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## The Influence of Individual Factors on Cognitive Process Variables within a Diverse Group Context

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### Abstract

The purpose of the study was to explore the relationship between individual factors (gender, language background (LB), nationality, English language proficiency (ELP), diverse group work experience (DGWE)) and cognitive processes (bias, stereotyping, anxiety & apprehension) and investigate the nature of any emerging differences, using the sample of 837 undergraduate students. Owing to the irregular distributions of the criterion variables we combined the sensitivity and versatility of parametric tests (t-tests, ANOVA) with the robustness of the equivalent non-parametric tests (Kruskall Wallis, Mann-Whitney). Strong conclusions were drawn where both groups of tests proved significant at the .01 level. The results revealed LB, nationality, ELP, and DGWE have a statistically significant impact on *bias*. LB, nationality, ELP and DGWE also appear to have an impact on *stereotyping* while *anxiety & apprehension* appear to be influenced by gender, LB, nationality, ELP and DGWE. The precise differences and implications for academics and researchers are discussed.

**Keywords:** Gender, Language, Nationality, Proficiency, Bias, Stereotyping, Anxiety, Apprehension

### 1. Introduction

During 2002-2003, almost 90 000 international students were enrolled in Australian universities (DIMA 2009a), with business schools having a majority of international students (McInnis 2003). By 2008, the number has increased up to 140 000 (DIMA 2009b), with the three largest groups being from India (34 574), China (33 189) and Malaysia (8 143). Subsequently, many universities are faced with the inherent challenges of educating such a diverse population of students (Engberg 2004). Although a developing body of literature reports that international students are trapped in a psychological climate marked by increasing alienation and difficulties in academic and social adjustment (Abe, Talbot & Geelhoed 1998; Nora & Cabrera 1996), with a few notable exceptions (e.g. Shaw 2004), little research has attempted to examine their experiences of cognitive processes such as perpetuation of biases and stereotyping (Goto & Takeuchi 2002) and the level of anxiety and apprehension (Greenland & Brown 1999) within a diverse group context. Many existing studies have typically focused on the United States, and, to a limited degree, on Australia, especially in the context of higher education.

Furthermore, the focus of social science literature has been on Blacks and Whites, to a lesser degree on other ethnic minority groups, including Asians (Hune 1995; Hwang & Goto 2008). On the other hand, due to small sample sizes, there has been a tendency to combine individuals from the Far East, Southeast Asia or the Indian subcontinent under one label, as a single homogeneous ethnic group, assuming that they share common characteristics in all circumstances thus, ignoring within-group differences (Laanan & Starobin 2004; Yoon & Portman 2004). Yes, Asians may have some sense of 'Asian-ness' in common, however, they differ from each other in ethnicity, culture, language, religion, experiences, and so forth. For example, although Chinese and Taiwanese students have similar backgrounds in terms of culture, language, race and geographic location, in the study of Yang et al. (1994), they demonstrated considerable differences in their meaningful relationships with US students. Similarly, Fritz, Chin and DeMarinis (2008) found no significant differences between international students as a single group and the US students with respect to anxiety;

however, a different pattern emerged when the international student population was divided into subgroups. Hence, examination of differences between the Asian groups is an important caveat warranting further investigation (Lew, Chang & Wang 2005).

Moreover, Kessler, Michelson and Williams (1999) predict that the cognitive processes are likely to occur due to a wide range of individual characteristics. However, the accuracy of this theory is unknown, as only a small number of studies have examined them in relation to characteristics other than gender, race/ethnicity, and class. Specifically, research has established that English language proficiency is a “bona fide problem in and of itself” for many students from non-English speaking backgrounds (NESB) studying in the United States (Swagler & Ellis 2003, p. 423; Burroughs 2008; Burroughs, Marie & McCroskey 2003; Woodrow 2006); however, only a small number of them empirically examined its influence on various cognitive processes. Furthermore, it remains unclear to what extent and in what ways such individual differences predict cognitive tendencies in diverse settings (Sommers, Warp & Mahoney 2008).

Therefore, the main purpose of the present study is to take a step toward filling this void. Specifically, to (1) explore whether the relationships between individual factors (gender, language background, nationality, English language proficiency, diverse group work experience) and cognitive processes (bias, stereotyping, anxiety & apprehension, mental effort) exist and (2) investigate the nature of any emerging differences between these groups.

## **2. Literature review**

The most common theoretical underpinnings used to explain the possible biases and inaccuracies that often occur when members of diverse groups work together to achieve a common goal are social categorization theory (SCT) and its related social identity theory (SIT). According to SCT, people routinely classify others into a number of cognitive categories often based on observable differences such as gender, age, race or nationality rather than cognitively maintaining their individuality (Turner 1985; 1987). Through social categorization, others are perceived either as members of the same category as one's self (in-group), as members of a different category (out-group) or unique individuals. However, people often rely on group-based impressions rather than person-based individuating qualities (Fiske, Link & Neuberg 1999).

Furthermore, according to SIT (Ashforth & Mael 1989; Tajfel 1978; 1982; Tajfel & Turner 1986), an individual's social identity is constructed with reference to his/her membership in different social categories together with the value and emotional significance attached to that membership. As individuals are perceived or perceive themselves as belonging to social categories (e.g. 'women', 'men', 'Asians', 'Blacks', 'Whites', 'young', 'old') and social categories are associated with specific characteristics (e.g. aggressiveness, laziness, inarticulate, etc.), members incorporate such category traits as inherent features of their self-concept (Tajfel 1978). Once socially identified with a group, individuals accentuate perceptions of their similarities with in-group members while simultaneously accentuating their differences from out-group members, thereby creating 'us' versus 'them' dynamics within groups (Hogg & Abrams 1985).

SIT further assumes that individuals strive for a positively valued social identity. That is, they view in-group members as more attractive, trustworthy, honest and cooperative than members of the out-group (Ashforth & Mael 1989; Hogg 2001; Tajfel & Turner 1986). Such differentiation results in an in-group favoritism and out-group bias (Allen & Wilder 1975; Fiske 2004; Gaertner & Insko 2000; Hinkle & Schopler 1986).

Consistent with these theories, numerous studies have demonstrated that in diverse settings, individuals become aware of their visible demographic differences from one another and those differences are likely to trigger stereotyping and bias (Fiske & Taylor 1991; Shaw & Barrett-Power 1998). For instance, the evidence shows that majority groups are more likely to display bias than are minority groups (Oakes, Haslam & Turner 1994) and it has long been established that minority groups such as Asians (Delucci & Do 1996) and women (Sigelman & Welsh 1991; Gardener 1995) often appear to be the victims of such behaviors. For instance, Asian students in Pham and Dykstra's (1994) study were dissatisfied with unwelcoming attitudes and reported incidents of stereotyping and discriminatory behaviors from other students. Similarly, Asian students in Ancis, Sedlacek and Mohr's (2000) study reported disrespectful and unfair treatment from other students than did European students. Asian American men in the study of Kohatsu et al (2000) reported greater bias against them than did Asian American women. A greater level of bias or discrimination was reported among non-whites and men in the study of Kessler, Mickelson and Williams (1999) than whites and women. Research has also documented that limited English language skills of NESB students (Goto, Gee & Takeuchi 2002; Yeh 2002; Yeh et al. 2005) and the lack of knowledge, experience and contact with diverse members (Dalton 1991) are the other contributing factors of stereotyping and bias.

Furthermore, research in the field of cognitive psychology has demonstrated that when individuals encounter an environment that is unfamiliar in language, people, behavioral norms, etc. they experience a high level of anxiety and apprehension. Anxiety is found to be greater in intergroup than in interpersonal encounters (Gudykunst & Shapiro 1996). For instance, research has found ethnic differences in the experiences of anxiety, noting a greater level of social anxiety among Asian American students relative to European American students (Fritz, Chin & DeMarinis 2008; Lau et al. 2009) or White American students (Okazaki 1997; Okazaki et al. 2002). Similarly, Asians experience more anxiety

than Hispanics when interacting with Caucasians (Stephan & Stephan 1989). Tsui, Egan and O'Reilly (1992) also suggest that being different in race, nationality or gender is more anxiety-producing for traditionally predominant groups such as men and whites than for women and non-whites. Furthermore, research has also found that in situations where group members are forced to interact with one another in a language that is not their first language (English in our case) they are likely to experience a greater level of anxiety and apprehension as they would feel less competent in expressing themselves in that language (Burroughs 2008; Burroughs, Marie & McCroskey 2003; Woodrow 2006). Similarly, as individuals have different values and experiences they may feel unable to anticipate others' reactions (Bacharach & Bamberger 1992) and become too anxious and inhibited to make contributions to the decisions made by the group (Pelled, Ledford & Mohrman 1999). Hence, the level of fear or worry associated with the interaction with dissimilar others is likely to increase (Jackson, Stone & Alvarez 1992; Shaw & Barrett-Power 1998). Plant and Devine (2003), on the other hand, argue that individuals (e.g. Whites) who have a limited experience interacting with members of other ethnic groups (e.g. Blacks) are likely to experience a high level of anxiety and apprehension.

Therefore, based upon these theories and subsequent research findings we propose that some or all of the following individual characteristics (*gender, language background, nationality, English language proficiency, diversity group work experience*) will be the predictors of *bias, stereotyping, and anxiety & apprehension*.

### 3. Methodology

#### 3.1 Setting, design and procedures

The hypotheses were tested on a sample of 837 onshore and offshore undergraduate business students working on a team project as part of a requirement of the Business Capstone 301 unit at Curtin University of Technology, Perth, Western Australia. The teams were deliberately formed to maximize the gender, race and age diversity. Teams were required to run a virtual business for 8 weeks of the 12-week semester by making a wide range of decisions, including which markets to emphasize, what research and development to conduct, how to market products, manage staff, facilities and a sales force, how to finance operations and manage production facilities, and many more. The aim of the simulation was to increase ROA, ROE, Cumulative Profit, Stock Price and Market Capitalization. The primary method of data collection was a survey questionnaire. During the 7<sup>th</sup> week, 975 questionnaires were distributed to all participants accompanied with a cover letter stating the purpose, the timeframe and the assurance of confidentiality.

#### 3.2 Sample

As the participation in the study was voluntary, of the 975 questionnaires, 837 were returned, yielding 80.2% response rate. Table 1 depicts the number and percentage of respondents by gender, language background, English language proficiency, nationality, and diverse group work experience.

#### 3.3 Measures

A total of 25 questions captured the variables of interest for the purpose of the study. The details are provided below.

##### 3.3.1 Demographic information

The questionnaire contained items asking about the participants' gender, nationality, language background, English language proficiency, and diverse group work experience. 51 nationalities were represented in the sample; however, the focus of the study was on five groups only (1=Australian, 2=Chinese, 3=Indonesian, 4=Malaysian, 5=Singaporean). As the percentage of students with other nationalities such as Bangladesh, Croatia, France, Kenya and so forth was considerably low it was decided to exclude them from the analyses. Students were also asked to indicate their language background (1=ESB, 2=NESB). We also assessed 520 NESB students' self-reported English language proficiency by posing the question: "*If your first language is not English how would you rate your English language proficiency?*" followed by 3 choices: 1=low, 2=average and 3=high. We did not use their TOEFL scores because TOEFL assesses written rather than spoken English proficiency, which we believe plays a more important role in our context. A summary of all demographic data obtained in the study is provided in Table 1.

##### 3.3.2 Bias

Bias was measured using five items adapted from James, Lovato and Cropanzano (1994) and the remaining 5 items from Shaw (2004). Based on the results of exploratory factor analysis (EFA), this study used only 8 items. In the previous study, the reliability for the scale was .90/.93 (Shaw 2004). In this study, the internal reliability was .90. The items describe student's self-observations, perceptions, emotional reactions, and behavioral dispositions toward other members of a group because of their differences (Dovidio et al 2004). Example items were: "I sometimes react to certain group members in a negative way or treat them unfairly simply because of their gender, race/ethnicity, age, etc." and "Prejudice exists in our project group".

##### 3.3.3 Stereotyping

Stereotyping, referred to as the extent to which respondents use stereotypes to predict the behaviors and attitudes of other group members was measured using four items adapted from Shaw (2004). The Cronbach's alpha coefficient

of .89 for the scale was confirmed by Shaw (2004). In this study, the Cronbach's alpha coefficient was .96. An example item was: "When working with my group members, I often find myself using stereotypes to predict how they will behave in group meetings".

### 3.3.4 Anxiety and Apprehension

Anxiety & Apprehension referred to as a respondent's level of fear, uneasiness or worry associated with his/her interaction with other group members (Stephan & Stephan 1985) was measured with eight items adapted from Shaw (2004). As four of the items were negatively phrased, we reversed the scoring to make it consistent with the rest of the scale. According to Shaw (2004), the reliability for the original scale was .88/.89. In this study, the reliability was .88. An example item was: "I usually feel calm and relaxed when asked to express my feelings or opinions at group meetings".

Students responded to all items using a seven-point Likert scale ranging from 1 (Strongly Disagree) to 7 (Strongly Agree).

## 4. Results and discussion

To test the hypothesis, Comparison of Means tests (t-tests) and Analysis of Variance (ANOVA) tests were performed. Having obtained significant results, the nature of the differences that emerged was examined using Tukey's HSD procedure. Owing to the irregular distributions of the criterion variables, we decided to combine the sensitivity and versatility of parametric tests (t-tests, ANOVA) with the robustness of the equivalent non-parametric tests (Kruskal Wallis, Mann-Whitney). However, unlike the Tukey's HSD which compensates for the increased risk of Type I error, the repeated use of the Mann-Whitney tests does not compensate for the increase in that risk. Hence, to minimize the cumulative risk of Type I errors, we adopted a stricter criterion of significance ( $p < .01$ ) (Huberty & Morris 1989). The statistical results revealed some noteworthy patterns.

The results in Table 2 indicate that *gender* is a contributing factor to *anxiety & apprehension* ( $t = -2.48$ ,  $p < .01$ ), suggesting that females ( $M = 2.42$ ) are more anxious and apprehensive when interacting with other members than males ( $M = 2.23$ ). However, no significant differences were found between males and females in relation to *bias* and *stereotyping*.

As in Table 2, *language background* (ESB vs NESB) also found to have a significant association with *bias* ( $t = -3.29$ ,  $p < .01$ ), *stereotyping* ( $t = -7.06$ ,  $p < .01$ ), and *anxiety & apprehension* ( $t = -4.91$ ,  $p < .01$ ). These results suggest that (a) NESB students ( $M = 1.90$ ) are more likely to exhibit bias toward other members because of their differences than ESB students ( $M = 1.64$ ), (b) NESB students ( $M = 3.22$ ) are more likely to use stereotypes to predict the behaviors and attitudes of other members than ESB students ( $M = 2.45$ ), and (c) NESB students ( $M = 2.47$ ) experience a greater level of anxiety and apprehension in interacting with other members than ESB students ( $M = 2.10$ ).

The results in Table 3 indicate that *nationality* is an important predictor of *bias* ( $F = 6.17$ ,  $p < .01$ ), *stereotyping* ( $F = 21.02$ ,  $p < .01$ ) and *anxiety & apprehension* ( $F = 7.24$ ,  $p < .01$ ). The results also show that in relation to *bias*, of all the pair-wise differences the only significant difference lies between Australians ( $M = 1.59$ ) and Chinese ( $M = 2.21$ ), with Chinese affirming higher levels of bias than Australians. In relation to *stereotyping*, significant differences were found between Australians on one hand and Chinese, Indonesians, Malaysians and Singaporeans on the other. The widest difference was between Australians ( $M = 2.13$ ) at the lowest end and Chinese ( $M = 3.58$ ) at the highest end. It appears that the Asian culture has slightly greater tendency towards the use of stereotypes to predict the behaviors and attitudes of other group members. In relation to *anxiety & apprehension*, the results revealed distinct differences between Australians and Singaporeans ( $M = 2.10$  and  $2.09$ , respectively) on one hand and Chinese, Indonesians and Malaysians ( $M = 2.47$ ,  $2.61$  and  $2.59$ , respectively) on the other. The widest difference was between Indonesians ( $M = 2.61$ ) at the lowest end and Singaporeans ( $M = 2.09$ ) at the highest end.

As in Table 4, *English language proficiency* (ELP) appears to be related to *bias* ( $F = 8.72$ ,  $p < .01$ ), *stereotyping* ( $F = 11.02$ ,  $p < .01$ ) and *anxiety & apprehension* ( $F = 17.65$ ,  $p < .01$ ). Although ELP is significantly associated with *bias* the nature of the association is not entirely clear as the emerged difference between the two groups appears to be marginal. However, the tendency to engage in *stereotyping* and the level of *anxiety & apprehension* appear to decrease with ELP.

The results in Table 4 also revealed statistically significant relationships between *diverse group work experience* (DGWE) and *bias* ( $F = 8.59$ ,  $p < .01$ ), *stereotyping* ( $F = 8.75$ ,  $p < .01$ ) and *anxiety & apprehension* ( $F = 10.59$ ,  $p < .01$ ). Although there appears to be some relationship between DGWE and *stereotyping* the nature of the relationship is not entirely clear as the emerged difference between the two groups appears to be marginal. However, the tendency to exhibit *bias* and the feeling of *anxiety and apprehension* appear to decrease with DGWE.

In summary, the influence of individual factors (*gender*, *language background*, *nationality*, *ELP*, *DGWE*) on cognitive process variables (*bias*, *stereotyping*, *anxiety & apprehension*) was examined. Our results provided a considerable amount of support for our hypothesis. However, we did not find that *gender* is a significant predictor of *bias* and *stereotyping*. The lack of gender differences for *bias* and *stereotyping* may be attributable to the possibility that negative



gender stereotypes are fading and females and males are becoming more positive in their perceptions of each other (Dovidio & Gaertner 1991), hence resulting in a reduction of bias and the amelioration of harmonious intergroup relations (Devine & Elliot 1995).

We also observed statistically significant differences within each cognitive process (*bias, stereotyping, anxiety & apprehension*) across different gender, language background, nationality, ELP, DGWE groups. However, the observed differences appeared to be of relatively low practical importance as all groups showed a strong tendency towards the low end of the scale, indicating an overall low level of *bias, stereotyping* and *anxiety & apprehension*. Low levels of *bias, stereotyping* and *anxiety & apprehension* could potentially be due to the sample used, as 3<sup>rd</sup> year undergraduate students, over the duration of their course, have been involved in various group projects and had a greater exposure to, and contact with, dissimilar others compared with 1<sup>st</sup> year students. Furthermore, various efforts such as diversity workshops provided by Curtin Business School might also have accounted for low levels of *bias, stereotyping* and *anxiety & apprehension*.

## 5. Conclusions and implications

These findings have both theoretical and practical implications. First, we examined the relationship between individual factors and cognitive process variables using undergraduate students as little attention has been devoted to their experiences of cognitive processes (Goto & Takeuchi 2002; Greenland & Brown 1999), particularly in an Australian context. We substantiated the findings of previous studies mostly conducted in the United States that *gender* is a predictor of *anxiety & apprehension* (Tsui, Egan & O'Reilly 1992) and *nationality* is a predictor of *bias* (Ancis, Sedlacek & Mohr 2000; Kessler, Michelson & Williams 1999; Kohatsu et al. 2000; Pham & Dykstra 1994), *stereotyping* (Pham & Dykstra 1994) and *anxiety & apprehension* (Lau et al. 2009; Okazaki 1997; Okazaki et al. 2002). However, we found that the relationships between *gender* and *bias*, and *gender* and *stereotyping* were not statistically significant. Additionally, we extended the existing studies by examining the effect of *language background, ELP* and *DGWE* on *bias, stereotyping*, and *anxiety & apprehension* and established that in the context of higher education, the effect is significant at ( $p < 0.01$ ) level, thereby substantiating Kessler, Michelson and Williams' (1999) proposition that cognitive processes are due to a wide range of individual characteristics not just gender, race/ethnicity, or class. Furthermore, rather than combining the responses of all Asian groups and portraying them as a single homogeneous ethnic group (Laanan & Starobin 2004; Yoon & Portman 2004), we broke the responses of Asian groups into four nationality groups (Chinese, Indonesians, Malaysians, Singaporeans) and found statistically significant differences between these groups in relation to cognitive process variables. These differences suggest that Asians are diverse and cannot be reduced to a homogeneous whole with respect to cognitive processes.

Although the overall level of *bias, stereotyping*, and *anxiety & apprehension* is low, the mean differences that emerged between different gender, language background, nationality, ELP, DGWE groups suggest that education administrators or academics should continue providing interactive diversity workshops, training interventions, or multicultural courses designed to increase students' sensitivity to individual differences, as such efforts give students the opportunity to interact with members of other groups and have potential to modify their attitudes and beliefs and, hence, result in reduced *stereotyping, bias* (Astin 1993; Chang 2002; Milem 1994; Rudman, Ashmore & Gary 2001) and *anxiety & apprehension* (Islam & Hewstone 1993; Stephan & Stephan 1985; 1989).

## 6. Limitations and directions for future research

Although this study makes a number of important contributions, there are obvious limitations to the study, which can be improved upon by future research. Specifically:

- This study was purely quantitative. Further research using qualitative methodologies might more comprehensively explain the quantitative patterns observed.
- This study considered a limited number of factors such as *gender, language background, nationality, ELP* and *DGWE*. Exploring other characteristics such as *small group management experience, managerial/supervisory experience, grade points, grade expectations, full-time work experience, majors*, etc. as potential predictors of cognitive processes could be fruitful to explore in future studies particularly as researchers propose that cognitive processes are likely to occur due to a wide range of individual characteristics (Kessler, Michelson & Williams 1999).
- As the percentage of students with other nationalities was relatively low, they were excluded from the analyses. A further sample stratified according to ethnic or national criteria would enable its effects to be more thoroughly explored.
- As the data was collected from a single tertiary institution the generalizability of the findings is limited. Thus, it would be worthwhile for future studies to validate the findings of our study in other higher educational settings.

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Table 1. Demographic data of participants

	Frequency	Percentage
<b>Gender (n=837):</b>		
• Male	400	47.8
• Female	437	52.2
<b>Language Background (n=837):</b>		
• English Speaking Background (ESB)	317	37.9
• Non-English Speaking Background (NESB)	520	62.1
<b>English Language Proficiency (n=520):</b>		
• Low	24	2.9
• Average	335	40.0
• High	161	19.2
<b>Nationality (n=650):</b>		
• Australian	162	19.4
• Chinese	150	17.9
• Indonesian	62	7.4
• Malaysian	169	20.2
• Singaporean	107	12.8
<b>Diverse Group Work Experience :</b>		
• A little	137	16.4
• Some	354	42.3
• A lot	346	41.3
<b>Total:</b>	837	100.0

Table 2. The relationships between gender, language background and cognitive process variables: comparison of mean scores

Cognitive Process Variables	Gender		t-test	Mann-Whitney
	Male	Female	t	Z
	(N=400)	(N=437)		
Bias	1.80	1.80	-.059	-.335
Stereotyping	2.93	2.92	.009	-.019
Anxiety & Apprehension	2.23	2.42	-2.485**	-2.848**
Cognitive Process Variables	Language Background		t-tests	Mann-Whitney
	ESB	NESB		Z
	(N=317)	(N=520)		
Bias	1.64	1.90	-3.298**	-4.215**
Stereotyping	2.45	3.22	-7.068**	-6.720**
Anxiety & Apprehension	2.10	2.47	-4.911**	-5.279**

Note 1. Independent sample t-tests & Mann-Whitney tests \*\*p<0.01

Table 3. The relationship between nationality and cognitive process variables: comparison of mean scores

Variables	Australian (N=162)	Chinese (N=150)	Indonesian (N=62)	Malaysian (N=169)	Singaporean (N=107)	ANOVA F	Kruskal Wallis X <sup>2</sup>	Mann-Whitney Z
	1	2	3	4	5			
Bias	1.59	2.21	1.81	1.92	1.73	6.170**	26.270**	1<2=-4.903**
Stereotyping	2.13	3.58	3.38	3.08	3.16	21.024**	71.432**	1<2=-7.745** 1<3=-5.257** 1<4=-5.604** 1<5=-5.176**
Anxiety & Apprehension	2.10	2.47	2.61	2.59	2.09	7.240**	30.868**	1<2=-3.866** 1<3=-3.178** 1<4=-3.890** 2>5=-3.442** 3>5=-3.050** 4>5=-3.497**

Note 1. \*\*the mean difference is significant at the .01 level

Table 4. The relationships between ELP, DGWE, SGME and cognitive process variables: comparison of mean scores

Variables	English Language Proficiency (ELP)			ANOVA	Kruskal Wallis	Mann-Whitney
	Low	Average	High	F	X <sup>2</sup>	Z
	(N=24)	(N=335)	(N=161)			
	1	2	3			
Bias	1.92	2.05	1.59	8.724**	18.436**	2>3=-4.127**
Stereotyping	3.68	3.41	2.75	11.021**	18.915**	2>3=-4.147**
Anxiety & Apprehension	3.28	2.58	2.12	17.654**	37.309**	1>2=-3.168** 1>3=-4.799** 2>3=-4.825**
Diverse Group Work Experience (DGWE)						
	A Little	Some	A Lot			
	(N=137)	(N=354)	(N=346)			
	1	2	3			
Bias	1.92	1.94	1.61	8.591**	23.476**	1>3=-2.875** 2>3=-4.722**
Stereotyping	3.30	3.02	2.68	8.757**	16.500**	1>3=-3.783**
Anxiety & Apprehension	2.56	2.43	2.13	10.596**	24.664**	1>3=-4.135** 2>3=-4.103**

Note 1. \*\*the mean difference is significant at the .01 level



## Dividend Policy and Inflation in Australia: Results from Cointegration Tests

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### Abstract

This paper examines the relationship between dividends and inflation in Australia by testing for cointegration between these two variables. The results of the tests indicate that inflation is contributing to dividend growth. This finding can be interpreted in different ways. Trying to follow a dividend policy which is perceived to be optimal Australian firms may, for example, believe that there is a desirable level of real dividend income to be paid out to their investors. A second possible interpretation of the results would be that inflation simply increases the nominal volume of corporate earnings and thereby leads to higher dividend payments.

**Keywords:** Dividend policy, Inflation, Cointegration, Stock market

### 1. Introduction

This paper provides an analysis of the relationship between dividends and inflation in Australia by testing for cointegration between these two variables. Finding a statistically significant stable long-term relationship between dividends and the price level would be quite interesting. In fact, this approach offers a new perspective on two of the most important problems faced by the modern theory of finance. The first of these two major issues is to explain why firms pay dividends. The second important question is whether stocks are a useful hedge against inflation. Obviously, the approach suggested here will not give direct answers to these questions but will help to analyse the relationship between inflation and the dividend policy of Australian firms. The paper is organized as follows: Section 2 and 3 briefly review issues related to the optimal dividend policy of a firm and the relationship between inflation and the stock market. The fourth section describes the data sets examined. Section 5 presents the results from the cointegration tests. The final section concludes by discussing the implications of the empirical evidence presented in this paper.

### 2. Dividend Policy

Assuming that capital markets are perfect and that there exist no taxes and Miller and Modigliani (1961) have argued that the value of a firm is not affected by its dividend policy. Therefore, dividend changes have no economic implications and there is no optimal dividend policy for a firm. This Dividend Irrelevancy Hypothesis is based on the argument that dividends are paid from earnings and that investors do not prefer dividends to capital gains or vice versa. In fact, given that the tax laws of many countries discriminate against dividend income by taxing dividends more heavily than capital gains there even are strong arguments against dividend payments. However, dividends are regularly paid by many firms.

Agency theory may give a justification for the existence of dividend payments. Most importantly, trying to overcome information asymmetries the management of a firm can use dividend changes to signal revised earnings expectations to its investors. Testing this hypothesis has produced mixed empirical evidence. Allen and Michaely (1995) have provided an excellent survey of the literature and have noted that much work remains to be done. Taking a similar view, Collins, Saxena, and Wansley (1996) have argued convincingly that the dividend policy issue is yet unresolved.

### 3. Stock Prices and Inflation

Many investors seem to believe that stocks are a useful hedge against inflation. Generally speaking this assumption is based on the argument that stocks are claims on real capital. At first sight it seems to be very convincing to assume that inflation by definition increases the nominal value of real capital and therefore leads to higher stock prices. A more detailed view on the relationship between inflation and the stock market reveals a quite simple mechanism that can help

to explain why there should be a positive relationship between inflation rates and stock returns: Higher prices increase the revenues of firms leading to higher corporate earnings and – ultimately – to an increase of stock prices. While this mechanism is intuitively appealing, there are some obvious problems.

As a matter of fact, Campbell and Shiller (1988) have pointed out that two countervailing trends are present. First of all – and as already noted - inflation raises corporate earnings and increases future expected dividends. This effect is, of course, positive for stock returns. But there is also a second important effect of higher inflation rates. Namely, inflation increases the discount rate (via the Fisher effect) and therefore lowers stock prices. Given the existence of these two countervailing trends the mixed empirical evidence documented in the literature is no surprise at all. At least in the short run there is no clear picture. In fact, many econometricians have reported that stock returns and inflation rates are negatively correlated. Brenner and Galai (1978), for example, have presented a survey of earlier empirical studies. These studies in general seem to show that the inflation rate and stock returns are negatively related. Therefore, the empirical evidence published in the seventies seems to indicate that stocks are a poor hedge against inflation. In spite of the negative contemporaneous correlation of stock returns and inflation most financial economists today seem to accept the idea that inflation has a positive effect on stock returns in the long run. Boudoukha and Richardson (1993) as well as Kolari and Anari (2001) have reported empirical evidence indicating that stocks can indeed serve as long-term inflation hedge.

#### **4. Data**

Inflation is measured using the Australian All Groups Consumer Price Index which is reported on a quarterly basis by the Australian Bureau of Statistics. The index is based on a basket of goods and services known to account for a high proportion of the consumption expenditures in Australia and therefore is accepted as official measure of inflation. In fact, monetary policymakers in Australia use CPI inflation as target (see, for example, Heath, Roberts and Bulman (2004)). The current reference base period of the Australian All Groups Consumer Price Index is 1989–90.

The Australian All Ordinaries Index is usually used as proxy for the performance of the Australian stock market. This index consists of the 500 largest companies listed on the Australian Stock Exchange (measured by market capitalization) and therefore is a broad measure of stock market activity. Marrett and Worthington (2008), for example, have argued that the All Ordinaries covers about 92% of Australian companies by market value. Consequently, many investors seem to believe that the All Ordinaries Index is a suitable market indicator for Australian stocks. Data on the volume of dividends paid by the index constitutes is provided by Bloomberg (dividend per index share). Bloomberg reports data on dividends starting in the second quarter of 1999. Thus, there are just enough data points to perform cointegration tests.

#### **5. Empirical Analysis**

According to ADF-tests (not reported) both the Australian consumer price index (CPI) and the All Ordinaries stock market index dividend time series are nonstationary. As a consequence, the cointegration test developed by Johansen (1991) is used to search for a long-term relationship between the two variables. The results of the test for cointegration between consumer prices and the All Ordinaries stock market index dividend time series are reported in table 1. The test statistics indicate quite clearly that cointegration is a relevant phenomenon. Therefore, a stable long run relationship between dividends and the price level seems to exist. In other words, both variables follow a common trend. This result does not depend on the choice of the CPI as the measure of inflation. Table 2 shows that the dividend time series and the Australian GDP price deflator are also cointegrated.

Table 1. Cointegration between dividends and the CPI

Table 2. Cointegration between dividends and the GDP price deflator

Finding cointegration between dividend payments and the price level does not necessarily imply that stocks are a good hedge against inflation because dividends are only one source of equity market returns. However, the results reported above do suggest that inflation is contributing to dividend growth. There are different possibilities to interpret these empirical findings. In fact, Australian firms may assume that there is a desirable level of real dividend income to be paid out to their investors. This would imply that the corporate sector does indeed believe in the existence of some sort of optimal dividend policy. A second (and probably less noteworthy) interpretation of the results reported in table 1 and 2 would be that inflation simply increases the nominal volume of corporate earnings. Given that dividends are paid from earnings this could imply that the corporate sector also increases dividend payments.

#### **6. Conclusion**

The empirical evidence presented above indicates quite clearly that there is a stable long run relationship between dividend payments and the price level examining data from Australia. Finding cointegration between the consumer price level and the dividends payments of Australian firms does not necessarily imply that stocks are a useful hedge against inflation – especially not in the short run. This study can also not help to explain why firms pay dividends at all. However, the cointegration tests reported above do indicate that dividend changes are related to the phenomenon of



inflation. As a matter of fact, firms seem to increase their dividend payments facing an environment of a rising price level in order to stabilize the real value of dividend income. Therefore, higher inflation is a major driver of dividend increases. This finding does have a number of interesting implications. Most importantly, a higher variability of inflation may distort the ability of firms to use dividend changes to signal revised earnings expectations to their investors.

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Table 1. Cointegration between dividends and the CPI

Sample (adjusted): 1999Q4 2008Q1				
Trend assumption: No deterministic trend (restricted constant)				
Lags interval (in first differences): 1 to 1				
Unrestricted Cointegration Rank Test (Trace)				
Hypothesized		Trace	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.484237	26.52963	20.26184	0.0060
At most 1	0.111460	4.017979	9.164546	0.4095
Trace test indicates 1 cointegrating eqn(s) at the 0.05 level				
* denotes rejection of the hypothesis at the 0.05 level				
**MacKinnon-Haug-Michelis (1999) p-values				
Unrestricted Cointegration Rank Test (Maximum Eigenvalue)				
Hypothesized		Max-Eigen	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.484237	22.51165	15.89210	0.0039
At most 1	0.111460	4.017979	9.164546	0.4095
Max-eigenvalue test indicates 1 cointegrating eqn(s) at the 0.05 level				
* denotes rejection of the hypothesis at the 0.05 level				
**MacKinnon-Haug-Michelis (1999) p-values				

Table 2. Cointegration between dividends and the GDP price deflator

Sample (adjusted): 1999Q4 2008Q1				
Trend assumption: No deterministic trend (restricted constant)				
Lags interval (in first differences): 1 to 1				
Unrestricted Cointegration Rank Test (Trace)				
Hypothesized		Trace	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.471150	27.54874	20.26184	0.0041
At most 1	0.159037	5.889039	9.164546	0.1995
Trace test indicates 1 cointegrating eqn(s) at the 0.05 level				
* denotes rejection of the hypothesis at the 0.05 level				
**MacKinnon, Haug and Michelis (1999) p-values				
Unrestricted Cointegration Rank Test (Maximum Eigenvalue)				
Hypothesized		Max-Eigen	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.471150	21.65970	15.89210	0.0055
At most 1	0.159037	5.889039	9.164546	0.1995
Max-eigenvalue test indicates 1 cointegrating eqn(s) at the 0.05 level				
* denotes rejection of the hypothesis at the 0.05 level				
**MacKinnon, Haug and Michelis (1999) p-values				



## Study on the Cost Management Based on the Cooperative Value Chain

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### Abstract

The competition among modern enterprises has not been the competition about single enterprise, but the competition among the value chains and the enterprise needs to strengthen the competitive ability by the cooperation. Based on developing Porter's value chain, the opinion that the whole value chain contains the upper suppliers and the lower dealers was proposed, and how to achieve the optimal cost management by the cooperation between the upper and lower enterprises with the homogenous enterprises was further explained in the article. In addition, some risk costs which may occur in the cooperation process and how to implement cooperative harmony were analyzed, and according to the analysis results, the enterprise could keep away from these risks in advance.

**Keywords:** Cooperation, Value chain, Cost management

### 1. Introduction

The generation of the value chain is the result of the competition that enterprises pursue different competitive strategies. To enhance the strategy of the enterprise, American strategic management scholar Porter (1985) first put forward the method of the value chain analysis. He thought that the value chain was the combination of a series of associated valuable activities of the enterprise. According to Porter's theory of the value chain, the "cost chain" corresponding with the valuable activities exists on the value chain (seen in Figure 1). Starting from the expense devotion for the product R&D, the preparation before the production, and various consumptions in the making process, until to establishing the sales channel, marketing and distribution output and expenses after service, this "cost chain" supports various activities on the value chain to be developed effectively to increase the values of the product and fulfill clients' demands. As the comprehensive consumption index of the value chain activity, the cost is represented by a sort of form of "negative increment". The value chain cost management is to manage the "cost chain" on the value chain of the product, eliminate the activities without increments or with low efficiencies, reduce the amount of "negative increment", minimize the costs on the whole chain, enhance the efficiency of the whole supply chain, and make the enterprises on the chain all win.

In the drastic competition of the market, enterprises find that only the interior cost control has not fulfilled the consumers' demands for the product cost, so they begin to seek how to reduce their operation costs and acquire the one-up advantage of cost by means of others' strengths, which offers the market environment for the occurrence of the value chain system and is the interior power to establish the cooperative relationship among enterprises (Li, 2002, P.30-31). The generalized value chain management received Porter's concept of value system, and Porter thought that the value system was composed by the enterprise value chain, supplier value chain, channel value chain, purchaser value chain and the operation unit value chain of the homogenous enterprises. The concept of the value system begins to be utilized by enterprises with the development of the economic globalization.

Under the guidance of thus ideas, the competition among enterprises has not been limited only in the interior of the enterprise. The value chain of the enterprise begins to participate in the market competition as a strong aggregation which is the value resource plan taking one core enterprise surrounded by other enterprises as the axis point, and the plan continually solidify the stability of the system by the cooperation among enterprises. Therefore, it is very meaningful to study how to strengthen the value chain cost management by the cooperation.

## 2. Literature review

English scholar Simmonds (1981) put forward the concept of the SMA (Strategic Management Accounting), and he thought that the accounting should learn from the exterior, which would help the company to evaluate its competitive status. The enterprise is an opening system, and the management accounting should pay more attention to study the exterior environment, understand the competitive cost structure of the enterprise, and notice the cost competitive status of the enterprise relative to competitors.

American management accounting scholars Shank and Govindarajan (1989) agreed that viewpoint, and further developed the range of the value chain based on Porter's value chain theory (1985), and they defined the value chain as "the value chain of any company contains the whole process of the value production activity". This process includes the whole course from the initial suppliers receive the raw materials to the finished products are sent to the users. The interior value chain of the company associates with the supplier value chain by the stock activity, and associated with the client value chain by the sales and after service activities, so the whole value chain forms. So the advantages of the enterprise can not only root in the adjustment of the market range involved by the value activities, but root in the harmony among enterprises or the optimized benefits brought by using the value chain together.

In addition, the node enterprises which participate in the whole value chain analysis possess common value orientation, and they can share sensitive information and effectively harmonize and manage the relationships among the node enterprise on the supply chain, which can not only increase the trust each other among cooperators, enhance purchasers' receiving efficiency and reduce the stock-in-trade and the cost of the supply chain, but make the activities with same type more effective for the node enterprise on the supply chain, and accordingly enhance the operation efficiency of the whole value chain for the company (Dekker, 2000, P.41-52), and attract more enterprises in the value chain to join the enterprise alliance in the future, and help the company to implement the whole value chain analysis in the larger range. Therefore, it is very important to cooperate and harmonize with node enterprises, and share the information about the cost and performance relative to the value chain for the company.

With the deepening and utilizing of the value chain theory in enterprises, this theory has gradually been the dominant idea for the multiform enterprise to instruct its strategy. By the drive of the economic globalization, by means of the cooperation among enterprises, the value system composed by the supplier value chain, the manufacturer value chain and the purchaser value chain emerges as the times require, and the value chain theory breaks the interior characters in the enterprise, and scholars attentions begin to turn to the whole value system form the single interior of the enterprise.

Dekker (2003) used the idea of the value management to analyze the value relation on the supply chain, and he analyzed the value and cost composing among the supplier, the manufacturer and the shopkeeper by taking the large-sized English retail enterprise as the example, and put forward the method of the value chain analysis, and established the chart model based on the value chain analysis. The cost control model of the classified supply proposed by him could offer referenced theoretical instruction for the enterprise cost control.

Dubois (2003) pointed out the influencing degree of the mutual function between the enterprise with other associated enterprises on the cost of the enterprise, and he researched the relationships among the key suppliers and key purchasers and other correlative enterprises, and the influencing degree to the cost of the enterprise based on the analysis of the concrete case, and he also pointed out that the association between the cost drive and the enterprises on the value chain, and established the base for the game analysis among enterprises.

Yu Fusheng and Di Congzhi (2004) utilized the theory of the value chain to deeply study the cost control, and defined the thought, objective and content of the cost control based on the value chain theory, and reconstruct the cost control system to effectively control the cost of the enterprise and strengthen the competitive advantage of the enterprise.

Liu Yijuan (2004) established the activity cost model to analyze the complete value chain to achieve the practice of the cost control through introducing and discussing how one English retail enterprise broke the boundary of the company, utilized the cost information of the node enterprises in the value chain and manage the mutual dependent relationship among all activities on the value chain, which indicated that the replacement of the past opposed relationship with suppliers by the mutual cooperation and consideration among node enterprises in the supply chain could harmonize the manage the activities in the supply chain, realize the cost control, enhance the operation efficiency and the performance of the supply chain.

Jiang Ximing and Cao Li (2004) analyzed the deficiencies of the present enterprise cost control from the view of the value chain, analyzed relationship among the interior value chain, the exterior value chain and the cost control, and established the cost control guarantee system based on the view of the value chain.

Based on former researches, we considered the whole value chain (including the upper enterprises and lower enterprises), and studied how the enterprise could achieve the cost optimization on the whole value chain by the cooperation based on the cooperative value chain cost management. At the same time, we combined the game thought with the general cost control method in the enterprise, considered the extension of the interior activity cost control

method for the enterprise, and studied the influencing degree of the risk induced by the game relationship to the enterprise strategy cost control.

### **3. The cost management based on the cooperative value chain**

When the range of the value chain management extends, the value system has not been only limited in the interior value stage in the enterprise, and it should surround the core enterprise, seek the cooperation from the upper and lower enterprises, control the information, materials and capitals, start from purchasing raw materials, making middle products and finished products, and sending products to consumers by the sales network. At the same time, the enterprise attracts exterior enterprises in the same industry to participate in the cooperation by means of the core ability to research, develop, design and sell the products together and reduce the operation consumption of the enterprise. The whole value activity connects the suppliers, manufactures, distributors, shopkeepers, final users, and the enterprises with homogenous benefits to be structure mode with complete function network system (seen in Figure 2).

#### *3.1 Cooperative cost management with suppliers*

As viewed from the value chain, the core enterprise and the supplier are in same value chain, and they are strategic partners. Only both sides fully cooperate, the maximum value and the win-win result can be achieved.

##### **3.1.1 Supplier participating in advance**

70%~80% of the product cost is confirmed in the design, so it is very important to seek the opportunity to reduce the cost in the development process of the product. The cooperation mode with suppliers' participation is adopted in the product development process, and its advantage is that the suppliers could know the materials needed in the development of the new product as soon as possible, implement the parallel development and reduce the cycle of the development. In addition, the suppliers could participate in the production of the core enterprise, give counsels for the enterprise, put forward advices to improve the production and reduce the cost.

##### **3.1.2 Confirming suppliers in advance**

Confirming the supplier in advance means to select suppliers in the design phase, and these suppliers are responsible for the components design or the engineering system design, and all works may not be charged by suppliers, but the rights and responsibilities should be defined clearly. The advantage of confirming suppliers in advance is to allow development multiple engineering designs, which could largely enhance the development speed of the product. Generally, the suppliers selected in the initial phase should not only participate in the components design, but assist the assembling of samples and charge for the components provision after the new product is pushed. Under the mode of confirming suppliers in advance, suppliers providing complex components should not only participate in the R&D process of the product as soon as possible, but answer for the product quality, production cost and optimization as the chief principals, and they should ensure to provide corresponding systems and components in time.

##### **3.1.3 Establishment of objective cost**

The basic principle of the objective cost method is to confirm the objective profit of the enterprise accruing to the price in the consumption market or the final consumers' payment price, and calculate the cost by the reverse operation to decompose the objective cost to confirm the supply cost or the production cost of various components. The objective cost of the core enterprise is supplier's upper limit of the price. The operation program under the new mode is to first confirm the capitals of the core enterprise, then tell the suppliers what they should do, and finally wait suppliers' answer whether they should bargain on according to the price proposed by the core enterprise. In the past, the core enterprise forced the suppliers to depreciate continually and never considered suppliers' benefits. In the new mode, the core enterprise will turn to the cost from the price, and build a win-win situation. The core enterprise and suppliers will cooperate closely to solve the problems about cost and technology, and the trust relationship between both sides will be confirmed.

#### *3.2 Cooperative cost management with dealers*

It will save transaction costs, avoid transaction risk and investment risk, enhance the efficiency of the repertory management and better serve clients for the manufacturer to select good lower cooperative enterprises and effectively cooperate with them. So the influence of the lower cooperative enterprises on the strategic decision for the core enterprise is more and more important.

##### **3.2.1 Cooperative repertory management**

For long, the repertory managements in various phases of the circulation run in their ways respectively. Manufacture, shopkeeper and merchant respectively have their repertories and make their repertory control strategies, which will inevitably induce the phenomena of "demand expansion". To share the information about the supply ability and repertory status with dealers can reduce dealers' worries, and if the manufacturer could help the dealer to make the order before the sales midseason, he will provide better design production ability and arrange production schedule to fulfill the demands of the product. Therefore, for manufacturers and lower enterprises' benefits, they will consciously adopt

the mode of united repertory to realize the alliance of both sides. In the united repertory, the popular mode is CPFR (Collaborative Planning, Forecasting and Replenishment), i.e. the manufacture and deal cooperate to plan, forecast and complement strategies, or utilize the game behaviors each other to reduce the transaction cost in the cooperation (Zhang, 2004, P.59-61& Li, 2004, P.42-43).

### 3.2.2 United sales promotion strategy

The united sales promotion strategy is a sort of allied strategy between the deal and the core enterprise, i.e. in dealer's final sales phase, the dealer and manufacturer participate in the sale together according to their respective advantages to enhance consumers' satisfaction and extend their respective sales profits. The united sales promotion strategy is a sort of renovation for the traditional sales thinking. The basic thought of the united sales promotion strategy is that the core enterprise utilizes its advantage to participate in dealer's sales activity, for example, the core enterprise sometimes more knows how to put the product to stimulate consumers' purchase desire. In addition, the united R&D of the core enterprise with purchaser is one representation for the core enterprise to participate in the sale, because the core enterprise should perfect the production and design of the produce according to consumers' demands, even ask the dealer to complete its design, so the new cooperation except for the united sale forms between the core enterprise and the dealer.

### 3.2.3 United pricing

Shopkeepers' retail pricing will directly influence the profit level of the core enterprise. Because the manufacturer hardly control shopkeeper's pricing, if the pricing of the core enterprise is lower than the shopkeeper's anticipated profit, and even the retail pricing can make the core enterprise and the shopkeeper acquire maximum channel profit, shopkeeper also will select the pricing from his own maximum profit. However, because they can not acquire maximal integrated profit in the state of non-cooperation and can not make their respective profits maximum, so for the pricing, the core enterprise and the shopkeeper have the cooperative game base, and the objective of the cooperation is to reduce the transaction cost of haggling by united pricing and realize the integration of sales pricing.

### 3.3 Cooperative cost management with homogenous enterprises

The homogenous enterprises mean the enterprises with same benefit objective in the same industry. Generally, the enterprise will consider the cooperation in certain value phase with homogenous enterprises according to the associated and sharing thoughts in the value chain theory. In the cooperation, the enterprise will relegate the part without obvious advantage to homogenous enterprises to compete it, for example, the design of certain components, the R&D of certain technology and sharing the sales channel with homogenous enterprises.

The cooperation among homogenous enterprises root in different core competitions of different enterprises, and the cooperative enterprises respectively possess strong strength in certain aspect, so they have different value increase points. For the maximization of respective benefits, these enterprises will consider many factors such as operation association and operation importance to contract non-core works to other enterprises, i.e. the homogenous cooperation in the value system should seek the benefit crossing in the interest conflict to realize win-win cooperation, maximize bother benefits in the value system and effectively control the cost. In the benefit maximization, the enterprises try to solve the interest conflict and achieve the win-win effect by the game behavior with homogenous enterprises, and accordingly reduce the management cost and the transaction cost in the cooperation.

## 4. Cooperative harmony and risk cost

The complete value chain of the company is a series of combinations of all correlative activities of different enterprises including customers and suppliers in the supply chain extending across organizational boundaries. The relationship governance among companies in the value chain is mainly to harmonize, manage and control the mutually dependent activities (including the activities harmonizing and influencing the boundaries of the company) between two neighboring node enterprises and the mutual capital transmission. The interior harmonizing mechanism of the company can take the administrative order as the primary measure, but the node enterprises in the value chain are independent each other, and the authority mechanism is deficient to harmonize the relationships among them. Gulati and Singh (1998) thought that the encouragement mechanism, the standard operation program, the dispute solution, the non-market pricing system, and other proper measures can be the control mechanisms to manage the relationships among companies in the value chain. In addition, Thompson (1967) thought that the mutual dependence and uncertainty about the activities in the node enterprises were stronger, and they more need to harmonize and manage these relationships. Therefore, to harmonize the relationships among node enterprise in the value chain, the mutually dependent activities and the capital transformations among companies should be first harmonized and managed, and the management measures are related with the cooperative relationships (such as merger relationship, series relationship and reciprocal relationship) among node enterprises in the value chain and the uncertainty of the activities engaged by these companies.

Because the enterprises in the value chain are independent each other, the cooperation is mainly to form the contract by

the negotiation. The contract is the agreement achieved by people who actualize the cooperation and benefit distribution. To sign a contract must pay corresponding cost, and because of the diversity of the contract form, to achieve different contract will consume different transaction costs and induce different cooperative effects. But in the game process, there are still some decisive risk factors which will raise the cost for the enterprise.

First, for both sides in the cooperation, (1) the enterprises participating in the cooperation generally possess certain strength and certain stability for the development strategy, but they can not eliminate the costs induced by the adjustment and adaptation for the cooperation when the management strategy changes largely, (2) though the cooperation emphasizes sharing information, but the cooperation members can not realize complete information sharing in the cooperation because of their respective benefits, and the cooperator can not know the other's information sufficiently, and the phenomenon of information asymmetry will occur, and the cooperators will continually select their partners in the cooperation process, so the additive cooperation selection cost will occur, (3) in the implementation process of the cooperation, cooperators may adopt the opportunism behaviors, and the "moral risk" may occur, so the enterprise certainly adopt corresponding measures to keep away, and the cost to prevent the risk occurs, (4) in the game process of the cooperation, because both sides are inclined to keep their private information, poke others' information and prevent information loss, the information technology and the safety risk about the information emerge as times require, so the cost of information safety will occur.

Second, as viewed from the exterior economic environment, (1) in the value system, the disagreement of benefits will certainly induce the competition which may be from cooperators or exterior, and the any competition will bring certain uncertainty and competitive cost for the management and cooperation of the enterprise, (2) in the cooperation, the enterprise inevitably needs the information transmission among enterprises, because the "information channel" is easily influenced by the exterior jamming factors, and the "information distortion" will bring risk loss for the cooperative enterprises, (3) in the business cooperation across regions and countries, the differences in the customs and cultural backgrounds will bring risk costs for the cooperation.

Though enterprises all hope to reduce the transaction cost by the cooperation, but in the cooperative game process, the costs still may happen. The generation of these costs is induced by a series of uncertain factors including the uncertainty of the decision of the core enterprise, the uncertainty of the exterior cooperative enterprise brought by the uncertainty of the core enterprise's decision, the uncertainty of the exterior cooperative enterprise's subjective behaviors and the uncertainty of the management environment, and these uncertainties bring prevention costs and risk costs for the cooperation among enterprise and directly influence the efficiency of the cooperation.

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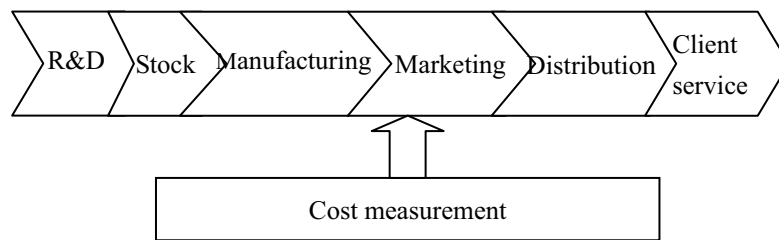


Figure 1. Structure of Cost Chain

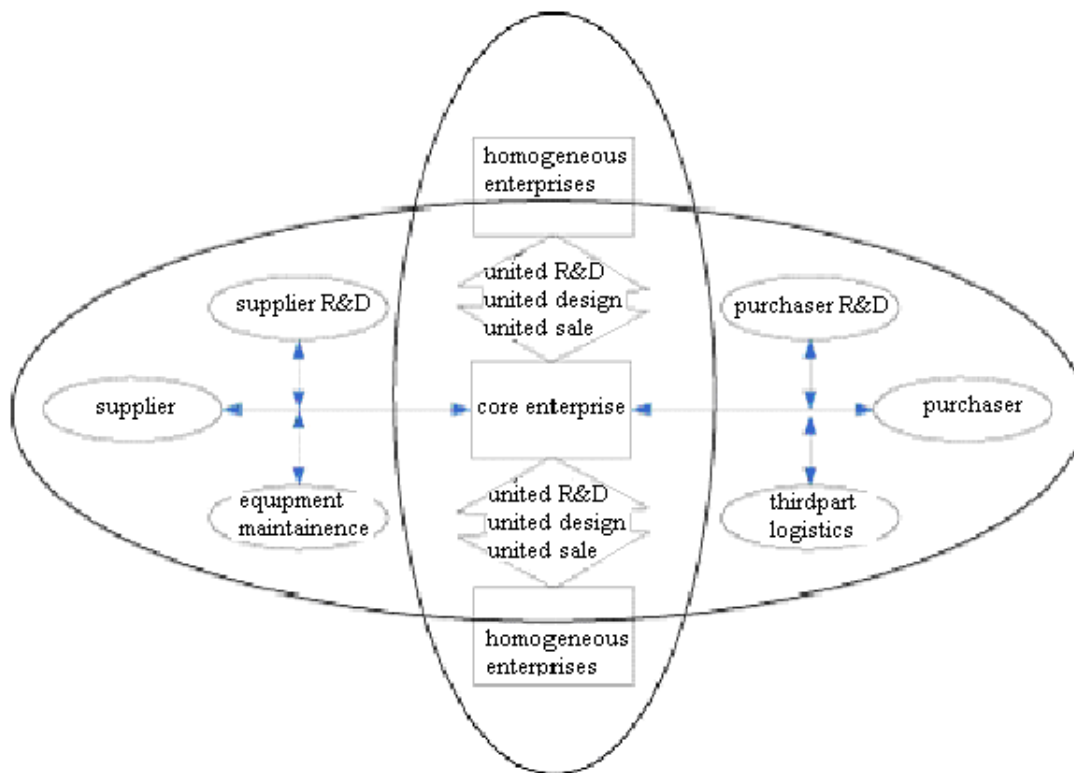


Figure 2. Structure of Value System (Zhang, 2006, P.24)



## Study on the Relationship between Customer Satisfaction and 3PL Costs

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### Abstract

The relationship between customer satisfaction and logistic costs was mainly analyzed in the article, and the grey correlation analysis method was used to study the relationship between customer satisfaction and various activity centers, and the research result could offer decision-making references to save costs and enhance customer satisfaction for 3PL (Third Party Logistic) enterprises.

**Keywords:** 3PL (Third Party Logistic), Customer satisfaction, Cost, Grey correlation

With the increasingly drastic competition in the 3PL market, the logistic service enterprises all take improving the service of the enterprise as the important measure to enhance consumer satisfaction and form higher consumer loyalty. However, the enhancement of the service quality level always goes with the large rise of the logistics costs, and it is worthy to study whether the paid costs will obtain good returns. At present, there are many researches about customer satisfaction by foreign and domestic scholars, and they primarily used various models to analyze the influencing factors of satisfaction, and for the cost research about 3PL enterprise, their researches mainly centralized in the cost analysis and cost saving, and the researches about the relationship between 3PL service cost and customer satisfaction were still rare.

### 1. Customer satisfaction and its evaluation

#### 1.1 Customer satisfaction

Marketing scientist Philip Kotler pointed out that the satisfaction meant one person's joviality sense or disappointment sense by comparing his perceptive effect to the product or service with his expectation. So the customer satisfaction is decided by customer expectation and actual perception, and both factors are reversely proportional, and the customer satisfaction is positively proportional with the actual perception. The computation formula of the concept can be described as (Gong, 2000, P.78)

$$D = \frac{u(X)}{U}$$

Where,  $D$  is the customer satisfaction,  $u(X)$  is the customers' actual perception which shows positive correlation with the service level of the enterprise and is influenced by the enterprise drumbeating and the client perceptive ability,  $U$  is the customer expectation which is decided by the promise of the enterprise and customer's historical experience accepting service, and when  $D = 1$ , the customer's expectation goes all the way with his actual perception, and when  $D \geq 1$ , the customer obtains the satisfaction exceeding his expectation, and when  $D \leq 1$ , the customer's experience and perceptive quality are lower than his psychological expectation.

The researches about customer satisfaction begun earlier in foreign countries, and some customer satisfaction mode identified by many scholars have been formed, and the representative model is the American customer satisfaction index evaluation model (seen in Figure 1).

From Figure 1, customer satisfaction is mainly decided by two factors including customer expectation and perceptive factor, and both factors act each other to make customer feel satisfactory or not. Based on that, many domestic and foreign scholars put forward the strategies about how to enhance customer satisfaction, and in these strategies, one common problem can be concluded, i.e. to enhance the service ability and service level of the enterprise.

### 1.2 Evaluation of 3PL enterprise customer satisfaction

The competition in the 3PL market is more and more drastic, and facing the severe situation, many professional logistics companies all put improving service quality and enhancing service level on the primacy to maintain the market status and enhance the market share. It is an urgent problem to improve the service quality and enhance the service level for professional logistics companies. In the summer of 2006, after interviewing 64 production enterprises with logistics outsourcing operation in Tianjin City, the problems concerned by these enterprises could mainly include safety, being in time, veracity, the ability and level to dispose international logistics, communication ability and the reasonability of price.

The safety includes the safety of the transportation on the road, the safety of the storage and the safety of information, and about 84.4% of inquired enterprises emphasized the demand of the safety. The being in time includes picking up the goods in time, delivering goods in time, transporting in time and so on, and about 78% of inquired enterprises emphasized the character of being in time. The veracity includes the accomplishment veracity of orders, the nicety of the repertory, the nicety of the information and the nicety of the charge accounting, and about 76.6% of inquired enterprises emphasized the character of veracity. The ability and level to dispose international logistics (most production enterprises in Tianjin have the outsourcing operations) include the customs applying ability of professional logistics companies, sheet processing ability and the transportation ability of international goods, and about 59.7% of inquired enterprises emphasized the ability and the level to dispose international logistics. The communication ability includes the business communication ability with clients, and the ability processing clients' complaints, and about 59.4% of inquired enterprises emphasized the communication ability of professional logistics service companies.

## 2. Costs of 3PL enterprises

According to the logistic iceberg theory proposed by Professor Seiichi of Japan Waseda University (Shuai, 2005, P.156), the logistics costs include not only the material charges such as direct transportation and distribution charges above the water, but the invisible immaterial charges which happen below the water in the interior of the enterprise. For 3PL enterprises, the logistics is their prime business, and the logistics costs analysis is the important measure of the logistics management, and the quantification of the logistic economic benefit index, and it can more obviously reflect the 3PL economic benefits.

Because different services offered by 3PL enterprises for customers will produce different costs, so according to the logistics function classification (Gao, 2006, P.67), the logistics cost generally can be divided as material circulation charge, information circulation charge and logistic management charge. The material circulation charge includes the packaging charge, the transportation charge, the storage charge, the loading and unloading charge, the circulation machining charge and the distribution charge. The information circulation charge includes the information charges about the storage management, the order management and the customer service. The logistic management charge generally includes the charges in the logistic computation, adjustment and control.

According to the activity-based costing method, the whole operation flow of the logistic service enterprise can be divided into many different activity centers, and the cost accounting can be implemented by different activity centers. Table 1 is the cost accounting according to the activity-based costing method, and the cost accounting period is from Jan 2006 to Dec 2006.

From Table 1, the maximum proportions of the cost in Company A are the distribution charge and the storage charge, and to effectively cut the costs of 3PL enterprises, both charges should be noticed.

## 3. Relationship between customer satisfaction and logistics cost

The relationship between customer satisfaction and logistics cost is influenced by many factors, so following hypotheses are needed. First, the management level of all logistic enterprises has achieved their optimal level. Second, the market is in the state with sufficient competition. Third, when other influencing factors don't change, the logistic service level decides customer's satisfaction degree.

### 3.1 Relationship between customer satisfaction and total logistics cost

Customer satisfaction is not directly correlative with logistics cost, and there is the service quality between them to maintain their relationship. Generally, higher payment of service cost can bring higher service quality and obtain customer's higher satisfaction, and on the contrary, lower payment of service cost will induce lower service quality and reduce customer's satisfaction. So generally speaking, customer's satisfaction is positive proportional with the service cost paid by the enterprise. In the survey of logistic enterprises, the degressive relation of the marginal benefit exists between customer satisfaction and costs paid by the professional logistic companies. In the initial stage, the super-addition of service cost can largely enhance customer satisfaction, but with the continual increase of service cost, the enhancement of customer satisfaction brought by the added unit cost will continually decrease.

In Figure 2,  $OC_1 = C_1C_2 = C_2C_3$ , and  $OQ_1 \geq Q_1Q_2 \geq Q_2Q_3$ , and with the continual addition of unit cost, the

enhancement of customer satisfaction is decreasing continually.

In the actual production and management, to survive and develop, 3PL enterprises all emphasize the relationship between service cost and customer satisfaction. The ideal change relationship between both sides can be presented in Figure 3 (Xu, 2001, P.6).

In Figure 3,  $S_1$  and  $S_2$  are the relationship curves between customer satisfaction and logistics cost, and the service cost is kept in  $C_1$ , and the customer satisfaction rises from  $Q_1$  to  $Q_2$ , and the customer satisfaction is enhanced when the service cost doesn't change.

In Figure 4,  $S_1$  and  $S_2$  are the relationship curves between customer satisfaction and logistics cost, and the service cost decreases from  $C_1$  to  $C_2$ , but the customer satisfaction rises from  $Q_1$  to  $Q_2$ , i.e. when the service cost decreases, the customer satisfaction is enhanced.

### 3.2 Analysis of relationships between customer satisfaction and various logistics costs

According to the activity-based costing method, the services offered by the 3PL enterprises can be divided into different activity centers, and the costs expensed by different activity centers and their contributions to customer satisfaction are different, so the influences on customer satisfaction can be analyzed according to different activity centers. Six enterprises with logistic service outsourcing business were selected to respectively evaluate influences of many factors including distributing, goods processing, order processing, storage service, information processing and problem disposal on the satisfaction. Supposed that the values of various indexes are in the range from 1 to 10, and higher values means higher importance degree, and the scores and reference sequences of various enterprises are seen in Table 2.

The influences of various activity centers on customer satisfaction are taken as the research objectives, and the grey association analysis method (Deng, 1987) is adopted to study the problem.

Above values are nondimensionalized and the result is in Table 3.

Perform the grey correlation analysis for above data in Table 3.

$$\eta(k) = \frac{\min \min |\hat{X}_{(0)}(k) - X_{(0)}(k)| + \rho \max \max |\hat{X}_{(0)}(k) - X_{(0)}(k)|}{|\hat{X}_{(0)}(k) - X_{(0)}(k)| + \rho \max \max |\hat{X}_{(0)}(k) - X_{(0)}(k)|} \quad (1)$$

Where,  $|\hat{X}_{(0)}(k) - X_{(0)}(k)|$  is the absolute error between the  $k$ 'th factor  $\hat{X}_{(0)}(k)$  and  $X_{(0)}(k)$ ,  $\min \min |\hat{X}_{(0)}(k) - X_{(0)}(k)|$  is the minimum difference between two classes,  $\rho$  ( $0 < \rho < 1$ ) is the distinguished rate, and generally  $\rho = 0.5$ .

After compute the correlation coefficient between sequence  $X_{(0)}(k)$  and sequence  $\hat{X}_{(0)}(k)$ , and compute the average value of various correlative coefficients.

$$r = \frac{1}{n} \sum_{k=1}^n \eta(k) \quad (2)$$

The correlations of 6 influencing factors to customer satisfaction and their rankings are seen in Table 4.

Table 4 indicates the ranking of the importance of logistic activity center influencing customer satisfaction is from distributing, storage service, information processing, goods processing, and problem disposal to order processing in turn.

## 4. Conclusions and advices

In the costs of logistic enterprise, the proportions of distributing and storage service are bigger than others', and for the total control cost, the controls about these two aspects will produce effective effects. However, they are the most important factors influencing customer satisfaction, so the relationship should be disposed carefully.

To solve the problem about the logistic costs, the customer satisfaction should be enhanced based on controlling the costs from following aspects.

(1) The all-personnel service concept should be established. First, employees' master consciousness should be established, and the enterprise should make them realize that their thoughts and actions are closely linked with the survival and development of the enterprise. Second, the communication between the enterprise and interior employees should be strengthened, and the enterprise should let employees deeply understand the development objective and task of the enterprise. Third, the education of service consciousness should be strengthened, and the consciousness servicing for clients should be sunk deep into the hearts of the people. Fourth, the employee training should be strengthened and

the ability servicing service should be enhanced.

(2) The communication between the enterprise and the clients should be strengthened. The communication is the important measure to increase understandings and release conflicts and complaints between the enterprise and customers. Good communication can make the enterprise really know customers' real demands and establish target-oriented strategies and methods to fulfill these demands, which can not only effectively enhance customers' satisfactions, but effectively reduce the service cost for the enterprise and fundamentally reduce the cost waste induced by the inefficient services. Regular client communication, complaint mail box and visiting customers regularly are goods measures to communicate with customers.

(3) Different service combinations should be offered to different clients according to the market segmenting results. Aiming at the similar demands in the interiors of various sub-markets, the enterprise should offer consistent service product combination for various enterprises in the sub-market, and aiming at the different demands among different sub-markets, the enterprise should offer different service product combination among various sub-markets. On the one hand, the standardized service aiming at similar demands could largely reduce the production and service cost, and on the other hand, aiming at different demands, the individual service product combination could effectively enhance customers' satisfaction.

(4) The professional operation of the enterprise should be emphasized and the core operation of the enterprise should be cultivated as soon as possible. Michael Porter thought that the difference was one important approach to enhance the competitive force of the enterprise, and professional logistic enterprises should emphasize the cultivation of their core business and establish the image of difference. Quite part Chinese logistic enterprises are from original transportation enterprise and storage enterprises, and they should fully utilize their traditional resources to offer professional services for clients.

(5) The utilization of high-new technologies could also effectively enhance the efficiency of the logistic service and reduce the cost for the enterprises.

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Table 1. Cost accounting table of Company A (unit: Yuan)

Activity center	Money amount of costs	Proportion
Distributing	1024108	40.24%
Goods processing	301582.5	11.85%
Orders processing	31558	1.24%
Storage service	904747.5	35.55%
Information processing	268752	10.56%
Problem disposal	14252	0.56%
Total	2545000	100%

Table 2. Customer satisfaction influencing values of various activity centers

	Distributing	Goods processing	Orders processing	Storage service	Information processing	Problem disposal
Enterprise 1	8	2	4	8	6	5
Enterprise 2	9	5	5	9	8	8
Enterprise 3	8	6	7	10	8	6
Enterprise 4	8	3	5	9	7	6
Enterprise 5	9	5	5	9	6	7
Enterprise 6	8	6	5	8	6	6
Reference $x_0'$	9	6	7	10	8	8

Table 3. Dimensionless data table

	Distributing	Goods processing	Orders processing	Storage service	Information processing	Problem disposal
Enterprise 1	0.89	0.33	0.57	0.8	0.75	0.625
Enterprise 2	1	0.83	0.71	0.9	1	1
Enterprise 3	0.89	1	1	1	1	0.75
Enterprise 4	0.89	0.5	0.71	0.9	0.875	0.75
Enterprise 5	1	0.83	0.71	0.9	0.75	0.875
Enterprise 6	0.89	1	0.71	0.8	0.75	0.75
$x_0$	1	1	1	1	1	1

Table 4. Correlations and ranking of influencing factors

Influencing factor index $x_i$	$x_1$	$x_2$	$x_3$	$x_4$	$x_5$	$x_6$
Correlation degree $r_i$	0.833	0.675	0.6	0.762	0.74	0.652
Ranking	1	4	6	2	3	5

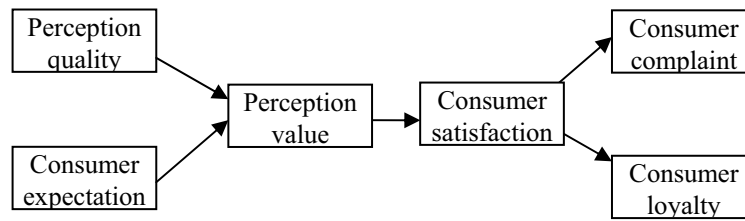


Figure 1. US Customer Satisfaction Index Evaluation Model

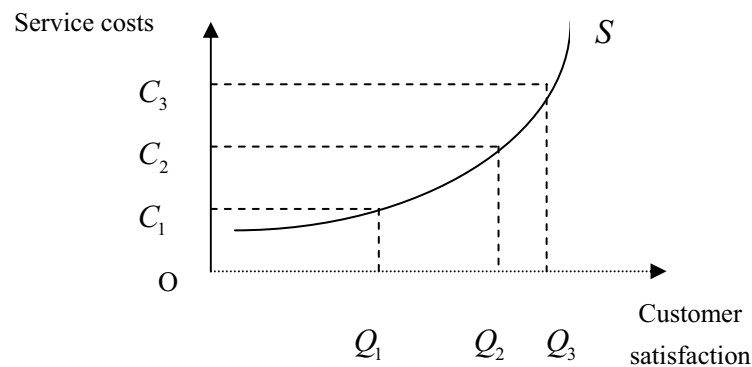


Figure 2. Sketch Map of the Relationship between Logistics Cost and Customer Satisfaction

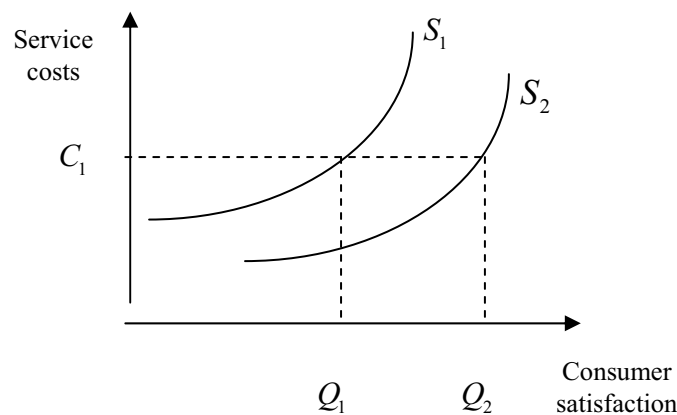


Figure 3. Relationship 1 between Service Cost Change and Customer Satisfaction Change

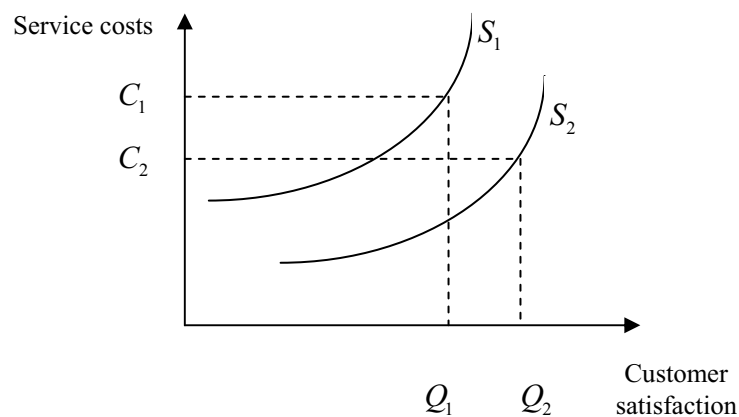


Figure 4. Relationship 2 between Service Cost Change and Customer Satisfaction Change



## An Exploration of the Antecedents and Impact of Imitative Behavior

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### Abstract

Diverse disciplines in management research have explained the imitative behavior of firms and the benefits of imitation in different angles, but the integrated framework and relevant research are limited. This paper proposed a conceptual framework to unravel the imitative behavior, including the antecedents of imitative behavior and the linkage with firm performance. Based on literatures of imitation, this paper proposed three perspectives, namely *competition-oriented*, *information-oriented* and *freerider-oriented* perspectives, to discuss the formation of imitative behavior. Furthermore, the absorptive capacity also played an important role when the firms observe and access relevant outside knowledge about the actions, and may impact the relationship between imitative behavior and performance. Finally, this paper developed several propositions and a conceptual framework to enrich our understanding on imitative behavior.

**Keywords:** Imitative behavior, Competition, Herding behavior, Absorptive capacity

### 1. Introduction

The question of “*Why do firm differ?*” has been discussed in strategic management filed at least two decades, and continuously became the focal point of management research (Rumelt, R., Schendel, D. E., & Teece, D. T. 1994). According to resource-based view (RBV), firms in the same industry perform different because firms differ in terms of the resources and capabilities they control (Barney, J. 1991; Wernerfelt, B. 1984). Therefore, firms are those with bundles of resources and capabilities and make them perform differently. This explanation regards the differences between firms as the *endogenous* factors, and ignores the interaction among firms in the competitive and quickly changing environment.

Afterward some scholars focus on the dynamic market process that initiated by Schumpeter (Schumpeter, J. 1934), and concern about the micro competitive behavior. They care about the competitive process which included actions and responses between firms. Since firms act within the context including group, industry, general environment, and social system, firms can not behave and make decisions without considering the actors beside them. This phenomenon, interactions of inter-firms, has been paid attention to and a number of research have concerned about. In the social science field, imitative behavior has been stressed by sociological, psychological, and economic theories. According to economic theories, such as resource-based view and approach of competitive position, firms are heterogeneous with distinctive resources and should seek unique market niche and position to obtain better performance and advantages. In reality, imitative behavior indeed exists, such as technological adoption, administrative fad or fashion, as well as foreign direct investment. However, little is known about the reasons why firms imitate each other and how does imitative behaviors generate.

In economics theory, firms' behavior should base on efficient consideration. Profits, performance, or competitive advantages are targets which firms' action and strategy seeking for. Firms imitate the other firms' action, obtain relevant information and knowledge through observing. In addition, how firms assimilate and transform outside knowledge into commercial ends depends on the learning mechanism and absorptive capacity. Therefore, the level of absorptive capacity of a focal firm conditions the success of exploiting and learning outside knowledge.

The purpose of this study is to unravel the imitative behavior including why firms imitate each other and how imitative behavior generates performance. This study starts off based on economic foundations, and proposes three perspectives, *competition-oriented*, *information-oriented* and *freerider-oriented*, to analyze the antecedents of imitative behavior. Furthermore, since learning mechanism and capacity of a firm determine how outside knowledge are assimilated, transformed and combined to successful outcomes, this paper reviews learning literature and stresses the importance of absorptive capacity. Besides, this paper discussed the imitative behavior through observation rather than any

cooperative interactions. In other words, there is no collude, alliance or cooperation relationships among firms.

## 2. Literature review

This paper first reviewed the literatures of antecedents of imitative behavior. On the second section, organizational learning theory and absorptive capacity are also illustrated as follows.

### 2.1 Antecedents of imitative behavior

Why do firms imitate each other? What are the reasons that firms' behavior tend to be convergent? This paper proposed three perspectives, namely competition-oriented, information-oriented, and freerider-oriented perspectives.

#### 2.1.1 Competition-oriented perspective

Industrial organization economics is the main stream of business competitive strategies. In this stream of research, the scholars of Harvard school such as Bain, Mason, and the following significant researchers, Cave and Porter, emphasized on the relationship among structure –conduct–performance (Bain, J. S. 1956; Caves, R. E. & Porter, M. E. 1977; Mason, E. 1957). These researchers demonstrated that firms' behavior is influenced by industrial structure, such as the amount of buyers and sellers, and the entry barriers. Furthermore, the firms' conducts would change the original structure and relative positions amongs firms.

Because market structure determines the conducts of the firms, the focal firm concerns about its strategy relative to the competitors, and game-theoretical techniques provide an analytic modeling of the critical issue (Saloner, G. 1991; Schmalensee, R. 1988). Game-theoretical tool emphasizes on the imperfect competition rather than perfect competition, the firm's action must consider what rivals acted and what rivals may respond to the attacks.

Firms operate in the same industry, namely the same end product market, are direct competitors. Hence behavior of competitors is the reference when a firm undertakes a strategy and makes a decision. Competitive moves by one firm have visible effects on its competitors and thus may incite retaliation or counter the move (Porter, M. E. 1980). In Porter's point of view, firms are interdependence, and imitative behavior, reactions, and responses most likely occur in an oligopolistic market (Chen, M.-J. & Miller, D. 1994). When one firm acts, the other firms would act to respond due to maintenance of its market position.. Awareness of mutual interdependence increases the likelihood that a firm will respond to neutralize the effect of rival's moves and deter further attacks (Chen, M.-J. et al. 1994).

On the other hand, the geographic proximity of firms increases the opportunity for direct observation of competitors (Burt, R. S. 1987; Pascal, A. H. & McCall, J. J. 1980), thus may intensify local competition. Some researchers proposed the imitative behavior is induced by maintenance of relative competitive position of the firms. For example, bunching of foreign direct investment may also induced by competitive pressure.

In the close competitive relations, market shares reduction cause firms to fall below their status quo (Kahneman, D. & Tversky, A. 1979), risk-taking behavior and the likelihood of making changes thus increase (Greve, H. R. 1998). Firms generally respond to challenges in the market by making competitive counterattacks (Chen, M.-J. et al. 1994), and the behavior of the firms within an industry tends to be convergence.

#### 2.1.2 Information-oriented perspective

Informational cascade is a stem of behavior theory explores situations when an economic decision maker acts depends on what it observed. An informational cascade occurs when a decision maker has observed the actions of those ahead of him and then follow the behavior of the preceding decision makers rather than his own information (Bikhchandani, S., Hirshleifer, D., & Welch, I. 1998; Bikhchandani, S., Hirshleifer, D., & Welch, I. 1992). The imitative behavior occurs by observing preceding actions, and herding behavior is taken place (Banerjee, A. V. 1992).

Bikhchandani, Hirshleifer and Welch (1992) elaborated that everyone doing what everyone else is doing, even when their private information suggests doing something quite different. The first decision maker behaves purely based on her prior belief, but the behavior reveals his private information to followers. As this revealed information accumulates, it is rational for followers to ignore their own information and mimic the decisions of others they observed (Banerjee, A. V. 1992). Informational cascades make behavior convergence since gathering information is costly. Through observing what actions have been undertaken when the decision maker faces similar decision problems is costless (Bikhchandani, S. et al. 1998).

According to the foregoing discussions, informational cascades imply some assumptions as follows. First of all, decision makers are rational in the model. Decision makers think the others act prior to them with some information that is important for him (Banerjee, A. V. 1992). Second, decision makers can observe and obtain *perfect information*. When decision maker faces similar decision problems, gathering all alternative information is costly. Therefore, observing the others' actions and follow them is an efficient strategy. Third, decision makers confront *uncertain environment*. Informational cascades occur more easily when decision makers are quite uncertain whether the correctness of his judgment (Deutsch, M. & Gerard, H. B. 1955) and the previous failure in a task (Thelen, M. H., Dloinger, S. J., & Kirkland, K. D. 1979).



In the cascade, previous-actions observable (PAO) regime is more important than previous-signals observable (PSO) regime (Bikhchandani, S. et al. 1992). Since “*actions speak louder than words*”, firms obtain the relevant information by observing the actions. Therefore, a cascade starts by PAO would lead greater uniformity of behavior. On the other hand, since PSO joins the common pool of knowledge, a long enough series of opposing signals will eventually make decision makers’ behavior switch (Bikhchandani, S. et al. 1992).

One important point of informational cascades is that decision makers do not concern about the amount of information. Instead, they care about the sequence of information receiving. In the informational cascade model, the order is exogenous and the level of precision differs between decision makers. It is plausible that the highest-precision individual will act first, and a low-precision decision maker will imitate a higher-precision predecessor. Decision makers differ not only by their position in the queue, but also by the signal they privately observe.

Several attributes of informational cascades should be noted. First, the convergence of behavior is fragile. Since informational cascades are triggered by a small amount of original information, they can be reversed by a little information. Therefore, the fads and convergence of behavior are volatile. Second, the information cascades might be wrong. Decision makers observed what prior decision makers’ doing without their own private information, once the prior decision makers make wrong decision, the conformity of behavior may not increase the benefit of all actors.

### 2.1.3 Freerider-oriented perspective

In micro-level analysis, all of the individual members of a given group can benefit from the efforts of each member and all can benefit substantially from collective action. This externality, or external effect, occurs because the characteristics of “public goods”.

The diffusion (Rogers, E. M. 1995) or spillover of innovation (Spence, M. 1984) may erode the profits the early adopters own, the adopters establish the protection mechanism, such as patents, to avoid the “free-rider problem”. However, late comers could observe the outcome or performance of early actors and decide whether to adopt, and obtain the “free-rider effects”. These implications of free-rider effects can be observed in the form of information spillover in R&D (Spence, M. 1984), productivity improvements (Ghemawat, P. & Spence, M. 1985), or the diffusion of administrative technologies (Abrahamson, E. 1991).

The diffusion of innovation literature explored the process and the contextual factors of innovations’ rates of diffusion. Rogers (1995) defines diffusion as the process by which an innovation is communicated through certain channels over time among the members of a social system. According to his definition, diffusion must include four parts: innovation, communication channels, time, and social system. Therefore, the diffusion occurs within society and may spread through all social actors.

The second literature of free rider effect is the network externality (Katz, M. L. & Shapiro, C. 1986; Katz, M. L. & Shapiro, C. 1985). The perceived value and utility of a user is increased by the amount of the agents consuming the product (Katz, M. L. et al. 1986; Katz, M. L. et al. 1985). The more the amount of consumers derives the higher the utility of the user. As the higher perceived value or utility increases, users transmit the positive feedback to the network. Thereafter, this feedback induces firms to follow the technological standard, produce more standard products, and generate the network externality (Katz, M. L. et al. 1986; Katz, M. L. et al. 1985). The positive payoff externalities make late comers enjoy the free-rider effects, and follow the actions since the formers obtain outstanding outcome and better performance.

Although the formers can protect the benefits from the other through technological ownership plan or patents, the technological spillovers and the unveiled outcomes can also make firms imitation and adoption. Because imitation cost are lower than innovation costs in most of cases (Lieberman, M. B. & Montgomery, D. B. 1988), and “follow the leader” can minimize risk as well (Knickerbocker, F. T. 1973), firms would tend to observe the superior and outstanding performance and imitate them. The ability of perception and copy fruitful products or practices effectively from the others is the source of the second-mover advantage (Teece, D. J. 1986).

Lastly, this paper compared three perspectives by the assumptions, the contents of imitation, and the objectives of imitation to improve the understanding of imitative behavior.

**(Insert Table 1 here)**

### 2.2 Organizational Learning Theory

Organizational learning theory has become an important literature in management research. Organizational learning is routines-based, history-dependent, and target-oriented (Levitt, B. & March, J. G. 1988). Organizations can learn from direct experience through trial-and-error experimentation and organizational search, or learn from the experience of others (Levitt, B. et al. 1988). Furthermore, organizational routines are repeatedly invoked and socially constructed programs of action that embody the knowledge, capabilities, belief, values, and memory of the organization and its decision makers (Nelson, R. R. & Winter, S. G. 1982). Choice and actions encoded in routines are more likely to be attended to and accepted by organizational members and decision makers.

Learning has been distinguished in terms of dichotomous typologies, such as lower-level learning versus higher-level learning (Fiol, C. M. & Lyles, M. A. 1985), double-loop learning versus single-loop learning (Argyris, C. & Schon, D. 1978), and exploitation learning versus conceptual learning (Kim, D. 1993). To enrich the understanding of organizational learning, Huber (1991) proposed four constructs, knowledge acquisition, information distribution, information interpretation, and organizational memory, and linked the constructs with organizational learning. In addition, the learning process carried out by the processing of information of a focal firm, and may cause behavior to change (Huber, G. P. 1991). The key of organizational learning theory is to discover how information and knowledge are transformed and shared within a firm, and how behavior changed through learning process.

Prior research has suggested that organization not only hold specialized knowledge but also have the opportunity to learn from other units (Huber, G. P. 1991; Levitt, B. et al. 1988). A firm may intend to obtain knowledge from the other firms, but may fail to do so. Even though the knowledge and information is available, the organization may fail to catch the knowledge as a result of lower absorptive capacity (Tsai, W. P. 2001).

The ability of a firm to recognize the value of outside sources of knowledge, assimilate and apply knowledge to commercial ends is a critical determinant of the success of organizational learning. The abilities collectively constitute what we called a firm's "absorptive capacity" (Cohen, W. M. & Levinthal, D. A. 1990). Afterward Zahra and George (2002) reviewed relevant literatures and reconceptualized absorptive capacity for four dimensions: acquisition, assimilation, transformation, and exploitation (Zahra, S. A. & George, G. 2002). In the framework, the dynamic learning process contains assimilating external information and knowledge, transmitting and combining existing internal knowledge, and creating performances and advantages. Nonaka and Takeuchi (1995) illustrated organizational learning is the process of knowledge creation. The process covers socialization, externalization, combination, and internalization, and then generates the spiral of knowledge (Nonaka, I. & Takeuchi, H. 1995).

The ability of a firm absorbs and learns determined by the characteristics of knowledge and structures of organization. In a young or new organization, knowledge structures are simple, thus the outside knowledge is easily to assimilate and to embed in organizational routines. On the other hand, the parent firms play an important role for transferring knowledge in the international joint ventures (Lyles, M. A. & Salk, J. E. 1996). The communication system within a firm, such as organization structure or organizational forms, will influence knowledge sharing, transferring, and exploiting in an organization.

### 3. Conceptual framework and propositions

In this section, the paper proposed a conceptual framework of imitative behavior, including the antecedents of imitative behavior and the implication of imitation.

#### 3.1 Antecedents of imitative behavior

The process of decision making in an uncertain environment involves a cycle of environmental scanning, interpretation, and learning (Daft, R. L. & Weick, K. E. 1984). Decision makers scan and observe environmental change, and exploit, learn or change the future actions. Based on the foregoing literature review, this paper proposed two constructs of the attributes of observing, *structure* and *target* constructs.

##### 3.1.1 Attribute of Structure and Imitative Behavior

One firm is visible to its competitors may induce the other firms' retaliation and counter in a given industry (Porter, 1980). In the interdependent relations, imitative behavior, reactions, and responses are likely to occur in an oligopolistic market (Chen, M.-J. et al. 1994). Game-theoretical tool emphasizes on imperfect competition rather than perfect competition due to former shows the higher level of interdependence. Firm's actions are influenced by its rivals' actions, thus one firm would consider what its rivals' behavior and make respond. Awareness of mutual interdependence increases the likelihood that a firm responds to neutralize the effect of rival's moves and deter further attacks (Chen, M.-J. et al. 1994). Firms may imitate their rivals for fear of losing market position when undertaking strategies differ from the competitors.

Hence, the higher the concentration ratio represents the higher level of mutual interdependence. Once firms are aware with the higher level of mutual interdependence, the imitative behavior is likely to be induced. Thus:

*Proposition 1: The greater the extent of concentration ratio in an industry, the higher the level of imitative behavior.*

Location near each other makes observation and the transit of information easier (Greve, H. R. & Taylor, A. 2000). When competitors take actions nearby, the actions may threaten the established ranking of market position and reduce the market share that a focal firm already owned (Greve, H. R. et al. 2000). The reduction of market shares cause firms to fall below their status quo (Kahneman, D. et al. 1979), and induce firms to counter the challenges by undertaking the similar actions (Chen, M.-J. et al. 1994). Besides, the geographic proximity of firms enhances direct observation of competitors (Burt, R. S. 1987; Pascal, A. H. et al. 1980), thus the level of proximity may intensify local competition.

According to informational cascades perspective, On the other hand, decision maker observes decision-making of prior

maker and follows the information rather than its private one (Bikhchandani, S. et al. 1992). As the actor is nearby, the late comer can easily observe and obtain the prior information in facing the similar problems. The situation also occurs in the spillover or diffusions. The actions and outcome can be observed and diffused quickly in the neighborhood. Thus:

*Proposition 2: The greater the extent of proximity of actors, the higher the level of imitative behavior.*

### 3.1.2 Attribute of Imitatee and Imitative Behavior

When the actor is large or successful, the threat becomes salient (Greve, H. R. et al. 2000). Prior movers with high domestic shares will be more likely to elicit fast competitive responses (Chen, M.-J. et al. 1994).

In the herding behavior, a low-precision decision maker will imitate a higher-precision predecessor because of uncertainty and previous failure in a task (Bikhchandani, S. et al. 1992; Deutsch, M. et al. 1955; Thelen, M. H. et al. 1979). Therefore, the reputation and high-status of large firms could be viewed as appropriate reference point in an uncertain environment.

In the literature of spillovers, diffusions and externalities, successful and large firms are regarded as a signal of the prior actions. Rogers (1995) proposed that high-status opinion leaders will have special influence because the others want to be affiliated with their status. Organizations may seek to acquire status by imitating higher-status organizations and those are usually large and successful firms (Fombrun, C. & Shanley, M. 1990). Hence:

*Proposition 3: The greater the market shares of prior actors, the higher the level of imitative behavior that late comer will undertake.*

The more visible a threat, the more likely that it would be detected and responded to (Kiesler, S. & Sproull, L. 1982). If actions of rivals are vague and unobvious, firms may ignore and reduce the probability of response (Chen, M.-J. et al. 1994). The more visible the actions, the late comers can easily observe and perceive the existing threat, and more likely to take actions.

On the other hand, perspective of informational cascades illustrate that follow the previous-actions rather than the signals since information conveyed by actions (Bikhchandani, S. et al. 1992). Firms can obtain the information of the similar decision and learn by observing. Once the actions of prior decision maker are obvious, the firms can easily observe the actions with less cost, and the conformity of behavior occurs.

In addition, researchers of diffusion also proposed when innovation is observability, late mover is likely to adopting (Rogers, E. M. 1995). The firms observe and imitate the actions which prior adopter or actor has superior outcome in the search process. The visibility of actions makes firms perceive the existence of benefits and also make them clarify the detailed actions to minimize risk. Thus:

*Proposition 4: The greater the extent of visibility of actions that prior actors operate, the higher the level of imitative behavior that late comer will undertake.*

### 3.1.3 Relationship between imitative behavior and performance

The sources of competitive advantage of a firm can be stated in two parts: one is exploitation of particularly favorable combinations of initial conditions and positions to match their environment, and the other one is erosion of these rent as competitors catch up by imitating the successful strategies of market leaders (Cockburn, I., Henderson, R., & Stern, C. 2000). Therefore, firms can obtain competitive advantages through imitating successful and leader firms (Cockburn, I. et al. 2000).

The entry timing of firms has been discussed in the prior research. Late mover or late entrants can observe the actions and strategies of early movers, and imitate those outcomes or more success. This condition facilitates late mover advantages (Shankar V., Carpenter, G., & Krishnamurthi, L. 1998), and thus make imitators obtain superior performance. Hence:

*Proposition 5: The greater the extent of imitative behavior that a focal firm adopts, the higher the level of organizational performance.*

Although imitation may cause firms to obtain abnormal performance and competitive advantage, absorptive capacity of a firm is likely to moderate the impact of imitative behavior on performance. Although observing other firms' actions provides important access to new knowledge and information and inducing a firm to imitate the other firms, its impact on firm's performance may rely on the extent of the firm absorbs such new knowledge. A firm may be able to observe and access relevant information about the actions, but may fail to enhance its performance if the focal firm without capacity to absorb. Organizations must have absorptive capacity to assimilate new knowledge and generate better off outputs (Tsai, W. P. 2001). Without such capacity, firms can not learn or transfer knowledge from outside to inside.

Once firms have superior absorptive capacity, the outside knowledge can be assimilated and transformed well, and easily combined it with existing knowledge and obtain better performance. In the contrast, if firms cannot assimilate and transmit outside knowledge into the organization, firms may only perform similar strategy rather than create

commercial ends and gain abnormal returns. Hence,

*Proposition 6: The imitative behavior of a focal firm is positively related to organizational performance when a firm has higher level of absorptive capacity.*

Cohen and Levinthal (1990) suggested organizational absorptive capacity not only depends on the organization's direct interface with the external environment, but also depends on transfers of knowledge across and within subunits. The sharing and transmitting mechanisms are critical for organizational learning. A number of researchers have proposed the sources of absorptive capacity, such as structure of communication system, the character and distribution of expertise (Cohen, W. M. et al. 1990), organization forms, and combinative capabilities (Van den Bosch, F., Volberda, H. W., & de Boer, M. 1999). Based on the arguments, this paper proposed two constructs of absorptive capacity: diversity of knowledge and complexity of organizational structure.

According to perspectives of organizational learning and absorptive capacity, characteristic of knowledge and communication system of a firm influence the firm to assimilate outside knowledge, transmit and create new application to commercial ends. The knowledge structure affects knowledge sharing and communication since the relevant backgrounds induce the actors sharing language and symbols (Allen, T. J. & Cohen, S. D. 1969; Cohen, W. M. et al. 1990). If all actors in the organization share the same specialized language and symbols, they will increase the effects of communication with each other (Cohen, W. M. et al. 1990).

While overlap of knowledge among individuals is necessary for internal communication, there are some benefits induced by diversity of knowledge (Cohen, W. M. et al. 1990). Diverse knowledge structures coexisting in the same mind elicit the sort of learning and problem solving which facilitate innovation (Simin, H. A. 1985). The less diverse knowledge can ensure sufficient communication among individuals, however, high diverse knowledge may facilitate new link among them and yield new creation and innovation. As a result, firms should balance the tension of the forces in order to facilitate higher absorptive capacity. Therefore:

*Proposition 6a: Absorptive capacity will influence the relationship between imitative behavior and performance through diversity of knowledge. The moderate level of diversity of knowledge will increase the influence of imitative behavior on performance.*

A number of researchers proposed that the communication system, organization forms, or organizational structure will influence the transmitting of information and knowledge (Cohen, W. M. et al. 1990; Galbraith, J. R. 1977; Tushman, M. L. & Nadler, D. A. 1978; Van den Bosch, F. et al. 1999). The structure of an organization will become the major influence on the absorptive capacity and learning mechanism. When structural complexity increases, the probability that the information and knowledge being transmitted will be distorted or blocked totally (Galbraith, J. R. 1977).

A flexible organizational structure and approach to management is thought to be associated with higher capacities for knowledge acquisition (Dodgson, M. 1993; Lyles, M. A. et al. 1996), and make outside knowledge can transfer inside easily. Organizational flexibility promotes absorptive capacity and the knowledge transfer process by encouraging greater receptivity of organizational members to new stimuli from the outside, and enhances sharing and exchanging of information within the organization.

For example, a field salesperson who has learned about a competitor's move from a customer may inform the area sales manager, who may modify, delay, or block the transmission of this information to the next level of the organization, and so on (Smith, K. G., Grimm, C. M., Gannon, M. J., & Chen, M. J. 1991). Even if the information finally reaches the relevant decision maker, it may be too distorted to be useful. This problem of information processing could be also occurred in the knowledge sharing and transferring, thus may not only cause the communication system inefficient, but also make absorptive capacity of organization reduced. Thus:

*Proposition 6b: Absorptive capacity will influence the relationship between imitative behavior and performance through structural complexity. The higher level of structural complexity will reduce the influence of imitative behavior on performance.*

The conceptual framework and propositions are presented in figure 1.

**(Insert Figure 1 here)**

#### **4. Conclusions and future research**

This paper is to unravel the process of imitation, which includes why firms imitate each other and how imitative behavior generates performance. This paper illustrates the antecedents of imitative behavior based on economic foundations, and proposed competition-oriented, information-oriented and freerider-oriented perspectives of imitative behavior. Furthermore, this paper proposed absorptive capacity would moderate the influence of imitative behavior on performance based on diversity of knowledge and structural complexity.

First of all, this paper contributes to the literatures of imitative behavior, and proposes a conceptual framework to promote the understanding of imitation in the management research. Second, this paper make linkage of imitative

behavior and performance which less paid attention to in the prior research.

In addition, this paper suggests future research to explore the relationships by diverse case studies in the first. Through detailed case studies, the research can define specific variables and develop operational definitions and measurable indicators of these variables to undertake empirical test.

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Table 1. Integration of competition-oriented, information-oriented, and freerider-oriented perspectives toward the antecedents of imitative behavior

Theoretical perspective	Assumptions	Contents and actions			Objective of imitation
		(Who) Imitater	(What) Target	(Action) Method	
<b>Competition-oriented</b>	<ul style="list-style-type: none"> <li>Bounded rationality</li> <li>Uncertainty</li> <li>Maximization of shareholders wealth</li> </ul>	Close competitors	Decisions which may erode the profit or change the relative position	<ul style="list-style-type: none"> <li>Observing</li> <li>Guessing</li> </ul>	<b>Indirect profits</b> (Stabilize relative positions)
<b>Information-oriented</b>	<ul style="list-style-type: none"> <li>Rational</li> <li>Perfect information</li> <li>Uncertainty</li> <li>Risk Aversion</li> </ul>	Prior decision maker	As facing similar decision problems	Observing	<b>Indirect profits</b> (Reduce costs of gathering information on decision-making)
<b>Freerider-oriented</b>	<ul style="list-style-type: none"> <li>Imperfect information</li> <li>Uncertainty</li> <li>Risk aversion</li> </ul>	Firms who are success or has superior outcome	<ul style="list-style-type: none"> <li>Public information</li> <li>Actions or decisions which can obtain superior outcome</li> </ul>	Observing	<b>Direct profits</b> (Obtain notable outcome)

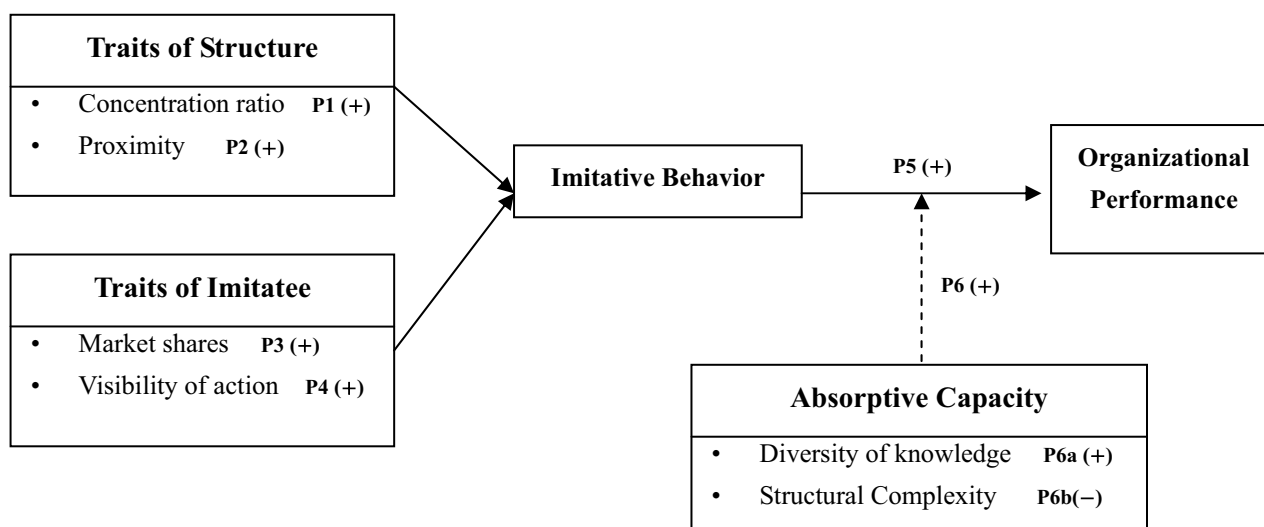


Figure 1. Conceptual framework



## Study on the Allocating and Planning of Brands and Goods

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### Abstract

By the field survey, we obtained corresponding data, and established the mathematical model by the analytical hierarchy process (AHP). The mathematical model was used to analyze the rationality of the brand introduction and goods allocating and planning in the marketplace in order to enhance the competitive level of the business area, offer more shopping choices when promoting citizens' purchasing power, exert the advantage of the business area to the largest extent, generate the maximum benefit and ensure the win-win in the same types of operation.

**Keywords:** Business area, Brand, Goods allocation, Analytical hierarchy process (AHP)

The marketplace allocation of a mature business area should be well-proportioned, and possess different marketplace orientations, and avoid the repetition of same-class marketplace, or else, the over duplicate goods will influence of the ordered competition of the sale. How to reconstruct the new order of the business area and integrate the new skeleton of fortune has become the inevitable problem of the orienting and updating of the business area. Taking the central business street, Binjiang Street in Tianjin of China, as the example, we used four marketplaces on the same class as the research samples, and applied the mathematical model to analyze the rationality of the marketplace allocation. If the differences among marketplaces are obvious and irreplaceable, these marketplaces can be flourishing together completely, or else, the market competition will wash out the weaker one.

### 1. Brand amount and type statistic in various marketplaces

The amount statistic and occupancy rate of different types of brand in various marketplaces are respectively seen in Table 1 and Figure 1.

From the survey result, all marketplaces all emphasize the type of suit-dress, then the type of clothing and the type of sportswear.

### 2. Analysis of goods in different marketplaces

#### 2.1 Analysis of occupancies of different brands in various marketplaces

The occupancies of different brands in various marketplaces are seen in Figure 2.

From the statistical data, the amount of the exclusive brands in the Quanyechang Mall is the most, and the Youyi New Land and Binjing Mall take the second place.

#### 2.2 Applying the mathematical model to analyze the rationality of the marketplace allocation

AHP was first formally proposed by American operational researcher T. L. Saaty in the middle of 1970s. It is a sort of systematic and layered analysis method combining quantitative method and qualitative method. Because of its practicability and validity to process complex decision problem, it is quickly concerned in the world. AHP can not only be applied in the situation with uncertainty and subjective information, but be allowed to use experiences, insights and intuitions by the logic mode. The biggest advantage of AHP may is that it put forward the hierarchy, and it makes the observer can seriously consider and measure the importance of the index.

#### 2.3 Establishment of recursive hierarchy model

According to the decision objective of "optimal rationality", we first divide the influencing factors into two sorts. The first sort is the interior factors which includes the floor layout, shopping environment, orientation, pricing and floor. The second sort if the exterior factors, i.e. the region factor. Confirm the exterior factor weight and the interior factor weight of each marketplace in all surveyed marketplaces by the principle of AHP, and compute their ratios, i.e. the "relative rationality". The hierarchy model of four marketplaces is established in Figure 3.



## 2.4 Paired comparison of the constructions of judgment matrix

After establish the relative rationality hierarchy, we need confirming a comparison judgment matrix dominated by upper factors which are the rules of lower factors. According to the proportion nine-scale method (seen in Table 2) proposed by Professor T. L. Saaty, judge the importance of above six rationality rules, and respectively establish the comparison judgment matrixes of the rule layer to the objective layer and the project layer to the rule layer in the relative rationality hierarchy (seen in Table 3~Table 9, and the symbols in various tables correspond with the symbols in the relative rationality hierarchy model).

## 2.5 Computation and consistency check of relative ordering weights of factor under single rule

### 2.5.1 Hierarchically single ordering

The methods to solve the ordering weights of various factors include the line sum method, the square root method and the sum product method, and we adopt the square method to compute the weights.

(1) Compute the geometric average value  $G_i$  of the matrix (M) line by line.

$$G_i = \sqrt[n]{\prod_{j=1}^n a_{ij}} \quad (i \text{ is the line number, } i=1, 2, \dots, n)$$

(2) Standardize  $G_i$ , and obtain the weight  $W_i$ .

$$W_i = G_i / \sum_{i=1}^n G_i \quad (i = 1, 2, \dots, n)$$

$W = (W_1, W_2, \dots, W_n)^T$  is the weight vector of the computation.

(3) Compute the maximum latent root of the judgment matrix,  $\lambda_{\max}$ . (Serve the consistency check).

$$\lambda_{\max} = \frac{1}{n} \sum_{i=1}^n \frac{(MW)_i}{W_i} \quad (i=1, 2, \dots, n)$$

Where, MW denotes the new vector obtained by the product of the judgment matrix M and the weight vector W, and MW<sub>i</sub> is the i'th factor of MW.

### 2.5.2 Consistency check

When establishing the judgment matrix, because of the complexity of objective things and the limitation of human judgment ability, the contradiction will inevitably occur in the judgment process of importance for various factors, for example, when judging the factor  $x/y=1:4$  and  $y/z=1:2$ , the situation of  $x/z=1:3$  may occur. So we need implementing the consistency check for the judgment matrix to test the rationality of the judgment matrix and the weight vector from the matrix. We generally use the consistency ratio index, CR, to test the rationality, and the formula is  $CR=CI/RI$ .

In the formula,  $CI = (\lambda_{\max} - n) / (n - 1)$  is the consistency index, RI is the average random consistency index, and both of them are confirmed by large numbers of tests. Part values of the random consistency index RI are seen in Table 10. When  $CR < 0.1$ , the inconsistency degree of the matrix can be accepted, or else, we need reconstruct the judgment matrix or make necessary adjustment.

Through calculation, we can obtain the weight vectors and consistency test results of above six judgment matrixes (WB denotes the weight vector of the rule layer to the objective layer, and  $W_j^C$  denotes the weight vector of the project layer to the j'th rule).

(1) Comparison among various rules.  $W_{\text{rationality}} = (0.6250, 1.8750, 1.2500, 3.7500, 4.3751, 3.1251)^T$ ,  $\lambda_{\max} = 6.0000552$ ,  $CI = 0.000011$ ,  $CR = 0.0000089 < 0.1$ . In five exterior influencing factors, the brand repetition rate is the most important factor, then the orientation and the brand amount.

(2) Comparison among various projects.

a. Region.  $W_{\text{region}} = (5.1189, 1.7063, 1.7063, 3.4127)$ ,  $\lambda_{\max} = 3.9999625$ ,  $CI = 0.0000125$ ,  $CR = 0.000013 < 0.1$ .

b. Shopping environment.  $W_{\text{shopping environment}} = (1.2, 1.6, 0.4, 0.8)$ ,  $\lambda_{\max} = 3.9999813$ ,  $CI = 0.0000062$ ,  $CR = 0.0000065 < 0.1$ .

c. Floor layout:  $W_{\text{floor layout}} = (1.2, 0.4, 0.8, 1.6)$ ,  $\lambda_{\max} = 3.999925$ ,  $CI = 0.000025$ ,  $CR = 0.000026 < 0.1$ .

d. Orientation:  $W_{\text{orientation}} = (1.2, 1.6, 0.4, 0.8)$ ,  $\lambda_{\max} = 3.9999813$ ,  $CI = 0.0000063$ ,  $CR = 0.0000065 < 0.1$ .

e. Brand repetition.  $W_{\text{brand repetition}} = (3.9, 5.2, 2.6, 1.3)$ ,  $\lambda_{\max} = 3.9999812$ ,  $CI = 0.0000063$ ,  $CR = 0.0000065 < 0.1$ .

f. Brand amount.  $W_{\text{brand amount}} = (1.6, 1.3, 1.2, 0.8)$ ,  $\lambda_{\max} = 3.9997$ ,  $CI = 0.0001$ ,  $CR = 0.0001042 < 0.1$ .

From the computation results of CR, the consistencies of six matrix is very good, and they all pass the consistency check, so we can think these six judgment matrixes and weight vectors are all reasonable.

### 3. Computations of exterior factor weight and interior factor weight

The integrated weights of various projects in the project layer to the rationality objective layer are computed by the weights of two layers (the project layer to the rule layer, and the rule layer to the objective layer) with the weighting method, and the exterior factor weight formula of each project is

$$X_i = \sum_{j=1}^5 W_{ji}^C W_j^B \quad (i \text{ is the project No., } i=1, 2, 3)$$

Where,  $X_i$  denotes the exterior factor weight of the  $i$ 'th project,  $W_{ji}^C$  denotes the weight of the  $i$ 'th project to the  $j$ 'th rule, and  $W_j^B$  denotes the weight of the  $j$ 'th rule to the relative rationality objective. And the matrix is  $Z = (33.5124, 37.3796, 19.4418, 16.8206)$ .

So the marketplace with the highest rationality is Youyi New Land.

### 4. Conclusions

From the result of this article, the allocating and planning of Youyi New Land is reasonable comparatively, and in the marketplace, the occupancy rate of the exclusive brand is the highest one, and according to the investigators' observation, even for the brands common with other marketplaces, its allocation of goods is largely different. In the final analysis, Youyi Mall could correctly orientate the marketplace, process the relation between the brand orientation and goods allocation, exhibit them perfectly in front of consumers, intensively attract consumers' attentions and achieve the sales intention. In the survey, some problems about the shopping centre such as the insufficient pertinence of marketplace orientation and differences of goods allocation all should be improved further. In various business forms, the special business circle possesses the strongest life-force. For any business area, with its characteristic, it will come down and aging quickly and no more people will focus on its development. To further develop itself, Chinese business area must have its characteristics.

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Table 1. Amount statistics of the brands with different types in various marketplaces

Mall	Type	Clothing	Suit-dress	Men's wear	Sportswear	Children's wear	Home textile
Quanyechang Mall		24%	42%	14%	10%	6%	4%
Hualian Mart		24%	32%	15%	20%	6%	3%
Youyi Newland Mart		32%	17%	19%	22%	7%	3%
Binjiang Mansion		23%	41%	13%	14%	5%	4%

Table 2. Satty proportion nine-scale system

Scale	Meaning of comparison
1	The $i$ 'th factor is same important with the $j$ 'th factor
3	The $i$ 'th factor is little more important than the $j$ 'th factor
5	The $i$ 'th factor is obviously more important than the $j$ 'th factor
7	The $i$ 'th factor is much more important than the $j$ 'th factor
9	The $i$ 'th factor is extremely more important than the $j$ 'th factor
2, 4, 6, 8	The importance of comparison between $i$ and $j$ between paired scales
Reciprocals of above numbers	The judgment scale of the comparison between $i$ and $j$ is $a_{ij}$ , and the judgment scale of the comparison between $j$ and $i$ is $a_{ji}=1/a_{ij}$

Table 3. A-B judgment matrix (for the total objective of relative rationality, compare the relative importance among various rules)

A	B1	B2	B3	B4	B5	B6
B1	1	1/3	1/2	1/6	1/7	1/5
B2	3	1	3/2	1/2	3/7	3/5
B3	2	2/3	1	1/3	2/7	2/5
B4	6	2	3	1	6/7	6/5
B5	7	7/3	7/2	7/6	1	7/5
B6	5	5/3	5/2	5/6	5/7	1

Table 4. B1-C judgment matrix (for the rule of region, compare the rationality among various projects)

B1	C1	C2	C3	C4
C1	1	3	3	3/2
C2	1/3	1	1	1/2
C3	1/3	1	1	1/2
C4	2/3	2	2	1

Table 5. B2-C judgment matrix (for the rule of shopping environment, compare the rationality among various projects)

B2	C1	C2	C3	C4
C1	1	3/4	3	3/2
C2	4/3	1	4	2
C3	1/3	1/4	1	1/2
C4	2/3	1/2	2	1

Table 6. B3-C judgment matrix (for the rule of floor layout, compare the rationality among various projects)

B3	C1	C2	C3	C4
C1	1	3	3/2	3/4
C2	1/3	1	1/2	1/4
C3	2/3	2	1	1/2
C4	4/3	4	2	1

Table 7. B4-C judgment matrix (for the rule of orientation, compare the rationality among various projects)

B4	C1	C2	C3	C4
C1	1	3/4	3	3/2
C2	4/3	1	4	2
C3	1/3	1/4	1	1/2
C4	2/3	1/2	2	1

Table 8. B5-C judgment matrix (for the rule of brand repetition rate, compare the rationality among various projects)

B5	C1	C2	C3	C4
C1	1	3/4	3/2	3
C2	4/3	1	2	4
C3	2/3	1/2	1	2
C4	1/3	1/4	1/2	1

Table 9. B6-C judgment matrix (for the rule of brand amount, compare the rationality among various projects)

B6	C1	C2	C3	C4
C1	1	4	4/3	2
C2	1/4	1	1/3	1/2
C3	3/4	3	1	3/2
C4	1/2	2	2/3	1

Table 10. Values of the average random consistency index RI

Order of the matrix	1	2	3	4	5	6	7	8	9
RI	0.00	0.00	0.58	0.90	1.12	1.24	1.32	1.41	1.45

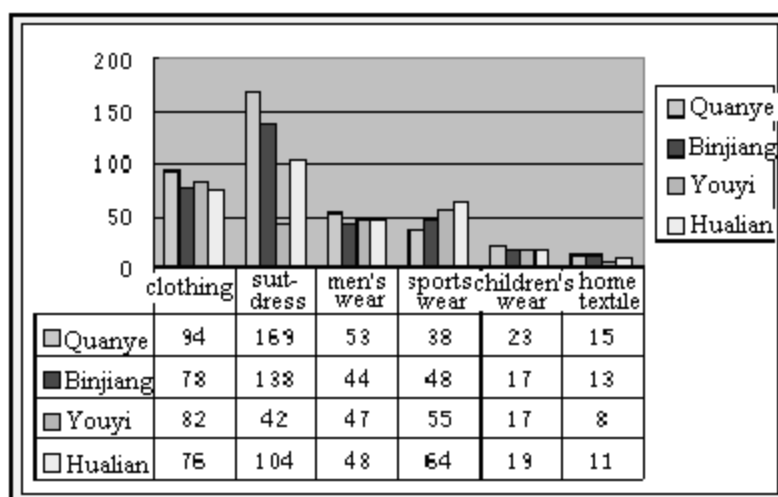


Figure 1. Occupancy Comparison of Same Type Goods in Various Marketplaces

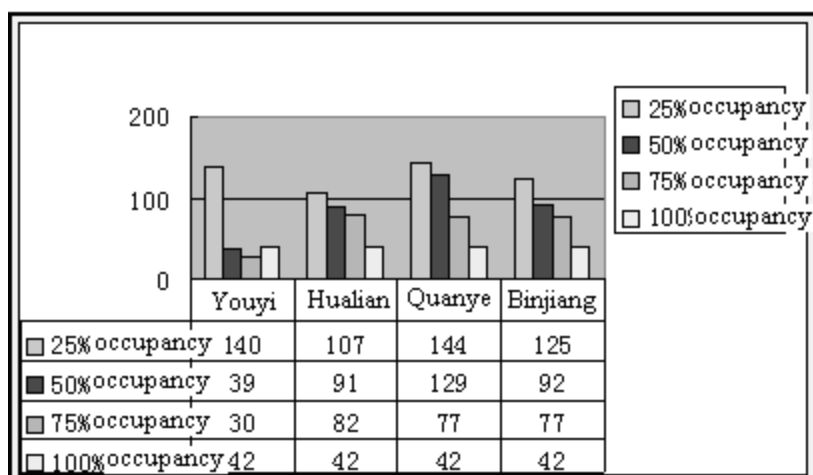


Figure 2. Occupancy Statistics of the Brands with Different Occupancies in Various Marketplaces

Note: 25% occupancy means the brand possessed by only one marketplace in four surveyed marketplaces; 50% occupancy means the brand possessed by two marketplaces together in four surveyed marketplaces; 75% occupancy means the brand possessed by three marketplaces together in four surveyed marketplaces; 100% occupancy means the brand possessed by four marketplaces together in four surveyed marketplaces.

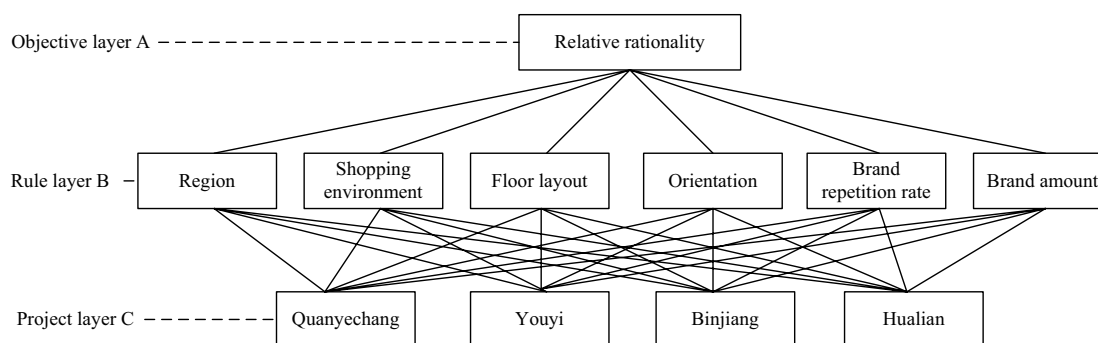


Figure 3. The Hierarchical Structure Model of Four Marketplaces



## Food Retail Competitive Strategy in Recession Economy: A Case of Successful Foreign Discount Stores in Finland

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### Abstract

The study aims to increase our knowledge of how a retailer can survive in recession economy by changing its *competitive strategy*. In particular, the study is to identify those strategies that can help retailers to maintain successful performance despite turbulence in the operational environment. A case study approach is employed to explore a whole picture of a successful retailer's actions and strategy to scope with down turn economy. Results of the study show that retailers can maintain and improve their performance in times of crisis by adjusting their competitive strategies properly. We found that in recession period, retailers need to exercise a combination of competitive strategies including low cost focus and differentiation focus strategy. To be able to enhance low cost strategy, retailers need to have logic logistic center, to increase effectiveness of employees, and to reduce wastes from right-ordered for fresh food products, to strictly utilize first-in-first-out food product displaying methods. For focus strategy, firms need to pull unprofitable products from the shelves, and to focus on profit-driven product selection, to focus their promotion campaign on the most effective time and channel. In differentiation strategy, retailers need to be more selective for which products to offer, and to be more creative in their promotion program.

**Keywords:** Retailer, Recession economy, Competitive strategy, Performance

### 1. Introduction

In recession economy consumers feel insecure in their job and negotiate more about financial matters (Shama, 1978). Consumers also adapt their shopping behavior and habits, to be able to adjust to the changing economic conditions (Ang, 2001a, b; Ang *et al.*, 2000; Zurawicki and Braidot, 2005). This causes insufficient consumer demand for products and services, results in fierce competition in the market place (Zehir and Savi, 2004). In recession economies, companies react to these changes in the marketplace by reducing costs, cutting production, reducing investment, entering foreign markets, working more with equity capital, improving efficiency, re-structuring debt (Beaver and Ross, 1999; Laitinen, 2000; Pearce and Michael; 1997; Zehir, 2005). An economic crisis requires some changes to be made in companies' strategies. Literature shows a lack of investigation with respect to competitive strategy of firms in recession economy. To fill this gap and to respond to a suggestion for further in-dept study about companies' strategies in specific industry in recession economy by Mehmet & Engin (2007), this study aims to investigate competitive strategies that a retailer exercises in order to survive and make profit in down time. The research question, therefore, as follow: "*How do a food retailer utilize their competitive strategy to increase their performance in recession economy?*" This paper proceeds with discussing competitive strategy, statement of propositions, followed by the methodology, describing case company, findings, and conclusions and recommendations.

### 2. Porter's generic competitive strategies and food retailer's reactions in recession economy

#### 2.1 Porter's generic competitive strategies

According to Porter (1985), there are three types of competitive strategies: low cost, differentiation, and focus. In low cost strategy, a firm sets out to become the low cost player in its industry. Low cost strategy can be achieved by pursuing of economies of scale, proprietary technology, preferential accessing to raw materials and other factors. In a differentiation strategy a firm seeks to be unique in its industry whether in its products or services, or in the way it

operations. By pursuing differentiation strategy, firms are often able to set premium price for their unique products or services. The focus strategy is the choice of a narrow competitive scope within an industry. The focus strategy has two variants such as (a) cost focus: a firm seeks a cost advantage in its target segment; and (b) differentiation focus: a firm seeks differentiation in its target segment. (Porter, 1985)

## 2.2 Food retailer's competitive strategy in recession economy

Shama (1981) points out that in recession time consumers spend more time on comparative shopping, and look for cheaper products. Recession calls for managers to use strategies to stimulate consumer demand. Such strategies often require a redefinition of the target customers and strategies. They may include *narrowing* the product line, offering cheaper products and quantity discounts, lowering prices, increasing promotion, and offering products directly to consumers. In addition, companies tend to eliminate unprofitable intermediaries in the distribution channel members and reallocation of scarce company resources to the better-performing channel members in economic down turn. However, since decisions of this kind often demand long-term commitments, they should be taken carefully (Kotler and Armstrong, 2006). Ang et al. (2000) suggest that lower operating costs and improving cooperate within the channel, can clearly affect company performance positively. In the same vein, Schafer and Roper (1985) maintain that under economic hardship firms may offer cheaper and more functional products with narrower lines. It may be postulated as follows

**Proposition 1:** In recession economy, retailers tend to exercise low cost focus strategy

Pricing is an important strategy for retailers to maintain and getting more customers in particular recession time. However, some customers are impacted by recessions to a lesser degree than are others, so price cuts are not always necessary to stimulate demand. Instead, a differentiated pricing implemented through *focus* discounting programs may enable marketers to maintain market share without completely sacrificing profit margins. Price may be weighed against quality thus, stressing on differentiated value are likely to be more effective than low price per se. In order to be differentiated with their competitors in recession economies, Goerne (1991) reports that marketing managers have been using significantly more coupons in the promotion mix. Roberts (2003) proposes that those businesses that increased marketing spending were not significantly less profitable during recession. Therefore, companies should differentiate with their competitors not only in product design but also in their investment on marketing budgets for the long term and be able to maintain spending in the short term, in order to survive during the hard times and be profitable in the future. As results, the following proposition may be postulated:

**Proposition 2:** In recession economy retailers tend to exercise differentiation-focus strategy

## 3. Methodology

In this study qualitative research methods are selected with case study approach. Qualitative methods are less structured and more intensive than quantitative methods so they are more flexible in terms of relationship with respondent. This leads to data having more depth and richness of context, offering a greater potential for new insights and perspectives (Aaker & Day 1986: 121). Qualitative research involves collecting, analyzing, and interpreting data that cannot be quantified (Parasuraman, 1986). The fundamental differences of phenomena looked for are in the qualities, not in the quantities.

Case study approach chosen for this study is appropriate to help to answer the research question “how” of the study, that is, a contemporary set of events on which investigator has little or no control (Yin 2003). In addition, the case approach allows an investigation to retain the holistic view and meaningful characteristics of real life events (Yin, 2003) like affect of recession economy on behavior of firms. In terms of sample, this study adopted a single case approach in order to conduct an investigation that generates deep insight to the issue. In addition, a single case study is a comprehensive description and analysis of a unique situation of the crisis. Under the single case approach, the questions of this study can be answered through describing competitive strategies of a food retailer in Finland as a unique case. This is a unique case because, the effect of the world financial crisis leading to economy recession in different countries are different. Moreover, a recession on the national level may affect different companies differently. In addition, the food retailer case company here is the only foreign food retailer operates in Finland. This is revelatory case because it enriches knowledge of food retailer strategy dealing with recession economy which has rarely been studied before. The criteria for choosing a company for this study are based on: 1) business line and its scope-food retail industry; 2) Time of operations in Finland-company has to be in operations before the crisis and still in business during the recession so the changes in its strategy to scope with the recession can be identified.

Data collection: the information collected for this study was gathered the data triangulation method using multiple sources such as in dept interviews, printed sources like company annual reports, retail journals, magazines; internet sources such as the case company's website. This multiple sources help to produce more complete, holistic, and contextual portrait of the object under study (Ghauri & Gronhaug, 2005). The interviews were carried out by in-dept interviews with Area Director, Sales Director, Area Manager, and Store Managers. The interviewees are directed involved in the firms from beginning of its establishment in Finland and are still working in the company. Therefore,

they have the best knowledge about the company's strategy changes now in current crisis situation. To increase the reliability of the study, the standardized interview guide was sent to interviewees in advance so that during the interviews, interviewees and interviewer could follow the same structure. During the interview, information was written down, and later on it was transcribed into data based to ensure the validity of the study. In addition, to minimize errors from the interviewer, draft of interview transcript and its interpretation were sent to the interviewees by mail to check if there was anything missing or incorrect so it was possible for informants to add or correct some details (Yin 1994: 33). Furthermore, the use of quotations from the interviews in the study is to allow readers to make their own interpretation (Patton 1990: 324).

#### 4. Case description

##### 4.1 Food Retail Markets in Finland

The Finnish economies have been growing rapidly in the past few years, but in 2008 the growth has fallen off with weaker tendency in exports, consumption and investments. The outlook for private consumption has become more negative and consumers are becoming more cautious. The food retail sector is concentrated. The three largest import/wholesale groups supply over 80% of Finnish market. Finnish retail chains are meeting the stiff competition through increased efficiency, centralizing purchases, forming international alliances and expanding operations within the Nordic and Baltic region. The fastest growing sector in the food retail trade in Finland is discount stores. While discount stores currently only account for about 10-13 percent of the retail trade in Finland, volumes have tripled over the last ten years. In Finland, large supermarkets and hypermarkets accounted for about 55% of retail food sales of USD 17 billion. Finnish consumers are gravitating towards fresher, more convenient, more nutritious foods, better quality, and more environmental concerns. The ongoing socio-demographic changes with busier life styles and increasing single-person households are affecting food retailing to a high degree. Retailers are shifting their product ranges towards healthier, ready-to-eat foods and home meal replacements. Organic and functional foods are gaining in popularity with significant consumer awareness in the area of food safety and healthy eating habits such as products with low-fat benefits, with nutritional advantages, with perceived disease-preventative qualities. Finnish consumers are willing and able to pay higher prices for food and drink products that fall into these categories. (Bettina, 2008)

##### 4.2 Case Company L Discount Stores in Finland

The foreign L company has already established a presence in Finland since 2002. The entry of L has changed the dynamics of food retailing. By offering top quality products and fresh goods at the lowest possible prices, L has been able to build one of the fastest growing retail operations in Finland. Finnish retailers react by refocusing their stores to a more price-oriented basis and introducing new private label items to match Ls low prices. (Bettina, 2008)

Strategies adapted by L company in recession economy:

At the end of 2008 and beginning of 2009 the banking crisis which lead to global economy recession seem to start having effect to Finnish economy. The board of L company has decided to shift its competitive strategy from low cost strategy to focus strategy. This focus strategy includes low cost focus strategy and differentiation focus strategy. To be able to realize these strategies L company launches several actions. They consist of 1) every day low pricing product; 2) improving logistic systems; 3) reducing wastes; 4) increasing effectiveness of the stores; 5) withdrawing unprofitable products; 6) differentiating product range; 7) differentiating promotion program. By implementing these serial actions to pursue new competitive strategy, the L Company sees a recession as an opportunity for it to grow. To illustrate this the Area Director maintains that "...in recession economy, customers think twice about where they are going to shop, and we always offer the best ratio price/quality products to our customers..."

*Everyday low pricing products.* Under fierce competitive pressure and consumers buying behaviors during economic recession, L company has targeted its products as low pricing products in every day. "...We're always trying to get the price down..." commented the sale director. Example for this is that L company has kept discounting their products for longer period of time and more frequently discount certain groups of products. The area director commented on pricing strategy that "...prices for comparable products should be competitively priced. However, there are several dangers in cutting prices across the board. First, customers may resist moves by the company to reinstate prices after the recession has ended. Thus, we focus to discount certain group of products, product packages and combinations to attract our customers keep coming to our stores and maintain prices for other individual items..."

*Improving logistic systems.* In order to be able to offer every day low pricing products, L company has to reduce its operation costs through having better logistic systems. L company has implemented several steps to improve its logistics systems such as relocate logistic center, using more computer services, minimizing inventory level, using big stores as contemporary sub-center-warehouse for smaller satellite stores.

*Reducing wastes.* In order to achieve low cost focus strategy, the Board of L company has announced that "All stores and logistic centers have to commit to reduce the waste levels" This can be achieved from reducing over-ordered for fresh food product which leads to redundant waste products, having better sales forecast with help from computerizing



systems, better stools and equipments to handling and transporting products. In addition, all stores must strictly utilizing first in-first out displaying methods for food products so that there will not be any cases that new products are sold first, and old products are still remained unsold and gradually going to garbage place because of over dated.

Increasing effectiveness of the stores. L company has offered several training sessions for store managers, deputy store managers and other key personnel of the stores about how a store can increase the effectiveness of its employees. According to L company, the effectiveness of employees can be improved through exercise more strictly reward and punishment systems, maximum time limit for each particular tasks, incentive and bonus program, further education and promotion opportunities.

Withdraw unprofitable products. L company has made decision to withdraw all weak items from its stores. In the recession period, L company focuses its product offer characteristics on economy, durability, and functionality.

Differentiating product variety. L company has changed its products offering in its stores. The offers focus on multi-purpose goods over specialized products. L company also allocates extra effort to introduce new products in some key areas of its stores to maintain its strength over its competitors. One of the respondents mentions that "...as our store strength is known with having many different kinds of chocolates and foreign beers, we continue to strengthen our stores with updating variety of products offer within these areas..."

Differentiating promotion program. In promoting program, L company stresses more on superior price performance in time of economic crisis than other strength aspects. L company has also focus to allocate some of the promotion budget to points of sales (POS) promotion from which the consumer can gain value immediately such as "buy more, pay less" in which customers gain 5% bonus if the value of food products they buy more than 20 euros, and the bonus will increase to 10% of total food products if they buy more than 50 euros and the bonus is 20% if customers buy more than 100 euros. Customers get bonus immediately at the time they pay for their purchases as the bonus is deducted immediately from total amount. Other POS promotion that L company implements like inviting customers coming to its store and attending the lottery for winning its products. This kind of POS promotion is organized one a month. Besides, L company organizes also one a month sampling activities in which customers can taste its products and buy these products with discounted price in these days of product-sampling. Moreover, L company increases their promotion on the internet. Customers can study the coming campaign products on the company websites. They, further, can give feedback, ask questions, or give recommendations related to products offering. Related to promotion via TV advertising, L company now focus more on the most effective time of week day. According to L company records, people here do more shopping at the weekend. Thus L company focus their TV advertising on Thursday-Saturday, and remove TV advertisements for Monday-Wednesday. To be differentiated with local competitors, L company has carried out its unique campaign. In every two weeks, L company launch different product –campaign such as Healthy Products Week, Products for Your Lovely & Adore Pets, Asian Products Week, Italian Product Week, Spanish Product Week, American Product Week, Seafood Product Week, Sports Products, Baby & Kid Products, Luxury Products, Garden Products etc. These have created more excited to customers to come to the stores to shop despite of the effects of economic crisis.

#### Performance of L company after fourth month refocus its competitive strategy

After recognizing that global economic crisis may affect Finnish economy, L company has changed its competitive strategy from low cost strategy to low cost focus and differentiation focus strategy. Below are L company performance in four months from October to November 2008, and January 2009 (see Table 1). Table 1 shows how L company performance after 4 months undergoing new competitive strategy. The performance measurement is based on percentage of increase or decrease in each area compared to that of the same period of the previous year. As shown in Figure 1, in October 2008, sales of L company did not increase at all but the waste increased 5%. The best part of this month is that L company was able to decrease logistic costs compared to that of the same period of 2007. This leads to total performance of that month increase 1.8 %. In November, the situation got worst because of the effect of economic crisis. The sales were down 2.5% due to the number of customers reduced 3%. Since L company has refocus its competitive strategy, it was able to reduce logistic cost 10%.

This helps to L company to have the same performance with that of 2007. In December 2008, the change in competitive strategy shows the positive effect to all areas of performance. In December 2009, L company managed to increase its sales 3%, decrease logistic cost, and kept waste in the same level of that in the previous year. The effectiveness of employees was also increased in December 2008. The situation of L company is getting better also in January 2009 despite the effect of global economies becomes more serious to Finnish economy. The area director has commented that "...it was good that we have proper strategy in time so that we could keep our company in the right tract... the board of director of our company is very satisfied with what we have achieved so far, ... we will continue to pursue low cost focus and differentiation focus strategy to go through this economic down turn period..."

### 4.3 Implication of L company case

L company case has confirmed proposition 1 and 2 that in recession economy retailers tend to exercise low cost focus and differentiation focus strategy. L case company validates previous studies of companies' behaviors during economic recession on the one hand, it extends previous study by providing in more detail in-depth study about retailer's strategies in the period of economic crisis to survive and grow healthily on the other hand. In particular, L case company confirms that during recessions, companies offer discounts (Mandell, 1998), cut costs, adapt product variety (Song, 1998), and modifies product strategy (Roxas and Huszagh (1996) In addition, L company case confirms previous studies by Kim (1992) and Werner (1991) that the changes in promotion strategies during a crisis are very importance. Furthermore, the study validates the results by Shrager (1991) in which the author proposes that during a crisis, advertising campaigns should emphasize such rational motives as safety, reliability, and durability, rather than image and status (Shrager,1991).

This study extends previous studies by showing that during period of economic crisis, companies, on the one hand, have to adapt their strategy fit with their operating environments. On the other hand, the study points out that the companies have to focus their competitive strategy. The rationale for this is that companies have limited resources. To be unique, companies have to pursue differentiation strategy. However, not all businesses, areas of companies should be targeted for changes but focusing on product strategy and promotion strategy. Similarly, previous studies suggest that low cost strategy may be one of the most important strategies during recession economy. This study extends previous studies by showing that low cost focus strategy can keep a company to survive in the recession. More importantly, this study extends previous study by pointing out how a retailer can realize low cost focus strategy through improving logic logistic systems, reducing food wastes, increasing employees' effectiveness.

## 5. Conclusion

The purpose of this study is to investigate how a retailer react with economic crisis, and to assess the effects of competitive strategies including low cost strategy, differentiation strategy and focus strategies in such conditions; and to identify those that can help firms to maintain successful performance despite turbulence in the operational environment. A case study approach was used to explore a retailer's strategy to scope with recession economies. Results of the study show that appropriate competitive strategy can maintain or improve a retailer performance in times of crisis (see Figure 1.). In particular, in recession period, retailers need to exercise a combination of competitive strategies: low cost focus and differentiation focus strategy. To be able to enhance low cost strategy, firms need to have logic logistic center, increasing effectiveness of employees, and reducing wastes from right-ordered fresh products, strictly utilizing first in-first out food product displaying methods. For focus strategy, firms need to pull unprofitable products from the shelves, and focus on profit-driven product selection. In differentiation strategy, retailers need to be more selective in which products to offer, and more creative in their promotion strategy. The study makes some significant contributions to theory and practice. First, it investigates the effects of competitive strategy changes on company performance during times of economic crisis. The study reported here takes a more radical path in investigating the effects of competitive strategy changes on company performance measures. The performance measures set as sales, logistic cost, employees' effectiveness, and total performance. The purpose of this analysis is to provide decision makers and strategic planners with full evidence for effective strategy changes to implement during an economic crisis.

We also acknowledge that there are several limitations in this study. First of all, for the purpose of exploring how a retailer can deal with down turn economy, the present study investigates in depth one case company. The result of this study thus may not be able to generalize for other companies. Therefore, future study about competitive strategy of companies in recession economy can use the same framework of this study but using larger sample size to validate the results of this study. In addition, a cross countries study may be of interest for future study. This is because the effect of the world financial crisis leading to global economic crisis may differ in different countries. Finally, this study investigates performance of L company in only 4 months period after L company implements their new competitive strategy. This four months period can be considered as short period and it may not reflect the whole true about the effectiveness of the strategy in recession economy. Thus, a longitudinal study of the issue for longer period of time is needed.

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Table 1. Performance of L company after 4 months changes in competitive strategy

Area of Performance	October 2008	November 2008	December 2008	January 2009
Sales	+/-0% Increase	-2.5%	+3%	4.5%
Logistic costs	Decrease 5%	Decrease 10 %	Decrease 10%	Decrease 12%
Waste	Increase 5%	Increase 4.3%	+/-0%	Decrease 7%
Employees' effectiveness	+/-0%	Increase 5%	Increase 10%	Increase 11%
Number of customer visited stores	+/-0%	-3%	+4%	+ 2.5%
Total Performance	+1.8% Increase	+/-0% Increase	3.8% Increase	5.2.% Increase

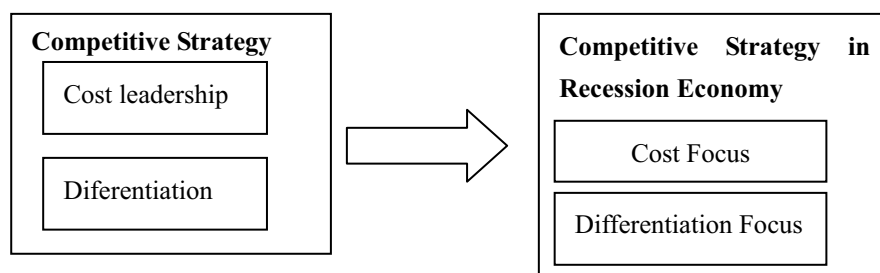


Figure 1. Shift in Company's Competitive Strategy in recession economy



## The Research of the Chinese Enterprise Transnational Operations Strategic

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### Abstract

The world economics are developing to the internationalization direction depth, various countries' economy in interdependence and under international division of labor condition, not only in production, distribution area, but also in the capital, technology, information, and transportation and so on, manifests internationalization tendency. In order to deal with the international market and the resources competition, Many Chinese enterprises have implemented transnational operations gradually. This research goal is for comprehensive, systematic, knew profoundly Chinese enterprise transnational operations development history and the present situation, existence question and reason, and to provide the countermeasure suggestion for promoting Chinese enterprise transnational operations fast and healthy development.

**Keywords:** Economic globalization, Transnational operation, Foreign investment

### 1. The Chinese Enterprise transnational operations present situation analysis

Along with Economic globalization rapidly expand, it has provided the good opportunity for the Chinese enterprise to participate in the international competition and optimize allocation of resources in bigger range. Started from 1979, the Chinese Enterprise foreign investment experienced four stages approximately:

The first stage (1979-1985): Yearly average foreign investment cost 25 million US dollars, enterprise average investment scale 9.5 million US dollars.

The second stage (1986-1991): Yearly average foreign investment cost 208 million US dollars, enterprise average investment scale 1.4 million US dollars.

The third stage (1992-1998): Yearly average foreign investment cost 705 million US dollars, enterprise average investment scale 1.06 million US dollars.

The fourth stage (1999-2001): Average foreign investment cost 678 million US dollars, enterprise average investment scale 2.18 million US dollars.

According to the Chinese Ministry of Foreign Trade and Economic Cooperation statistics, until at the end of 2001, Chinese government accumulates authorization foreign Investing enterprise 6610, Chinese side agreement total investment 8.36 billion US dollars. China invests outward domain is mainly the resource development, production processing, transportation, the project contractor, the traveling dining and so on.

#### 1.1 Subject of investment multiplication

The Chinese Enterprise which carry on the overseas management to have four broad headings:

1.1.1 Foreign trade Specialized company and the large-scale foreign trade group are the Chinese Enterprise overseas management main force

1.1.2 Large-scale Production enterprise or enterprise group. These enterprises are engaged in the transnational operations superiority are that has the relatively mature production technology and certain research and development ability; has the huge production system and the sales network in domestic; The product price performance have the evident competitive advantage. Although these company overseas management start is late, but the development speed is quick

1.1.3 Bank and other non-bank financial institutions

1.1.4 Small and medium-sized enterprise. These enterprise quantities are many, the investment scale is small, and the management variety is unitary.

## *1.2 Trades are the Chinese Enterprise foreign investment fundamental modes, accounts for 60%*

According to department of commercial affairs statistics, up to at the end of 2002, China accumulated sets up foreign non-finance class enterprise 6960, agreement total investment 13.78 billion US dollars, Chinese enterprise investment cost 9.34 billion US dollars. And, beyond the border processing assembly enterprise 420, Chinese enterprise investment cost 1.122 billion US dollars, have led domestic export 2.157 billion US dollars on the whole every year. At the same time, accumulation sign foreign contract engineering contracted amount 114.78 billion US dollars, complete turnover 82.72 billion US dollars. Sign foreign labor service cooperation contracted amount 29.52 billion US dollars, complete turnover 23.76 billion US dollars, to send somebody to units or organizations to a foreign country service 2.734 million people. But, Chinese foreign total investment not only accounts for the world foreign total investment proportion to be low, moreover, the foreign investment cost accounts for the domestic fixed asset investment proportion to be very also low.

Moreover according to a UNCTAD design's weight country attraction foreign capital and the foreign investment relative scale size's statistical target computation, since the 1990s, Chinese foreign merchant direct investment storage quantity has occupied GDP proportion to rise year by year, it has reached as high as 35.6% in 2003; But the foreign direct investment occupies GDP proportion actually not change, it was only 2.6% in 2003.

*Insert Table 1 here*

*Insert Table 2 here*

Foreign merchant direct investment cost (A) \ foreign direct investment cost (B) \ differential (A-B) \ year (note: The foreign direct investment cost calculates by the actual use amount of foreign investment, foreign direct investment cost by the Chinese side investment cost computation.) (Data origin: Department of commercial affairs "Chinese Foreign capital Statistics" (all previous years), "2003 Year China Foreign Direct investment Statistical bulletin")

Above analysis full showing, compares with the huge foreign capital intake scale, Chinese foreign direct investment already seriously lagged, since long, this kind "introduces" and "walkout" development extremely imbalanced aspect, if reverses not as soon as possible, will certainly to initiate a series of deep levels economic frictions, thus affects Chinese economy continually, fast, and healthy development.

## *1.3 Single item investment scales is relatively small*

Compares with Multinational corporation of the developed country and some emerging industrialized country, the Chinese Enterprise transnational direct investment scale is generally small, the single project surpasses million US dollars not to be many, considerable amount of small and medium-sized enterprise founds the Out-of-country enterprise investment cost has only more than 100 thousands US dollars to be even lower. This kind of miniaturized foreign investment project and Operation organization scale, although is more nimble, but difficulty contends with formidable Multinational corporation in the international competition. Forms this kind of characteristic primary cause, on the one hand is because Chinese Enterprise was still in the transnational operations e start stage, lacks the experience of participation international competition, the manner is discrete in the foreign investment's scale; On the other hand is because participates in the transnational investment quite active mostly is the Small and medium-sized enterprise, their management strength had decided often pursues invests few, the effective quick strategic target. These small and medium-sized enterprises mostly choose the economic development level close or the lower developing country achievement invest the region, thus invests the enterprise which sets up is also small and medium-sized enterprise which naturally adapts the locality economic development level and the level of employment.

## *1.4 The investment region to expand unceasingly*

To look from the physiographic region that Chinese enterprises carry on the foreign investment operative activity initial period, stemming from evasion risk, accumulation experience's consideration, they choose the geographical position near Hong Kong and Macao area and the Southeast Asia to take the investment destination. Started from the 1990s, the Chinese Enterprise started to the developed country investment. Looking from the profession domain, Chinese

Enterprise transnational investment initial period, only steps in service industry with the trade related, like service, packing, transportation and so on. Along with the foreign investment further advancement, the investment profession domain expands unceasingly. From the industry and agriculture production, the investment develops to industries and so on dining traveling, advisory service, technology development, real estate, has stepping. But generally speaking, Chinese foreign investment involved the high-tech industry proportion to be still low.

## **2. Chinese Enterprise transnational operations characteristic**

### *2.1 Multiplication foreign management pattern is forming*

At present, China invests outward runs factory and processes assembly service to expand to more than 160 countries and the area, involves the trade, production processing, resource development, transportation, contract engineering, agriculture and the agricultural product comprehensive development, health, traveling dining and advisory service and so on many domains, the priority of investment gradually from Hong Kong and Macao, North America area, shifts to Asian and Pacific, Africa, Latin American and so on developing countries in general, the multiplication trend of development is day by day remarkable. The foreign contract engineering service distributes in more than 180 countries and the area, involves domains and so on construction, petroleum chemical industry, electric power, transportation, communication, water conservation, metallurgy, railroad, coal, the labor service cooperation service from sends out the architectural engineering service primarily to expand gradually to the multi-domains, like national economy and so on coal, forestry and aerospace, peaceful use atomic energy and high tech each domains.

### *2.2 Management main body structures further optimizes*

After more than 20 years development, China foreign subject of investment transformed gradually from the Trading company to the large and middle scale production enterprise primarily, the Production enterprise foreign investment accounts for the proportion to increase unceasingly, the Trading company accounts for the proportion to reduce gradually. Specially one batch of leading enterprise positively carried out the transnational operations and has made the good progress, and has become the main force of China invested outward. Some superiority enterprise started to implement the foreign investment strategy, and has formed the global production sale network initially, initially Multinational corporation embryonic form. Haier, Lenovo, Glans, Wanxiang, Chunlan and so on, one batch of home well-known enterprise already products outlet overseas, has seized the partial overseas market, and production own product in overseas, cultivates own brand.

### *2.3 Chinese Enterprise entry overseas market mode to stress in joint capital way which newly built*

Chinese Enterprise overseas development way mainly for newly built, this is because relative to capital operation, the Chinese Enterprise has confidence to production operation and management capacity. But overseas enterprise many utilization capital operation methods and so on purchase annexations, although already appeared, but the overall looked that is also short by the Chinese leading enterprise use. The reason lies, although the merger and acquisition way is advantageous in the enterprise speeds up its overseas management advancement process, but to the Chinese Leading Enterprise, takes out the large amount merger and acquisition fund is not the easy matter one time, in addition present home money market financing channel also not very unimpeded, uses the outside capital to realize merger and acquisition to be more difficult.

### *2.4 Chinese Enterprise transnational operations' main purpose develops the overseas market, guarantees the resources supply*

At present, under the market environment of many profession competitions started to tend to the superheating, the Chinese Enterprise relied on oneself manufacturing aspect superiority to develop the overseas market to become the essential choice. TCL purchases German Schneider electron company, Haier to purchase an Italy refrigerator plant, is the typical example of Chinese enterprise develops the overseas market.

### *2.5 Chinese Enterprise transnational operations have the tendency which generally serves for the domestic economy growth, this related with Chinese transnational operations' main body is government property enterprise*

The country as enterprise assets' owner, impossible not to affect enterprise's decision-making with own benefit pursue, particularly some Major industries and the enterprise group, its foreign investment activity implemented and has manifested national foreign economic development strategic intention directly. Therefore, generally speaking, Chinese Enterprise's foreign investment and the transnational operations, and are not only restricted in seek enterprise individual superiority, but seeks comprehensive superiority of Chinese economic development and participation international division of labor.

## **3. Existence question of Chinese Enterprise transnational operations**

### *3.1 Lacking the globalization strategy consciousness and the modernization management and operation method*

Chinese Enterprise also generally lacks the globalization strategy consciousness and the modernization management and operation method, is unable meet the international competition need in the management idea and the method,

satisfies merely in seizes the domestic market, “walks” consciousness to be light, even if some enterprise which have the strength and the comparison superiority has not the foreign investment development plan. The transnational enterprise is one kind of ultra giant enterprise of altitude organized; it needs to have the highly strict science management objectively. The developed country transnational operations gained in over a hundred year experience, has skilled, standard, scientific managerial technique. These elements have restricted the enterprise transnational operations development.

### *3.2 Foreign investment strategies are not explicit, the investment scale is small, invests area distribution to be unreasonable*

First, Many Chinese Enterprises lack the foreign investment long-term developmental strategy, the goal are not extremely explicit, lacks the scientific examination. Next, although domestic subject of investment strength had the enhancement in recent years, Out-of-country enterprise average investment scale expansion, but the most Out-of-country enterprise's investment scales were still small as. According to the department of commercial affairs statistics, 3439 sample of Out-of-country enterprise average investment scale is 965 ten thousand US dollars, the resource development enterprise size is biggest, but manufacturing industry enterprise average investment scale also insufficient million US dollars. Once more, Chinese foreign investment mainly concentrates in the Asian particularly Hong Kong area. By the end of 2003, Chinese foreign direct investment total quantity 80% distributed in the Asian countries, the major part in Hong Kong area, direct investment only accounted 3.3% for the total quantity to European and American countries. The investment too concentrated increased the operational risk, did not meet the investment market multiplication requirement.

### *3.3 Research and development levels low, deficient technical superiority*

China large and middle scale industrial enterprise research and development expense accounts for the product sales revenue proportion only then 1%~2%, even if were in 2002 ,the Chinese electron hundred enterprises, the research development investment also only occupied 3.8% equally. Now, approximately some 2 /3 state-owned Large and middle scale Enterprises have not established the research and development organization, new product sales volume proportion average only then 8%. Therefore Chinese Enterprise transnational investment scope is freely broad and involves the profession to be broad, but mainly by the resource development primarily, the manufacturing industry and the high technology and new technology industry just started.

### *3.4 Many Chinese transnational operations successful enterprise not yet to establish the lasting competitive advantage*

Chinese Majority Enterprises lack the transnational operations experience, management tool to be backward, the top level transnational operations talented person is deficient, technical and the fund limitation, the Chinese product lacks the brand superiority in the international market. Adds the information not to work with the language culture aspect barrier, causes many enterprises have difficulty in the transnational operations. In addition, the business management level is low, lacks the institution management system platform.

### *3.5 Lacking the foreign capital funds and the high quality transnational operations talented person*

Chinese Enterprise meets a prominent question in the foreign investment is the capital insufficient , national credit aid dynamics is also insufficient, other financing channel is also quite unenlightened, thus enables the development international market to be beset with difficulties. Includes the state investment plan besides some resource development and the foreign processing trade project has obtained the government finances supporting, the most project funds must depend on enterprise to solve itself. At the same time, the enterprise carries on the transnational operations to need large quantities of high-level financial talented person, scientists and technicians, the managerial talent and legal talent, they not only need have a good command of the foreign language skilled, but must thoroughly understand the international law and the international business rules, but Chinese Enterprise lacks exactly the inter-disciplinary talent exactly, the talented person bottleneck already became restriction enterprise “walks” obvious barrier.

## **4. Chinese Enterprise transnational operations' strategy chooses**

### *4.1 Chinese enterprise transnational global competition strategy*

In China, the following some big enterprises have met the transnational operations requirement, will develop gradually first generation of Multinational corporation that take China as the base, participates in the global competition: first, the specialized Foreign trade company which already had the good internationalization foundation and strong business capacity and Chinese-funded trade group which in Hong Kong and Macao. Second, the enterprise or the enterprise group which have the suitable technical strength and the business capacity; third, the industry trade company, the technique trade company, the agricultural trade company, financial trade company or group. Fourth, Financial syndicate and service industry company which has the abundant capital strength.

The reality choice of Chinese Enterprise carries out the global competition to be:



4.1.1 Take above four kind of Major industries to carry on the transnational operations, forms the base of the Chinese Enterprise implement the international competition gradually.

4.1.2 Cultivates the small and medium-sized enterprise internationalization, the market rule urges many small and medium-sized enterprises to speed up own development and through union, annexation inevitably and becomes enterprise group which has the formidable strength and the rich competition experience.

4.1.3 Unifies the small and medium-sized enterprise and the big enterprise, major and medium slightly develops simultaneously, forms the network shape enterprise series structure.

#### *4.2 Chinese enterprise transnational investment competition strategy*

##### *4.2.1 Purchase and newly built way*

The intrinsic factor of Affects the transnational enterprise investment mode of entry including: Enterprise unique resources. The transnational enterprise which has the technology, the monopolizing industrial property and so on unique resources, more suitable to select the newly built enterprise's method to carry on the direct investment; transnational investment management and operation experience. The external factor of affects the transnational enterprise investment mode of entry including: Host country government control to foreign enterprise purchase behavior. The enterprise may select the purchase method enter to the developed country. Otherwise, then selects the newly built method enter to the industrialization degree low country or area; Host country market and motherland market growth situation.

##### *4.2.2 Sole ownership managements and joint adventure*

Regardless of being the purchase way or the newly built way, there are some capital input proportion question. Regarding the Multinational Corporation, faces the choice question of the overseas subsidiary company is having the proportion of property rights and domination. The influence stockholder rights participation form primary factor includes: first, The Multinational Corporation has superiority and strength. the big Multinational Corporation which has technical, the product and the sales network superiority, has the monopoly superiority in the market, the more choice sole ownership subsidiary company; otherwise, is not too intense in the stockholder's rights request; second, the Multinational corporation which Implements the global strategy, embarks from the overall benefit maximization goal, therefore favors in sets up the sole ownership subsidiary company or controls 50% above joint capital subsidiary company; third, Cost and income, if the anticipated profit margin is high, then suitable uses the sole ownership management; If the anticipated benefit is low, and overcomes the venture capital ability to be limited, then may consider use the joint adventure, to spread loss the risk.

##### *4.2.3 Transnational direct investment evolution types enter strategic*

The transnational direct investment is not only the capital and the management element shift, is also the transnational extends of transnational enterprise production operation organization system. Chinese Enterprise transnational investment uses the evolution type advancement strategy, first export to the target market, examines the product competitive power and the market potential in the target market, familiar international market environment, establishes the marketing network, accumulation management experience. Second, after product stands firm in the target market, then establishes sales organization which has the management domination, replaces the locality importer, will sent the service link to extend to the target market. Third, after obtaining the stable market share, if the market also has further development potential, the enterprise may further invest to move the storage and transport system to the locality.

#### *4.3 Transnational enterprise overseas financing strategy*

In recent years, Chinese Multinational corporation foreign investment had develops greatly, but this condition has not had the very big change. Chinese Enterprise overseas financing way mainly has the overseas enterprise loan, the international finance to rent as well as the overseas enterprise project mortgage loan and so on.

First, overseas financing should "act as circumstances permit", in the US and Canada, because has the highly developed stock market, enables the direct financing to become the main financing method; In Europe, because the traditional banking industry is quite developed, therefore the bank becomes the main sources of fund; In Japan, because the bank and stock market financing function is different, the enterprise different fund obtain must through the different channel. Second, utilizes the advanced financing method, mainly to include: "release lever purchase"; the international finance rents. Third, the bank-business union, specifically the bank-business union fundamental mode includes: development to relate closely with the Multinational bank; Sets up "the united department" with the domestic bank to the overseas. Fourth, utilizes the financial innovation technology fully. International Financial market innovation started in the mid-60s develops the high tide to the 80s. In this process, has produced many new financial instruments. These instruments provide the very effective way for Chinese Multinational Corporation collected the corresponding fund in American as well as in the European market.

#### 4.4 Chinese Enterprise transnational marketing strategy

##### 4.4.1 Chinese Enterprise marketing strategy present situation analyzes

Besides individual outstanding enterprise marketing strategy more outstanding, Most Chinese enterprise marketing strategy performance is not good, the existence question mainly displays in the following four aspects: Non-marketing strategies either neglect marketing strategy; Marketing strategies advance recklessly or follow blindly; Narrow profession marketing angle of view; Marketing strategy appraisal which stress in the sales volume

##### 4.4.2 Chinese transnational enterprise marketing strategy's model chooses

The American Enterprise globalization marketing strategy stresses on the following several aspects: First, leads by the large-scale Multinational corporation; second, pays great attention the science and technology development strategy; third, focuses in the global competition strategy. The Western Europe enterprise pays great attention to set up the world-famous brand enterprise image in the global market development, some famous companies, and the famous brand goods become to "the trailblazer" in implement in the global market strategy process.

The Japanese Enterprise is stressing on the globalization marketing strategically, presents the following characteristic: First, pays great attention to establish the global marketing network; second, emphasis to the resources localization strategy; third, pay great attention to the technical and information development strategy.

The Asian newly-emerging nation and the local of enterprise globalization marketing strategy has the following characteristic: First, use geography close and cultural similar, first develops the mutually market or other developing country market, take trade export primarily to developed country, direct investment as auxiliary; Second, the most enterprises take this local emerging market (for example the Chinese market) as the goal seek the transnational development, after treating savings certain strength, development to developing country again; third, the majority enterprises first join to the global market competition by the spare part or raw material production processing, then gradually impels own competitive advantage development and the industrial upgrading.

##### 4.4.3 Chinese transnational enterprise globalization marketing strategy choice suggestion

First, Establishment human resources strategy plan and the organization manage leading;

Second, take seriously to develop enterprise's marketing culture superiority;

Third, Develop enterprise's core competencies emphatically;

Fourth, choicely development enterprise strategic marketing alliance;

#### 4.5 Chinese enterprise transnational organizational structure strategy

##### 4.5.1 Organizational structure design and choice principle

In the organizational structure design and choice, besides must consider the influencing factor, but should also follow certain principle: Adaptation centralization and decentralization degree; the unity of the order and the command; the responsibilities and rights and benefits are unified; Capable and efficiency; Dynamic and stable disposition union.

##### 4.5.2 Chinese Multinational corporation organizational structure pattern choice type

First, Finance organizational structure pattern. The bank and the non-bank financial institutions mainly use this kind of pattern, this kind of company is mainly engaged in international investment and financing business, has the abundant fund and formidable financing ability, is good at carries on the investment and management through controls stock, purchase and annexation way, belongs by the function and the area primarily, high-level finance organizational structure. Such as China International Trust and Investment Corporation is this pattern.

Second, Comprehensive organizational structure pattern. Foreign Trade Company and the international economic cooperation company which mainly carry on the import-export trade and the investment service uses this pattern, it belongs to the high-level global synthesis organizational structure by the market and the product mainly.

Third, production organizational structure pattern.. This pattern suits in Production enterprise and the enterprise group specially which is engaged in the specific product production and the selling business, these enterprises have the technical research development organization, the abundant fund and the production strength, the multiplication services structure and the widespread information, the sales network, is the high-level global synthesis organizational structure by the product primarily.

##### 4.5.3 Consummation and develops of Chinese multinational corporation organizational structure

First, perfect the branch structure. Financial control; Plan control; in aspects and so on legal consultation, advertisements propaganda, to exterior relations carries on coordinated.

Second, consummates the control system. Mainly includes: Liability system; Financial verification system; Report and instruction system; Does an inspection the system.

Third, carry out the development of large-scale transnational enterprise group. The Chinese Enterprise may through set up the large-scale transnational enterprise group to change the present aspect.

Fourth, strengthens management to the overseas state asset

The Chinese State-owned business is the foreign direct investment main body, how to strengthen management to the overseas state asset, causes the overseas state asset inflation-proofing and appreciation, relates the major issue which the Chinese Enterprise transnational direct investment in the future.

#### *4.6 Chinese Enterprise transnational human resources management strategy*

Under Chinese Enterprise comprehensive participation economic globalization, merges the international economy system background, Chinese Transnational operations Enterprise should renewal human resources management idea, enhances the management level, takes the positive action, and reduces the brain drain. Should consider from the following aspect:

##### *4.6.1 Integrates human resources management in enterprise's developmental strategy*

The transnational operations enterprise must change traditional personnel management pattern, transform to “humanist” human resources management pattern from the tradition pattern, thus maximum limit stimulates the enterprise staff's enthusiasm. Only then like this, human resources management can get rid of the businesslike thoroughly work makes great strides forward to the higher management level.

4.6.2 Take and display the enterprise culture effectiveness, encourages innovating. Establishment enterprise culture which conforms to the enterprise actual to have the innovative ideology is the key that enhances enterprise cohesive force. In steep competition modern enterprise, if the enterprise does not carry on innovating, is very difficult to develop. In the management is also so, the enterprise through the self-denial, self-surmounting, raises the management level unceasingly, enhances the human resources using efficiency.

4.6.3 Talented people originate diversification. The Chinese transnational operations enterprise may profit from Multinational corporation managerial experience, uses the human resources localization and internationalization mode of administration, attracting overseas outstanding talent to serve for Chinese enterprise.

#### *4.7 Chinese Enterprise transnational culture management strategy*

The cultural conflict is one kind of objective phenomenon, everybody is unable to avoid being also unable to stop, simultaneously, the cultural conflict is also promoting various national culture development, realizes cultural blending, causes the humanity to make the progress unceasingly.

##### *4.7.1 Carry on Trans-Culture training, accomplishes one group of high grade Trans-Culture administrator*

In the enterprise transnational operations, in the host country cultural environment, must face two kind of different adaptation strategies. First, is changed by others—the follows cultural strategy; second, changes other people — innovation culture strategy. Such result is that causes enterprise's transnational operations to transfer “the localization management” in host country. In this kind of process, the most important link is the learning process, namely to host country culture study. Therefore, the follows cultural strategy also calls the study strategy. The Trans-Culture training primary coverage including the cultural understanding/sensitivity training, the language study, the Trans-Culture communicates and conflicts processing, the local environment analogy and so on. This may reduce the cultural conflict which manager possibly meets in broad, causes it rapid suits in local environment and displays the useful effect; Maintains the good interpersonal relationship in the enterprise, safeguard effective communication; Realizes the local staffs understanding and approval and so on to the enterprise to manage idea.

##### *4.7.2 Construction “mix” enterprise culture*

Regarding Chinese Enterprise transnational operations, must construct one kind of mix enterprise culture in the host country, and strengthens the Trans-Culture participation. The international enterprise's Trans-Culture participation is refers to through the cultural connection, achieves the Trans-Culture harmoniously to have the host country characteristic management and operation pattern, establishes Multinational corporation management culture gradually, and establishes enterprise culture gradually which take the company values as the core.

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Table 1. China foreign merchant direct investment storage quantity and the foreign direct investment storage quantity occupy GDP proportion (the unit: %)

year	1980	1985	1990	1995	2000	2002	2003
Foreign merchant direct investment storage quantity	0.5	2.0	5.8	19.3	32.2	35.4	35.6
Foreign direct investment storage quantity	-	-	0.7	2.3	2.4	2.8	2.6

Data origin: UNCTAD "World Investment Report 2004".

Table 2. 1991-2004 year China absorbs the foreign merchant direct investment cost and the direct foreign investment cost comparison (unit: Hundred million US dollars)

year	Foreign merchant direct investment cost (A)	foreign direct investment cost(B)	differential (A-B)
1991	43.66	3.70	39.96
1992	110.08	1.95	108.13
1993	275.15	0.96	274.19
1994	337.67	0.71	336.96
1995	375.21	1.06	374.15
1996	417.26	2.94	414.32
1997	452.57	1.97	450.60
1998	454.63	2.59	452.04
1999	403.19	5.91	397.28
2000	407.15	5.51	401.64
2001	468.78	7.08	461.70
2002	527.43	9.83	517.60
2003	535.05	28.50	506.55
2004	606.30	36.20	570.10



## Empirical Study on the Financial Characteristics of Chinese Companies Issuing Convertible Bonds

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### Abstract

At present, the convertible bonds advance side by side with allotment and additional issuing, and they have been the “troika” of the refinancing for Chinese listed companies. The single-factor analysis and Logistic regression analysis were adopted for Chinese listed companies which issued convertible bonds, allotment and additional share issuance from 2002 to 2004, and the results indicated that the companies which issued convertible bonds possessed many characteristics such as high growth property, large scale, low financial risk, low default risk, low stock price and shareholder concentration.

**Keywords:** Convertible bonds, Corporate financial characteristics, Logistic regression analysis

The corporate financial characteristics largely influence the choice of financing ways. According to relative theories, this article put forward some hypotheses and corresponding agent variables, used empirical data to validate these hypotheses, used the single variable analysis method to primarily review the significant differences of the financial characteristics of two kinds of issuing corporations, and used the Logistic regression analysis method to further review the influences of explanation variables.

### 1. Review of literatures

By the empirical test, Ke Dagang and Yuan Xianping (2006) pointed out that the scale, capital, R&D expenditure, the issuing scale of convertible bonds and the ownership structure of the company were positively correlative with the selection of convertible bond, but the default risk, growth opportunity and profit ability of the company were positively correlative with the selection of convertible bond. Based on foreign relative empirical research literature reviews, Liu Eping (2006) compared the financial characteristics of the company issuing convertible bonds and the financial characteristics of the company issuing additional shares, and the results indicated that for the choice of issuing convertible bonds or issuing additional shares to Chinese listed companies, the trade-off theory could be used to explain, and the explanation power of the agency theory and the information asymmetric theory was lower. In addition, the financial crisis hypotheses are very important to explain the differences of financial characteristics of two kinds of security corporations. Xu Ziyao (2007) empirically tested the three most authoritative foreign hypotheses by the data from Chinese listed companies issuing convertible bonds and additional shares in the period of 2001-2006, and the results indicated that the asset-liability ratio and the price to book ratio (P/B) of the company were significantly negatively correlative with the financing selection of convertible bonds, and the growth and the variability of management cash flow were significantly positively correlative with the financing selection of convertible bonds, and the scale, founded year, proportion of material assets and profit ability influenced little the re-financing selection for listed companies.

### 2. Research hypotheses and variable selection

Combining with Chinese special background, this article uses foreign relative theories to construct the financial characteristics of the company issuing convertible bonds and the company issuing allotment and additional shares, and puts forward following hypotheses.

Generally speaking, large company has low bankruptcy risk because it is inclined to multi-channel management, and the managers in large company have few freedom and growth opportunity, so it has stable cash flow, low financial crisis risk and strong debt bearing ability. In addition, the large company will offer more information to lenders than small company, so its exterior transparence and reputation class are higher, and it is easy to be supervised by the society, and the supervision is relatively lower, and it has strong debt ability. Therefore, the hypothesis 1 is proposed.

Hypothesis 1: The companies issuing convertible bonds have lower financial risk and default risk and larger scale than the companies issuing allotment and additional shares.

Because of the benefit conflict between shareholders and creditors, creditors are confronted with moral risk and converse selection. When the company issues debts, and invests these debts for the assets with higher risks, it can figure for values from creditors, so the asset substitution occurs, but the selling of secured liabilities can stop the asset substitution, because the secured liabilities can relieve the deficient investment, reduce the total cost of liabilities and enhance the values of the company. So the guarantee of material assets could reduce the cost of liability agency to some extent and limit this kind of opportunism behavior. Therefore, the hypothesis 2 is proposed.

Hypothesis 2: The companies issuing convertible bonds have more free cash flux, stronger growth property and more material assets than the companies issuing allotment and additional shares.

Gross & Hart (1980) put forward the concept of the private benefits of control, and they thought that the incomes of the controlling stake stockholder or the manger layer include cash flow value and the control value. The former is distributed according to controlling shareholders' stocks, and the latter belongs to the controlling shareholders' stocks. Because of the existence of the private benefits of control, the controlling shareholders or the management layer can ensure their controlling rights and corresponding private benefits of control through the financing structure arrangement. But the premise pursuing private benefits of control is that the shareholder must have the controlling right of the company. Therefore, if the controlling shareholders occupy fewer stocks, they will incline to debt financing. Comparing with the equity financing, the debt property of convertible bonds is stronger. So the hypothesis 3 is proposed.

Hypothesis 3: The controlling shareholders of the company issuing convertible bonds have fewer stocks.

When the economic situation is not optimal and the stock market is weak, the financing through issuing allotment and additional shares is difficult, or only low price can finance fewer capitals, which will harm the original shareholders' benefits. Here, to issue convertible debt could easily attract investors and correspondingly reduce the financing costs and issuing risk. When the economic situation begins to improve, the stock market explodes and the share price rises, the share transfer will successful more easily. So the hypothesis 4 is proposed.

Lan Faqin (2001) and Han Dezong & Li Yanrong (2003)'s research indicated that the refinancing sequence of Chinese listed company is from internal financing to exterior financing. The company with weaker profit ability has fewer retained earnings, lower interior financing quantity, which could not fulfill the financing requirements of the company, so the company will adopt the mode of exterior financing. The asset substitution hypothesis and the backdoor financing hypothesis all predict that the companies issuing bonds have higher profit ability than the companies issuing convertible bonds. So the hypothesis 5 is proposed.

Hypothesis 5: The companies issuing convertible bonds have higher profit ability than the companies issuing allotment and additional shares.

According to five above hypotheses, 9 explanation variables are selected in the article. Table 1 shows the company financial characteristic agent variables influencing the selection of the financing mode.

### 3. Sample data and modeling method

#### 3.1 Sample composing

Relative data in the research mainly come from the information materials disclosed by the listed companies which issued convertible bonds or allotment and additional shares publicly from Jan 2002 to Dec 2004, such as the annual report of the company and the announcement of the general meeting of shareholders. The samples eliminating financial listed companies are 141 sample companies (including 30 companies issuing convertible bonds and 111 companies issuing allotment and additional shares).

#### 3.2 Methods

(1) Single variable analysis. The single variable Mann-Whitney U test analysis method is adopted to analyze the characteristics of the companies with two kinds of financing mode including issuing convertible bonds and issuing allotment and additional shares (stock right financing), for making clear whether the significant differences exist in the financial characteristics of these two kinds of company.

(2) Multi-variable analysis. Because the company can select the financing mode issuing convertible bonds or the stock right financing, so at the appointed time, the probability that the company selects one financing mode can be denoted by a multinomial logarithm model, i.e.

$$\text{Logit}(P) = \log [P / (1-P)] = \alpha + \beta'x \quad (1)$$

Where, P is the probability issuing convertible bonds, and it can be defined as  $P(Y=1 | x)$ , and if the company issues convertible bonds,  $Y=1$ , and if the company issues allotment and additional shares,  $Y=0$ . x is the explanation variable, and it is the function of a series of characteristics ( $x_1, x_2, \dots, x_n$ ) of sample companies, i.e. the expression of  $\beta'x$  is

$$\beta'x = \beta'1x1 + \beta'2x2 + \dots + \beta'nxn \quad (2)$$

$\alpha$  is the intercept,  $\beta'$  is the slope of the parameter. So the probability issuing convertible bonds can be denoted as

$$P = e^{\beta'x} / (1 + e^{\beta'x}) \quad (3)$$

The above multiple-logarithm regression model can be evaluated by the maximum likelihood program. In the article, the software of SPSS16.0 is applied to compute corresponding regression data.

#### 4. Empirical results and analysis

##### 4.1 Single factor analysis

In the article, the averages and medians of 9 financial characteristic explanation variables in two kinds of samples including the companies issuing convertible bonds and the companies issuing allotment and additional shares are respectively tested, and the descriptive statistic result and the Mann-Whitney U test result are seen in Table 2.

The data in Table 2 indicates that the median of the liability/asset ratio of the company samples issuing convertible bonds is 0.422, and it is significantly lower than the value of the company samples issuing allotment and additional shares, 0.48, on the level of 1%. The median of the company scale is 21.875, and it is significantly bigger than the median of the company scale of the companies issuing allotment and additional shares, 21.217, on the level of 1%. The median of the fixed asset proportion is 0.472, and it is significantly higher than the median of the samples issuing allotment and additional shares, 0.344, on the level of 1%. The median of price to book ratio is 3.158, and it is significantly lower than the median of the samples issuing allotment and additional shares, 4.127, on the level of 1%. The median of stock right structure (FS) is 58.8, and it is significantly higher than the median of the samples issuing allotment and additional shares, 45.96, on the level of 1%. To the growth property, the median of the samples issuing convertible bonds is 0.244, and it is bigger than the median of 0.23 of the samples issuing allotment and additional shares, but the test result is not significant. To the cash flow variability, profit ability and flow ratio, the medians of the former respectively are 0.036, 0.107 and 1.011, which are all less than the medians of latter, 0.043, 0.109 and 1.177, and the test results are not significant. To further test the test result of single variable, the following multi-logarithm regression analysis is performed.

##### 4.2 Multi-factor analysis

The Logistic multiple-regression model is adopted to further test the single variable test result, and the binary variable of the companies issuing convertible is 1, and the variable of the companies issuing allotment and additional shares is 0. First select 4 optimal explanation variables to regress in 9 explanation variables by the forward stepwise logistic regression, and Table 3 shows the sequent arrangement of variables entering into the equation. Second, regress 9 explanation variables, and the regression result is seen in Table 3.

(1) The companies issuing convertible bonds have lower financial risk, lower default risk and larger company scale than the companies issuing allotment and additional shares. The hypothesis 1 is validated. If the companies with higher financial risks select the convertible bonds to finance, they can raise limited capitals, and the financing cost is high, and the secured company has not the enthusiasm of consignment-in. Therefore, the companies issuing convertible bonds have lower liability characteristic, i.e. the lower financial risk, which is the direct embodiment of the policy limitation of China's regulatory authority. Comparing with the stock ownership, the convertible bonds have certain liability property, so certain default risk exists, and generally speaking, the financial power of big company is stronger, and its ability to avoid financial risk is stronger too. At the same time, Chinese listed companies have intensive "financing thirsty disease", and the financing channels are narrow, but the large companies have stronger negotiation ability, so it is easily comprehensible that the scale of the large companies issuing convertible bonds is bigger than the companies issuing allotment and additional shares.

(2) The growth property of the companies issuing convertible bonds is better than the companies issuing allotment and additional shares, and their free cash flux is fewer than the flux of the companies issuing allotment and additional shares, and their material assets are higher than the material assets of the companies issuing allotment and additional shares. The regression coefficient of the total asset growth rate representing the growth property of the company in model 1 is 3.140, and the regression coefficient in model 2 is 3.614, and both coefficients are significant on the level of 5%, which indicate that the companies issuing convertible bonds are always in the asset expansion stage, and they need financing with large scale, and the companies issuing convertible bonds in China always acquire the financing amount than the companies issuing allotment and additional shares. The fixed asset ratio representing material asset proportion didn't enter into the equation in the selection by the forward stepwise logistic regression method, and in model 2, its regression coefficient is 1.57, so the result is not significant. At present, the admittance threshold issuing convertible bonds in China is higher, i.e. the higher requirement of asset yield, and the financial mess is not the consideration factor of the listed companies issuing convertible bonds. Hypothesis 2 has not been validated completely.

(3) The controlling shareholders' shares of the company issuing convertible bonds are higher. The regression coefficient of the largest shareholder's share proportion representing the controlling shareholder proportion is 0.045, but it is

significant on the level of 10%. That is opposite with the conclusion of the hypothesis, and the possible explanation is that the largest shareholders' shares of Chinese listed companies are generally higher, and the stock right financing influences little the controlling right status of the largest shareholder, and the companies with high controlling shareholder proportion issue convertible bonds makes for the adjustment of the capital structure.

(4) The companies issuing convertible bonds have lower share evaluation than the companies issuing allotment and additional shares. The price to book ratio is the characteristic index representing the share evaluation of the financing company, and its regression coefficient in model 1 is -0.337, and its regression coefficient in model 2 is -0.403, and both are significant on the level of 5%, which indicate that the shares prices of the companies issuing convertible bonds are relatively lower, i.e. the financing decision of the company has considered the factor of shares price, and the company with higher shares price selects the stock right financing, and the company with lower shares prices is inclined to issue convertible bonds for financing, and convert to the stock right financing when the shares price rises.

(5) The profit ability of the companies issuing convertible bonds is higher the companies issuing allotment and additional shares. For the financial characteristic index representing the profit ability of the company, i.e. the return on assets, its regression coefficient in model 2 is 5.714, and it didn't pass the significant test. According to the issuing conditions in China, under the situation according with supervision authorities' requirements about the return on assets of issuing convertible bonds, the companies have not obvious favor for the selection of financing mode.

## 5. Conclusions

The single-factor analysis and Logistic regression analysis were adopted for Chinese listed companies which issued convertible bonds, allotment and additional share issuance from 2002 to 2004, and the results indicated that the companies which issued convertible bonds possessed many characteristics such as high growth property, large scale, low financial risk, low default risk, low stock price and shareholder concentration. The material assets, cash flow variability and profit are not significantly different with the corresponding indexes of the companies issuing allotment and additional shares, and above results also proved that the largest shareholder's share proportion of the companies issuing convertible bonds was higher than the proportion of the companies issuing allotment and additional shares in China. The empirical tests can not completely support the foreign theoretical explanation about the issuing motivation of convertible bonds, which indicates that the foreign mature theoretical hypothesis of issuing convertible bonds doesn't be directly applied to explain the financial characteristic differences between the companies issuing convertible bonds and the companies issuing allotment and additional shares in China.

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Table 1. Table of variable definitions

Name of variable	Denotation	Concrete definition	Meaning of variable
Dummy variable	CB	The value of the company issuing convertible bonds is 1, and the value of the company issuing allotment and additional shares is 0	Explained variable
Liability/asset ratio	TD	Total liability amount/total asset amount	Financial risk
Total assets logarithm	SIZE	The natural logarithm of total assets	Company scale
Total assets growth rate	GROWTH	(total asset amount of the present term- total asset amount of the last term)/total asset amount of the last term	Growth
Fixed assets ratio	TANG	Fixed assets/total assets	Material assets
Price to book ratio	MV/BV	Market price of each share/net asset of each share	Share price evaluation
Cash fluctuation ratio	CFV	Operation cash flow standard deviation/average asset amount	Free cash flow
Return on equity	PROFIT	Net profit/shareholder equity	Profit ability
Liquidity ratio	FR	Flow assets/ flow liability	Default risk
Share proportion of the largest shareholder	FS	The largest shareholder's share proportion in the total shares	Equity structure

Table 2. Single variable analysis of financial characteristics for issuing convertible bond companies, allotment companies and additional issuing companie

Variable	Samples of issuing convertible bonds companies		Samples of allotment and additional issuing companies		T test		Mann-Whitney Test	
	Average	Median	Average	Median	Value of T	Significance	Value of z	Significance
TD	0.392	0.422	0.481	0.480	-4.076***	0.000	-2.59***	0.01
SIZE	21.994	21.875	21.379	21.217	3.524***	0.001	-3.53***	0.00
GROWTH	0.421	0.244	0.266	0.237	1.859*	0.065	-1.06	0.29
TANG	0.461	0.472	0.366	0.344	2.246**	0.026	-2.67***	0.01
MV/BV	3.110	3.158	5.017	4.127	-1.867*	0.064	-3.14***	0.00
CFV	0.047	0.036	0.052	0.043	-0.815	0.417	-0.48	0.63
PROFIT	0.139	0.107	0.122	0.109	0.522	0.602	-0.07	0.95
FR	1.274	1.011	1.284	1.177	0.319	0.75	-0.87	0.39
FS	57.113	58.800	48.841	45.960	1.933*	0.055	-2.16**	0.03

Note: \*\*\* denotes 1% level significance, \*\* denotes 5% level significance and \* denotes 10% level significance.

Table 3. Results of binary Logistic regression

Enter Equation variable	Forward stepwise regression (model 1)				All variables regression (model 2)			
	Coefficient	Standard deviation	wald	sig	Coefficient	Standard deviation	wald	sig
Constant	-13.909*	7.542	3.401	0.065	-14.38*	8.73	2.713	0.100
TD	-7.477***	2.045	13.367	0.000	-10.046***	3.04	10.918	0.001
SIZE	0.748**	0.342	4.794	0.029	0.728**	0.365	3.981	0.046
GROWTH	3.140**	1.258	6.237	0.013	3.614**	1.577	5.256	0.022
MV/BV	-0.337**	0.173	3.791	0.052	-0.403**	0.201	4.041	0.044
TONG					1.57	1.872	0.703	0.402
CFV					-4.773	7.625	0.392	0.531
PROFIT					5.174	3.46	2.236	0.135
FR					-1.037*	0.554	3.497	0.061
FS					0.045*	0.024	3.479	0.062
Observed amount	141							
Note: *, ** and *** respectively denote 10%, 5% and 1% level significance.								



## The Effect of Human Resource Management Practices on Business Performance among Private Companies in Malaysia

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### Abstract

The aim of this study was to identify commonly HRM practices effect on Malaysian private companies' performance. We found support for the four HRM practices are found to be correlated with the business performance based on responses from 153 managers from Selangor based private firms in Malaysia. Regression results showed that training and development, team work, compensation/incentives, HR planning, performance appraisal, and employees security have positive and significant influence on business performance with the exception for compensation/incentives and employees security.

**Keywords:** HRM, Private Companies, Malaysia

### 1. Introduction

Human resources of a company is saying to be one of the important capital is playing such an important role in the operation of an organisation. Pfeffer (1994) argued that human capital has long been held to be a critical resource in most firms. Companies are now trying to add value with their human resources and human resource (HR) department has been set up in order to manage their human capital, where as organisation in last decade, managed their human capital through personnel department which is only a small division of the company. The process of managing the human capital is called human resource management (HRM).

Malaysian organizations have started realising the importance of HRM. Cheah et al. (2003) stated that Malaysian managers realised that HRM had to be effective to bring about organisational stability and harmony. Besides, they also stated that the diversity of the composition of the modern workforce in Malaysia requires more appropriate and imaginative HRM solutions. As several scholars have noted that managing people is more difficult than managing technology and capital (Barney, 1991; Lado & Wilson, 1994), principally, in a country like Malaysia which is a multiracial country, failure in managing human capital and maintaining the harmony within an organisation will create fatal problems to the organisations.

Malaysian government has envisioned as a developed nation by 2020. Government has also recognised that human resource management can play an important role for the said vision. Managing human resources has become critical to the success at all companies, large and small, regardless of industry (Ulrich, 1997). Stavrou-Costea (2005) also argued that the effective human resource management can be the main factor for the success of a firm. Today the most of the

companies believed that without efficient HRM programmes and activities companies would not achieved and sustained effectively (Schuler, 2000). Consequently most of the organisations, domestic companies and multinational companies/corporations (MNCs) in Malaysia nowadays tend to focus more on HRM and also treated HRM as a key of success.

It is important for Malaysian private companies to retain their employees into their organization due to meet their ultimate goal i.e. maximizing profit. Malaysian Employers Fedearation (MEF, 2004, 2005) reported that annual labour turnover in 2003 and 2004 were approximately 17 per cent and 16 per cent respectively. Considering the need for HRM practices, Malaysian SMEs can motivate and retain their talented employees into their organization. Thus, this research is expected to become, in an important part, a meaningful guideline for human resource management practitioners in motivating and retaining their talented and skilled employees in the Malaysian context.

The purpose of this paper is to review the literature findings available other researches in the globe to date, to examine the relationship between HRM practices and performance of the organizations in the medium scale enterprises in Malaysia.

## **2. Literature Review**

Studies show that HRM plays an important role in formulating and implementing organisational strategy. Myloni et al. (2004) found that also HRM can be seen as part of the overall strategy of the firm. The increasingly importance of HRM in strategy has then led the HR managers to be part of the decision makers while formulating and implementing strategy. Rozhan and Zakaria (1996) study of Malaysian firm provides some evidence of HR managers having an involvement in the strategy formulation process.

Most research suggests that HRM is vital in order for an organisation to achieve organisational success (Barney, 1991; Jackson & Schuler, 2000; Pfeffer, 1994). Typically, HRM is considered to be vital in order for an organisation to achieve its success by enabling the organisation to sustain competitive advantage. Literatures on strategic HRM even indicate that HRM practices and systems contribute to the creation of a sustained competitive advantage for the firm (Arthur, 1994; Gerhart & Milkovich, 1992; Huselid, 1995; Macduffie, 1995; Terpstra & Rozall, 1993). As a result, it is important that a firm adopt HRM practices that make use of its employees.

A number of researches have found a positive impact of HRM on organisational performance. For instance, Becker and Gerhart (1996), Becker and Huselid (1998), and Dyer & Reeves (1995) empirical studies found that firms which align their HRM practices with their business strategy will achieve superior outcomes. MacDuffie (1995) studies worldwide auto assembly plants found that some HRM practices are related to productively and quality of the firm. Delery and Doty (1996) found significant relationships between HRM practices and accounting profits among banks. Youndt et al (1996) found that certain combinations of HRM practices are related to operational performance of manufacturing firms. Guthrie (2001) surveyed in New Zealand corporations found that HRM practices are related to turnover and profitability of the corporations.

More recent empirical study on HRM practices (Lee & Lee, 2007) uncovered six underlying HRM practices on business performance, namely training and development, teamwork, compensation/incentives, HR planning, performance appraisal, and employee security help improve firms' business performance including employee's productivity, product quality and firm's flexibility. This study reveals that three items of HRM practices influence business performance: training and development, compensation/incentives, and HR planning. However, some other researches also show that certain HRM practices have significant relationship with operational (employee's productivity and firm's flexibility) and quality performance outcomes (Chang and Chen, 2002; Ahmad and Schroeder, 2003; Kuo, 2004 Sang, 2005). These research evidence shows that effective HRM practices can have positive impact on business performance.

Using data from 197 Taiwanese high-tech firms Chang and Chen (2002) conducted a comprehensive study to evaluate the links between HRM practices and firm performance. This study reveals that HRM practices including training and development, teamwork, benefits, human resource planning, and performance appraisal have significant effect on employee productivity. This study also found benefits and human resource planning have negative relationship with employee turnover.

To generalize the efficacy of seven HRM practices by Pfeffer (1998) Ahmad and Schroeders (2003) found the seven HRM practices such as employment security, selective hiring, use of teams and decentralization, compensation/incentive contingent on performance; extensive training, status difference and sharing information have significant relationship with operational performance. Kuo (2004) adopted 11 HRM practices found that employment security, team working and incentive compensation are regarded as three of the main practices for impacting hospital performance.

Although HRM practices has been consider as one of the influential variables seems to increase business performance, most of the Malaysian private business organization really not practicing HRM into their business (Chew, 2005). It is unclear on how to change the mindset of the Malaysian business organization practicing HRM into their businesses. In order to understand what influence business performance as well we must first find out the HRM practices that are

influencing business performance. Therefore, it is replicated with references to the HRM practices related research in developed countries. In this study six factors have identified and they are training and development, teamwork, compensation/incentives, HR planning, performance appraisal, and employee security.

### 3. Research Model and Hypotheses

After looking at the literatures, this research posits the following hypotheses and statistical research model:

**H1:** There is a significant relationship between the training and development and business performance.

**H2:** There is a significant relationship between teamwork and business performance.

**H3:** There is a significant relationship between compensation/incentives and business performance.

**H4:** There is a significant relationship between HR planning and business performance.

**H5:** There is a significant relationship between performance appraisal and business performance.

**H6:** There is a significant relationship between employee security and business performance.

According to the existing literature the conceptual model in this study is shown in Figure 1.

### 4. Research Methods

#### 4.1 Sample and Data Collection

Data for this study was gathered by primary data collection method through personal administered questionnaire. Due to the cost constraint a convenient sample of 159 private companies were chosen for this research. One trained data collector approached potential respondents in randomly selected private business organization in Selangor in Malaysia. After assisting a respondent in completing a survey, the data collector would then approach the next available person and resume the screening process.

Of the 159 respondents who were agreed to complete the survey. However, 6 were discarded due to uncompleted responses; the final sample was 153 for an effective response rate of 91.45 percent. The response rate is very high due to the fact that the researchers' pursued all respondents personally and motivate respondents to participate the survey. The majority of the respondents were male (57.51 percent), Chinese group was the highest contributors of the total respondents (74.50 percent). Their age ranged from 16 to 50 with mean age of about 41.5 years old. Most of them were undergraduates representing 66.66% of the total sample.

#### 4.2 Measurement Development

Respondents completed personal survey questionnaire that included questions about the basic characteristics of the respondents (gender, age, race) items designed to assess (a) HRM practices, and (b) business performance.

*Business performance:* Business performance was measured using items developed by Lee and Lee (2007) with minor wording changes tailored to the business organization in Malaysia. Six items were rated using a multi-item method was used to increase the accuracy of measurement, and each item was based on a five point Likert scale (1) strongly disagree to (5) strongly agree.

*HRM practices:* Twenty five items measured variables were used to reflect the components of HRM practices. HRM practices including training and development, teamwork, compensation/incentives, HR planning, performance appraisal, and employee security were considered as the independent variables for this research. Similarly like business performance a multi-item method was used to increase the accuracy of measurement, and each item was based on a five point Likert scale (1) strongly disagree to (5) strongly agree.

#### 4.3 Reliability

Table I shows the number of items comprising each scale: the reliability reported by Nunnally (1978) for the scale and Cronbach's alpha for scale reliability obtained for our sample. Reliability from our sample showed a reasonable level of reliability ( $\alpha > 0.70$ ).

#### 4.4 Test for construct validity: factor analysis

A factor analysis was conducted in order to develop factors that help in explaining the role of experience and reference group in online brand trust. As suggested by Hair et al., (1995), seven factors were identified for the factor analysis using the eigen value criteria that suggest extracting factors with an eigenvalue of greater than 1.0. In conducting the factor analysis we followed Hair et al (1995) and Alfansi and Sargeant (2000). The seven factors identified explain 59.21 percent of the total variance. The extraction method used was principal axis factoring with Varimax rotation. This method has been widely accepted as a reliable method of factor analysis (see, Alexander and Colgate, 2000). In our survey, the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy score (0.86) was well above the recommended 0.5 level (Malhotra, 1999) suggested that the data may be factorable.

In creating these measures of HRM practices, we decided not to drop items loading heavily (.4 or higher). All items were loaded more than .4, however one item of training and development, one item of HR planning loaded together with other items is considered as insignificant and not meaningful as it is of low correlations decided to remove from all further analysis.

### **5. Normality of Data and Multi-collinearity**

Two major methods were utilized in order to determine the presence of multicollinearity among independent variables in this study. These methodologies involved calculation of both a Tolerance test and Variance Inflation Factor (VIF) (Kleinbaum et al, 1988). The results of these analyzes are presented in Table IV. As can be seen from this data, i) none of the Tolerance levels is <or equal to .01; and ii) all VIF values are well below 10. Thus, the measures selected for assessing independent variables in this study do not reach levels indicate of multicollinearity. The acceptable Durbin – Watson range is between 1.5 and 2.5. In this analysis Durbin – Watson value of 1.745, which is between the acceptable ranges, show that there were no auto correlation problems in the data used in this research. Thus, the measures selected for assessing independent variables in this study do not reach levels indicate of multicollinearity.

### **6. Results of Hypotheses Tests**

This study combined six HRM practices into one regression, to see the overall effect on business performance. The result in the table shows that of the six hypothesized relationships, four are significant ( $p < 0.05$ ) and two are nonsignificant ( $p > 0.05$ ) (see Table IV).

H1 suggest that training and development has a positive impact on business performance. The regression results support this hypothesis ( $t = 2.803$ ,  $p = .006$ ). This findings is consistent with studies indicating that higher the training and development facility provided by the company the performance will be. In other words, training and development program is important factor for business performance of a company (Lee and Lee, 2007).

H2 suggests that team work positively affects business performance. The regression results support this hypothesis ( $t = 2.266$ ,  $p = .025$ ). This finding is consistent with studies by (Lee and Lee, 2007; Ahmad and Schroeders, 2003) found that team work has significant relationship with business performance.

H3 suggests that compensation/incentives have a positive impact on business performance. The regression results show nonsignificant relationship with business performance ( $t = 1.172$ ,  $p = .243$ ). This study is counter to early study by Lee and Lee (2007).

H4 suggests that HR planning has positive and significant relationship with business performance. It is expected since past literature has consistently shown that HR planning has a significant and positive impact on business performance (Lee and Lee, 2007; Chang and Chen, 2002). The regression results support this study ( $t = 3.821$ ,  $p = .001$ ).

The acceptance of H5 (performance appraisal) is in agreement with some past research findings (Lee and Lee, 2007; Sang, 2005; Chang and Chen, 2002). The study result indicating that performance appraisal has positive impact on business performance ( $t = 2.128$ ,  $p = .035$ ). All of the previous studies suggest that performance appraisal significant and positive relationship with business performance.

From the results of the regression of this study found that employees security has no significant relationship with business performance ( $t = -.287$ ,  $p = .774$ ). However, the negative sign on the figure shows that if there is a relationship it will be negative one. This higher the security problem lower the business performance will have in the business. This study is consistent with previous study by Lee and Lee (2007).

### **7. Implications for practice**

The study reveals four significant indicators of HRM affecting business performance in the business. Government agencies like MIDA, SMIDEC, and other government agencies should create better awareness of the benefits of HRM practices to encourage higher rate of retention of the employees in the business organisation. It can be done by having seminars or induction sessions to allow companies to evaluate their business performance. In order to receive greater responses towards HRM practices, it is recommended that authority should give certificate as a token and financial support to attend the seminar. They could establish a close link with all business organization and get continuous feedback from them in order to identify the problem areas and take necessary actions to rectify them. Another way to enhance the possibility to use HRM in the companies sectors, government should enforce standardized, consistent and uniform policies in all business sectors, agencies or subsidiaries in practicing HRM policies. Management of private businesses should provide adequate pre-training to their employees on how to practices in business at all levels must be ensured so that the employees should get comfortable with practicing it.

### **8. Conclusion**

The research framework for this study relied on the six HRM practices as identified in various past research namely, training and development, team work, compensation/incentives, HR planning, performance appraisal, and employees security. Based on the result of the study, four HRM practices are found to be correlated with the business performance

with the exception for compensation/incentives and employees security. These results indicate that these two factors will not likely to influence the overall business performance in the Malaysian business organisation. In conclusion we can say all six HRM practices help improve firms' business performance including employee's productivity, product quality and firm's flexibility. From this result, it can be concluded that this study has achieved its main objective, which is to, study about the effect of HRM practices towards business performance in the context of private firms in Malaysia. Furthermore, the analysis indicates that in general the HRM practices did have some effect towards business performance even though two of the HRM factors did not show any support.

## 9. Limitations and recommendation

The study is limited in several ways. First, the small number of participants restricts the generalizability of the findings. Second, further analysis is needed on the pre-existing differences between the groups with respect to medium scale and small scale business organizations particularly HRM practices rate, which could impact future usages of HRM into all organisations. Further analysis is also needed to determine the potential moderating effects of ideology of its owner, size and technology usage of the firm.

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Table 1. Reliability Analysis

Variables	Coefficient Alpha
Training and Development	0.737
Team Work	0.809
Compensation/Incentives	0.862
HR planning	0.797
Performance Appraisal	0.724
Employees Security	0.769
Business performance	0.831

Table 2. Test of Collinearity

Variable	Tolerance	VIF
Training and Development	.597	1.675
Team Work	.555	1.802
Compensation/Incentives	.700	1.429
HR planning	.646	1.548
Performance Appraisal	.590	1.695
Employees Security	.613	1.632

Table 3. Regression Results

Independent variables	Parameter estimate	Standard error	t-value	p- value
Constant			2.162	.032
Training and Development**	.218	.329	2.803	.006
Team Work*	.183	.065	2.266	.025
Compensation/Incentives	.084	.072	1.172	.243
HR planning**	.286	.070	3.829	.001
Performance Appraisal*	.167	.073	2.128	.035
Employees Security	-.022	.081	-.287	.774
*p≤0.05; **p≤0.01; N=153				
Overall model: F=21.80; p≤0.0001; R <sup>2</sup> =0.473; Adjusted R <sup>2</sup> =0.451				

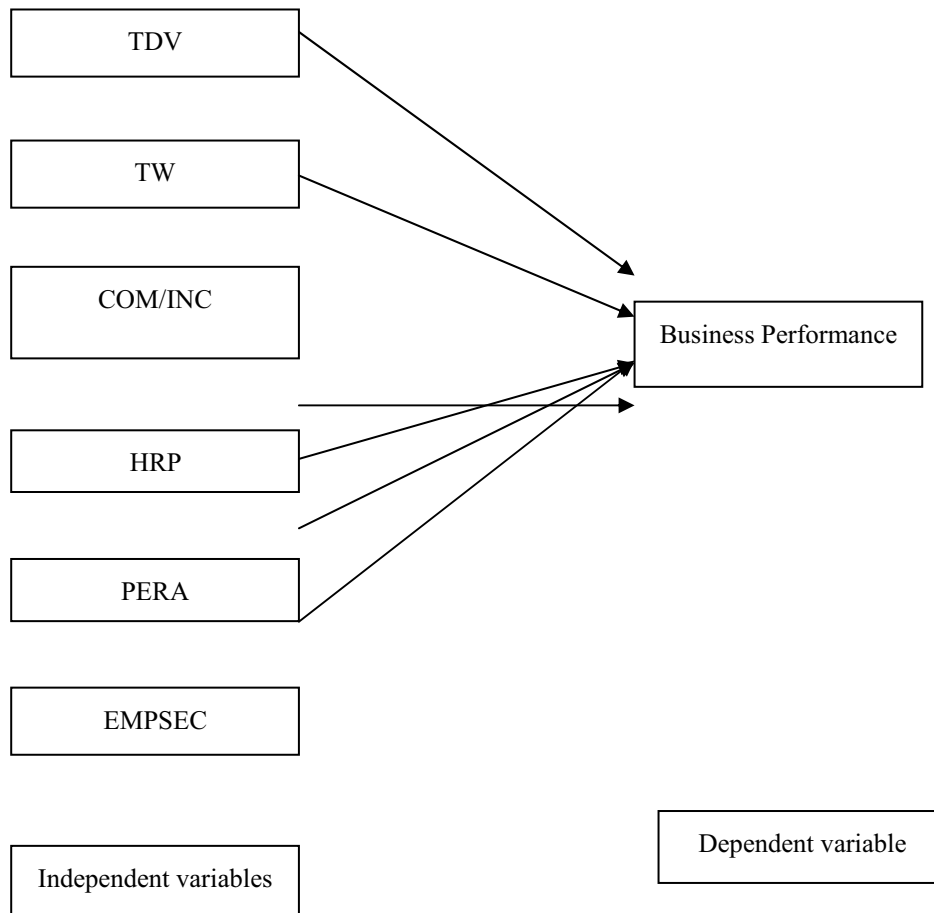


Figure 1. A Schematic diagram of the conceptual framework



## An Analysis of Causes for SMEs Financing Difficulty

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### Abstract

SMEs have an extremely important position in national economy and social life, especially in the aspect of solving employment and promoting urbanization, what is irreplaceable by large enterprises. However, at present the SMEs financing issue in China has already become a serious problem that troubles the economic development, market growth, and social progress. This issue has aroused a wide attention from economic theory field, industrial field, and the government. This paper summarizes the causes for SMEs financing difficulty comprehensively, with the hope of offering references for further studies.

**Keywords:** Small and medium enterprises (SMEs), Financing, Cause

### 1. Disadvantage conditions for financing

For SMEs, the conditions for financing are inferior to that of large enterprises.

- (1) High transaction costs. To issue loans for SMEs means high costs, which serves as a barrier for banks offering loans for SMEs. Banking credit is a typical scale economy. The larger the loan, the smaller the unit transaction cost.
- (2) Information asymmetry. The information asymmetry and incomplete information cause the credit rationing in credit market ----- According to the contract conditions, banks offer the funds less than required. Empirical studies show that, compared with large enterprises, SMEs suffer more from the credit rationing. Reasons are: Firstly, SMEs are at an inferior position in transaction costs. Secondly, SMEs managers do not possess high credits. Their management style and behavioral characteristic have a higher uncertainty, which makes banks face serious moral risks if they offer loans for SMEs. SMEs also face the rationing issue by financing in the security market.
- (3) SMEs are at an inferior position in credit filtration. As banks face the adverse selection issue, the active strategy is to put forward certain non-prince condition. In other words, ask the loan applicant to offer mortgage or guaranty by certain mechanism. SMEs face more strict requirements for mortgage in applying loans. Meanwhile, due to the geological location, the special assets, and the disposal cost, SMEs will suffer more loss in liquidation. Only by means of higher requirements for mortgage, can banks compensate the potential loss.
- (4) SMEs face greater risks in operation. SMEs usually operate in a short period. The probability of exiting from the market is high, which increases the risks of banks objectively. It is estimated that nearly 23.7% of small enterprises disappear in two years and nearly 52.7% of small enterprises exit the market in four years due to business failure, bankrupt, or other reasons.

### 2. Worse credit of SMEs and single financing channel

SMEs have to build up their credit. However, the macro environment in which SMEs live at present has a relative economic surplus. As a result, SMEs grow slowly. And it is hard to accumulate a higher credit. SMEs do not have a wide financing channel. They mainly depend on state-owned banks. However, the state-owned commercial bank does not enter the market completely. Former public-to-public credits will not impact the chief manager due to failure of enterprises. Once the public-to-public credits are in problems, it is hard to settle down the issue. Therefore, with this worry, banks usually set restrictions for issuing loans for SMEs in fields of amount, procedure, mortgage, and so on. Besides, due to the SMEs' great needs, commercial banks cost a lot in operation. So, state-owned commercial banks are not friendly with SMEs in a sense. SMEs do not possess a financing guaranty system. Before, enterprises usually offer guaranty mutually. But at present, the guaranteed financing between enterprises are seldom. After all, it is not necessary for an independent enterprise offering guaranty for other enterprise, which will benefit nothing but increase risks. On

the other hand, if reformed SMEs are normal stock enterprises, the Law of Enterprise regulates strictly on offering guaranty for other enterprises. Therefore, although after 1998 the government advocates banks to offer services for private enterprises, banks find it not easy due to SMEs' defects: such as the credit issue. For some SMEs, they operate merely based on loans, which worsen the competitive environment and the credit. The relationship between SMEs and banks is not in harmony.

At present, China's finance environment is transferring from the old to the new. Many regulations and laws are imperfect. Policy support for SMEs may not be in work. Financing support is not effective and SMEs could not get sufficient loans from banks.

A survey shows that the loan get by SMEs is about 0.5% of large enterprises. But in applying loans, SMEs have to follow the complicated procedures similar to large enterprises. For one loan, banks have to take five times of management costs by offering the loan for SMEs than for large enterprises. So, under the circumstance of severe industrial competition and pursuing for maximum profits, banks would like to offer loans for large and medium enterprises.

### **3. The direct financing channel for SMEs is almost closed**

The security market is crowded by state-owned enterprises. SMEs could not occupy any position in the market. Few SMEs can enter the market by reforming into stock enterprises. Private financing is regulated strictly in China because it may cause a series of social problems. The government is careful for the development of private financing. The Criminal Law regulates the "illegal private financing crime" seriously. As a result, SMEs face demanding political barrier in direct financing. Therefore, on one hand, amounts of private capitals could not be used effectively. They have to flow into state-owned enterprises by commercial banks. On the other hand, SMEs are lack of capitals. They could do nothing but stand by. China does not open the enterprise property right market. Enterprises' assets could not flow freely. Some enterprises fail to make best use of their assets. Some enterprises have to develop by their own assets instead of by merger and purchase. To sum up, because of the lack of a capital market, the development of SMEs seems to be primitive.

In China's financial system, the capital market, compared with the fund market, is imperfect. It lacks of a multi-level capital market that can offer financing services for SMEs. The domestic main board market is only for state-owned large and medium enterprises' financing. The second board market is still a beautiful wish. The third board market grows by itself slowly. Foreign second board market is too far to be helpful. Present laws and regulations on listing financing and issuing securities are not good for SMEs. It is hard for SMEs to get funds by direct financing, such as debts or stock financing.

### **4. Funds and guaranties are useless**

"Banks always lend money for people who do not need money." Rich people can offer asset guaranty. SMEs have not sufficient assets. They could not take effective assets as guaranty. In order to escape from risks, banks will not offer loans for SMEs if without effective guaranty even they feel optimistic to certain SME's development.

At present, many SMEs adopt the mutual private guaranty in order to obtain capitals. The advantages are lower requirements, easy operation, and wide adaptation. But once there is a problem, two sides may be hurt. Risks are large.

Although recently some guaranty funds can offer financing services for enterprises, the quantity and the scale of present guaranty institutions are small. They do not desire for offering credit guaranty. It is estimated that China's guaranty system can offer the guaranty for 50 billion Yuan every year. Compared with millions of SMEs' thousands of billions financing needs, it merely solves no more than 5% capital short. Presently, most guaranty institutions are at loss. The long-term development capability is weak. Besides, guaranty funds may be troubled by political interference. They could not escape from risks. Therefore, they have to operate carefully. They set strict requirements and complicated procedures for enterprises' guaranty, which increases enterprises' burden, missing business opportunities. So, the credit guaranty institutions could not support SMEs effectively. In a short period, they will not help a lot.

### **5. It is not easy to depend on enterprises' self accumulation or leaders' personal credit**

Qi Zhao, the vice president of Yuyang Group, has said: "The bank always loves the rich the hates the poor. If you have more assets, he would like to marry his girls to you. If you just start your business, he would not give you money by all means. SMEs should not hope to get money from banks." This phenomenon is common at present. Under the condition of no indirect financing and direct financing, private enterprises have no choices but financing by themselves.

In the severe competitive environment, it is hard for SMEs realizing the primitive capital accumulation due to the lower interests and profits.

Although financial supervision agencies impose strict control over private financing, the private credit market is still active. It is difficult for private enterprises financing by this way. Sometimes, they may commit crimes. The Dawu Sun case is a typical example. Dawu Sun has ever worked in credit cooperatives and Agricultural Bank of China. But he still

failed to get loans from banks. Therefore, he had to get capitals by himself. His enterprise started from a waste land. Finally, he was sued. Now, he was judged for three years imprisonment, delaying an execution of four years.

Another direct financing for private enterprises is stock financing. However, the stock right can not flow freely among stock enterprises. And enterprises suffer burden of allocating dividends for small and medium stockholders. As a matter of fact, in order to create the positive development expectation and enhance enterprises' cohesion, enterprises try their best to allocate dividends. As a result, enterprises will be in short of capitals. Seldom enterprises input capitals in R&D.

#### **6. Restriction of financing characteristics**

The financing of SMEs is usually featured with "small, frequent, and fast". SMEs are sensitive to the market. Once they find business opportunities, they apply loans from banks. And they ask banks to offer loans as soon as possible in order to organize materials and realize transactions in time. However, state-owned commercial banks have to follow strict procedures and operational standards before issuing loans, which could not satisfy SMEs' needs for financing.

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## An Empirical Analysis on the Impact of FDI on China's Economic Growth

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### Abstract

Since 90s in 20<sup>th</sup> century, along with the establishment of applying the socialist market economy mechanism, China has gained considerable achievements in using foreign capitals. FDI (Foreign Direct Investment) has already become one of important source of capitals for Chinese modernization construction. China is the county attracting the most FDI in the world at present. Therefore, this paper tends to study the benefit of China using foreign capitals in perspective of FDI's impacts on GDP according to data from 1985 to 2008, which is meaningful for China making best use of foreign capitals and driving the economic development in China.

**Keywords:** FDI, GDP, Regression model

### 1. Introduction

In recent years, China's economy develops fast, showing a prosperous trend. One of the most wonderful achievements relies in the use of foreign capitals. China using foreign capitals changes along with the time, from a small quantity of experimenting units in a narrow scope with more restrictions to a comprehensive opening in a wide scope at multiple levels. The introduced foreign capitals rise from hundreds of millions, several billions, to dozens of billions annually. Regions introducing foreign capitals extend from several seaside cities and special areas to all districts. And more and more industries welcome foreign capitals.

Foreign-funded enterprises exert a significant effect on China economy. Jian Yao, a spokesman from the Ministry of Commerce, on Jan. 15<sup>th</sup>. 2009, says: in 2008 China's ability of absorbing foreign capitals keeps in rising. 92.395 billion US dollars are introduced into China in this year, rising by 23.58%, being the No.1 among the developing countries for 17 years. In perspective the industrial structure, in 2008 the service industry realizes a fast rising in absorbing foreign capitals. Excluding data of foreign capitals absorbed by banks, insurances, and securities, in 2008 China's service industry actually absorbs and uses 38.12 billion US dollars, rising by 24.23%, and accounting for 41.26% of the amount used by all industries. By 2007, there are 286,000 foreign-funded enterprises in China. The exports of foreign-funded enterprises account for 57.1% of China's total exports. Therefore, foreign capital is an irreplaceable factor for China's economic development.

### 2. The condition of China using FDI from 1985 to 2008.

By collecting data of China using FDI from 1985 to 2008, we can get the trend chart as follow.

According to this chart, the amount of China using FDI tends to rising during the twenty-four years in general. There are two fast-rising stages. The first stage is from 1992 to 1996, which is originated from Xiaoping Deng's speech. He advocated to enlarging the opening scope. Then, amounts of foreign capitals rush in. The second stage is from 2001 to now. In recent years, China's economy develops fast and the investment environment is improved greatly, what attract more foreign investments. Besides, because of the stable political environment and the nice economic development, many foreign investors are optimistic toward the investment in China.

### 3. The significance of analyzing the benefits of China using foreign capitals

Along with the gradually enlarging scale of China using foreign capitals, the effects of foreign capitals on China's economic and social life tend to be more significant. To analyze the benefits of China using foreign capitals correctly can check the result of using foreign capitals comprehensively, adjust the development strategy of opening and using foreign capitals in time, help to perfect the foreign-related economic and law system, improve the level of managing foreign investment affairs, and help to conclude experiences and lessons from experimenting units and later development, offering references for other areas using foreign capitals.

China using foreign capitals includes foreign direct investment and foreign indirect investment. Compared with foreign indirect investment, FDI can bring about techniques and crafts, organizational management skills, and marketing experiences comprehensively. Due to the impacts of FDI on the national economy, to analyze its relationship with GDP and understand the condition of China using foreign capitals is meaningful in theory and practice.

#### 4. The theoretical model and the empirical analysis

Now we make an empirical analysis of the impacts of FDI on GDP by constructing a regression model. In order to reflect the important effects of foreign capitals on China's economic growth, we introduce two variables, namely the saving and the investment, that driving the national economic growth. Besides, in order to show the driving effect of FDI on national economic growth clearly, we specially introduce the fixed asset investment as a variable that serves as a comparison in the model. The objectives of constructing the model:

(1) Understand the changes of FDI in China from 1985 to 2008.

(2) Use data to describe and analyze the impacts of FDI on GDP from 1985 to 2008.

Firstly, set the initial quaternary linear regression model:  $GDP = \alpha_0 FDI + \alpha_1 CO + \alpha_2 S + \alpha_3 FI$

Here, GDP (unit: 100 million Yuan); FDI (unit: 100 million US dollar); CO (unit: 100 million Yuan) stands for total consumption (include household consumption and government consumption); S (unit: 100 million) stands for the total savings of citizens and farmers at the end of the year; FI (unit: 100 million Yuan) means the total fixed asset investment at the end of the year.

Input the data in Table 1 into EVIEWS. The main menu View/Graph/Line draws figures for GDP and FDI as follow.

According to Figure 1, the GDP shows a prominent rising trend from 1985 to 2007. And there is a significant statistical law between FDI and GDP. Make OLS (Ordinary Least Squares) parameter estimation in EVIEWS and get the result as follow.

The regression model:

$$GDP = 10462.45 + 7.32FDI - 0.19CO + 0.80S + 0.49FI$$

$$(6.88) \quad (7.42) \quad (-1.25) \quad (5.63) \quad (4.02)$$

$$R^2 = 0.9984 \quad F = 2824.99 \quad DW = 1.18$$

(1) From the regression result, for this sample,  $\alpha_0 = 7.32 > 0$ . In other words, as FDI rises by 100 million Yuan, GDP will rise by 732 million Yuan.  $\alpha_1 = -0.19$ . It means the consumption is in an inverse proportion with the national economy, which conflicts with Keynes' national economic growth theory and is not in accordance with facts. That may be caused by data collection. Therefore, we delete this variable from this model. Besides,  $\alpha_2 = 0.80 > 0$  means savings are in a positive rising proportion with national economic growth. As savings rise by 100 million Yuan, GDP (gross domestic product) will rise by 80 million Yuan accordingly.  $\alpha_3 = 0.48$  also means fixed asset investment is in a positive correlation with national economic growth. But by comparing the parameters of variables, we find that the driving effect of FDI on GDP is significant.

(2) In the regression equation,  $T_1 = 6.88$ ,  $T_2 = 7.42$ ,  $T_4 = 5.63$ ,  $T_5 = 4.02$ . The values are larger than the 2.08 under the significance level 5%. Therefore, the explanation of variables FDI, S, and FI for GDP is significant.  $T_3 = -1.25 < 2.08$ . It means the variable CO is not significant and can not explain GDP correctly. So, the variable CO should be deleted from the model.

The regression result of F test on the significance of the whole equation is far larger than 4.31 under the significance level 5%. Therefore, the model is significant in general.

$DW = 1.18$ ,  $d_l = 1.08$ ,  $d_u = 1.66$ . Here, 1.18 is between  $d_l$  and  $d_u$ . It could not determine whether there is a sequence correlation for model's variables.  $R^2 = 0.9984$  means the model has a significant fitting effect in general.

From the prediction figure, we know that the regression MAPE is 7.00598,  $TIC = 0.01635$ ,  $CP = 0.999385$ ,  $MAPE < 10$ ,  $0 < TIC < 1$ ,  $CP \approx 1$ . It means the regression realizes high prediction accuracy. The predicted value is close to the real

value.

According to the prediction figure, the rising trends of FDI and GDP is similar. As the economy stays in a better state, FDI rises fast, for example the period from 1992 to 1996. As the economy stays in a worse state, FDI rises slowly, for example the period from 1996 to 2000. During this period, due to the impacts from international financial crisis, the rise FDI in China is slow. In recent years, because of China's entry to WTO, the stable and fast construction of market economy, and the improvement of infrastructure, all these factors form a favorable environment for foreign investors, plus the stable political environment, what are all favorable conditions for attracting more investments from foreigners. Therefore, even under the serious financial crisis, China is still the first choice for investments. Today, the FDI keeps rising and GDP tends to rise either, which indicate that China's economy develops well at present.

## 5. Conclusion

By the empirical analysis, the condition of China using foreign capitals (mainly FDI) is better. Foreign capitals have a significant effect on GDP. In a sense, it proves that foreign capitals exert positive effects on the national economic growth.

As we discuss the effects of foreign capitals on China economy, we should know that foreign capitals are endowed with foreign investors' pursuits, which will inevitably be restricted by foreign investors' market planning and global business strategies. For example, for the sake of interests, a trans-national company usually allocates capitals or reduces the production and exports of child-company in one country and increases the production and exports of child-company in another country, disturbing the market supply of the host country. Therefore, as we introduce foreign capitals, we should pay more attention to the effects of foreign capitals on China's economic growth. Meanwhile, as for the foreign capitals entering China, we should grasp the opportunity and develop the national economy rationally and fast.

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Table 1.

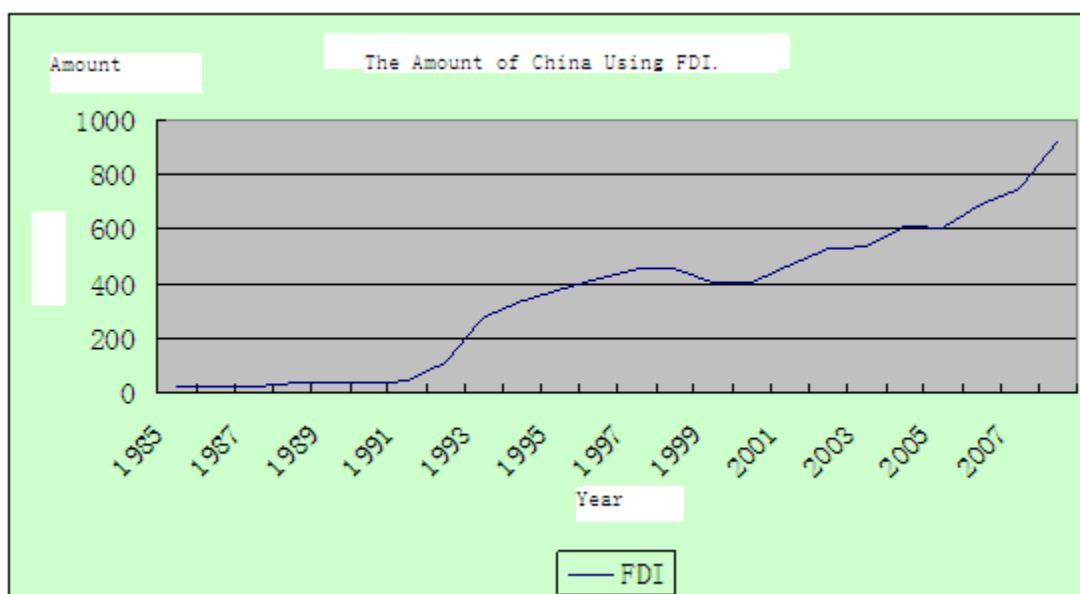


Table 2.

Dependent Variable: GDP				
Method: Least Squares				
Date: 02/19/09 Time: 21:23				
Sample(adjusted): 1985 2007				
Included observations: 23 after adjusting endpoints				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	10462.45	1521.728	6.875375	0.0000
FDI	7.320399	0.986437	7.421054	0.0000
CO	-0.186012	0.148966	-1.248690	0.2278
S	0.800636	0.142224	5.629387	0.0000
FI	0.489700	0.121764	4.021705	0.0008
R-squared	0.998410	Mean dependent var		81112.25
Adjusted R-squared	0.998056	S.D. dependent var		68842.54
S.E. of regression	3035.180	Akaike info criterion		19.06359
Sum squared resid	1.66E+08	Schwarz criterion		19.31044
Log likelihood	-214.2313	F-statistic		2824.986
Durbin-Watson stat	1.179369	Prob(F-statistic)		0.000000

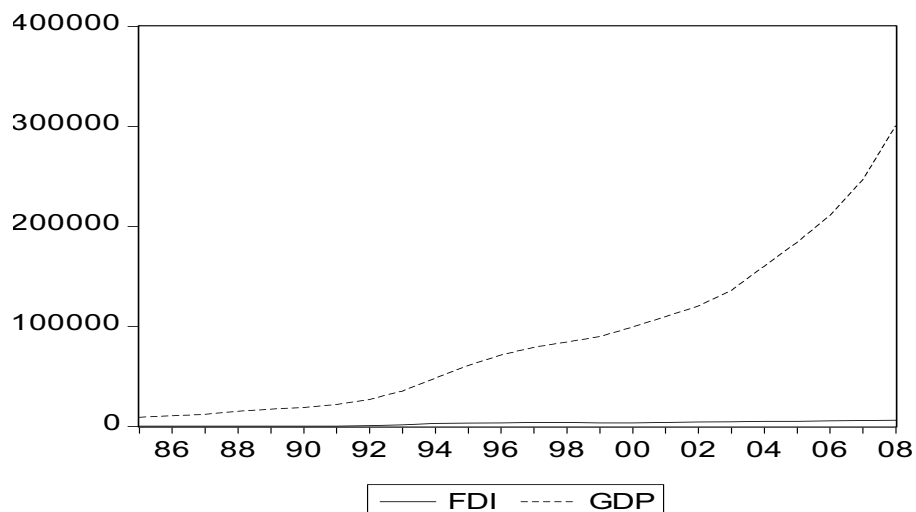
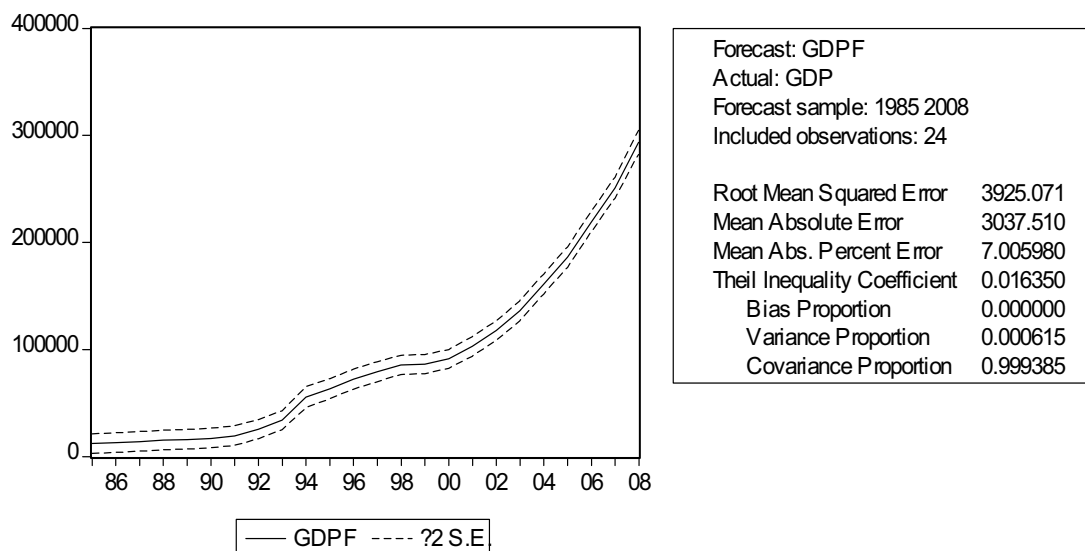


Figure 1. The linear graphs of GDP and FDI.





# Investigating the Impact of Leaders' Responsibilities in Reaching Organizational Excellence in the EFQM through the Systems Dynamics Approach

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## Abstract

Leadership is one of the most important areas of discussion in providing direction and guidance to organizations. This is where leaders are said to give life to the organization and their decisions, strategies and methods spell success or failure for the entire system. Among the tools suited to the investigation of leaders' behavior and decisions is the System Dynamics methodology, in which it is possible to investigate the decision-making processes and various behaviors of leaders and to have different analyses of these for reaching organizational success. In this article, the System Dynamics approach has been employed in order to investigate the responsibility of leaders in reaching organizational excellence. The model was first designed based on cause-effect relations in the EFQM model; the relationships between the model variables were then compiled. Afterwards, various scenarios for a company in the transportation industry were put to investigation through its self-evaluation results.

**Keywords:** System dynamics, Leader responsibility, EFQM, Organizational excellence

## 1. Introduction

There is no debate that the success of any organization is greatly dependent upon the competence of its leaders and similarly, the leaders' capabilities define the success of the organization. A review of leadership literature, by D.V. Day and R. G. Lord concluded that 20 to 45 percent of all organizational performance deviation is related to leadership (Day, Lord, 1988).

Successful leadership has its roots in the highest levels of the organization; this leadership and responsibility must be viewed as a serious and stable obligation (Chopin, 1995). Effective leadership begins with vision and mission. It is developed by compilation of a strategy for applying these tenets. In order to be successful in upgrading the productivity and optimizing business in the organization any approach must begin from the top and initiated from the highest level of leadership (Oakland, 1999). Many diverse studies have been conducted in the various aspects of leadership, and a great number of books authored on the subject are focused on the leadership aspects of mission, vision, goals, motivation, and employee management (Day, Lord, 1988) and (Kouzes, Posner, 2003). Volumes have also been published recently that focus on the interaction between the leaders and clients, partners, and representatives from the society (Segil, Goldsmith, and Belasco, 2003) and (Hampson, 1999).

Today, scientists and intellectuals emphasize the use of TQM as an inclusive solution for increasing the efficiency of organizations. In this framework, which focuses on comprehensive TQM quality management, organizational excellence models have been introduced as tools for instating systems and evaluating how successfully these

establishments are carried out. As extended tools, Organizational Excellence Models provide leaders with a comprehensive attitude and a more precise understanding of all angles of the organizational system to move towards excellence. This is such that the models for national quality awards offer an organized structure for the understanding and utilization of TQM. As an example, the Deming Award model proved that it can be employed as an effective tool for the expansion of quality concepts across Japan. And the use of the self evaluation technique based on the criteria of the Malcolm-Baldrige Award (MBNQA) made it into a powerful tool among American organizations (Hart, 1993) and (Moore, 1995). Another case worthy of mention is the European Organizational Excellence Award model (EEA), which was compiled, based on the Malcolm-Baldrige model by the European Quality Management Foundation, and was put to use by European and non-European countries alike.

The main aim of the EFQM model and the European Organizational Excellence Award, EEA was the promotion of concepts and their institutionalization in organizations in which the model is utilized for the organizational excellence. Although the Deming, Malcolm-Baldrige, and EFQM models are the most famous ones for performance excellence, they have inspired other countries to develop their own specialized models. Generally speaking, the TQM system has been founded on a mental framework and as such, it may well be the case that the prediction of its outcomes would not be possible in complex circumstances. In order to overcome this obstacle, mental models which rely on the Cybernetic Feedback Theory have been suggested in order to create the appropriate structure for hypothesis and computerized simulation (Forrester, 1971). In investigating the complexities of concepts related with TQM, Waldman has suggested the use of system theory in the implementation of this model (Waldman, 1994). Bauer et al. also supports this idea, stating that the use of Dynamic Models for TQM in times of turmoil and disorder is essential (Bauer, Reiner, and Schomshule, 2001). In Iran, from among the available excellence models in the world, the EFQM model has been welcomed and has become the foundation for the instatement of national awards. The EFQM Excellence Model, similar to other quality awards such as the Malcolm-Baldrige National Award in the United States or Deming's Award in Japan, is based on self-evaluation. Self Evaluation is a comprehensive and ordered consideration of organizational activities in comparison with the criterion activities (European Foundation for Quality Management, 2003) and (Van der Wiele, and Brown, 1999). Dynamics is a suitable tool for helping with better understanding the self evaluation process and an aid for decision-making and implementation of various policies for reaching excellence.

In order to investigate the various scenarios for the enhancement of the leaders' responsibilities in reaching effective leadership, the Dynamic System methodology has been used in this article, and to this end the EFQM model is used in order to design the Dynamic Model. Therefore, at first the Dynamic System is designed based on the relationships between the EFQM model criteria; the relationship between the model variables is consequently identified. Here, the data simulation results from self-evaluation of an organization. We have attempted to investigate the various scenarios regarding the upgrading and creation of the leaders' responsibility.

### **Introducing the Organizational Excellence Model**

The EFQM Organizational Excellence Model represents all constant features that an organization aiming at excellence must possess. It was introduced as the primary framework for the evaluation and improvement of organizations in 1991 by the European Quality Management Foundation. The EFQM Organizational Excellence Model is based on eight fundamental Excellence Model concepts, which have been derived from pivotal ideas in superior companies and organizations in the twentieth century. EFQM believes that reaching excellence requires promotion and establishment of these concepts:

- Results orientation
- Customer focus
- Leadership and Constancy of Purpose
- Management by Processes and Facts
- People Development and Involvement
- Continuous innovation, learning, and improvement
- Partnership Development
- Corporate Social Responsibility

A non-prescriptive framework, the EFQM Excellence Model is based on 9 criteria (EFQM, 2003). These are, in turn, divided into two groups: Enablers and Results. Figure 1 shows the EFQM along with the advantages of each of the main criteria. Each of the model criteria consists of many sub-criterion totaling 32 sub-criteria. Here we shall introduce each of these models.

Figure 1 here

**1. Leadership Criteria**

- 1a. Leaders develop the mission, vision, values, and morality of the organization and themselves act as role models for the culture of excellence.
- 1b. Leaders personally ensure the creation, development, and application of management systems and their continuous improvement.
- 1c. Leaders interact with customers, partners, and representatives of the society.
- 1d. Leaders reinforce the culture of excellence among the employees.
- 1e. Leaders identify and champion organizational changes.

**2. Policy and Strategy**

- 2a. Policy and Strategy are based on the present and future needs and expectations of stakeholders.
- 2b. Policy and Strategy are based on information from performance measurement, research, learning and external related activities
- 2c. Policy and Strategy are developed, reviewed and updated.
- 2d. Policy and Strategy are communicated and deployed through a framework of key processes.

**3. People**

- 3a. People resources are planned, managed and improved.
- 3b. People's knowledge and competencies are identified, developed and sustained.
- 3c. People are involved and empowered.
- 3d. People and the organization have a dialogue.
- 3e. People are rewarded, recognized and cared for.

**4. Partnerships and Resources**

- 4a. External partnerships are managed.
- 4b. Financial resources are managed.
- 4c. Buildings, equipment, and material are managed
- 4d. Technology is managed.
- 4e. Information and knowledge are managed.

**5. Processes**

- 5a. Processes are systematically designed and managed.
- 5b. Processes are improved, as needed, using innovation in order to fully satisfy and generate increasing value for customers and other stakeholders.
- 5c. Products and services are designed and developed based on customer needs and expectations.
- 5d. Products and services are produced, delivered, and serviced.
- 5e. Customer relations are managed and enhanced.

**6. Customer Results**

Excellent organizations comprehensively measure and achieve outstanding results with respect to their customers

- 6a. Perception Measures.
- 6b. Performance indicators.

**7. People Results**

Excellent organizations comprehensively measure and achieve outstanding results with respect to their people.

- 7a. Perception Measures.
- 7b. Performance Indicators.

**8. Society Results**

Excellent organizations comprehensively measure and achieve outstanding results with respect to society.

- 8a. Perception Measures.
- 8b. Performance Indicators.

## 9. Key Performance Results

Excellent organizations comprehensively measure and achieve outstanding results with respect to the key elements of their policy and strategy.

9a. Key Performance Outcomes.

9b. Key Performance Indicators.

### System Dynamics Methodology

System Dynamics is a method for understanding the behavior of complex systems through simulation and is used for representing system behavior vis-à-vis different strategies and policies in order to use in the decision-making process. This methodology was born 35 years ago when Forrester wrote his first book (1971), titled "Industrial Dynamics" which focused on issues emergent from industrial applications (Forrester, 1985). The primary works considered managerial issues such as production and occupation instabilities, shortage or contradiction in union growth, and the reduction of market share. In a short time, this method was used in a broader range of issues, from research management and project development to the concept of exponential growth in a finite world and the reduction in natural resources. The primary designation, Industrial Dynamics, gave way to a more general one: System Dynamics. The focus of Dynamic System Studies is not on systems but rather on problems. (Forrester, 1985) Through the Dynamic System approach, problems have at least two characteristics. First, they are dynamic; for example, they deal with values that are variable in different time intervals. It is possible to show them in charts based on time variation. The fluctuation of occupation levels in an industry, the reduction of city taxations based on the quality of life, the excess of expenses in a building project, expansion of governments, cancer, etc. are examples of problems that fall within the realm of System Dynamics. The first step in learning the System Dynamics approach is attaining skill in describing the dynamics of the problem (Richardson, Pugh, 1981). The second characteristic of problems in System Dynamics is the use of the "Feedback" concept. A good example of the feedback system is that of CNC machines or close-circuit control systems. All human systems are primarily feedback systems (Whiteley, 1991).

- **Cause and Effect Diagrams**

System Dynamics focuses on the structure and behavior of systems including reciprocal feedback links. The cause and effect diagram is a simple tool which helps the model-maker in making the real world system both conceptual and pictorial. In a cause and effect diagram, arrows show the direction of effect and the positive and negative signs show the type of effect. If change in one variable causes change in the other in the same direction when compared to the initial value we say that the relationship between the two variables is positive. If change in the second variable is opposite to the change direction in the first variable it is said to be negative.

- **Positive Feedback Loop**

When a feedback link related to a variable causes increase in the main deviation, the feedback link is said to be positive. In a positive feedback link by having constant feedback to self, a variable re-energizes its increase or decrease. The expected behavior of a positive feedback link is an exponential increase or an exponential decrease

- **Negative Feedback Loop**

When a feedback loop causes change in the value of a variable in the opposite direction to the main deviation, the feedback loop is said to be negative. The negative feedback loop is identified by behavior converging toward the goal. The expected behavior in a negative feedback link is an asymptotic approach to the goal (Goodman, 1983).

### The Details of the Dynamic System Modeling Structure

The above described cause and effect diagram presents the primary view to the problem and is mainly intended for the purpose of creating connections between the model-maker and the policy-maker. The formulation of the system operation model is based on structural details which are essentially clearer; for example policy-making variables or rates, the state variables, the auxiliary variables, or the information flows and delays. In this way, the flow diagrams provide more detailed and lucid views of the model structure (Richardson, Pugh, 1981).

The System Dynamics Model includes the stability variables, the auxiliary variables, the constant values, the rate variables, and the initial values. The cumulative values of the state variables are completely different in concept from the flows affecting them. Forrester (1985) considers the condition variables to act as storage inside the system. These variables can be the material available at hand, the material in the building process, the factory environment or the number of employees. The state variables (levels) are the current values of that set of variables which result from accumulating the differences between the incoming flows and the outgoing ones. The state variables display a snapshot of the system state and cannot change in a single moment as integration requires time to take place. State variables (levels) gain meaning in the systems of information networks, in the same way that they exist in the physical systems.

The instantaneous flows that cause reductions or increases in the variable values are called rate values. In other words, the rate variables consist of instantaneous flows that exist among state variables. In a feedback loop it is also required to

describe the variables that are dependent on the values of state and rate variables. These are known as auxiliary variables. Also, all mentioned variables can be dependent on constant values. These constants are used in the model, but their value does not change during the simulation.

### ***The Stages for the Dynamic Modeling of the System***

Systems Dynamics is a methodology for the study and management of complex systems which have feedback. These systems can be present in various domains such as: business, economy, environment, energy management, urban issues, and other social and human areas. Logical steps in the modeling of the dynamic system are as follows: (Spencer, 1966) and (Roberts, 1978)

- *Definition of problems that need to be solved and the results that needs to be achieved.*
- *Analysis of the problem with the help of cause-and-effect diagrams.*
- *Formulation of the model structure.*
- *Collection of information, initial values and the basic data needed for constructing the model of the existing data in reality and/or discussion with the conductors or designers who have the knowledge and experience of the system under study. – The initial values, the state values, the constant values, and the data related to the policies can be considered among these.*
- *Investigation of model validity under certain conditions to ensure model validity.*
- *Using the model for testing various policies for reaching the most suitable results.*

### **System Dynamics Model for Organizational Excellence – EFQM**

The purpose of Dynamic System modeling is to establish the relation between the various variables which make up the system and are used to analyze decision-making policies in the realm under study. The cause-and-effect diagram is an essential tool which helps in modeling the real world in the form of feedback links. Therefore, identifying the key problem variables before the development of a cause-and-effect graph is of great importance. They key variables are divided into three categories of enablers, results, and other variables.

#### ***Model Variables***

As was mentioned, from among the famous models for organizational excellence, the European Model for Organizational Excellence has gained more attention. In Iran as well, this model is the basis and the foundation for all national awards. Therefore, the dynamic model variables are defined based on the criteria of the EFQM Model and these variables are divided into three categories: Enablers, Results, and Other Variables.

#### ***Excellence= Enablers + Results***

The Enabling Variables are Leadership, Policy and Strategy, People, Partnerships & Resources, Processes. Results Variables are Customer results, people results, society, results, key performance results.

And other Variables include: Leadership goal, policy & strategy goal, people goal, partnerships and resources goal, processes goal, Customer results goal, people results goal, society results goal, key performance results goal, Leadership gap, policy & strategy gap, people gap, partnerships & resources gap, processes gap, Customer results gap, people results gap, society results gap, key performance results gap, Customer results rate, people results rate, society results rate, key performance results, goal rate.

#### ***The Cause-and-Effect Graph and the Process of Organizational Excellence Modeling***

The Cause-and-Effect diagram of the EFQM Model shows the relation between the variables defined above. There are expanded cause and effect relations between the criteria and the sub-criteria of the EFQM Model, which can be described as follows:

- *The relationship between the Enabler and the Result domains and vice-versa.*
- *The relationship among the main criteria*
- *The relationship among the sub-criteria of the model*
- *The relationship between the sub-criteria of the model with the main model criteria.*

Due to the expanded relations defined above, in this article the relationship between the model fields and the main model criteria are used in drawing the model. This is described as follows:

It is believed in the EFQM that reaching excellent results regarding customers, people, society, and operations, requires effective leadership, which itself begins with putting together the vision and the mission, and is expanded with the compilation of the strategy for actualizing it. Therefore, the leadership and organization guideline criteria are related with all model criteria. An organization can attain excellent results regarding people only when it elects suitable approaches in the field of managing human resources; for this reason the employees' criteria are related to the

employees' results. Achieving excellent results in the field of customers requires the utilization of suitable approaches in the processes criteria such as design and expansion of products, delivery of products and services, and management of relations with customers. Therefore, the customer result criteria are related to the processes criteria. An organization can reach Excellent results in the area of society only when it has the appropriate approach in the criteria of companies and resources, such as technology management, management of foreign companies, management of equipment, buildings, materials, plus the criteria for employees including equal opportunity for hiring. Reaching excellent results in the field of key operation results requires reaching excellence in customer results, employee results, and society results. Therefore, the criteria of key operation results are in relation with customer result criteria, employee results, and society results. Based on the systems dynamic methodology, the cause-and-effect diagram was drawn based on the EFQM Model criteria. Then, with the help of the Vensim software the stock and flow profile was drawn, which can be seen in tables 2 and 3.

### ***Formulating the Model structure***

In order to describe the relations between the variables and to investigate the various scenarios, the self-evaluation results a company was used in the transportation industry. This was done by the means of self-evaluation techniques, questionnaire, and workshop. The results are provided in table 1:

Table 1 here

The excellence criterion is gained from the total of enabler criteria and the results of the EFQM Model. One of the presuppositions in this model is that having the appropriate enabler can lead us to excellent results. In other words, reaching excellent results is possible through focusing on and improvement of criteria of leadership, guidelines and strategies, people, partnerships, resources, and processes. Furthermore, leadership is a motivator for other enabler criteria in such way that the leaders of an organization are the most important element in the organization reaching success (Deming, 1993).

(1)  $Leadership(t) = \text{integral}(\text{leadership rate} + \text{leadership}(t-1))$

(2)  $Leadership\ rate = leadership * f_1 + Customer\ results\ gap * f_6 + people\ results\ gap * f_7 + societ\ results\ gap * f_8 + key\ performance\ results\ gap * f_9$

(3)  $Leadership_{geol} = 100$

$leadership_{gap}(t) = leadership_{geol} - leadership(t)$   $leadership(t_0) = 25$

$Criterion\ deficiency\ rate\ as\ identified\ by\ the\ decision-maker = f_i$

Similar to the above description, the rest of the variable equations are explained. Reaching excellence in results is not possible unless leaders clarify the vision, mission, and the goals; encourage their people to reach these goals and have appropriate interaction with partners and the representatives from the society. Therefore, the criterion for leadership is in direct relationship with the enabler criteria and the results criteria.

Figure 2 here

Figure 3 here

### ***Suggested Strategies***

In this section, the strategies for creating and upgrading leaders' responsibilities and attaining organizational excellence have been described. Each of these strategies results in the improvement of the criteria based on the relations described. Following is the description of each of the introduced strategies.

#### ***1. Compilation of the Mission and the Vision and the Distribution of the Organizational Beliefs and Values by the Leaders***

As is mentioned in (1a), according to the first criterion of the EFQM Model, leaders should provide the values and beliefs through the compilation of a clear mission and vision statement; a vision that explains what the organization wants and what it aims to achieve specifically in relation to the fundamental concepts. The purpose of the organization should be stable and define the line of responsibility from the top.

#### ***2. Compilation of the Strategies and the Operational Activities.***

For the organization to reach its visions, it is required that strategies for work and business, and operational plans for their actualization are prepared. This means that the organizations require effective leadership. Such leaders compile the organizational guidelines and strategies for the purpose of accomplishing their mission, view, and values. (1b, 2c). The compilation of these strategies is based on the needs and the current and future expectations of the organization's stakeholders (2a). Moreover, it is also based on the evaluation of activity, research, and learning (2b). Finally, the compiled strategies are communicated and deployed in the organization through leadership of organizational and framework change. (1e, 2d).



### **3. Empowering and Encouraging People for Participation by the Leaders.**

The existence of a close relationship with employees is a necessity for effective leadership, as seen in (1d) in the model. The leaders must encourage the culture of excellence among the employees. In order to fulfill this they should expand effective communication from top to bottom and throughout the It is seen that applying the described strategies in the field of leadership has resulted in the improvement of criteria and effectiveness on other criteria.

Figure 4 here

Figure 5 here

Applying the strategy of compiling guidelines, organizational strategies and operational strategies has resulted in the improvement of the guideline and strategy criterion, and influence on other criteria. Organization in order to convey the vision, the mission, and strategies for people and to maintain interaction with them. They should also develop the competencies, skills and activities needed by the employees, encourage, and reward them in order to facilitate their empowerment and participation in activities contributing to the improvement of the organization.

### **4. Expansion of the Leaders' Interaction with Customers, Partners, and Society Representatives.**

As described in sub-criterion (1c), the leaders' key attitude toward the administration of the organization should be centered on the customer and the expansion of partnerships. Leaders accordingly consider it effective to know who their customers are, and what needs and expectations from the organization they have, and to know to what degree these expectations have been fulfilled. Moreover, the leaders consider it effective to identify the existing opportunities for key partnerships and to organize, stabilize and update them and make partners aware of the needs of the organization and customers in order to create more added value. Finally, by encouraging, supporting and participating in activities aiming at the improvement of environmental conditions, respect for law, and organizational participation in the society, they increase their social responsibilities.

What follows is a study of the results of different strategies, with the help of the simulation done with the Vensim software.

Table 2 here

Figure 6 here

Applying the strategy of people empowerment and participation by leader's results in the improvement of the people criterion and influence on other people criteria.

Figure 7 here

The strategy of interaction among the leaders, partners and the representatives of society results in the improvement of criteria of partnerships and resources and influence on the Society Results and Key Performance Results.

Figure 8 here

Implementing the strategy of leader interaction with customers' results in the improvement of the criterion of processes and influence on the Customers Result.

Figure 9 here

Applying the strategy and improvement of processes standard results in the improvement of this standard.

Figure 10 here

Improvement in the criterion of people with respect to the influence of applying strategies has resulted in improvement in the people results.

Figure 11 here

There was improvement in the criterion of people, partnerships and resources. The effect of strategies on these criteria has resulted in improvement of society results.

Figure 12 here

Improvement in customer results, society results, and people result has caused improvement of the criterion.

Figure 13 here

### **Conclusion**

The main purpose of compiling a System dynamics model based on the EFQM is investigating the accomplishment of Organizational Excellence in organizations so that it is possible to predict the level of organizational excellence achieved by defining and implementing various strategies in the fields of improvement that result from self-evaluation. In this article, the effect of higher leaders' responsibility on attaining organizational excellence has been investigated. The explained leadership strategies show that enhancement of leadership criteria consequently impacts other enabler

criteria and with respect to the cause-and-effect relation between the enabling field and the results of the EFQM, improvement in the Enabler criteria result in the improvement of the Results criteria.

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Table 1. The results of initial self-evaluation and the level of goal for criteria

Criteria	Initial Value	Goals
Leadership	25	100
Policy & Strategy	15	80
People	25	90
Partnership & Resources	35	90
Processes	35	140
<b>TOTAL ENABLERS</b>	<b>135</b>	<b>500</b>
Customer Results	30	200
People Results	30	90
Society Results	20	60
Key Performance	30	150
<b>TOTAL RESULTS</b>	<b>110</b>	<b>500</b>
<b>TOTAL</b>	<b>245</b>	<b>1000</b>

Table 2. Results of the Model Simulation

Year	leadership	policy & strategy	people	partnerships	processes	total enablers	customer results	people results	society results	key performance	total result	total score
0	25	15	25	35	35	135	30	30	20	30	110	245
1	45	27	40	42	56	210	65	42	25	49	181	391
2	61	37	53	50	74	275	94	51	30	66	241	516
3	72	46	63	56	88	325	117	60	34	80	291	616
4	80	53	70	62	99	364	136	66	37	92	331	695
5	86	58	76	68	108	396	151	71	40	102	364	760
6	90	63	80	74	116	423	163	75	43	111	392	815
7	93	69	83	79	122	446	173	79	45	118	415	861
8	94	70	86	83	127	460	181	82	47	124	434	894
9	95	72	88	87	131	473	187	84	49	129	449	922
10	96	74	90	89	134	483	192	86	51	133	462	945

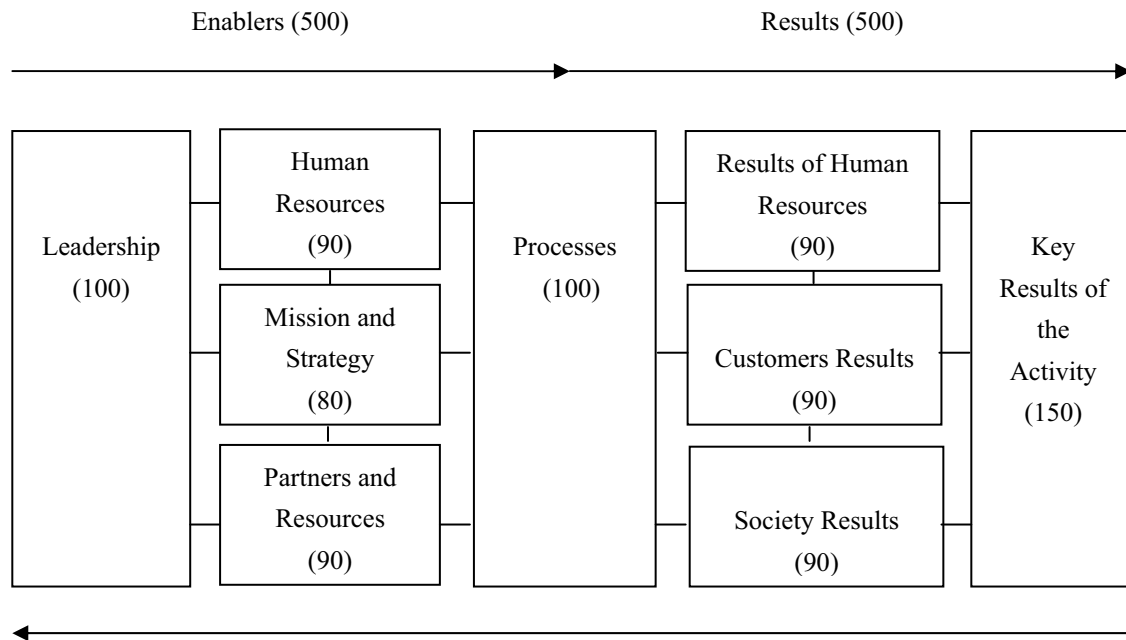


Figure 1. The EFQM model

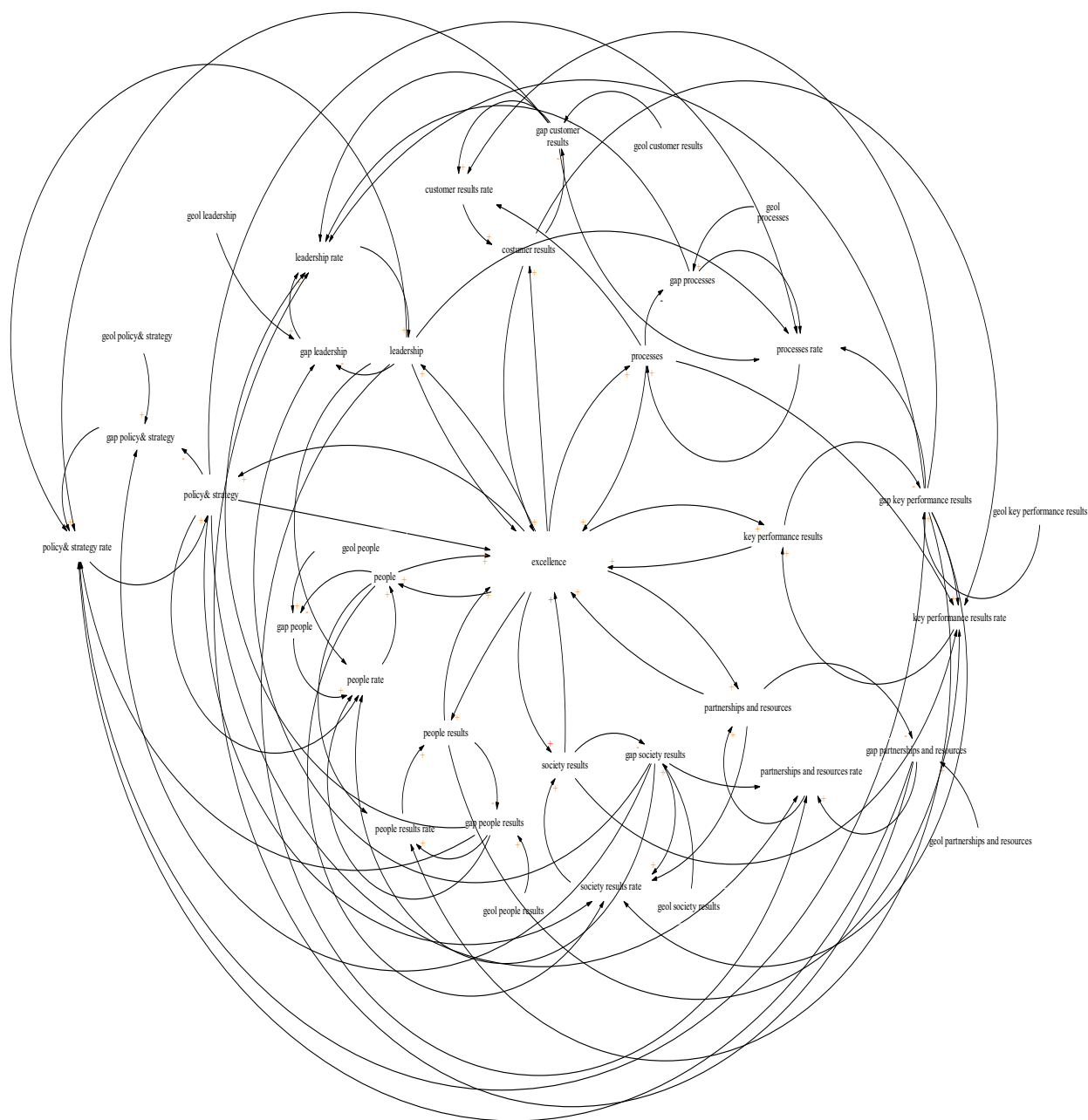


Figure 2. Cause-and-Effect diagram based on the EFQM Model

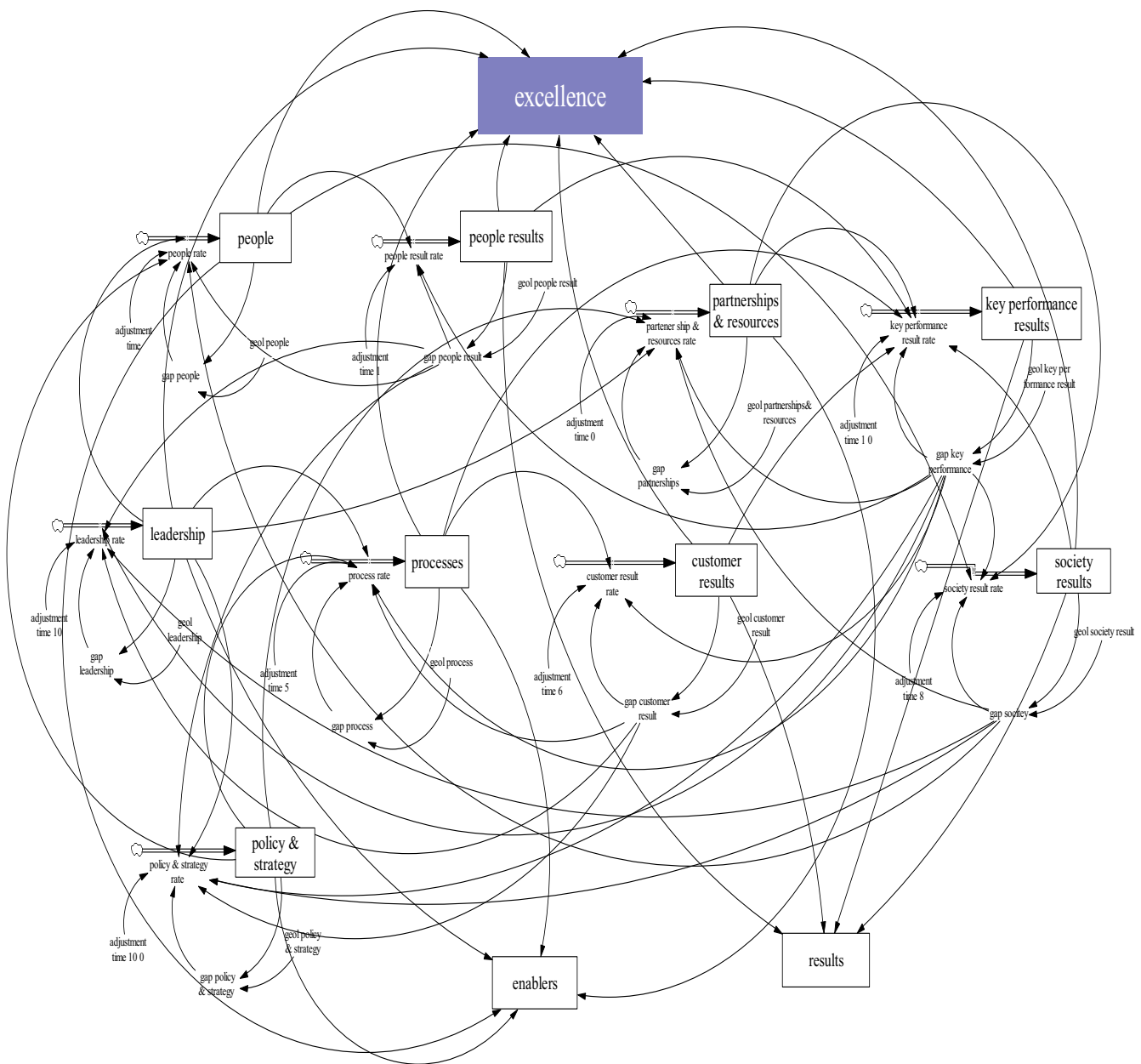


Figure 3. Stock and flow diagram based on the EFQM Model

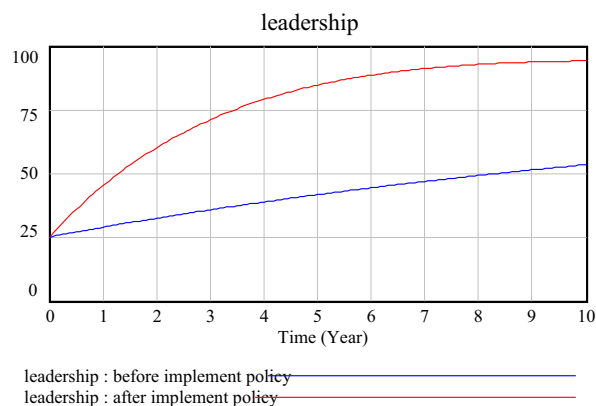


Figure 4. The effect of applying the strategies on Leadership criteria.

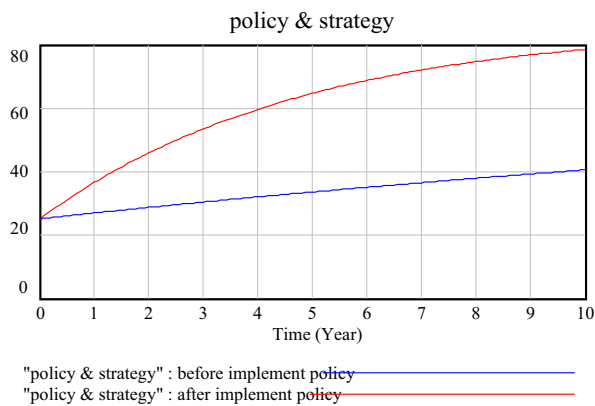


Figure 5. The effect of applying the organizational guideline and strategy

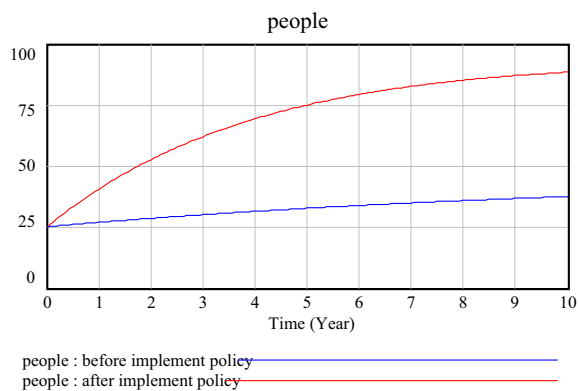


Figure 6. The effect of strategies on the people criterion

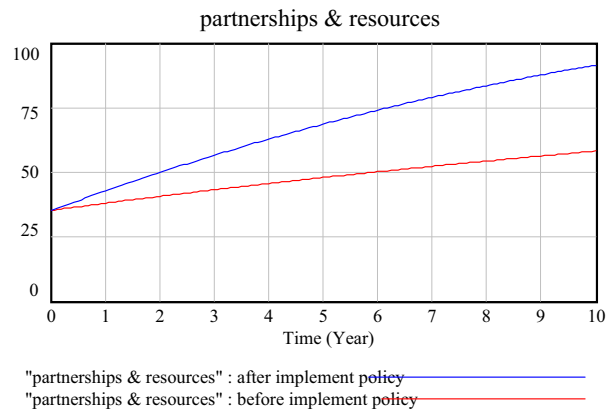


Figure 7. The effect of applying strategies on companies and organizations

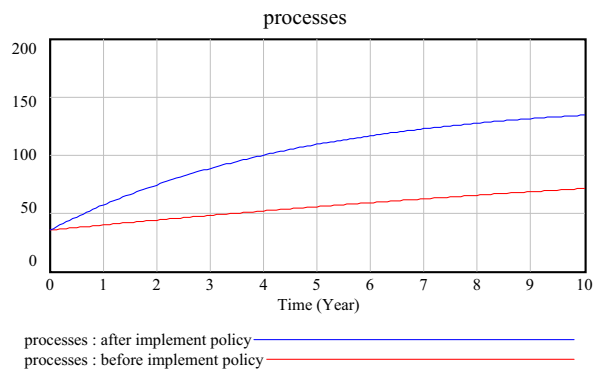


Figure 8. The effect of applying the strategies on the criteria of guideline and strategy

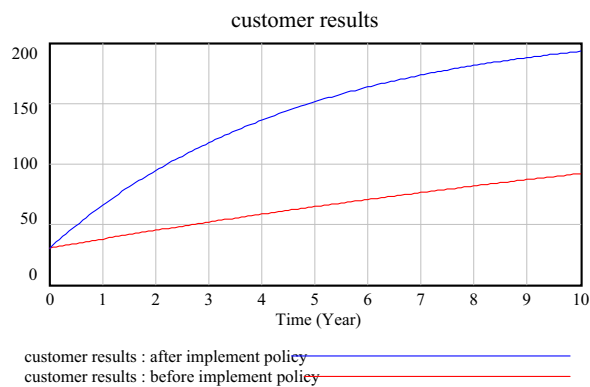


Figure 9. The effect of applying the strategies on the standard of Customer Results



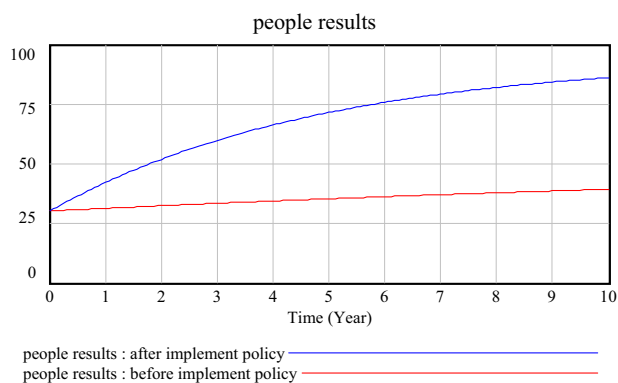


Figure 10. The effect of applying the strategies on the criterion of People Results

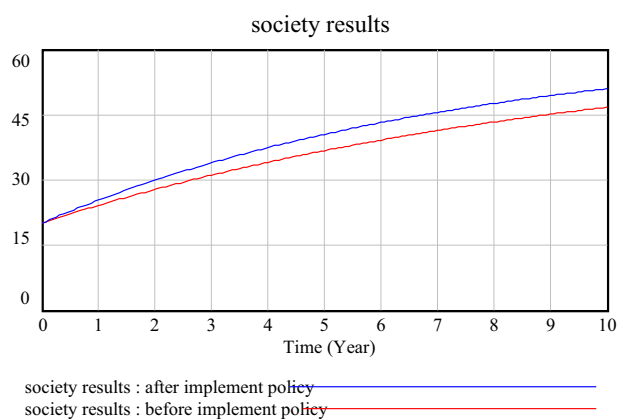


Figure 11. The effect of applying the strategies on the criterion of society results

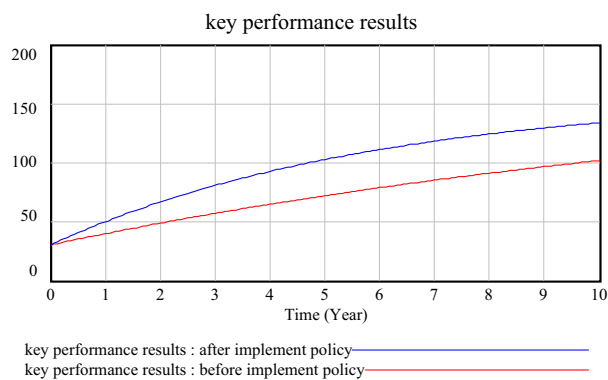


Figure 12. The effect of applying the strategies on the of key operation results

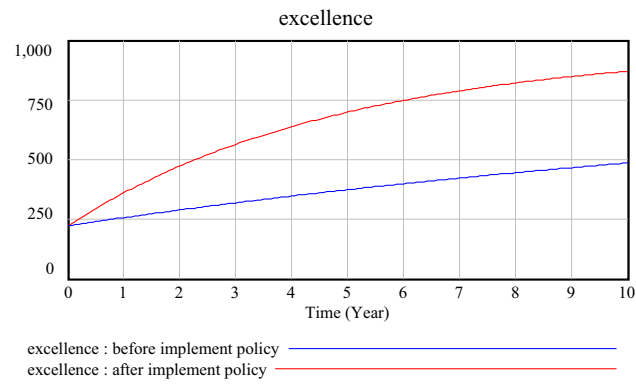


Figure 13. The effect of applying strategies in the area of leadership on attaining organizational excellence



## Co-management Model for Dealing with Intellectual Property Rights in Standards

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### Abstract

As the technical barriers characterized by standards including intellectual property right (IPR) have restricted industrial development in China, to improve industry core competence through self-innovation and standardization and industrialization of independent intellectual property has come to our primary task. On base of the situation in China, the problems arisen from IPRs in standards relate to the government, standardization organizations, enterprises, colleges and universities, scientific research institutions and so on, then how to make the stakeholders cooperate with each other becomes the key point. This paper analyzed current situation of each stakeholder, constructed co-management model including instructing of the government and governmental standardization organizations, folk industrial associations as bridge, industry and research integration with enterprises as the mainstay and with colleges and universities, scientific research institutions as pioneers.

**Keywords:** Standard, Intellectual property right, Co-management

### 1. Introduction

Under the regime of WTO, developed countries and large international corporations have restricted the development of industries with cost advantages in China through technical barrier characterized by standards including IPRs, the DVD industry is exactly the case. To reverse the situation, China needs to encourage innovation and standardization and industrialization of independent intellectual property. However, things come to be complex. In China, inclusion of IPRs into standards concerns many stakeholders, such as the government, standardization organizations, enterprises, colleges and universities, scientific research institutions and so on, and there still exist a series of issues on lack of cooperation between each other. It is therefore crucial to integrate resources so as to improve the industry-wide core competences. This paper constructed cooperation model among stakeholders and made some recommendations for action.

### 2. Cooperation model for inclusion of IPRs into standards

Inclusion of IPRs into standards increases with market share and boosting commercialization of innovation with the advent of knowledge industry (Li, 2006, P.68). Lack of domestically developed IPRs and industrialization leads to the situation of “standards available but unimplemented by relevant industries” (Guan, 2006, p.33). At the Seventeenth National Congress the guideline of “to accelerate to establish the technological innovation system with enterprises as the mainstay, market-oriented, industry and research integration, to channel innovation-encouraged resources into companies and boost commercialization of technological achievements” was set forth, it pointed out the direction for inclusion of IPRs into standards, which includes: 1) macro-management and instructing of the government and governmental standardization organizations, 2) to encourage folk industrial associations to play a role as bridge, 3) industry and research integration with enterprises as the mainstay and with colleges and universities, scientific research institutions as pioneers.

#### 2.1 Enterprises as the mainstay

Most of the enterprises in China have not yet recognized the main body role in market themselves, apart from the industry that shocked by foreign company, for example, TD-SCDMA, AVS, IGRS and so on. In these companies and enterprise alliances, independent innovation and IPRs as well as cooperation with colleges and universities and academic institutes have been paid great attention to during past few years, and they have take an active part in standard development at home and abroad, e.g promoting standard with independent IPRs to international standards and establishing policies for the inclusion of IPRs into standards. International standards established in AVS, IGRS and TD-SCDMA are making their way to be industrialized nowadays.

However, for most companies, they are less aware of innovation and standardization, lack of a system for research and development and spend less than 1% of the revenues on R&D (Gao, 2008, P.291), as well as lack in cooperation with colleges and universities and academic institutes or if there exist cooperation but only limited to technical transfer, cooperative development and authorized development (Yan, 2007). Partial companies failed to promote their standards to international such as WAPI, owing to lack of knowledge of international standardization regulations, despite of recognizing the important of standardization. On the other hand, some available standards are unimplemented by relevant industries such as EVD, owing to considerations only on the state-of-the-art but not compatibility (Guan, 2006, p.33).

It follows that the enterprises as the mainstay in inclusion of IPRs into standards shall pay attention to both standard development and IPRs. They shall orient their standards to consumer needs and increase investment in innovation, summon the awareness of standard development, conduct standard development, recruit and maintain talented people in standard development, set up department for inclusion of IPRs into standards to analyze IPR-related issues and set out IPR strategy for standard development, take an active part in international standard development and understand relevant procedures so as to set their IPRs into international standards or direct the standard development.

In addition, companies shall pay great attention to other companies, colleges and universities and academic institutes to develop IPR policies and alliance standards, to deepen their cooperation with colleges and universities and academic institutes by participating in funding national engineering (technological) research centers, national engineering laboratories and national priority laboratories.

### *2.2 Colleges and universities and academic institutes as a pioneers*

Colleges and universities and academic institutes make great contribution to educate people and experts and to provide technical and intellectual support for standard development, technical progress and industrial improvement in China. Additionally, colleges and universities such as Tsinghua University, Peking Universities and academic institutes have built cooperation with companies and joint IGRS and AVS for intellectual support and standard development. As of Feb. 2009, there were 19 colleges and universities and 5 academic institutes included in the list of AVS members and 8 colleges and universities and 5 academic institutes in that of IGRS members.

However, disalignment between innovative research and commercialization remains, most of the scientific achievements and patents couldn't meet the market needs because the existing evaluation system of research performance stimulates researchers to focus on personal gains instead of availability. Lai Ming, member of the national committee of CPPCC, noted at the 2nd Plenary Session of the 1st Conference of the Ninth CPPCC National Committee that only 20 percent of the scientific achievements were realized and less than 5 percent industrialized and only 5 percent of patents traded. Disalignment between research projects, company and customer needs is the major cause for the low rate of commercialization as commercialization of scientific achievements eventually depends on market demands and the companies know customers' needs best (Zhu, 2008, P. 200).

Colleges and universities and academic institutes serve as pioneers in inclusion of IPRs in standards. They join with companies to streamline inclusions of patents into standard through combining research with commercialization. An innovation-encouraged system of combining research with commercialization needs to pay more attention to efficient communication and cooperation with companies. We also call for government agencies concerned to regulate applications for research projects and improve evaluation system of scientific research by accommodating customer needs and to strengthen their cooperation and communication so as to shared resources and avoid the waste of research fund.

### *2.3 Instructing of the government and governmental standardization organizations*

Standardization organizations generally develop IPR-related policies, provide information services (maintaining patent pools) and serve as an intermediate in the case of disputes arising from standard development and IPRs inclusion (Li, 2007, P.14-15), but are not involved in patent licensing which are left to the market. However, Standard development organizations in China are much more different from overseas counterparts. They are classified into the government-sponsoring and the folk. Standardization organizations sponsored by the government range from SAC, sectoral and local standardization organizations and industry associations built in accordance with official policies or of official character. Folk standardization organizations consist of civil trade associations. Standardization organizations of different nature play different role in standard development.

Standardization system in China follows integrated pattern. The government creates favorable policies and regulations to allow companies to implement standards and IPR strategy. It plays a role in regulation in the context of market economy instead of being involved in standard development and implementation. Standardization organizations sponsored by the government develop and maintain national, local and trade standards. SAC is authorized by the State Council to regulate nation-wide standard development, to develop regulations for standard development and to organize implementation laws and regulations and programs concerning standard development. Compared with the overseas counterparts, SAC plays a leading role in developing and maintaining standards and establishing regulations for

standard development.

Standardization organizations in China have struggled with inclusion of IPRs into standards in recent years. Developing new policies are urgently needed to address relationship between public and private rights, collection and disclosure of information on patents and disposal of patent right. Since 2000 SAC has paid attention to this issue and kept an eye on IPR-related policies from international standardization organizations in the field of information technology. In 2004 it developed the Regulations for Inclusion of Patents into National Standards (provisional), which however has not yet been promulgated. It means therefore that there isn't a complete system for inclusion of IPRs into standards in China.

The government and standardization organizations sponsored by the government (mainly SAC) serve as a policy maker and moderator. With the complexity of inclusion of IPRs into standards at home and abroad, both the government and SAC need to improve existing laws and regulations, develop policies for inclusion of IPRs into standards and boost inclusion of IPRs into standards. They shall coordinate national trade-related policies, sector-specific policies, technical policies and IPR and standard development policies. They shall also encourage innovation and protect public interest by establishing a public service platform for technical standards, pre-warning, response system and restraining abuse of IPR in standards.

#### *2.4 Folk industrial associations as bridge*

Folk industrial associations serve as a bridge between companies and the government (Peng, 2003, P.8). They are more sensitive to the market than the government agencies and the standards they develop most reflect the customer needs. The famous standardization organizations in the world are all non-government organizations such as ISO and IEC.

Folk industrial associations are known as trade associations in China. They are founded spontaneously in response to industrial needs and affiliated to federations of industry and commerce. According to statistics from China Federation of Industry and Commerce, there were 8,596 trade organizations as of the second quarter of 2007 and the figure is increasing. In developed countries, most of technical standards are developed by trade associations or societies instead of government agencies. They develop own IPR-specific policies based on those by ISO, IEC and ITU, for example ANSI and BSI. We can learn from their experience in development of IPR-specific policies.

Trade associations are far away from developed countries in China, the role and position in standardization and inclusion of IPRs in standards have not been fully explored. The most challenge before folk industrial associations is the legal status. Their legal status cannot be guaranteed because scopes of civil and official industry associations overlap. According to statistics from Yu Hui, researcher from Chinese Academy of Social Sciences, 60 – 70 percent of folk industrial associations haven't established the legal status (Yu, 2007, P.67). Unsound systems and part-time staff within folk industrial associations make it difficult to provide members with substantial services and obtain acceptance (Peng, 2003, P10).

Efforts shall be made to support folk industrial associations to play as bridge and build up consultation and communication centers between the government and companies. Folk industrial associations itself shall improve their systems, align with overseas counterparts, refine their staff, train talented people and establish a sense of professional services. Government agencies concerned shall legislate for legal status of folk industrial associations so that they can run in a legal way.

### **3. Conclusion**

Improving industry-wide core competence needs combination of standards with IPRs as a guarantee and consistent efforts from the government, standardization organizations sponsored by the government, folk industrial associations, companies, colleges and universities and academic institutes. In addition, inclusion of IPRs into standards shall accommodate customer's needs and respect market's role in resource deployment in consideration that inclusion of IPRs into standards is caused by competition among companies (Li, 2006, P.68).

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## An Analysis of the Difficulties and Countermeasures for Commercial Banks Anti-Money Laundering

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### Abstract

The anti-money laundering has started a fast development in China recently. Laws and regulations tend to be more perfect. The supervision is more comprehensive. And the international cooperation is stronger. However, it still faces many problems. For example, among all checks by The People's Bank of China, commercial banks often report their operations wrongly, causing information redundancy and serious missing. And even the information is useless. Reasons concern many aspects. Commercial banks do not pay attention to the anti-money laundering. The methods used for anti-money laundering are simple. Employees are not professional and lack of responsibility. Therefore, this paper, by analyzing the anti-money laundering mode, concludes that the key, also the difficulty, is to identify the dubious operation. Finally, this paper advances several suggestions for anti-money laundering.

**Keywords:** Commercial bank, Anti-money laundering, Difficulty, Countermeasure

### 1. The essence of anti-money laundering is anti-crime.

Money laundering is to adopt some methods, such as transfer, exchange, and payment, to conceal and disguise the source and nature of criminal proceeds. Based on the characteristics of illicit money anti-money laundering is, to pick up, identify, and investigate the dubious cash flow related with crimes from normal cash flow, supplying clues for striking crimes. According to the Article 2 in Chapter one of the Law of the People's Republic of China on Anti-money Laundering: The term "anti-money laundering" as mentioned in the present Law refers to an act of adopting the relevant measures according to the provisions of the present Law to prevent any money laundering activity for the purpose of concealing or disguising, by all means, the sources and nature of criminal proceeds generated from any drug-related crime, organizational crime of any gangland, terrorist crime, crime of smuggling, crime of corruption or bribery, crime of disrupting the financial management order, crime of financial fraud, etc.. The concept is based on the money laundering crime regulated in the Criminal Law, which also mentions seven sorts of upstream crimes.

However, in practice, anti-money laundering is just to screen out the dubious transactions and identify, report, and investigate doubtful customers' information from normal cash flows by following certain operation norms. It does not focus on certain kind of crime. In fact, among the cases that are solved because of the clues from anti-money laundering, only few of them are punished in the name of "anti- money laundering crime". Some are even not crimes but illegal activities, such as interest transfer and tax exemption. But the information is still valuable. In perspective of this point, anti-money laundering is anti-crime.

Therefore, a more exact description of anti-money laundering activity is: "a process of making up false conditions in order to disguise the income, the illegal source, and the illegal employment. (Xin Wang, 1996, p26)"

### 2. The core of commercial banks' anti-money laundering is to identify the doubtful transaction.

Since People's Bank of China takes up the anti-money laundering business in 2003, it has issued many specific regulations and rules. All these regulations form a relatively complete anti-money laundering law system. "The large-sum and doubtful transaction report system", "the customer identification system", "the anti-money laundering self-regulation evaluation system", and "the non-spot supervision system" constitute the four backbones. Therein, the self-regulation evaluation and the non-spot supervision belong to evaluation mechanism. The customer identification is to supervise the transaction subjects. The large-sum and doubtful transaction report focuses on the objective activity, which is the base for judging whether it is or concerns anti-money laundering. It is also the emphasis of the whole task.

Here, the "doubtful transaction report" is the difficulty in legislation and practice fields because of changeable conditions and standards. The economic development, the finance market, and the financial regulation directly

determine the standards for doubtful transactions. However, in China the transaction subjects are numerous. The economy grows fast. The regional difference is significant. And the development of financial market lags behind. All these factors determine that the doubtful transaction standards will be frequently revised in practice.

On Oct. 1<sup>st</sup>, 2007, the Command No. 2 of People's Bank of China is in effect. This regulation is about "the management of customer identification, customer information, and transaction record store". Together with the "Decree of Managing Financial Institution's Large-Sum Transaction and Doubtful Transaction Report" (Command No.2, 2006) and the "Decree of Managing Financial Institution Reporting Doubtful Transaction Concerning with Terror Financing" (Command No.1, 2007), the three constitute a complete definition of doubtful transaction.

### *2.1 Process of identifying and reporting doubtful transaction*

Commercial banks are ideal areas for money laundering crimes, which are also the emphasis for anti- money laundering. Compared with securities and insurance industries, commercial banks implement anti-money laundering strategies earlier. In commercial banks' anti-money laundering practice, "doubtful transaction report" is a daily work. But how to realize an exact and timely report is always a key and difficulty task. Doubtful transactions happen frequently. Therefore, it is impractical to check every doubtful transaction. Besides, the identification standards are not quantitative. It depends on people's logical reasoning and sensitive recognition. So, at present in China, we combine the system filtration and manual identification together in the banking industry.

Take a stock bank for example. In order to meet the need for periodical reports regulated by the People's Bank of China, this bank develops an anti-money laundering system based on self conditions, supervising daily transaction information. According to relevant standards, this system produces "large- sum transaction information" and "doubtful transaction information" and presents them to professional employees who will identify the doubtful transactions and make up data. Afterwards, professional employees pack up standardized information into cases and report them upward. By means of this anti-money laundering system, relevant employees merely make judgments among a small scope, determining whether certain transaction is doubtful or not, which takes efficiency and exactness into consideration at the same time. Professional employees can also present doubtful transactions directly, without the filtration of system. They can further complement data of doubtful transactions, achieving the "transaction recurring". Finally, relevant doubtful transactions will be packaged into standard information, offering bases for next summarization and analysis. The process is in figure 1 as follow.

### *2.2 Difficulties for doubtful transaction report*

Since the implementation of doubtful transaction report system, data qualities have been improved gradually. Fewer and fewer institutions report nothing. According to the Anti-Money Laundering Report 2007 issued by People's Bank of China in 2008, the doubtful transaction has already realized the paperless and network report thoroughly. PBC received 210 million doubtful transaction reports in 2007 (? , 2008, p21). However, due to the complexity of practical operations, the doubtful transaction system faces lots of difficulties at present, which mainly focus on these aspects as follow.

#### *(1) Data collection*

Customers may refuse to offer necessary information. Anti-money laundering asks for transparent transactions. Financial institutions should collect the sensitive information as much as possible, such as customers' income and expenses. Concerning this kind of questions, customers may refuse to give answers or just offer wrong information.

It is hard to collect data, or effective data, of special operations. At present, the anti-money laundering system has data connections with retailing debt system, personal credit system, and credit card system. They can share transaction data. By this way, all transactions will be traced basically. However, data is from banks' customer material data bases. If an operation merely concerns cashes but not accounts, banks will fail to collect relevant data, such as cash exchange, and cash transfer. Under this circumstance, professional employees must register on the anti-money laundering system and add relevant data, which not only increase employees' work but also can not guarantee data quality.

#### *(2) Contradiction between the subjectivity of doubtful transaction standard and the batch processing*

People's Bank of China's Decree of Managing Financial Institution's Large-Sum Transaction and Doubtful Transaction Report regulates the standards for doubtful transactions. Banks and similar financial institutions adopt 18 standards, which can be sorted into several types. Firstly, the quantitative standard, such as the Article 6: Open or cancel different accounts without normal reasons and lots of payments happen before the cancel. Secondly, the efficiency standard, such as the Article 1: The short- term separate capital deposits and collective withdrawals or collective capital deposits and separate withdrawals are not in accordance with customers' identification, financial conditions, or business operations. Thirdly, the association standard, in other words, whether has certain connection with areas where the money laundering crime is popular, such as the Article 5: The sharp rise of capital transfers or frequent payments happen, which associates with customers from areas where there are crowded with crime of smuggling, crime of any gangland, terrorist crime, etc. (2006).

Therein, the quantitative standard and the efficiency standard are right for an automatic filtration of computers. The



association standard can be realized by setting a black list. However, the subjective judgment is irreplaceable. For example, the Article 1 has a large elasticity. A deposit of 1 million Yuan may be a fact for a private owner but it may belong to a doubtful transaction for a government server. Presently, the human identifying subjects are from data filtrated by computers. It is inevitable that amounts of doubtful transactions could not be identified.

Besides, human identification is based on two preconditions: Firstly, understand the transaction completely. Secondly, have a strong responsibility and professional sensitivity. Unfortunately, few bank employees are qualified for the two preconditions and can not satisfy the requirements for anti-money laundering task.

### **3. Suggestions for commercial banks' anti-money laundering**

#### *3.1 Pay more attention to anti-money laundering*

Presently many commercial banks are short of employees, especially for small branches. They must ensure the normal operation of daily work firstly. Then, they are responsible for the extension of middle business and product marketing. As a result, they have not sufficient time or energy for anti-money laundering that exerts no benefits.

In order to ask commercial banks to treat the anti-money laundering seriously, the Law of the People's Republic of China on Anti-money Laundering regulates: where a financial institution fails to report relevant reports on large sum transactions or doubtful transactions according to the relevant provisions, the administrative department of anti-money laundering of the State Council or its authorized dispatched organ at or above the districted city level shall order it to correct. In the case of serious circumstances, a fine of 20, 000 Yuan up to 50, 000 Yuan shall be imposed on the financial institution and a fine of 10, 000 Yuan up to 50, 000 Yuan shall be imposed upon its directly liable chairman, senior manager or any other person." The severe punishment indicates administrative departments' emphasis and determination. Commercial banks should pay more attention to anti-money laundering work in thought or in practice.

#### *3.2 Improve employees' quality of anti-money laundering*

Anti-money laundering information is from the operational level. It is the operational employee who understands and knows customers' activities. At present, the identification of doubtful transactions still relies on people. Therefore, the responsibility and professional sensitivity of anti-money laundering employees, especially the operational employees, directly determine the quality of doubtful data. So, it is vital to improve the employees' quality. To train a qualified anti-money laundering employee, we should start from two aspects: (1) Make the obligation clear and set up professional responsibility. The Law of the People's Republic of China on Anti-money Laundering regulates clearly that financial institutions are responsible for reporting large-sum transactions and doubtful transactions. To carry out the obligation covers the whole operation of commercial banks. Related employees should understand this point completely. (2) Long-term experiences and train professional sensitivity. Here, the deposit and credit operation, the exchange operation, and the international check operation may be abused.

#### *3.3 Upgrade the operation system and the anti-money laundering system*

Present operational system used by financial institutions does not take anti-money laundering into consideration thoroughly. It can be cooperate with the anti-money laundering system in banks. If employees find doubtful transactions, they could do nothing but collect information firstly. After the operation has been done, they register on the anti-money laundering system or report the doubtful transaction to professional employees. By this way, the efficiency is low and can not guarantee the exactness.

We can upgrade present operational system and equip it with the anti-money laundering function. Then, it will change the anti-money laundering work to a great degree. Employees can get rid of present complicated processes. In one operation, employees can complete the filtration, identification, and report, which greatly improve the work efficiency and exactness of identification, reducing the burden of employees and promoting their enthusiasm for work. Meanwhile, the upgraded operation system has a more effective black list system. As a customer who may commit money laundering crime, the employee can get warnings from the system and collect proofs in purpose. Also, the system should support the network check, which can improve the work efficiency further. As for the online bank and other new developed operations, the system should take the anti-money laundering into consideration, as offering more convenient financial services for customers, supplying exact information about anti-money laundering.

At present, criminals usually choose to escape from supervision by means of separate transactions. Therefore, we should set up a united anti-money laundering system, changing present conditions, realizing the information share, associating customer information together, and achieving a more effective identification in a larger scope.

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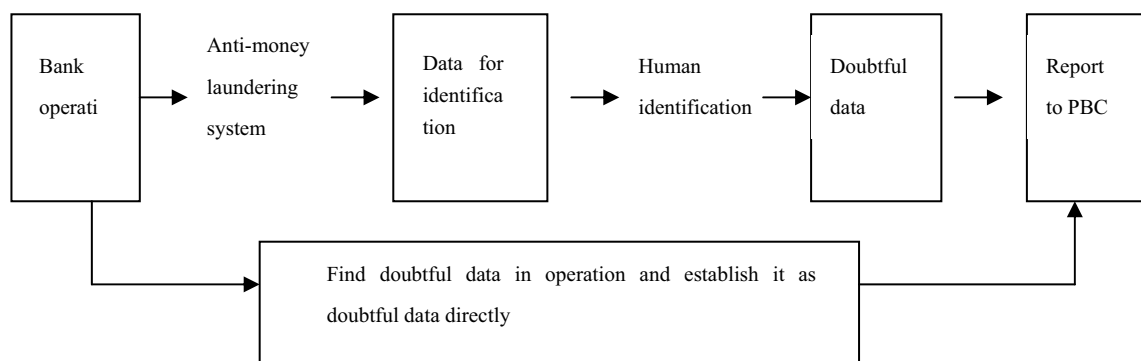


Figure 1. The Identification of Doubtful Data.



## Conventional vs Islamic Bond Announcements: The Effects on Shareholders' Wealth

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### Abstract

In this study the impact of Islamic bond and conventional bonds announcement on shareholder wealth was investigated. Data was employed from firms that listed in Bursa Malaysia for the period 2001 to 2006. A standard event study methodology with beta refinement using Blume's method is employed to achieve the objective. The results indicate that there is a wealth effect by the announcement of Islamic bond issues. This is consistent with Mikkelsen & Partch (1986) that states certain types of debts lead to abnormal return. The bond offering size appears to have a mild negative impact on the cumulative abnormal return.

**Keywords:** Conventional bond, Islamic bond, Abnormal return, Blume's method

### 1. Introduction

Typical financing decisions of a firm are to determine how much and what type of debt and equity should be issued to raise the required capital so that it can maximize the value of the firm, which will eventually maximize the wealth of the shareholders. Whether a firm's capital structure affects its stock price is not purely academic, it also has practical implications. If capital structure does not matter (Modigliani & Miller, 1958), then management should not devote much time in choosing the firm's financing strategy. But if it does matter, management should seek the optimal capital structure, one that maximizes the firm's value.

During the financial crisis, banking institutions were strapped with liquidity problems due to non-performing loans. These problems have resulted in firms acquiring their financing needs from bond markets instead of using bank loan financing and equity financing. This situation makes the domestic private debt securities (PDS) market an important avenue for Malaysian firms to raise new funds. Under these circumstances, when firms announce debt financing, will this be perceived favorably or otherwise by the investors?

Many studies have been carried out to examine the wealth effects of bond announcements. Thus far the results obtained are mixed and inconclusive. For instance, Harvey *et. al.* (2003) provided evidence that debt creates shareholder value for firms that face potential high managerial agency costs. Arshanapalli *et. al.* (2004) found that firms experienced

negative abnormal returns around the time of the announcement of convertible bonds. This result contradicts with the findings of Kang & Stulz (1996) and Roon & Veld (1998). Their results showed that announcements of convertible bonds were associated with positive but insignificant abnormal returns. Burlacu (2000) investigates the relation between announcements' effect of convertible bonds and equity components for 141 French convertible bond issues. The results indicate that convertible bond issue announcements implied significant negative market responses. Ammann *et al.* (2004) studied the announcements and issuance effects of offering convertible bonds and exchangeable bonds for the Swiss and German market during January 1996 to May 2003 and found significant negative average abnormal returns on the announcement day for the complete sample and observed no significant effects on the issuance day.

In view of the mixed and inconclusive results obtained thus far, this study aims to provide additional empirical evidence on the effects of bond announcement on stock returns. However, this study is unique and differs from other studies in that it focuses on the difference between conventional bond and Islamic bonds announcements. Furthermore, this study also attempts to validate the results suggested by Mikkelsen & Partch (1986), which states that certain types of debts lead to abnormal return. Conventional bond is proxy by straight bond financing as it is purely debt rather than other bonds that have half features of equity (convertible bond and bond with warrant). Islamic bonds have different features due to Shari'ah compliance. In addition, the growth of Islamic PDS in Malaysia has been very encouraging.

In a niche mainstream financial industry, Islamic debt instrument account for a large proportion of the Malaysia PDS market. Demand for Islamic debt instrument, which accounted for only 7% of total bonds raised in 1999, grew to 25% in 2000 and subsequently to 76% in 2005 primarily due to awareness of alternative funding sources. No fewer than 45% of all Malaysian domestic bonds are now *Shari'ah* compliant, especially the larger issues, and the proportion continues to grow. Islamic bonds have becoming increasingly popular and now they are the focus of government. Islamic bonds provide investors, especially Muslim investors to invest in *Shari'ah* compliant investments. This has resulted in better access to a larger investor base, as well as providing lower pricing to issuers via the wider investors pool from the participations of large Islamic investors. Does the growth of the Islamic bond create wealth to the shareholder compare to conventional bond of the issued company?

Investigating this issue could provide additional insights and perhaps different evidence on the debt announcements effects on stock returns in an emerging capital market like Malaysia. The evidence obtained is especially useful to international investors who wish to invest in an emerging capital market. It is a well-known fact that familiarity helps to reduce investment risk. As more and more foreign funds intend to diversify their portfolios, the results of this study should help them to achieve their objectives. Furthermore, the results of this study would provide better insights to managers and the government on this issue. The results of this study can also assist policy-makers to implement new sets of policies regarding the administration of the financial market in Malaysia.

## 2. Data

Corporate debt announcements gain using the database compiled by Bursa Malaysia from year 2001 to 2006. We then screen the sample to include only firms offering straight bonds and Islamic bond, which are listed in Bursa Malaysia. In addition, the sample of bond offering must have data availability on size of the bond offering, length of bond maturity, a firm's debt ratio and a firm's total assets. To ensure the effect purely from bond announcement, we excluded sample that bundled with other corporate proposals announcements within seven days after the announcement date (Jothee, 2005).

## 3. Event Study Methodology and Results

### 3.1 Event Study Methodology

We use market model event study methodology to calculate abnormal returns around each announcement of bond issue. The abnormal return is used to measure the performance of stock prices of firms on certain days (which also reflects the investors' reaction to the event), and is calculated as  $AR_{it} = R_{it} - (\alpha_i + \beta_i R_{mt})$ , where  $AR_{it}$  is the abnormal returns on stock  $i$  at period  $t$ ,  $R_{it}$  is the observed returns on stock  $i$  at period  $t$ ,  $R_{mt}$  is the returns on market portfolio in period  $t$ ,  $\alpha_i$  is the constant average return of stock  $i$  and  $\beta_i$  is the beta estimate of stock  $i$ .

*The announcement day (day 0) is defined as the day the bond offering was first make known to the public. The return on the Kuala Lumpur Composite Index (KLCI) is used as a proxy of market returns (Pandey et al., 2000; Annuar & Shamsher, 1993). Sixty-one days (30 days before announcement day and 30 days after the announcement day) was chosen to facilitate the event window analysis in the emerging market. This time period is chosen because any period less than 61 days may not be able to test the effect of the event, as the volatility of the stock is low. For a period of more than 61 days, we cannot really see the effect of the event, as there may be other factors (not included in this study) that may trigger the effect.*

The abnormal returns (AR) are then averaged across securities and cumulated over time to identify aggregate abnormal returns behavior. For each day in the event window, the averaged residual across firms to produce the average abnormal return (AAR) for that day  $t$  relative to the announcement day is as follows:

$$AAR_t = \left( \sum_{i=1}^N AR_{it} \right) / N$$

where N is equal to the number of firms in the sample. The  $AAR_t$  is the average estimated percentage deviation of the returns of the sampled stock from the normal relationship to the market. The t-statistic is used to analyze whether the AAR are statistically different from zero. The t-statistic test is defined as  $t = AAR_t / \delta(AAR)$ , where  $AAR_t$  is the average abnormal returns of period t and  $\delta(AAR)$  is the standard deviation of AAR over the event window, (-30, +30).

The  $AAR_t$  is cumulated to identify the aggregate AR behavior:  $CAAR_t = \sum_{t=1, \dots, T} AAR_t$ . The computation of  $CAAR_t$  is to provide a more accurate figure in determining the longer term effect on share prices from bond announcements. The expected value of  $CAAR_t$  is zero in the absence of abnormal performance. The t-value for the  $CAAR_t$  is given as  $t = CAAR_t / \delta(CAAR)$ . The standard deviation of CAAR is defined as  $\delta(CAAR) = \delta(AAR) / \sqrt{N}$ , where N is the number of days in the CAAR statistic.

### 3.2 Refinement of Beta Measurement

In most studies, the beta of a security comes from the regression of security returns against the market returns. However, an obvious disadvantage of the market model is that the returns will be biased if there is a run-up in prices prior to the announcement (Roon & Veld, 1998). The estimated beta is biased since it is derived from historical data and then use to predict the beta (Blume, 1975; Visicek, 1973). This may affect the empirical results and evidence. Due to this limitation, the beta needs to be adjusted to avoid biasness. This is important because the information on the value of the true beta for security is important to forecast the future beta for a security in order to estimate its market risk for a future time period (Mansor & Kim Lian, 2000). Linear regression method is the simplest and most common method used in beta estimation. The beta is estimated by using returns from 120 trading days (Harvey *et al.*, 2003) prior to the announcement date, excluding the 61 days event window. Then the linear regression beta value is used to compute adjusted betas to get the true beta or unbiased beta in the forecast period. Adjusted beta was computed by using Blume's method so that the results are more accurate. It was the best beta forecasting method for the overall Malaysian market (Mansor & Kim Lian, 2000). In addition, Blume's method is generally appropriate for any conditions arising in the market. It was utilised linear regression beta for two consecutive non-overlapping time periods as shown in Diagram 1.

Linear regression for beta is  $\beta_{i2} = a + b\beta_{i1} + \varepsilon_{i2}$  where  $\beta_{i1}$  is the beta of security  $i$  in time period 1,  $\beta_{i2}$  is the beta of security  $i$  in time period 2 and  $\varepsilon_{i2}$  is the error term. The formula above is used to calculate the beta in time period 2. Betas in time period two (first 60 day prior to announcement, excluding the 30 day event window), are regressed on the corresponding betas in time period one (second part of 60 days). The regression coefficient  $a$  and  $b$  is then utilized in the following equation to obtain the ex-ante betas in time period 3,  $\beta_{i3}$  (event window), by using the ex-post betas ( $\beta_{i2}$ ) in time period 2 as  $\beta_{i3} = a + b\beta_{i2}$ . The  $\beta_{i3}$  obtained is used to forecast the corresponding "true" betas in time period three. The reason why several time periods to measure the beta is used is because it continually changes overtime (Blume, 1975), which can result in a biased beta. So, if the true beta follows a linear time trend, it can be easily shown that the estimated beta is unbiased so that the results are more accurate.

### 3.3 Results

Table 1 shows the summary of average abnormal returns on day -1, day 0 and day+1 of bond announcement. The average abnormal returns for Islamic bonds are 0.9598% for day -1, 0.5685% for announcement date and 0.9384% for day +1. The positive abnormal return on a day before announcement is significant at 10%. Meanwhile the announcement of Islamic bonds has not resulted significant positive effect on the stock returns during announcement day and a day after. This can be observed in the t-test statistics of 0.9169% for day 0 and 1.5135% for day +1. This could be due to the fact that information of Islamic bonds offering often leaks out to the market before the announcement (as we can see on day-1) is made by the firm. However, none of day surrounding conventional bonds announcement have any significant effect on stock return. These reveal in Table 1, where the AARt of conventional bonds from day -1 to day +1 are 2.221% (t-statistic = 1.723), 0.882% (t-statistic = 0.684) and 0.064% (t-statistic = 0.050). However, none of these results are significant at 5%. Hence, the announcement of conventional bonds normally carries no surprise to the market.

The summary results of cumulative average abnormal return (CAARt) for the whole sample shows in Table 2. Using the conventional event window of day (-1, +1), the evidence shows that there is wealth effect to the shareholders of firm offering Islamic bonds. The cumulative return for that period is 1.5069% and significant at 1%. Meanwhile, cumulative return for event window (0, +1) is 0.9384% which is significant at 5%. This finding generally validate the results suggested by Mikkelson & Partch (1986), which states that certain types of debts lead to abnormal return. Conversely, no wealth effect found during the event window of conventional bond announcement. However when the event window is extended to day (0, +7) the CAAR of conventional bond announcement is 9.7964% and it is significant at 5%. In addition, this wealth effect is larger than Islamic bond announcement that only 2.8177% and significant at 10%.

Figure 1 and Figure 2 depicts the movement of CAR over the event windows of  $-30$  and  $+30$  for better view the effect of bond announcement. From Figure 1, it can be observed that the CAARt has fickle trend throughout the entire event window ( $-30, +30$ ). As indicated, there is a small upward movement at days  $-2$  and  $-1$ . This can be due to leakage of information but not widespread yet. When the news is announced (day 0), the CAR starts to show further upward movements until about one week when it reaches almost the peak. After that the CAR starts to move downwards. The figure appears to indicate that the investors over-reacted first then start to adjust themselves. It also appears to show that the market is not efficient in semi-strong form. The slow reaction to stock returns may indicate that the investors require the some time, probably a week or so to digest the information content of this announcement. Though slow, investors appear to response positively to this announcement.

On the other hand, it can be observed from Figure 2 that the CAARt of conventional bond announcement has an upward trend throughout the entire event window ( $-30, +30$ ). The return for the whole CAARt for the conventional bond announcement is 47.739% which is much larger than Islamic bond (0.0200%). However the larger positive value insignificant. The CAARt of conventional bonds are inconsistently positive for the entire event window except for the day  $-27$  due to  $-4.796\%$  of AARt, which is significant at 0.05 level. The positive return but insignificant evidence shows that there is no announcement effect on straight bond offering. This result is in line with the findings by Yen (2002), where he found that in the Malaysian market, straight bond offering announcement day has an insignificant positive impact on stock return.

The overall result in this study suggests that on average, the investors in the Malaysian market do react to Islamic bond announcement that further provides wealth effect. However, investors do not react to conventional bonds announcements. Thus, this is a good justification why the Islamic bond offering became more popular for firms in Malaysia as tool of debt financing.

#### 4. Regression Analysis & Results

##### 4.1 Regression Analysis

To examine the relationship between the characteristics bonds and CAR, a regression analysis is used. Ordinary Least Square (OLS) analysis which the results were resolved from heteroskedasticity problem was used to get the result of regression. To examine whether bond offering size, maturity of the bond, debt ratio and a firm's total assets of the bond issuer affect the CAAR ( $-1, +1$ ), the following regression equation is established:

$$CAAR(-1,+1) = aOFR + bMAT + cDBT + dSZE + \varepsilon$$

where: *OFR* is ratio of size of bond offering divided by total asset for the period prior to the announcement, *MAT* is bond maturity, *DBT* is ratio of total debt to total asset for the period prior to the announcement date, *SZE* is the logarithm of the difference in a firm's total asset before and after announcement of bonds offerings and  $\varepsilon_{it}$  is error term.

The respective variables used for the cross sectional analyses are explained below.

- 1) Relative bond offering size (*OFR*) is different for each firm. Based on the Pecking Order theory, debts are better than equity because of their low costs. When a firm uses debt as a financing tool, it signals good news to investors. Thus, *OFR* is positively related to the CAAR.
- 2) Maturity (*MAT*) is the length of time until the bond issuer returns the par value to the bondholder and terminates the bond. Generally, the longer the term, the higher the coupon is to compensate the bondholders for the additional risk of tying up money for a longer period. In this respect *MAT* would have a negative relationship with CAAR.
- 3) Debt ratio (*DBT*) measures a firm's financial leverage which indicates the extent to which the business relies on debt financing. According to the Pecking Order theory, postulates a negative relationship between profitability and debt ratio. Hence, debt ratio would have a negative relationship with the CAAR.
- 4) According to Stein, 1992, firm size (*SZE*) could be used as a proxy for the degree of information asymmetry. For instance, large firms are more likely to have greater coverage, draw more attention and undergo greater scrutiny by stock analysts and institutional investors. We expect the abnormal return to be positively related to firm size.

##### 4.2 Results of Regression Analysis

The results of firm that announce Islamic bonds are generally inline with expectations. This can be observed from the all variable coefficients are not significant except for *OFR*. However, we did not get the expected sign for *OFR*. Results in Table 3 shows that the coefficient of *OFR* is  $-0.0027$  and significant at 5%. This significant negative coefficient means that the bigger the offer size of Islamic bonds, the smaller the CAAR. This is explaining the small positive and significant (Table 2) wealth effect of Islamic bond announcement.

In addition, we also reveal relationship between CAAR of conventional bond announcement and *OFR*. But its sign is following the expected sign. The coefficient value of *OFR* is 0.004 and statistically significant at 1%. Result indicates that the relative size offering has positive impact on the abnormal return. This may suggest that investors perceived bigger conventional bond issue as an indicator of credible signals of improved performance. Thus it is consistent to the

Signaling Theory. Furthermore, Table 3 shows that firm size is positive and highly significant (at 1%) relate to return of conventional bonds announcements. This indicates that if the firm size of conventional bond issuer is large, the abnormal return would be bigger. This may be seen by investors as a positive move by bigger firms. The firms are utilizing their benefits of size and public attention to further leverage their earnings. Bigger firms are known for their better assets, better management and better corporate governance. The result is in line with Billingsley & Smith (1996).

## 5. Conclusion

This study has investigated the effect of Islamic and conventional bond announcements on stock return in Malaysia. Mainly, it attempts to validate the results suggested by Mikkelson & Partch (1986), which states that certain types of debts lead to abnormal return. We find that there is a wealth effect on the Islamic bond issues announcement. However, no wealth effect on the conventional bond announcement. This finding is similar to previous studies on conventional bond announcements effect in Malaysia (Yen, 2002). Where, he found no wealth effect on straight bond announcements. The diverse effect on of Islamic bond and conventional bond in Malaysia could be explained by the different characteristic of both bonds. Where, the foremost characteristic of Islamic bond issues are have to comply with *Shari'ah* that approved by Shariah Advisory Council (SAC) of the Securities Commission Malaysia. Thus, it is contrary to the study done by Muhammad & Muhammad, 2001; where they suggest that Islamic bond in Malaysia is still having controversy on legal acceptability or compliance with *shari'ah* due to the characteristic of Islamic bonds in Malaysia are not much different with conventional bonds. In addition, we examine abnormal stock return determinant on bonds announcement. The bond offering size demonstrates as significant factor of stock return on Islamic and conventional bond announcement, but the sign for Islamic bond announcement is negative that contrary to conventional bond which follow the expected sign. Islamic bond issue could not gain much on tax deductibility since do not have coupon features. Thus, Islamic bond issues are not really a low cost of capital investment. The bigger issue of Islamic bond will increase firm's default risk without trade off on low cost of capital investment. Another significant factor of stock return on conventional bond announcements is firm size. Investors are confident on conventional bond issue by bigger firm due in believing that they can afford the obligation of bond issue to finance another investment or project that can make higher return.

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Table 1: Summary of the Average Abnormal Return

Sector	Day-1	Day 0	Day+1
Islamic bonds	0.9598* (1.5480)	0.5685 (0.9169)	0.9384 (1.5135)
Conventional bonds	2.2207 (1.7228)	0.8820 (0.6842)	0.0642 (0.0498)

Note: t-statistics are in parentheses, \* Significant at 10%

Table 2: Summary of the Cumulative Average Abnormal Return

Sector	Day(-1,+1)	Day (-1,0)	Day(0,+1)	Day(0,+7)
Islamic bonds	1.5069 (3.9542)***	0.5685 (1.4527)	0.9384 (2.5366)**	2.8177 (1.7470)*
Conventional bonds	0.9462 (0.5017)	0.8820 (0.6588)	0.0643 (0.0785)	9.7964 (2.8750)**

Note: t-statistics are in parentheses,\* Significant at 10%, \*\* Significant at 5%, \*\*\* Significant at 1%

Table 3: Results of Regression Analysis for the Sample

Variable	Islamic Bonds		Conventional Bonds	
	Coefficient	T-statistic	Coefficient	T-statistic
Constant	0.0195	0.2870	-5.7516	-1.3211
OFR	-0.0027 <sup>b</sup>	-2.1645	0.0042	3.2080 <sup>c</sup>
MAT	-0.0006	-0.4077	-0.1278	-0.2713
DBT	0.0033	0.0731	0.5093	1.3299
SZE	0.0025	0.1666	6.35E-06	4.0472 <sup>c</sup>
R-squared	0.0947		11.9988	
F-statistic	0.2355		0.8955	

Notes: <sup>a</sup> Significant at 10%, <sup>b</sup> Significant at 5%, <sup>c</sup> Significant 1%



Diagram 1: Beta Estimated Using Returns from 120 Trading Days Prior to the Announcement Date

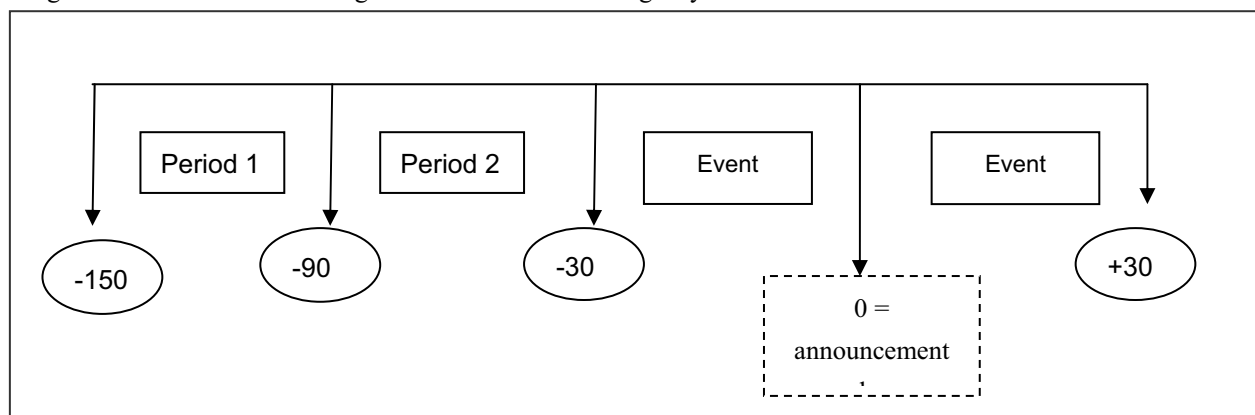


Figure 1: Cumulative Average Abnormal Return for Islamic Bonds

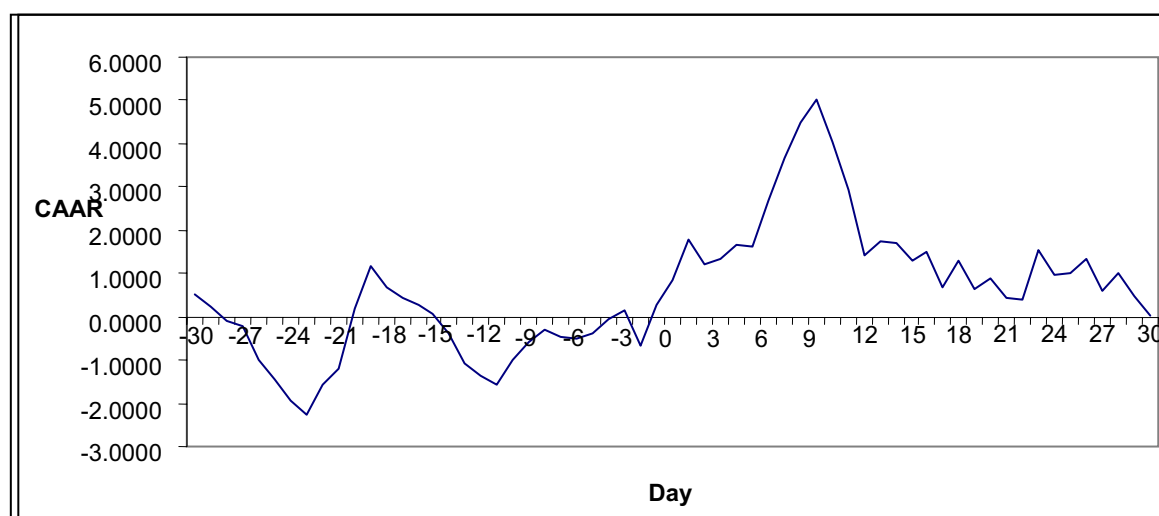
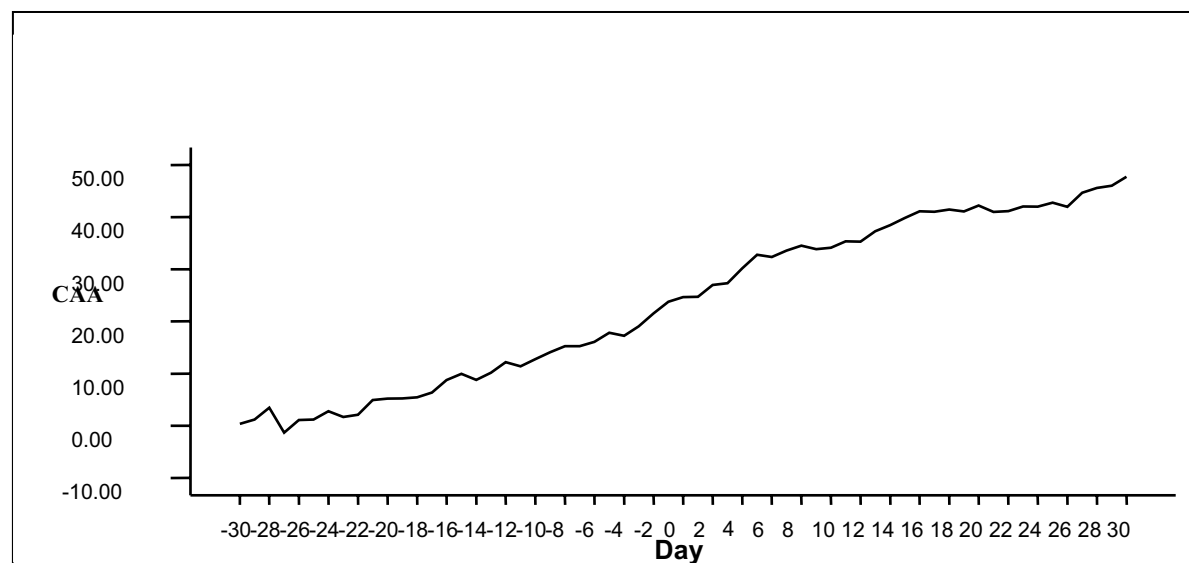


Figure 2: Cumulative Average Abnormal Return for Conventional Bonds





# Thoughts on Speeding up the Foreign Economic and Trade Development in Chinese Western Area ----- in Perspective of Chongqing City

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## Abstract

To implement the grand western development strategy and to speed up the regional economic development is a vital decision of the central government in the new century. Foreign economy and trade is an important component of national economy. To develop the foreign economy and trade in western area and to speed up the opening-up process is significant to drive the economic and social development there. Chongqing city, as the only municipality in western area, the growth of foreign economic and trade development will benefit the western area in general. Therefore, to study how to speed up the foreign economic and trade development in Chongqing is meaningful in practice. Since the execution of reform and opening up policy, the foreign economy and trade have developed fast in Chongqing. But there are problems in attracting foreign capitals.

**Keywords:** Foreign economy and trade, Western area, Chongqing city

## 1. Introduction

To further strengthen the reform and opening-up policy in western areas and execute the grand western development strategy is one of tasks emphasized by the central government. Facing the new condition of economic globalization and China's WTO entry, to speed up the opening-up in western areas and develop foreign economy and trade means a lot for making best use of foreign and domestic markets and resources, promoting the implementation of grand western development strategy.

For thirty years since the reform and opening-up policy, with the support of national policy, the foreign economy and trade have developed fast in western areas, gaining marvelous achievements. In late 1997, the foreign direct investment in western areas reached 2.507 billion US dollars. Due to the special history and national conditions, the economy in western areas has a poor base. The general economic development level still lags behind the eastern areas. As for the scale and level of foreign economic and trade development, there is a large gap between western areas and eastern areas. In 1999, the total value of input and export by commodities was 13.7 billion US dollars, merely accounting for 3.8% of the total. The foreign direct investment was 1.83 billion US dollars, merely accounting for 4.5% of the total.

Conditions in western areas are complex. In this paper, we just analyze Chongqing city, by which we hope to understand the foreign economic and trade development in western areas. It will serve as a reference for analyzing how to speed up the foreign economic and trade development in western areas.

## 2. History evolvement of the foreign trade in Chongqing city

Since the foundation of new China, the foreign trade in Chongqing city has experienced three development stages in general.

The first stage (starting period): before 1983.

At the very beginning, China adopts the highly-centralized foreign trade system. The foreign trade in Chongqing city

just follows the national plan. Before 1983, it merely purchases and adjusts national export commodities and executes the state's international economic aids.

The second stage (initial development period): from 1983 to 2001.

The reform and opening-up policy brings about vitality for Chongqing's foreign trade development. In 1980, Chongqing was positioned as an inland foreign trade port and set up a customs. In 1983, Chongqing adopted special economic plans and began to manage its foreign trade independently. Then, it set up relevant foreign business institutions concerning commodity inspection, animal and plant quarantine, foreign shipping, and exchange management, offering basic conditions for development foreign trade. In 1992, Chongqing was positioned as a river opening city. Its foreign economy and trade gained further development. In 1997, Chongqing turned into a municipality. In administration, it is directly controlled by the central government, which makes it execute the central policy more quickly. Compared with seaside areas, in Chongqing foreign investors can enjoy more beneficial policies. The municipality effect also arouses foreigners' enthusiasm for investment in Chongqing, what generates certain impacts on Chongqing's foreign trade development. Since 90s, Chongqing has improved its position in world commodity trade gradually. And its market shares keep rising.

The third stage (fast development period): after China's WTO entry.

On Dec. 11<sup>th</sup> 2001, China joins in WTO officially. The release of the right of operating foreign trade, the carry-out of China's promises to WTO, the construction of national highway net, and the grand western development program bring about new chances for Chongqing's foreign trade development. From 2001 to 2006, Chongqing's foreign trade keeps in growing and reaches a new top. Till late 2006, Chongqing approved 4179 foreign-funded enterprises. The contract foreign funds reach 8.759 billion US dollars. The actual use of foreign funds is 4.8 billion US dollars. In 2006, the contract foreign funds are 1.12 billion US dollars, realizing a 139.4% rise than that in 1997 before it turns into a municipality. The actual use of foreign funds is 0.7 billion US dollars, realizing a 76.4% rise than that in 1997. 69 of world top 500 large enterprises live in Chongqing. 90% of foreign-funded enterprises satisfy with the investment environment.

### **3. Present conditions and problems for Chongqing's foreign trade development**

#### *3.1 Present conditions*

Since the reform and opening-up policy, Chongqing's foreign trade has gained fast development, which mainly focuses on these aspects as follow:

##### **(1) Import and export trade keeps in rising**

From 1987 to 1996, the total value of import and export steadily rises from 0.297 billion US dollars to 1.585 billion US dollars in Chongqing city. From 1997 to 2006, the total value of import and export quickly rises from 1.678 billion US dollars to 5.470 billion US dollars in Chongqing city. In 2005, the total value of import and export reaches 4.293 billion US dollars, being the No.24 in China, and the No.6 in western areas.

##### **(2) The foreign direct investment rises fast**

From 1979 to 2005, in Chongqing city the contract funds of foreign direct investment is 7.660 billion US dollars. The approved contract projects are 4041. The actual use of foreign funds is totally 4.207 billion US dollars. From 1979 to 1995, total foreign direct investment is 1.185 billion US dollars and the annual average is 74 million US dollars. From 1996 to 2000, total foreign direct investment is 1.333 billion US dollars and the annual average is 267 million US dollars. From 2001 to 2005, total foreign direct investment is 1.789 billion US dollars and the annual average is 358 million US dollars. Apparently, Chongqing's attraction for foreign funds grows. The foreign direct investment rises fast.

##### **(3) More foreign economic cooperation**

After being approved as a municipality, Chongqing develops the foreign economic cooperation comprehensively. From 1996 to 2000, the contract funds, concerning foreign labor cooperation, project contract, and design consultant, realizing a turnover of 230 million US dollars. Till late 2000, Chongqing totally exports 3675 laborers, sets up 39 foreign agencies, and offers 9.44 million US dollars multilateral or bilateral aids. From 2001 to 2005, the contract funds, concerning foreign labor cooperation, project contract, and design consultant, realizing a turnover of 464 million US dollars. Till late 2005, Chongqing totally exports 7037 laborers, sets up 69 foreign agencies, invests 83.66 million US dollars, and offers 144 million US dollars bilateral aids.

#### *3.2 Problems*

Although since the reform and opening-up policy, especially being approved as the municipality, Chongqing's foreign trade develops quickly and the total value of import and export by commodities keeps in rising, its foreign trade still lags behind the western seaside city.

#### (1) Lower foreign trade dependence

From 1989 to 2003, in Chongqing city the percentage of the total value of import and export by commodities to GDP tends to decreasing. Compared with the whole country, Chongqing has lower foreign trade dependence. From Figure 1, Chongqing's foreign trade dependence is always lower than the national average. During recent years, Chongqing's foreign trade dependence basically changes from 5% to 15%. The national average is from 25% to 50%, higher than Chongqing's. Although Chongqing's foreign trade dependence tends to rising in general, it fluctuates around 10%. It means Chongqing's foreign trade is not strong. The position of Chongqing's foreign trade needs to be improved further in the whole national economy.

#### (2) Smaller foreign investment scale

From 1988 to 2006, Chongqing's actual use of foreign funds rises in fluctuation. But it is still lower than the national average. During recent years, the average of Chongqing's actual use of foreign funds is about 474 million US dollars or so, while the national average is about 1388 million US dollars or so, higher than that of Chongqing city. It means Chongqing needs to further develop its capacity of using foreign funds and improve its attraction for foreign funds.

Generally speaking, although Chongqing's foreign trade develops fast in recent years, it lags behind the national average no matter what it is the scale or the structure of the foreign trade, or the driving effect on regional economy. Even in the western areas, Chongqing's foreign trade is not better than Sichuan province and Shaanxi province. Therefore, Chongqing's foreign trade needs to be improved further.

### **4. Suggestions for speeding up Chongqing's foreign economic and trade development**

Foreign investment speeds up the development of certain industries, expands the investment fields, cultivates new tax sources, and drives Chongqing's economic growth on one hand. On the other hand, the lagged-behind environment construction causes a series of problems, such as the small scale of foreign investment, and the low proportion of foreign investment. However, the potential of Chongqing using foreign investment needs to be explored further. Chongqing should adopt practical measures to enlarge the scale of foreign investment and improve the level of foreign investment, developing the advantages and deleting the disadvantages. By means of introducing and using foreign funds creatively, Chongqing can turn foreign investment into sustainable drives for its economic development.

#### *4.1 Adjust the strategy of developing world market*

In recent years, Chongqing's foreign trade develops well. The market share of Chongqing's export keeps in rising. But the scale of export is small. Compared with another three municipalities, Chongqing still lags behind in foreign trade filed. Therefore, Chongqing can increase its investments in foreign countries according to the requirements for resources, industrial development, and industry structural adjustment.

#### *4.2 Increase investment in science & technology*

In Chongqing city, the competitive advantage product is mainly the initial product and industrial product endowed with lower value-added and technologies. With the advantage of low prices, products can occupy some market shares during certain period in a sense. But in order to gain more profits, it is necessary to change present growth pattern of foreign trade. Chongqing city should grasp the chance generated by world scientific and technological revolution, invest more in science and technology, adjust the export industry and the product structure, and develop high-tech industry, using high technologies to reform and improve the traditional industries. Encourage export enterprises to realize independent research and development, set up an independent innovation mechanism, and improve enterprises' core competitiveness continuously.

#### *4.3 Improve the investment environment*

In order to attract more foreign investments, using foreign funds to improve the competitiveness of foreign trade, Chongqing should invest more in the hard and soft environment: Speed up the construction of transportation net and information net and relevant infrastructure; Strengthen the construction of legal and financial environment; Perfect the service system, and improve the administrative efficiency, offering convenient and timely services for foreign producers.

#### *4.4 Speed up the cultivation of economic talents*

The severe world market competition means the industrial competition, the product competition, and the talent competition. Talents are the most important factor for the formation of competitive advantage. To improve the competitiveness of foreign trade, Chongqing must strengthen the cultivation of foreign trade talents, making best use of the effect of talents. Therefore, to cultivate a batch of complex talents who are familiar with foreign trade business and WTO principles and have international marketing experiences and modern management experiences, and further train some primary foreign trade talents is an inevitable choice for Chongqing improving its competitiveness of foreign trade.

#### 4.5 Make best use of special internal and external macro environment advantages

##### (1) The advantage of municipality

Chongqing is the only municipality directly under the control of the central government. It has an important strategic position in developing the Yangtze River economic band and driving the grand western development program. Chongqing has a great market generated by the Sanxia project and enjoys the most preferential migrant development policy. Besides, it locates at the border between the west and the east. Therefore, it can exert a dragon-head effect and radiation effect on the grand western development.

##### (2) China's entry to WTO and use of foreign investment

China's entry to WTO means a lot for Chongqing city where the economy and culture lag behind the eastern seaside cities. It is a valuable chance for Chongqing achieving a spanning development of economy. The practice of the reform and opening-up policy tells us that the reform can liberate the undeveloped productivity and the opening-up can promote an undeveloped region to exert the later advantage. As an inland opening port, Chongqing should not miss the wonderful chance.

##### (3) The implementation of the grand western development strategy

The grand western development program is a significant strategy of China speeding up the development of western areas. It is an important measure to drive the balanced development of national economy. In order to speed up the development of western areas, the state council issues the "Notice of Implementing the Grand Western Development Program", supplying lots of preferential policies in foreign investment field, investment ways, and taxation, and offering policy guaranty for enlarging the scale of using foreign funds in western areas.

## 5. Conclusion

Chongqing's competence of foreign economy and trade keeps in rising. But it is still at a lower level. The proportion of Chongqing's total value of import and export by commodities to the economic gross is small. Its driving effect on the economy is weak. Correspondingly, its contribution to economic growth is restrained. Besides, the foreign investment does not exert a strong impact on Chongqing city and the fluctuation is large, which is not good for the sustainable economic development.

Due to the low level of Chongqing's foreign economy and trade in China, Chongqing should not only adjust the world market development strategy, but also invest more in science and technology, improve the investment environment, and speed up the cultivation of economic talents. Meanwhile, Chongqing must make best use of special internal and external macro environment advantages, speeding up the foreign economic and trade development.

Chongqing, as the only municipality in western areas, its foreign economic and trade growth means a lot to the whole western areas' foreign trade development. Therefore, to study how to speed up the foreign economic and trade development in Chongqing city is meaningful in practice. However, Chongqing, as one of twelve provinces and cities in western areas, has its special uniqueness. Its experiences are not right for all other provinces and cities. In spite of this fact, the study of Chongqing is still useful. According to the similarities of Chongqing city and other provinces and cities, this paper can still serve as references for studies on other provinces and cities.

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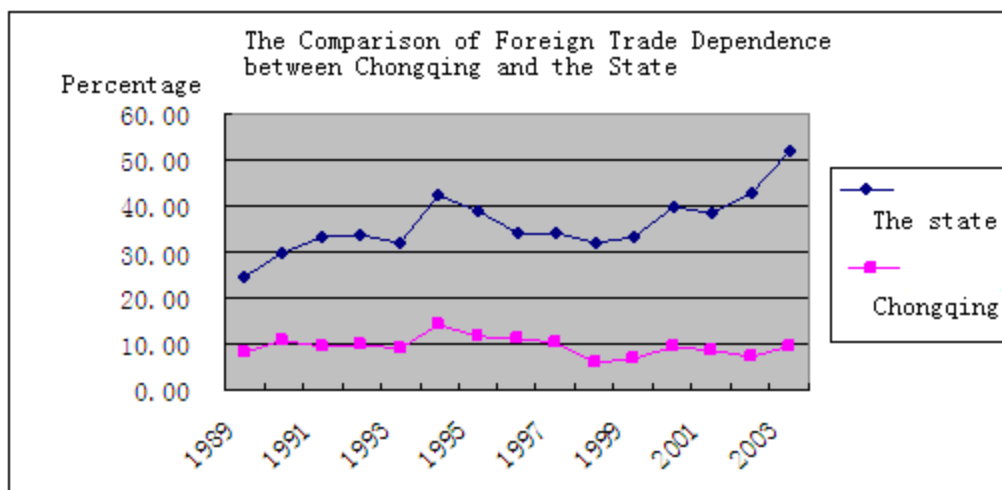


Figure 1.

Data source: Chongqing Yearbook (2004) (being calculated and edited)

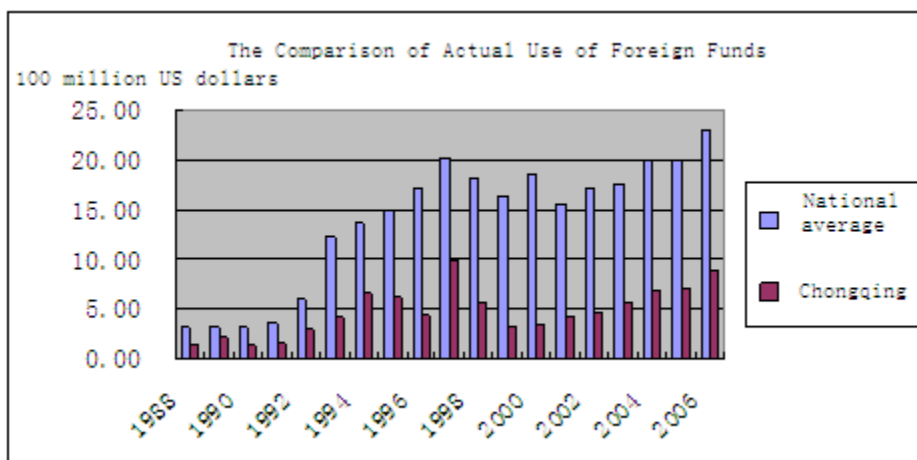


Figure 2.

Data source: Chongqing Yearbook (2007) (being calculated and edited)



## The Compare and Enlightenment of Governance Model in Domestic and Overseas Commercial Bank

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### Abstract

Good corporation governance will facilitate commercial bank to make a scientific decision and operate in an intensivism way. Furthermore, the proper governance model will reduce the moral risk and the converse choice of the management. By comparing the typical governance models of different countries, we can find some principles and ways for our state-owned commercial bank to establish effective corporation governance model.

**Keywords:** Commercial bank, Corporation governance, Corporation personality

### 1. Introduction

Corporation governance is one of the most important concepts in the modern enterprise system. Corporation governance is the system arrangement, which can harmonize the relation among shareholders, directors and managers and assort with some related people (employee, clients, suppliers, creditors, the public and the government). It contains exterior governance model and interior governance model. With corporation governance, we can keep all the level in the enterprise in order and in controllable state, and in the end we will have the transparent and effective governance effect. In all, corporation governance is one of the most critical problems confronted with the enterprises.

### 2. The compare of the governance model in domestic and overseas commercial bank

Corporation governance of commercial bank is a system, which can guarantee steady operation and persistent development of the commercial bank. Board of the director and high-level managers make use of this system to deal with affairs in the bank or out of the bank, such as establishing development strategy, protecting the benefits of depositors, shareholders and stakeholders, and ensuring most of the operation activities in good order and most of the governance function in a safe and healthy way.

According to the conception of corporation governance of commercial bank, we will compare the governance models in some typical countries in order to achieve some experience for our reforms in the commercial bank system.

#### 2.1 Market type of the governance model in commercial bank

Market type of the governance model in commercial bank is fit for the enterprises, which include dispersive equities. This type of governance model can carry out the control and supervisal to the operation of the bank with some fluxion forms of creditor's rights, such as liquidation, and some fluxion forms of equity's rights, such as mergers and acquisitions. It gives priority to the exterior supervisal and is also called outsider system. Due to the dispersive creditor's rights and equity capital's rights, it is difficult for the singlehanded shareholder and creditor to control and supervise managers of the bank. So in virtue of the capital market, it can bring the control and supervisal into effect.

The precondition of market type of the governance model is that there is perfect law environment, developed capital market and effective manager market. This type of governance model is generally used by British and American banks, and the intensive and restricted mechanism to the directors, presidents and supervisors depends on exterior markets.

Market type of the governance model needs strict external conditions:

First of all, product market must be an effective competition market, which can guarantee the prompt reflection to the performance of the bank;

Second, capital market is mature and normative, and share price reflects the genuine performance of the bank's

operation;

Third, equity's rights are dispersive and the competition in the managerial control market is sufficient. There is no obstacle about the mergers among the banks in this system.

Fourth, the reputation system of the banker's market is perfect, and it can select the proper bankers and eliminate the improper ones with the change of the bank's operation performance.

## *2.2 Enterprise type of the governance model in commercial bank*

Enterprise type of the governance model in commercial bank gives priority to the enterprise while not the market. It means that the intendance, decision-making and implement all come from interior of the bank. Management board (know from board of the director in the British and American countries) in this type of governance model is made up of big shareholders who can supervise and obligate managers directly. Enterprise type of the governance model adapts to the comparatively concentrative equity structure and it mainly used by German and Japanese banks. Because some big corporation and financial institutions in these countries hold a high proportional stock and they are always depositors of the bank, it is likely to form insider control in the rank of managers. This kind of governance model is also called double-board system. Compared with market type of the governance model, there are some distinctive characteristics as below:

In the first place, the stock holders are relatively centralizative and shareholders will commit themselves to the long-term development of the bank;

In the next place, the supervise function of the securities business weakens paralleled with the market type of the governance model;

Again, because of the restrain of the equity transference, the operation of the bank will keep stable and continuous in the management.

Finally, this style of the governance model pays more attention to the collective goal of the bank, and cares more about the benefits and the losses of stakeholders in the course of purchasing.

## *2.3 State type of the governance model in commercial bank*

Nation's holding in a high proportion is the prominent character of state type of the governance model. Operators in this type of the bank are designed by the nation, and inspired with the administration promotion. The operation object is commonly serving for the country. At present, countries like China who is carrying through the reform of economic system adopt this kind of governance model.

State type of the governance model is composed of Shareholder convention, Supervisory board, Management board and the rank of the managers. Supervisory board does not participate the management, but is entitled to check the account of the bank. Supervisory board exerts an influence on the board of the director and the rank of the managers. The right of the board of the director is big, with responsibility for the establishment of the important decision-making. The general manager takes charge of the implement in detail.

State type of the governance model leads to a plight whether accorded autonomy in management to all levels of the bank's managers or bestowed sufficient authority of supervisal to the owner of the state. The former will bring out the effectiveness of the bank, but meanwhile will probably lead to insider control, even damage the interest of the nation. The latter has the administration color with supervisal control and will result in more interference to the state-owned banks.

There are some respective characters among these three governance models, so we summarize some of them in the tab.1 below.

## **3. The use for reference to our state-owned commercial bank**

Our state-owned commercial banks are state type of the governance model with state stock holding a very big proposition. The ownership of this governance structure is fairly concentrated. Corporation governance in our country depends mostly on interior power to control the managers of the bank, what's more, it doesn't take management board as the center and the effect of independent director isn't enough either.

Based on the analysis and compare with the governance model in domestic and overseas commercial banks above, combining the characteristic of the market and enterprise type of the governance model, we can put forward some suggestions for our state-owned commercial banks.

### *3.1 Speeding up the reform of the government, and making clear the demarcation line of the government function*

In the market economy, there is a clear distinction between social management function of the governance and the function of the owners. Management function of the country is to maintain the fair competition of the economic main body by drawing up the regulation and standardizing market order. As the owner of the economic main body, the ownership scope of the country should be limited in a certain area. In addition, the function of the country should also



be confined within the joint-stock economic main body, which means that the state and other investors should associate with each other as equals with the same commercial principals and be restricted by the law of the company in the internal economic main body, not allowed to surpass the Law.

*Insert Table 1 here*

For the sake of constructing modern corporation governance in the commercial bank successfully, we need to definite the respective functional position of our commercial bank in a further way. On the base of the detached function between the management of government community and the operation of the enterprise proprietor, as the contributive main body of the state-owned commercial bank, the state should fulfill the function of shareholders and get rights and interests complying with the Law. That's the key to guarantee the freedom of the decision-making and the separation of the government and the enterprise.

### *3.2 Strengthen the exterior intendance system of the market and the society to the operators of the bank*

In the light of actual situation, at the same time emphasizing the obligation to the owners, we are supposed to intensify the supervisal action to the market and the society.

There are some aspects about market supervisal:

- i Making innovation in the income system of the management, and cultivating the manager market.

On the one hand, inspiring the operators with short-term measures and long-term ones; On the other hand, making the manager at their posts feel competitive pressure from manger market and increasing the substituted cost.

- ii Establishing an open, fair and competition financial tools and financial service products.

Under the circumstances of the modern market economy, capital operation and debt operation completely lie in the capability and the quality to develop and extend the financial tools and financial products. Clients can make a choice by the operation level of the bank.

- iii Trying best to develop capital market.

The restricted mechanism to the capital embodies not only in the owners but in the depositors as well who will transfer their savings to the capital market.

The content about social supervisal contains that:

- i The independent audit supervisal.

There is a set of audit mechanism interior the banks, but it is controlled by some people in the course of the operation rather than by the system. So it's important to pinpoint the exterior independent audit mechanism, which can reflect the result in a comparatively objective and equitable sphere.

- ii Setting up a system that can throw daylight on information, and it can publicize the operation and financial situation of the bank for a period of time, intensifying the supervisal to the managers about their work by the community force.

### *3.3 Shaping corporation personality of the capital owner for our state-owned bank*

Corporation personality is a value mechanism, which is made up of all the people in the enterprise contracted and communicated each other. It is a moral mechanism, which united the development of the society, the growth of people's personality and the external environment and behavior.

As a unit form composing society structure, commercial bank is in a surrounding that has all kinds of interest correlation bodies. If we analyses the corporation personality of our commercial bank with some ethic and social psychology theory, it is helpful to form a unity about internal value mechanism and external behavior in the course of adapting to the environment. And it will have a surprising effect to resolve the plight in the state type of the governance model.

Besides, there are some other steps to be learned from other countries for our commercial bank, for example, we can increase the proportion of the independence directors.

## **4. Conclusion**

There is no good or bad criterion about the governance model in different countries, and it is helpful as long as this kind of governance model accords with the economic resources of that country and answers for the need to develop in a certain period. With the advancement of our modern enterprise system, our country is confronted with many choices about which governance model we should select. The comparative analysis of different corporation governance in some typical countries offer us some valuable experience, meantime, we must have a clear understanding that it doesn't come true until we lead a way agreed to the situation of our country. Therefore, we expect further research in order to find a develop route for our commercial bank, that's a method which can bring us system and efficiency in a harmonious and uniform way.

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Table 1. The compare of the three governance models in commercial bank

The type of the governance model Character	Market type of the governance model in commercial bank	Enterprise type of the governance model in commercial bank	State type of the governance model in commercial bank
Equity structure	Dispersive	Comparatively concentrated	State-owned
Basic governance model	Market governance	Shareholder governance	State governance
Function of the board of the director	very strong	Comparatively strong	Very weak
Degree of the announcement	high	Comparatively high	low
Relation between performance and income	Count for much	Comparatively much	Count for little



## Tinapa Business Resort: A Strategy for Sustainable Rural Livelihood in Cross River State, Nigeria

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### Abstract

The development of Tinapa Business Resort in Cross River State has served as an anchor point to service other tourism destinations. At the same time it is transforming Calabar into a natural paradise with internal and external influences over the livelihood of most rural communities especially Adiabo community through income generation, investment opportunity, employment generation, and socio-economic upliftment. This paper critically assessed the various ways in which the development of Tinapa Business Resort has impacted on the livelihood of Adiabo (host community) as regards employment provision by the various construction companies, emerging socio-economic activities in the enclave community, present employment distribution and ecological problems in the area. Data were obtained using a combination of questionnaires, interviews direct field observation and on the spot assessment. Systematic random sampling techniques was employed to allow every member of the population have equal chances of being selected. However, Data collected reveals that Tinapa Business Resort has impacted significantly of the livelihood of the host community. Therefore the sustainability of this laudable investment (Tinapa Business Resort) will be greatly determined by the interplay of the stakeholders, continual utilization of the resort and general tourism growth within the region.

**Keywords:** Tinapa business resort, Cross River State, Livelihood, Sustainability

## 1. Introduction

The world is gradually turning into a global village as a result of development strides, with tourism playing a big role. As an outward sign, mankind is beginning to reshape his attitude in keeping with the mould of nature-landscape, the immersion concept geared towards the conservation of the natural environment, complete with animals, plants, stonework, vines, mist, sand and even man himself, which are all active compliments of the earth. The over reliance of the Nigeria economy on crude oil calls for diversification into other sectors in search of an improve revenue status. This quest for an alternative form of income generation other than petroleum in Nigeria calls for the recognition of the need to implement the concept of sustainable development, which include the development of a liable tourism industry.

The development of the Tinapa Business Resort in the state is basically channeled at harassing the historical, natural and cultural potentials of the state into an exciting tourist destination of international standard, as well as utilizing the potentials of the port and free trade zone to establish Calabar as a global trading distribution hub in West Africa inspite of the numerous dividend the Tinapa Business Resort is yielded to Cross River State, what happen to the livelihood of a fishing, rivers, environment and farming community like Adiabo the host community with over 200 hectares of their land affected due to the construction of the Tinapa project? It is therefore very important to look into the community life and their means of survival, so as to know what value they stand to derive and to make provisions for allowable level of loss they are going to suffer. To thus end this paper focus on the level of benefits the Adiabo community have derived since it establishment with regards to employment provided to the Adiabo community by the various construction companies between 2004-2007, Businesses that have emerged in the area due to the posit obtained by the indigene (host community) from the various construction companies, present attractions, employment distribution and ecological problem resulting from the development of the Tinapa Business Resort in the area.

## 2. Study area

This study is basically within the confines of Adiabo village in Odukpani Local Government area of Cross River State, Nigeria. The Tinapa business resort (site) is bounded to the North by the settlement of Adiabo, to the south by the Pamol industrial estate and Pamol Rubber Plantation. While to the East and West by Farmlands and Calabar River respectively. The area lies within the geographical coordinates of 422671.665-426400.373E and 55431.948-959730.205N (GPS).

## 3. Methodology

The area has an estimated population of 15,000 with about 500 houses clustered at some point and scattered at other points. The houses were sample using systematic sample technique while random sample techniques was adopted in other to allow every member of the population have equal chances being selected. The research also made use of a combination of questionnaire, interview, direct field observation are on the spot assessment. A population of five hundred (500) household were used of which two hundred (200) household were drawn from the entire population which represent the sample population for this study.

## 4. Literature review

### 4.1 Tourism and economic development

Hall (2003) in his study on the socio-economic impact of tourism discovered that tourism has become a significant source of foreign exchange revenue for many countries of the world. According to him tourism activities in Maldives contributed 66.6 per cent of the country's Gross Domestic Product (GDP) and accounted for 65.9 per cent of its exports. Roe and Godwin (2002) supported the works of Hall, according to their analyses tourism industry in Vanuatu has contributed 47.0 per cent of the country's GDP and 73.7 per cent of its total export earnings. They went further to emphasized that (thirteen (13) developed countries in Asia (Cambodia, Lao people's Democratic Republic and Neps), tourism accounted for more than 15 per cent of export earnings.

There further stress that tourism alone contributed 43.5 per cent of the total export earnings of Fiji and one third of its GDP. Other small Islands such as Tonga and Vanuatu are dependent on tourism for half or more of their export earnings. Prentice (2007) in his study opines that tourism in China has provided a substantial contribution to its GDP, amounting to 13.7 per cent in 2006. Taking full advantage of the potential of their natural and cultural tourist resources, countries in the greater Mekong sub-region are benefiting from the tourism industry. He went further to stress that in 2006, tourism in Cambodia and the Lao people's Democratic Republic accounted respectively for 22.3 and 21.4 percent of their total export earnings and contributed 19.6 and 9.3 per cent respectively of their GDP.

According to UNWTO (2004) tourism industry contributes significantly to the creation of employment both directly and indirectly. According to UNWTO the industry in the Asian and pacific region provide jobs for about 140 million people representing an average of 8.9 per cent of total employment. It also emphasized that tourism employment in North-East Asia is estimated at 86 million jobs, or 10.1 per cent of total employment. This situation is attributed mainly to China, where 1 out of 10 persons works in a tourism-related industry. In support of UNWTO's argument, Sharpley and Telfer (2002) following empirical findings, indicated as part of his illustration, that in Oceania, the workforce in the

tourism sector accounted for 14.5 per cent of total employment, or 1 in every 6.9 jobs. The importance of tourism becomes more significant when the structure of the workforce in selected Pacific Island economies is analysed. For instance in 2003, 1 in every 3.2 persons was employed in the tourism sector, while in Vanuatu the ratio was 1 in every 2.4 jobs.

Richards and Hall (2003) opines that tourism industry has become a significant provider of employment in countries of the Asian and Pacific region, thereby improving the economic situation of the people of those countries. In addition, revenue generated from tourism has enabled Governments to allocate financial resources for improving education and health countries. They further stress that in Maldives, where tourism activity is the economic mainstay, almost 100 per cent of the population is now literate, while the infant mortality rate has improved from 121 per 1,000 in 1977 to 38 per 1,000 in 2002 and over the same period, the average life expectancy at birth increased from 47 years to 67 years. Okunbawa (2001) assert that tourism is an important engine of economic growth and job creation. According to him, the industry continues to expand faster than average world economic growth, as disposable income and free time increase in developed countries. Grollier (1978) opines that Tourism is also a motor of development, foreign exchange earner and promotion of international understanding, friendship and world peace. Lawal (2001) drawing from the World Tourism Organization Report (2000) regard tourism to be the fastest growth industry in the world. It accounts for over 50% of the foreign exchange earnings of most countries in the world. Kigoth (2000) posits that the industry is reputed to be the largest contribution of global foreign exchange earnings. Ofulue (2001) affirming the works of Lawal asserted, that if tourism is properly handled in Cross River State the industry could generate as much as 5 billion US dollars per annum and also sustain the economy of Cross River State, the state which is blessed with great tourism potentials. The potential if fully exploited could go a long way to solving the problem of unemployment while promoting peace and cross-cultural understanding. In his contribution, Shrumann (1981) in Atsu (1983) pointed out said the commonest argument in favour of promoting tourism is the anticipated foreign exchange profits especially where a country lacks significant export oriented agricultural sector.

Robinson (1979) noted the economic significance of tourism, dividing these into the direct effect relating to the income accruing from the actual expenditure involved in tourism and the direct effects which arise from the fact that trades directly involved also depend on the products of other industries in meeting the demands of tourists. Abdullah (2005) drawing from UAE chapter of the hotel industry body pointed out that Dubai tourist resort provides over 255 hotels with a total of 17,253 rooms and occupancy in 1998 averaged 49.3 percent. According to him since January 1997 when the Department of Tourism and Trade promotion Council was formed, there have been tremendous achievements in terms of promoting and marketing of the resort product to international tourists. He further argued that tourism industry in Dubai has accounted for a steadily increasing percentage of Dubai's GDP, with some estimates putting it as high as 20 percent. He also opines that tourism in Dubai is expected to overtake oil export as an important source of revenue in the near future.

Salem (2004) in his analysis of Dubai tourism resort pointed out some positive impact which includes.

- The pride of native place from local inhabitants in creeds.
- New social contacts appear
- Revenues from tourism help to support the cultural and historical heritage
- Increases educational level of the inhabitants
- Helps to develop the trade and prevents the disappearance of the culture and customs of a country
- Development of local culture and crafts.

According to UAE chapter of the hotel industry body and catering international management association (HCIMA) the investment in Dubai land projected to be more than 20 billion will be pivoted to the next wave of growth for tourism. According to UAE the overall aim of Dubai resort is to create an ideal city, against world benchmarks, that will become the ultimate leisure and entertainment destination between Hong Kong and Paris.

Kigoth (2000) in assessing the degree of impact of tourism in Nigeria discovered that whether tourism impact is beneficial or adverse is a function of a particular form or scale of tourist activities, the environment and socio-economic characteristic of the area and the degree to which the industry is planned and managed. Jombo (1983) argued that the tourism industry does not require heavy and sophisticated technology and is less labour intensive. It can absorb unemployed labour resources, improve the standards of living, increase infrastructure and social amenities for the visited region relatively quicker than any other source. By providing or expanding infrastructure. He inferred that tourism could form the basis and the stimulus for the development of other industries.

According to Aremu (2001) World Tourism Organization (WTO) finding revealed that:

(1) Receipt from international tourism (Excluding transportation) constitutes 6.8% of world's international trade in goods and services in 1989.

- (2) Travel and tourism constituted the world's largest creator of jobs in most countries providing employment for a total of 101 million people or one in 16 workers worldwide.
- (3) Travel and tourism is responsible for almost 7% of total global capital investment contributing about US & 166 billion of tax revenue and creating opportunities for employment and small-scale business establishment.
- (4) Travel for holiday purposes accounts for 60% of world travel and 30% of business trips.
- (5) African's share of international tourism receipts grew from US & 88 million in 1950 to US & 1.13 billion in 1975, US & 1.13 billion in 1975, US & 2.71 billion in 1980.

According to Aremu, Nigeria and other African countries have since recognized the above statistics. He said if government of federal, state, local and private sector can accord tourism the desired attention, tourism would go places.

Falade (2001) emphasizing the need for tourism development posited that tourism industry, "if developed" would as a matter of fact facilitate the diversification of Nigeria economy from the prevailing high dependence on oil. He admitted that international tourism has long been a major source of foreign currency earning and thus a contributor to the economy of African countries such as Kenya, Senegal, Gambia etc. further, tourism is an important factor in national prosperity and as a vehicle for economic growth. However, Falade believed that successful tourism can be developed at local, state and national level requiring useful feasibility studied and market research to assess the potentials of the development of local tourist services and infrastructure on planned basis among others.

## 5. Discussion of findings

The development of the Tinapa Business Resort in Calabar, Cross River State brought about different companies, which operated between 2004 to 2007. Table 1 shows the number of staff and percentage employment from Adiabo (host community) by the various construction companies between 2004-2007

The data collected reveals that out of the eleven (11) companies that existed in Tinapa Business Resort during construction work, CAT construction company recorded the highest unskilled workers from the host community with a value 80% followed by Naira company with 65%. Although other companies also provided unskilled employment to the host community as presented in the table 1. Furthermore, data collected for skilled workers from Cross River State, it was notice that Julius Berger Nigeria limits out of 337 workers only 11 workers from Adiabo the (host community) were skilled workers with a value 15% followed by GITTO construction limited with 67 workers but only 21% of the Adiabo people were in the skilled cadre. The table also shows that ARUB consultant due to the technical nature of their job employed only two (2) skilled workers none from Adiabo (host community) as shown in the table 1. Nevertheless table 1 reveals that our of eight hundred and eighty six (886) workers employed by the various construction companies between 2004-2007, seven hundred and ninety six (796) employed were recorded in Adiabo (host community) at the same time four hundred and eighty one percent (481%) employment was also provided in the area

Furthermore data on the number of people from Adiabo community (host community) who are currently employed in the Tinapa Business Resort was obtained table 2 reveals that the host community (Adiabo) were represented in all the employment cadre provided in the Business Resort. Although 31.3% of the people (host community) were employed to work in the hotel industry while 23.4% of the villagers were employed as cleaners. Table 2 shows that 15.6% were also employed in the shopping complex as sales representatives. The table also shows that the fishermen village and the craft village provided 6.3% and 4.7 employment respectively.

Nevertheless, table 2 indicate that at the full commencement of the Tinapa Business Resort only 71 persons from Adiabo Community (host community) were employed in the various job cadre.;

Furthermore, data were obtained based on the benefits derived by the people of Adiabo (host community) due to the present of Tinapa Business Resort is presented in the area.

Figure 1 reveals that most people who were engage in the Tinapa business resort during the construction stage have fully utilized the wages they were paid during the construction stage of the Tinapa Project. Today there are emerging businesses in Adiabo community as majority of the people owned sewing centers, internets service, welding and fabricator workshops dressing saloon amongst others making them self employed with value 35.6%. Table 2 also indicates that majority of the people from Adiabo (most community) who were workers in the Tinapa Business resort are today mechanic and drivers with a value 20% compared with barbing/heir dressing saloon, laundry services workshop as presented in fig 1.

Internet services and sewing centers was another benefits derived by the people (host community) from the establishment as it had a value of 5.6% and 6.7% respectively as shown in fig 1. All the percentages in Fig 1 were frequencies of responses in each variable observed as a socio-economic activities in Adiabo Community.

With respect to the data collected base on ecological problem in the area is presented in figure 2. Figure 2 indicate that the sitting of the Tinapa Business Resort had destroyed the cultural grow in Adiabo with a value 31.1% compared to other variable such as water pollution 8%, erosion 12% limiting ground 17.8% respectively. Although other ecological

problem ranged from biodiversity loss 16.7%, economic stress 3.3%, air pollution 10% respectively as shown below in figure 2

However, figure 2 also reveals that Tinapa Business Resort in Adabo (Host Community) had little or no impact in terms of its impact on water and air pollution in the area has both had a least value of 8% and 10% respectively. However the percentages were derived from frequency of responses in each variable notice as ecological problems in the study area.

## 6. Conclusion

Tourism has become the most powerful engines for economic growth of most nations of the world of which Nigeria is one with a great tourism potentials such as Obudu Ranch Resort, Marina Resort, Waterfall, Tinapa Business Resort among others. The big tourism project in Cross River State "Tinapa Business Resort" has much to offer in Nigeria and Cross River State in Particular. The Tinapa Business Resort has the potential for poverty eradication, promotion for gender equality, and women empowerment reduction in child mortality environmental sustainability, global partnership for development among others. The hope of the common man is yet another great issue which the tourism industry in Cross River State is yet to tackle.

The of Africa's premier Business Resort in Cross River State is a great hope for the helpless societies and communities in the state whose resources are deteriorating and untapped yet the livelihood of these rural communities is rested upon this laudable natural resources.

Nevertheless the development of the Tinapa Business Resort even though much has not been felt in the state, it has offered much dividend to the Adabo (host community) in Cross River State as their livelihood and environment has been transformed through the development and provision of social amenities in the area. However, it is quite clear from the research finding that much is still needed to be done to ensure the viability and sustainability, of the resort in Cross River State.

Therefore, the spread for this viable indices (socio-economic) to other rural communities will be a welcome development to all stakeholders in this great industry.

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Table 1. Employment provision by the various companies to adiabo community between 2004-2007 in tinapa business resort during construction

NAME OF COMPANIES	NATURE OF WORK	TOTAL EMPLOYMENT LEVEL ADIABO	DIABO COMMUNITY SKILLED WORKERS	PERCENTAGE OF SKILLED WORKER	DIABO COMMUNITY UNSKILLED	PERCENTAGE OF UNSKILLED
JBN LTD	Const of Emperia H20 Reservoir, shopping complex, drainages W/H 3-5	337	11	15	236	30
GITTO CONS LTD	Clearing of project site/pilling of Emperia A-D	67	6	21	61	42
ITB CONS COMPANY	Const at Tinapa 3 star Hotel	122	8	20	114	35
TREV NIG LTD	Pilling o the Hotel foundation	13	0	0	13	48
ARUB CONSULTANTS	Consultancy services to all contractors on site for quality control	0	0	-	0	-
PONET	Construction of the swimming pool	42	2	18	40	46
NAIRDA	Installation electrical materials/Fitting	85	6	30	79	65
CAT CONSTRUCTION COMPANY	Construction steal work for W/H 1&2, 4 & 5	58	2	15	56	80
DREAM ENTERTAINMENT	Construction of studio Tinapa	50	1	12	49	60
VANOARD NIG LTD	Dreading of Tinapa lake 45	4	2	45	2	50
AVOT	Landscaping	108	0	0	108	60
<b>TOTAL</b>		886	38	120	758	361

Source: Field Work 2008

Table 2. Host community employment generation in tinapa business resort (host community)

EMPLOYMENT CADRE	NO OF EMPLOYEE (HOST COMMUNITY)	PERCENTAGE
Fisher man village	4	6.3
Craft village	3	4.7
Shopping complex	10	15.6
Entertainment centers	7	10.9
Security	4	6.3
Hotel	20	31.3
Administrative staff	3	4
Clerks	5	7.8
cleaners	15	23.4
	71	

Source: Field Work 2008

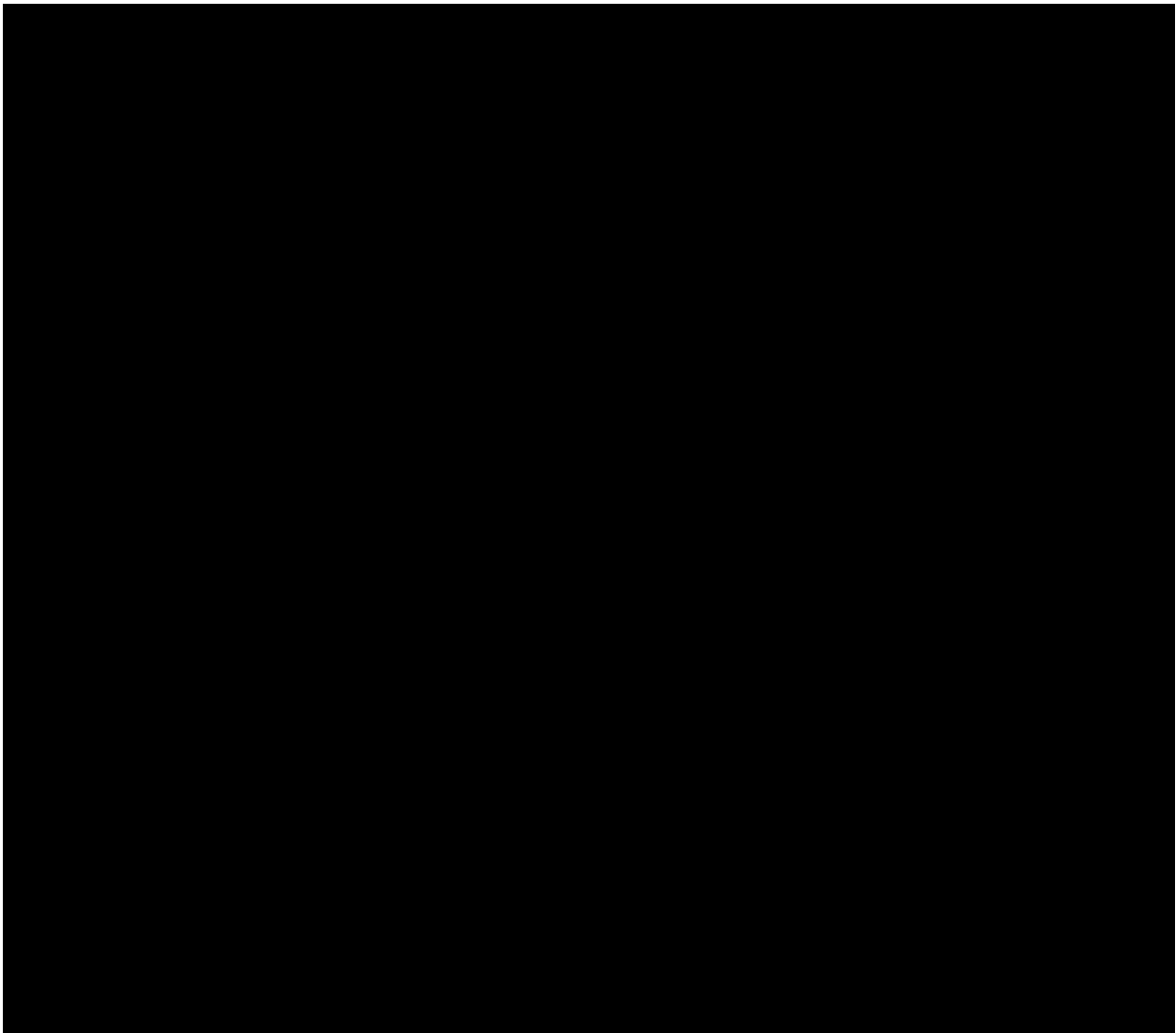


Figure 1. Socio Economic Activities in Adiabo (Host Community)

**Source:** Field Work 2008

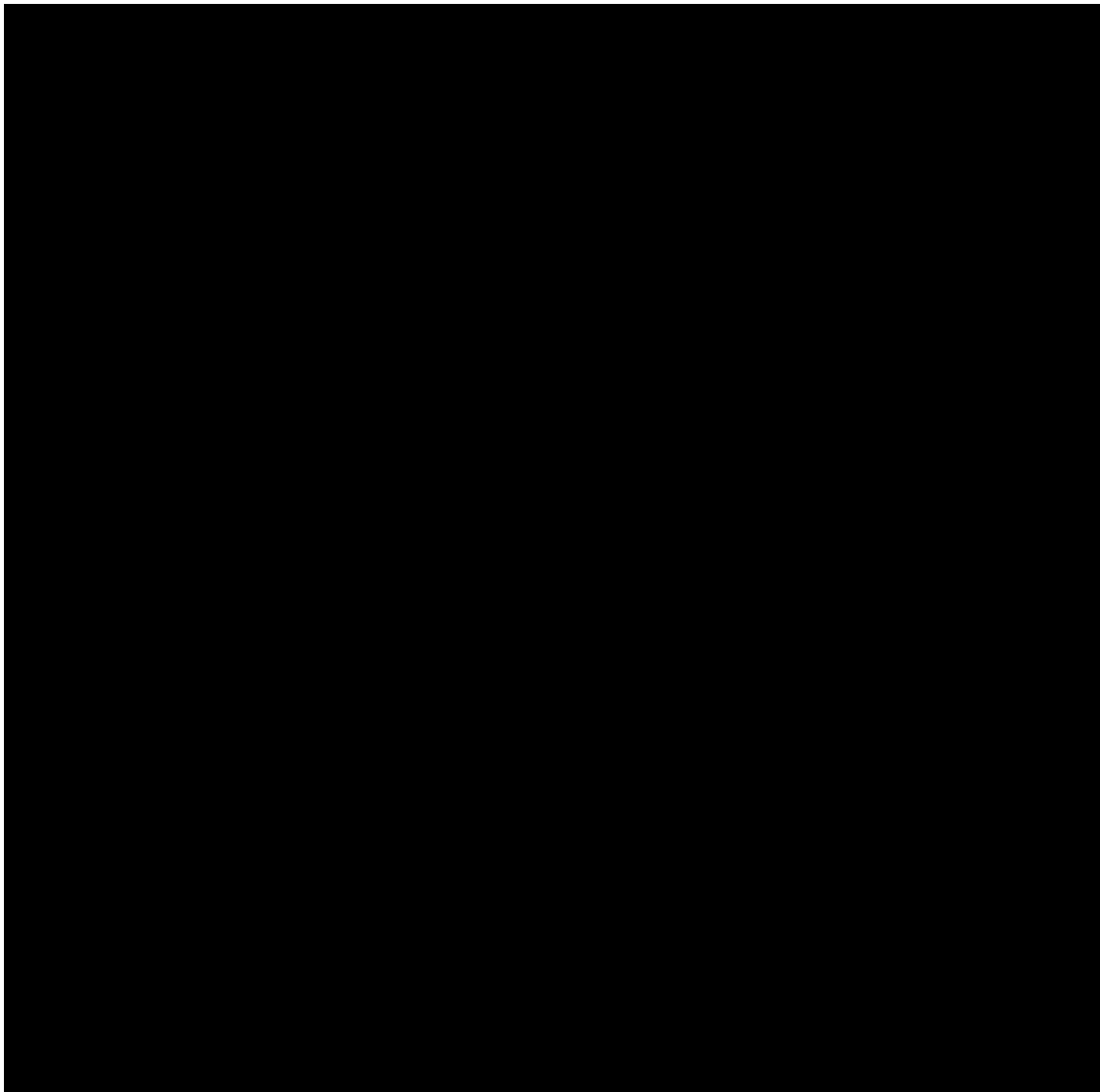


Figure 2. Ecological Problems in the Area Ecological Problem

**Source: Field Work 2008**



## Customer Demographics Affecting Bank Selection Criteria, Preference, and Market Segmentation: Study on Domestic Islamic Banks in Bangladesh

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### Abstract

Bangladesh is a moderate Islamic country. There are six full pledged Islamic banks providing services to wide range of customers. This study is designed to examine the impact of demographic disparities on the bank selection criteria applied by diversified customers of domestic Islamic banks in Bangladesh. We have run regression analysis after controlling for four demographic groupings such as Gender, Marital Status, Age and Educational Qualification. The beta scores were taken for identifying the influential factors chosen by the customers of Islamic Banks. Mostly, non-Islamic factors such as Corporal efficiency, Core-Banking services, Confidence, etc. were given higher weights by majority of the respondents. The report recommends introducing complete E-Banking solution, to increase advanced marketing efforts and to hire experienced human resources for better Islamic Banking activities in Bangladesh.

**Keywords:** Customer demographics, Islamic banking, Customer satisfaction

### 1. Introduction

Following the tremendous growth in oil exporting Islamic countries in 70's, banking based on Islamic law and principles has started to flourish. Since then the growth has been baffling at 10-15% during 1995 to 2005. By the end of 2005, total asset value of Global Islamic Banking stood at US\$700 Billion and at an annual growth of 15% until 2010, the industry could grow to US\$1.4 Trillion and to US\$2.8 Trillion by 2015 (IFSB Website, 2008). Magid (1986) summarized the reasons behind establishment of Islamic banks in three folds: firstly, to call for unified Islamic political and economic system; secondly, to create a pure Islamic system in Islamic countries and lastly, to adopt the Islamic Shariah law as the foundation for business transactions. Although the idea of Islamic banking comes from the desire of conducting financial activities in accordance with Islamic Shariah principles (Naser and Moutinho, 1997), the popularity of Islamic banks is spreading widely with increasingly large international conventional banks by establishing Islamic window services.

Unlike conventional banks, the purpose of Islamic banks is to work in harmony with the Islamic law and principles towards economic development. Due to its profit-risk sharing principles, Islamic banks, compared to non-Islamic banks, seek for a just and an equitable distribution of resources (Siddiqui, 1985). This is the reason why non-Muslims are also adopting Islamic banking in different parts of the world. The consequence of this is that Islamic banks face competition from both other Islamic banks and non-Islamic banks. When competition intensifies and when banks start to offer more or less similar products and services, it is the customer satisfaction that can influence the performance of an Islamic bank and determines whether its competitiveness and success are vulnerable (Naser et al, 1999). Hence, effective market positioning to identify influential factors affecting customer satisfaction is of paramount importance for Islamic banks.

At present there are six Islamic banks operating in Bangladesh (BB Annual Report, 2007). Islami Bank Bangladesh Limited (IBBL) is the first Islamic bank in Bangladesh, which was established in 1983. The bank currently holds majority of the Islamic banking assets and liabilities of the Islamic banks in the country. It has one of the highest numbers of branches and employees throughout the country. Bank Al-Falah and ICB Islamic Banks are the two foreign Islamic banks added to the list at the very end. However, the marketing setup of these banks are still very narrow. Hardly anyone will find an advertisement in TV commercials or on roadside billboards. Table 1 provides some details of Islamic banking sector in Bangladesh, which demonstrates increasing importance of Islamic banks in the country.

This study is attempted towards finding how different categories of customers choose their Islamic banks, what factors they mostly rely on, what makes them satisfied. Through this study, an attempt was made to know whether customers from different gender, educational qualification, professional background act differently while selecting their Islamic banks, whether they put higher importance to any specific factor or not? Furthermore, the report concludes on how these categories of customer[s] can be targeted and what kind of marketing strategies Islamic banks should apply to cover more areas and satisfy more customers.

The reminder of the paper is designed in five sections. Section 2 demonstrates the existing literatures in market segmentation and bank selection criteria in Islamic banking. Section 3 explains the methodology and hypotheses. Findings are shown in section 4 and section 5 concludes the study.

**Place Table 1 here**

## **2. Literature Review**

### *2.1 Strategic marketing - Segmentation and Positioning*

Increasing competition and diversity of service development in banking and financial services[s-not needed] sector pressures the Islamic banks to become increasingly responsive to market considerations in terms of segmentation, management and market strategies, internal and external infrastructure, their use of information technology and their ability to innovate and differentiate (Zineldin, 1996). Since Islamic banking is based on profit-risk sharing principles, it reduces the burden from the borrowers. The fathom of such key benefit has already created a place for Islamic banks in the mind of the core customers. Naser and Moutinho (1997) identified this profit-risk sharing relationship as a relationship-banking tool for Islamic banks since this relationship establishes a close link between the customers and the bankers. Despite of the pros and cons, Islamic banks have to fight stiff competition and as such building a competitive edge can only help them, which can be done by effective positioning strategies along with redesigning service provisions and approaches of customer management.

Both market segmentation and positioning are vital issues in marketing theory and practice. Positioning is an attempt to distinguish the bank from its competitors along real dimensions in order to be the most preferred bank for a certain market segment or prospect (Zineldin, 1996). As theory, market segmentation is the process of dividing a market into distinct groups of individuals or organizations, who share one or more similar responses to some elements of the marketing mix. Banking services are characteristically different from physical products and as such the focus of differentiating customers based on these services should also be multi-faceted. Various studies (Zeithaml and Bitner, 1996; Lovelock, 1996; Legg and Baker, 1996) found banking services being closely tied with intangibles like trust and commitments, transparency, inseparability and heterogeneity. Services are instantly provided and hence every customer feels the result instantly and behaves differently the next time they are offered with the same services. Therefore, a positive image making is necessary. Ries and Trout (1986) extended this necessity by hinting that: In the communication jungle out there, the only hope to score big is to be selective, to concentrate on narrow targets, and to practice segmentation. Market positioning also plays imperative role in market strategy by analyzing the market to segment the customers' requirements based on competitive advantages (Kotler, 1994; Zineldin, 1996). Therefore, effective positioning reflects how customer perceives the products, factors make the customers satisfied and whether customers behave differently with different factors while choosing a bank.

### *2.2 Bank selection criteria and market segmentation in Islamic Banking*

Islam is the primary reason behind choosing Islamic banking. Customers in Islamic banks seriously consider whether the bank complies with Islamic Shariah rules in all stages of banking activities (Kader, 1993; Metawa and Almossawi, 1998; Naser et al, 1999; Haron et al, 1994; Ahmad and Haron, 2002; Erol et al, 1990). The variables deemed important under religious (Islamic) construct include compliance to Shariah rules, offering of Shariah compliant services, offering interest free loans etc. However, studies have also showed that Islamic belief is neither the only reason, sometimes, nor the primary reason behind choosing Islamic banking.

Along with religious background, customers want a good use of their investment. They want the best cost-benefit tradeoff, branches and ATMs' in convenient location, faster transaction processing, caring employees, good financial advices from managers etc (Erol and El-Bdour, 1989; Erol et al., 1990; Omer, 1992; Haron et al., 1994; Gerrard and Cunningham, 1997; Mettawa and Almossawi, 1998; Naser et al., 1999; Ahmad and Haron, 2002; Abbas et al., 2003).

Dushuki and Abdullah (2007) concluded that Islamic banks must not only rely solely on religious factors as a strategy to secure customers' allegiances but they should also emphasize providing quality and efficient services. They have also identified the absence of social responsibility issues in terms of selecting a bank.

There has been serious lack in researches in Islamic banking, especially in the area of customer satisfaction, in Bangladesh. In their latest working paper, Rashid and Hassan (2008), has run a factorial regression analysis to find out influential bank selection factors. To the best of our knowledge, this is the only study on bank selection criteria on customers of Islamic banks in Bangladesh. This study has found Compliance to Shariah laws as one of the influential factors, whereas the other factors are convenience, cost-benefit, corporal efficiency, core banking services and facilities, and confidence. Corporal efficiency and Confidence are two most important factors found from this analysis.

Measuring the impact of customer demographics on bank selection criteria gives birth to newer marketing strategies for banks. It helps to understand group-behavior of the customer and therefore it makes positioning and branding activity easier. Studies in customer preference and market segmentation in Malaysia, Jordan, the UAE were mostly done by categorizing the customers based on religion; whether they are Muslims or non-Muslims. Sudin et al. (1994) found no significant difference in bank selection criteria between Muslim and Non-Muslims living in Malaysia. However, some researches sought completely a different mechanism for wider acceptability of the research. Erol and El-Bdour (1989) and Erol et al. (1990) compared the bank selection criteria between Islamic and Conventional Banks, which is not the focus of our study here.

Boyd et al. (1994) placed importance on the marital status, married or unmarried, of the customers found that customers are different in putting more emphasis on various bank selection factors such as reputation, cost-benefit, efficiency etc. However, their report revealed that customer those are 'single', have put less prominence on reputation rather the 'married' customers. Another demographic variable, size of the household in terms of number of family members as dependents, was tested and the study found that 'heavy' households emphasis on reputation, cost-benefit and efficiency, whereas the others put more importance on convenience and cost-benefit issues. Occupation of the respondents was another demographic segmentation take into account. The report disclosed that more white-collar households are emphasizing on reputation, modern facilities, and convenience. However, the counterparts, blue-color households, put greater emphasis on core banking (availability of basic services), cost-benefit issues. Lastly, Gender of the respondents revealed interesting results. Males are putting importance on faster service, convenience; however, female gave importance to longer-term aspects relating to organizing their finances and becoming more financially secure.

Kaynak et al. (1991) reported differences in bank selected criteria based on gender, age, education background of bank customer in Turkey. This study reported that male customer put more importance on reputation of the bank, business hours, parking facilities, availability of wide-range of services, and fast and efficient services than the female customers. The convenience (especially bank location) played important role for customer under age 40. According to educational segmentation, customers with more than primary education considered empathy, fast and efficient services, location of the banks more important than the uneducated group.

Market segmentation can lead to insights about the basic process of consumer behavior. Edris and Almahmeed (1997) extended the analysis on market segmentation in Islamic banking by analyzing the behavior of 500 business firms on their differences with bank selection criteria. They have further segmented the sample based on whether the companies are originally based in Kuwait or not.

Studies on satisfaction of the customers in financial service sectors have been well known among the academicians since the mid of 80s'. Parasuraman et al. (1988) opened a new window of research in service quality by establishing SERVQUAL model. Their model has been replicated in many countries with multi-dimensional sectors, and found close to a big success. Since, customer satisfaction has close relationship with customer retention especially in markets that are highly competitive and saturated like financial services (Lopez et al. 2007); it is necessary to continuously monitor changes in satisfaction among different segments of customers. In this regard, studies on customer segmentation and bank selection criteria along with customer satisfaction started warily came in the study done by Snow et al. (1996). This study concluded that there were clear differences in the service's expectations for retail banks in Canada among different ethnic groups. Research continues with Furrer et al. (2000), which reported relationship between segmented customers based on cultural background and their satisfaction. They also developed a Cultural Service Quality Index (CSQI) and established multicultural market segmentation.

Market segmentation and customer satisfaction have been largely affected by banks' massive involvement in technological banking activities (Keeton, 2001). DeYoung (1999) found that some consumers willing to pay high service charge since they are receiving e-banking services at the next foot step, however, some people still want to see banks are reducing fees/ charges where they believe in personalized attention instead of large technological investment, which may increase cost.

Globalization has raised the competition among Islamic banks worldwide and they must provide technological services along with compliance to Islamic Shariah law. Therefore, identification of niche is vital, which calls for clear

understating of the customer segments. At the next stage, banks would be able to make necessary adjustments to their policies according to the specific demand of the customer groups. Islamic banking is still in embryonic stage and customer management is largely absent with majority Islamic banks in Bangladesh. Since, competition is increasing, it became a more than necessity to analyze customer segments and make strategies according to demand of the customers.

### 2.3 Factors considered important by customers in non-Islamic Banks

Though it is not one of our objectives, for a better outlook, we can contrast the bank selection factors important to Islamic and non-Islamic customers. As proved by numerous theories, beside religion, there are non-religious factors such as cost-benefit trade off, convenience, empathy towards customers, and efficiency of the bankers etc, considered to be important to the customer before choosing an Islamic bank. In conventional banks, different types of customers put emphasis on different factors before choosing their banks. The following table shows the factors considered important by customers of non-Islamic customers:

**Place BOX 01 here.**

Though the name itself, Islamic Bank, is the differentiator; however there are vast similarities among customers regarding the factors considered important while choosing their bank either Islamic or non-Islamic. This statement may raise the question on the viability of testing bank selection criteria in Islamic banks. But it is very important testing the bank selection criteria in Islamic banks since the industry is becoming strongly dominant in global financial development. This study is especially important because here we investigate the importance of market demographics on the bank selection criteria applied by different customers. This would further help us to formulate new policies for better customer management in Islamic banks.

## 3. Purpose, Methodology, and Hypotheses

### 3.1 Conceptual framework

Bangladesh is a moderate Muslim country. Historically due to religious attitude, male used to perform financial activities including banking, shopping etc. Hence, dominance of female has been irregular. However, scenario has changed with the increase of educated class in the cities. Beauty of reality is majority of consumption decision is now demographic. As a result, banks, mostly providing similar services for demographically diverse customers, are highly complex challenges of living up to differing customer perceptions of service quality (Lopez, 2007). Since, service sector is especially individual; therefore, banks must identify its distinctive target. This is particularly a high priority for Islamic banks to identify the groupings based on demographic differences to provide priority services. We have not found any published research in Bangladesh on bank selection differentiator of Islamic banks' customers.

This research is an extension of our early research (Rashid and Hassan, 2008), which is still in working series format. The earlier research was on bank selection criteria applied by Islamic banks customers in Dhaka, the capital city of Bangladesh. Main objective of this research was to find out influential factors affecting bank selection among customers of different Islamic banks. According to Mean Ranking of the respective variables, **Confidence** ranked at the top (Mean 5.19, SD 1.15). Respondents ranked Compliance to Islamic rules, one of the highly expected and influential factors, at number three (Mean 4.825 and SD 1.22). Cronbach Alphas are shown for individual factors, while all these had Alpha more than 0.7 as suggested by Nunnally (1978). See Table [2] for descriptive statistics.

**Place Table 2 here**

Table [3] shows the regression results for six constructs. According to Standardized Coefficients Beta, Corporal Efficiency was the most important factor influencing the bank selection decision of the customers (Beta = 0.322). Beta shows the relative importance (weight) of any specific factor in explaining the dependent variable. Second important factor was Compliance to Islamic rules (Beta 0.196) and close to this was Core Banking (availability of basic banking services) with a Beta value of 0.186. R Square of the model was 0.442 with  $P < .01$ . As there was no other related research done in Bangladesh, we hope this R Square to be highly promising.

**Place Table 3 here**

Frankly speaking, higher value of R Square motivated us to extend the study to check the influence of demographics on these bank selection criteria. As the groups of customers are heterogeneous, the major objective of this study to determine whether these heterogeneous customers have differing perceptions towards bank selection criteria tested by Rashid and Hassan (2008).

### 3.2 Data and Sample

We have extended the study of Rashid and Hassan (2008), which has considered 371 respondents associated with 5 Islamic banks in Dhaka City. Dhaka as a capital city represents the whole country and most of the Islamic banks have only branches in different areas in Dhaka City. The customers were randomly selected based on a collected list of customers. The authors acknowledge the assistance of branch managers in this regard.

See Table [4] through [7] for the respondent's profile considered for this study. Under Gender category, Female is



30.46% of 371 respondents. Majority of the respondents (53.64%) have completed undergraduate degree(s), however, 37.73% were from postgraduate level and the rest 8.63% were from high school level. The sample considered in the analysis comprised of 50.40% from 21-30 Years age category, close to 22% were from both 31-40 Years and 40+ Years age category respectively, and only 4% was from below 21 Years age category. Out of 371 respondents, about 52% respondents were married.

### 3.3 Research Instruments

The earlier study (Rashid and Hassan, 2008) has used structured questionnaire based upon three types of questions (See Annexure at the end for the Questionnaire translated in English). First type of questions included some demographic variables such as gender, home district, educational level, age, occupation etc. Secondly, some general questions included questions on brand switching, knowledge on Islamic banking, method of banking (physical visit, internet etc.), most likely factors with Islamic banks, cost-benefit issues of Islamic banks compared to conventional banks etc. Some questions regarding perception of the respondents towards bank selection criteria and one question regarding Overall Satisfaction came at the end.

### Place Table 4 to 7 here

### 3.4 Selection of the Factors/ Constructs

The factors were constructed based on Factor Analysis (*which is available from authors upon request*). Variables under each factor (a total six factors were there) were tested with Cronbach Alpha for reliability. The six factors taken for analysis were as follows.

- 1) **Corporal Efficiency** (faster transaction and document processing, efficient managers, knowledge of customer's business etc.)
- 2) **Compliance** (Provision of interest free loans, run on Islamic law and principles, provision of profit-loss sharing principles etc.)
- 3) **Convenience** (strong global, and local network, sufficient transaction time, convenient branch location etc.)
- 4) **Core Banking** (basic services, marketing program on availability of services, competitiveness in product offerings, uniform services in all branches etc.)
- 5) **Confidence** (confidentiality of bank information, confidence in bank's management and bank size of capital and, asset etc.)
- 6) **Cost-Benefit** (lower service charge and average decent return).

### 3.5 Objective, Hypotheses and Analysis

The objective of this study is to determine whether customers categorized into different Gender, Education, Age and Marital Status categories are differing importance towards these above listed and tested six Bank Selection Factors. The only hypothesis in this regard is as follows:

***H<sub>1</sub>: Different demographic groups will report different level of importance towards six bank selection criteria applied to their Islamic Banks.***

*H<sub>1.1</sub>* Betas of Six Bank Selection Criteria for Male and Female are different.

*H<sub>1.2</sub>* Betas of Six Bank Selection Criteria for Married and Unmarried are different.

*H<sub>1.3</sub>* Betas of Six Bank Selection Criteria for Graduates and Postgraduates are different.

*H<sub>1.4</sub>* Betas of Six Bank Selection Criteria for Age Categories of 21-30 Years, 31-40 Years and 40+ Years are different.

We will run regression analysis for the six factors having control for Gender, Education, Age and Marital Status respectively. The results will be shown as follows:

- 1) Model Fit (with R Square for each category and factor),
- 2) Ranking based on Beta score for each category and factor for relative importance given to that factor. Standardized Beta presents the relative importance of any specific factor in decimal format for explaining the dependent variable. For example: a Beta of 0.400 may be represented as if this variable is putting 40% importance in explaining the dependent variable.
- 3) Significance level for each category and factor (with P value)

## 4. Findings

In this study for 371 complete questionnaires, SPSS was used to analyze the data. We have run multiple regression analysis having Overall Satisfaction as the dependent variable and Six Factors resulted from factor analysis as the independent variables. We have controlled the regression analysis for four demographic variables such as Gender, Education, Age and Marital Status to prove the significance of demographic differences in Bank Selection Criteria for

Islamic banks' customers in Bangladesh. In general, Multi-co linearity was under control, however slightly out of the line for few cases, where the sample size is lower than other individual demographic dimension.

### Results

#### (1) Gender

$H_{1,1}$  Betas of Six Bank Selection Criteria for Male and Female are different.

#### Place Table 8 here

Supporting for this hypothesis is given in Table [8]. Female respondents showing highest importance to Core-Banking, (Beta 0.504), (availability of basic banking facilities along with marketing programs and uniformity of services, etc), whereas male put the highest importance on Corporal Efficiency, (Beta 0.374), (faster transaction and document processing, efficient managers, knowledge of customer's business, etc). Both of these are statistically significant at  $P < 0.001$ . The model for Female has an R Square of 0.557 and R Square for Male is 0.447. Moreover, female ranked Corporal Efficiency (Beta .494) as the second important factor where as Male ranked Compliance (to Islamic rules) as the second important factor (Beta 0.315) for choosing Islamic banks.

#### (2) Marital Status

$H_{1,2}$  Betas of Six Bank Selection Criteria for Married and Unmarried are different.

#### Place Table 9 here

Table [9] provides the details of this hypothesis. The R Square for Model of Married respondents is 0.451 (Significant at  $P < 0.001$ ) and same for Unmarried respondents is 0.477 (Significant at  $P < 0.001$ ). Married customers put close importance to Core Banking (Beta 0.341), Corporal Efficiency (Beta 0.338) and Compliance (0.332) respectively. All of these are statistically significant at  $P < 0.001$ . Unmarried respondents are emphasizing mostly on Corporal Efficiency (Beta 0.459,  $P < 0.001$ ) and secondly on Core Banking (Beta 0.325,  $P < 0.001$ ). Unmarried respondents are putting significance to Compliance, which is at number three (Beta 0.226,  $P < 0.001$ ).

#### (3) Education Level

$H_{1,3}$  Betas of Six Bank Selection Criteria for High School, Graduates and Postgraduates are different.

#### Place Table 10 here

In Table 10, it shows R Square of Model for High School is 0.281, which is pretty low may be because of fewer sample size, R Square for Undergraduate model is 0.450 and same for Postgraduate is 0.488. We are discarding the High School model since the model is not significant ( $P = 0.399$ , which is more than an acceptable level i.e. 0.05). Among the respondents from undergraduate level, Corporal Efficiency was the most influential factor (Beta 0.418). Core Banking (Beta 0.353) and Compliance (Beta 0.333) were at the second stage of preference. However, respondents those have completed postgraduate, put close importance to Corporal efficiency (Beta 0.323) and Confidence (0.321). They have also chosen Core Banking services (0.301) at the second stage important factor.

#### (1) Age Category

$H_{1,4}$  Betas of Six Bank Selection Criteria for Age Categories of 21-30 Years, 31-40 Years and 40+ Years are different.

#### Place Table 11 here

Table 2 shows the regression results for different age category. We have discarded 17-21 Years age category because of lower sample size and confidence interval (Sig. 0.070) of the model in this category. Most vibrant investors are from 21-30 years of age category and they have put highest importance, primarily, to Corporal (Beta 0.453) efficiency and secondly, to Core Banking (Beta 0.355) services. This model has an R Square of 0.482 (Sig. 0.000). In next age category, 31-40 Years, with an R Square of 0.483 (Sig. 0.000), the respondents supported the greater Compliance to Islam (Beta 0.420) and at the second stage, they have put emphasis on Cost-Benefit (Beta 0.277), Core Banking (0.276) and Corporal Issues (Beta 0.264). However, the most experience group, age category of 40+ Years (R Square 0.460, Sig. 0.000), put highest importance to level of Confidence (Beta 0.433) and they kept Core Banking (Beta 0.382), Corporal (Beta 0.337) and Compliance (Beta 0.333) in their second level choices while selecting an Islamic Bank.

## 5. Conclusion

### 5.1 Summary

Primary objective of this research was to determine the bank selection factors that are given higher priorities by groups of customers while selecting any Islamic banks in Bangladesh. The patterns discerned from the study are not only different from earlier researches but also provide the leader with importance clues to effective strategy buildup.

#### Place Table 12 here

Let us start with the odd one. Convenience was one of the factors, which was not selected as an important factor by any of the groups as first and second important factor while selecting Islamic banks. As we have seen from Table [12], Corporal efficiency is the number one factor, which was selected by almost every group either as the first important

factor (5 out of 9 groups) or as second important factor (another 2 out of the rest 4 groups). Availability of Core Banking services was selected by two groups (Female and Married) as the first important factor, while another five out of rest 7 groups have selected it in the second category. Compliance (with Islam) is the first priority for the age group of 31-40 years and Confidence level of the customer with Islamic banks was the most important factor for respondents from 40+ age category. If we see explicitly, almost every group has logic behind choosing different factors as the first or second important factor. However, it is clear that leaders running Islamic banks in Bangladesh must put higher importance to Non-Islamic issues such as Corporal Efficiency and Core-Banking Services rather than only religion as their backdrop banner.

### 5.2 Area of Importance

The variables under Corporal efficiency and Core-Banking would give us more clear focus for our customer positioning. Corporal efficiency includes variables like (1) fast and efficiency counter services, (2) speed and efficiency of transaction processing, (3) interior setup of the branch for better banking (4) experienced management team, (5) management capable of giving financial advice, (6) faster document processing, (7) management's knowledge on customer's business. Respondents/ Customers put more importance to these variables more than any other variables. Its means like conventional banks, Islamic bankers must also have to offer faster, experienced and helpful services to the customers. This also concludes that most of these customers either have switched from conventional banks to Islamic banks or banking system in Bangladesh offers substantial competitiveness that motivates the customers for better services against their valuable money. So, the first priority of the Islamic banks in Bangladesh would be to design corporal issues according to the market demand.

The variables under Core-Banking services include (1) uniformity of services in all the branches, (2) awareness programs of services availability, (3) competitiveness in basic product offerings. The first variable can be ensured by proper use of E-Banking facilities to ensure that all services are available in all branches. The second point is very much lacking with all Islamic Banks and we suggest the central authority and the Universities to offer courses of Islamic Banks. Except few Public University, no other institutes have course offered on Islamic banking. Therefore, even if the industry is growing, the growth will stuck after a certain period, or the growth will not be of expected quality. The condition of the third point is even shoddier. Most of the Islamic banks, except Islami Bank Bangladesh Limited – the first Islamic bank of the country, and few multi-national conventional banking offering Islamic banking window services, offer very basic services those are common to all the Islamic banks. This point makes the investors confused. Moreover, lack of advertisements, lack of community development programs; hinder the development of the majority domestic Islamic banks in Bangladesh. We firmly urge all the Islamic banks to introduce modern services based on E-Banking facilities to keep pace with new generation of banking.

### 5.3 Limitations

1) Same analysis can be done by taking clustered sampling from different regions in Bangladesh. However, the sample would be very less in number for most of the regions. Most of the Islamic Banks in Bangladesh do not have branches throughout the country.

2) Mean differences can also be run to check the validity of the results.

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Table 1. Islamic Bank Statistics in Bangladesh

<b>Description</b>	<b>June 2006</b>	<b>June 2007</b>
No of Banks	6	6
Conventional Banks providing Islamic Banking	10	10
No of Branches with Islamic Banks	308	330
Islamic Branches with Conventional Banks	20	21
% of Employees in Islamic Banking with Private Commercial Banks	27.73	27.73
% of Employees in Islamic Banking in Banking Industry	10.73	10.73
% of Islamic Deposit in Industry Deposits	9.67	14.3
% of Islamic Deposits in Private Banks' Deposit	28.46	23.6
% of Islamic Credit in Industry Credits	14.88	17.2
% of Islamic Credits in Private Banks' Credit	29.35	26.9
Investment-Deposit Ratio	0.92[0.59]	0.95[0.77]
<i>Islamic Banks of all Banks in the Industry (inside bracket)</i>		
Liquidity: Excess (+), Shortfall (-) % of the Private Banks	19.08[8.19]	20.8[13.5]
<i>Islamic Banks of all Banks in the Industry (inside bracket)</i>		

Source: Annual Report, Bangladesh Bank, Various Editions

**BOX 01: Bank selection criteria applied by non-Islamic customers**

**Factors**

**Explained by**

Cost benefit trade off

Gerrard and Cunningham (1997), Boyd et al (1994)

Convenience

Gerrard and Cunningham (1997), Boyd et al (1994), Keeton (2001), DeYoung (1999)

Faster transaction

Gerrard and Cunningham (1997), Boyd et al (1994)

Reputation

Boyd et al (1994), Kaynak et al. (1991)

Physical facilities

Kaynak et al. (1991)

Wide range of services

Kaynak et al. (1991), Rashid and Hassan (2008)

Trust and Commitments

Zeithaml and Bitner (1996), Lovelock (1996), Legg and Baker (1996)

Table 2. Descriptive Statistics

Mean Rank	Constructs	Mean	Std. Deviation	N	Cronbach Alpha
	Overall Satisfaction	4.78	1.154	371	
5	Corporal Efficiency	4.6692	1.08553	371	0.876
3	Compliance	4.8253	1.22050	371	0.864
4	Convenience	4.7001	1.19212	371	0.807
6	Core Banking	4.5517	1.08210	371	0.776
1	Confidence	5.1923	1.15607	371	0.810
2	Cost Benefit	4.8504	1.20129	371	0.730

Source: Rashid and Hassan (2008)

Table 3. Regression Results

	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	.685	.252		2.713	.007		
Corporal Efficiency	.343	.061	.322	5.577	.000	.459	2.178
Compliance	.185	.048	.196	3.880	.000	.602	1.660
Convenience	-.038	.054	-.039	-.696	.487	.490	2.042
Core Banking	.198	.056	.186	3.564	.000	.565	1.769
Confidence	.093	.056	.093	1.650	.100	.486	2.060
Cost Benefit	.083	.046	.086	1.802	.072	.667	1.500

$R^2 = 0.442$ ;  $F_{6, 364} = 48.053$ ;  $p < .01$

Dependent Variable: Overall Satisfaction

Source: Rashid and Hassan (2008)

Table 4-7. Respondents' Profile Source: Rashid and Hassan (2008)

Respondent's Gender			
	Frequency	Percent	Cumulative Percent
Female	113	30.46	30.46
Male	258	69.54	100.00
Total	371	100.00	

Respondent's Education Level			
	Frequency	Percent	Cumulative Percent
High school	32	8.63	8.63
Undergraduate	199	53.64	62.27
Postgraduate	140	37.73	100.00
Total	371	100.00	

Respondent's Age			
	Frequency	Percent	Cumulative Percent
17-21	15	4.04	4.04
21-30	187	50.40	54.45
31-40	85	22.91	77.36
40+	84	22.64	100.00
Total	371	100.00	

Respondent's Marital Status			
	Frequency	Percent	Cumulative Percent
Married	194	52.29	52.29
Unmarried	177	47.71	100.00
Total	371	100.00	

Table 8. Regression Results – Gender

Respondent Gender		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
<b>Female</b> N = 113 $R^2 = .557$ $F = 22.038$ $Sig = .000$	(Constant)	5.005	.077		65.094	.000		
	Corporal	.604	.083	<b>.494</b>	7.247	<b>.000</b>	.905	1.104
	Compliance	.326	.078	.278	4.165	.000	.946	1.057
	Convenience	.228	.088	.174	2.604	.011	.939	1.065
	Core Banking	.600	.082	<b>.504</b>	7.337	<b>.000</b>	.894	1.119
	Confidence	.303	.075	.275	4.065	.000	.922	1.085
	Cost Benefit	.035	.081	.029	.436	.664	.962	1.040
<b>Male</b> N = 258 $R^2 = .447$ $F = 33.763$ $Sig = .000$	(Constant)	4.690	.054		86.216	.000		
	Corporal	.419	.053	<b>.374</b>	7.909	<b>.000</b>	.988	1.012
	Compliance	.360	.054	<b>.315</b>	6.678	<b>.000</b>	.993	1.007
	Convenience	.164	.052	.147	3.126	.002	.991	1.009
	Core Banking	.330	.054	.291	6.138	.000	.984	1.017
	Confidence	.215	.055	.184	3.885	.000	.986	1.014
	Cost Benefit	.233	.053	.206	4.380	.000	.992	1.008

a. Dependent Variable: Overall Satisfaction

Source: Created from SPSS Output

Table 9. Regression Results – Respondents' Marital Status: Married, Unmarried and Others

Respondents' marital status		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
<b>Married</b> N = 194 $R^2 = .451$ $F = 22.082$ $Sig = .000$	(Constant)	4.878	.065		75.502	.000		
	Corporal	.367	.061	<b>.338</b>	5.996	<b>.000</b>	.982	1.018
	Compliance	.376	.064	<b>.332</b>	5.847	<b>.000</b>	.974	1.027
	Convenience	.184	.062	.166	2.956	.004	.992	1.008
	Core Banking	.393	.065	<b>.341</b>	6.055	<b>.000</b>	.985	1.015
	Confidence	.302	.061	.277	4.933	.000	.990	1.011
	Cost Benefit	.180	.067	.151	2.686	.008	.984	1.017
<b>Unmarried</b> N = 177 $R^2 = .477$ $F = 25.423$ $Sig = .000$	(Constant)	4.667	.064		73.043	.000		
	Corporal	.551	.068	<b>.459</b>	8.055	<b>.000</b>	.962	1.040
	Compliance	.259	.066	.226	3.950	.000	.957	1.045
	Convenience	.160	.066	.137	2.419	.017	.976	1.025
	Core Banking	.369	.064	<b>.325</b>	5.761	<b>.000</b>	.982	1.019
	Confidence	.171	.069	.141	2.469	.015	.959	1.043
	Cost Benefit	.202	.064	.183	3.176	.002	.946	1.057

**Marital status “others” were found “0”.**

a. Dependent Variable: Overall Satisfaction

Source: Created from SPSS Output

Table 10. Regression Results – Education level of the respondents

Education level		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
<b>High school</b> N = 32 R <sup>2</sup> = .281 F = 1.107 Sig = .399	(Constant)	4.991	.238		20.973	.000		
	Corporal	.358	.201	.487	1.782	.093	.567	1.765
	Compliance	.334	.259	.338	1.287	.215	.614	1.629
	Core Banking	.297	.211	.325	1.407	.177	.791	1.265
	Confidence	.172	.161	.237	1.069	.300	.860	1.163
	Cost Benefit	-.229	.196	-.252	-1.169	.259	.912	1.097
	Convenience	-.007	.189	-.009	-.039	.969	.869	1.151
<b>Undergraduate</b> N = 198 R <sup>2</sup> = .450 F = 26.055 Sig = .000	(Constant)	4.694	.063		73.936	.000		
	Corporal	.491	.064	<b>.418</b>	7.684	<b>.000</b>	.975	1.026
	Compliance	.399	.065	<b>.333</b>	6.140	<b>.000</b>	.981	1.019
	Core Banking	.401	.062	<b>.353</b>	6.525	<b>.000</b>	.986	1.015
	Confidence	.191	.069	.150	2.785	.006	.991	1.009
	Cost Benefit	.187	.067	.151	2.779	.006	.973	1.028
	Convenience	.157	.066	.129	2.380	.018	.985	1.015
<b>Postgraduate</b> N = 140 R <sup>2</sup> = .488 F = 21.159 Sig = .000	(Constant)	4.871	.070		69.874	.000		
	Corporal	.395	.079	<b>.323</b>	4.982	<b>.000</b>	.914	1.094
	Compliance	.248	.068	.230	3.622	.000	.954	1.048
	Core Banking	.363	.077	<b>.301</b>	4.722	<b>.000</b>	.948	1.055
	Confidence	.350	.068	<b>.321</b>	5.116	<b>.000</b>	.978	1.022
	Cost Benefit	.224	.068	.207	3.288	.001	.968	1.033
	Convenience	.188	.067	.174	2.799	.006	.991	1.009

a. Dependent Variable: Overall Satisfaction

Source: Created from SPSS Output



Table 11. Regression Results – Age (in Years)

Respondent age		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
<b>17-21 Years</b> N = 15 R <sup>2</sup> = .700 F = 3.114 Sig = .070	(Constant)	5.136	.258		19.923	.000		
	Corporal	.970	.407	.657	2.387	.044	.495	2.020
	Compliance	.331	.432	.214	.765	.466	.480	2.085
	Convenience	.156	.235	.161	.663	.526	.634	1.576
	Core Banking	.144	.279	.117	.514	.621	.722	1.385
	Confidence	.348	.220	.350	1.581	.153	.766	1.306
	Cost Benefit	-.376	.210	-.392	-1.791	.111	.781	1.281
<b>21-30 Years</b> N = 187 R <sup>2</sup> = .482 F = 27.736 Sig = .000	(Constant)	4.717	.064		74.261	.000		
	Corporal	.527	.064	.453	8.268	.000	.966	1.035
	Compliance	.254	.068	.208	3.756	.000	.945	1.058
	Convenience	.168	.068	.134	2.448	.015	.964	1.038
	Core Banking	.428	.066	.355	6.521	.000	.979	1.021
	Confidence	.162	.070	.127	2.301	.023	.946	1.057
	Cost Benefit	.178	.067	.148	2.664	.008	.937	1.067
<b>31-40 Years</b> N = 85 R <sup>2</sup> = .483 F = 12.137 Sig = .000	(Constant)	4.856	.093		52.067	.000		
	Corporal	.278	.088	.264	3.155	.002	.948	1.055
	Compliance	.516	.103	.420	4.985	.000	.936	1.068
	Convenience	.227	.091	.208	2.489	.015	.953	1.049
	Core Banking	.275	.085	.276	3.230	.002	.911	1.098
	Confidence	.238	.096	.224	2.493	.015	.819	1.221
	Cost Benefit	.288	.089	.277	3.239	.002	.904	1.106
<b>40+ Years</b> N = 84 R <sup>2</sup> = .460 F = 10.935 Sig = .000	(Constant)	4.750	.107		44.570	.000		
	Corporal	.401	.102	.337	3.950	.000	.961	1.040
	Compliance	.324	.086	.333	3.744	.000	.884	1.131
	Convenience	.152	.093	.137	1.627	.108	.984	1.016
	Core Banking	.449	.101	.382	4.439	.000	.947	1.056
	Confidence	.462	.091	.433	5.089	.000	.969	1.032
	Cost Benefit	.180	.104	.153	1.727	.088	.893	1.120

a. Dependent Variable: Overall Satisfaction

Source: Created from SPSS Output

Table 12. Summary of the Factors

<i>Category</i>	<i>First Important Factor</i>	<i>Second Important Factor</i>
Female	Core-Banking	Corporal
Male	Corporal	Compliance
Married	Core-Banking	Corporal
Unmarried	Corporal	Core-Banking
Undergraduate	Corporal	Core-Banking
Postgraduate	Corporal	Confidence
21-30 Years	Corporal	Core-Banking
31-40 Years	Compliance	Core-Banking
40+ Years	Confidence	Core-Banking

Source: Extracted from the above Regression Results

### Questionnaire

#### Quality Perception of the Customers towards Services of Domestic Islamic Banks in Bangladesh

By: Rashid and Hassan (2008) – Working Paper

Part One: Demographic Information (Please √)

Your gender:

- ☐ Male  
☐ Female

Your Home Division:

- ☐ Dhaka  
☐ Chittagong  
☐ Rajshahi  
☐ Barishal  
☐ Sylhet  
☐ Khulna

Your education level:

- ☐ Below high school  
☐ High school  
☐ Undergraduate  
☐ Post graduate

Your age:

- ☐ 17-21  
☐ 21-30  
☐ 31-40  
☐ 40+

Your occupation:

- ☐ Public sector  
☐ Private sector  
☐ Self employed  
☐ Semi-government agency  
☐ Wage earners  
☐ Student  
☐ Others; Please specify .....

Your Monthly Income:

- ☐ Less than 10000 TK  
☐ TK 10000 to TK 40000  
☐ TK 41000 to TK 100000  
☐ More than TK 100000

Your Monthly Savings:

- ☐ Less than 5000 TK  
☐ TK 5000 to TK 20000  
☐ TK 21000 to TK 50000  
☐ More than TK 50000

Your Marital Status:

- ☐ Married  
☐ Unmarried  
☐ Others

#### Part Two: Service, Communication and others (Please √)

Do you have any existing relationship with Islamic Banking Institutions in Bangladesh?

- ☐ Yes ☐ No

Do you know that it is HARAM (not permissible) to receive and charge interest in Islam?

- ☐ Yes ☐ No ☐ Not sure

How much do you know about Islamic banking and finance?

- ☐ Never thought about it.  
☐ Not much  
☐ Sufficient knowledge ☐ Very well

Do you know that banks in Bangladesh provide interest-free services?

- ☐ Never thought about it.
- ☐ Not much
- ☐ Sufficient knowledge
- ☐ Very well

How [do]you come to know that bank offers interest-free banking in Bangladesh?

- ☐ Bank employee
- ☐ Media (Newspaper, TV)
- ☐ Internet
- ☐ Friends/ Family

Do you feel, Islamic or interest free services are costlier than non-Islamic services?

- ☐ No ☐ Not sure

Do you know how your deposits and savings are invested by the banks? i.e. Ethical investment or war, arms, trade, gambling, alcohol, tobacco etc.

- ☐ Ye ☐ No ☐ Not sure

How do you differentiate banking services?

- ☐ Interest rate/ profit
- ☐ Convenience
- ☐ Cost of banking
- ☐ Other; please specify: .....

Why have you chosen Islamic Banking?

- ☐ Religion
- ☐ Cheap products
- ☐ Convenient bank location
- ☐ Friends
- ☐ Ethical
- ☐ Other than above, please specify: .....

For how long are you dealing with or have you become a consumer of Islamic Banking?

- ☐ Less than 1 year
- ☐ 1-5 Years
- ☐ 6-10 Years
- ☐ More than 10 Years

Did you switch from one Islamic Banks to Another?

- ☐ Yes ☐ No

If Islamic product becomes costly, would you still consider them?

- ☐ Yes ☐ No

While dealing in Islamic Financial products, you feel more satisfied at:

- ☐ Internet Banking
- ☐ Telephone Banking
- ☐ Personal Visit

## Part Three: Bank Selection Criteria (Please √)

Please rank the bank facilities for following items. Rank them from 1 to 7. '1' represents strongly disagree and '7' represents for strongly agree.

<i>Please Tick</i>	1	2	3	4	5	6	7
Fast and efficient counter services							
Speed and efficiency of transactions							
Interior comfort of Branches							
Experienced management team							
Availability of financial advice							
Faster document processing							
Knowledge on customer's business							
Provision of free interest loans							
Provision of Islamic products and services							
Run on Islamic law and principles							
Provision of profit-sharing investment products							
No interest paid nor taken on savings and loans							
Wide Electronic Communication System							
Strong global network							
Sufficient time for transaction							
Convenient branch location							
Awareness program on services							
Competitive Product Offerings							
Uniform services in all branches							
Overdraft privileges on current account							
Confidentiality of Bank							
Confidence in Bank's management							
Bank size in assets and capital							
Lower service charge							
Average decent return							

## What is your level of Overall Satisfaction?

Highly Dissatisfied						Highly Satisfied
1	2	3	4	5	6	7



## Study on the Innovational Function of the Management

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### Abstract

Traditional management process summarization should be improved in adapting and instructing the diversified management for modern enterprises, and Chinese enterprises at the present stage also urgently need the new understanding for the management function. Starting from the cognition and practice of the management, the innovation should be the core function of the management, and it should be embodied in the function of the management.

**Keywords:** Innovation, Function, Management, Process

Four functions such as planning, organizing, leading and controlling in the management are the mainline in the management theory all along. Traditional management scholars thought that all managers in all departments and all classes in the enterprise would carry out these functions, and effective management meant to complete these functions successfully. Robbins thought that “the actual management is not so simple like described management function, and there are not simple, limit-clear and pure starts and terminals of planning, organizing, leading and controlling in the real world”. We think the innovation runs through the process of the management, and it should be the core function of the management.

### 1. Understanding the innovational function of the management

The innovational function of the management can be understood as that the change of exterior environment threatens the survival and running of the system to certain extent, and to avoid the system loss induced by the threat or its extension, the system develops the local or whole adjustment in the interior, or predict the opportunity which is helpful for the system development in the environment when the system observes or experiences the changes in the exterior world, and actively adjust the strategy and technology of the system to actively develop and utilize the opportunity to seek the development of the system. Because of the multiplicity and levity of the threat and opportunity, the innovation should not be institutionalized, and the system has not copy gifted entrepreneurs all along, but the innovational entrepreneur emerges continually. With the development of productivity and the advancement of the technology, the innovational function of the management gradually possesses the natures of recognition and practice.

#### 1.1 *The recognition of the innovational function*

In the management function system, some scholars put forward the hierarchy function structure, and the macro function includes planning, decision-making, evaluating, predicting and other defensive functions, and the basic function includes planning, organizing, controlling, leading, commanding, harmonizing and encouraging for general management problems, and the micro function includes many sub-functions such as investigating, researching, analyzing, processing, preparing, propagandizing, training, ordering, appointing and removing, inducting, consulting, deploying, implementing, censoring, checking, summarizing and rewarding and publishing, which is used to prefect and supply the basic function and the macro function. In above three layers including 28 functions, the innovation is not listed. We think that the innovation exists in every function, and especially for the macro function and the basic function, the innovation will decide the result and efficiency of the management to the largest extent.

#### 1.2 *The practice of the innovational function*

Many successful enterprises generally adopt the mode of encouragement management, and form the innovation culture of the enterprise. Toyota Motor Corp alleged that their employees would propose 200 million new ideas every year, and each employee would put forward 35 advices averagely, and 85% of these advices would be adopted by the company. In the daily management of Microsoft Corporation, the work time could be changed flexibly. Program design is a sort of research work with innovations and highly centralized energies, so the researchers and designers need comfortable feelings to complete their works consciously. Someone may select working in the night, and be on duty at 22 o'clock and off duty at 6 o'clock in the next day. To keep intensive and comfortable work atmosphere, the company divides employees into many group with 5~15 persons to engage in the research and development of the project. Designers all

work for a long time, and they input program to the computer ceaselessly all day and print paper pile, and the work rhythm is so quick to make people crazy. Employees consciously delay the work time, and no one wants to be the person who first leaves the office. The work atmosphere forms loose and devoted work principles, and makes the work efficiency of Microsoft Corporation extraordinarily high. The innovational representation of the successful enterprise is the exertion and embodiment of the innovation of the whole enterprise, and the support and perfection of the innovational function is the activator to enhance the competitive force and efficiency of the enterprise.

## **2. The innovational function is the core function of the management**

### *2.1 Necessary innovational function*

In the management process, only to maintain the order is not enough, and once the management system is closed, the system can but spontaneously go to disorder. As viewed from the entropy theory and the dissipative structure theory, the negative and isolated maintenance is entropy production, and the essential of innovation and reform is negative entropy which is the necessary condition for the system evolvement. Without the innovation but the maintenance, the entropy production in the system can not maintain the order state, and without the maintenance but the innovation, the system will be in the non-balanced state for ever. Only the management with the optimized combination of maintenance and innovation is the excellent management. Peter Drucker thought that “the deficiency of innovation is the biggest single reason for the ruin of existing organization”. In the future, the innovation of the organization and society is same important with the innovation of the technology. Only if the maintenance matches with the innovation and the speed and quality of the innovation is good enough, the enterprise or any human system in the competition could survive and develop healthily.

### *2.2 Innovational function represents its values in other functional activities*

Various management functions have their own special representation form. The function of planning is embodied by confirming objective, establishing strategy and developing the layout, project or plan of the sub-plans. The function of organizing is embodied by the organization structure design and personnel distribution. The function of leading is embodied by the leaders' instructing and encouragement, and solving conflicts. The function of controlling is embodied by monitoring the activity process to ensure the information feedback and measure correction completed by the plan. If the environment doesn't change and renovate, the plan will be invariable, and all organizations will sustain good structure design, and the decision-making project will be confirmed because of the exact prediction of the result. However, the environment always changes, managers should deal with challenges at any moment, and in each stage and every function of the management activity, they should innovate everywhere at every turn and at any time. The innovational function happens not only in the term of strategic layout decision-making, but in the daily management, so it has not special representation form, and it represents its survival and values in all activities of other management functions. In the continually changing environment, the objective, content, form and activity factors of the system activity must continually change and adjust it, or else, the interior factors of the management system will be impacted even eliminated. Therefore, the innovation will be picked out from four functions of the management, and be the core function of the management.

## **3. Innovational contents in the management process**

### *3.1 The Innovation in the planning function*

Some most important strategies in the organization always occur when you least expect them to, which can not be knew by the senior managers before. To fully utilize these strategies, we usually need to identify them and expand their influences. For example, some new purposes found by some salesman occasionally could be turned into the new major operation of the corporation. Planners always look for modes in the failed experiment, seemly random activity or disorder learning, and they usually could find the new methods to solve the problem or consider the problem, for example, finding the new market which doesn't get in, or understanding the characteristics of the corresponding new product, and so on.

### *3.2 The innovation in the organizational function*

Because increasing competition, the requirement of the enterprise to the innovation is higher and higher, and many enterprises are implementing reforming actively and flow construction, and trying to be learning-type organizations. Modern management theories thought that the organization innovation was the composing of the “technical” advancement and the investment of the management system and structure in the production, distribution and sale was the composing of the total capitals.

### *3.3 The innovation in the leading function*

The result of leading is to induce the reform, usually the drastic reform, and form very active reforming potential, which requires that leaders must accept continual challenges and innovations, and make the enterprise be in the advantaged competitive status through actively reform.

### 3.4 The innovation in the control function

Joseph Alois Schumpeter emphasized that “the innovation of the enterprise is the drive of the economic development”. The intention of the management control is to test whether the system is running normally and developing according to the strategic objective. The innovation in the management control function is also embodied in the project manage of the total lifecycle and total system, and in the total system and total process quality management and control.

The innovation is not listed as a sort of management function, and it is related to the industrial development level in the initial development stage of the management theory. With the quick development, levity and uncertain of the scientific technology, every manager will encounter new situation and new problems every day. The conformism can not deal with new challenges, and without the innovation, the enterprise can not sustain the operation and acquire ideal management performance. The drastic competition and challenges of the globalization compel managers to make the innovation in the management process as a sort of core function. In Gottlieb Guntern’s book, he pointed out that “the proper combination of sufficient innovation speed and quality is the first key factor to acquire the success”. In the further research, we should mainly emphasize the content embodiment of the innovational function and how to embody these contents.

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## The Developments and Future Prospects of Insurance Industry in China

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### Abstract

During the past three decades, the insurance industry has developed from a virtually nonexistent industry to a large, open industry. This fast growing economy coupled with the largest population in the world, rising personal income, and economic system reform could not only explain the rapid growth of China's insurance industry, but also foretell the increasing importance of China's insurance market in the future. This paper provides an analysis of the generic development of China's insurance industry from 1980 under the context of China's economic reform and opening up and its future prospects. First we simply cover the development of insurance industry in China during the period of 1980-2003 and we divide it into three stages: (1) resumption and restoration, (2) market-oriented reform, and (3) opening up and rapid growth. Then we forecast its future trends. Finally, presents the conclusion.

**Keywords:** Insurance industry, Developments and prospects, China

### 1. Introduction

As a country with a history of more than five thousand years, ancient people of China developed various measures with similar conditions could share risks and help each other. These measures can be considered the most primitive forms of insurance. But the real modern insurance was introduced to China by the West during the final of Qing Dynasty, which controlled China's insurance market profitably for a long period of time. And this may have contributed to the concern that China's insurance industry might again be controlled by foreign capital and the prudence in granting foreign insurers licenses to operate in China.

Since the Founding of New China, the insurance industry was revived from 1980 when economic system reform and opening up began. During the past three decades, the insurance industry has developed from a virtually nonexistent, minimal, and closed industry to a large, open industry with potential promise. The volume of insurance premiums grew rapidly from RMB 0.46 billion in 1980 to RMB 388 billion in 2003, 230 ranking China eleventh in the world with 1.6 percent of the global market share (China Insurance Regulatory Commission (CIRC); Swiss Re 2004, p.35). This fast growing economy coupled with the largest population in the world, rising personal income, and economic system reform could not only explain the rapid growth of China's insurance industry, but also foretell the increasing importance of China's insurance market in the future.

China's insurance industry was deeply affected by the reform and opening up of China. On one hand, the economic system reforms recreated China's insurance market and thus determined the direction of the industry. China's market-oriented economic system reform was a gradual process of institutional change dominated by the government. As a result, only state capital could be found in China's insurance industry and the market was exceedingly concentrated at the beginning of the industry's restoration. On the other hand, opening up to the outside exposed the infant industry to fierce international competition, bringing great opportunities along with grave challenges to domestic insurers.

### 2. The development of insurance industry in China since 1980

From the 3rd Plenary Session of the 11th Chinese Communist Party (CPC) Central Committee led by Deng Xiaoping at the end of 1978, the economic system reform and economic construction became the main theme of China's development. Then, nation's financial system, governed by the People's Bank of China (PBOC), came into being. Concurrently, the insurance industry was restored and developed rapidly in the ensuing years. To explore the development of the insurance industry in China, we divided into three stages consistent with the gradual development of China's economic system reform: (1) resumption and restoration, (2) market-oriented reform, and (3) opening up and rapid growth.



### *2.1 the Resumption and Restoration period (1980-1985)*

At the initial stage of economic system reform, the government aimed at developing the commercial insurance system and encouraging the domestic insurance business. These reforms came twenty-one years after the closure of the insurance industry. At this stage, all insurance business was monopolized by PICC, which was directly controlled by the central government. Insurance regulation was carried out by the PBOC, People's Bank of China. The terms and rates of policies were set and/or approved by the "regulator." As a result, the insurance product portfolio lacked variety, there was narrow use of complex actuarial science in pricing, and the price structure was simplistic. Additionally, the distribution channels were limited. Also, insurance assets were simply deposited in banks without consideration to an investment policy of diversification between bonds, equities, or real estate.

In 1982, the total gross life insurance premiums totaled only RMB 1.6 million (CIRC). From this very small base, both the non-life and life insurance businesses grew significantly with annual growth rates exceeding GDP growth rates. As Table 2.1 indicates, during this period, the life insurance business was insignificant relative to non-life insurance market. At this stage, enterprise property insurance and transportation equipment insurance (insurance coverage on motor vehicles, keel boats, and fishing boats) dominated the market.

**Insert Table 2.1 here**

### *2.2 the Beginning of Market-Oriented Reform period (1986-1991)*

In March 1985, the State Council of China enacted Interim Regulations on the Administration of Insurance Enterprises, setting out the requirements for the establishment of insurance companies. At this stage, The PBOC's direct administration of the insurance industry began to give way to supervision as the market-oriented reforms progressed. In 1995, PBOC established the Division of Insurance Supervision under its Department of Non-Banking Financial Institutions Supervision, which took over the responsibility of insurance supervision.

During this period, the limit on insurance investment channels and risk control mechanisms were relaxed. This resulted in extensive investment in real estate, securities, and trusts, which led to substantial investment in non-performing assets. However, there were no visible changes in the distribution system and insurance product portfolio. As Table 2.2 shows, while the volume of life insurance premiums was lower than that of non-life insurance, the fast growth of insurance premiums remained higher than GDP growth

**Insert Table 2.2 here**

### *2.3 the Opening Up and Rapid Growth period (1992-2003)*

The 14th National Congress of CPC in 1992 and the 3rd Plenary Session of the 14th CPC Central Committee in 1993 confirmed China's irreversible commitment to market-oriented reforms. Individuals and enterprises lost their traditional economic safeguard and were responsible for assuming financial risks. As a result, many factors contributed to the rapid growth of the insurance industry, including the fast growing economy, rising personal income, accelerating industrialization and urbanization, and social security system reform. In the remainder of this section, the current state of various aspects of China's insurance market is examined. From 1992 to 2003, the average annual growth rate of gross premiums remained at over 30 percent. Table 2.3 shows the volume of insurance, both life and non-life and GDP. It can be seen that the volume of life insurance premiums surpassed that of non-life insurance for the first time in 1997 and remained higher in the subsequent years. The rapid growth of premium income and an expanded capital base explain the substantive increase in the total assets of the industry.

Generally speaking, the competitiveness of the market has been on the rise as the number of insurers has increased over time, but China's insurance market is still characterized as a typical oligopoly market. The government remains heavily involved in the industry, though not as much as before.

**Insert Table 2.3 here**

## **3. The future Trends in China's Insurance Industry**

We forecast that China's insurance industry will maintain a two-digit growth rate in the coming eight to ten years and the growth rate will be descending over time. As to the development of the industry itself, the market system will keep up with international standards gradually and the following trends will be the most prominent features in an environment characterized by globalization, financial integration, aging population, and dynamic information technologies.

### *3.1 Growing Competition in the Insurance Market*

China's insurance market will be more competitive as more foreign capital flows in and the number of insurers increases. The competitiveness of the insurance industry is growing at an accelerating pace. We anticipate that in next 3 year both of the respective market shares of the top 5 insurers in the life and non-life insurance sectors will fall to about 65 percent and 70 percent respectively and that the largest life insurer will hold about 40 percent of the market while the largest non-life insurer will hold about 45 percent. At the same time, the fierce competition will drive the insurers to pay

a great deal of attention to the quality of service and the functions of insurance products. However, on the whole, China's insurance market will still be characterized as a concentrated oligopoly in the medium-term.

### 3.2 Deepening Cooperation with Other Financial Institutions, Especially Banks

The cooperation between insurers and banks will be strengthened greatly. Bancassurance has been a success in China, because banks have advantages over insurers in customer resources and marketing. People in China are acquainted with and have steadfast trust in banks and therefore, bank services can be easily accepted. Bancassurance can be expected to continue to be one of the major distribution channels for life insurance. Besides strengthening strategic cooperation between the two industries, there will be more and more holding companies controlling both banks and insurance companies.

Finally, with a view to the coming financial integration, various innovative measures for the controlling of systematic financial risks, such as insurance securitization, will become popular, but not in the near term. The development of insurance securitization is a complex project and is demanding for both the insurance market and the securities market. Presently, the preconditions for insurance securitization do not exist in China, including theoretical research, the training of professional personnel, and the establishment of required infrastructure (e.g., legislation system). However, alternative risk transfer mechanisms will surely be important means for risk management by China's insurance industry.

### 3.3 Optimization of the Product Portfolio

With respect to China's life insurance sector, the demand for health and pension insurance will increase rapidly and steadily along with the aging population and the deepening of social security reform. On the health insurance side, while currently the government provides a large portion of health care in urban areas, this portion is declining. Consequently, the role of private health insurance is rising. Note, however, that there is hardly any private health insurance in rural areas of China. However, it is worth indicating that severe adverse selection and moral hazard exist, and domestic insurers lack experience in risk control. Therefore, China's insurers need to improve their health plans and intensify their cooperation with hospitals in order to control the medical costs and reduce adverse selection and moral hazard. Managed care plans will be introduced in China and will likely become the major operation pattern of health insurance in the next five to eight years. As for pension insurance, the insurance industry is faced with great opportunities and foreign insurance companies specializing in pension will play an important role in the market.

## 4. Conclusions

China's insurance industry developed rapidly from a virtually nonexistent, minimal, and closed industry into a large, open industry with great potential. This is supported by the growing insurance demand resulting from the government's efforts to create market-oriented reforms in the 1980s. As to the supply side, China's insurance market is characterized by an increase in the number of insurers and organizational restructuring of the state-owned insurers, which gradually lost their former monopoly of insurance market. While the market has become more competitive, it is still characterized as a typical oligopoly and the government remains heavily involved in the industry, though not as much as before. Furthermore, the geographic distribution of China's insurance industry is highly imbalanced. As a developing industry in a developing economy, China's insurance industry undoubtedly has tremendous potential. Some factors, including excellent economic prospects, accelerated economic system reform, and the large and aging population will drive China's insurance industry to grow continuously and rapidly. However, the development of the industry might be bottlenecked by the immature domestic capital market, shortage of professional personnel, unfavorable image of the industry, and lack of public good faith. Despite these challenges, we forecast that

China's insurance industry will maintain a two-digit growth rate in the forthcoming eight to ten years and the growth rate will be decreasing over time. As to the development of the industry itself, the market will catch up with international standards gradually and become more and more competitive. There will be deepening cooperation between insurers and other financial institutions, especially banks. Optimization of product portfolios and diversification of distribution channels are also expected, though agents and brokers will continue to play a crucial role.

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Table 2.1 Economic Growth and Insurance Premiums in China, 1980-1985(RMB 100M)

items	value in year					
	1980	1981	1982	1983	1984	1985
GDP	4517.8	4860.3	5301.8	5957.4	7206.7	89889.1
Total Premiums	4.6	7.8	10.3	13.2	20	33.1
Non-Life Insurance premiums	4.6	7.8	10.3	13.1	19.3	28.7
life insurance Premiums	N/A	N/A	N/A	0.1	0.7	4.4

Source: National Bureau of Statistics of China (2004), §3.1, §3.3, China Insurance Regulatory Commission (CIRC).

Table 2.2 Economic Growth and Insurance Premiums in China, 1986-1991(RMB 100M)

items	value in year					
	1986	1987	1988	1989	1990	1991
GDP	10201.4	11954.5	14922.3	16917.8	18598.4	21662.5
Total Premiums	45.8	71	110.4	97.6	135.2	178.2
Non-Life Insurance premiums	34.5	46.1	72.9	78.1	106.8	136.8
life insurance Premiums	11.3	25	37.5	19.6	28.4	41.4

Source: National Bureau of Statistics of China (2004), §3.1, §3.3; China Insurance Regulatory Commission (CIRC).

Table 2.3 Economic Growth and Insurance Premiums in China, 1992-2003(RMB 100M)

year	GDP	Total Premiums	Non-Life Insurance premiums	life insurance Premiums
1992	26651.9	211.7	147.4	64.3
1993	34560.5	395.5	251.4	144.1
1994	46670	500.4	336.9	163.5
1995	57494.9	594.9	390.7	204.2
1996	66850.5	777.1	452.5	324.6
1997	73142.7	1087.9	480.7	607.2
1998	76967.2	1247.6	499.6	748
1999	80579.4	1393.2	521.1	872.1
2000	88254	1595.9	598.4	997.5
2001	95727.9	2109.2	685.4	1424
2002	103935.3	3053.2	778.6	2274.9
2003	116603.2	3880.4	869.4	3011

Source: National Bureau of Statistics of China (2004), §3.1, §3.3, China Insurance Regulatory Commission (CIRC).



# A Study to Determine the Effects of Customer Value on Customer Loyalty in Airline Companies Operating: Case of Turkish Air Travellers

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## Abstract

Enhancing customer loyalty has become a popular topic for managers, consultants, and academics. The arguments in support of loyalty are simple to understand. Loyal customers are reported to have higher customer retention rates, commit a higher share of their category spending to the firm, and are more likely to recommend others to become customers of the firm. (Reichheld, Sasser, 1990; Zeithaml, 2000, "Keiningham, et al. 2007)

Traditionally, marketing activities have focused on success in the product marketplace by examining the physical aspects of products and services such as quantity, quality, functionality, availability, accessibility, delivery, price and customer support. More recently, marketing managers have shifted their emphasis to creating value for their customers (Clutterbuck, Goldsmith, 1998; McAlexander et al., 2002, Mascarenhas, et al. 2006). So there are very limited researches for customer value affect customer loyalty? Is customer value affecting customer loyalty? This research focused determine the effects of customer value, which is perceived by domestic line passengers based on the services offered by the airline company preferred, on the level of loyalty towards airline companies.

This study was carried out based on descriptive research model. Multiple regression analysis was employed in the study so that the extent to which the level of passenger satisfaction about each of the services offered by airline companies influences the level of passenger loyalty to airline companies can be determined. Also, logistic regression analysis was conducted to determine the services playing a role in meeting passenger expectations by airline companies.

**Keywords:** Customer loyalty, Customer value, Airlines, Turkish air travellers

## 1. Introduction

Recent years have shown a growing interest in customer loyalty. The globalization of competition, saturation of markets, and development of information technology have enhanced customer awareness and created a situation where long-term success is no longer achieved through optimized product price and qualities. Instead, companies build their success on a long-term customer relationship. According to lots of studies, it can cost as much as 6 times more to win a new customer than it does to keep an existing one. (Rosenberg *et al.* 1984) Depending on the particular industry, it is possible to increase profit by up to 60% after reducing potential migration by 5%. (Reichheld 1993, Kuusik, Varblane, 2009)

Customer loyalty is a buyer's overall attachment or deep commitment to a product, service, brand, or organization (Oliver 1999). The loyalty concept is similar in meaning to relationship commitment, which is described by the relationship marketing literature as an enduring desire to be in a valued relationship (Morgan and Hunt 1994). Customer loyalty manifests itself in a variety of behaviors, the more common ones being recommending a service provider to other customers and repeatedly patronizing the provider (Fornell, 1992)

Customer loyalty is a prime determinant of long-term financial performance of firms (Jones and Sasser, 1995). This is particularly true for service firms where increased loyalty can substantially increase profits (Reichheld, 1996). Service firms focus on achieving customer satisfaction and loyalty by delivering superior value, an underlying source of

competitive advantage (Woodruff, 1997). For service firms the challenge is identifying the critical factors that determine customer satisfaction and loyalty. (McDougall, Levesque, 2000)

Value in social science is understood in the human values such as the instrumental and terminal ones suggested by Rokeach (1973). In marketing, it is typically defined from the customer's perspective. As Zeithaml suggested, this is "the customer's overall assessment of the utility of a product based on perception of what is received and what is given" (1988). Meanwhile, others have proposed various definitions with a distinct emphasis (Anderson, Jain and Chintagunta 1993). They share some commonalities: customer value is linked through or inherent in the use of some products or services; it is perceived by customers instead of independently determined by the one who offers the products and services; and customer's perceptions typically involve a trade-off between what one receives and what he or she correspondingly sacrifices. The distinctions of these definitions exist in the different terms used (utility, worth, benefits, quality, etc.) and the different points of time when the perception of value is created: at the moment of making purchase decision or after use (Woodruff 1997, Feng, Morrison 2007)

Perceived value has proven to be a difficult concept to define and measure (Woodruff, 1997, Zeithaml, 1988). Broadly defined, perceived value is the results or benefits customers receive in relation to total costs (which include the price paid plus other costs associated with the purchase). In simple terms, value is the difference between perceived benefits and costs. However, what constitutes value appears to be highly personal, idiosyncratic, and may vary widely from one customer to another. Research evidence suggests that customers who perceive that they received "value for money" are more satisfied than customers who do not perceive they received "value for money" (Zeithaml, 1988). Also perceived value may be used by customers to "bundle" various aspects of the service relative to competitive offerings. (McDougall, Levesque, 2000)

The nature of customer value, how it determines customer loyalty and how this in turn leads to financial outcomes is the subject of considerable discussion amongst academics and consultants. As with the development of any new area, there is debate about the alternative ways concepts can be defined. Some authors focus just on the benefits of customer value. Others adopt a cost-benefit view, which assesses value on the basis of a "get for give" view. The benefits are what the customer gets, and costs are what the customer gives up (Whittaker et al., 2007; Brodie et al. 2009)

## 2. Research Methodology

**Objective of the Study:** The aim of this study is to determine the effects of customer value, which is perceived by domestic line passengers based on the services offered by the airline company preferred, on the level of loyalty towards airline companies.

**Limitations of the Research:** The research is limited by the questionnaire answered between the 01-31 2007 of January, 2007 by 397 passengers. Data were collected from domestic passengers departing from Istanbul Atatürk airport, Istanbul Sabiha Gökçen airport, Izmir Adnan Menderes Airport, Malatya Erhaç airport and Antalya airport.

**Research Method:** Face-to-face interview is used for the research.

**Research Medium:** The research medium consists of 397 passengers. For sampling purposes, 397 was randomly selected from the domestic passengers between 1-31 of January and included in the questionnaire analysis.

**Collection of the Research Data:** A pilot work has been done with 21 passengers to learn about how good the questions in the questionnaire form serve for the objective of the research. According to answers to those questions, some modifications have been done in the questions. 397 usable questionnaires were gained in the research and Microsoft Office Excel and SPSS (Statistics Pack for Social Sciences) 13, 0 were used in the analysis.

**Reliability Analysis of the Research:** It is possible to say that the research is reliable as a whole, according to the coefficient of reliability  $\alpha = 0,884$

## 3. Research Findings

(Insert Table 1 Here)

As can be seen Table 1, 59, 4 % of male and 40, 5 % of them are female passengers. When the distribution of the subjects according to their age range is analyzed it can be seen that 15% of them are aged between 15-25, 54,5 % of them are aged between 26-35, 22,8 % of them are aged between 36-45, 5,9% of them are aged between 46-55 and 1,8 of them are aged 56 or more than it. Consequently it is seen that passenger intensity between "26-35".

When the distribution of the members related to their education background is examined, it can be seen that 57 % of the members are graduates, 19, 3% of them are master's degree graduates and 5.8 % of them are doctor's degree graduates. When the proportion of the members who are graduates and postgraduates is analyzed in terms of the general sum a high proportion has been occurred as 82, 1 %.

When the monthly incomes of the members are examined, it has been seen that 36,8 % of them have monthly income as 1000-1999, 36,2% of them have monthly income as 2000-2999, 9,6 % of them have monthly income as 3000-3999, 7,9 % of them have monthly income as 4000- more than it.

(Insert Table 2 Here)

As can be seen Table 2, Air passengers were asked if the services provided by a carrier met their expectations in terms of value for money for their travel cost or not, and 79, 8% of the passengers stated that their expectations were met while 20,2% of them gave negative response to this question. As can be seen in Table 1, the money spent by passengers meet their expectations to a great extent. On the other hand, the 20, 2-percent negative response points out that identifying passengers' wants and needs accurately and meeting them has become really important for carriers in domestic lines. Therefore, airline companies should increase communication channels with their customers and also become involved in studies aimed at measuring customer satisfaction and value by using techniques like questionnaires.

Apparently, customers attach a great deal of importance to fulfillment of their wants and needs. In this respect, carriers operating in domestic lines have to provide their customers with services designed to create higher values for their customers and to increase customer loyalty to airline companies. Thus, it seems obligatory for airline companies to provide various options in value-oriented services such as low-pricing, increasing domestic routes, stepping up direct flights, punctuality and baggage services. Furthermore, communication channels with customers should be increased so that customer wants and needs can be identified more accurately and services should be provided continuously through a strategy from which all customers in the market can benefit.

(Insert Table 3 Here)

As can be seen Table 3, passengers involved in the survey were asked if they had ever experienced any negative situation related to the airline company they preferred. The responses received indicate that 72, 0% of the passengers have hardly had an unpleasant experience concerning the carrier chosen. This result is indicative of the fact that airline firms operating in domestic lines provide services by creating value for their customers and maintain a high level of customer satisfaction. On the other hand, 26, 4% of the passengers stated that they had experienced a negative situation while 1, 5% stated they had experienced too many or continual negative situations. This highlights the significance of the fact that airline companies need to continue their actions designed to improve personnel training and to provide better service so that customer loyalty is improved.

(Insert Table 4 Here)

As can be seen Table 4, those passengers who had stated that they had had a negative experience concerning the airline firm chosen (n=281) were inquired about the extent to which they found carriers' attitude towards problems efficient. The responses indicate that 55, 5% of the passengers regard the airline firms' attitude towards the problems experienced as efficient. On the other hand, 25, 3% of them provided neither positive nor negative responses while 19, 2% of them stated that they found the airline firms' attitude towards the problems inefficient. This situation shows that the personnel of the carriers operating in domestic lines should receive more training and there should be more effort about the management of customer relations. Also, airline companies should ensure that their personnel have a feeling of satisfaction and contentment about their job. It is only natural that a member of staff with a complete training and a feeling of contentment about his or her job will adopt a more positive attitude towards customers. Furthermore, a well-qualified employee could help increasing customers' level of loyalty to airline firms by creating more customer value on behalf of firms.

(Insert Table 5 Here)

As can be seen Table 5, passengers participating in the survey were asked whether they thought their suggestions and complaints were conveyed to the relevant departments of airline companies or not. According to the results, 57, 1% of the air passengers stated that they thought their suggestions and complaints were conveyed to the concerning departments of airline companies. On the other hand, the percentages of those providing negative responses for this question and those giving neither positive or negative responses were 19, 1 % and 23, 7 % respectively. This situation points out that the units of airline carriers where suggestions and complaints are evaluated prove inefficient. Passengers may have the opinion that when their remark about a negative situation is conveyed to the relevant unit it is ignored. In this respect, it becomes critical that passengers' suggestions and complaints be evaluated by the relevant unit and immediate feedback is communicated to customers. Resolving an issue and providing feedback about that may lead to a change of negative opinions about airline companies even if customers have experienced a negative situation.

(Insert Table 6 Here)

As can be seen Table 6, in terms of services and criteria, the questions in the first and second parts of the study were aimed at the services provided before, during and after flight and factors affecting customer value such as brand image, network connection, pricing, costs and human resources management. It is considered that each of the services and criteria questioned is included simultaneously by one or more factors affecting customer value.

When the order of importance assigned by passengers to the services provided by the airline they prefer is examined, it can be seen that the services of "great importance" are, in a descending order," flight safety (O=4, 86) and security (O=4, 74) followed by baggage services (O=4, 54). Other services following them are on-time departures and arrivals (O=4, 49), cabin cleanliness (O=4, 46) and behavior and attitude of personnel (O=4,37). These are followed by "ticket fare"

( $O=4,34$ ), which indicates that low-pricing is not the only value perceived by customers but other service factors also may play a more significant role. The importance assigned by customers to ticket fare is followed by suitability of schedule ( $O=4, 33$ ), brand image of airline ( $O=4, 27$ ) and suitability of flight route ( $O=4, 19$ ). While all other services are considered to be “important” by passengers, only paid catering services ( $O=3, 24$ ) are regarded by passengers as “neither important nor unimportant”.

When the factors satisfying customers about the services of the airline they choose are examined, it can be seen that air passengers are satisfied most by flight safety ( $O=4, 62$ ) and security ( $O=4, 51$ ) followed by brand image of airline ( $O=4, 13$ ), cabin cleanliness ( $O=4, 11$ ) and availability of on-line services ( $O=4, 08$ ). The level of passenger satisfaction for ticket price is lower ( $O=3,68$ ) than that for other service factors, which plainly reveals the fact that airline firms should become engaged in more actions to create more customer value in their low-pricing activities. On the other hand, passengers stated that they were satisfied with all other factors provided by airline company, while they stated that they found only paid catering services “neither satisfying nor dissatisfying” ( $O=3,44$ ). This highlights the need for airlines offering service in domestic lines to improve catering services.

As Table 6 demonstrates, the satisfaction and importance levels assigned by passengers vary significantly for all the services of the airline preferred except for aircraft type, aircraft comfort and design, variety-speed-quality of catering services and availability of online services. The least satisfying factors based on level of importance are ticket fare ( $O_0=4,34$ ;  $O_1=3,68$ ), baggage services ( $O_0=4,54$ ;  $O_1=3,93$ ) and convenience of schedule ( $O_0=4,33$ ;  $O_1=3,81$ ). Apparently, air passengers express dissatisfaction with the airline company chosen particularly in terms of the satisfaction levels they expect from these services. In other words, it seems that their expectations are not met and the value created by airline company for customers cannot be perceived. The service for which satisfaction level is more significantly higher than importance level is paid catering services ( $O_0=3, 24$ ;  $O_1=3, 44$ ). This shows that in that service category, passengers receive service from the preferred airline at a level above their expectations.

(Insert Table 7 Here)

As can be seen Table 7, when air passengers were asked if they would think of not having a lifelong loyalty to the airline company they preferred or not, 36,8% of them stated that they would be loyal to the airline they preferred while 33,8% stated they wouldn't. On the other hand, the percentage of those passengers providing neither positive nor negative response for that question was 29, 5%.

As Table 7 clearly shows, the percentage of passengers thinking of being loyal to their airline (36, 8%) and the percentage of passengers not thinking this way (33, 8%) are very close. This situation demonstrates that customers may feel loyal to a particular airline in direct proportion to the service value offered to them by airline companies. As customers' value perceptions are formed in line with their relative decisions, any value component to be created by an airline company can be perceived in a different way by any customer. Customers form their preference criteria based on the comparisons among airlines offering the services which create value for them. Customers show preference to the airline which creates most value for them. However, this does not necessarily mean that a feeling of loyalty to the airline company preferred is created within customers because a customer may show different preferences among the airline companies creating most values for him or her. The percentage of those air passengers providing neither positive nor negative responses for this question (29, 5%) seems to support this suggestion. Habits deriving from previous experiences may be a strong determinant for passengers' airline choice. However, this habit for an airline company does not again mean loyalty to that airline.

The concept of loyalty to be formed for an airline company can be shaped by improving value oriented services and presenting them to customers continuously. Therefore, airlines operating in domestic lines should keep up with developing technology, improve the services creating most value for customers and provide these series continuously throughout a year except for certain intervals.

According to the results from the logistic regression analysis carried out to determine the services affecting meeting of expectations considered by passengers in creating loyalty to a particular airline, the level at which the satisfaction level for services explains airline's meeting of customer expectations seems to be 40%.

The services having a positive effect on an airline company's meeting of customer expectations are, in a descending order, cabin cleanliness (increases the probability of meeting expectations by 3, 45), ticket fare (increases the probability of meeting expectations by 2.83), airline's brand image (increases the probability of meeting expectations by 2, 39) and behavior and attitude of personnel (increases the probability of meeting expectations by 1, 73). On the other hand, the services having a negative effect on an airline company's meeting of customer expectations are, in a descending order, aircraft type (decreases the probability of meeting expectations by 0,81), availability of online services (decreases the probability of meeting expectations by 0,66) and convenience of flight route (decreases the probability of meeting expectations by 0,49).

(Insert Table 8 Here)

As can be seen in Table 8, cabin cleanliness, ticket price, brand image of airline company, behavior and attitude of personnel are among the services meeting expectations of passengers flying domestic lines. This situation shows that airlines providing service in domestic lines have realized customer value oriented activities. The height and continuity of the value perceived by a customer can positively affect the loyalty to be formed in that customer towards a particular airline. However, a careful examination of the relevant table clearly reveals the fact that aircraft type, availability of online services and convenience of flight route fail to precisely meet customer expectations. Naturally, it should be kept in mind that if the inefficiencies in these services happen to be continual, customers' feeling of loyalty could be affected in a negative way.

(Insert Table 9 Here)

According to the results from the logistic regression analysis carried out to determine the influence of customers' satisfaction level about airline's services on the level of loyalty to a particular airline company, the level of satisfaction felt for service explains 15% of the change in overall satisfaction level. The model demonstrates that variety, speed and quality of catering services (0,19), meeting of special requests in check-in and boarding procedures (0,19), on-time departures and arrivals (0,12) and safety services (0,13) have a positive influence on loyalty level. Accordingly, the increase in the satisfaction level for variety, speed and quality of catering services, meeting of special requests in check-in and boarding procedures, on-time departures and arrivals and safety services leads to an increase in loyalty level, too.

#### 4. Conclusions

Today's airline companies have started to employ various marketing methods and strategies in an intensely competitive environment where product and service differentiation is becoming harder and harder, the number of rival companies is increasing and a new notion of customer whose wants and expectations are increasing day by day is emerging. In order for airline companies operating in domestic lines to determine methods and strategies appropriate for themselves, they have to identify accurately the characteristics of the market in which they provide service. They particularly have to ensure customer value, which is defined as providing products and services with qualities different from rival airlines and with most benefit and lowest price. It is clear that, in addition to ticket price, criteria such as schedule, convenience of schedule, convenience of flight route, aircraft type, aircraft comfort and design, services and criteria related to comfort such as catering services and behavior and attitude of personnel and other service features such as quick reservation and meeting special requests in check-in and boarding procedures are also influential in creating value for customers and ensuring customer loyalty.

In conclusion, in marketing strategies aimed at creating value for customers, airlines operating in domestic lines have to determine the services and criteria regarded important by customers accurately and in line with customer expectations. Thus, satisfaction level of customers about the services and criteria offered should continuously be measured. As well as creating a benefit for customers, the services and criteria satisfying customers and regarded important by them also create a value and loyalty for customer.

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Table 1. Demographics

<i>Nationality</i>	Frequency	Percent
<i>Turkish</i>	397	100%
<i>Other</i>	0	0%
<i>Sexual</i>	Frequency	Percent
Man	236	59,4%
Women	161	40,5%
<i>Age</i>	Frequency	Percent
15-25	31	15,0%
26-35	113	54,5%
36-45	47	22,8%
46-55	12	5,9%
55- more	4	%1,8
<i>Education</i>	Frequency	Percent
Primary school	22	0,9%
High school	35	17,0%
University	118	57,0%
Master	40	19,3%
Doctorate	12	5,8%
<i>Monthly income(TL)</i>	Frequency	Percent
0-900	20	9,66%
1000-1999	76	36,8%
2000-2999	75	36,23%
3000-3999	20	9,66%
4000- more	15	7,9%
Total	207	100%

Table 2. Airline Companies' Meeting of Expectations

Airline Companies' Meeting of Expectations	Frequency	Percent
Yes	317	79,8
No	80	20,2
<b>Total</b>	397	100,0

Table 3. Experiencing Negative Situations

Experiencing Negative Situations	Frequency	Percent
Never experience	116	29,2
Rarely experience	170	42,8
Experience	105	26,4
Too much experience	4	1,0
Certainly experience	2	0,5
<b>Total</b>	397	100,0

Table 4. Efficiency of Airline Company's Attitude towards Negative Situations

Efficiency of Airline Company's Attitude towards Negative Situations	Frequency	Percent
Strongly agree	13	4,6
Agree	143	50,9
Neither agree nor disagree	71	25,3
Disagree	46	16,4
Strongly disagree	8	2,8
<b>Total</b>	281	100,0

Table 5. Communicating Suggestions and Complaints

Communicating Suggestions and Complaints	Frequency	Percent
Strongly agree	24	6,0
Agree	203	51,1
Neither agree nor disagree	94	23,7
Disagree	72	18,1
Strongly disagree	4	1,0
<b>Total</b>	397	100,0

Table 6. Determinants of Airline Choice and Satisfaction Level

Airline Choice and Satisfaction Level	Importance		Satisfaction		Matched z Test	
	O	SS	O	SS	z	p
Convenience of schedules	4,33	0,57	3,81	0,76	11,76	0,00**
Ticket fares	4,19	0,73	3,81	0,84	7,75	0,00**
Convenience of flight line	4,34	0,64	3,68	0,90	11,28	0,00**
Airline Images	4,27	0,73	4,13	0,62	3,61	0,00**
On time performance	4,49	0,62	4,04	0,74	10,43	0,00**
Aircraft type	3,80	0,94	3,89	0,71	-1,74	0,08
Aircraft comfort	4,01	0,80	3,96	0,67	1,22	0,23
of catering services	3,66	0,94	3,75	0,85	-1,62	0,11
Paid catering services	3,24	1,06	3,44	0,89	-3,36	0,00**
Behavior of the staff	4,37	0,69	4,03	0,77	7,23	0,00**
Security	4,74	0,44	4,51	0,63	6,87	0,00**
Baggage services	4,54	0,59	3,93	0,88	12,23	0,00**
Flight Safety	4,86	0,35	4,62	0,59	7,66	0,00**
Availability of online services	4,12	0,91	4,08	0,79	0,87	0,39
Cabin cleanliness	4,46	0,54	4,11	0,73	8,63	0,00**
Meeting special requests in check-in and boarding	4,10	0,85	3,95	0,74	3,22	0,00**

Table 7. Loyalty towards Airline

Loyalty towards Airline	Frequency	Percent
Strongly agree	30	7,6
Agree	116	29,2
Neither agree nor disagree	117	29,5
Disagree	100	25,2
Strongly disagree	34	8,6
<b>Total</b>	397	100,0

Table 8. Logistic Regression Analysis on the Services Affecting Meeting of Expectations

	<b>Beta</b>	<b>St. Error</b>	<b>Wald statistic</b>	<b>p value</b>	<b>Odds ratio</b>	
Convenience of schedules	0,39	0,24	2,53	0,11	1,47	
Ticket fares	-0,67	0,28	5,76	0,02	0,51	**
Convenience of flight line	1,04	0,22	22,65	0,00	2,83	**
Airline Images	0,87	0,35	6,35	0,01	2,39	**
On time performance	0,19	0,24	0,60	0,44	1,21	
Aircraft type	-1,65	0,38	18,55	0,00	0,19	**
Aircraft comfort	0,56	0,38	2,17	0,14	1,76	
catering services	0,04	0,30	0,01	0,90	1,04	
Paid catering services	-0,38	0,27	1,94	0,16	0,68	
Behavior of the staff	0,55	0,27	4,23	0,04	1,73	*
Security	0,20	0,28	0,48	0,49	1,22	
Baggage services	0,24	0,21	1,42	0,23	1,28	
Flight Safety	0,22	0,28	0,61	0,44	1,25	
Availability of online services	-1,08	0,26	17,02	0,00	0,34	**
Cabin cleanliness	1,24	0,32	15,42	0,00	3,45	**
Meeting special requests in check-in and boarding	-0,26	0,28	0,88	0,35	0,77	
(Stable)	-4,39	1,64	7,19	0,01	0,01	**
Model $\chi^2=116,08$ , $p=0,00<0,01$ ; Nagelkerke $R^2=0,40$						

Table 9. Regression Model on the Services Affecting Loyalty

	<b>Beta</b>	<b>St.Error</b>	<b>St.Beta</b>	<b>t</b>	<b>p</b>
(Stable)	1,02	0,54		1,87	0,06
Convenience of schedules	0,02	0,09	0,02	0,26	0,80
Ticket fares	0,02	0,08	0,02	0,29	0,77
Convenience of flight line	0,08	0,08	0,07	1,05	0,29
Airline Images	0,04	0,11	0,02	0,37	0,71
On time performance	0,17	0,08	0,12	2,10	0,04*
Aircraft type	0,09	0,10	0,06	0,85	0,40
Aircraft comfort	-0,11	0,13	-0,07	-0,83	0,41
catering services	0,24	0,09	0,19	2,54	0,01*
Paid catering services	-0,06	0,08	-0,05	-0,81	0,42
Behavior of the staff	0,07	0,10	0,05	0,75	0,45
Security	0,23	0,10	0,13	2,22	0,03*
Baggage services	0,15	0,07	0,12	2,00	0,05
Flight Safety	0,04	0,10	0,02	0,35	0,72
Availability of online services	-0,13	0,08	-0,09	-1,67	0,10
Cabin cleanliness	-0,12	0,10	-0,08	-1,21	0,23
Meeting special requests in check-in and boarding	0,28	0,09	0,19	3,05	0,00**
R=0,39; $R^2=0,15$ ; F=4,32, $p=0,00<0,01$					



## Study on Forecasting the Stock Market Trend Based on Stochastic Analysis Method

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### Abstract

To counter strong features of disorder and randomness of stock market fluctuation in China, we introduce a Markov process model for the stock market trend forecasting, which is a useful complement for an existing technical analysis. Meanwhile, we expound on the related properties of Markov process and establish Markov chain mathematical model of the stock market trend forecasting, furthermore, give an example of model application, finally, further investigate application of the model.

**Keywords:** Markov chain, Transition probability matrix, Stock

### 1. Introduction

As high-speed development of China's market economy, people's living standard and disposable incomes rapidly increase, and everyone's financial awareness and investment are increasingly growing. Finance and investment increasingly become a hot topic. Since China's capital markets are underdeveloped and choices of people's investment are relatively narrower, investment stock market become the main investment behavior. Moreover, the development of China's stock market is gradually moving towards maturity and norms after seventeen years. The history of development of foreign capital market has proven that the stock not only has provided significant long-term interests of investors in the past, but also will also provide a good investment vector in the future. However, because of the vagaries of the stock market, investors not only have to seriously study the listed company's history, performance and development prospects of such fundamentals, but also be familiar with the variety of technical analysis in order to win a huge return on investment and become a successful investor. Ideal status is that selecting stocks by fundamental analysis and confirming the timing of buying and selling stocks by technical analysis.

An efficient stock market, whose price randomly fluctuates, reflects the homogeneous distribution of market information, but we can predict possible future trend of the stock market through analysis of past information. In this paper, we analyze and forecast the stock market index with Markov properties, stock prices, as well as its state of interval in view of Markov model, which provides investors with relevant reference model in order to avoid blind and irrational behavior.

### 2. The Basic Principles of Markov Forecasting Method

The main principle of using Markov chain to predict is to build Markov forecasting model that predicts the state of an object in a certain period of time in the future by virtue of probability vector of the initial state and state transition probability matrix. Markov prediction model play an important role in the modern statistics because it has Markov properties (no after-effect properties), the weak demand on historical data and forecasting method with many advantages. The difference between Markov model and other statistics methods (such as regression analysis, time series, etc.) are that the former does not need to find mutual laws among the factors from the complex predictor, only to consider the characteristics of the evolution on the history situation of the event itself and to predict changes of the

internal state by calculating the state transition probability, so Markov model has broad applicability in prediction of the stock market.

## 2.1 Markov process and Markov chain

### 2.1.1 Intuitive description of Markov process

Markov process is a stochastic process with no after-effect properties. The after-effect properties mean: that state of at time  $t$  greater than  $t_m$  only depend on state of at the moment  $t_m$  in some process when the state is known at the moment  $t_m$  in some process, but not depend on state before the moment  $t_m$  in the process.

### 2.1.2 Markov chain and transition matrix

#### (1) The definition of Markov chain

Let a discrete state space of random sequence be  $E$ . If for any non-negative integer  $n_1, n_2, \dots, n_m$  ( $0 \leq n_1 < n_2 < \dots < n_m$ ) and arbitrary natural number  $k$ , as well as the arbitrariness  $i_1, i_2, \dots, i_m, j \in E$ , satisfying the following condition:

$$P\{X_{(n_m+k)} = j \mid X_{(n_1)} = i_1, X_{(n_2)} = i_2, \dots, X_{(n_m)} = i_m\} = P\{X_{(n_m+k)} = j \mid X_{(n_m)} = i_m\}, \quad (1)$$

then this random sequence  $\{X_{(n)}, n = 1, 2, \dots\}$  is said to be Markov chain.

#### (2) Transition matrix

In a balanced system, if probability of the system from state  $i$  to  $j$  is  $P_{ij}$ , then the set of transition probability vector in system state form a transfer matrix, written by

$$P = [P_{ij}]_{m \times n},$$

Where transfer matrix must be a probability matrix which its operation rules is the same as conventional matrix. Transfer matrix has the following properties:

$$P^{(k)} = P^{(k-1)} * P = P^k.$$

#### (3) State probability matrix

The average transition process of Markov chain only depends on the system's initial state and the transfer matrix, where the system's initial state is a line matrix posed by the probability vector, written by

$$S^{(0)} = [S_{ij}^{(0)}]_{1 \times n}.$$

When the system's initial state is known, let probability matrix in a state  $k$  be  $S^k$  after  $k$  th transferring. By the Chapman-Kolmogorov equation we have

$$S^{(k+1)} = S^{(k)} * P,$$

Then we can obtain the following recursive formula:

$$\begin{aligned} S^{(1)} &= S^{(0)} * P, \\ S^{(2)} &= S^{(1)} * P = S^{(0)} * P^2 \\ &\dots\dots \\ S^{(k)} &= S^{(k-1)} * P = \dots = S^{(0)} * P \dots \dots \end{aligned}$$

So

$$S^{k+1} = S^{(0)} * P^{k+1}.$$

According to this recursive formula, we achieve the forecast based on the interpretation of dynamic system.

### 2.1.3 The basic properties of Markov chain

(1) No after-effect property. We can see that the state of random variables  $X_{(n_m+k)}$  with Markov properties only depends on state of a random variable through Eq. (1), but not depends on the early state of random variables.

(2) Stationary distribution. That is, state probability distribution  $\{\eta_{(i)}, i \in I\}$  with Markov chain must satisfy

$$\eta_{(i)} = \sum_{j \in I} \eta_{(j)} P_{ij}, \quad (2)$$

Where  $P_{ij}$  is the state transition matrix of the random process of,  $I$  is a set of state space.

(3) Ergodic property. That is, no matter what the system starting from whatever state, the system is in the probability of state  $j$  must stabilize in  $\eta_{(j)}$ ,  $j = 0, 1, \dots, S$  after a sufficiently long time. We express it as

$$\lim_{n \rightarrow \infty} P_{ij} = \eta_{(j)} \quad (3)$$

From another perspective to understand Eq. (3), no matter how stochastic process system start from where the state, when the transfer step number  $\beta$  is sufficiently large, probability of transfer to a state  $j$  approach to a constant  $\eta_{(j)}$ . According to this property, we can obtain that state transition probability  $\eta_{(j)}$  is an unique solution when equation set satisfy the condition

$\eta_{(j)} > 0, \sum_{j=1}^n \eta_{(j)} = 1$  in stochastic process  $\{X_{(n)}, n \in E\}$  with Markov property.

(4) Interlinked property of state. That is, process with Markov property will be able to reach the same status through a limited transfer step whatever the initial state is. Stochastic process can reach a state  $k$  regardless of their initial state being either  $i$  or  $j$  after a certain steps  $\beta_1$  and  $\beta_2$ , only are transfer directions and step numbers different.

## 2.2 Construction of Markov chain forecasting model

Analysis of the moving changes on Markov chain is mainly on state and relationship of limited Markov process in chain, then to predict the future situation of chain. According to the characteristics of the composition of process of Markov chain, we may make the following assumptions in order to apply Markov chain forecasting model to stock market analysis.

(1) The operation of the stock market only is impacted by random factors such as the global or regional economic, politics, and society and so on, and macro policy of securities management department is stable and manipulated impact of investors is negligible.

(2) Up or down of the stock market in a given day just depended on state before the closing day, but it had little to do with the past, so the market over the past was negligible.

(3) The probability which stock market from one state  $i$  skips to another state  $j$  by the same time interval has nothing with moment of the state  $i$ .

When analyzing and forecasting process by Markov Chain, we have the following steps:

(1) To construct state and to determine the corresponding state probability; (2) to write a state transition probability matrix by the state transfer; (3) To derive all kinds of the state vector by the transition probability matrix; (4) to analyze, predict and make decision in a stable condition.

## 3. Empirical analysis of stock market forecast

### 3.1 Regarding the closing state of the Shanghai and Shenzhen Composite as the object to predict

Stock index, that is, stock price index is a indicators for reference edited by the stock exchange or financial services institutions, which shows that change of stock market. It mainly denotes the general trend of stock prices and change range for the entire market, so that it can provide investors with real-time to reflect the movements of the stock market. Therefore, to analyze and forecast it is very practical for investors.

To cite the total 27 trading days closing price changes of Shanghai Composite Index from October 1, 2007 to November 16, 2007 as an example, each day's closing prices that are divided into three states: up, down and zero-plus by up and down five points, are analyzed and forecasted. To see Table I on raw data.

Now we analyze and forecast the above information by using Markov Chain.

(1) Constructing the state process and determining the state probability

If we take each closing day as discrete time units in table I, the closing prices are divided into three states: up, zero-plus and down. And let  $x_1 = \text{up}$ ,  $x_2 = \text{zero-plus}$  and  $x_3 = \text{down}$ , then the state space is  $E(x_1, x_2, x_3)$ , and state probability is possibility size of emergence of a variety of state. State vector

is denoted by  $\eta_{(i)} = (p_1, p_2, \dots, p_n)$ , where  $i = 1, 2, \dots, n$ ,  $p_j$  is probability of  $x_j$   $j = 1, 2, \dots, n$ . There is 27

trading days in table I, where up  $x_1 = 12$ , zero-plus  $x_2 = 8$  and down

$x_3 = 7$ , so the probability of each state are as follows:  $p_1 = \frac{12}{27} = 0.444$ ,

$p_2 = \frac{8}{27} = 0.296, p_3 = \frac{7}{27} = 0.259$ , and state the vector  $\eta_{(0)} = (0.444, 0.296, 0.259)$ , is called initial state vector.

## (2) The Establishment of State Transition Probability Matrix

Since the state of the last day is up while there is no state transition in Table 1, the up total number should be recorded as  $12-1 = 11$  times, where the number of state from up to up is 5, so transition probability  $p_{11} = \frac{5}{11} = 0.455$ . Since the number of state from up to zero-plus is 3, so the corresponding transition probability  $p_{12} = \frac{3}{11} = 0.273$ . Since the number of state from up to down is 3, so the corresponding transition probability  $p_{13} = \frac{3}{11} = 0.273$ . Since the number of state from zero-plus to up is 3, and the number of the closing price is 8 times before the day, so the corresponding transition probability  $p_{21} = \frac{3}{8} = 0.375$ . Similarly, we can obtain

$$p_{22} = \frac{3}{8} = 0.375, p_{23} = \frac{2}{8} = 0.250, p_{31} = \frac{5}{7} = 0.714, p_{32} = 0, p_{33} = \frac{2}{7} = 0.286.$$

Now we express the above each state transition probability as Table 2

We can obtain the closed state transition matrix of Shanghai Composite Index by Table 2.

$$P = \begin{bmatrix} p_{11} & p_{12} & p_{13} \\ p_{21} & p_{22} & p_{23} \\ p_{31} & p_{32} & p_{33} \end{bmatrix} = \begin{bmatrix} 0.455 & 0.273 & 0.273 \\ 0.375 & 0.375 & 0.25 \\ 0.714 & 0 & 0.286 \end{bmatrix}.$$

where each row of matrix  $P$  is state transition probability of various situations. So

$$\sum_{j=1}^3 p_{ij} = 1, i=1,2,3.$$

## (3) Calculating state probability of the subsequent closing days by transition probability matrix

According to Markov process, the state probability in different periods are denoted by  $\eta_{(i)}$ , here  $\eta_{(i+1)} = \eta_{(i)} * P$ , where  $P$  is state transition matrix. According to Table 1, because the stock price is up on the 27th day but no follow-up information, it is regarded as the initial state vector.  $\eta_{(0)} = (1, 0, 0)$ . By virtue of the vector and state transition matrix to predict state probability of various closing date in the future. And hence we can obtain state probability vector of closing price on 28th day

$$\eta_{(1)} = \eta_{(0)} * P = [1 \ 0 \ 0] \begin{bmatrix} 0.455 & 0.273 & 0.273 \\ 0.375 & 0.375 & 0.25 \\ 0.714 & 0 & 0.286 \end{bmatrix} = (0.455 \ 0.273 \ 0.273).$$

State probability vector of closing price on 29th day is  $\eta_{(2)} = \eta_{(1)} * P = (0.504 \ 0.226 \ 0.270)$ . State probability vector of closing price on 30th day is  $\eta_{(3)} = \eta_{(2)} * P = (0.507 \ 0.223 \ 0.272)$ .

## (4) Analysis, forecasting and decision-making in a stable condition

From the above calculations we can see that closing price trends of the Shanghai Composite Index: with increasing in trading days, that is,  $i$  is large enough, as long as the state transition matrix is unchanged (i.e. stable conditions), then state probability tend to the value that is independent of the initial state and more or less stabilized. That is, the stock market eventually is up about the possibility of 50 percent, zero-plus about 20 percent and down about 30 percent. The outcome of predicting is consistent in the actual situation. Therefore, the Shanghai stock market should be optimistic for the near future. The calculation of derivation of the above step is larger to predict the final closing price. According to system stable condition equations of Markov chain, we can use one-step method to predict the state of the closing price. By stable conditions of Markov chain system:

$$\begin{cases} \eta P = \eta \\ \sum_{i=1}^n x_i = 1 \end{cases}, \eta = (x_1, x_2, \dots, x_n), P = \begin{bmatrix} p_{11} & p_{12} & \dots & p_{1n} \\ \dots & \ddots & \ddots & \dots \\ p_{n1} & p_{n2} & \dots & p_{nn} \end{bmatrix},$$



To take closing state vector  $\eta = (x_1, x_2, x_3)$  and state transition matrix

$$P = \begin{bmatrix} 0.455 & 0.273 & 0.273 \\ 0.375 & 0.375 & 0.25 \\ 0.714 & 0 & 0.286 \end{bmatrix}$$

into the above equations, we have

$$\left\{ \begin{array}{l} (x_1, x_2, x_3) \begin{bmatrix} 0.455 & 0.273 & 0.273 \\ 0.375 & 0.375 & 0.25 \\ 0.714 & 0 & 0.286 \end{bmatrix}, \text{ and hence } \begin{cases} 0.445x_1 + 0.375x_2 + 0.714x_3 = x_1 \\ 0.273x_1 + 0.375x_2 = x_2 \\ 0.273x_1 + 0.25x_2 + 0.286x_3 = x_3 \end{cases} \\ x_1 + x_2 + x_3 = 1 \end{array} \right.$$

$$\text{So } \begin{cases} x_1 = 0.507 \approx 0.500 \\ x_2 = 0.222 \approx 0.200 \\ x_3 = 0.271 \approx 0.300 \end{cases} \cdot \text{We can see that state probability value of the closing price calculated under the steady-state}$$

is the same as conclusions derived by recursive formula.

### 3.2 Regarding the closing price on the stock status as the object to predict

We cite closing price changes of total 27 trading days of China Merchants Bank shares in Shanghai from January 5, 2007 to February 12, 2007 as an example, each day's closing price was divided into three states: up, zero-plus, down by plus or minus 20 cents and analyze and predict it.

See Table 3 for raw data.

Using the previous methods of case study, we process the data: the closing price is divided into three states by each closing day as discrete unit of time: up, zero-plus and down, and calculating the

probability of each state are as follows:  $p_1 = \frac{11}{27} = .407$ ,  $p_2 = \frac{2}{27} = 0.074$ ,  $p_3 = \frac{14}{27} = 0.519$ . We establish the state transition probability matrix

$$P = \begin{bmatrix} p_{11} & p_{12} & p_{13} \\ p_{21} & p_{22} & p_{23} \\ p_{31} & p_{32} & p_{33} \end{bmatrix} = \begin{bmatrix} 0.5 & 0.1 & 0.4 \\ 0.5 & 0 & 0.5 \\ 0.357 & 0.071 & 0.571 \end{bmatrix}.$$

We calculate the subsequent closing state probability by the transfer matrix and obtain the initial state vector  $\eta_{(0)} = (1, 0, 0)$ . We can obtain state probability vector  $\eta_{(1)} = (0.5, 0.1, 0.4)$  of closing price on 28th day,

$\eta_{(2)} = (0.443, 0.078, 0.478)$  of closing price on 29th day  $\eta_{(3)} = (0.431, 0.078, 0.489)$

of closing price on 30th day. We may calculate state probability value of the closing price under the steady-state as follows:

$$\begin{cases} x_1 = 0.528 \approx 0.500 \\ x_2 = 0.081 \approx 0.100 \\ x_3 = 0.391 \approx 0.400 \end{cases}$$

This shows that China Merchants Bank is eventually up about the possibility of 50 percent, zero-plus about 10 percent and down about 40 percent. Therefore, this share should be optimistic for the near future.

### 3.3 Regarding the state interval of the closing price of every day of single stock as object to predict

We cite the closing price of 24 trading days of Sinopec shares of Shenzhen on January 31 –March, 12, 2007 as an example, original data see Table 4.

The 24 trading day closing prices are divided into six price intervals from low to high in Table 4, where the length of each interval is 0.25 units, so we obtain interval state (see Table 5)

According to the data in Table 4 and Table 5, we can obtain 24 state transition situations of closing price (see Table 6):

Since state transition probability  $p_{12} = \frac{1}{1} = 1, p_{11} = p_{13} = p_{14} = p_{15} = p_{16} = 0 \cdots$  we can obtain

state transition matrix:

$$\begin{bmatrix} 0 & 1.000 & 0 & 0 & 0 & 0 \\ 0.400 & 0.200 & 0.400 & 0 & 0 & 0 \\ 0.125 & 0.125 & 0.500 & 0.125 & 0.125 & 0 \\ 0 & 1.000 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 & 1.000 \\ 0 & 0 & 0.500 & 0 & 0.250 & 0.250 \end{bmatrix}.$$

According to the raw data, we can obtain that the closing price of the 24th trading day is 8.90, which belongs to state interval S3. So the initial state vector can be identified as  $\eta_{(0)} = (0, 0, 1, 0, 0, 0)$ . The closing price state probability vector of the 25th trading day state probability vector by Markov chain prediction is as follows:

$$\eta_{(1)} = \eta_{(0)} * P = (0.125, 0.125, 0.500, 0.125, 0.125, 0),$$

the closing price state probability vector of the 26 trading day is as follows:

$$\eta_{(1)} = \eta_{(1)} * P = (0.113, 0.338, 0.300, 0.063, 0.063, 0.125).$$

That is, State probability that the closing prices of the 25th and 26th trading day locate in S3 and S2, respectively, are maximum, and they are the same as the actual situation of 8.89 and 8.66. The above method is to forecast the subsequent day's closing price based on the raw data from the closing price of 24 trading days. So the state interval vector formula to predict the closing price of the  $i$  th trading day is  $\eta_{(i)} = \eta_{(i-1)} P, i = 25, 26, \cdots$ . After the calculation, we know that the closing price state interval after each day predicted by the above formula is basically consistent with the actual situation.

#### 4. Conclusion

As the Markov chain has no after-effect, using this method to analyze and predict the stock market index and closing stock price is more effective under the market mechanism. However, Markov chain prediction method is only a probability forecasting methods, the predicted results is simply expressed probability of a certain state of stock prices in the future, rather than be in a absolute state. The operational status of the stock market is subject to the influence of various factors from market, for example, the multiple market forces from both sides, the fundamentals state of the stock itself, macroeconomic policy, trade and economic degrees and psychological factors of investors. Therefore, no single method can accurately predict changes in the stock market every day, Markov chain prediction method is no exception. But we can combine the results of forecasts from using Markov chain to predict with other factors and see it as a basis for decision-making. In this paper, we only explore application of Markov chain in the stock market, and achieve relatively good results. Markov chain can also be spread and applied to other fields, such as the futures market, the bond market and so on.

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Table 1. The closing price changes of Shanghai Composite Index in October 1, 2007 and November 16, 2007

serial number	1	2	3	4	5	6	7	8	9	10	11
state	zero-plus	up	down	up	down	down	up	up	zero-plus	down	up
serial number	12	13	14	15	16	17	18	19	20	21	22
state	zero-plus	zero-plus	zero-plus	zero-plus	up	up	zero-plus	up	up	zero-plus	down
serial number	23	24	25	26	27						
state	up	down	down	up	up						

Table 2. The state transition of the closing price changes of Shanghai Composite Index from October 1, 2007 to November 16, 2007

<div> <div>probability changes</div> <div>The closing states</div> </div>	up	zero-plus	down
up	0.455	0.273	0.273
zero-plus	0.375	0.375	0.25
down	0.714	0	0.286

Table 3. The closing price changes of China Merchants Bank shares in Shanghai on January 5, 2007 - February 12, 2007

serial number	1	2	3	4	5	6	7	8	9	10	11
state	down	up	up	up	down	down	up	up	down	down	up
serial number	12	13	14	15	16	17	18	19	20	21	22
state	up	up	down	zero-plus	up	down	down	down	down	down	down
serial number	23	24	25	26	27						
state	up	zero-plus	down	down	up						

Table 4. The closing price of 24 trading days of Sinopec shares of Shenzhen from January 31 to March, 12, 2007

serial number	1	2	3	4	5	6	7	8	9
the closing price	9.68	9.67	9.05	8.70	8.59	8.75	8.60	8.37	8.77
serial number	10	11	12	13	14	15	16	17	18
the closing price	8.88	9.37	9.05	8.70	8.59	8.75	8.60	8.37	8.77
serial number	19	20	21	22	23	24			
the closing price	8.56	8.70	8.94	9.05	8.98	8.90			

Table 5. The closing price interval states of 24 trading days of Sinopec shares of Shenzhen on January 31-March, 12, 2007

price state	S1	S2	S3	S4
price interval	$<8.6$	$[8.6 \ 8.85)$	$[8.85 \ 9.1)$	$[9.1 \ 9.35)$
frequency	3	5	9	1
price state	S5	S6		
price interval	$[9.35 \ 9.6)$	$\geq 9.6$		
frequency	2	4		

Table 6. The closing price state transition of 24 trading days of Sinopec shares of Shenzhen from January 31 to March, 12, 2007

frequency Current phrase \ The next phrase	S1	S2	S3	S4	S5	S6
S1	0	3	0	0	0	0
S2	2	1	2	0	0	0
S3	1	1	4	1	1	0
S4	0	1	0	0	0	0
S5	0	0	0	0	0	2
S6	0	0	2	0	1	1



## Strategies for Developing the Success of Small Medium Enterprises in Pakistan

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### Abstract

This research investigates the successful strategies for growth of SMEs business in Pakistan. SMEs play an important role in the business as well economy of the country. Research was conducted from 100 SMEs units by using structured questionnaire as tool for the measurement. The data was analyzed by using SPSS-16.5 software five point likert scales used for the measurement of SMEs in Sindh. It was revealed that different stages of SMEs business required the strategic planning and it was observed that SMEs most of the units are sick units in Pakistan because of lack of Planning strategies. The strategy however continuous strong growth is not necessarily one of the aims of an enterprise, then success has been measured in other ways.

**Keywords:** Strategies, SME, Business, Developing, Growth, Economy

### 1. Introduction

Although strategy is a word more commonly associated with large organizations and strategic decisions have been found to be just a significant to the success of small enterprise. This unit describes some of the main considerations in formulating small business strategies, taking into account the diversity of motives of the owner-manager. In the large Business, growth of sales & profits are common strategic goals, but this is not always the case in small Business. Why not? What other strategic objectives might a small business have? The size distribution of firms in the economy unfortunately has narrow view of success which consigns most small business into the category of unsuccessful. The vast majority of business does not grow beyond their classifications as a small firm; only few grow to become medium size, and even fewer grow into the new large companies of the future. Large firms in the UK economy account for a very small percentage of the total number of enterprises. As we saw earlier, (See Unit 1, Figure 1.2), 99 percent of UK Business fall into the "Small" category of less the 50 employee and nearly 90 percent are "Micro" Enterprise of fewer than 10 employees. If the size distribution of firms is visualized as a pyramid, the base is extremely broad & the apex very narrow. If successes mean climbing from the bottom to the top, then it is rear in deed.

### 2. Data Collection Methodology

Research was conducted from 100 SMEs units by using structured questionnaire as tool for the measurement. The data was analyzed by using SPSS-16.5 software. Five point likert scale used for the measurement of SMEs in Sindh.

### 3. Model of Growth Stages

This view of small business success or failure has been refined into various models of the growth stages of a small business. The number of stages varies but a composite model is illustrated in figure 10.1.

#### 3.1 Phase 1: Concept / Test stage

The new business idea is conceived, and planned. Full scale operations may (or may not) be preceded by detailed planning and testing in the market place. In some cases the business is run as a part time operation, before the owner places complete dependence on it. The small business begins operation and is developed to viability, or it is aborted at

an early stage. This stage is specified as the individual owner-manager launching a new enterprise largely through his own efforts. Some analyses indicate curial periods when a small business will survive or fail. One such period is illustrated as the first 18-24 months, or it will not develop satisfactorily and suffer an early death. VAT statistics confirm this high level of early failures with only 68 percent of registrations surviving the first 2 years (see Unit 3, Figure 2)

### *3.2 Phases 2: Growth / Decline Stage*

The second curial phase is sometimes shown as occurring between the second and third years of operation. The growth that can occur at this time places organizational strains on the enterprise. The one-person entrepreneurial management style is seen as inadequate to fully sustain growth. A division of managerial tasks, the recruitment of non-owner-managers and the development of functionally organized team are seen as the prerequisites to take the business through this phase, without which it will struggle and often fail.

### *3.3 Phase 3: Maturity*

A further stage looks at the business maturing, and going through a period of stability, when growth flattens. The small firm loses its simple structure of centralized decision making, and becomes more sophisticated in its control system and more bureaucratic in its procedures. In other words it takes on some of the characteristics of a larger organization.

### *3.4 Phase 4: Re-growth / Decline*

The identification of a further phase, sometimes referred to as the s-curve hypothesis, suggests that once a small business has established it self in the market place, with a demonstrable competitive advantage, profit or external investment will follow the further exploit this early success. This will trigger a second period of a high growth. Without this second surge of growth, the lack of impetus in maturity phase can turn into stagnation and decline, as competition intensifies. Whilst these models of the various growth stages of successful small enterprises contain aspects which are indeed descriptive of how businesses develop, they over look the statistical evidence, that most small businesses do not develop into larger organizations in this way it is true that many do fail; many more simply establish themselves and survive as small business, without becoming larger companies in either size or organizational structure.

## **4. Impact of SMEs on the production performance in Sindh in year 2008**

The survey was made within various SMEs operating in Sindh, targeting employees from both lower and middle level management, it must be noted that about 60% of the questioners were filled by lower management and 40% by middle management, the distribution is shown in tables-1,2,3 and 4. In survey we focus on basic three cities of sindh which are emerging potential in SMEs, Zone-wise distribution is given in table-4.

## **5. Developing SMEs growth Strategies**

The general purpose of the management of any enterprise has been defined as the achievement of the organization objectives and a continuous improvement in its performance; successful management is thus directly linked to the organization. If the objective of the business includes high rate of growth, this clearly yardstick against which success of the management can be judged. If however continuous strong growth is not necessarily one of the aims of an enterprise, then success has been measured in other ways.

As many small business are the physiological extension of owner-manager, their personal motives and objectives will be crucial in assessing success or failure. Researches cost considerable doubt on weather growth is the common goal driving the small business owner forward. A survey of owner-manager business concluded that for owner-manager should be independent. Another study stated that more than 30 percent owners wanted their small firms stay at their present size. This echoes earlier work done at the time of the Bolton report which suggested that any owner paid lip services to the ideal of growth might threaten.

Clearly the motives of owner-managers for entering into the world of small business will vary, giving rise to different objectives for their business. Attempts have been made to classify entrepreneurs in terms of their personal values, in order to distinguish between some of the more obvious types, and their possible objectives (see also Unit 2, The Entrepreneur and the Owner-Manager). Figure The only common motive that can be attributed to owner managers with such differing backgrounds and desires is the survival of the business itself, for a sufficiently long period to deliver the objectives sought.

### *5.1 Critical factors in the failure of young business*

Young firms face problem in their formative years which threaten survival.

#### *5.1.1 External influences*

Earlier in this study (unit 3, 1, A matter of life and death) we reviewed the external influences outside of their control. Macro-economic conditions such as interest rates, prices and market risk overall levels of consumer demand, and micro

environmental factors in the local catchment areas or industry sectors such as the intensity of competition, are important influences on whether a new venture sinks or swims.

#### 5.1.2 Internal factors

The personal attributes, skills and competencies of the individual owner-manager are crucial to how well the business faces up to the inevitable crises that arise. Which particular important as some seem more critical to survival than others.

One study analyzed events which particularly threatened the survival of small ventures.

### 6. Small business strategy

With a low probability growth, and a high risk of failure, can a small business, adopt strategies to improve in chance of success? Much advice is published on how to succeed as a small business owner. There is obviously much to be gained from listening to the practical advice of those who have experience of small enterprises. But can this be formulated into a prescriptive strategy to guide the small business owner?

These motives vary from the craftsman seeking an alternative lifestyle to the opportunistic entrepreneur driven by materialistic gain. The objectives of small enterprises will also vary therefore high or continuous growth can not be assumed as an objective. The only objective common to the whole small business sector seems to be that of survival, as the risk of failure is high.

#### 6.1 Strategies beyond survival

Beyond survival, strategies will depend on the objectives of the enterprise. However the quality of management and marketing and the quantity of money remain as key influences on the ability of the small firm to meet its objectives, whatever these happen to be. New strategies will need to build on, rather than detract from, these primary influences. The motives of the owner manager are therefore a fourth influences to be added to the existing goals. Unlike large companies where objectives arise from the influences of a variety of stake-holders, small enterprise strategy's driven by more easily identifiable sources, often one person. This additional force in any development of strategy beyond survival is shown in figure 10.4.

Table 3 key influences in small firm strategies beyond survival –the '4 Ms'. Again the influences overlap to represent the impact they can have on each other. For example motives can point to one strategy which is thwarted by money or marketing considerations. An owner may be motivated to run a business which is completely environmentally friendly, only to find that money does not permit this policy to be fully implemented. A restaurant owner may have personal motives to provide only vegetarian food, but finds that the market place does not support this strategy. Management consideration may indicate a strategy which is thwarted by the motives of the owner. An appropriate management structure for a growing business may never be implemented by an owner motivated by a strong desire for personal control. Marketing strategies may run counter to motives. An owner's desire to run what they perceived as a completely ethical business may prohibit certain sales approaches. Despite evidence of strong local demand and competitive advantage; a trader may refuse to open on Sunday for personal reasons. Money influences may be diminished by personal motives. A desire to retain certain friendship may prevent rigorous pursuit of debtors. An owner with motives to promote their standing in the community may turn down the cheapest deal in favor of the local supplier.

#### 6.2 Activity for Growth

If small firm had the objective of high growth, how would its strategies be different from business with less ambitious growth plans?

#### 6.3 Strategies for growth

Small business can be divided into three broad categories for strategic analysis.

- Those likely to cease trading in the near future
- These likely to survive, but which will stay very small
- Those which will not only survive but will also grow rapidly.

As we have seen, the vast majority of small business falls into the first two categories. Only a tiny minority turn into the high growth enterprises which move quickly towards medium size status or beyond. However their significance to the economy is much greater than their numbers imply. High growth firms are those that provide most employment prospects over 30 percent of the new jobs created by small business are provided by the fast growing four percent of firms. This section looks at some of the influences on their growth.

#### 6.4 The entrepreneur, the firm and strategy

In a review of the evidence on small business growth, strategy developed a framework of the characteristics of high growth small firm improving three components.

- The starting resources of the entrepreneur
- The firm
- Strategy

External equity Growing business is more likely to have obtained external funds from outside individuals or organizations. Market positioning high growth firm tend to occupy deliberately chosen market niches where they can exploit innovations and any technological sophistications they might have innovation. New products or services introduction are key to small firm growth. Growth is restricted if no owning managers are not interested in developing new business. The motivation and retention of a management team is important to increase the capabilities of the business.

### 6.5 Stages of growth

Are different strategies and skills required for different stages of a firm's life? Setting up a new business is not the same managerial task as running an existing fast growing one. The problems and issues seem to cope up in the same strategic areas, however. For example Ducker puts forward four requirements for the successful development of a new venture:

- (1) Focus on the market
- (2) Financial foresight, especially planning cash needs in advance of growth.
- (3) Building a top management team before it is required.
- (4) Careful definitions of the founder's roles in the enterprise.

### 6.6 Successful small businesses strategies.

In this and other units the various influences on the like hood of, first the survival of a new venture and secondly, its growth into larger enterprises has been discussed. These have been divided into external and individual influences and into factors that particularly affect high growth firms. As growth is one of the key factors in survival, many of the influences on survival are similar to those that are important for high growth firms. A composite model of these influences is summarized in critical factors in small business strategies.

Unit 3 (section 5, 'Critical survival factors') summarized the external factors listed above unit 2 (section 6 'Towards successful entrepreneurship') analyzed the building block of successful entrepreneurship which make up the individual factors. This unit has added the important ingredient of motives. Together these factors influence the likely hood of success or failure. The overlapping circles indicate the inter dependence of these force. For example the sector in which the firm is set up just as the decision on which sector to start a new venture in is influenced by personal factors and previous experience. Few entrepreneurs develop a business in which all these factors are favorable disposed. If a complete set of favorable influence is not attainable, which are the most significant ones to get right? Research into successful small firm provides some guidance evidence from several studies suggests that the success of a small firm depend more upon the policies it adopted than the buoyancy of the market in which it operates. External influences are less important; than individual factors, particularly the management competencies and the personal attributes to cope with the small business environment. Some individual's successes an entrepreneur when the odds seems stacked against them, whilst other fail when the conditions for success are relatively good.

## 7. Conclusions

Strategy may seem a work more applicable to larger organization then small. However small business is similarly influenced by their strategic choices, the common perception might be that the typical small business is more productive, whilst larger organizations are more diligent in their strategies process. There is little hard evidence to support this view. Some commentators view entrepreneurial strategy of large firms is more diligent than small businesses. They focused control of small enterprise certainly make the process of formulating strategy easier than in large organization. The sheer size and complexity of some enterprises means that changing existing pattern to a deliberate new strategy is a difficult task. In a small business, the owner manger can embark on a new strategy with minimal consultation and communication.

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Table 1.

Variable	Middle Performance	Low Performance	High Performance
Experience with TQM	0.0034	0.01507	-0.01567
Production Experienced Squared	-0.0002	-0.003	0.00024
Sole Proprietorship	-0.23456	-0.2664	-0.17734
Hired labor to Total Labor			
Gross Income			
Debit Asset Ratio	0.78689	0.545454	0.0011
Firms Located in North-West	0.00457	0.35487	0.02455
Firms Located in East-West	0.46585	0.712	0.1254

Table 2.

Management Tier	No of Respondents	Percent
SMEs Upper Management	80	40
Lower Management	120	60
Total (n=)	200	100

Table 3. In SMEs successful growth in various units of Sindh

S:NO	Item	Agree	Disagree	Neutral	Percent	Freq
1	Employees Satisfaction	51.5	21.5	27	100%	200
2	Teamwork and participation	66.5	6	27.5	100%	200
3	Freedom Through Control	57	18	24.5	100%	200
4	Unity of Purpose	71	2	27	100%	200
5	Long Term Commitment	70	3	25	100%	200
7	Continuous Improvement	70.2	2.7	25.1	100%	200

Where as: Agree = Strongly Agree + Agree,

Disagree = Strongly Disagree+ Disagree

Table 4.

Geographical Zone	Frequency	Percent
Sukkur	20	50%
Hyderabad	10	25%
khairpur	10	25%



# Demographic Diversity in Top Level Management and Its Implications on Firm Financial Performance: An Empirical Discussion

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## Abstract

This paper explores how demographic diversity in top level management affects firm financial performance. Top level management refers to both top management team and board of directors. Thus, the purpose of this paper is to empirically examine the effect of demographic diversity on top management team and boards of directors with regard to firm financial performance. This paper uses both financial and non-financial data from top 100 non-financial listed companies over the period 2000 to 2006, using the non-probability sampling approach. Demographic diversity comprises of ethnic and gender diversity and performance is measured by Return on Equity (ROE). A Pooled Least Square (PLS) regression method is used and hierarchical regression analyses are presented accordingly. The results indicate that demographic diversity has some significant impact on boards of directors with regard to firm financial performance. However, demographic diversity in TMTs does not create any significant impact on firm financial performance.

**Keywords:** Gender and ethnic diversity, TMTs, BODs, Performance

## 1. Introduction

The effectiveness of the top management level and its impact on firm performance has always been a central focus in most research work in strategic management. Conceptually, the top management level could be viewed in two perspectives; top management team and board of directors. It is of great interest for many researchers to continue investigating the characteristics of the top management teams (TMTs) and board of directors (BODs) and their impact on firm performance (Kakabadse and Kakabadse, 2006; Kakabadse et.al., 2006; Cadbury, 1992; Dahya and Travlos, 2000; Kroll, Walters and Le, 2007; Auden, 2006). Women's and multi-ethnic groups' involvement in the top level management has become increasingly important in the business world. Significant changes in terms of their readiness in holding high-ranking positions have attracted many researchers to continue exploring in these areas (Holton, 1995; Burke, 1997; Burke and Nelson, 2002; Carter, Simkins and Simpson, 2003; and Klenke, 2003). Though, much of the previous work connected to discriminatory policy, however, the corporate world remains unclear over whether gender and ethnicity in TMTs and BODs diversity could create significant impact on firm performance in general, and financial performance in particular.

## 2. Top Management Teams (TMTs) and Board of Directors (BODs)

Firm performance is a reflection of the characteristics and actions of the team of managers central to the firm, which is conceptualized as top management team, (TMT) (Hambrick and Mason, 1984). Several studies have made attempts in examining the characteristics and behaviors of the top management team, such as interaction and demography, and exploring the impact on success of the firm (Amason, 1996; Amason and Sapienza, 1997). Top management team and their importance as a potential determinant of firm performance continue to be a focus of strategic management

researchers (Goll, Sambharya and Tucci, 2001). The ultimate objectives of top management team's efforts are to create a competitive advantage and ensure strong organizational performance. As the top management takes important corporate decisions and sets strategic directions, it is therefore recognized as a key component affecting a firm's performance. On the other hand, the crucial point in this research that can not be ignored is that the roles of the board of directors (BODs) and their contributions on financial performance. The board of directors has the final authority and responsibility for the corporation's conduct and performance, although the day to day operations are to be handled by professional managers (Fischel and Bradley, 1986).

The primary theories concerning the roles of the board of directors include stewardship theory and the agency theory. The stewardship theory argues that managers are inherently trustworthy and not prone to misappropriate corporate resources (Donaldson, 1990; Donaldson and Davis 1991, 1994). This view suggests that there is little need for the oversight and governance role of the board of directors. Agency theory, which characterizes modern corporations, is built on the notion of separating ownership from control as the managers could potentially take actions that are rooted in their self interests (Jensen and Meckling, 1976; Eisenhardt, 1989). Clearly, the board of directors plays a very significant role in maximizing shareholders' wealth via exercising control over top management (Kose and Senbet, 1998). As a corporate governance mechanism, the board members are also to ensure adequate returns for shareholders (Vafeas, 1999; Weir and McKnight, 2001; Coles et al., 2001). The general principles in the Malaysian Code of Corporate Governance in 2000 cover the aspects of board structure, board size and independent board of directors. This in turn, motivated the Bursa Malaysia to take some steps to further enhance the commitment of the board members of the Malaysian corporations (e.g. restriction on the number of directorship of a person in impose restriction on the number of directorship of a person) starting from year 2002.

### 3. Focus of the Study

This paper focuses on two different aspects of top level management; top management teams (TMTs) and board of directors (BODs). Many studies were carried out in this area over the past two decades, Hambrick and Mason (1984). Research on TMT characteristics has been widely carried out on various aspects for theoritizing purposes (Lamm and Myers, 1978; McGrath, 1984; Gladstein and Reily, 1985; Murray, 1989; Michael and Hambrick, 1992; Fiol, 1995). The demographic characteristics on TMT includes age, functional background, education, tenure, (Hambrick and Mason, 1984), who paved a way to deal with diversity within top management and its impact on firm performance that is better known as the Upper Echelon Theory. They argued that top management's characteristics (e.g. demographic) influence the decisions that they make and therefore the actions adopted by the organizations that they lead. It occurs because demographic characteristics are associated with many cognitive bases, values and perceptions that influence the decision making of top management. This discussion was later expanded to the 'six specific influence processes' that allow shaping the strategic direction and performance of the organization (Navahandi, 2006).

In view of this, top management members could with greater demographic diversity, influence decision making process in the top management and positively contribute to firm performance. The basic foundation of this theory could be rooted to the earlier concepts on the characteristics at the top management and competitive behaviours (Cyert and March, 1963). Thus, firm performance could be positively impacted by the competitive behaviours at top level of an organization. Admittedly, in the case of BODs to a large extent (as discussed above), diversity enhances greater creativity, innovativeness and quality decision making, thus this study expects the similar outcome at strategic level particularly involving the boards of directors (Zahra and Pearce, 1989) since boards are the most influential actors, boards are also to carry out the monitoring role representing shareholders (Hambrick, 1996).

Significantly, some research shows that increasing diversity on boards of directors would be beneficial to organization in terms of gaining critical resources (Pfeffer and Salancik, 1978) and where corporate governance is concerned, benefits at strategic level are positively related to diverse top management (Eisendardt and Bougeois, 1988). Occupational diversity among board members is also positively related to performance in the context of social obligation (Siciliano, 1996). Zander (1993), stresses that efforts must also be taken to make fullest use of the talents of board members. The presence of the demographic heterogeneity at top management level is expected to increase firm performance, hence, heterogeneity is suitable for complex, ambiguous business operations and the decision making processes are structured in nature whereas, homogeneity in top management is more effective especially when faced with unstructured decision making processes (Hambrick and Mason, 1984).

This paper has its 'unique contribution' on the scope of diversity, the upper echelon theory and the implications on firm performance. As most studies focus on the demographic diversity involving the individuals of the top management teams (TMTs), we however, have a different view of testing the demographic effect in TMTs with regard to firm performance. Rather than focusing on age, functional background, educational background and tenure of the individual manager, this study incorporates the proportion of demographic diversity based on gender and ethnicity in TMTs and BODs and its implications on firm performance. Understandably, diversity can be viewed in two perspectives; demographic and cognitive. Demographic diversity includes gender, age, race and ethnicity and cognitive diversity includes knowledge, education, values, perception, affection and personality characteristics (Maznevski, 1994; Milliken

and Martins, 1996; Pelled, 1996; Boeker, 1997; Watson et al., 1998; Peterson, 2000; Timmerman, 2000). There have been many contemporary studies on demographic diversity and its effect on performance (Lee and Far, 2004; Evans and Carson, 2005; Bergen and Massey, 2005). Some researchers even studied specifically on the impact of demographic diversity on top management team or boards of directors and its implications on firm performance (Roberson and Park, 2007; Erhardt, et al., 2003; Certo et al., 2006; Carson, et al., 2004;). However, very few studies found on gender and ethnic diversity in top management teams (e.g. Roberson and Park, 2007) and boards of directors (Burke, 1995) simultaneously.

It should be pointed out that this study does not investigate the characteristics or discrimination within the top management teams (TMTs) and boards of directors (BODs) rather this work is specially designed to investigate the impact of diversity (demography) within top management team and boards of directors on firm financial performance. Hence, the purpose of this study is to empirically examine the relationship between gender and ethnic diversity on top management teams and boards of directors with firm financial performance (Certo et al., 2006; Kroll, Walters and Le, 2007; Auden, 2006)

#### **4. Definition**

Initially (before 20th century) ethnic groups were defined as ‘people of other countries (Yin, 1973) but however, ethnic groups do not necessarily share a country of origin but instead share a sense of common political or cultural origin (Capehart, 2003). In essence, diversity affiliations include gender, race, national origin, religion, age cohort and work specialization, among others (Cox, 2001). As the terms multi-ethnic and multi-culturalism are inter-changeably used, Kabilan and Hassan (2005) ... prefer the use of the term ‘multi-ethnic’ to ‘multi-culturalism’...multi-culturalism is a misled concept or a misnomer, when applied to Malaysia. Hasan, Samian and Silong (2005) ...managing diversity is very much based on tolerance and respect ...to preserve inter-ethnic harmony. Hence, ethnic would be the right term to address racial composition in Malaysia. Hence, ethnicity involves Malays, Chinese, Indians and others and gender refers to either male or female groups.

#### **5. Homogeneity versus Heterogeneity and Performance**

The current literature reveals the fact that the relationship between diversity and organizational or group performance can be either positively correlated or negatively correlated or even some studies show that there is no relationship (somewhat mixed findings) between diversity and performance. Perceived diversity within the senior management ranks was evidenced in higher perceived levels of overall performance, profitability and return on equity (Allen, Dawson, Wheatly and White, 2008). Some empirical findings indicate that diversity results in greater knowledge, creativity and innovation and thus, organizations tend to become more competitive (Watson et al., 1993). Besides that, the diversity able to attract and retain the best talent available; reduced costs due to lower turnover and fewer lawsuits, enhanced market understanding and marketing ability, better problem solving, greater organizational flexibility and better overall performance (Coz and Blake, 1991; Griscombe and Mattis, 2002) via improvement in decision making at strategic level (Bantel, 1993). Siciliano (1996) found that board diversity paves a way for positive results in performance. Also supported by Eisenhardt et al., (1998), Smith et al., (1994), Carpenter (2002) and Greening and Johnson (1996). Cultural heterogeneity results in issue-based conflict which in turn enhances greater organizational performance. Heterogeneity is positively linked to better problem solving and offering creating solutions (Michael and Hambrick, 1992). Hence, diversity is positively related to performance. However, there could be no relationship between diversity (cultural heterogeneity and member diversity) and group cohesion. Murray (1989) suggested that the infusion of homogeneous groups would result in better performance.

However, advantages associated with homogeneous top management can not be ignored. In fact some argue having homogeneous management team would be more beneficial with regard to firm performance (Williams and O'Reilly, 1998). Evidence shows that heterogeneity leads to conflicts and negatively affects the effectiveness of communication in top management (Pelled et al., 1999; Amason, 1996; Carpenter, 2002). Besides this, racial and gender diversity can have negative effects on individual and group outcomes in certain instances (Miliken and Martins, 1996). For example, group members who differ from the majority tend to have lower levels of psychological commitment and higher levels of turnover intent and absenteeism. However, advantages associated with homogeneous top management can not be ignored. In fact some argue having homogeneous management team would be more beneficial with regard to firm performance (Williams and O'Reilly, 1998). It should be noted that the upper echelon diversity is associated with the demographic diversity of the workforce, with the evidence of homo-social reproduction taking place in organizations, particularly with regard to gender and race (Nishii, Gotte and Raver, 2007)

#### **6. Hypotheses Development**

The Upper Echelon Theory by Hambrick and Mason (1984) becomes an important input in relating heterogeneity in top management team (TMT) to firm performance. In view of this, a closer look at the model and its components would be of great help to expand our knowledge on diversity not only in Top management teams (TMTs) but also in boards of directors (BODs) that can be viewed in the same context as TMT (Hofman, Lheureux and Lamond, 1997) and it should

be noted that it is not organizational performance rather financial performance that is being investigated here and demographic diversity is represented by gender and ethnic diversity (Roberson and Park, 2007; Conyon and mallin, 1997; Daily et al., 1999; Zander, 1979; Costa and Kahn, 2003; Kang and Cnaan, 1995; Rutledge, 1994; Widmer, 1987; Martin and Midgley, 1999; Carson, Mosley and Boyar, 2004). Therefore, these arguments allow us to develop a set of directional hypotheses that explain the impact of the demographic diversity in TMTs and BODs on firm financial performance, thus the following hypotheses are proposed:

Hypotheses:

General;

Demographic diversity in TMTs has a significant impact on firm financial performance.

Demographic diversity in BODs has a significant impact on firm financial performance.

Specifically;

H1: Firm financial performance is positively impacted by gender diversity among TMT members.

H2: Firm financial performance is positively impacted by ethnic diversity among TMT members.

H3: Firm financial performance is positively impacted by gender diversity among Board members.

H4: Firm financial performance is positively impacted by ethnic diversity among Board members.

## 7. Methods and Measures

Data for the study were gathered from top 100 non- financial listed companies in Malaysia based on their average market capitalization over the period 2000 to 2006 (Appendix 1). A judgmental sampling method was adopted to suit the requirements for this study. These 100 companies accounted for almost two-thirds the total market capitalization on the main board. Besides their (non-financial companies) substantial contribution in the economy, the selection of non-financial companies is also important to control the heterogeneous characteristics of the companies selected.

The main focus was to detect the effect of gender and ethnic diversity on both top management teams (TMTs) and Board of Directors (BODs) with regard to firm financial performance from year 2000 to 2006. This period reflects the beginning of the post-crisis and the enhancement of the corporate governance in Malaysia (The Malaysian Code on Corporate governance, 2000). The dependent variable was financial performance, independent variables were gender and ethnic diversity and the control variables were TMT size, board size, firm size and firm age. The dependent variable, ROE; Return on Equity (Net Income divided by Total Equity- returns from shareholders' perspective) was a measure used to measure firm financial performance (Thomas and Ramaswamy, 1994), the independent variables, gender diversity and ethnic diversity on both TMTs and BODs were measured using a ratio scale. As for TMTs, gender and ethnic diversity were determined by female managers and non-Malay managers divided by total managers. Whereas, gender and ethnic diversity on BODs were determined by female directors and non-Malay directors divided by total board directors. The control variables; board size was determined by the number of directors sitting on the board, TMT size refers to total TMT members, firm total asset was a measure for firm size and firm age refers to number of years of business operations (Roberson and Park, 2007; Jehn and Bezrukova, 2004; Cohen and Cohen, 1975; Rosenthal and Rosnow, 1984).

## 8. Results

The main objectives of this study are first, to examine the effect of demographic diversity in top management team (TMT) on firm financial performance, secondly, to examine the effect of demographic diversity in boards of directors (BODs) on firm financial performance. The correlation results are displayed in Table 1 and as for the purpose of combining cross sectional and time series data, panel/pooled data analysis method was considered in view of obtaining reliable empirical results. Hence, Pooled Least Squares regression analyses were performed to explain the effect of demographic diversity (gender and ethnic diversity) on firm financial performance in the presence of the control variables in two different perspectives (TMT and BOD) as shown in Table 2 and Table 3. The regression results are presented in a hierarchical form.

Table 1 displays the mean, standard deviations and correlation details. Regarding correlations involving the demographic diversity and performance in both TMTs and BODs, in the case TMTs, the diversity variables (gender and ethnicity) are not significantly correlated with performance. However, TMT size has a significant negative correlation with the diversity factors at 0.01 (-0.139 and -0.093). On the other hand, in the of BODs, ethnic diversity is significantly (positively) correlated with performance at 0.05 (0.097). However, as for TMT, gender diversity is positively correlated with firm age at 0.01 (0.103) but negatively correlated with firm age at 0.01 (0.189) with regard to BODs. Meantime, a diagnostic testing on multi-collinearity effect was also done (using the pooled method) to ensure the independent variables remain reliable in explaining the variation in the dependent variable, and it was verified that the VIFs (Variance-inflating factor) for both control and independent variables were between 1.0 and 1.2

Before we discuss further, let us view some insightful information about the demographic diversity effect within TMTs and BODs using scatter plot matrix approach. Interestingly, the graphical expression of the bivariate relationship among gender diversity, ethnic diversity and TMT size and gender diversity, ethnic diversity and Board size seems to be quite unique as illustrated in Figure 1 and 2. Figure 1 reveals that there is a linear relationship between gender diversity (GDIVMGT) and TMT size. However, the relationship between ethnic diversity (EDIVMGT) and TMT size is curvi-linear and the relationship between gender diversity and ethnic diversity among TMT members is well spread, there is no clear pattern.

Similarly, Figure 2 illustrates that there is a linear relationship between gender diversity (GDIVBOD) and Board size. However, the relationship between ethnic diversity (EDIVBOD) and board size is curvi-linear, this is consistent (but statistically insignificant) with the earlier discussion involving TMT. Nonetheless, the relationship between gender diversity and ethnic diversity among board members is concentrated in the centre; again, there is no clear pattern.

Table 2 shows that based on findings, in general, demographic diversity in TMTs had no impact on firm financial performance. Clearly, though gender and ethnic diversity were positively correlated with financial performance, however, the correlation of the two with financial performance was insignificant. Thus, the first two hypotheses are not supported.

Table 3 shows that based on findings, in general, demographic diversity in BOD had a partial impact on firm financial performance. It seemed that gender effect did not contribute significantly toward firm financial performance though it registered a positive correlation with financial performance. Hence, hypothesis 3 is also not supported. However, ethnic diversity was significantly, positively and consistently correlated with financial performance at 0.001 to 0.05. Hence, hypothesis 4 is fully supported. Firm performance was significantly impacted by ethnic diversity in BOD over a period 2000 to 2006 ( $t = 2.438; 23.888$ ), however, the first two models were significant at 0.05 and 0.1 ( $F\text{-test} = 3.028, 2.034$ ). The following two models were marginally significant at 0.10.

## 9. Discussions and Conclusions

Our discussions are divided into two perspectives; TMTs and BODs. In the case of TMTs, our results revealed that diverse groups in top management particularly among the TMT members did not have any significant impact on firm financial performance. It seemed, though women's involvement at corporate level (TMT) in large firms remained intact (34.9 per cent), however, they were unable to create impact on their firms' financial performance. In addition, it could refer to the fact that probably, women's participation was limited to certain areas at strategic level (not actively involved in decision makings) as shareholders remained skeptical about women's ability to handle crisis (Shockley-Zalabak, 1981) as compared to men who could manage using competitive styles (Miller, 1989). But the emergence of women leaders globally can not be denied; in fact they are equally capable to handle global businesses (Warner and Joynt, 2002). Similarly, even ethnic diversity also did not have any significant impact on firm financial performance. This could be regarded as unique findings as many firms were to some extent controlled by either family members or race-based political parties. This could be a contributory factor as to why ethnicity in TMT failed to show its relevance to firm financial performance. Nonetheless, in view of our findings, we can not deny the advantages of homogeneity in our discussion (Williams and O'Reilly, 1998). It should be remembered that homogeneity may only be applicable for a short run as many Malaysian companies were still in the growth stage. However, in the long run companies need to be prepared to increase diversity in TMT in order to compete and sustain in the international and global market (Auden, Shackman and Onken, 2006; Goll, Johnson and Rasheed, 2007) as heterogeneity paves ways for greater creativity, innovativeness and firm performance (Michael and Hambrick, 1992; Griscombe and Mattis, 2002).

In the case of board of directors (BODs), demographic diversity partially influenced firm financial performance. Again, gender effect among the board members did not seem to be significant with regard to financial performance. However, ethnicity among the board members created a significant impact on firm financial performance. Hence, ethnic diversity could be used to rectify poor corporate governance among the listed companies especially when the economy is faced with financial crisis (Mitto, 2002). Thus, we need heterogeneity particularly on ethnicity as members on the boards are directly involved in issuing, restructuring, takeover exercises, introducing measures to enhance regulatory, transparency, accountability and independence. Though women's role was not felt in boards of directors, again it could be argued that the effect was only for a short run but in the long run, companies should increase gender diversity to enhance their international competitiveness.

This study supports both homogeneity and heterogeneity in TMTs and BODs and both have advantages and disadvantages. However, shareholders need to be concerned with the dangerous practice known as 'groupthink' especially when homogeneity exists in BODs. Undoubtedly, in the presence of women and ethnicity in the workforce, companies should consider heterogeneity in their teams at strategic level for greater performance via creativity, innovativeness and quality decision making.

## 10. Limitations

Some limitations or potential weaknesses in this study must be addressed. First, the sample involves non-financial sector which comprises of various industries thus, it is quite difficult to maintain homogeneous characteristics within the companies chosen as different industries tend to face different types of challenges. Second, this study is constrained by the selection of variables where, only two independent variables (gender and ethnic diversity) were used to measure TMT and BOD diversity and the operational definition of ethnic diversity (non-Malay ratio) is to some extent becomes arguable as there are possibilities where all the TMT and board members are non-Malays but of the same ethnic group which statistically gives a high score for diversity and this could be misleading and this data were solely based on the companies' annual reports. The dependent variable (performance measure) ROE may not be the best recommended measure as there are others measures such as ROA, Tobin's Q, etc. Third, the regression model in this study assumes there is a linear relationship between demographic diversity in TMTs and BODs and performance. There could be a curvilinear relationship between them. This means diversity may result in adverse results for a certain period, followed by indifferent results, then positive relationship with regard to performance.

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Table 1. Mean, standard deviation and correlation results

	Mean	Std D	1	2	3	4	5	6	7	8	9
1.Performance	7.147	47.617	1								
2.Gender in TMT	0.349	0.284	.008	1							
3.Ethnic in TMT	0.662	0.327	.057	<b>-.163**</b>	1						
4.TMT size	4.00	4.00	-.014	<b>-.139**</b>	<b>-.093*</b>	1					
5.Gender in BOD	0.131	0.068	.012	.052	-.067	<b>-.124**</b>	1				
6.Ethnic in BOD	0.521	0.253	<b>.097*</b>	-.068	<b>.521**</b>	-.060	.038	1			
7.Board size	8.44	2.400	0.010	<b>-.090*</b>	-.014	<b>.237**</b>	-.057	.040	1		
8.Firm size <sup>a</sup>	4.090	9.864	.012	<b>.093*</b>	-.015	.037	.036	<b>-.090*</b>	<b>.139**</b>	1	
9.Firm age <sup>b</sup>	27.520	15.798	<b>.103**</b>	<b>.103**</b>	<b>-.094*</b>	.058	<b>-.189**</b>	-.020	<b>-.108**</b>	.067	.1

a In billions, b In years, \* p < 0.05, \*\* p < 0.01

Table 1 displays the mean, standard deviations and correlation details involving demographic diversity and performance in both TMTs and BODs.

Table 2. PLS Regression Results of Financial Performance on Demographic Diversity in Top Management Team (TMT)

Independent Variables	Model 1	Model 2	Model 3	Model 4
Constant	-1.872	-0.765	-1.010	4.175
Gender	4.413	3.915	3.733	4.874
Ethnic	9.785	9.430	9.488	8.834
TMT size		-0.212	-0.225	-0.180
Firm size			0.081	0.099
Firm age				-0.198
R- Square (%)	0.3	0.4	0.4	0.7
F-test	0.889	0.637	0.493	0.714

**Dependent Variable: Performance, \*p < 0.10, \*\*p < 0.050, \*\*\*p < 0.001**

Table 1 describes the effect of gender and ethnic diversity in top management team (TMT)

Table 3. PLS Regression Results of Financial Performance on Demographic Diversity in Board of Directors (BODs)

Independent Variables	Model 1	Model 2	Model 3	Model 4
Constant	-7.959	-10.045	-10.124	-2.244
Gender	13.838	14.373	13.233	2.816
Ethnic	<b>23.447***</b>	<b>23.259**</b>	<b>23.877**</b>	<b>23.888**</b>
Board size		0.252	0.175	0.026
Firm size			0.1444	0.181
Firm age				-0.200
R- Square (%)	1.20	1.21	1.3	1.57
F-test	<b>3.028**</b>	<b>2.034*</b>	1.587	1.578

**Dependent Variable: Performance, \*p < 0.10, \*\*p < 0.050, \*\*\*p < 0.001**

Table 2 describes the effect of gender and ethnic diversity in board of directors (BODs)

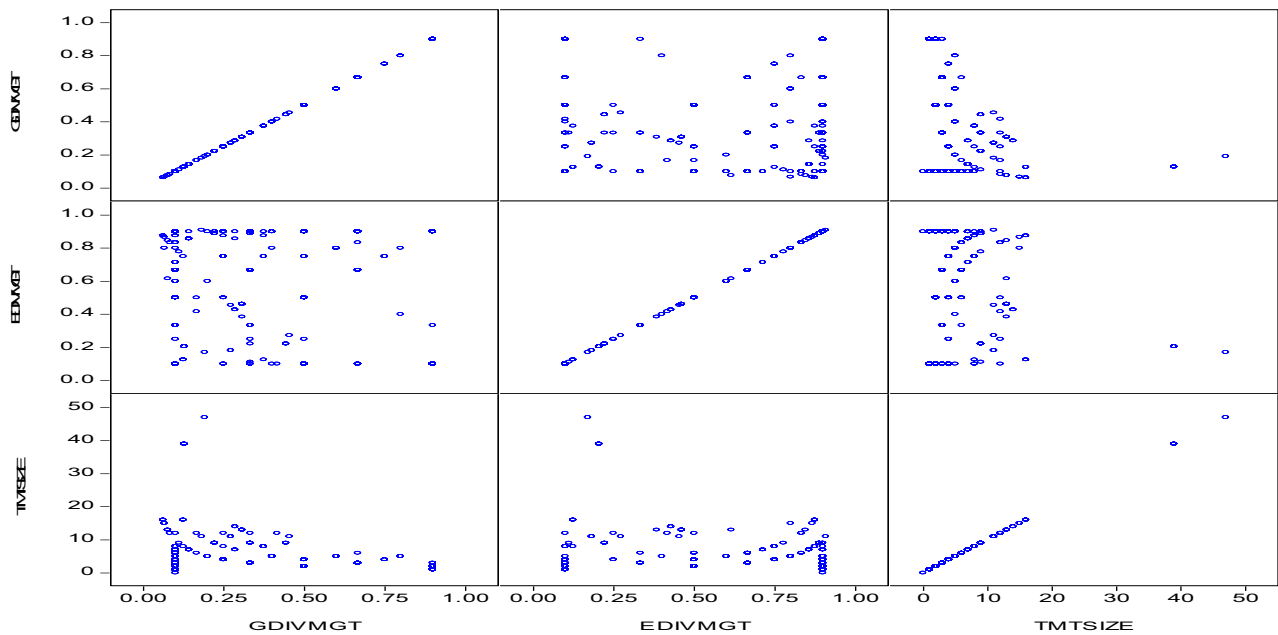


Figure 1. Scatter Plot Matrix of Demographic Diversity and TMT Size

Figure 1 reveals the graphical expression in a bivariate form among gender diversity (GDIVMGT), ethnic diversity (EDIVMGT) and TMT size.

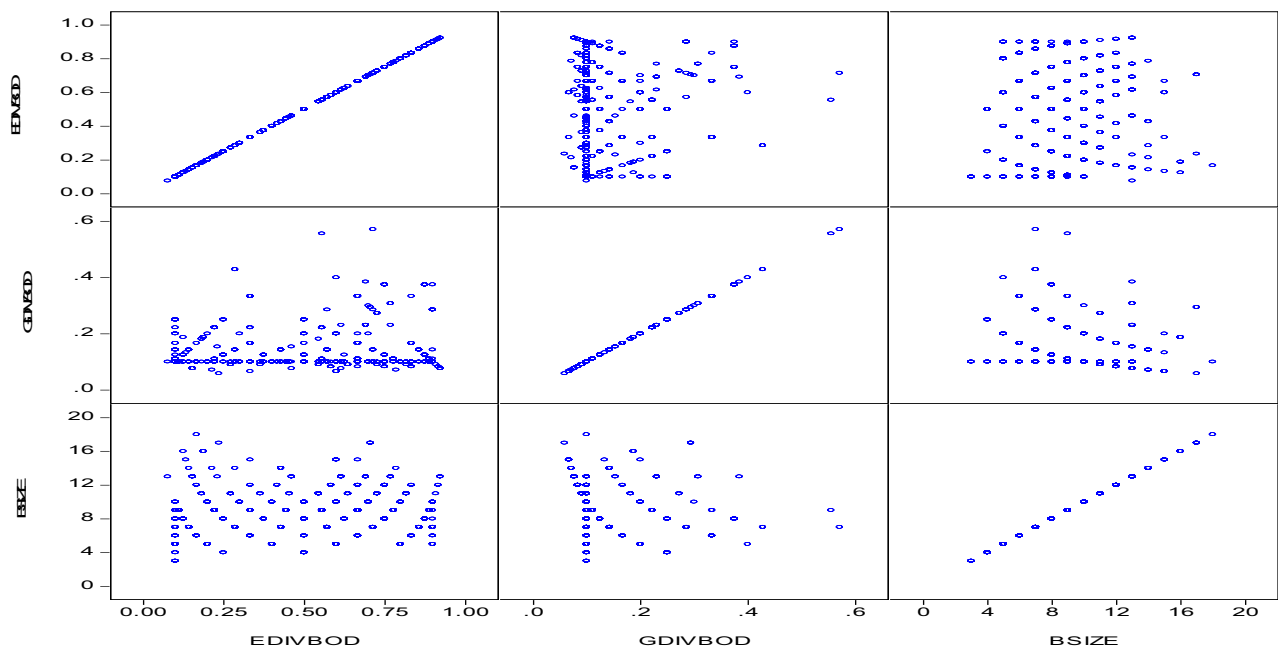


Figure 2. Scatter Plot Matrix of Demographic Diversity and Board Size

Figure 2 reveals the graphical expression in a bivariate form among gender diversity (GDIVBOD), ethnic diversity (EDIVBOD) and Board size (BSIZE)

**Appendix 1: Top 100 non-financial companies**

<b>No</b>	<b>Company</b>	<b>No</b>	<b>Company</b>
1	AKN Technology Bhd	51	Malayan United Industries Bhd
2	Batu Kawan Bhd	52	Malaysian Airline System Bhd
3	Amway (Malaysia) Hldgs Bhd	53	Malaysian Mosaics Bhd
4	APM Automotive Holdings Bhd	54	Malaysian Oxygen Bhd
5	Asiatic Development Bhd	55	Malaysian Pacific Ind Bhd
6	Bandaraya Developments Bhd	56	Marco Holdings Bhd
7	Berjaya Land Bhd	57	MISC Bhd
8	Berjaya Sports Toto Bhd	58	MMC Corporation Bhd
9	Bintulu Port Holdings Bhd	59	Mulpha International Bhd
10	Boustead Heavy Industries Corp Bhd	60	NCB Holdings Bhd
11	Boustead Holdings Bhd	61	Nestle (Malaysia) Bhd
12	British American Tobacco (M)	62	Oriental Holdings Bhd
13	Cahaya Mata Sarawak Bhd	63	Pan Malaysia Corporation Bhd
14	Camerlin Group Bhd	64	Pan Malaysian Industries Bhd
15	Carlsberg Brewery Malaysia Bhd	65	Panasonic Manufacturing Malaysia Bhd
16	Chemical Co of Malaysia Bhd	66	Petaling Tin Bhd
17	Country Heights Holdings Bhd	67	Petronas Dagangan Bhd
18	Dialog Group Bhd	68	Petronas Gas Bhd
19	DIGI.Com Bhd	69	PPB Group Bhd
20	DRB-Hicom Bhd	70	PPB Oil Palms Bhd
21	Esso Malaysia Bhd	71	PSC Industries Bhd
22	Fraser & Neave Holdings Bhd	72	Puncak Niaga Holdings Bhd
23	Gamuda Bhd	73	Ramatex Bhd
24	Genting Bhd	74	RB Land Holdings Bhd
25	Globetronics Technology Bhd	75	Resorts World Bhd
26	Golden Hope Plantations Bhd	76	Road Builder (M) Hldgs Bhd
27	Guinness Anchor Bhd	77	Shell Refining Co (FOM) Bhd
28	Hap Seng Consolidated Bhd	78	Sime UEP Properties Bhd
29	Hume Industries (Malaysia) Bhd	79	Star Publications
30	IGB Corporation Bhd	80	Sunway Holdings Incorp Bhd
31	IJM Corporation Bhd	81	TA Ann Holdings Bhd
32	KFC Holdings (Malaysia) Bhd	82	TA Enterprise Bhd
33	Kian Joo Can Factory Bhd	83	Talam Corporation Bhd
34	KSL Holdings Bhd	84	Tan Chong Motor Holdings Bhd
35	Kuala Lumpur Kepong Bhd	85	Tanjong Public Limited Company
36	KUB Malaysia Bhd	86	TH Group Bhd
37	Kulim (Malaysia) Bhd	87	Tradewinds (M) BHD
38	Kumpulan Guthrie Bhd	88	Time Dot Com Berhad
39	IOI Corporation Bhd	89	Time Engineering Bhd
40	IOI Properties Bhd	90	Top Glove Corporation Bhd
41	Island & Peninsular Bhd	91	Transmile Group Bhd

42	Jaya Tiasa Holdings Bhd	92	UBG Bhd
43	JT International Bhd	93	Uchi Technologies Bhd
44	K & N Kenanga Holdings Bhd	94	UMW Holdings Bhd
45	Kwantas Corporation Bhd	95	Unisem (M) Bhd
46	Lingkaran Transkota Hldgs Bhd	96	WCT Engineering Bhd
47	Lingui Developments Bhd	97	WTK Holdings Berhad
48	Lion Corporation Bhd	98	YTL Cement Bhd
49	Magnum Corporation Bhd	99	YTL Corporation Bhd
50	Malakoff Bhd	100	YTL Power International Bhd



## On the Development of Economy, Science and Technology

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### Abstract

The advance in global economy promotes the development of science and technology, which propels the former in return. The development of economy as well as science and technology has promoted global competition and encouraged people to develop economy, science and technology in order to get out of crisis. As a result, the development of science and technology will promote the diversification of economy and global exchanges. This article is divided into two parts--- the challenges and opportunities in the development of economy as well as science and technology and their development. In order to develop economy, science and technology, we must broaden our minds to deal with challenges and opportunities.

**Keywords:** Economy, Science and technology, Competition, Development

Economic development is closely related to that of science and technology since the former is the basis for the latter and the latter is a focus in the former. Economic development provides the necessary environment for researches in science and technology and the latter offer condition for the exploration of economic strategy. The development in both aspects will promote the society's advance, global exchanges and competition. There are, of course, challenges and opportunities in the development process, which will promote development as well. In this situation, a nation or a region must develop its economy as well as science and technology in order to get out of crisis.

### 1. Challenges and Opportunities in the Development of Economy, Science and Technology

#### *1.1 Challenges and Opportunities in Economic Development*

In the development of economy there are challenges and opportunities, which promote the economic development as well. Both of them are auxiliary to each other. It is reported that an economic crisis may promote the economic cooperation and cultural communication among nations and regions because of their efforts to perfect their economic policies and study their development strategies during it. Actually, challenges are closely associated with opportunities in economy. Challenges will promote the development of international trade, the competition in science and technology, the development of global economy and therefore that of the whole world. Meanwhile, economic crises inform people of economic knowledge and global development, hence promoting the development of economy. As for opportunities, they promote the development of the information-based era, that of science and technology in many nations or regions over the world as well as competition for talents. It is opportunities that help nations and regions get out of crisis, promote their cultural exchanges and development and enhance their economic competition.

#### *1.2 Challenges and Opportunities in the Development of Science and Technology*

In the development of science and technology there are also challenges and opportunities, which promote the economic development in return. Actually, economy and science and technology are indispensable for each other since they propel one another. It is reported that crises in science and technology promote the cooperative activities among nations or regions, the development of global economy and science and technology, the development of talents as well as exchanges in economy, science and technology. It is of significance to explore into the challenges and opportunities in science and technology development. These challenges will enable nations or regions to study their economic strategy, hence promoting the development of society as well as science and technology. Meanwhile, these challenges also encourage people to study science and technology and world economy in order to get familiar with the challenges and opportunities themselves. In addition, not only nations or regions, but also governments at all levels or enterprises are forced to learn about development and get out of crisis. Opportunities promote economic competitions, perfect the law system and help people to prevent risks and keep away from crisis. It is opportunities that push the economic development, promote the competition among nations or regions, encourage the development of talents as well as that of science and technology themselves.

### 2. The Development of Economy, Science and Technology

#### *2.1 Close Relations between Economy and Science and Technology*

Economy is closely related to science and technology. On one hand, economy provides an environment for science and technology; on the other hand, science and technology are the connotation of economic development and provide condition for the exploration into economic strategy. Economic development promotes the competition in science and

technology while science and technology push the economic competition as well. It is reported that global competition is mainly conducted in economy, science and technology and talents. Actually, any nation or region needs the whole world, needs science and technology as well as talents. If economic development suffers from difficulties, there'll be a crisis in science and technology. Their development calls for the development of nations or regions, getting out of crises and investment from different industries. As the mainstay in a nation or a region's development, economy, science and technology are included in the important plans of governments or enterprises, a main part in social development, a major issue in global competition, the connotation of culture as well as an important strategy in global development.

## *2.2 The Development of Economy, Science and Technology*

### *2.2.1 Getting out of Crisis*

First of all, we should try to get out of crisis. To some degree, crises promote the development of economy as well as science and technology, encourages the cooperation among nations or regions, enhances the development of governments and enterprises, facilitate the improvement of the whole society. What's more important, nations, regions and people are encouraged to develop themselves in order to get out of crisis. As is reported, the computer, an important tool for business, has been developed with the internet-based commerce means. It is challenges and opportunities that have promoted the economic development, the advance in science and technology as well as the competition among nations or regions. At the same time, they help governments or enterprises to think over how to get out of crisis. Therefore, economic policies get perfected. As is known to all, governments, enterprises, all sides of the society and people are all of importance for the development of economy, science and technology, which pushes cooperation and exchanges all over the world, the progress of society as well as cultural advance.

### *2.2.2 World Development*

It is the advance of the whole world that has promoted the development and competition in economy, science and technology as well as the cultural exchanges among nations or regions. In return, the world has been developed through the competition in economy, science and technology. Economy, science and technology provide lots of experience for world development while the world also offers an environment for their development. In addition, challenges are closely related to development, in which the former promotes the latter while the latter forces nations or regions to get rid of crisis. It is reported that challenges and opportunities in economy, science and technology have made our world wonderful and the extensive use of computers has enabled nations or regions to learn about the competition all over the world. There are challenges and opportunities in world development, which promote global competition, encourage people to negotiate their disputes in international trade, force nations or regions to develop their economy, science and technology, push governments or enterprises to get out of crisis, to perfect their economic plans and regulations as well as promote the development of talents. In a word, world development has promoted the cooperation and development of nations or regions, facilitated the development in economy, science and technology, forced them to get out of crisis.

## **3. Conclusion**

Both economy and science and technology are of great importance. They are significant parts in world competition, hence drawing much attention in any nation or region. Accordingly, it is a major issue for them to broaden their minds to get out of crisis and develop their economy, science and technology.

In a short, economy, science and technology provide lots of experience for world development while the advance of the whole world also promotes competitions in economy, science and technology. It is challenges and opportunities that have promoted the development of nations or regions as well as that of economy, science, technology, culture, world exchanges and talents. In this situation, nations or regions are encouraged to try to get out of crisis, to develop their economy, science and technology, hence promoting the development of the whole world.

## **Notes**

Competition: a battle to find out who is the winner. <http://baike.baidu.com/>

Development: a philosophical term referring to the process of things getting from a simple state to a complicated one. <http://baike.baidu.com/>

Economy: the incomes and expenses of a nation, an enterprise or an individual. <http://baike.baidu.com/view/>

English Translation: <http://fanyi.cn.yahoo.com/>

Science and technology: the application of scientific development and its achievements<sup>0</sup> in practice. <http://baike.baidu.com/view/>

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