strengthened by other communication mix elements such as sales promotion, direct marketing, events, personal selling. Marketers can design an integrated marketing communication program so the intermediary publics talk about the brand in the social media and let them persuade the potential customers to receive samples and try the brand. Then the salespersons approach the target customers to explain more about the brands and persuade him or her to buy. Moreover, the company can spread the news about the events through social media and when the publics go to the event, the company can collect participant's information in a database and contact them in the future.

PR functions as a means for the organizations to kindle the fire of relationships and sustain them throughout the life of the brands or the organizations, while other communication mix elements will do the rest. The persuasion processes of public relations have also changed the ways marketers manage the PR campaign as public relations adapts itself to the new media that allow its messages to reach more specific audiences than ever before.

FUTURE RECOMMENDATIONS

Even though this study is trying to explore the public relations processes for persuasion and come up with the model to explain the factors that are necessary to create the relationship between the organization and the stakeholders, future studies can test the model empirically especially in the context of the companies that actually engage in corporate social responsibility projects. However, in the long run, the researchers should study the actual buying behaviors that are resulted by the persuasion in public relations campaign. The study would shed some light so we understand the effects of public relations processes which can result in persuasion and eventually purchase behaviors especially for stakeholders who are not customers. A longitudinal study on the sustainability of the relationships between the company and its stakeholders through the PR processes is also an interesting topic.

REFERENCES

Bowker, D. (2004). The public relations perspective on branding. In Clifton, R., & Simmons, J. (Eds.). *Brands and Branding*. Princeton, NJ: Bloomberg Press.

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Volume 1 (2010), Number 2

- Caywood, C. L. (1997). Twenty-first century public relations: The strategic stages of integrated communication. In Caywood, C. L. (Ed.). *The Handbook of Strategic Public Relations & Integrated Communications*. Boston: McGraw-Hill.
- Dewey, J. (1927). *The Public and Its Problems*. Chicago: Swallow.
- Esman, M. J. (1972). The elements of institution building. In Eaton, J. W. (Ed.). *Institutional Buiding and Development*, 78-90. Beverly Hills, CA. Sage.
- Evan, W. H. (1976). *Interorganizational Relations*. New York: Penguin.
- Greenberg, B. S., & Miller, G. R. (1966). The effects of low-credible sources on message acceptance. *Speech Monographs*, 33, 127-136.
- Greenberg, B. S., & Tannenbaum, P. H. (1961). The effects of bylines on attitude change. *Journalism Quarterly*, 38, 535-537.
- Grunig, J. E., & Hunt. T. (1984). *Managing Public Relations*. New York: Holt, Rinehart and Winston.
- Harris, T. (1998). *Value-added Public Relations: The Secret Weapon of Integrated Marketing*. Chicago: NTC Business.
- Hongcharu, B., & Eiamkanchanalai, S. (2006). Public relations in integrated marketing communications: A model of strategic public relation processes for creating sustainable customer relations. In Papadopoulos, N. & Veloutsou, C. (Eds.). *Marketing from the Trenches: Perspectives on the Road Ahead*, 51-66. Athens: Athens Institute for Education and Research.
- Husek, T. R. (1965). Persuasive impacts of early, late or no mention of a negative source. *Journal of Personality and Social Psychology*, 2, 125-128.
- Johnson, H. H., & Scileppi, J. A. (1969). Effects of ego-involvement conditionson attitude change to high and low credibility communication. *Journal of Personality and Social Psychology*, 13, 31-36.
- Lazarfeld, P. F., Berelson, B., & Gaudet, H. (1948). *The People's Choice*. New York: Columbia University Press.
- Mills, J., & Harvey, J. (1972). Opinion change as a function of when information about the communicator is received and whether he is attractive or expert. *Journal of Personality and Social Psychology*, 21, 52-55.
- O'Keefe, D. J. (2002). *Persuasion: Theory & Research*. Second Edition. Thousand Oaks, CA: Sage Publications.
- Petty, R. E., Cacioppo, J. T., & Goldman, R. (1981). Personal involvement as a determinant of argument-based persuasion. *Journal of Personality and Social Psychology*, 41, 847-855.
- Petty, R. E., & Cacioppo, J. T. (1986). Communication and persuasion: Central and peripeheral routes to attitude change. New York: Springer-Verlag.
- Rhine, R. J., & Severance, L. J. (1997). Ego-involvement, discrepancy, source credibility, and attitude change. *Journal of Personality and Social Psychology*, 16, 175-190.
- Rogers, E. (1995). *Diffusion of Innovations* (4th ed.). New York: Free Press.
- Simon, R. (1980). *Public Relations Concept and Practices* (2nd ed.). Columbus, OH: Grid Publishing.
- Smith, R. D. (2009). *Strategic Planning for Public Relations*. Third Edition. New York: Routledge.
- Solis, B., Breakenridge, D. (2009). *Putting the Public Back in Public Relations: How Social Media is Reinventing the Aging Business of PR*. Upper Saddle River, NJ: Pearson Education.
- Sternrthal, B., Dholokia, R., & Leavitt, C. (1978). The persuasive effects of source credibility: Tests of Cognitive Response. *Journal of Consumer Research*, 4, 252-260.
- Ward, C. D., & McGinnies, E. (1974). Persuasive effects of early and late mention of credible and noncredible sources. *Journal of Psychology*, 86, 17-23.

THE UNDERLYING MECHANISM OF EVOLUTION AND REVOLUTION DURING THE PROCESS OF ORGANIZATIONAL DEVELOPMENT

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Abstract

A systematic understanding of organizational development is critical to strategy research because organizational life cycle becomes increasingly shorter. In this paper, a new type of evolving model of organizational knowledge system which is comprises by empirical knowledge subsystem and revolution knowledge subsystem is constructed. The nature between evolution and revolution during the process of organizational development is defined. Based on this, the modes of organizational development are classified. The mechanism of different modes of organizational development is analyzed. The strategies and the opportunities during the process of organizational development are given. Finally, we verify our proposed theoretical model through the studies of success and failure cases in reality.

Key Words: evolution, revolution, organizational development, knowledge system

Topic Groups: Change management and organizational development, Organizational behavior, Technology and innovation management

INTRODUCTION

Change management is the core and hot issues in the field of organization development and enterprise growth theory, and the related theoretical studies and practices mainly from such three aspects, the change mode of enterprise or organization, the influence factors of change and the strategies of change.

In the research of change mode, Lewin (1951) proposed discontinuous change model, which is syllogism of changes: defrost - change - redefrost. Weick & Quinn (1999) revised Lewin's point of view, divided change mode of enterprise into gradual mode and mutation mode. Larry (1998) proposed evolution and revolution according to the growth of enterprise, the evolution is moderate adjustments in order to keep the growth and the revolution is the great change in the practice of management. Zhang (2000) pointed that the enterprise that both can be integrated organically can be called self-organizing enterprise. Liu (2003, 2004) combined the complex system theory with change management, and put forward that enterprises should be multi-agent organization and the change process should be along with complexity growth in order to adapt to the complexity of external environment.

In the research of the influence factors of change, many studies think internal and external environmental factors affect organizational change, which is completed by the interaction of driving force and resistance force (Hu & Wan, 2005). Natural selection assumes that the internal and external network of the enterprise and the interaction between them influence the change path of the enterprise (Michael & John, 1977; Michael & John, 1984). Jeffrey & Gerald (1978) consider that, the distribution of key resources and the control mode of organization behavior will cause the change in the organizational behavior.

In the research of the strategies of change, there are process reengineering, the change of organization structure, and the establishment of networked organization, living organization, and learning organization. These change practices and theoretical research adapt to the development of the knowledge-based enterprise to a great extent.

However, the high failure rate of change practice demonstrates that the existing theories are lack of guidance and explanatory power. For example, the existing research about the classification of change mode (revolution and evolution) has not revealed the essential characteristics of different change modes. Moreover, it is lack of the research of the influence factors of change and intrinsic mechanism based on the characteristics of knowledge-based enterprise. To be exactly, what is the essential difference of different change modes? What is the decision mechanism of different change modes? What is the occurrence and feedback mechanism when the change process and the change of network structure and knowledge level are connected together? What is the dynamics theory of driving different change modes? These problems are not only the basic problems but also the core problems in the research of change management.

The systematic research of the influence factors of change, change modes and intrinsic mechanisms has theoretical significances and practical application values. Following we will define the essential difference of different change modes, consider the decision mechanism of different change modes, analyze the occurrence and feedback mechanism when the change process and the change of network structure and knowledge level are connected together, and conclude the dynamics theory of driving different change modes.

In this paper, we mainly reveal the underlying mechanism of evolution and revolution from the aspect of knowledge during the process of organizational development. In section 2, a new type of evolving model of organizational knowledge system which is comprised by empirical knowledge subsystem and revolution knowledge subsystem is constructed. Moreover we analyze the stable state of the knowledge system. In section 3, the dynamic change of knowledge system and the structure of NIL networks are studied. In section 4, the mechanisms of different modes of organizational development are given. In section 5, management suggestions of this paper are pointed. Section 6 concludes the paper.

EVOLVING MODEL OF ORGANIZATIONAL KNOWLEDGE SYSTEM

The dynamic change process of knowledge-based enterprise is always under the co-evolution interaction of revolution force and stability force. The new and heterogeneity knowledge introduced during the growing process of knowledge-based enterprise form the revolutionary knowledge subsystem. And experience knowledge transformed by stocking knowledge after the entering of revolutionary knowledge forms the empirical knowledge subsystem. The revolutionary knowledge subsystem and the empirical knowledge subsystem form the knowledge system of knowledge-based enterprise commonly. The dynamic mechanism of the growth or revolution of the enterprise is determined by the evolution of knowledge organization systems (Park 2005). The revolution force comes from the revolutionary knowledge subsystem and the stability force comes from the empirical knowledge subsystem. Moreover the revolution force and stability force are proportional to the revolutionary knowledge level and the empirical knowledge level respectively. The revolution force and the revolutionary knowledge level form the positive feedback, and the stability force and the empirical knowledge level form the positive feedback either. Meanwhile, as the increase of the empirical knowledge level and the stability force, there will produce inhibiting effect on the revolution force, and the growth rate of the revolutionary knowledge will be reduced. The reduction of the growth rate of the revolutionary knowledge means the decrease of external heterogeneity knowledge which will also leads the decrease of the growth rate of empirical knowledge. When the growth rate of empirical knowledge and the revolutionary knowledge both decrease to zero, the knowledge level of the knowledge system comes to maximum. And the tension force produced by the stability force and revolution force reaches maximum.

Above mentioned knowledge dynamic characteristics corresponding to the change process of knowledge-based enterprise can be described as follows.

Suppose $x(t)$, $y(t)$ denote the empirical knowledge level and the revolutionary knowledge level of the knowledge-based enterprise at time t respectively, and $z(t)$ denotes the heterogeneity knowledge level at time t .

Moreover knowledge could not grow limitlessly, thus the basic dynamic model of knowledge evolution may be defined by the following differential equation:

$$\begin{cases} \frac{dx(t)}{dt} = a_1x(t)\left(1 - \frac{x(t)}{K_{\max}^x}\right)(1 - b_1y(t) + c_1z(t)) \\ \frac{dy(t)}{dt} = a_2y(t)\left(1 - \frac{y(t)}{K_{\max}^y}\right)(1 - b_2x(t) + c_2z(t)) \end{cases}$$

with the initial conditions

$$\begin{cases} x(0) = x_0 \\ y(0) = y_0 \end{cases}$$

where K_{\max}^x, K_{\max}^y denote the development limit of the empirical knowledge level and the revolutionary knowledge level of the knowledge-based enterprise respectively, and $a_i, b_i, c_i > 0 (i = 1, 2)$.

The equilibrium conditions are

$$\begin{cases} a_1 x(t) \left(1 - \frac{x(t)}{K_{\max}^x}\right) (1 - b_1 y(t) + c_1 z(t)) = 0 \\ a_2 y(t) \left(1 - \frac{y(t)}{K_{\max}^y}\right) (1 - b_2 x(t) + c_2 z(t)) = 0 \end{cases}$$

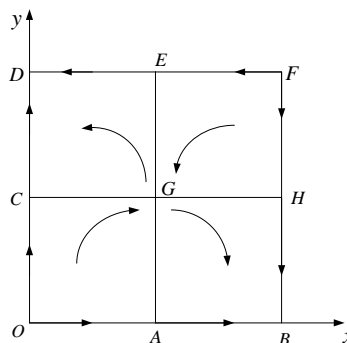
The singular points of the equations are $O(0, 0)$, $A\left(\frac{1+c_2 z(t)}{b_2}, 0\right)$, $B(K_{\max}^x, 0)$,

$C\left(0, \frac{1+c_1 z(t)}{b_1}\right)$, $D(0, K_{\max}^y)$, $E\left(\frac{1+c_2 z(t)}{b_2}, K_{\max}^y\right)$, $F(K_{\max}^x, K_{\max}^y)$, $G\left(\frac{1+c_2 z(t)}{b_2}, \frac{1+c_1 z(t)}{b_1}\right)$ and $H(K_{\max}^x, \frac{1+c_1 z(t)}{b_1})$.

Following we will analyze the effect of heterogeneity knowledge level on the dynamic evolving process of knowledge system.

(1) When $\frac{1+c_2 z(t)}{b_2} < K_{\max}^x$ and $\frac{1+c_1 z(t)}{b_1} < K_{\max}^y$, that is $z(t) < \min\left\{\frac{b_2 K_{\max}^x - 1}{c_2}, \frac{b_1 K_{\max}^y - 1}{c_1}\right\}$.

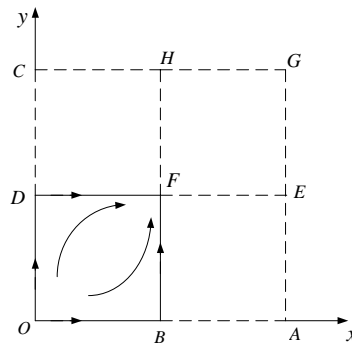
Figure 1: The dynamic evolving process of knowledge system (case (1))



From the dynamic evolving process of knowledge system (Fig.1), we can derive that the stable points are B and D .

(2) When $\frac{1+c_2 z(t)}{b_2} > K_{\max}^x$ and $\frac{1+c_1 z(t)}{b_1} > K_{\max}^y$, that is $z(t) > \max\left\{\frac{b_2 K_{\max}^x - 1}{c_2}, \frac{b_1 K_{\max}^y - 1}{c_1}\right\}$.

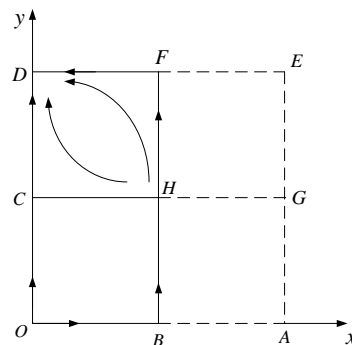
Figure 2: The dynamic evolving process of knowledge system (case (2))



From the dynamic evolving process of knowledge system (Fig.2), we can derive that the stable point is F .

(3) When $\frac{1+c_2z(t)}{b_2} > K_{\max}^x$ and $\frac{1+c_1z(t)}{b_1} < K_{\max}^y$, that is $\frac{b_2K_{\max}^x - 1}{c_2} < z(t) < \frac{b_1K_{\max}^y - 1}{c_1}$.

Figure 3: The dynamic evolving process of knowledge system (case (3))



From the dynamic evolving process of knowledge system (Fig.3), we can derive that the stable point is D .

(4) When $\frac{1+c_2z(t)}{b_2} < K_{\max}^x$ and $\frac{1+c_1z(t)}{b_1} > K_{\max}^y$, that is $\frac{b_1K_{\max}^y - 1}{c_1} < z(t) < \frac{b_2K_{\max}^x - 1}{c_2}$,

similarly to case (3), the stable point is A .

THE CHANGE PROCESS AND NIL NETWORKS

Although the dynamic change process of knowledge-based enterprise is always under the co-evolution interaction of revolution force and stability force, people can not only through introducing new knowledge to change the enterprise's management style or strategy (Grieves 2000). To realize change, enterprise's behavior must be checked, the alternative plans will be verified, and the modified patters will be put into practice. To realize organizational revolution and evolution process, the enterprise need to conduct single loop learning to correct and enhance organizational capability and reconstruct double loop learning within the organization based on not changing the basic norms, policy and objectives of enterprise. And organizational learning effectiveness depends on all levels of staff and the interactions and mutual relations between them (Burke 1997). The main bodies between the organization's internal and external, formal and informal interactions and mutual relations construct the perception-strain-decision neural network with the property of

optimizing or changing internal and external relations and interactions, and form immune network with the property of distributed autonomy meanwhile.

In order to support the evolution of revolutionary knowledge subsystem and form rapid and intuitive perception and reaction of external change, double loop learning manner is adopted to destruct stability in neural network which has the positive feedback process characteristics. And in order to support the evolution of empirical knowledge subsystem and keep sustained and healthy development in stable region of evolution, single loop learning manner is adopted to strengthen the stability in immune network which has the negative feedback process characteristics. What is more, neural network and immune network commonly form learning network. The learning mechanism is determined by the synergy impact between single loop learning and double loop learning constantly to realize the collection, share, and integration of internal and external knowledge and generate dynamic knowledge system and core abilities for different stage of organization. Here we define such neural network, immune network and learning network formed during the process of organizational development as NIL networks for short.

At the same time, during the process of knowledge exploration and exploitation in neural network, immune network and learning network, the introduction of external new knowledge and increment of empirical knowledge will produce new interactive relationships and the change of the original connections of the organization, i.e., give rise to the change of structure of neural network, immune network and learning network. The dynamic change of knowledge system and the structure of NIL networks are concomitant.

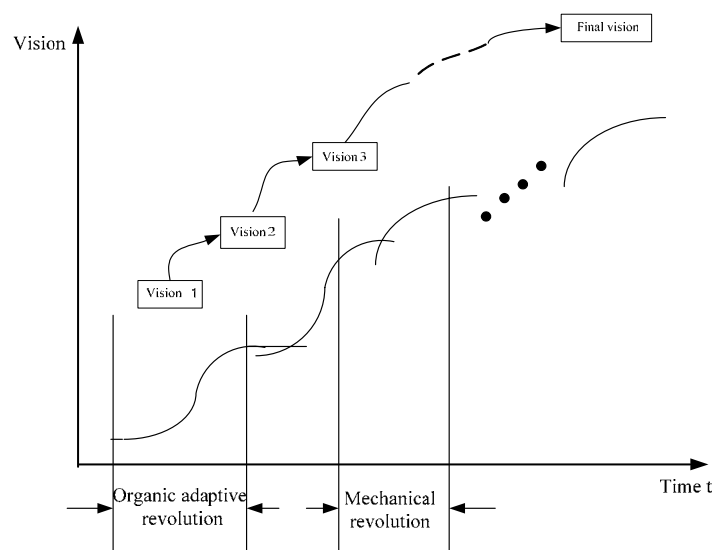
THE MECHANISM OF DIFFERENT MODES OF ORGANIZATIONAL DEVELOPMENT

Based on knowledge system, the generation of change strategy in knowledge-based enterprise is determined by the mechanism of foreknowledge, referred as internal model, which is codetermined by organization structure, benefit structure, knowledge structure, subject of internal and external relations and ways of their interactions (John 1998). The internal model is the key to our basic standard, vision and behavior manner, and it also decides how to transform the perceptions of changes of external environment to the adjustment of its own NIL network structure. And the vision is the limit of time series of internal model in the knowledge-based enterprise. The internal model of the knowledge-based enterprise can be divided into explicit internal model and tacit internal model. Based on neural network, the explicit one is the prospective ability and mechanism organized by the effect of the revolutionary knowledge subsystem, while by assistant of the immune network, the tacit one is the predictive ability and mechanism organized by the effect of empirical knowledge subsystem.

Evolution and revolution are two ways of things development, and the essential difference between them is not the magnitude of the change rate, but whether there occurs new properties hereabout the change point. The change of the knowledge-based enterprise can be classified as evolution, mutation revolution and sliding revolution. The so-called evolution means invariant or minimal optimized changes of the internal model in the knowledge system. And with the domination of the empirical knowledge and the support of the immune network in the organization, the course of the evolution is realized through single loop learning. Meanwhile, revolution is a change process, which is driven by the external and internal innovative knowledge and characterized by changes of internal models and it is realized through double loop learning with the support of the neural network in the organization.

Revolution can be classified as mutation revolution and sliding revolution. Mutation revolution means discontinuous and saltatory changes in the internal model, while sliding revolution means the process of the continuous and non-saltatory changes in the internal model. The change process caused by evolution and mutation revolution has been defined as mechanical revolution mode, while the change process caused by evolution and sliding revolution has been defined as organic adaptive revolution mode. With the structure of the sliding mode, the sliding movement should have good stability and dynamical quality. Different revolution modes during the change process of knowledge-based enterprise are shown in Fig.4.

Figure 4: Different revolution modes of knowledge-based enterprise



PRACTICE IMPLICATIONS

Through the above analysis, knowledge-based enterprise can adopt some strategies and make use of some opportunities during the process of organizational development. Different strategies of knowledge change and different strategies of network change can be combined which will result in mutation revolution or sliding revolution and decide that whether the change mode is organic adaptive mode or mechanical mode.

Secondly, choosing suitable change opportunity is very important. Successful change should be happened at proper time with proper combinations. Proper knowledge change strategy and proper network change strategy should be organic matched. Otherwise if one hand is not matched, that will lead to failure of change.

Thus our proposed theoretical model and analysis can provide some suggestions or verifications during the change processes of knowledge-based enterprise in reality, such as the mode of Chrysler, Xerox Corporation, Haier and so on.

CONCLUSIONS

We have modeled the process of organizational development from the aspect of organizational knowledge system which is comprised by empirical knowledge subsystem and revolution knowledge subsystem. We define the essential difference of different change modes, consider the decision mechanism of different change modes, analyze the occurrence

and feedback mechanism of different change modes, give the strategies and the opportunities during the process of organizational development, conclude the dynamics theory of driving different change modes and finally point out some practice implications. In a word, our efforts can explain the increasingly phenomenons of shorter life cycle, guide the behavior of knowledge-based enterprises, enrich the theory of organizational development and so on.

In further study, we will try to confirm our conclusions in practical knowledge-based enterprises and analyze the problem or the model in certain less restricted situations.

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REFERENCES

- Lewin, K. (1951). *Field Theory in Social Science*. New York: Harper and Row.
- Weick, Karl E., & Quinn, R. E. (1999). Organizational Change and Development. *Ammu. Review Pychol*, 50, 361-386.
- Greiner, Larry E. (1998). Evolution and Revolution as Organizations Grow. *Harvard Business Review*, May-June, 55-67.
- Ding-kun, Zhang (2000). Improving and revolutionary-the study for organizational change. *China Soft Science*, 10, 121-124.
- Hong, Liu, & Zhou, Lin (2003). Organization change along with complexity growth. *Management Review*, 15 (12), 52-56.
- Hong, Liu (2004). Complexity of multi-agents based organization. *Ziran Zazhi*, 26 (4), 227-233.
- Xiao-han, Hu, & Di-fang, Wan (2005). Empirical research on the organization change effect factors and the organization change mode: samples as the high-tech new ventures. *Application of Statistics and Management*, 24 (1), 15-20.
- Hannan, Michael, & Freeman, John (1977). The Population Ecology of Organizations. *American Journal of Sociology*, 82 (5), 929-964.
- Hannan, Michael, & Freeman, John (1984). Structural Inertia and Organizational Change. *American Sociological Review*, 49, 149-164.
- Pfeffer, Jeffrey, & Salancik, Gerald R. (1978). *The external control of organizations: a resource dependence perspective*. Harper & Row, New York.
- Park, S. H., & Zhou, D. (2005). Firm heterogeneity and competitive dynamics in alliance formation. *Academy of Management Review*, 30, 531-554.
- Grieves, J. (2000). The origins of organizational development. *Journal of Management Development*, 19 (5), 345-447.
- Warner, Burke W. (1997). The new agenda for organization development. *Organizational Dynamics*, 26 (1), 7-18.
- Holland, John H. (1998). *Emergence: From Chaos to Order*. Redwood City, California: Addison-Wesley.