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## Statement from the Managing Editor

Welcome to our first issue of this year. The articles published in this issue are interdisciplinary and it is encouraging to see our younger generation of researchers, from our institution, as well as others, sending in their contributions to the Journal.

In our first article, Visetbhakdi, using an experimental design, studies gender differences in Thai consumers' responses to sex appeal advertising. Her findings offer useful suggestions for marketing practitioners in planning their advertising strategies for products and brands.

Praptiningsih, in the second article, discusses the effect of Bank of Indonesia's monetary policy on macroeconomic stability and financial performance. Her findings provide valuable knowledge to investors, firms, government, and central banks in terms of decision making regarding market perceptions and expectations.

In our third article, Lowell examines product attributes and demographic variables that affect Thai consumers' repurchase of frozen ready to eat meals (frte). Given that Thais rank among the world's highest in terms of purchase of these foods, his findings provide useful insights for marketers for the improvement of their current offerings, better segmentation, and expansion into new markets.

In our fourth article, Laokulrach throws light on policies and factors affecting employment in Thailand. Her paper, which reviews policies over the past 25 years, proposes several factors, which if initiated, can support the increase and stabilization of Thailand's production and employment.

Our final article by Mahato, examines international passenger satisfaction with Nepal Airlines. As the number of travelers are increasing worldwide and competition gets stiffer in the airline industry, his findings offer useful suggestions for both travelers and airline operators.

I express my gratitude to all the contributors; any meaningful improvements in the Journal are dependent upon submissions. I urge those of you who previously have submitted manuscripts to the Au Journal of Management to continue to do so. I also invite new contributors to send the Journal your very best.

**Patricia Arttachariya, Ph.D.**  
Managing Editor



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# THE EFFECTS OF SEX APPEAL ADVERTISING ON THAI CONSUMERS' EMOTIONAL AND BEHAVIORAL RESPONSES

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## Abstract

*The study aimed to investigate the gender differences in Thai consumers' emotional and behavioral responses to sex appeal advertising. This study employed an experimental design with a sample of 623 Thai young adults. The sampling frame of this study was Thai undergraduate university students from one private university. Respondents were shown sex appeal print ads with three nudity levels (low, moderate and high). It was found that gender of respondents proved to be a key determinant of the evaluation of sex appeal advertising. The use of strong and overt nudity in advertising can generate tension among females. Hence, it is up to marketers to downplay the degree of nudity of advertising on Thai female target audience as a possible way to reduce negative arousal-tension. The present study provides a better understanding of the way in which Thai male and female young adults respond to the use of sex appeal advertising, as well as provides useful managerial applications for advertisers in Thailand.*

## INTRODUCTION

'Sex' is one of the creative strategies employed by advertisers to gain consumers' attention in the competitive and cluttered advertising environment. Since sex is viewed by advertisers to have the ability to grab and maintain audience attention, which can in turn increase ratings and circulation and thereby generate greater revenue for the company, the use of sex appeal in advertising is on the upward trend. A number of studies have suggested that the use of sex appeal in TV and magazine advertising is prevalent (Henthorne & LaTour, 1995) and is increasing worldwide (Paek & Nelson, 2007; Peterson & Kerin, 1977; Sciglimpaglia, Belch, & Cain, 1978; Soley & Kurzbard, 1986). Importantly, the sexual content and imagery in women's and men's magazines today are more explicit and overt than in the past (Soley & Kurzbard, 1986). Moreover, it is common for advertisers nowadays to use global or standardized advertising with similar themes and even the same advertising across borders, for cost savings benefits and for controlling the brand's global image. With the increased use of standardized advertising, it is crucial for global advertisers to consider the boundaries of sexual content in the adver-

tising of each country. This study aims to understand how Thai young adults' respond to the use of sex appeal advertising. Based on the literature reviewed, there are key problems that need to be further investigated.

1. **The use of sex appeal stimuli has mixed responses results.** Researchers report mixed results with respect to sex appeal advertising effectiveness (Putrevu, 2008). Prior empirical studies have shown both positive reactions and negative reactions from viewers of sexual (or erotic) advertising. Given these mixed results and unanswered questions, the study examines the effect levels of nudity in advertising on Thai young adults so that advertisers will have a better understanding of how to utilize appropriate levels of nudity in Thai advertising.

2. **There have been limited studies on sex appeal ads in the Asian context.** The aim of the study is to investigate consumers' responses to sex appeal advertising in the previously overlooked Thai context. Most of the sex-in-advertising research has been conducted in the U.S. context (Beetles & Harris, 2005; Paek & Nelson, 2007; Reichert, 2002). However, there appears to be limited studies on sex appeal advertising in Asian countries (Liu, Li, & Cheng, 2006).



This study aims to address this gap by investigating Thai young adults' responses to different nudity levels in advertising. As advertising nudity increases, how will Thai young adults respond in terms of arousal, attitude toward the ad, attitude toward the brand, and purchase intention? The underlying assumption is that differences in gender will have an effect on how young Thai adults' respond to nudity level in advertising. This study aims at contributing pragmatic suggestions for practitioners, who should find the results useful for planning advertising strategies for brands and products.

## LITERATURE REVIEW

### Arousal as Emotional Responses Effects of Sex Appeal Advertising

**Arousal** is defined as responses, which range from energized to tiredness and from tension to placidity (Thayer, 1978). Prior studies have indicated that once exposed to sexual content, individuals experience these reactions (LaTour, 1990). The LaTour study supports the notion that sexual visuals evoke affective responses, generally characterized by positively-valenced arousal. Arousal proved to be a key mediator of ad response. Energized arousal (arousal that generates positive valence) proved to be the key driver of positive attitudinal responses (LaTour, 1990; LaTour & Pitts, 1990). If participants experienced a positively valenced arousal (energy and calmness), they also had more favorable attitudes toward the ad ( $A_{ad}$ ). Specifically, male respondents experienced more general activation (energy) as female nudity increased. On the other hand, females experienced tension activation (negatively valenced arousal) (Ford, LaTour, & Honeycutt, 1997; LaTour, 1990; LaTour & Pitts, 1990). Thus, arousal generated by nudity was a key determinant in subjects' responses to the ad and the product advertised.

### Attitude toward the Ad ( $A_{ad}$ ) and Attitude toward the Brand ( $A_b$ ) as Emotional Response Effects of Sex Appeal Advertising

**Attitude toward the ad ( $A_{ad}$ ) and attitude toward the brand ( $A_b$ )** are also key variables that

researchers have studied in relation to sex appeal advertising and emotional response effects (Muehling & McCann, 1993). **Attitude toward the ad ( $A_{ad}$ )** is defined as 'a predisposition to respond in a favorable or unfavorable manner to a particular advertising stimulus during a particular exposure occasion' (Mackenzie, Lutz, & Belch, 1986, pp.130-131). Studies have shown that sexual ads generate a positive attitude toward the ad ( $A_{ad}$ ) more than non-sexual ads (Reichert, Heckler, & Jackson, 2001; Severn & Belch, 1990). Another study indicated that a mild female sex appeal ad generated a more favorable attitude toward the ad ( $A_{ad}$ ) than an overt female sex appeal ad (LaTour & Henthorne, 1994). **Attitude toward the brand ( $A_b$ )** is defined as 'an individual's evaluation of a branded product' (Mitchell & Olson, 1981, p.318).

One study supported the notion that nudity in advertising positively influences consumers' attitude toward the ad ( $A_{ad}$ ) (Dudley, 1999). Dudley (1999) studied young consumers' attitude toward different degrees of nudity level depicted in sun tan lotion ads. The results showed that the advertisement featuring the product only was significantly less appealing than ads using models and that increasing nudity resulted in a more appealing ad. Thus, the results confirmed that the amount of nudity level has a strong influence on the respondents' response in terms of attention getting and that an increase in nudity level resulted in higher evaluations of the advertisement. The nude ad was seen as more significantly distinctive than either the swimsuit or product-only advertisements. Other studies have also indicated similar results, whereby sex appeal advertising generated positive reactions (Bello, Pitts, & Etzel, 1983; Severn & Belch, 1990).

On the other hand, there is empirical evidence that suggests that sex appeal advertising generates negative reactions on the part of the consumer. A previous study found that the ad containing a nude model was viewed as the least appealing (attitude toward the ad), and the product (attitude toward the brand) and company (attitude toward the advertiser) were perceived as having the lowest quality and as the least reputable (Peterson & Kerin, 1977). Another study indicated similar results—that a strong and overt sex appeal advertisement results in a significantly less favorable attitude toward the



ad ( $A_{ad}$ ), attitude toward the brand ( $A_b$ ), and purchase intention (PI) than a non-sexual advertisement (LaTour & Henthorne, 1994). Thus, it is still inconclusive whether sex appeal advertising generates positive or negative attitude toward the ad ( $A_{ad}$ ) or attitude toward the brand ( $A_b$ ).

### **Purchase Intention as Behavioral Response of Sex Appeal Advertising**

Purchase intention is defined as 'an individual's conscious plan to make an effort to purchase a brand' (Spears & Singh, 2004, p.56). Purchase intention is an acceptable and widespread measurement of behavioral intention in the marketing literature (Reichert, 2002). A number of studies have found that advertising with sexual content generated higher levels of purchase intention than those with no sexual content (Dudley, 1999; Grazer & Keesling, 1995; Severn & Belch, 1990). A study by Severn and Belch (1990) found that sexual ads generate significantly higher purchase intention than nonsexual advertisements. LaTour and Henthorne (1994) found that a mild sex appeal advertisement generates significantly higher purchase intention than an overt sex appeal advertisement. Hence, the level and variation of sexual explicitness also appear to have an effect on purchase intention (Grazer & Keesling, 1995; LaTour & Henthorne, 1994).

### **Gender Differences**

Studies have shown that the gender of respondents is a key determinant in the consumers' reaction to sex in advertising (LaTour, 1990; LaTour & Pitts, 1990; Sciglimpaglia, et al., 1978). Past literature has suggested that gender is one of the key variables in consumer behavior, since gender affects buying behavior, response to advertisements, product judgment, and information processing and the learning process (Till & Priluck, 2001). While men are mostly aroused when viewing nudity and sexual content sources, women are affected by romantic content sources (Anne 1971 cited in Liu et al., 2006, p.21). A number of researchers believe that men and women react differently to varying forms of sexual content in advertising due to gender differences in terms of sexual and personal motivations

and desires (Liu, et al., 2006). An explanation can be that women are more easily influenced than men (Darley & Smith, 1995) and it appears that women's capacity for elaborative processing is greater than that of men (Meyers-Levy & Maheswaran, 1991; Meyers-Levy & Sternthal, 1991).

A prior study found that the gender of the respondents had an effect on the reactions to the use of sex in advertising, with female respondents reacting more strongly to suggestive ads than men (Belch, Holgerson, Belch, & Koppman, 1982). As the level of suggestiveness increases, female respondents find the ads more offensive, less appealing, and less interesting than male respondents (Belch, et al., 1982). A study by Pope, Voges and Brown (2004) reported that women had more positive attitudes toward corporate image when exposed to sex appeal advertising for a cause. Another study indicated that men tended to respond favorably to sex appeal advertising in general (LaTour & Henthorne, 1993). It can be said that the gender of participants is a key determinant of the evaluations and interpretations of sexual content in advertising (Reichert, 2002).

Numerous studies support the idea that both male and female respondents evaluate the depiction of the opposite sex more favorably (Belch, et al., 1982; Jones, Stanaland, & Gelb, 1998; Judd & Alexander, 1983; LaTour, 1990; LaTour & Henthorne, 1993; Peterson & Kerin, 1977; Sciglimpaglia, et al., 1978; Sengupta & Dahl, 2008; Simpson, Horton, & Brown, 1996). An early study by Judd and Alexander (1983) showed that male respondents recalled advertising messages better than female respondents for advertising that depicted different female nudity levels. Similarly, Sciglimpaglia et al. (1978) found that men and women varied greatly in their evaluation of erotic ad stimuli.

Previous studies have shown that females evaluated the male-female nude suggestive ad negatively while the males evaluated were generally positive (Aboukalam, 2005; Sciglimpaglia, et al., 1978). A more recent study found that female respondents had less favorable attitudes than men toward sexy female ads and male respondents rated female nudity as more attention drawing than other visuals (Jones, et al., 1998). Moreover, male respondents had more favorable attitudes toward sexy female



advertising than to sexy male advertising (Jones, et al., 1998). A recent study indicated that female respondents had less favorable attitudes toward the ad ( $A_{ad}$ ) than male respondents when exposed to a sexually explicit ad (Sengupta & Dahl, 2008). In conclusion, a number of previous studies in sex-in-advertising effects research have investigated gender differences in advertising responses.

CONCEPTUAL FRAMEWORK AND HYPOTHESES

This study aims at investigating how males and females respond to sex appeal ads and how individual differences interact with their responses. Referring to the conceptual framework (see figure 1), there are four dependent variables: 1) arousal, 2) attitude toward the ad ( $A_{ad}$ ), 3) attitude toward the brand ( $A_b$ ), and 4) purchase intention (PI). There are two independent variables: 1) advertising nudity levels and 2) gender of respondents.

Gender Differences in Responses to Sex Appeal Advertising

Gender is a significant predictor of arousal—males show more positive attitudes toward the ad ( $A_{ad}$ ) and attitudes toward the brand ( $A_b$ ) when viewing

nude ads than viewing a demure ad (LaTour et al., 1993). Thus, past literature suggests that the gender of participants is the moderator of sex appeal advertising and of consumers' responses (Beetles & Harris, 2005; Belch, et al., 1982; Jones, et al., 1998; LaTour, 1990; LaTour & Henthorne, 1993; LaTour & Pitts, 1990; Peterson & Kerin, 1977; Pope, Voges, & Brown, 2004; Reichert, 2002; Sengupta & Dahl, 2008; Simpson, et al., 1996; Smith, Haugtvedt, Jardrich, & Anton, 1995).

This study predicts that males and females will experience differently arousal, attitude toward the ad ( $A_{ad}$ ), attitude toward the brand ( $A_b$ ), and purchase intention (PI) when they are exposed to different advertising nudity levels.

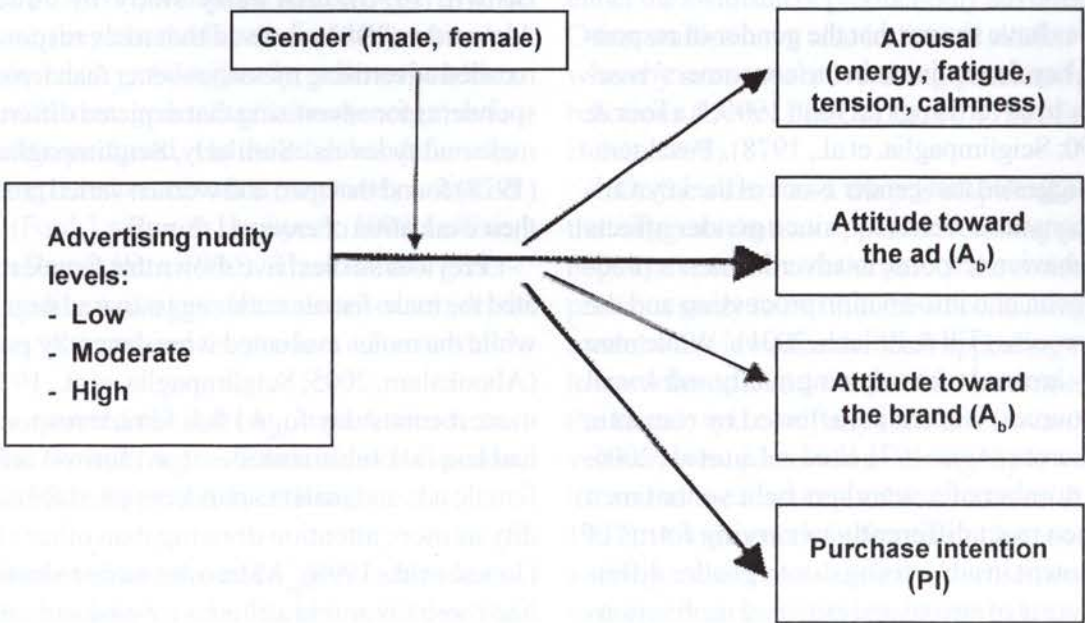
**H1:** When exposed to different nudity levels in advertisements, Thai males and females will experience differences in arousal (energy, calmness, fatigue, and tension).

**H2:** When exposed to different nudity levels in advertisements, Thai males and females will have different attitudes toward the ad ( $A_{ad}$ ).

**H3:** When exposed to different nudity levels in advertisements, Thai males and females will have different attitudes toward the brand advertised ( $A_b$ ).

**H4:** When exposed to different nudity levels in advertisements, Thai males and females will have different intentions toward purchasing the brand advertised (PI).

Figure 1: Conceptual Framework





## METHODOLOGY

### Design and Stimuli

The hypotheses were tested in an experiment with three treatment levels (low nudity level, moderate nudity level, and high nudity level), resulting in a three (type of ad) by two (gender of respondent) between-subjects factorial design.

High quality mock-up magazine advertisements were used as stimuli. The ads, designed for the study, promoted Lancôme Miracle perfume because it is a well-known global brand with a luxurious image; thus, the brand itself is relevant to the college-age population. All ads were identical in terms of copy i.e. limited to Lancôme's logo and Miracle's logo and a single phrase 'The fragrance for women' in order to minimize text as a confounding variable.

Most studies on nudity have been carried out on single models, i.e. investigated either women only models or male only models, and there have been few studies on using mixed heterosexual models. Since there is still a gap in investigating the use of the sex appeal of heterosexual couples and its effects on male and female respondents, this study aims to extend the knowledge in this area by investigating Thai young adults' response to the use of female and male nudity in advertising. Images of female and male models in varying degrees of revealing clothes were used in experimental designs. There were three types of nudity levels in this study (adopted Peterson & Kerin, 1977; Belch et al., 1982). Nudity level:

1. Low nudity: fully clothed
2. Moderate nudity: exposing some midriff and cleavage
3. High nudity: undressed and exposing more back and cleavage.

### Sample and Procedure

Convenience sampling was used for this research. The respondents of the experiment were 623 undergraduate students aged between 18-23 years old at one private university (286 male, 337 female). The students were recruited from a combination of different faculties and from second to fourth years, depending on student availability. The students were recruited from different subjects in

order to obtain a good mix of students from different years of study.

The experiments were conducted in classrooms. The average time for conducting the experiment was around 30 minutes in each class. The students were randomly assigned to three different treatments. Once respondents viewed the stimuli i.e. one respondent viewed one magazine advertisement (the stimuli were not embedded in other materials), they were asked to fill out the questionnaire.

The questionnaire was designed to measure consumers' responses (arousal, attitude toward the ad, attitude toward the brand, and purchase intention) towards the advertising. Arousal was measured by adopting LaTour and Pitts' (1990) and Thayer's (1978) 18 items short form to measure arousal across four dimensions (energy, calmness, fatigue, and tension). Thayer's AD-ACL dimension scales consist of summing the four-point adjectival items each for General Activation (Energy), General Deactivation (Calm), Sleep (Fatigue), and High Activation (Tension).

The scales measuring attitude toward the ad (Aad) were adopted from Mittal and Lassar's (2000) original 7-interval semantic differentials: boring/interesting, good/bad, desirable/undesirable, irritating/pleasing, and like very much/dislike very much. The original three semantic differential 7-interval items measuring attitude toward the brand (Ab) were adopted from Mittal and Lassar (2000): good/bad, desirable/undesirable, likable/dislikable. The original two 7-point interval items of Bello, Pitts and Etzel (1983) measuring purchase intention (PI) were adopted. The two items were used to measure the intention to buy (I will actively seek out the product in the market, I will buy the product for self or as gift).

### Manipulation Check

A manipulation check was done by having the respondents rate the nudity level of the magazine advertisement on LaTour's (1990) six-point single item scale, indicating the degree to which treatment ads displayed nudity. Results of the one-way ANOVA showed a significant difference between the low-nudity ad and moderate-nudity ad, with the moderate-nudity ad being perceived as displaying



more nudity ( $M = 3.05$ ) than the low-nudity ad ( $M = 1.27$ ),  $F(2, 632) = 180.57, p < .001$ . The results also showed a significant difference between the low-nudity ad and the high-nudity ad, with the high-nudity ad being perceived as displaying more nudity ( $M = 3.27$ ) than the low-nudity ad ( $M = 1.27$ ),  $F(2, 620) = 180.57, p < .001$ .

Although the ANOVA results showed no significant differences between the moderate-nudity ad and the high-nudity ad, the high-nudity ad indicated a higher mean than the moderate-nudity ad ( $M = 3.27$  and  $M = 3.05$  respectively). However, the open-ended question for the manipulation check of the level of sex appeal revealed that the high-nudity ad had a higher level of nudity than the moderate-nudity ad. A larger number of respondents described the sex appeal used in the ad of the moderate-nudity ad as ‘not too much’ or ‘not too revealing’ than for the high-nudity ad. Hence, the overall indication of the mean score and the open-ended question show that the high-nudity ad is perceived as displaying nudity more than the moderate-nudity ad.

## RESULTS

Hypothesis 1 was assessed using MANOVA in order to investigate the effects of nudity levels in advertising on males’ and females’ arousal. The observed significance levels for Pillai’s test indicated that there was a statistically significant difference between different advertising nudity levels on the combined dependent variables,  $F(8, 1230) = 8.38, p < .001$ , partial eta squared = .052 (see table 1). The Ad Nudity Levels\*Gender interaction was significant,  $F(8, 1230) = 2.51, p < .05$ , partial eta squared = .016.

Hypothesis 1 predicted that Thai males and females would experience arousal differently when exposed to different nudity levels. The results (see table 2) showed significant Ad nudity levels\*Gender interaction for tension,  $F(2, 617) = 8.02, p < .001$ , partial eta squared = .025. This suggested that the tension generated was dependent on the joint effects of gender and the advertising nudity levels. The post hoc Tukey HSD tests of the interaction effect of advertising nudity levels and gender revealed that

Table 1: Multivariate Tests

Dependent variable: arousal

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Ad nudity levels	Pillai's Trace	.103	8.379	8.000	1230.000	.000	.052
Gender	Pillai's Trace	.010	1.544a	4.000	614.000	.188	.010
Ad nudity levels*Gender	Pillai's Trace	.032	2.507	8.000	1230.000	.011	.016

a. Exact statistic

Table 2: Tests of Between-Subjects Effects

Dependent variable: arousal

Source	DV	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Ad nudity levels	Energy	3.771	2	1.885	6.939	.001	.022
	Calmness	11.586	2	5.793	17.027	.000	.052
	Fatigue	1.504	2	.752	2.236	.108	.007
	Tension	.747	2	.374	1.621	.199	.005
Ad nudity levels*Gender	Energy	.312	2	.156	.574	.564	.002
	Calmness	.923	2	.462	1.357	.258	.004
	Fatigue	.811	2	.405	1.205	.300	.004
	Tension	3.698	2	1.849	8.018	.000	.025
Error	Energy	167.660	617	.272			
	Calmness	209.923	617	.340			
	Fatigue	207.554	617	.336			
	Tension	142.299	617	.231			



females were significantly more tensed (High Activation) than males in the high-nudity level condition (female tension:  $M = 0.51$ , male tension:  $M = 0.28$ ,  $p < .01$ ). Hence, hypothesis 1 was supported.

Hypothesis 2 was assessed using a two-way ANOVA to investigate the effects of advertising nudity levels on males' and females' attitude toward the ad ( $A_{ad}$ ). The results (see table 3) indicated that the Ad Nudity Levels\*Gender interaction was not significant,  $F(2, 617) = 0.78$ ,  $p > .05$ , partial eta squared = .003. The results showed that males and females did not differ significantly in their attitude toward the ad ( $A_{ad}$ ) when exposed to different advertising nudity levels. Hence, hypothesis 2 was not supported.

H3 was assessed using a two-way ANOVA to explore the effects of advertising nudity levels and

gender on attitude toward the brand advertised ( $A_b$ ). The results (see table 4) showed that the Ad Nudity Levels\*Gender interaction was not significant,  $F(2, 617) = 0.89$ ,  $p > .05$ , partial eta squared = .003. From the Estimated Marginal Mean, the attitude toward the brand ( $A_b$ ) between males and females across the three nudity conditions was not significantly different (low nudity: male  $M = 5.04$ , female  $M = 5.44$ , moderate nudity: male  $M = 5.04$ , female  $M = 5.47$ , high nudity: male  $M = 4.87$ , female  $M = 5.52$ ). Hence, hypothesis 3 was not supported.

Hypothesis 4 was assessed using a two-way ANOVA in order to investigate the effects of advertising nudity levels on males' and females' purchase intentions (PI). The results (see table 5) showed that the Ad Nudity Levels\*Gender interaction was not significant,  $F(2, 617) = 0.21$ ,  $p > .05$ ,

Table 3: Tests of Between-Subjects Effects

Dependent variable: attitude toward the ad ( $A_{ad}$ )

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Ad nudity levels	11.586	2	5.793	5.233	.006	.017
Gender	.658	1	.658	.594	.441	.001
Ad nudity levels*Gender	1.725	2	.863	.779	.459	.003
Error	682.957	617	1.107			

Table 4: Tests of Between-Subjects Effects

Dependent variable: attitude toward the brand ( $A_b$ )

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Ad nudity levels	.436	2	.218	.213	.809	.001
Gender	37.336	1	37.336	36.383	.000	.056
Ad nudity levels*Gender	1.818	2	.909	.886	.413	.003
Error	633.163	617	1.026			

Table 5: Tests of Between-Subjects Effects

Dependent variable: purchase intention (PI)

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Ad nudity levels	1.380	2	.690	.477	.621	.002
Gender	56.486	1	56.486	39.033	.000	.059
Ad nudity levels*Gender	.617 2	.309	.213	.808	.001	
Error	892.883	617	1.447			



partial eta squared = .001. From the Estimated Marginal Mean, the differences of purchase intentions between males and females across the three nudity conditions was not significantly different (low nudity: male  $M = 3.54$ , female  $M = 4.08$ , moderate nudity: male  $M = 3.58$ , female  $M = 4.27$ , high nudity: male  $M = 3.60$ , female  $M = 4.18$ ). Hence, hypothesis 4 was not supported.

## DISCUSSION AND CONCLUSION

H1 investigated whether gender differences had any influence on consumers' arousal (energy, calmness, fatigue, and tension) when consumers were exposed to different advertising nudity levels. This hypothesis was supported. The results of H1 found that the tension generated was dependent on the joint effects of gender and the advertising nudity levels, and that females were significantly more tense than males in the high-nudity level condition. This suggests first, that gender is a key determinant of the evaluations of sex appeal advertising and second, the use of strong and overt nudity in advertising can generate tension among females. A number of empirical studies have reported consistent results, indicating that females reacted less favorably to high sex appeal advertising (Belch, et al., 1982; LaTour & Henthorne, 1993).

The pattern of tension (moderate nudity generated the lowest tension) among the females in this study is consistent with earlier empirical studies, which found that females' responses exhibited a curvilinear pattern such that both low and high sex appeal ads evoked lower evaluations than that of the moderate sex appeal ad (Belch, et al., 1982; Sciglimpaglia, et al., 1978). This pattern of tension is also supported by another study in which consumers' favorable responses were reduced as the level of nudity increased (LaTour & Pitts, 1990).

The research results, indicating higher tension of females than males under high-nudity conditions, are supported by a number of sex-in-advertising effects research studies, which contend that gender is the key determinant of consumers' responses to sex appeal advertising (LaTour, 1990; LaTour & Pitts, 1990; Liu, et al., 2006; Sciglimpaglia, et al., 1978).

Gender differences in response to sex appeal advertising can be explained by the following differences in 1) sexuality and 2) socialization. First, men and women differ in many ways with regard to sexuality, that is, men have higher levels of sexual interest and activity than women, such as sexual fantasizing and exposure to pornography (Reichert, LaTour, & Kim, 2007). Second, it can be argued that the reason why men and women react differently in terms of arousal is because of differences in socialization or because of a 'double standard' (Reichert, et al., 2007). Socialization plays a significant role in sexual development (Fisher, White, Byrne, & Kelley, 1988) and socialization influences are biased toward encouraging male sexuality but discouraging female sexuality (Sengupta & Dahl, 2008). The socialization of human sexuality theory argues that affective responses (positive or negative) to sexual stimuli depend on the sexual socialization process during childhood when the child typically receives differing direct or indirect messages from influential sources such as parents, peers, and social institutions (Sengupta & Dahl, 2008). With regard to casual sex, men are rewarded or admired, while women are likely to receive negative messages and sanctioning from parents or peers (Sprecher, McKinney, & Orbuch, 1987). Another study reported that females generally perceived erotic stimuli as punishers, while males perceived erotic stimuli as rewards (Griffitt & Kaiser, 1978). Eventually, due to powerful and repeated conditioning, attitudes toward sex per se get transferred to sexual stimuli, causing men to generate positive affect while women generate negative affect toward sexual stimuli (Sengupta & Dahl, 2008). Thus, without the threat of restriction or sanctions, men are more impulsive in their responses, with little inhibitions (Reichert, et al., 2007). In conclusion, gender differences in terms of sexuality and socialization has an effect on females experiencing more tension than males in high-nudity condition and sustaining more conservative views toward the use of sex appeal in advertising.

Results of H2, suggests that when exposed to different nudity levels in advertisements, there were no gender differences on attitude toward the ad ( $A_{ad}$ ). The results of this study are in contrast to a number of studies that indicated that males and females had different attitudes toward the ad ( $A_{ad}$ ).



when exposed to sex appeal advertising (Jones, et al., 1998; Judd & Alexander, 1983; Liu, et al., 2006; Sengupta & Dahl, 2008; Simpson, et al., 1996).

However, recent studies have yielded results similar to this study in that there were no gender differences in consumers' response to sex appeal advertising. A study investigating consumers' responses toward sexual and non-sexual appeals found that there were no gender differences in attitude toward the ad ( $A_{ad}$ ) (Putrevu, 2008). Another recent study also found that there were no significant gender differences in male and female responses to ads featuring male models with high sex appeal and ads featuring female models with low and high sex appeal (Liu, et al., 2006). The findings suggest that Chinese male and female undergraduates may hold quite similar attitudes toward sex appeal advertising (Liu, et al., 2006).

This implies that negative arousal-tension did not elicit a negative attitude toward the ad ( $A_{ad}$ ). Past studies also have shown that tension did not exert a direct influence on ad impression (LaTour & Pitts, 1990). Another possible explanation can be that the high-nudity condition is not that strong or overt enough to elicit negative attitudinal responses, while past studies have employed strong and overt visuals, such as nude models or models engaging in sexual acts (Judd & Alexander, 1983; Sengupta & Dahl, 2008; Simpson, et al., 1996).

Another reason that explains why Thai males and females have similar ad attitudes ( $A_{ad}$ ) toward sex appeal advertising is because the research sample exclusively consisted of students. It could be that this college segment has the fewest gender differences when compared to other age brackets. The college students might have greater homogeneity between the sexes because this group has a higher level of education (more than 12 years) than the general Thai population, which is on average 8.1 years (Thai news agency, 2005). Having a high education is associated with being more liberal (Ford, et al., 1997). Thus, having a higher education and a liberal attitude might contribute to males and females having similar attitudinal responses to sex appeal advertising.

H3 and H4 tested the influence of advertising nudity levels and gender differences on consumers' attitude toward the brand ( $A_b$ ) and purchase inten-

tion (PI). These hypotheses were not supported. This suggests that males and females did not have significant differences in attitude toward the brand ( $A_b$ ) or purchase intention (PI) when exposed to different advertising nudity levels. The results are in contrast with some studies suggesting there were gender differences in attitude toward the brand ( $A_b$ ) and purchase intention (PI) when respondents were exposed to sex appeal advertising (Peterson & Kerin, 1977; Reidenbach & McCleary, 1983). The possible explanation could be that first, the moderate and high nudity conditions are not that strong or overt enough to elicit negative emotional and behavioral responses. Second, the research sample is mainly college students which might have the fewest gender differences compared to other age groups.

## IMPLICATIONS

### Practical Implications

Advertising researchers and practitioners are concerned about advertising effectiveness and how the brand message is getting across to their target audience. In today's cluttered media environment, sex appeal advertising is one way to grab target audiences' attention and is believed to help break through the cognitive defense mechanism (Putrevu, 2008). Insights into how Thai consumers respond to different degrees of sex appeal advertising can help marketers understand the extent to which degrees of sex appeal advertising, the influence of sex appeal advertising on certain types of target audiences and, how to avoid offending target audiences by using explicit sex appeal advertising. These research findings provide a better understanding of the way in which Thai male and female young adults respond to the use of sex appeal advertising. The results provide several implications for advertisers and their development of advertising strategies and executions, as discussed below:

#### 1) *Degrees of sex appeal*

As demonstrated in this research, gender difference plays a role in moderating the effects of sex appeal advertising on arousal. The results showed that females experienced more tension than males



under the high-nudity condition. The use of nudity in print ads certainly has the potential of generating significant levels of tension among Thai females. Hence, it is left to the discretion of advertisers to downplay the amount of nudity in the ads that target Thai female audiences as a possible way to reduce negative arousal-tension. In addition, high sex appeal advertising should be avoided for female products.

### 2. *Implications for media placement*

Since the results showed that females experienced more tension than males under high-nudity condition, the findings are important for advertisers so they can contribute to forming certain guidelines as to where to place sex appeal advertising. A related managerial implication is that high sex appeal advertising should not be placed in media vehicles whose target audiences are predominantly female. High sex appeal advertising should be placed only in men's magazines like FHM and Maxim so as not to offend the sensitive female audiences.

### 3. *Avoid risk for well-established brands*

The research results demonstrated that sex appeal advertising did not generate significantly different attitudes toward the brand ( $A_b$ ) or purchase intentions (PI) because of prior brand familiarity with Lancôme Miracle perfume. In this study, prior brand familiarity reduces the influence of sex appeal advertising. Launching sex appeal advertising also can run the risk of generating negative responses. Employing sex appeal advertising is more beneficial to a new brand launch than a well-established brand when weighing between the benefit of capturing the audiences' attention and considering the risk of offending certain groups of consumers.

## **Theoretical Implications**

This research makes contributions to the existing literature on sex-in-advertising effects research. Although the research results confirmed earlier empirical research that demonstrated gender differences in arousal toward sex appeal advertising (LaTour, 1990; LaTour & Henthorne, 1993; LaTour & Pitts, 1990), this research extends the literature by showing very different results, i.e. when consumers are exposed to different advertising nudity levels, males

and females have similar attitudes toward the ad ( $A_{ad}$ ).

## **LIMITATIONS**

The first limitation of this study is the use of convenience sampling. The sample of this research was drawn from undergraduate students at one private university in Bangkok; thus, this limits the findings' generalizability to other groups of consumers. Another limitation of this research is that the viewing experience was not realistic since the respondents viewed the print ads in classrooms and each respondent viewed only one print ad. Hence, the classroom setting does not represent a naturalistic situation, where they are exposed to many adverts. Since Lancôme Miracle perfume print ads were used, the respondents might be aware of the brand and might hold prior attitude toward the brand ( $A_b$ ) before seeing the print ads. The respondents' attitude toward the ad ( $A_{ad}$ ) generated from different advertising nudity levels might not be strong enough to influence attitude toward the brand ( $A_b$ ).

Due to budget constraints, the research tested only feminine perfume brand Lancôme print ads with only one type of sex appeal, that is, nudity level. The research results from print ads might be different from the results of other media vehicles, such as TV stimuli.

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# THE EFFECT OF MONETARY POLICY ON MACROECONOMIC STABILITY AND STOCK MARKET: EVIDENCE FROM INDONESIA

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## Abstract

*Monetary policy can have a significant effect on the movement in the stock market. This paper investigates the effect of monetary policy through monetary instruments on macroeconomic objectives and stock market utilizing Vector Error Correction Model (VECM) in order to examine the dynamic effect of Bank Indonesia Rate and Overnight Money Market Rate in achieving price stability, foreign exchange stability, economic growth, and capital market stability. This paper utilizes Impulse Responses and Variance Decomposition approach to examine the responses and the contribution of monetary policy instruments in affecting the macroeconomic objectives. The findings confirmed that Bank Indonesia Rate and Overnight Money Market Rate are statistically significant in affecting the inflation rate, foreign exchange rate, the output growth and the Jakarta Composite Index. Finally, there is a trade-off between inflation and economic growth.*

## INTRODUCTION

According to major fluctuations and high volatility in inflation rates, exchange rates, gross domestic products growth rates and the stock index movements during the empirical period of 1990 to 2009, Bank Indonesia implemented several monetary policies to reduce the high volatility. However, some policies were found to be insufficient to mitigate the negative shocks affective macroeconomic stability. Therefore, Bank Indonesia continued working on minimizing the negative impact of economic shocks that can influence the stock market's performance as well as the macroeconomic stability. The Indonesian Capital Market, Financial Institution Supervisory Agency, and the Indonesian Stock Exchange Board played an important role in limiting deeper financial market's decline, particularly on the Indonesia Composite Index. Since stock market has become one of the main elements in influencing macroeconomic stability, movements in the stock market can have a significant impact on the macroeconomy.<sup>1</sup> To some extent, some literature argued that changes in the macroeconomic variables can have a significant impact on the movements in the stock market.<sup>2</sup> With respect to these linkages, Bank Indonesia's role in maintaining macroeconomic and

financial sector stability would be strongly influenced by the effectiveness of the monetary policy implementation or the effectiveness of monetary instruments. An important monetary policy instrument used by Bank Indonesia is the Bank Indonesia (BI) Rate. This is the main instrument of Bank Indonesia in controlling macroeconomic and financial performance. According to the operational mechanism, the instrument is known as the Interbank Overnight (O/N) Money Market Rate. In order to assess whether Bank Indonesia can influence inflation rates, exchange rates, economic growth and the stock market effectively, the relationship between these variables must be tested empirically. If the empirical test results identifies that the monetary policy instrument is significant in influencing the macroeconomic and financial stability, Bank Indonesia will be able to identify measures to reduce the volatility that encourages positive expectations of investors and businesses in Indonesia's economic and investment activity. With uncertainty and high volatility in macroeconomic indicators, these tend to increase the cost of all economic activities. Furthermore, it is important to conduct a study to test how effectively Bank Indonesia implements monetary policy through its instruments in achieving the ultimate goals namely price stability, exchange rate stability, economic growth, and sta-



bility in financial markets. Therefore, this paper will investigate whether the monetary policy can have a significant effect on macroeconomic indicators such as the inflation, the exchange rate, the output growth, and the stock market through the monetary policy transmission mechanisms. The result will be beneficial to the investors, firms, government and central bank in terms of their decision-making regarding the market perception and expectation. Furthermore, the study will provide valuable knowledge and experience based on the empirical studies and current research in terms of monetary policy and financial systems.

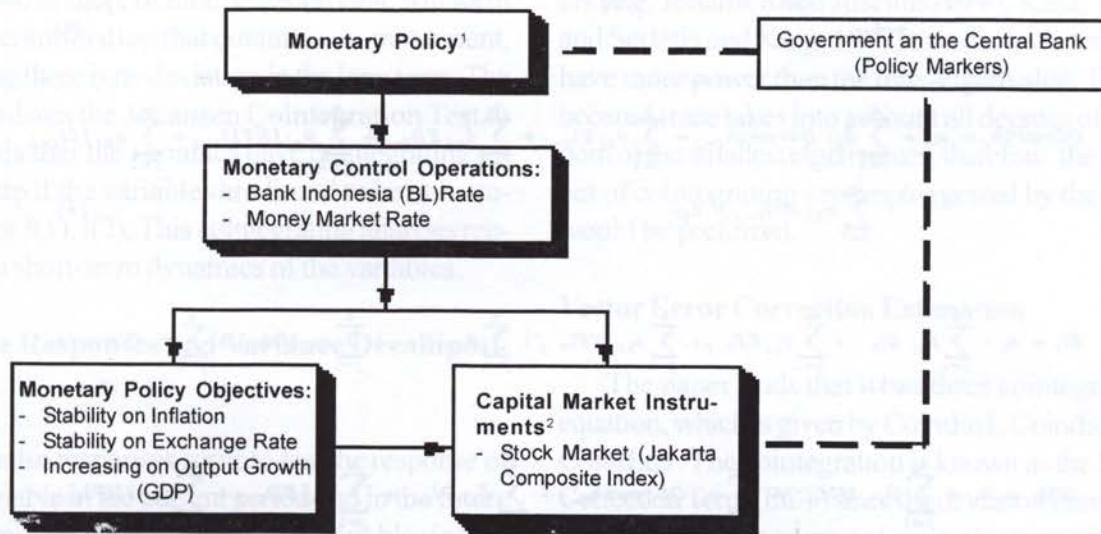
## REVIEW OF RELATED LITERATURE

According to the Law of Bank Indonesia's Independency, No.23, 1999, it stated that the single objective of Indonesian monetary policy is to maintain the stability of the rupiah. It means that Bank Indonesia should control the inflation rate, where the representation of the value of rupiah is in terms of goods and services under consumption activities. The other implication is to maintain the stability in the foreign exchange in terms of rupiah. Therefore, in order to influence the economic activity, Bank Indonesia issued a monetary policy instrument, known as Bank Indonesia (BI) rate. BI rate is Bank Indonesia's monetary policy instrument used to control the monetary and financial sector. In the operational level, the movement in the Interbank Overnight (O/N) rate indicates the operational target of monetary policy where interest rate in the money market is often referred as the Interbank Money Market (MM) rate (Bank Indonesia, 2009). According to Cargill (1991); Thomas (1997); Mishkin & Eakins (2000), the monetary policy instruments are used to influence the economy in achieving monetary objectives. Thomas (1997) defined that the general tools of monetary policy include open market operations, discount window policy, and reserve requirement policy. The targets that the central bank can influence most quickly and accurately are various measures of bank reserves and short term interest rates. Mishkin and Eakins (2000) also discussed that the objectives of monetary policy is to achieve: (1) high employment, (2) economic growth,

(3) price stability, (4) interest rate stability, (5) stability of financial markets, and (6) stability in foreign exchange markets. Economic growth are measured by the percentage change in the real gross domestic product every year. Price stability, an important macroeconomic objective, depends upon the central bank's control of the inflation rate that reflects the price stability because a rising price level or the inflation rate creates uncertainty in the economy that may lower the economic growth. Stability in foreign exchange markets reflects the stability in the value of domestic currency in foreign exchange markets. Greenspan (1989) and Thomas (1997) stated that the ultimate goals of monetary policy are price level stability, full employment, exchange rate stability and long-term economic growth. Cargill (1991) and Ferguson (2003) proved that monetary policy is concerned with reducing fluctuations in domestic economic activity, full employment, price stability, and economic growth; ensuring a stable domestic financial system and considering financial stability. According to Ross (1997); Blanchard, Ariccia, and Mauro (2010), these studies empirically proved the existence of a positive relationship between the development of financial systems to economic growth. Issing (2003) found that there is a trade-off between the financial stability and the monetary stability. Thorbecke (1997) examined how stock return data respond to monetary policy shocks. Similarly, Rigobon and Sack (2003) found that movements in the stock market can have a significant impact on the macro-economy and are likely to be an important factor in the determination of monetary policy. In addition, Bernanke & Gertler (2000) concluded that monetary policy also responded to variability in asset prices particularly in the stock market. According to the literature reviewed, the ultimate goals of monetary policy are to maintain the price stability, exchange rates stability, economic growth and financial market stability. Empirical evidence confirmed that the central bank still faces many challenges in achieving the macroeconomic and the stock market stability. The challenges happened when a trade-off exists. In order to control the positive and negative relationship among macroeconomic indicators and stock market index regarding the trade-off, central bank should maintain the monetary instruments effectively. Therefore, it is important to



**Figure 1: Conceptual Framework**



<sup>1</sup>The Effect of Monetary Policy Toward Monetary Policy Objectives (Green, 1996; Fraga, 2003; Walsh, 2003; Chowdury & Siregar, 2004; Naqvi & Rizvi, 2009)

<sup>2</sup>The Effect of Monetary Policy Toward Capital Market (Lee, 1992; Thorbecke, 1997; Bernanke & Gertler, 2000; Regobon & Sack, 2003; Gupta, 2006)

**Source:** Author (processed)<sup>4</sup>

conduct a study that emphasizes on the effectiveness of monetary policy instruments in achieving macroeconomic and financial stability. This study attempts to examine the effectiveness of Indonesian monetary policy toward macroeconomic and financial stability through the monetary policy mechanisms.

## RESEARCH FRAMEWORK

The BI rate is the monetary policy instrument that is able to give signals to the market regarding the policy changes.<sup>3</sup> The BI rate can be increased, decreased, or unchanged. Bank Indonesia utilized the 1-month BI rate to affect the interest rates particularly in the inter-bank money market. Figure 1 shows the conceptual framework of the study. The main part of this study is to examine the impact of monetary policy toward the macroeconomic objectives and the financial markets

particularly on Indonesian Stock Market. The objective is to measure whether the monetary policy has a significant effect on macroeconomic indicators and the financial markets especially in affecting the price of stock markets.

## Research Models and Hypotheses

This paper employs the autoregressive distributed lag (ADL) models to identify the lag length. The ADL model consists of the “autoregressive”, because lagged values of the dependent variable are included as regressors, as in autoregression, and “distributed lag” because the regression also includes multiple lags of an additional predictor. The research model and hypotheses used in this paper are based on the study of Bernanke and Gertler (2000). The following are the integrated models<sup>5</sup>, which consists of six-autoregression models. The models are given as follows:

$$\begin{aligned}
 INFL_t = & \alpha_0 + \sum_{j=1}^k \beta_{1j} INFL_{t-j} + \sum_{j=1}^k \gamma_{1j} JCI_{t-j} + \sum_{j=1}^k \delta_{1j} MM_{t-j} + \sum_{j=1}^k \theta_{1j} QGrowth_{t-j} + \sum_{j=1}^k \mu_{1j} BI_{t-j} \\
 & + \sum_{j=1}^k \pi_{2j} ER_{t-j} + \epsilon_{2t}
 \end{aligned} \quad (2)$$



$$ER_t = \alpha_2 + \sum_{j=1}^k \beta_{2j} ER_{t-j} + \sum_{j=1}^k \gamma_{2j} INFL_{t-j} + \sum_{j=1}^k \delta_{2j} JCI_{t-j} + \sum_{j=1}^k \theta_{2j} MM_{t-j} + \sum_{j=1}^k \mu_{2j} QGrowth_{t-j} + \sum_{j=1}^k \pi_{2j} BI_{t-j} + \varepsilon_{2t} \quad (3)$$

$$QGrowth_t = \alpha_3 + \sum_{j=1}^k \beta_{3j} QGrowth_{t-j} + \sum_{j=1}^k \gamma_{3j} BI_{t-j} + \sum_{j=1}^k \delta_{3j} ER_{t-j} + \sum_{j=1}^k \theta_{3j} INFL_{t-j} + \sum_{j=1}^k \mu_{3j} JCI_{t-j} + \sum_{j=1}^k \pi_{3j} MM_{t-j} + \varepsilon_{3t} \quad (4)$$

$$BI_t = \alpha_4 + \sum_{j=1}^k \beta_{4j} BI_{t-j} + \sum_{j=1}^k \gamma_{4j} ER_{t-j} + \sum_{j=1}^k \delta_{4j} INFL_{t-j} + \sum_{j=1}^k \theta_{4j} JCI_{t-j} + \sum_{j=1}^k \mu_{4j} MM_{t-j} + \sum_{j=1}^k \pi_{4j} QGrowth_{t-j} + \varepsilon_{4t} \quad (5)$$

$$MM_t = \alpha_5 + \sum_{j=1}^k \beta_{5j} MM_{t-j} + \sum_{j=1}^k \gamma_{5j} QGrowth_{t-j} + \sum_{j=1}^k \delta_{5j} BI_{t-j} + \sum_{j=1}^k \theta_{5j} ER_{t-j} + \sum_{j=1}^k \mu_{5j} INFL_{t-j} + \sum_{j=1}^k \pi_{5j} JCI_{t-j} + \varepsilon_{5t} \quad (6)$$

$$JCI_t = \alpha_6 + \sum_{j=1}^k \beta_{6j} JCI_{t-j} + \sum_{j=1}^k \gamma_{6j} MM_{t-j} + \sum_{j=1}^k \delta_{6j} QGrowth_{t-j} + \sum_{j=1}^k \theta_{6j} BI_{t-j} + \sum_{j=1}^k \mu_{6j} ER_{t-j} + \sum_{j=1}^k \pi_{6j} INFL_{t-j} + \varepsilon_{6t} \quad (7)$$

Where,  $INFL_t$  is the Inflation Rate on time  $t$ ;  $Q$  is the Output Growth at time  $t$ ;  $ER$  is the Exchange Rate at time  $t$ ;  $BI$  is the Bank Indonesia Rate at time  $t$ ;  $MM_t$  is the Money Market Rate at time  $t$ ;  $JCI_t$  is the Jakarta Composite Index at time  $t$ ;  $\alpha$  is a constant and  $\varepsilon_t$  is an error term. Time  $t$  is in quarterly and  $j$  is lagged values that are chosen by the best estimation. According to the research model<sup>5</sup>, we construct the null hypotheses as follows:

$$H_0: \beta_j; \delta_j; \theta_j; \mu_j; \pi_j = 0$$

There is no significant effect between the BI Rate, Exchange Rate, Inflation Rate, JCI, Money Market Rate, and Output Growth. The alternative hypotheses as follows:

$H_a: \beta_j; \delta_j; \theta_j; \mu_j; \pi_j = 0$ , or minimum of one variable not equal to zero.

There is a significant effect between the BI Rate, Exchange Rate, Inflation Rate, JCI, Money Market Rate, and Output Growth

## RESEARCH METHODOLOGY

The research investigates the effect of monetary policy in achieving the price stability, foreign exchange

stability, economic growth, and financial markets stability. This paper utilizes Quarterly Database, which is from Q1:1990 to Q4:2009. The secondary data are collected from International Financial Statistic (IFS)-IMF, CEIC Database and Bank Indonesia quarter database. The variables that are used in this paper are: (1) Bank Indonesia (BI) Rate – the proxy is the Bank Indonesia (BI) interest rate, which is the benchmark of the determination of interest rates in Indonesia. (2) Money Market Rate – the proxy is the interest rate in the Interbank Overnight (O/N) Money Market Rate. (3) Exchange Rate – the proxy is the exchange rate of domestic currency to the foreign currency (Rp/USD). (4) Inflation Rate – the proxy is the percentage change in Consumer Price Index (CPI) in Indonesia. (5) Output Growth – the proxy is the percentage change in Indonesia's Gross Domestic Product (GDP). (6) Jakarta Composite Index (JCI) – the proxy is the Jakarta Composite Index (JCI) as the average stock index in the Indonesian Stock Exchange.

## Cointegration and Error Correction Models

Co-integration states that if the time series data



are not stationary or has a unit root, the combination of two or more of time series variable will form a linear combination that contain a co-movement, assuming there is no deviation in the long term. The paper utilizes the Johansen Cointegration Test to check whether the variables have cointegrating relationship if the variables are found to be non-stationary or  $I(1)$ ,  $I(2)$ . This cointegrating analysis represents a short-term dynamics of the variables.

### **Impulse Responses and Variance Decomposition**

Impulse responses serve to test the response of each variable in the current period and in the future by assuming that the error of other variables is zero (Stock & Watson, 2007). Stock & Watson (2007) defined that forecast error decomposition is the percentage of the variance of the error made in forecasting a variable due to a specific shock at a given horizon. According to Enders (2004), the forecast error variance decomposition tells us the proportion of the movements in a sequence due to its "own" shocks versus shocks to the other variable.

## **PRESENTATION OF DATA AND CRITICAL DISCUSSION OF RESULTS**

### **Stationarity Test, Granger Causality Test and Johansen Cointegration Test**

The paper concludes that all six variables are stationary at first difference or  $I(1)$ . Thus, this requires at cointegration method be conducted. The decision on the appropriate lags in the model is related on the lowest AIC or SC criterion. According to the AIC criterion, the result finds that the appropriate lag is 2. The Granger causality test finds that BI rate, exchange rate, JCI, and money market rate can help to predict the volatility on inflation rate. In terms of financial market, the BI rate and money market rate are statistically significant on explaining the changes on JCI. The paper finds that there are three cointegrating equations at 0.05 levels. Meanwhile, the max-eigenvalue test provides one cointegrating equation at 0.05 levels. There are conflicting results between trace statistics and max-eigen-

value. However, it is suggested by several researchers (e.g. Johansen and Juselius, 1990; Kasa, 1992; and Serletis and King, 1997) that the trace tends to have more power than the max-eigenvalue. This is because trace takes into account all degrees of freedom of the smallest eigenvalues, therefore, the number of cointegrating vectors suggested by the trace would be preferred.

### **Vector Error Correction Estimation**

The paper finds that it has three cointegrating equation, which is given by CointEq1, CointEq2, or CointEq3. The cointegration is known as the Error Correction Term (ECT) since the deviation from long run equilibrium is corrected gradually through a series of partial short run adjustments. The negative or positive coefficient of ECT shows the speed of adjustment quarterly of the endogenous variables toward equilibrium. According to the first ECT (CointEq1), BI rate is statistically significant at 5% level, JCI at 1% level, and Output Growth at 5% level. The speeds of adjustment toward the equilibrium per quarter are 80.2479 percent, 103.0889 percent, and 257.5734 percent for BI rate, JCI, and output growth. The second ECT (CointEq2) shows BI rate is significant at 1%, Inflation at 5%, JCI at 1% and money market rate at 1%. The speeds of adjustment for BI rate, inflation, JCI, and money market rate are 71.3854 percent, 58.1485 percent, 48.2143 percent, and 90.6338 percent. The last ECT stated BI rate is significant at 1%, Inflation at 1%, and money market rate at 1%. The speeds of adjustment are 20.3748 percent, 56.2835 percent, and 28.2914 percent. BI rate has negative influences in two cointegrating relationship that is the first and the third ECT, indicating a downward adjustment but has a positive influence in the second cointegrating relationship. This means that the changes in BI rate will be corrected mostly from the previous performance. The implication of these results confirms that there is interdependent relationship among BI rate, money market rate, inflation, output growth and Jakarta Composite Index. The change in one variable will influence the change in other variables. (Table 1)



**Table 1: Speed of Adjustment Parameter of the Error Correction Term (ECT)**

Error Correction:	Bank Indonesia (BI) Rate	Exchange Rate (ER)	Inflation Rate (INFL)	Jakarta Composite Index (JCI)	Money Market Rate (MM)	Output Growth (Qgrowth)
CointEq1	-0.802479	-0.179749	0.749369	1.030889	-0.873949	2.575734
	(0.34614)	(0.14370)	(0.51775)	(0.32659)	(0.55414)	(1.24172)
	[-2.31835]**	[-1.25083]	[1.44734]	[3.15650]***	[-1.57713]	[2.07433]**
CointEq2	0.713854	0.044428	0.581485	-0.482143	0.906338	-0.392215
	(0.16238)	(0.06741)	(0.24288)	(0.15321)	(0.25995)	(0.58249)
	[4.39629]***	[0.65906]	[2.39411]**	[-3.14703]***	[3.48661]***	[-0.67334]
CointEq3	-0.203748	0.018037	-0.562835	-0.00922	-0.282914	-0.268844
	(0.06739)	(0.02798)	(0.10080)	(0.06358)	(0.10788)	(0.24174)
	[-3.02349]***	[0.64473]	[-5.58375]***	[-0.14501]	[-2.62244]***	[-1.11211]

**Note:** \*\*\*means significant at  $\alpha = 1\%$ ; \*\* means significant at  $\alpha = 5\%$ ; \* means significant at  $\alpha = 10\%$

## Impulse Responses

Impulse responses test the response of each variable in the current period and in the future period. Eviews are provided automatically in ten periods that is ten quarters. First is the response of BI rate. The shocks of exchange rate, money market rate and JCI result in a positive response of BI rate. The change in the inflation and output growth can negatively affect response of BI rate. Second is the response of exchange rate. The shocks of money market rate and exchange rate itself bring a positive response to exchange rate. Only the shock of JCI results in a negative response of exchange rate. Third is the response of inflation rate. The shock on the exchange rate is a positive response of inflation rate. Similarly, the JCI has influence on the inflation rate in a positive direction. The shock on money market rate has a significant effect on creating a negative response of inflation. Fourth is the response of JCI. A negative response of JCI emerge when there are shocks on exchange rate and money market rate. Fifth is the response of money market rate. The fluctuation on exchange rate and money market rate in terms of its lagged values generate a positive response on the money market. The negative response will emerge when the inflation are changed. Lastly, the response of output growth is negative when there are shocks on money market rate and exchange rate. (Figure 2)

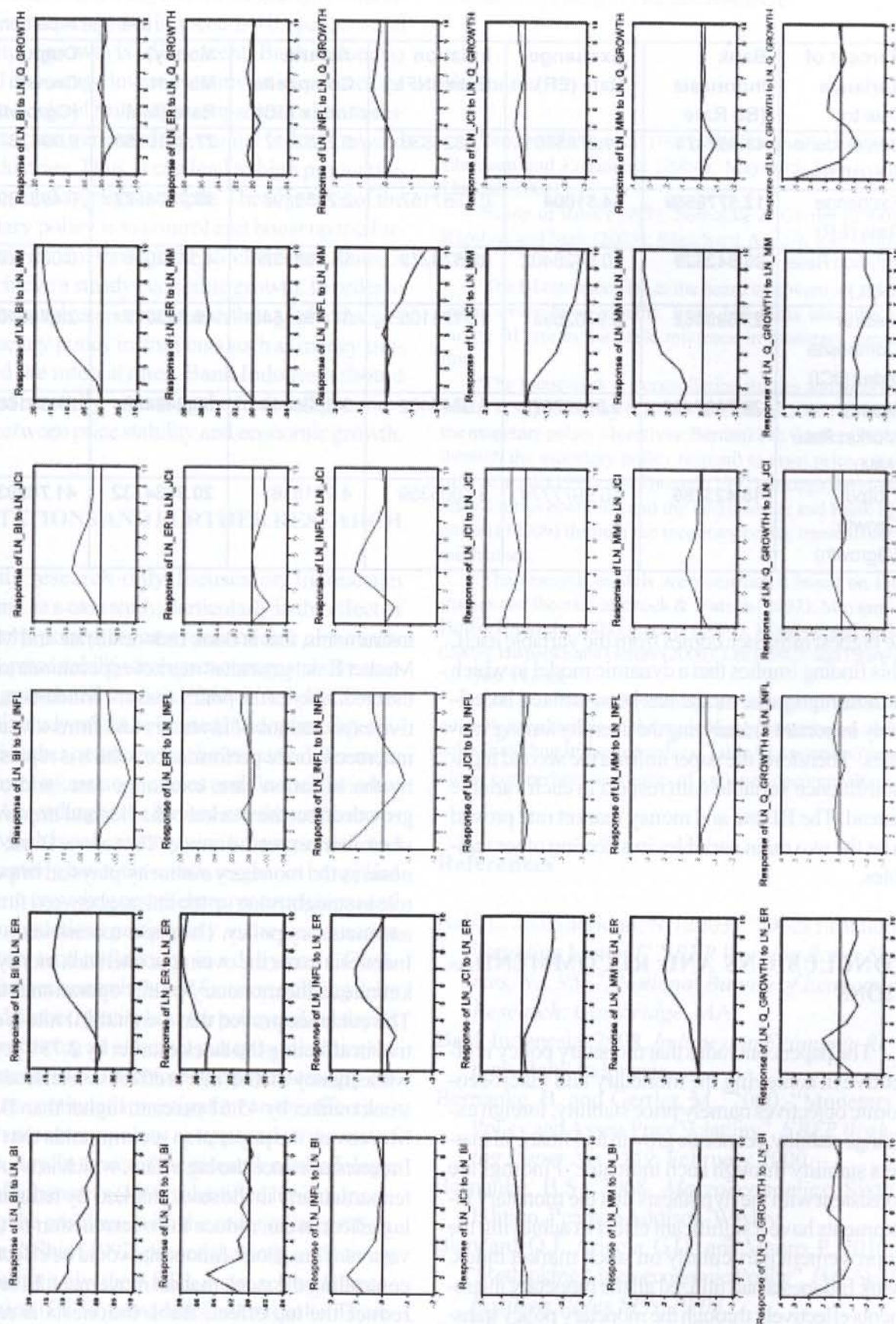
## Variance Decomposition

First, the money market rate contributes 27.662 percent to BI rate, and 11.278 percent from the exchange rate. The second findings are the variances of exchange rate are influenced by 19.767 percent of money market rate, and 12.577 percent of BI rate. Third, the variance of inflation rate are mainly affected by 26.942 percent of BI rate, and 15.309 percent from JCI. Fourth is the variance decomposition of JCI. The highest contribution is from money market rate of 45.613079 percent on average to JCI and 9.970 percent from exchange rate variation. Fifth is the variance decomposition of money market rate. The result finds that the contribution comes from BI rate by 20.760 percent and 9.804 from exchange rate. Lastly is the variance decomposition of output growth. The regressive model shows that the lagged values of output growth creates a relatively high influence of 41.783 percent, followed by 20.963 percent from money market rate, and 18.424 percent from BI rate. As a general conclusion, we can confirm that BI rate has a significant contribution to all variables. Table 2 presents a brief summary of the contribution among variables.

Table 2 shows the contribution of each variable in influencing one another in an average percentage. Each variable in the row has three columns that are highlighted. The three columns refer as the three highest influences among variables. The paper finds that



Figure 2: Impulse Responses  
Responses to Cholesky One S.D. Innovations





**Table 2: Summary of Variance Decomposition<sup>6</sup>**

(average in percentage)

Percent of Variance Due to:	Bank Indonesia (BI) Rate	Exchange Rate (ER)	Inflation Rate (INFL)	Jakarta Composite Index (JCI)	Money) Market Rate (MM)	Output Growth (Qgrowth)
Bank Indonesia (BI) Rate	<b>43.807474</b>	<b>11.2785661</b>	7.9824836	8.2752617	<b>27.6619256</b>	0.9942872
Exchange Rate (ER)	<b>12.5776559</b>	<b>64.51004</b>	0.4357157	2.2158198	<b>19.7674577</b>	0.493309
Inflation Rate (INFL)	<b>26.942329</b>	10.9428402	<b>39.579279</b>	<b>15.3091328</b>	4.1432958	0.0831202
Jakarta Composite Index (JCI)	<b>2.7599462</b>	9.9702692	1.2175105	<b>37.7601545</b>	<b>45.613079</b>	2.6790406
Money Market Rate (MM)	<b>20.7607492</b>	<b>9.8040767</b>	5.0845462	3.6520044	<b>58.248456</b>	2.4501684
Output Growth (Qgrowth)	<b>18.423766</b>	10.9977774	3.5605359	4.2715181	<b>20.9634732</b>	<b>41.78293</b>

the highest influence comes from the variable itself. This finding implies that a dynamic model in which the autoregressive model has been utilized is definitely important in analyzing the intensity among variables. Therefore, the paper utilized the second highest influence variable with respect to each variable instead. The BI rate and money market rate proved to be the two main variables in affecting other variables.

## CONCLUSIONS AND RECOMMENDATIONS

The paper concludes that monetary policy is effective in achieving the monetary and macroeconomic objectives namely price stability, foreign exchange stability, economic growth and financial markets stability through each indicator. Findings are consistent with the hypothesis that the monetary instruments have a significant effect in achieving the improvement particularly on stock market index. Bank Indonesia had utilized all the monetary instruments effectively through the monetary policy transmission mechanisms. The effectiveness of monetary

instruments, that is Bank Indonesia rate and Money Market Rate, generates market expectations toward the credibility of the policy makers. In addition, positive expectations of investors and firms toward the macroeconomic performance, which is represented by the inflation rate, exchange rate, and output growth affect the market behavior and improve the stock market performance. Therefore, Bank Indonesia as the monetary authority plays an important role in straightening up the linkage between financial and monetary policy. The paper recommends Bank Indonesia to use the overnight interbank money market rate as the monetary policy operational target. The evidence proved that 1-month BI rate is effective in affecting the stock market by 2.759 percent, while money market rate is effective in affecting the stock market by 45.61 percent, higher than BI rate. Moreover, the paper also recommends that Bank Indonesia reduce the lag effect, which is two quarter particularly in the stock market. By reducing the lag effect, it can reduce the overreaction of the investors. Thus, Bank Indonesia would be effective in controlling the stock market movement. In order to reduce the lag effect, Bank Indonesia is recommended to consider the JCI and output growth re-



sponses since the JCI and output growth proved to move faster in adjusting toward the changes in monetary instruments. JCI's speed is 103 percent and the output growth is 257 percent. Bank Indonesia should encourage investors to invest in real sectors. Buying stocks of real sector companies such as manufacturing can generate high capital inflows toward the industries. Thus, it can lead to high production capacity and aggregate output. The objective of the monetary policy is to control and boost up the foreign investment through the stock market. Thus, it will achieve a steady economic growth. In order to generate a high economic growth through the changes in monetary policy instruments such as money supply and the interest rates, Bank Indonesia should respond carefully, regarding the trade-off phenomenon between price stability and economic growth.

## LIMITATIONS AND FURTHER RESEARCH

This research only focuses on Indonesian economy as a case study, particularly in the effect of monetary policy on macroeconomic objectives namely price stability, foreign exchange stability, economic growth and financial markets stability. Therefore, this study might be limited in adoption for utilization in other countries that have many differences in terms of monetary policies and financial market bases. According to the limited number of observations, which is only seventy nine time series data and on a quarterly basis, the results might not be applied directly in providing comprehensive conclusions and recommendations particularly as the stock market indicators tend to fluctuate in a daily basis. Obviously, further research should focus on utilizing daily data and further identify how the policymakers should act in producing an effective policy to minimize the investment risks. Therefore, the paper strongly encourages continued investigation on the effectiveness on monetary policy as opposed to the use of fiscal policy. In terms of the research methodology, study of Johansen's (1990) identified limitations regarding the problems with the order of integration. Pesaran & Shin (1997) proved that in quantitatively and qualitatively, the ADRL approach and the co-integration (ECM) provided similar results. Therefore, the paper suggests utilizing the ADRL approach

in providing an alternative method that may result in alternative findings in further research.

## Endnotes

<sup>1</sup>Study of Thorbecke (1997); Rigobon and Sack (2003); Ehrmann and Fratzscher (2004); Maysami, Howe, and Hamzah (2004).

<sup>2</sup>Study of Ross (1997); Bernanke & Gertler (2000); Rigobon and Sack (2003); Blanchard, Ariccia, and Mauro (2010).

<sup>3</sup>The BI rate specified in the board of governors meeting in every three months. Bank Indonesia used the 1-month BI rate as the basic reference in monetary operation.

<sup>4</sup>The framework is a compilation studies and theories which is supported by Mishkin & Eakins (2000) through the monetary policy objectives; Bernanke & Gertler (2000) through the monetary policy respond to asset price volatility; Cargill (1991) and Thomas (1997) through the monetary control operation and the instruments; and Bank Indonesia (2009) through the monetary policy transmission mechanism.

<sup>5</sup>The research models are constructed based on the studies and theories of Stock & Watson (2007); Maysami, Howe, Hamzah (2004); Enders (2004); Rigobon and Sack (2003); Bernanke and Gertler (2000); Lee (1992); and Eviews 5.1 User's Guide.

<sup>6</sup>The table shows the average percentage of variance on each variable due to the most highly contributed variables including its lagged values. Table 9 (Appendix) provide a comprehensive results of variance decomposition.

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# PRODUCT ATTRIBUTES AND CONSUMERS' RE-PURCHASE DECISION ON FROZEN READY TO EAT MEALS: A STUDY ON CONSUMERS IN SELECTED HYPERMARKETS IN BANGKOK

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## Abstract

*The main purpose of this research was to examine selected product attributes and demographic variables that affected consumer re-purchase decision on frozen ready to eat meals. The data was received for four hundred respondents from five locations around Bangkok Metropolis. From the findings, all independent variables which dealt with product attributes had a direct relationship with re-purchase decision on which 'taste' was the strongest independent variable from the set. Next in order were, convenience, packaging, price, brand and preparation time. Moreover, there were relationships between re-purchase decision and demographics.*

## INTRODUCTION

Frozen Prepared meals were originally designed to be consumed by people too busy, unwilling or even unable to prepare their own food. Over the past 50 years worldwide and the last 20 years in respect of Thailand, peoples' way of life has changed dramatically, especially in regards to purchase behavior of products such as frozen food. From only 20 years ago to now, Frozen and Chilled RTE meals have taken off and grown in current value terms by 17% (2.6 Billion Thai Baht in 2008) (Euromonitor, Thailand, 2008). Thai consumers lead the world as the most frequent buyers of ready-to-eat (RTE) meals, with 75 percent claiming they have no time to prepare proper meals from scratch (A Global AC Nielsen Report. December 2006). The total market sector is expected to continue to grow in most countries due to increasing demand for convenience with more working couples and consumers spending less time on food preparation. Future growth is expected to be steady, rather than dramatic, as most consumer demand in the major markets is already being satisfied. (<http://th.nielsen.com/news/frozenfood>, Retrieved September 21, 2010).

However, in the drive for greater convenience, the ambient meal concept continues to open up opportunities for improvements in ingredients and quality, especially in markets where refrigerated storage

is at a premium. According to the A.C. Nielsen survey, three quarters of Thai consumers, agree that RTE meals come in handy when there is no time to prepare a meal from scratch, and they are in good company with 87% of consumers around the world agreeing that convenience is the biggest purchase driver. Beyond convenience, 40% of Thai consumers cited it was cheaper than buying all the ingredients and preparing from scratch as their second reason for purchasing ready to eat meals. Frozen RTE Meals are certain to remain a lifestyle choice of people in Bangkok and will very much grow and expand into other provinces as soon as lifestyles start to change there as well.

## OBJECTIVES OF THE STUDY

1. To examine the relationship between frozen RTE product attributes and consumer Re-Purchase Decision on frozen RTE meals.
2. To study the differences in consumer demographic factors and consumer Re-Purchase Decision on frozen RTE meals.



## LITERATURE REVIEW

### Product Attributes

When used in a market research context, attributes are simply properties of a given product, brand, service, advertisement or any object of interest. Much brand and market research is targeted at understanding the most significant and powerful attributes of a product, service, and brand. In this study, the researcher has selected a limited amount of attributes, which are: price, taste, convenience, preparation time, packaging, and brand.

### Taste

A performance attribute such as taste describes the ways in which a product performs its functions, each of the characteristics that can be evaluated only by using the product. This has been done in many studies and in general 'taste' and sensory responses to foods tend to be rated very highly as an influence (Schroder and Earle, 1998).

Taste is only be experienced or evaluated post-purchase, unless of course samples are give to consumers prior to purchase (Parry, 2001). Prompriang (1996) found that taste of food obviously is the factor affecting the selection of frozen prepared meals. The American Association of Family and Consumer Sciences (1995) also found that taste is the major factor relating to children's selection of fast food.

### Price

Obviously a key attribute of any product is price; however, buyer behavior is influenced not only by the price of the basic product, but by the price of warranties, product enhancements, shipping, installation, training, customer assistance, consumables, replacements parts, and repair services. Price also refers to a reasonable price, which customers will compare against the amount of money paid with the service that they get and price is a marketing tool that can be used creatively to help attract customer traffic, create customer satisfaction and build customer loyalty (Garton, 1995). Dawson (1995) argued that the search for price and price comparisons are responsive to consumer buying behavior.

Price refers to the perceived value of goods and service measured in some medium of exchange (Walters and Bergiel, 1989). The different perception in the product /service quality leads to a difference in identifying price. The importance of food price rests on its effect on consumer income. Walters and Bergiel (1989) mentioned that consumers may wish to rank many types of products or brands high on their preference list, but price makes this prohibitive.

### Convenience

Convenience relates to the ease of use of consumption of the product for the consumer and thus contributes to product quality. Convenience food has been defined as food offered to the consumer in such a manner that purchase, preparation and consumption of a meal costs less physical and mental effort and/or money than when the original and/or separate components are used (Luning, 2001). The convenience attribute involves timing of convenience.

The increased consumption of convenience food is assumed to be due to decreasing volume of households. Much attention in the food industry is given to developing 'Ready to eat meals' that can be easily and quickly prepared while still having good sensory and nutritional properties. Furthermore packaging concepts are designed more and more to fulfill the consumers need for convenience (Luning, 2001).

### Packaging

Packaging is a perfect illustration of the principle that attributes can have sub-attributes. The finished product has form attributes such as shape, size, weight and texture (Parry, 2001). For example Ready Meal Packaging includes: materials used to make the polyethylene trays or paper cards, size of Package which reflects, in part, the amount of meal in the package, shape of package (standing up right, lying down, bags), labels containing the brand name, product information and possibly a quality seal, cardboard box to prevent damage to the inner packaging.

Appearance plays an important role in the way in which consumers select food. Food is perceived



initially either via sense of vision or the sense of smell, or via both of these senses simultaneously. Both appearance and aroma provide cues about the identity of a food and generate expectations about its eating quality. Consequently, packaging design often has to stand as a proxy for appearance of the food itself. Both appearance and aroma of foods are powerful forces in appetite with appearance being especially important for low aroma intensity, e.g. many cold dishes or sealed foods/packed foods (Schroder and Monika, 2003).

## **Brand**

Brand names help customers remember a key attribute or benefit. For example, the name Sensodyne helps customers remember the tooth-pastes key benefit, which is the reduction of pain in teeth (Parry, 2001). In addition, a brand name that is shared may lead customers to make inferences about one product based on what they already know about another.

Another important brand attribute is the name of the company that manufactures the products. The company brand can also lead consumers to make inferences about product attributes or benefits. A brand logo is another important brand attribute. In many cases, logos serve no other purpose than product differentiation. However, in some cases brand logos communicate important information about the product (Parry, 2001).

## **Preparation Time**

Preparation time plays an important role in the purchase decision towards convenience foods, as time is at the heart of reasons consumers pick products such as ready to eat meals and other pre-packaged products (Darian, 1995). The increasing demand for convenience-orientated food is time-poverty (Berry, 1979). The respondents who are very time poor, agree that fast foods, frozen dinners, and ready to eat foods are convenient (Darian, 1995). Fast foods may be used by the very time-poor because these foods offer the benefits that are most important to them (Darian, 1995). Robinson (1990) stated that the employed women feel the most time-poor but they do not purchase more time-saving

goods and services than others. The very time-poor may be willing to use fast foods because they feel that the benefits of great convenience outweigh other factors such as healthiness.

## **Demographics**

People within the same demographic group can exhibit very different psychographics profiles (Kotler, 2000). Psychographic and demographic profiles are highly complementary approaches that work best when used together.

Gender differentiation has long been applied to clothing, hairstyling, cosmetics and magazines (Kotler, 2000). Males and females not only eat differently but also have a completely different relationship to the selection, preparation, and consumption of food in present-day society (Gillon et al., 1993).

Darian (1995) argued that younger families were more likely to have eaten fast foods, but the relationship between time shortage and use of fast foods remained significant after controlling for the effect of age. For students, nutrition was not as important as convenience, but nutrition was more important than adequacy for graduates (Betts, 1997).

Education is also associated with some differences in consumption of food items (Dobson et al., 1997). People with college education tend to be more sophisticated, more curious and more willing to experiment with new products. However, Darian (1995) stated that the use of frozen food is not significantly related to respondents' education.

Product choice is greatly affected by economic circumstances; spendable income (level, stability and time pattern), savings and asset (including the percentage that is liquid), debts, borrowing, and attitudes toward spending and saving (Kotler, 2000). Working-wife families do purchase more meals prepared away from home such as meals prepared in restaurants (Nickols and Fox, 1983). Reilly (1982) found that those who feel more overloaded are more likely to use convenience food items.

Income segmentation is a long-standing practice in such product and service categories as automobiles, clothing, cosmetics, financial services, travel and food. Davis and Stewart (2002) argued that households with higher incomes eat out more fre-



quently and spend more money per dining occasion than households with lower incomes. At Texas A&M and Cornell University, Davis and Steward (2002), studied that a 10% increase in income is associated with a 0.7% increase in demand for RTE meals.

The family is the most important reference group in society. The family unit influences individual's values and lifestyles (Michman and Mazze, 2006). Marketers have discovered the benefits of targeting specific marital status groupings. For instance in the United States, singles, especially one-person households with incomes greater than \$50,000, comprise a market segment that tends to be above average in the usage of products not traditionally associated with supermarkets. Some marketers target one-person households with single-serve prepared foods (Schiffman and Kanuk, 2007).

**Purchase Decision on frozen ready to eat meals**

Nicosia (1966) identified three types of buyer decision making models. Nicosia further builds a comprehensive model involving 5 modules. The encoding module includes determinants like ‘attributes of the brand’, ‘environmental factors’, ‘consumer attributes’, ‘attributes of the organization’, and ‘attributes of the message’. Other modules in the system include, consumer decoding, search and evaluation, decision, and consumption. In some cases, consumers may decide not to formally evaluate each and every brand; in other cases, intervening factors

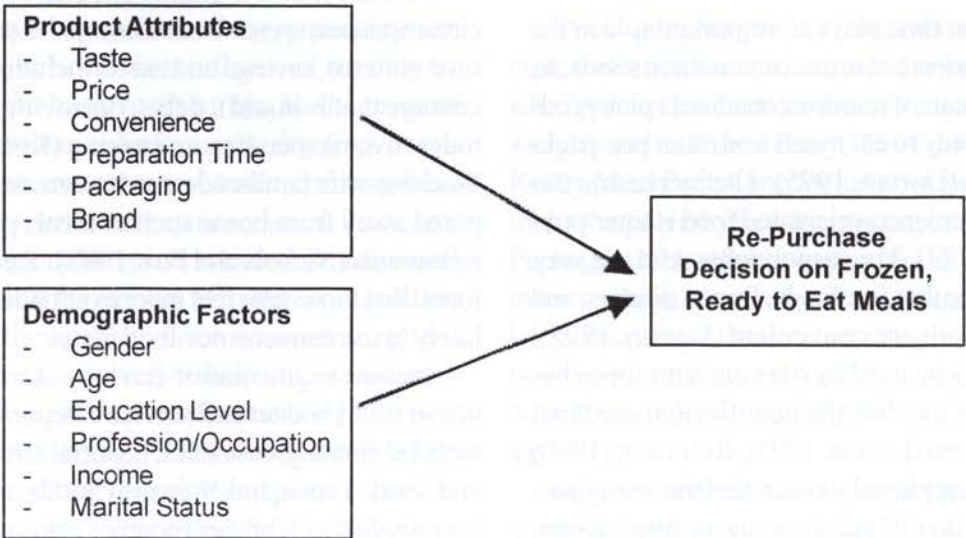
may affect the final decision (Kotler, 2000).

**RESEARCH FRAMEWORK**

There are many studies about product attributes and decision to purchase frozen RTE meals. Reed et al. (2000) outlined some initial findings of an investigation into the chilled ready meal market in Northern Ireland. The result showed that convenience was the predominant motive for purchase of the product, satisfying the increasing consumer requirement for added value food products. Silayoi and Speece (2004) used focus groups in order to gain in-depth insights into Thai consumer shopping behaviors for packaged food products. The results showed packaging elements are the main factors in respondent assessment and decisions on packaged food purchasing. Kruorviriyapan (1996) studied the ‘Ready to eat frozen food consumption behavior of consumers in Bangkok Metropolitan area’. The result explained that they consume ready to eat frozen food for breakfast because of the perceived lack of time in preparing food. Trongpanich (2000) studied the ‘demographic factors that are related to purchase of ready-to-eat frozen food products’ and found those influences on purchase of frozen ready to eat food products consist of taste of food, variety, convenience, appropriate price, and availability.

Based on the literature review above, the researcher conducted the study based on the conceptual framework as indicated in Figure 1 below:

**Figure 1: Conceptual Framework**





In this study, the researcher set up twelve pairs of null and alternate hypotheses and classified them into two groups.

$H_{01} - H_{06}$  There is no relationship between product attributes (taste, price, convenience, preparation, packaging, and brand) and re-purchase decision on frozen ready to eat meals.

$H_{07} - H_{012}$  There is no difference between demographics and re-purchase decision on frozen ready to eat meals.

## METHODOLOGY

Descriptive research is used in this research, which is designed to describe the characteristics of a population. The research technique used in this study is the survey method. The target respondents are all respondents over the age of 20 years who have consumed or purchased a frozen ready to eat meal within the last twelve months from the timing of the questionnaire and reside within Bangkok.

The researcher used a questionnaire as a tool to gather the information from the target respondents. The questionnaire was composed of three parts. The first part of questionnaire asked respondents to express their opinion on product attributes. The questions were adapted from the study by Reed et al. (2000). There were eighteen questions that included factors such as Taste, Price, Convenience, Preparation, Packaging and Brand. The second part asked about their Re-Purchase Decision toward Frozen Ready to Eat Meals. This part of the questionnaire was adapted from Silayoi and Speece (2004). Five-point Likert scales were applied for both first and second parts of the questionnaire. The final part consists of six questions which indicate the personal information of the respondent measured by gender, age levels, educational levels, occupation, income per month and marital status.

The sample size for this study was 400. The researcher used simple random sampling to select 5 hypermarkets from a list of 120. The results are as follows: Big C, Fashion Island, Tesco Lotus, Bangkapi, Carrefour, Rama IV Road, Big C, Rajdamri, and Tesco Lotus, Minburi. A total of 80 questionnaire sets were distributed in each of the 5 stores mentioned. The questionnaire was also trans-

lated from English language to the Thai language for better comprehension.

## FINDINGS

Based on Table 1, the study shows that from 400 respondents that the largest population of respondents were female which accounts for 54.8%. The majority of the respondents were aged 26-30 years of age (35.5%). A total of 50% hold a bachelors degree, with 73% either holding a bachelor or masters degree. 310 respondents or 77.5% were employees of private companies or public listed companies. The largest income bracket was 20,001-30,000 Thai Baht with 103 respondents or 25.8%. Finally 281 of the respondents or 70.3% were single, with the second largest group being married with 109 respondents or 27.3%.

As indicated in Table 2, all of the relationships between product attributes (taste, price, convenience, preparation time, packaging, and brand) and re-purchase decision were described by hypotheses 1, 2, 3, 4, 5, and 6. Pearsons Correlation was used to test each hypothesis. All independent variables which dealt with product attributes had a direct relationship with re-purchase decision on which 'taste' was the strongest independent variable from this set ( $.000 < .01$ ,  $r\text{-value} = .540$ ), following by convenience ( $.000 < .01$ ,  $r\text{-value} = .417$ ), price ( $.000 < .01$ ,  $r\text{-value} = .275$ ), brand ( $.000 < .01$ ,  $r\text{-value} = .268$ ), packaging ( $.000 < .01$ ,  $r\text{-value} = .264$ ), and preparation time ( $.000 < .01$ ,  $r\text{-value} = .196$ ), respectively.

Table 3, shows the findings of analysis of variance (ANOVA) which dealt with the difference between demographics of the respondents in term of re-purchase decision which were described by hypotheses 7, 8, 9, 10, 11, and 12. This research showed that gender and occupation did not reject the null hypothesis as they scored greater than .05 and thus there is no difference between gender or occupation and re-purchase decision on frozen ready to eat meals with the significant level of .492 and .914, respectively. Nevertheless age, education level and income did reject the null hypothesis as they scored 0.00.



**Table 1: The Summary of Demographic Factors**

Demographic	Variable	Frequency	Percentage
Gender	Male	181	45.3
	Female	219	54.8
	<b>Total</b>	<b>400</b>	<b>100</b>
Age	20 - 25 Years Old	50	12.5
	26 - 30 Years Old	142	35.5
	31 - 35 Years Old	127	31.8
	36 - 40 Years Old	47	11.8
	41 - 45 Years Old	25	6.3
	More than 46 Years Old	9	2.3
	<b>Total</b>	<b>400</b>	<b>100</b>
Education Level	High School or Lower	28	7
	Certificate or Diploma	79	19.8
	Bachelors Degree	200	50
	Masters Degree/PhD	93	23.3
	<b>Total</b>	<b>400</b>	<b>100</b>
Occupation	Civil Servant	49	12.3
	Employee	310	77.5
	State Enterprise Employee	15	3.8
	Business Owner	18	4.5
	Other	8	2
	<b>Total</b>	<b>400</b>	<b>100</b>
Income per Month	Less than 10,000 Baht	35	8.8
	10,001 - 15,000 Baht	73	18.3
	15,001 - 20,000 Baht	81	20.3
	20,001 - 30,000 Baht	103	25.8
	30,001 - 40,000 Baht	70	17.5
	More than 40,000 Baht	38	9.5
	<b>Total</b>	<b>400</b>	<b>100</b>
Marital status	Single	281	70.3
	Married	109	27.3
	Divorced	7	1.8
	Widowed	3	0.8
	<b>Total</b>	<b>400</b>	<b>100</b>

**Table 2: The Summary of Hypothesis Testing (Hypothesis 1, 2, 3, 4, 5, and 6)**

Hypothesis	Value	Sig. (2-tailed)	"r" value	Result
H <sub>1</sub>	Taste and re-purchase decision	0.000	0.540	Rejected H <sub>0</sub>
H <sub>2</sub>	Price and re-purchase decision	0.000	0.275	Rejected H <sub>0</sub>
H <sub>3</sub>	Convenience and re-purchase decision	0.000	0.417	Rejected H <sub>0</sub>
H <sub>4</sub>	Preparation time and re-purchase decision	0.000	0.196	Rejected H <sub>0</sub>
H <sub>5</sub>	Packaging and re-purchase decision	0.000	0.264	Rejected H <sub>0</sub>
H <sub>6</sub>	Brand and re-purchase decision	0.000	0.268	Rejected H <sub>0</sub>



**Table 3: The Summary of Hypothesis Testing (Hypothesis 7, 8, 9, 10, 11, and 12)**

Hypothesis	Value	Sig. (2-tailed)	Result
H <sub>7</sub>	Gender and re-purchase decision	0.492	Failed to reject H <sub>0</sub>
H <sub>8</sub>	Age and re-purchase decision	0.005	Rejected H <sub>0</sub>
H <sub>9</sub>	Education level and re-purchase decision	0.000	Rejected H <sub>0</sub>
H <sub>10</sub>	Occupation and re-purchase decision	0.914	Failed to reject H <sub>0</sub>
H <sub>11</sub>	Income and re-purchase decision	0.000	Rejected H <sub>0</sub>
H <sub>12</sub>	Marital status and re-purchase decision	0.383	Failed to reject H <sub>0</sub>

## CONCLUSION

According to the findings of hypotheses 1, 2, 3, 4, 5, and 6, it can be concluded all of product attributes (taste, price, convenience, preparation time, packaging, and brand) had a very weak to moderately positive relationship with the re-purchase decision on frozen RTE meals. These product attributes are related to consumer Re-Purchase Decision on frozen ready to eat meals, although at different levels. Taste which came first has a positively moderate relationship to re-purchase decision is supported by Parry (2001). An extrinsic attribute is an attribute that can only be experienced or evaluated post-purchase, unless of course samples are give to consumers prior to purchase. Prompriang (1996) also found that taste of food obviously is the factor affecting the selection of frozen prepared meals. Nattawan (1997) argued that consumers ranked taste as the most important factor in the selection of frozen dessert. Convenience was then second after taste, is supported by Van Dam (1994) in that the increased consumption of convenience food is assumed to be due to decreasing number of households, decreasing appreciation for housekeeping, increasing labor participation of women and increasing welfare. The third most important attribute was price. This is supported by a study by Reed et al. (2000) who also found that price although important was not the top attribute when purchasing ready to eat meals, in fact only 18% of respondents mentioned the products were too expensive or that price was a major contributor to Re-Purchase Decision. Brand was fourth, and showed a positively weak relationship. This is supported by a study by Silayoi and Speece (2004) in which consumers mentioned that brand was important in regards to reliability of

the product, especially for first time purchases. Packaging was fifth, and has positively weak relationship. This is supported by Schroder and Monika (2003) Packaging design often has to stand as a proxy for appearance of the food itself. Both appearance and aroma of foods are powerful forces in appetite with appearance being especially important for low aroma intensity. Also supported by the study of Silayoi and Speece (2004) who mentioned that participants clearly felt that packaging helps contribute to a positive shopping experience. Preparation time was of least importance as a product attribute. This is supported by Kruorviriyapan (1996). Frozen ready to eat meals were expected to be made/prepared quickly thus the name, so it was expected rather than looked for. The author mentioned that consumers of Frozen ready to eat meals bought and used frozen meals due to the perceived lack of time in their busy social and work life.

In regards to Bangkok, we can state that gender, occupation, and marital status have no difference to re-purchase decision on frozen ready to eat meals. Qualls (1981) stated that nowadays men are more likely to get involved with the household task including cooking. Reilly (1982) found that those who feel more overloaded are more likely to use convenience food items. Kotler (2000) argued that product choice is greatly affected by economic circumstance, spendable income, savings, and asset, debts borrowing and attitudes towards spending and saving. As this research focused on Bangkok which is a fast paced city where residents feel a lot of time pressure, it is possible that people in every type of occupation purchase frozen ready to eat meals. These changes have made the traditional 'housewife' less likely to make a home cooked dinner as she goes into the workforce.



Age, education level and income level all had a positive relation with Re-Purchase Decision on frozen ready to eat meals. The age group between 26-30 years age has the highest mean, while over 46 years old has the lowest mean for Re-Purchase Decision. This is supported by Betts (1997). Younger generations are more traveled than previous generations and seem to value diverse cuisine and dining experiences as attributes of a good meal. The group of Master Degree and PhD had the highest mean of purchase while diploma or certificate had the lowest mean. This is supported by McNeal (1982). Consumers normally choose products, services and activities over others because they are associated with a certain education. People with college education tend to be more sophisticated, more curious and more willing to experiment with new products. Having more general knowledge tends to cause a person to be aware of more kinds of things to satisfy needs, and consequently purchase behavior differs from that of the less knowledgeable. The group of between 30,001 to 40,000 Thai baht per month had the highest mean of purchase while 10,001-15,000 Thai Baht had the lowest mean of re-purchase decision. This is supported by Davis and Stewart (2002) who argued that households with higher incomes eat out more frequently and spend more money per dining occasion than households with lower incomes.

## RECOMMENDATIONS

The results of this study set out to provide evidence that not only demographics but product attributes that have the potential to impact and influence the re-purchase decision of residents in Bangkok. For example, demographics such as age, education and income were observed to be especially influential, while gender, marital status and occupation were not.

Thai economic growth has been, and will be, a primary determinant of consumer expenditures on food as well as a myriad of other products and services. Taste, price, convenience, preparation time, packaging and brand were obvious product attributes that were proved to have a relationship with re-purchase decision on frozen ready to eat meals.

These product attributes should be taken as important when developing frozen ready to eat meals for the Thai market. It is usually understood that price is a large driver for sales, as well as having a good tasting product that is consistent. Again, people who work harder and longer hours per day, have no time or perceive a lack of time to prepare a home cooked meal. These points have a direct impact on the sales and performance of frozen ready to eat meals as a large proportion of the market is based around convenience.

Certainly obvious is the number of females now entering the work place from the traditional 'stay at home' wife. This trend helps the sales in convenience food as both male, females and couples start to rely more on convenience food due to perceived lack of time. As with age, we see the mean on re-purchase decision on frozen ready to eat meals rising steadily from 20-45, with the age of 26-30 being the highest, while stabilizing and then increasing again from 41-45 years of age. Based on these findings, we can state that when marketing frozen meals, to focus on the ages between 26-45 years of age to maximize outcomes. This goes with the research giving the target market of frozen ready to eat meals as people who are students and also within the work force. To gain newcomers to the market, marketers may wish to target 20-25 year olds who may still be living at home and are not purchasers of convenience foods. Marketing activities should be focused towards the higher educated customer starting from a Bachelor degree. Dobson et al. (1997) stated that education is also associated with some differences in consumption of food patterns. Research suggests that income growth and changes in demographic affect the number of food items demanded by customers. As the Thai economy strengthens, and income levels rise, the demand for higher quality ready to eat food may create opportunities for marketers and producers alike such as CP Foods Public, S&P or other players. We see this to be true in our research, suggesting that as one's income increase, there is an increase in purchase of convenience food as well.

After concluding the results we found the attributes with the strongest relationship to re-purchase decision to be: Taste, Convenience, Price Brand, Packaging and Preparation Time. In previous stud-



ies in the European Union (European Sensory Network, 2008) these 6 attributes all listed in the top 10 of most importance when purchasing frozen ready to eat meals. Taste and convenience were the strongest in regards of relation to Re-Purchase Decision on frozen ready to eat meals. Marketers may want to expand the variety of flavours, to products that are harder to prepare as home meals. Fritolay (Thailand) one of the world's largest 'Crisps' manufacturer (owned by Pepsico) has taken the issue of variety a step further and gone outside the box with traditional Thai flavours and other innovative flavours thought up by their marketing teams. A good suggestion to capitalize on is what is call 'In-store Demos', as a means of sampling the product direct to the end consumer. In-store demos are below the line activities that according to many frozen food companies have the greatest impact on not only initial sales, but most importantly repeat purchases. Reflecting the food industries trend toward more processed products, retailers of ready to eat food should offer many food products in a variety of sizes and convenient packages. Consumer demand for convenience and quality, are leading to new packaging designs. In Thailand 'Jele Beauty drink' have adapted to this convenience by adding a straw to the packaging. In addition, marketers may want to not price themselves too low just to gain sales, as 'price' was not the attribute with the highest relationship with re-purchase decision on frozen ready to eat meals. Thus it is suggested to evaluate the other product attributes, especially taste and convenience before working on any price structure.

## FURTHER STUDY

The research focused on Bangkok a city not representative of Thailand as a whole, and thus it is recommended that research is taken from provinces around Thailand, possibly segmenting the country as; North, Central, and South to get a more detailed view of Thailand as a country and consumers re-purchase decision on frozen ready to eat meals. The research studied only six product attributes of frozen ready to eat meals. Hence further studies could indentify more and analyze their effect on re-purchase decision, such as; variety, product origin,

kiddie meals and many others.

'Taste' would be of interest to conduct further research; that would look in detail at this attribute. Such as what tastes are customers looking for? What variety of flavours, what type of cuisine \*(Thai, Italian, Indian), It would be beneficial to do a study on potential consumers or a population that have never purchased frozen ready to eat meals and analyse the reasons behind this.

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# IMPACTS OF FISCAL AND MONETARY POLICIES ON EMPLOYMENT: A STUDY OF THAILAND FROM 1983-2008

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## Abstract

*Employment is one of the key economic indicators. Schools of economics have different perspectives toward the policies to stabilize employment. Keynesian theorists states that deficiency of aggregate demand causes unemployment, so the use of fiscal and monetary policies to increase aggregate demand can increase employment levels. Classical, Monetarist, and Real Business Cycle theories state that employment is generated from supply side factors and nonintervention markets. Employment is also affected by the socioeconomic factors such as labor force growth, urbanization, economic growth, and industrialization. This research aims to study whether the increase in employment level in Thailand is affected by monetary and fiscal policies or if the effect comes from other policies. Multiple regression analysis was applied in the study. The result shows that the supply side policies and socioeconomic factors affect employment in Thailand rather than fiscal and monetary policies. Macroeconomic policies may affect employment in the short run. Human resources development, trade openness, and minimum wage rate have positive impact on employment, while urbanization has a negative relationship with employment.*

## INTRODUCTION

Employment is a situation that the government sector gives importance to. Many countries include the employment rate as part of macroeconomic growth variables. Employment is volatile as per the economic situation. Employment in many countries, especially open countries, will decrease significantly when a nation faces economic downturn or crisis. Governments implement both fiscal and monetary policies with the targets of increasing the employment rate and stabilizing the economy.

The average employment rate in Thailand has been approximately 95-98 percent for the past 25 years. The employment structure in Thailand has changed during the past two decades as a result of economic development a rising from higher degree of international trade, capital inflows and foreign direct investment. The employment structure has been changed from the agricultural sector absorption to more industrial and service sectors absorption.

The production structure in the country has evolved from agricultural production towards industrialization. The industrial sector generates a higher

value in gross domestic product and also in terms of export value. The movement of economy to industrialization also increases the development of urban areas, motivating people in rural areas to move into urban areas for better job opportunities.

The employment rate in Thailand is also affected by the economic cycle. During 1991-1996, the high degree of openness and economic expansion resulted in the shortage of skilled and unskilled labor. During the economic crisis in 1997, Thailand faced a high rate of unemployment. As a result of bankruptcy in the business sector, many employees were laid off.

The Tenth National Economic and Social Development Plan, the master plan of policies for 2007-2011, aims to promote the agricultural sector in Thailand to produce more foods to serve the world market, attract more investment to expand the production base in the industrial sector, and build up the service sector to be a major sector to generate the highest income to the nation.

The government uses monetary and fiscal policies to stabilize the economic activities and employment in the country. The Bank of Thailand uses



policy interest rate to maintain price stability, and stabilize consumption and investment rates to benefit the employment level. The government uses credit policy to each production sector through the Specialized Financial Institutions (SFIs) with the objective of supporting their productions and employment levels. Tax policy is used to support employment generation for example tax exemption or reduction. The government uses the budget deficit to increase government spending to stimulate consumption and investment to benefit the employment situation.

Aside from monetary and fiscal policies, other policies are also used to increase and stabilize employment levels. The infrastructure and technology development, the promotion of trade and financial openness are used to increase a nation's competitive advantage and productivity to generate higher employment level. Policies of human capital development and the labor protection law are used to improve labor skills and living standard.

The roles of fiscal and monetary policies, and other policies in creating employment are identified differently by schools of economists. Keynesian theory believes that monetary and fiscal policies have important role in term of increasing the aggregate demand and also can increase employment. Classical, Monetarist, and Real business cycle theories explain that supply side factors can increase employment more effectively than monetary and fiscal policies. Economic development theories state that socioeconomic factors, for example industrialization, urbanization, and economic growth affects the employment level. Therefore it is questionable which policies, monetary and fiscal, or other policies, can more effectively increase employment in the nation.

This research studies the effectiveness of fiscal and monetary policies which were used during 1983-2008 in stabilizing employment in Thailand. The study of supply side policies such as trade openness, human capital development, infrastructure and technology development, and deregulation are also included here. The socioeconomic factors of labor force growth, economic growth, urbanization, and industrialization which may affect employment are also taken into account in this study.

The research aims to study if macroeconomic policy or other policies and factors affect employment in Thailand. This study is expected to contrib-

ute to the effectiveness of the government's policies to stabilize employment.

## **EMPLOYMENT IN THAILAND DURING 1983-2008**

From the data of National Statistical Office of Thailand, the average employment rate during the past 25 years was 95-98 percent and the average unemployment rate for the same period was 2-3 percent. Several reasons were attributed to the low open unemployment rate. First, 54 percent of the labor force comprises own-account workers (self-employed) and unpaid family workers, mainly in agriculture. This is considered a large proportion of the total workforce. Second, as in many other developing economies, the informal sector plays an important role in providing employment opportunities for the labor force.

The Thai labor market can be characterized as a production segmented labor market, consisting of agricultural, industrial, and service sectors. The data of National Statistical Office shows that employment in the agricultural sector has changed dramatically during the past 25 years. The agricultural sector was once the major sector to absorb the employment in the past. However, this degree of absorption has reduced significantly from approximately 60 percent of total employment during 1983-1992 to 40 percent in 2008.

In contrast, employment in the industrial sector increased from 13-15 percent in 1983-1992 to 22 percent in 2008 which reflects the greater absorptive ability of the sector during the past two decades. These figures are in line with the value of industrial production in GDP which is also higher among production sectors.

The service sector has also absorbed more employees during the past 25 years with an increase in the employment rate from 24 percent to about 40 percent. The service sector is the biggest sector of employment in Thailand, at the present.

## **EMPLOYMENT POLICIES IN THAILAND**

According to the Tenth National Economic and



Social Development, Thailand aims to promote the agricultural sector to be the food provider for the world market, encourage investment, expand production in the industrial sector, and establish the service sector to be the nation's main source of income.

The monetary and fiscal policies as well as the other policies have been used in Thailand to influence and support the employment. The Bank of Thailand has been using inflation targeting since the year 2000 to ensure price stability. The monetary policy stance is signaled through the policy interest rate. The impacts of monetary policy to investment, consumption, and employment level are through five main transmission channels including interest rate channel, exchange rate channel, asset price channel, credit channel, and expectation channel. The development of the financial markets, particularly the primary and secondary markets for money market and bond market, have been implemented to facilitate the business sectors to raise funds to expand their investment level.

Fiscal Policy is the use of government expenditure and revenue collection to influence economic stability. The government provides tax advantage to certain sectors, such as SMEs and companies that comply with the BOI's requirements. This tax advantage is a way to support the companies in reducing companies' burden and increasing profits. The government expects these sectors to generate higher production level in the nation, and also maintain and increase the level of employment.

The government uses quasi-fiscal policies to stimulate the economy through loans granted by the Special Financial Institutions (SFIs). The SFIs are under the supervision of the Ministry of Finance to increase funds raising opportunities for people and business sectors such as the agricultural sector, SMEs, and exporters.

The development of skills training and education has been the focus of the government since the Eight National Economic and Social Development Plan after facing the economic crisis in 1997. The government allocates its spending to education in order to increase capabilities of people and develop the labor force to match the skills in demand. In addition, the government increases motivation in people by providing better health care services.

The other important spending of the government

is on infrastructure and technology development to increase the competitive advantage of Thailand in the world market. This development benefits the trading which results in higher employment level.

The promotion of trade and financial openness has been developed since 1997 to expand and facilitate the market for production. Thailand also joined different Free Trade Agreements (FTAs) within and across the region. Thailand's openness now has resulted in seven major trade partners, including ASEAN, Australia, the USA, the EU, China, Japan and India.

Thailand developed the labor protection law in terms of minimum wage and social security to promote the living standard and right of labors. The minimum wage (tripartite) committee adjusts the minimum wage in each area based on the cost of living, inflation, standard of living, costs of production, firms' competitiveness, labor productivity, GDP and other economic and social conditions. In 2008, there were 14 minimum wage levels, ranging from 148 to 203 baht a day. The social security schemes provide sickness, maternity, invalidity, death, old age, survivor benefits, and child allowances for nonagricultural employees working in firms with 10 or more workers. In 2004, the unemployment insurance program took force.

## REVIEW OF LITERATURE

Employment means the state of being employed or having a job. The prevalence of employment is usually measured by using the employment rate, which is defined as the percentage of those in the labor force who are employed (Miles and Scott, 2005).

Economists have explained the influence of employment differently. Keynesian theory believes that fiscal and monetary policies influence the aggregate demand and affect employment. Classical, monetarist, and real business cycle believe that fiscal and monetary policies do not affect the employment situation; instead the real factors influence employment. Governments should not intervene in the market but should increase real factors such as education, technology, and capital formation to increase labor productivity, which would influence the aggregate sup-



ply in the nation (Froyen, 2005).

Fiscal policy is carried out by the executive and legislative branches of government that make policies regarding government spending programs and taxation (Eggert and Goerke, 2003). According to Keynes' theory, high unemployment is the result of a deficiency in aggregate demand. Keynes advocates using monetary and fiscal policies to regulate aggregate demand. Keynesian theory highlights the potential of fiscal policy to solve macro problems such as using fiscal stimulus to step up government spending, tax cuts, and increase transfers to create employment. These increases consumption and investment which can increase the level of employment (Froyen, 2005).

The classical, monetarist, and business cycle theories state that the effects of the increase in government spending and reduction in taxes do not increase employment. The question of how the increase in spending and reduction in taxation are financed arises. The government has two sources of funds: selling bonds to the public and creating new money. At this point, we assume the fix in money supply and taxation, and government finances their spending and loss in revenue by issuing bonds. The increase in government spending creates an increased demand for loanable funds as the government sells bonds to the public. The interest rate will increase enough to "crowd out" an equal amount of private expenditure on consumption and investment (Froyen, 2005).

If the government finances its spending and reduction in tax revenue by printing new money, the quantity of money is changed and the price level will change proportionately. In classical system and real business cycle, the source of increase in the money supply does not increase output and employment. So the increase in government spending has no independent effect on aggregate demand (Froyen, 2005).

Governments also implement expansion using monetary policies. Keynesian theory states that money affects income via interest rates. An increase in the money supply lowers the interest rate and in turn increases the consumption and investment in aggregate demand, which can increase the employment (Froyen, 2005).

To classical and real business economists,

money was a "veil" that determined the nominal values, but had no effect on real quantities (Froyen, 2005). Monetarists believe that expansionary monetary policy can only temporarily move the unemployment rate below the natural rate. There is a trade-off between unemployment and inflation only in the short run. In the long run, the influence of the money supply is primarily on the price level and other nominal variables. The unemployment rate will gradually return to the natural rate and the lasting effect of the expansionary policy will be a higher inflation rate (Froyen, 2005).

Classical, monetarist, and real business cycle economists believe in the importance of real factors in determining the "wealth of nations" and stressed the optimizing tendencies of the free market in the absence of state control. The growth of an economy is the result of increased stock of the factors of production and advances in technique of production. Among those forces, the following policy options have been emphasized: Human Capital Investment, Deregulation, Infrastructure and Technology Development, and Trade and Financial Openness (Schiller, 2006).

The way to reduce the costs of supplying goods and services is to improve the nation's infrastructure, that is, transportation, technology, communications, judicial, and other systems that bind the pieces of the economy into a coherent whole (Schiller, 2006). The invention of new products that serves as substitutes for old ones will tend to reduce the labor demand curve in the older sector. If greater product substitution possibilities are also created by these new inventions, the demand of labor of new products will increase (Ehrenberg and Smith, 2003). A nation's ability to supply goods and services depends on its human capital as well as its physical capital. Most countries focus on three types of training programs: (1) Retraining aimed at the long term-unemployed (e.g., unemployed for more than 12 months); (2) Retraining displaced workers, especially those displaced en masse as a result of enterprise/industrial restructuring; and (3) Training programs aimed at young people, often with special attention to school drop-outs (World Bank, 2004). Another way to increase human capital is to expand and improve the efficacy of the education system, both formal and non-formal. This method is more likely to



develop human capital gradually than to spur short-term economic growth (Schiller, 2006; Sussangkarn, 1991).

Government intervention affects the shape and position of the aggregate supply curve. The government intervenes directly in supply decisions by regulating employment and output behavior. In general, such regulations limit the flexibility of producers to respond to changes in demand (Schiller, 2006). Minimum wage laws are one of the most familiar forms of factor market regulations. The prohibition for employers to hire lower paid workers limits the ability of employers to hire additional workers. Wage-employment studies indicate that wages higher than equilibrium reduce employment in the formal sector (Nafziger, 1997). The other government regulations are social security system and unemployment insurance which increase the production cost to employers, so they tend to hire fewer employees (Nissim, 2007).

Openness policies are policies that support international trade and international capital flows across nations. Economists have long recognized that trade would lead to a division of labor advantageous to everybody involved. Indeed, by reshuffling resources in accordance with the principles of comparative advantage, they can be used more appropriately and effectively for production, thus creating the so-called gains from trade. Highly productive producers will be able to expand as they start selling their goods or services abroad. Producers and consumers will be able to take advantage of cheaper imports and of a larger product and quality choice (Jansen and Lee, 2007).

Employment is also affected by other socioeconomic factors, apart from public policies, which include labor force growth, economic growth, urbanization, and industrialization.

The increasing growth rate of labor force cannot be absorbed by industry, resulting in increased unemployment and underemployment. Labor force is growing faster than job opportunities result in growing unemployment. Many developing countries must contend with a much more rapid labor force growth than what developed countries faced at a similar stage in their growth (Nafziger, 1997).

Migration also affects the unemployment rate in particular areas or regions. Migration to urban ar-

reas where there are rapidly growing demand of workers are increasing (Sussangkarn, 1991). Harris-Todaro whose model views a worker's decision to migrate on the basis of wages and probability of unemployment, explains that migrants respond to urban rural differences in expected rather than actual earnings. Employees expect higher probability to earn income in urban areas (Nafziger, 1997).

Employment falls along with production during recessions, and rises again during recoveries. Employment grows along with potential national outputs as firms hire more workers to produce growing output. Okun's law states that for each percentage point by which unemployment rate is above the natural rate, real GNP is 3 percent below potential GNP (Hall and Taylor, 1991).

As an economy edges toward ever higher paths of development, there is further structural transformation as even more workers shift from the secondary sector towards the industrial and service sectors. Overtime, then, more modern and more developed economies tend to have the majority of the labor force employed in, and the greatest part of total income generated in the modern industrial and service sectors as the importance of agriculture and rural industries shrinks (Cypher and Dietz, 2004).

## RESEARCH METHODOLOGY

This research aims to study the impact of monetary and fiscal policies on employment in Thailand. This study is based on quantitative method by using secondary data of different variables. Multiple Regression analysis is applied to analyze the relationship of independent variables to dependent variable. Each pair of independent variable has correlation value not more than 0.75 which means that there is no multicollinearity between independent variables so multiple regression analysis can be applied in this study. The research uses the yearly data from year 1983 to 2008.

The researcher employed 3 models in this study. The first model includes the monetary and fiscal policies to affect employment. Money supply as a percentage of Gross Domestic Product (GDP) is used to measure the monetary policy. Tax revenue as a percentage of GDP, government's expenditures



as a percentage of GDP, and the budget deficit as a percentage of GDP are used to represent the fiscal policy.

The second model includes the macroeconomic and the supply side factors that follow the theories of classical, monetarists, and real business cycle. The objective of the second model is to study if the supply side policies are included in a model together with the macroeconomic policies, which can increase the employment. There are 4 supply side policies in this study. First, the infrastructure and technology development is measured by the government capital expenditure in economic service function as a percentage of GDP. Second, human capital development is measured by the government budget allocation to community and social services as a percentage of GDP. Third, deregulation is represented by percentage change in minimum wage and growth rate of social security distributed by private sector. The fourth one is trade openness and financial openness. Trade openness is measured by the total value of export and import to GDP. Financial openness is measured by gross capital flows to value of GDP.

The third model includes the socioeconomic factors to the supply side and macroeconomic factors. Again, the objective is to see if the monetary and fiscal policies affect employment when the other policies and factors are taken into account. The socioeconomic factors include the labor force growth rate, GDP rate, the growth rate of urbanization, and the level of employees in industrial sector.

The dependent variable is the employment rate of Thailand. The standardized coefficient is used to interpret the relationship between the independent variables and dependent variable in this study. The adjusted R square measures the determinant degree of each model. Durbin-Watson value is used to identify if there is autocorrelation among the independent variables. Durbin-Watson value of the first model with 4 independent variables should be 1.767 to 2.233. The second model of 10 independent variables must have value of Durbin-Watson 1.440 to 2.560, the third model with total of 14 independent variables must have Durbin-Watson value of 0.881 to 3.119 for non autocorrelation. The researcher uses 95 percent level of confidence.

## RESULTS OF THE STUDY

Durbin-Watson from three models has the value which indicates no autocorrelation problem among independent variables.

From the first model's results on Table 1, the monetary policy has a significant negative relationship to employment, and fiscal policy has no impact to employment. If money supply as a percentage of GDP increases by 1 percent, the employment rate will be reduced by 0.491 percent. Fiscal policy has no significant relationship to employment rate. The negative relationship between the monetary policy and the employment rate confirms the study by monetarists that the level of money supply level cannot increase employment. The increase in money supply level tends to increase price level expectations. Employees start to realize that their real wage decreases from lower purchasing power, so they demand a higher nominal wage. If employers can not increase the nominal wage to cover inflation rate, employers may decrease the level of hired employees. The policy maker cannot peg the unemployment rate at some arbitrary determined target rate.

The other explanation for the negative effect from monetary policy is liquidity trap. A liquidity trap results when demand for money becomes infinitely elastic so that further injections of money into the economy will not serve to further lower interest rates. Under the Keynesian theory in which this arises, it is specified that monetary policy affects the economy only through its effect on interest rates. Thus, if an economy enters a liquidity trap, further increases in the money stock will fail to further lower interest rates and, therefore, fail to stimulate the economy in terms of increasing aggregate demand.

The fiscal policy has no significant independent effect on employment rates. This result tends to conform to classical, monetarists theories and real business cycle theories. Consider the effects of an increase in government spending and reduction in tax revenue. The Thai government usually finances its spending by issuing bonds or borrowing. The increase in government spending creates an increased demand for loanable funds as the government sells bonds to the public, interest rate will increase. The interest rate is pushed up by enough to "crowd out" an equal amount of private expenditure on consump-



**Table 1: The Model's Results**

Independent Variables	Model 1	Model 2	Model 3
Constant	90.569	89.003	89.005
Money Supply as a percentage of GDP	-0.491 (-2.819)***	0.067 (0.380)	-0.063 (-0.371)
Tax revenue as a percentage of GDP	0.194 (1.108)	0.121 (0.945)	0.034 (0.291)
Expenditure as a percentage of GDP	0.295 (1.185)	0.023 (0.132)	0.037 (0.252)
Budget deficit as a percentage to GDP	-0.048 (-0.244)	-0.098 (-0.716)	-0.209 (-1.829)
Infrastructure and technology development		0.208 (1.403)	0.041 (0.318)
Human capital development		0.284 (1.683)	0.360 (2.477)***
Trade Openness		0.890 (6.109)***	1.082 (4.464)***
Financial Openness		0.016 (0.114)	0.284 (1.232)
Minimum wage		0.276 (2.026)***	0.342 (2.934)***
Social Security		-0.194 (-1.852)	-0.105 (-1.109)
Labor Force Growth			0.161 (1.242)
Urbanization			-0.299 (-3.436)***
Economic Growth			0.033 (0.167)
Industrialization			-0.203 (-0.576)
Adjusted R2	0.573	0.792	0.891
F-Sig	0.001	0.000	0.000
Durbin Watson	1.770	1.502	2.337

**Note:** \*\*\*significance at 95percent confidence interval level  
Number in the parenthesis is t-value.

tion and investment. Crowding out keeps aggregate demand from increasing when the government component of demand rises.

If the government finances its spending and reduces tax revenue by printing new money, the quantity of money is changed and the price level will change proportionately. In classical system and real business cycle, the source of the increase in money supply does not increase the output and employment.

The other explanation for the insignificance of fiscal policy to employment creation is the inelasticity of income to government spending. The government injects more spending to different projects with the objective of increasing the aggregate demand especially in consumption and investment in the system. If the amount of consumption and investment is changed very little from increased government spending, employment cannot be increased significantly.

The second model includes the effect from the combination of the macroeconomic policies with the

supply side policies into the study. Supply side policies include 4 perspectives that increase productivity. The model shows a significant relationship to the employment rate. The coefficient of determinant is 0.792. When macroeconomic policies and supply side policies are added into the model, the monetary and fiscal policies play no role in increasing employment. The supply side policies which are trade openness and minimum wage have significant positive effects to increase the employment rate. One percentage change in the minimum wage increases employment rate by 0.276 percent. If the trade openness index increases by one level, employment rate will be increased by 0.890 percent. Infrastructure and technology development, human development, and social security have no independent effects on employment.

The third model includes the entire effects from macroeconomic policy, supply-side policy, and socioeconomic factors to employment rate. The model again shows that the supply-side policy and socioeconomic factors affect employment rather than the



monetary and fiscal policies.

Human capital development, trade openness, and minimum wage rate have significant positive relationship with employment. If the human capital development spending as a percentage of GDP increase one percent, this can increase the employment rate by 0.360 percent. Trade openness affects employment rate positively with the highest degree. The increase in the value of export and import by 1 time more than the value of GDP, increases the employment rate by 1.082 percent. One percentage change in minimum wage rate increases the employment rate by 0.342 percent.

The increase in urbanization level has a significant negative relationship to employment. If the number of people in the urban areas to total population increases by one percent, the employment rate decreases 0.299 percent.

## CONCLUSION AND RECOMMENDATION

From the results of the study, the supply side policies and socioeconomic factors tend to have more impact on employment in Thailand. Those supply side factors are human capital development, minimum wage, and trade openness. Urbanization from socioeconomic factor has negative impact on employment. The results confirm the studies of classical, monetarists, and real business cycle school of thought that the real factors affect level of employment. The monetary and fiscal policies cannot increase the employment or can affect the employment only in the short term period. This result contradicts with the Keynesian's school of thought.

The researcher would like to propose policies to stabilize employment in Thailand. Even though the results shows no significant impact of monetary and fiscal policies on employment when other policies and factors are taken into the study, the government still needs to use them to stabilize the economic system and counter economic fluctuation. The government should use monetary policy through inflation targeting to stabilize the price level to benefit the operation of each production sector. The development of financial markets such as money markets and bond market is also needed to help business sectors to raise the needed funds to reduce the reluc-

tant lenders problem.

Tax advantage should be provided to corporate sectors. Government should provide tax advantage to firms which are 1) labor intensive production firms 2) agricultural industrial firms 3) export oriented industrial firms, or 4) operate in province areas.

Regarding the government spending, the amount of spending for human capital development should be emphasized. Skills and knowledge of the workforce should be developed either by on the job training or the training programs. The government should allocate spending to improve the quality of education at every level to prepare the educated persons to match with labor force requirement. The health care and community services also need to be considered. When people have better skills and knowledge as well as better standard of living, they can work more efficiently.

Second, the openness to international trade influences the shape and position of aggregate supply and employment absorption. From the result, trade openness has the highest degree of positive relationship to increase employment. With less trade regulation, producers can access to lower cost raw materials. Government should try to get the most benefit out of the free trade agreements (FTAs). International trade should be expanded and support should be given to the agricultural sector rather than only to industrial and service sectors.

Third, the minimum wage rate, which can increase the employment level, does not rely on the nonintervention concept from classical, monetarist, and real business cycle theories. The higher level of minimum wage rate increases the purchasing power of the household sector. They spends more for products and this results in the higher level of production and employment especially for agricultural or food products. Government should adjust the minimum wage rate to be in line with the changes in the inflation rate.

Finally, is the decrease in level of urbanization. Employees move to urban areas with the expectation of getting better jobs with higher wages. However, this movement of labor leads to excess supply of labor in urban areas and higher unemployment rate. The government should create jobs in rural areas. The employment in the rural areas should be



stabilized and supported, such as by providing tax privilege to corporations that invest and create jobs in the rural areas.

The above policies together can support the increase and stabilization in a nation's level of production and employment. Firms can access sources of funds from financial markets development. They can have price advantages from tax privileges, can expand to international markets via higher degree of trade openness, and can have labor that have the required skills so they can increase the production level as their expectation. The jobs are distributed to the rural areas, and agricultural sector employment will be better supported. Labors can have better standard of living from minimum wage rate which is in line with the changes in inflation rate.

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# ASSESSING SATISFACTION: A STUDY ON INTERNATIONAL PASSENGERS USING NEPAL AIRLINES

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## Abstract

*The objective of the study was to determine the satisfaction of passengers flying in Nepal Airlines. The study was conducted in and near Bangkok, Suvarnabhumi Airport and Tribhuvan International Airport. 301 samples were collected and used for the data analysis. The study adapted model from Park (2007) of airlines service quality to determine the satisfaction. There were six dimensions of Service Quality involved in the study and those were: In-flight services, Reservation-related services, Airport service, Reliability, Employee service and Flight availability. The study also included demographic factors such as Gender, Age, Purpose of travel, Income and Occupation. These demographic factors were analyzed to determine the difference between demographic factors. For the data analysis, multiple regression was used to determine the impact of Service Quality dimensions on passenger satisfaction and ANOVA was conducted to test the difference between demographic factors and passenger satisfaction. From the analysis, it was found that three dimensions of Service quality from six dimensions had significant impact on the passenger satisfaction. The three dimensions were In-flight services, Reliability and Employee service. There was difference between purpose of travel and passenger satisfaction and with use of Post hoc test, it was found that there was difference between study-business group and passenger satisfaction. Yet, overall, passenger satisfaction was found to be neutral.*

## INTRODUCTION

Service quality is a focused evaluation that reflects the customer's perception of elements of service such as interaction quality, physical environment quality and outcome quality (Olaleke O, 2010). Thus, by measurement of service quality to determine satisfaction level, the organization will know their stand concerning the offerings of their services to customers. Customer satisfaction is a judgment made on the basis of a specific service encounter (Cronin & Taylor, 1992). The study was set to determine satisfaction of Nepalese passengers flying Nepal Airlines on international routes and also to determine the difference between demographic factors and passenger satisfaction. Passengers have complained about the service quality of Nepal Airlines. Thus, the research questions were

a. What is the impact of Service Quality dimensions of Nepal Airlines on passenger satisfaction?

b. What was the difference between demographic factors and satisfaction of passengers flying Nepal Airlines?

## LITERATURE REVIEW

Park et al. (2005) pointed that it was worthwhile discussing dimensions of airlines in its specificity rather than basing on only SERVQUAL dimensions. Hence, the authors pointed the SERVQUAL dimensions did not address areas of airlines such as in-flight meals, seat space and leg room.

Park (2007) covered the aspects of airlines and proposed six dimensions for airlines: In-flight service, Reservation related service, Airport service, Reliability, Employee service and Flight availability. In airlines, delivery quality service to passengers is of high importance for airlines' survival. The airline service quality is an important to mediate to passen-



ger satisfaction (Park, 2006). Natalisha & Subroto (2003) studied an Indonesian Domestic airlines and found similar findings that service quality played a vital role on the level of passenger satisfaction. The study also recommended that domestic airline companies improve the quality of the service for passengers.

In the literature on Service Quality of Airlines, it was found that passengers value service quality as important for satisfaction (Sultan & Simpson, 2000; Pakdil & Aydin, 2007; Park, 2007 and An & Noh, 2009).

The proposed conceptual framework was adapted from the work of Park (2007). In addition to six dimensions, the researcher used Demographic factors to examine the level of satisfaction among passengers. (Figure 1)

Based on the research framework, the hypotheses were set for Service Quality Dimensions and Demographic factors to assess passenger satisfaction.

**Service Quality:**

Hypothesis 1: Impact of In-flight service on passenger satisfaction

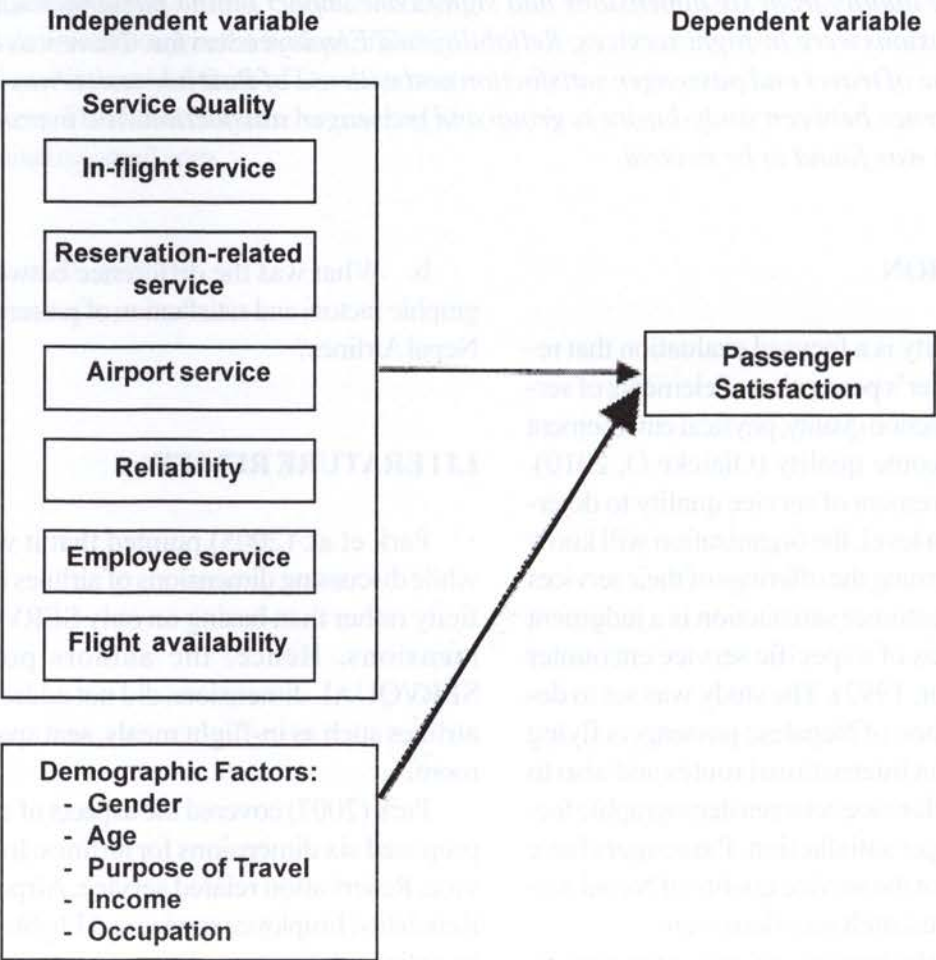
Hypothesis 2: Impact of Reservation-related service on passenger satisfaction

Hypothesis 3: Impact of Airport service on passenger satisfaction

Hypothesis 4: Impact of Reliability on passenger satisfaction

Hypothesis 5: Impact of Employee service on passenger satisfaction

**Figure 1: Conceptual Model**





Hypothesis 6: Impact of Flight availability on passenger satisfaction

### **Demographic factors:**

Hypothesis 7: Difference between gender and passenger satisfaction

Hypothesis 8: Difference between age and passenger satisfaction

Hypothesis 9: Difference between purpose of travel and passenger satisfaction

Hypothesis 10: Difference between income level per month and passenger satisfaction

Hypothesis 11: Difference between occupation and passenger satisfaction

## **METHODOLOGY**

The main objective of the study was to assess the level of satisfaction of passengers using Nepal Airlines on international flights. The study adapted the questions for Service Quality Dimensions in the questionnaire from the work of Park (2007). The respondents were Nepalese passengers flying international routes covered by Nepal Airlines. It was assumed that the respondents selected for the survey were able to speak, read and write in English, hence the questionnaire was administered in English. The study was designed to determine satisfaction with respect to service quality and also to find the difference between Demographic factors and satisfaction.

The researcher employed convenience sampling which refers to sampling procedure to obtain those units or people most conveniently available (Cooper & Schindler, 2008). The samples were collected from in and near Bangkok, docs.google.com, at Suvarnabhumi Airport and Tribhuvan International Airport. The survey lasted from 2<sup>nd</sup> April, 2011 till 11<sup>th</sup> May, 2011. The total samples collected were 301.

The instrument used for the survey was questionnaire. It was self-administered questionnaire. The questionnaire was divided into two sections.

Section I: Service Quality. For this section, the variables were In-flight service, Reservation-related service, Airport service, Reliability, Employee ser-

vice and Flight availability. The questions were in Likert scale which ranged from 1 "Strongly Disagree" to 5 "Strongly Agree" with equal interval of 1. The original 7 point-Likert scale was changed to 5 point-Likert scale; 1 "Strongly disagree" to 5 "Strongly agree" for ease of understanding of the sampled respondents. And, the final question in the section asked about overall satisfaction therefore the scale was in from 1 "Strongly Dissatisfied" to 5 "Strongly satisfied".

Section II: Demographic factors. Under this section, the respondents were requested to fill in the demographic information. The factors and item in the questionnaire are shown in table 1.

The reliability test of questions was conducted with 50 passengers. The result is shown in the table 2 and it showed that all of the six Service Quality dimensions were more than 0.6. which is acceptable as per Sekaran (1992).

For the hypotheses testing, Multiple regression was used to assess the impact of Service Quality dimensions on passenger satisfaction and ANOVA was tested for the demographic factors to determine the difference between demographic factors and passenger satisfaction.

## **FINDINGS**

Among the sample respondents, the majority of respondents was male with 68.4%. 25-29 years was the age group of the majority of respondents, accounting for 31.9%. From various purposes of travel, the major purpose of travel was study with 33.6%. Of the given income level per month, it was found that the major income level was less than Rs. 10,000 with 31.9%. Of the mentioned occupation, it showed that majority of the respondents was students, with 37.5%.

The regression of the model is illustrated in table 3 which shows that R square is 46 % indicating the percentage variance in the model.

The validity of the model is shown by significance of F-test of the regression model. From the table 4, it can be inferred that the model is valid.

The researcher studied the level of satisfaction based on the Service Quality. The study used six dimensions of Service Quality for Nepal Airlines,



**Table 1: Factors and items**

<b>Factors</b>	<b>Items</b>
In-flight service	up-to-date aircraft and in-flight facility
	good quality meals
	comfortable seats
	seat space and legroom
	in-flight entertainment services (newspaper, magazines)
Reservation-related service	convenience of reservation and ticketing
	promptness in reservation and ticketing
	accuracy in reservation and ticketing
Airport service	check-in service (waiting time, efficiency)
	promptness in baggage delivery
	accuracy in baggage delivery
	allowed to choose seat (Window, middle, Aisle)
Reliability	on-time performance in flight departure
	shown sincere interest in solving problems in flight cancellation
	shown sincere interest in solving problems in baggage loss
	maintained safety record
Employee service	neat in appearance
	willing to help passengers
	Courteous
	knowledge to answer passengers' questions
	personal attention
Flight availability	convenient flight schedule to destination
	frequent flights to destination
Gender	Male
	Female
	Less than 19 years
Age	19 years - 24 years
	25 years - 29 years
	30 years - 34 years
	More than 34 years
Purpose of Travel	Study
	Business
	Commuting
	Leisure
	Other
	Less than Rs. 10,000
Income	Rs. 10,000 - Rs. 25,000
	Rs. 25,001 - Rs. 35,000
	Rs. 35,001 - Rs. 45,000
	More than Rs. 45,000
	Student
Occupation	Self-employed
	Employee
	Traders
	Other

**Table 2: Reliability Testing: Cronbach's Alpha**

<b>Factors</b>	<b>No. of Items</b>	<b>Cronbach's Alpha</b>
In-flight service	5	0.828
Reservation-related service	3	0.862
Airport service	4	0.81
Reliability	4	0.739
Employee service	5	0.89
Flight availability	2	0.848



**Table 3: Regression of the Model**

Model Summary <sup>b</sup>										
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin Watson
					R Square Change	F Change	Df1	df2	Sig. F Change	
1	.679 <sup>a</sup>	.460	.449	.728	.460	41.812	6	294	.000	1.707

- a. Predictors: (Constant), Flight\_availability, Employee\_service, Reservation\_related\_service, In\_flight\_service, Airport\_service, Reliability  
b. Dependent Variable: Are you overall satisfied with service quality?

**Table 4: ANOVA of Regression**

ANOVA <sup>b</sup>						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	132.938	6	22.156	41.812	.000a
	Residual	155.793	294	.530		
	Total	288.731	300			

- a. Predictors: (Constant), Flight\_availability, Employee\_service, Reservation\_related\_service, In\_flight\_service, Airport\_service, Reliability  
b. Dependent Variable: Are you overall satisfied with service quality?

**Table 5: Summary of Service Quality Dimensions**

Hypotheses	b-value	p-value	Result
Hypothesis 1: Impact of In-flight service on passenger satisfaction	0.371	0.000	Rejected Null hypothesis
Hypothesis 2: Impact of Reservation-related service on passenger satisfaction	0.049	0.456	Failed to reject Null hypothesis
Hypothesis 3: Impact of Airport service on passenger satisfaction	0.095	0.225	Failed to reject Null hypothesis
Hypothesis 4: Impact of Reliability on passenger satisfaction	0.172	0.047	Rejected Null hypothesis
Hypothesis 5: Impact of Employee service on passenger satisfaction	0.298	0.000	Rejected Null hypothesis
Hypothesis 6: Impact of Flight availability on passenger satisfaction	0.109	0.085	Failed to Reject Null hypothesis

namely, In-flight service, Reservation-related service, Airport service, Reliability, Employee service and Flight availability. From the analyses, it was found that in-flight service, Reliability and employee service were factors impacting passengers' satisfaction. These findings are presented in table 5.

The assumptions to be met for the validity of the regression model to be generalized for the population. Following measures were taken to ensure the generalization of the model from sample to population. From table 3, Durbin- Watson statistic showed

value of 1.707. As a rule of thumb, the values less than 1 or greater than 3 are definitely a cause for concern (Field, 2009). Thus, for any two observations, the residual terms were uncorrelated.

Multicollinearity exists when there is a strong correlation between two or more independent variables in a regression model (Field, 2009). Multicollinearity exists in the multiple regression model because of use of two or more than two variables to predict the outcome. So, the descriptive statistics was used to check the multicollinearity, the variables are corre-



lated with each other if  $R > .9$  (Field, 2009). From correlation table 6, the R-value between any two predictors was less than .9. Thus, multicollinearity within the data was not significant.

For the normality of residuals, histogram should be bell shaped curve and normal probability plot in which the residuals should lie on the line (Field, 2009). Thus, from the figure 2 and figure 3, the distribution was normal. Thus, for this model, the service quality dimensions of Nepal Airlines that affected

the satisfaction were In-flight service, Reliability and Employee service.

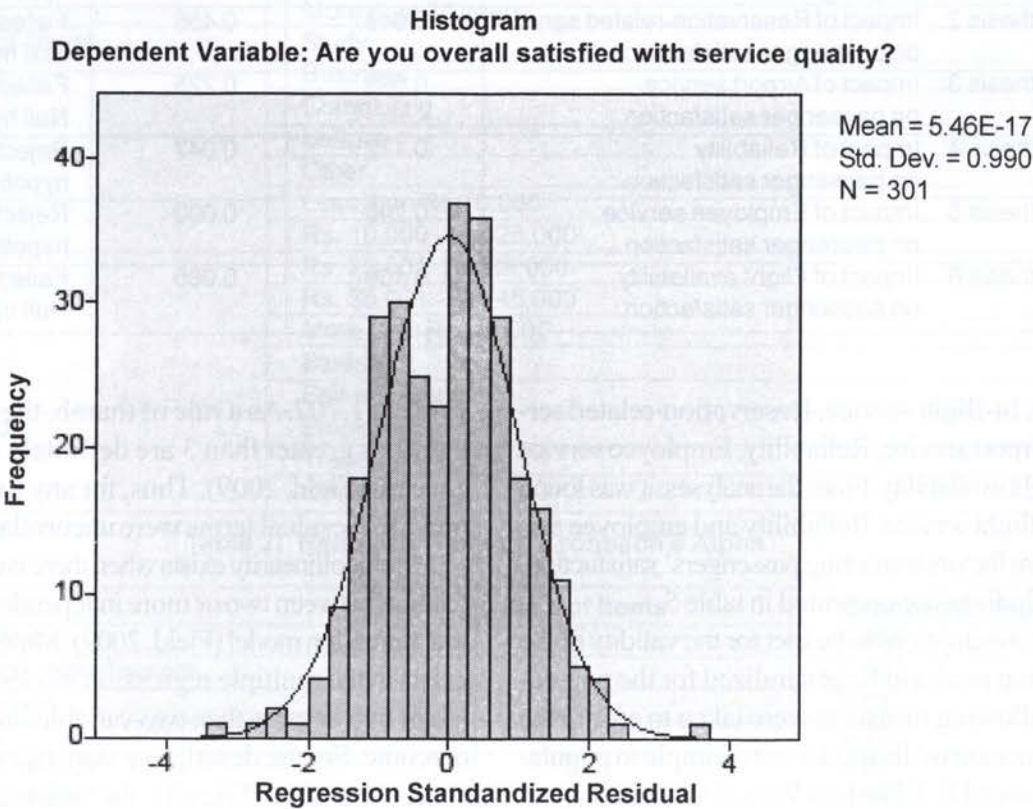
For the demographic factors, ANOVA was used to test the difference and it was found that there was difference between purpose of travel and passenger satisfaction. These findings are presented in table 7.

The ANOVA test results showed that there was difference between purpose of travel and passenger satisfaction. With post hoc test, it was found that

Table 6: Correlation

Correlations								
		Are you overall satisfied with service quality?	In flight service	Reser- vation related service	Airport service	Relia- bility	Emple- yee service	Flight availa- bility
Pearson Correla- tion	Are you overall satisfied with service quality?	1.000	.575	.397	.442	.530	.559	.444
	In flight service	.575	1.000	.414	.463	.534	.525	.444
	Reservation related service	.397	.414	1.000	.562	.458	.360	.527
	Airport service	.442	.463	.562	1.000	.515	.412	.516
	Reliability	.530	.534	.458	.515	1.000	.601	.507
	Employee service	.559	.525	.360	.412	.601	1.000	.399
	Flight availability	.444	.444	.527	.516	.507	.399	1.000

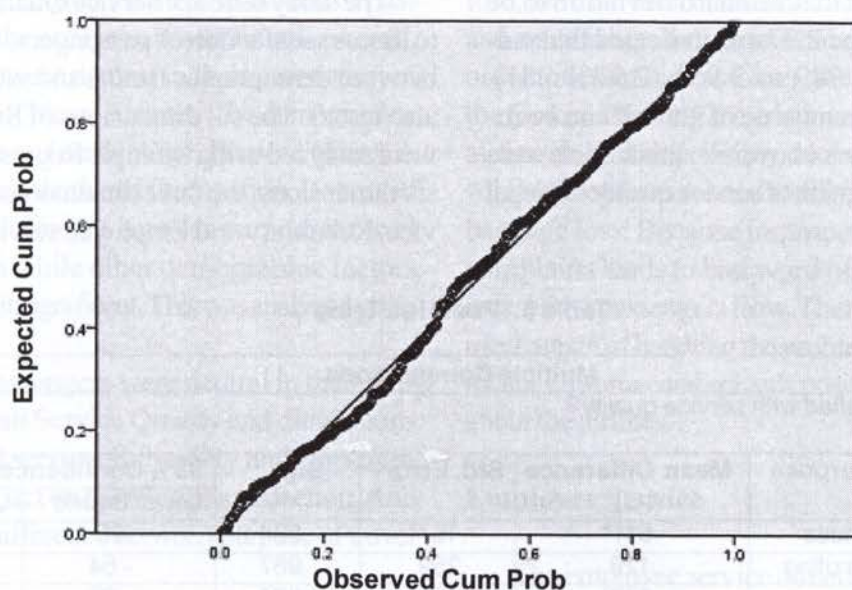
Figure 2: Histogram of Residuals





**Figure 3: Normal Probability Plot of Regression Standardized Residual**

**Normal P-P Plot of Regression Standardized Residual**  
**Dependent Variable: Are you overall satisfied with service Quality?**



**Table 7: Summary of Demographic Factors**

	<b>Hypotheses</b>	<b>p-value</b>	<b>Result</b>
Hypothesis 7:	Difference between gender and passenger satisfaction	0.461	Failed to reject Null hypothesis
Hypothesis 8:	Difference between age and passenger satisfaction	0.349	Failed to reject Null hypothesis
Hypothesis 9:	Difference between purpose of travel and passenger satisfaction	0.043	Rejected Null hypothesis
Hypothesis 10:	Difference between income level per month and passenger satisfaction	0.201	Failed to reject Null hypothesis
Hypothesis 11:	Difference between occupation and passenger satisfaction	0.304	Failed to reject Null hypothesis



there was difference in study and business passenger satisfaction. The result of Post hoc test is shown in table 8.

Table 9 showed that standard deviation to be 0.981 and mean to be 2.97 and indicated that values varied from 1.989 to 3.951 (2.97±0.981). Therefore, with mean value of 2.97, it can be inferred that passengers in overall satisfaction were neutral in their perception of service quality of Nepal Airlines.

## CONCLUSION AND RECOMMENDATIONS

The study used six Service Quality dimensions to assess satisfaction of passengers; the difference between demographic factors and satisfaction were also tested. The six dimensions of Service Quality were analyzed using Multiple Regression. From the six dimensions, the three dimensions: In-flight service, Reliability and Employee service were found

**Table 8: Post Hoc Tests**

Multiple Comparisons						
Are you overall satisfied with service quality? Games-Howell						
(I) Purpose	(J) Purpose	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Study	Business	.511*	.167	.024	.05	.97
	commuting	.129	.259	.987	-.64	.90
	Leisure	.143	.151	.876	-.27	.56
	Other	.129	.155	.920	-.30	.56
Business	Study	-.511*	.167	.024	-.97	-.05
	commuting	-.382	.281	.657	-1.20	.44
	Leisure	-.367	.186	.285	-.88	.15
	Other	-.382	.189	.263	-.91	.14
Commuting	Study	-.129	.259	.987	-.90	.64
	Business	.382	.281	.657	-.44	1.20
	Leisure	.015	.271	1.000	-.78	.81
	Other	.000	.273	1.000	-.80	.80
Leisure	Study	-.143	.151	.876	-.56	.27
	Business	.367	.186	.285	-.15	.88
	commuting	-.015	.271	1.000	-.81	.78
	Other	-.015	.175	1.000	-.50	.47
Other	Study	-.129	.155	.920	-.56	.30
	Business	.382	.189	.263	-.14	.91
	commuting	.000	.273	1.000	-.80	.80
	Leisure	.015	.175	1.000	-.47	.50

\*. The mean difference is significant at the 0.05 level.

**Table 9: Mean and Standard Deviation of Overall Satisfaction**

Descriptive Statistics		
N	Mean	Std. Deviation
Are you overall satisfied with service quality?	301	2.97 .981
Valid N (listwise)	301	



to be those influencing the satisfaction of passengers. The other three dimensions: Airport service, Reservation-related service and Flight availability were not found to influence the satisfaction of passengers. From the analysis, it was found overall, that passengers were neutral in their perception of Service Quality of Nepal Airlines. The demographic factors tested were: Gender, Age, Purpose of travel, Income level per month and Occupation. It showed that there was a difference between purpose of travel and satisfaction while other demographic factors were statistically insignificant. This was analyzed using ANOVA.

Thus, the passengers were neutral in their perception on overall Service Quality and dimensions such as in-flight service, Reliability and employee service have impact on the level of satisfaction. And also, there was difference between purpose of travel and satisfaction.

### **In-flight services**

The passengers' satisfaction was influenced by in-flight services. Under this dimension, the questions asked were in regard to "up-to-date aircraft and in-flight facility", "good quality meals", "in-flight entertainment", "comfortable seats", and "seat space and legroom". The study showed that passenger satisfaction was impacted by these attributes. The aircraft should be updated which would improve the comfort of passengers in seating and enough space for leg room. The food quality should be also considered in order to keep the passengers satisfied. In-flight entertainment like newspapers, magazines should be adequate in number. Passengers may prefer to read a particular daily newspaper. So, keeping that in consideration, the airlines should keep adequate copies of various daily newspapers.

### **Reliability**

The Reliability dimension of the Service Quality impacted passenger satisfaction. Under this dimension, questions asked were "On-time performance", "Shown interest in solving problems in flight cancellation", "Shown interest in solving problems in baggage loss" and "Safety record". The study showed that these attributes should be considered in the pas-

sengers' satisfaction. Nepal Airlines has a poor reputation with on-time departure time as found in previous informal interviews with passengers. Therefore, the item affects the satisfaction of passengers and causes them to turn to available alternatives. In order to retain the customer, the airline should see the factors affecting the on-time performance. The airline should responsibly deal with passengers in solving problems related to flight cancellation and baggage loss. Because improper handling of such complains leads to bad word of mouth which decreases the passengers flow. There should be proper mechanism of handling the problems that effectively retains customer and spreads positive word of mouth about the airlines.

### **Employee Service**

The employee service dimension of the Service Quality impacted passenger satisfaction. In this dimension, the questions asked related to "neat in appearance", "willing to help passengers", "Courteous", "has knowledge to answer passengers' questions", and "personal attention". Employees represent Nepal Airlines, hence it is important that employees provide the services politely, and courteously. Therefore, the airline should train its employees to be hospitable because it directly affects the customer passenger and eventually, the sales.

### **Purpose of Travel**

The study showed that there was difference between purpose of travel and satisfaction. Thus, the airline should consider the need of segmenting the demographic with purpose of travel and providing service accordingly. The difference was found between study and business group.

### **LIMITATIONS OF THE STUDY**

The current study focused mostly on passengers exiting from Bangkok or the passengers who flew on Nepal Airlines within the last year to Bangkok. Therefore, the study might not represent the population of passengers of Nepal Airlines.



## Further Study

From the study, it showed that 46% variance on the outcome was explained by the model. Therefore, other variables are necessary to take into account to explain passenger satisfaction. The model was used for passengers flying on international routes, however this model could be used to study passengers on domestic routes of Nepal airlines. Similarly, the model could be used to study the satisfaction level of passengers flying on different airlines. The study did not cover passengers' nationalities and the seat class. Thus, these can be included in the further study to assess the satisfaction of passengers. Finally, further research could employ a qualitative methodology using in-depth interviews so that more details on factors that impact the satisfaction levels of passengers can be identified.

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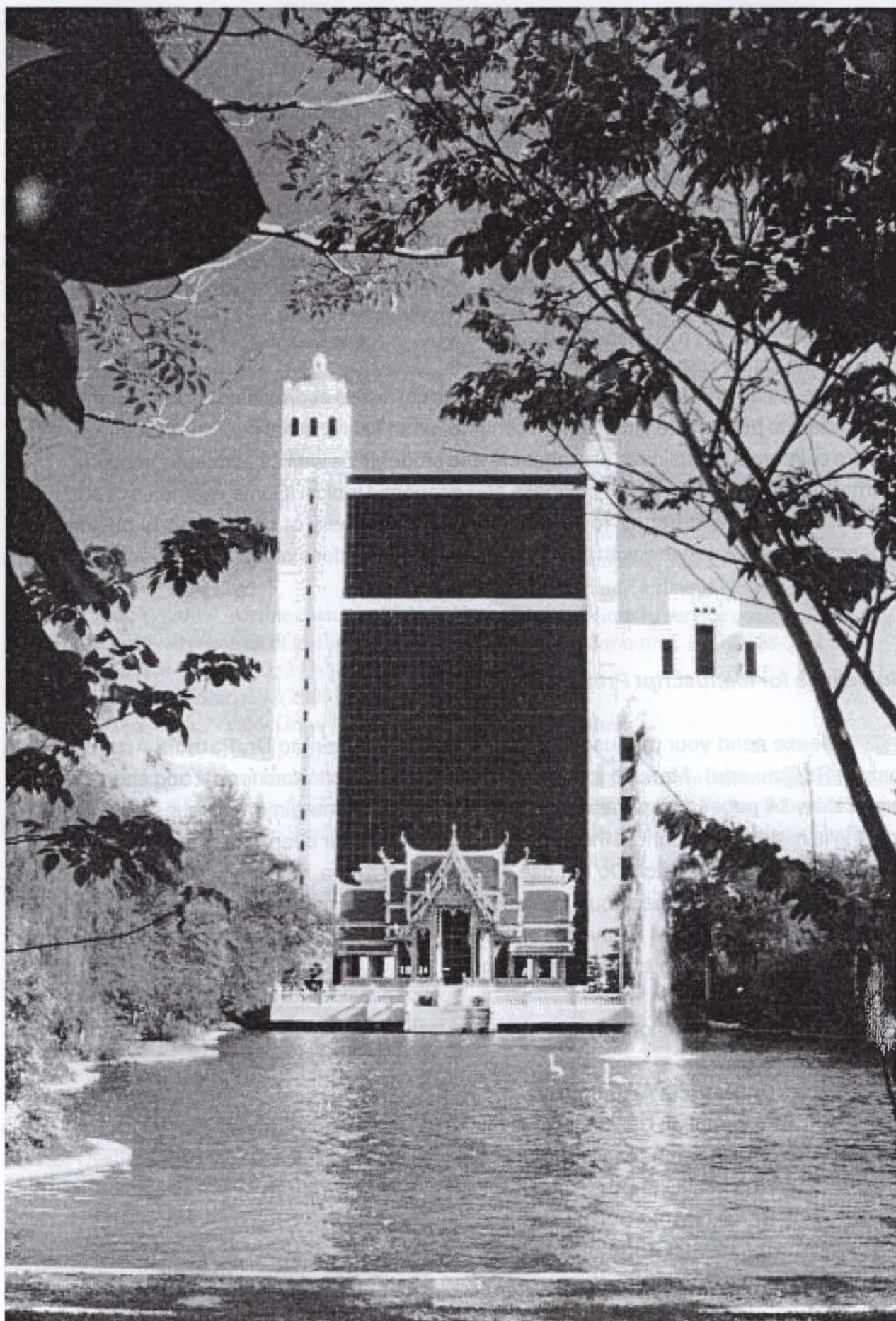
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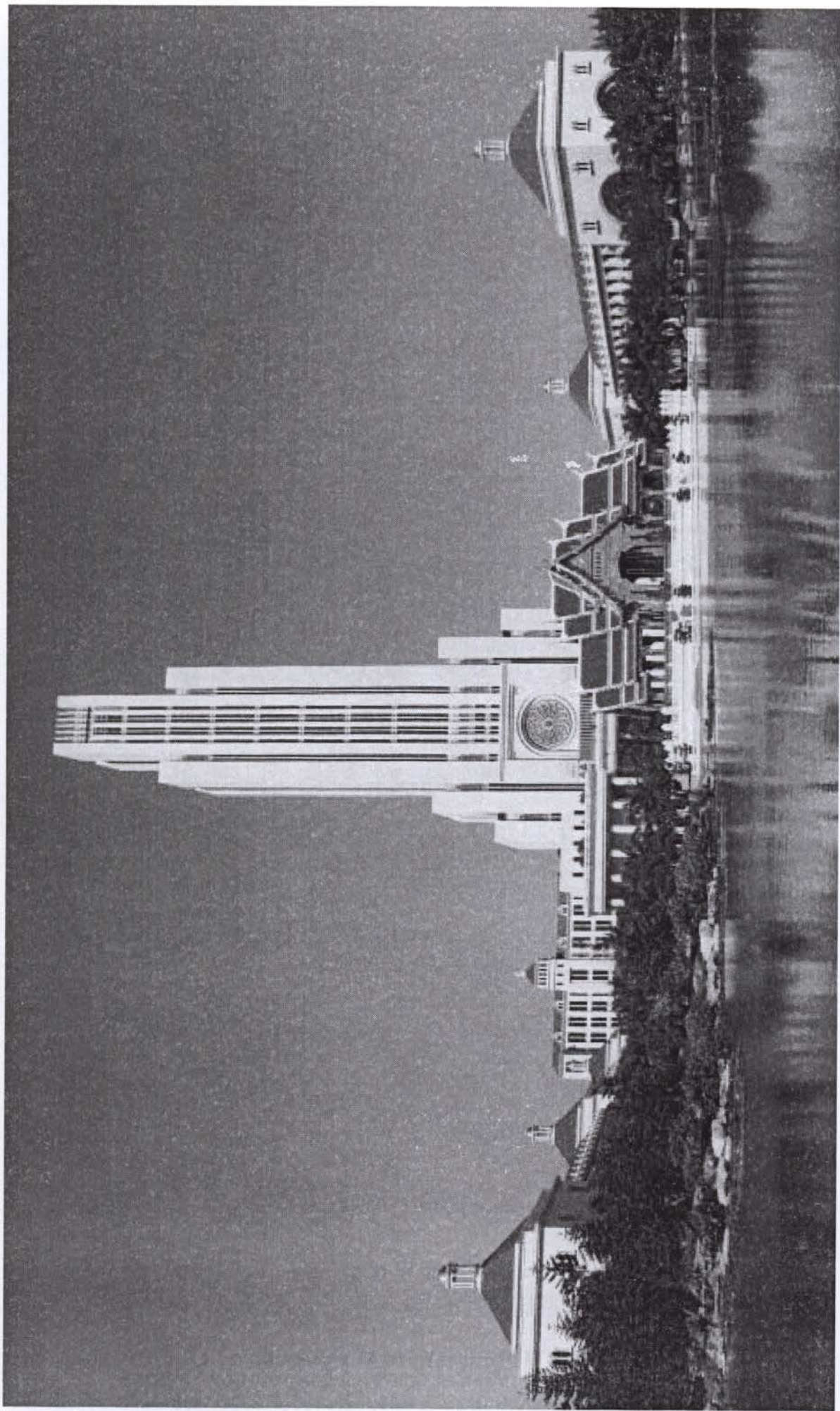
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