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ETHICS AS A FOUNDATION OF MANAGEMENT – A VALUABLE RESOURCE OR A RELIC IN THE TIMES OF CRISIS?

Joanna Hernik¹
Marcin Gębarowski²

¹ *Faculty of Economics, West Pomeranian University of Technology in Szczecin
Zolnierska str. 47, 71-210 Szczecin, Poland
Joanna.Hernik@zut.edu.pl*

² *Rzeszów University of Technology, Poland
marcing@prz.edu.pl*

Abstract

Following rules of activity, resulting from ethical norms accepted in given society, may be one of sources of a competitive advantage. Though, it can be presumed that not everybody is aware of the necessity as well as of advantages connected with activity running this way. In this aspect, the aim of the article to show Polish businessmen attitude towards challenges flowing from handling business in accord with ethics. All theoretical issues discussed herein pertain to the topic of business ethics. Empirical data presented in this paper were gathered by the authors during 410 interviews about ethics that were conducted with businessmen running small and middle firms. The main intention was to determine if obeying ethic rules is a real value for entrepreneurs. From obtained results the conclusion, that Polish businessmen declare the importance of ethics in their activity, but in practice the bulk of them does not remember any rules and does not recognize ethics as a footing of business, can be draw out.

INTRODUCTION

The present crisis is commonly referred to as a “crisis of trust” (Keeble, 2005, Sztompka, 2008, Uslaner, 2010), but what exactly is meant by *trust*? It can be said that trust is a belief in conduct of others as well as in rules governing social life. We believe that norms constitute a significant part of human life, and those around us voluntarily follow commonly accepted standards that can be generally referred to as ethical behavior (Sztompka, 2007). When we consider crisis of trust on the economic plain, it means there is lack of trust in the conduct of local authorities, the government and business entities, as well as consumer behaviors, which hinders decision-making processes and adopting certain attitudes. It seems

that the bigger a corporation, the more complicated are its dealings and the more difficult it is to attain transparency. It may be therefore assumed that the crisis of trust refers rather to larger entities than smaller ones which offer a direct contact with their consumers. As it turns out, problems with ethics do not revolve solely around entrepreneurs’ attitudes, but also around their company resources which include staff – it has been found that personnel who don’t trust their employers, work unwillingly (Rose, 2009).

Concerns over ethical operations in business are becoming more and more important in times of economic crisis: should companies, irrespectively of their size and business field, follow the commonly accepted norms in times of danger? Moreover, given the deteriorating

markets, should they continue to care not only for their profits, but also for so-called “social needs”? Modern management schools say “yes” to these questions. The idea of sustainable development and CSR also concur with this view. Not everyone, however, agrees with this approach. Let us recount a famous article by M. Friedman (Friedman, 1970), in which the author stated that promoters of a pro-social attitude and care about common well-being is simply a disguised advertisement of socialism. At the same time, such promoters undermine free market and the right to dispose of one’s property, i.e. the very essence of business. If we agree with this view, it should come as no surprise that businesspeople are obviously against “good business”, which presently means not only honest practices, but also green ones.

Socially-minded behaviors are frequently forced by active consumer groups, as well as by the media. However, they are not able to influence everything. Therefore entrepreneurs may – but do not need to – follow social expectations. On the other hand, it seems they need to behave ethically lest they come in for open criticism. The borderline between these two attitudes is elusive, but most definitely it does exist. It is therefore the aim of this paper to present attitudes of Polish businessmen towards ethics-related problems and challenges. Conclusions will reflect upon the real value of ethics in business.

The discussion focuses both on the fundamental question of what is not allowed in business, as well as problems related to attitudes towards the environment and poor people. The comments reflect the decline in the market, but also the socioeconomic transformation that Poland – a former communist country – has experienced.

All theoretical issues discussed

herein pertain to the topic of business ethics. Empirical data presented in this paper were gathered by the authors during 410 interviews about ethics that were conducted with entrepreneurs in 2009. The choice of respondent was not random – the interviews were conducted with owners and managers from small and medium-sized enterprises (SME) who agreed to the interview. The research was of qualitative nature and reflects respondents’ opinions about the presence of ethical norms in their business dealings, as well as the background of their adopted attitudes.

RESEARCH METHOD

Research unit analysis is Polish SME, particularly the manager. Study was done to investigate SME’s manager ethics. For this purpose, survey study was design and questionnaire was deployed as research instrument. Prior to develop questionnaire, ethics management should be understood perfectly.

Ethics is frequently defined as a set of moral principles that control or influence people’s behaviors. J. Hołówka states that human life consists of five spheres: personal ethics, sexual ethics, voluntary commitments, social ethics and public ethics (Hołówka, 2002). Ethics is understood as a set of theorems defining what is good and what is wrong at a given time for a particular group of people. Significantly, ethics in management, or ethics in business, is placed in the “voluntary commitments” category, i.e. it is considered to be only a voluntary group ethics. A conclusion may be drawn that business ethics is as set of rules that may be followed, although not necessarily, as it does not result in negative consequences.

With regards to above definition, four questions were developed to explore ethics, namely:

1. In general, should companies care about the environment and does your company care about it?
2. What does your company do to protect the environment?
3. Should people share with the needy?
4. How important is ethics in business?

In addition to those questions, it was also collected respondent's sex, field works, the existence of norms in business, and improper behavior in business. Respondents are Polish SME's managers. Data collection was done by personal interview considering the questions are in open form. Further data collected was tabulated and displayed using graph.

RESULT AND DISCUSSION

Ethics according to Polish SME – assumptions and research results

Society is influenced not only by large market entities, but also by small and medium-sized ones. Currently, consumers expect companies, irrespectively of their size, to offer good products and treat their cooperants and employees fairly (Augustyniak, 2011). It means that just as every person has certain commitments towards their communities, analogically each business should realize certain obligations so that they could participate in social life in an active, ethical and responsible way. It is true for all forms of activity can be reflected in various types of social commitment (Responsible Business Forum - Forum Odpowiedzialnego Biznesu, 2009). Based on the above mentioned assumptions, it has been researched if business people share this view.

If we agree that the crisis echoes the longest in entrepreneurs' and consumers' heads, it should therefore be assumed that

it will end no sooner than when people have accepted its end, and not when companies' profits increase. The key element is their trust in market because the majority want to believe in (and follow) the principles and seeks confirmation that these rules are being followed. This is why the current crisis has triggered growing expectations towards business reliability which includes incorruptibility, fairness, solidarity and honesty.

Ethics in management applies mainly to managers' behaviors – the way they fulfill their duties towards employees, shareholders, supervisors and loyal community. Their actions often depend on what others do (e.g. their peers, competitors, co-workers). Their behaviors are also influenced by less direct circumstances, such as the tax system or social pressure. Therefore managers' behaviors are triggered both by internal convictions as well as external conditions.

It is worth mentioning that in Poland the category of SME encompasses micro-companies (94.8% of market entities), small (4.2%) and medium-sized (0.8%) which totals 99.8% of enterprises (PARP report, 2009). The whole number of SME is approx. 1,780,000 entities. In order to investigate attitudes of Polish businesspeople towards ethics, 410 managers of SME from northwestern and southeastern Poland were interviewed directly. Due to geographical limitations and the adopted research method, our results should be treated cautiously. They can, however, serve as a starting point for further research.

Research sample

The vast majority of the enterprises interviewed operate in the service sphere. Figure. 1 illustrates the sample's field of operation.

As the results show, men tend to

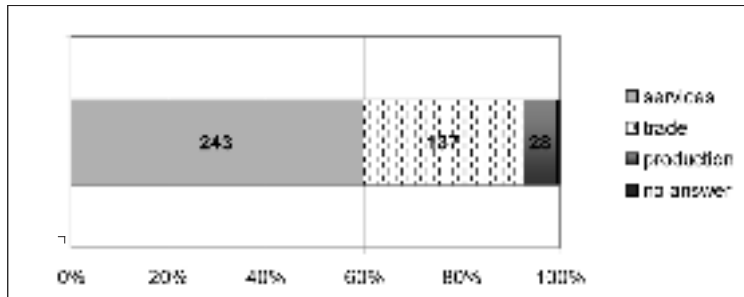


Figure 1. Structure of The Research Sample in Terms of Field of Operation

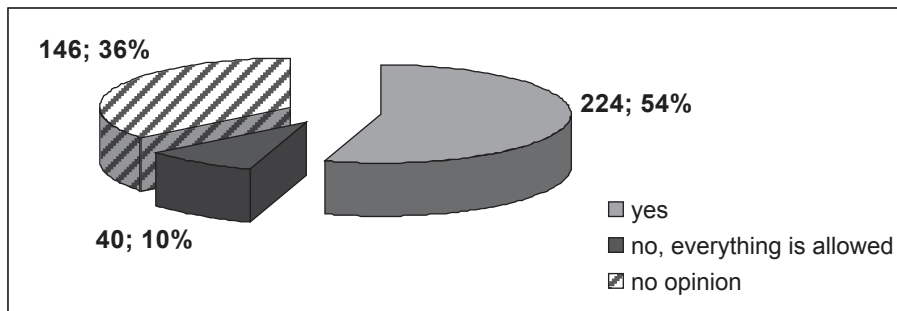


Figure 2. Answers to: “Are There Any Norms in Business?”

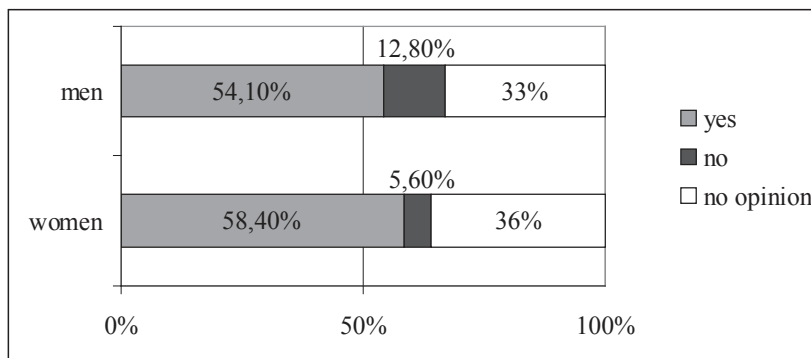


Figure 3. Answers to: “Are There Any Norms in Business ? in Terms of Respondents’ Sex

be SME managers (55%) more often than women, although the difference is slight (10%). They manage service companies (mainly catering, insurance, hairdressing, construction). Almost 7% of the respondents work in production fields (food, furniture, metal production).

In this research it was of utmost importance to determine if respondents obey ethical norms in their operations and whether or not they believe such norms should be followed. Figure. 2 illustrates the results.

It is worth emphasizing that the question whether there were any norms

to be obeyed in business, only 55% of the respondents agreed that not everything is allowed in business. The remaining people stated that there were no norms (35%) or they did not have any opinion on that matter (10%). Attitudes to ethical restrictions reflected differences between sexes. It was found that women are more ethical than men – only 5.6% of women declared that everything is allowed, whereas 12.8% of men agreed with this view (Figure 3).

Another important issue was determining whether entrepreneurs believed there were any improper

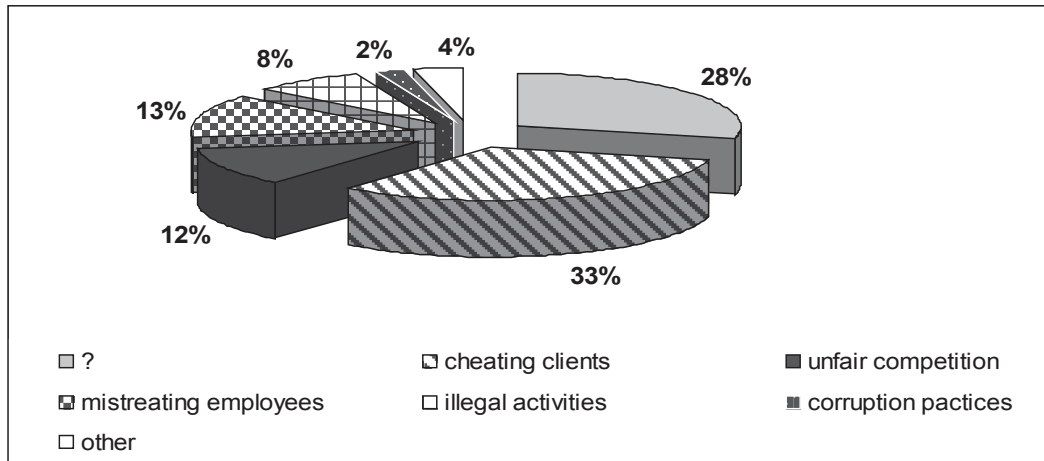


Figure 4. Answers to: "What Behaviors Are Improper in Business?"

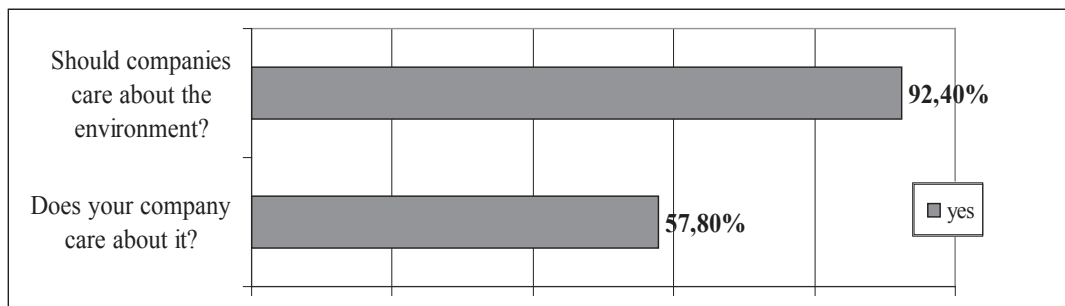


Figure 5. Answers to: "In General, Should Companies Care About the Environment and Does Your Company Care About It?"

behaviors in the context of business operations, and if so – what they were. Figure. 4 presents the results.

Among respondents who believed there were certain norms to be followed, 28% of them could not name any (question mark in the legend). The remaining respondents listed cheating customers, unfair competition, mistreating employees and illegal activities. It can be noticed that no social or environmental issues were mentioned.

Considering the commonly felt emphasis on ecologic and social matters, it is worth asking whether respondents believe that the environment should be cared for and whether companies should share their profits with the needy. Figure. 5 illustrates respondents' answers to the former question.

The obtained results reveal that in general businessmen believe that

environmental DOs and DON'Ts concern others and not them - they often do not care about the environment themselves (over 42% do nothing in that respect). On the other hand, as many as 58% of the respondents take steps that can benefit the environment. Women tend to display more sensitivity towards ecomatters than men. 95.7% of them stated that market entities should care about the environment. Among men, 89% of the respondents shared this view. Figure. 6 presents an overview of actions taken most frequently to protect the environment.

The vast majority of businesses segregate garbage. It was listed by 51.7% of the respondents who tried to take any steps to protect the environment. Furthermore, they listed four more important actions to protect the environment, such as using modern technological solutions (12.2%), recycling waste (8.8%), segregating

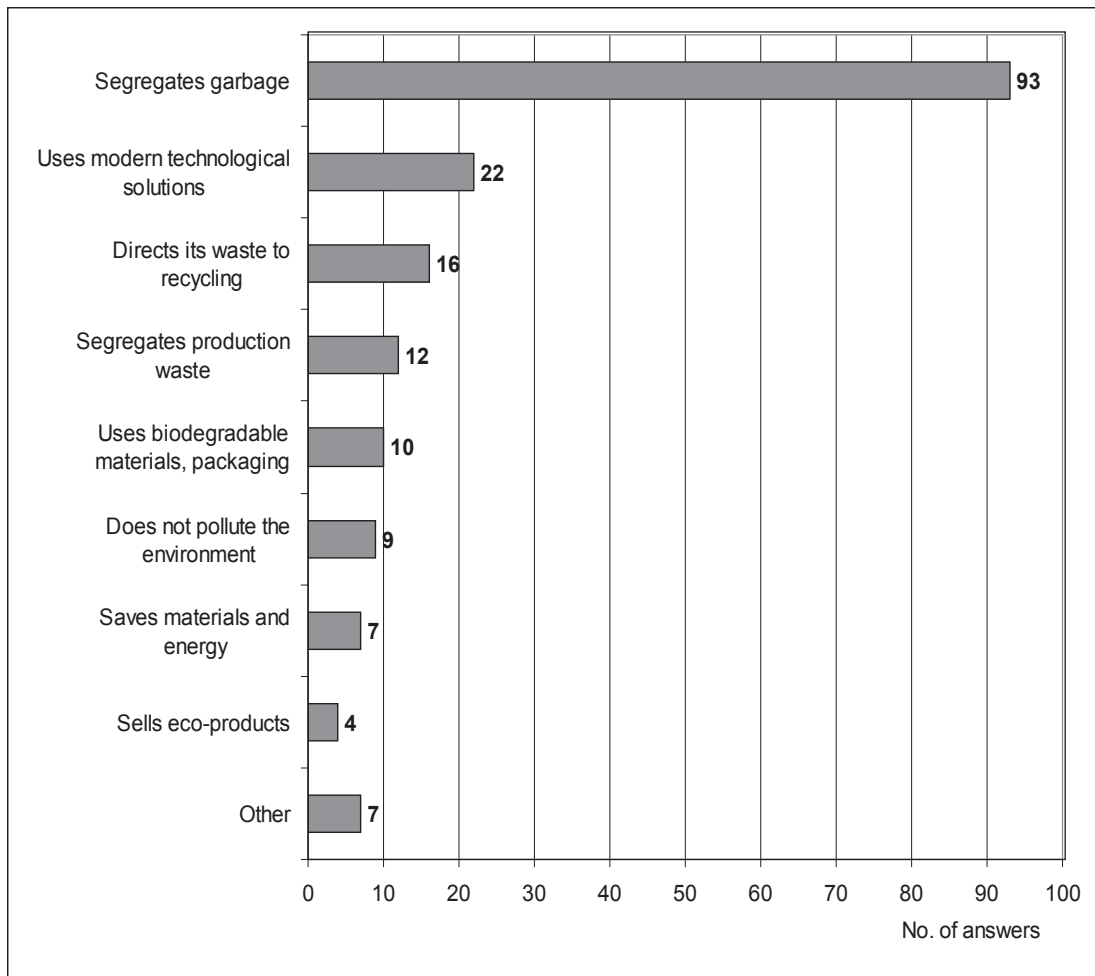


Figure 6. Answers to: “What Does Your Company Do to Protect The Environment?”

production waste (6.6%) and using biodegradable materials (5.5%).

According to some, a person possesses what they worked for so there is no obligation to share it with others. However, others believe that there is a certain responsibility to care for the needy and the unsuccessful. A question arises, then: do the businesspeople think they should share what they have? Figure. 7 illustrates the answers. One should notice that when answering the question whether or not it is advised to share with the needy, the respondents were not as unanimous as they were when asked about the environment. Some of them (51%) stated that one should share – women turned out to be more altruistic (55.3%) than men (48.6%). The

remaining businessmen either stipulated conditions under which they may help (such as knowing the exact purpose of their donations) or stated directly that everyone must count on themselves only. Unwillingness towards helping the needy was, however, displayed only by some of the respondents, as 31% of them wanted to help others.

All questions answered by the respondents focused on good and bad practices in business. They were designed to determine if managers should obey unwritten norms and whether ethics in business operations is vital. Figure. 8 illustrates the answers.

The average of 3.95 indicates that respondent are aware of the importance of ethical norms that regulate business

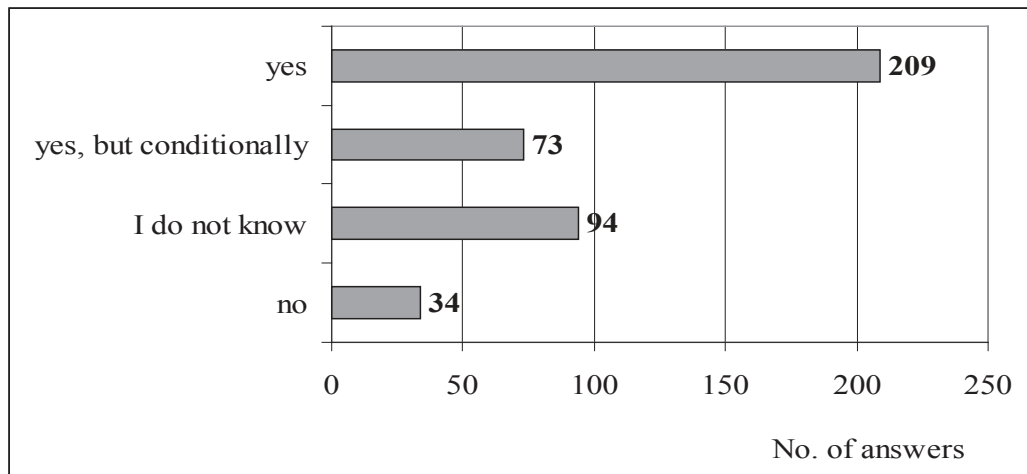


Figure 7. Answers to: “Should People Share With the Needy?”

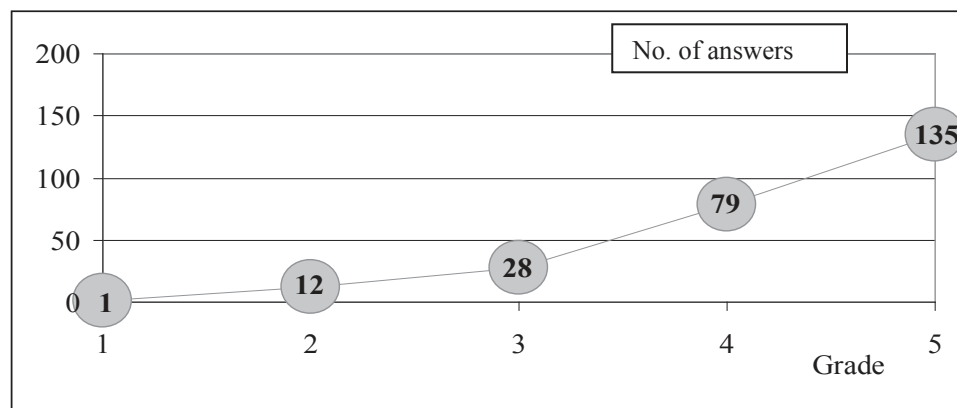


Figure 8. Answers to: “How Important is Ethics in Business?”
(1 – least important, 5 - most important)

activities. And although 9.75% of them stated that ethics is unimportant to them, 37.8% of those asked chose the maximum grade of 5. It is worth mentioning that women were more aware of the importance of fair conduct – their average was 4.19. Men, on the other hand, were less inclined to notice the importance of ethical aspects in business. Men’s average was 3.82.

Discussion

In literature one can find claims that changes in the European post-transformation countries ignored the issue of moral principles (Riha,1994). One can also read that these countries have

progressed from primitive socialism to primitive capitalism. Instead of protests, abuses and misbehaviors are met with cynicism, intolerance and ruthlessness, and faulty laws are chronically broken (Röpke,1950). One may draw two conclusions, then: firstly, overthrowing communism does not equal getting rid of its flaws and secondly, problems caused by economic crisis overlap with those resulting from social changes.

It seems that one of the fundamental questioned raised by ethics is the relations between the desire to possess goods and live well versus imperatives of social morality, which often emphasize the importance of helping others, compassion

and voluntary commitment. Some economists postulate in their papers that business ethics and general ethics should be treated separately. Such attitude is displayed e.g. by A. Carr, who stated in his article in 1968 that business ethics is a sort of game whose rules are well-known to everyone, therefore nobody expects it to be identical to personal or religious ethics (Carr, 1968). On the other hand, however, everyone of use participates in this game – we are all either suppliers or consumers of certain goods. For this reason it is hard to say that ethics in management should be considered solely as group ethics as it pertains to the whole society. Given the above, it can be said that behaviors of managers should be in keeping with ethics of a particular community.

Assuming that impeccable ethics is only an unattainable illusion, a compromise needs to be found between dictates of ethics and reaching particular life goals. Such compromise must also include business activity and approaches towards global concerns, such as ecology (Goulet, 1997). Based on the abovementioned assumptions, we may argue that the interviewed respondents did not feel they were an integral element of the environment in which they operate. Such conclusion is drawn from the fact that when answering the question “What behavior should not be accepted in business?”, not a single person mentioned any environmental issues. It may be treated as a confirmation of Riha’s view, who states that transforming countries loose some values and it is necessary to awake people’s sensitivity to issues that – seemingly – do not concern them directly. This assumption is clearly visible when the interviewed respondents are taken into account: 45% of them don’t think there are any rules in business. And it is hard to determine whether it results from the financial crisis or if it is a permanent

lack of sensitivity.

As conclusions of the research suggest, 38.8% of SME representatives was able to list a norm that – in their opinions – is vital in business. Most often they pointed to not cheating their clients, fair competition and fair treatment of their employees. The spheres are so closely related to the future of each entity that these answers seem obvious. In broader context, these principles condition further development of the company, allow existence of competition and healthy market, and it may be assumed that they enable economic and cultural advancement of the society (Clark, 2002).

Helping the needy or caring about the environment are, in respondents’ view, important obligations, but not theirs, apparently. Almost all of the respondents claim that the environment must be taken care of, but only 58% actually care about it. Moreover, their only effort is to segregate garbage, which seems to be quite limited in the face of opportunities their companies have.

Since ethics is a set of rules binding at a particular time at a given location, it is worth asking if we actually perceive the environment as a capital that needs to be preserved for future generations and whether businesspeople are exempt from that duty. If we argue that the current condition of the environment is a priority for the society, then the society should demand an active role of businesspeople, who should – as a result – display ethical behavior because without it, the market is going to be an arena for egoistic and immoral operations (Machan, 1999).

Analyzing behaviors of the interviewed businesspeople, it can be concluded that some of them have not yet shaken the remains of the former, communist system and are already „forced” to follow modern values. This assumption, however, pertains

only to some companies since it must be remembered that the most dynamic development of SME in Poland took place between 2002-2008, i.e. under the new system. Therefore the impression of lack of norms most likely results from challenging, crisis-related circumstances. These may be the reason why respondents were so unwilling to share with the needy, according to the research only 31% wanted to share.

In this context it is worth considering businesspeople's willingness to help others in relations to their sex. The results show that sex may be one of the determinants of ethical behavior in business. Calculating the level of women's increased sensitivity, however, requires additional research.

It may be assumed that all people want to follow socially accepted rules of behavior and only mindless individuals choose to live opportunistically and follow random motives. It turns out that the latter statement pertains to some of the interviewed businesspeople, therefore it would be advisable to remind them of principles of common sense (utilitarian philosophy), as well as emphasize that modern business entities succeed not only in terms of sales dynamics or innovations. As practice shows, while choosing a cooperant between two equally efficient companies, usually the one which operates in honest and reliable way is selected. Consequently, such company will gain competitive advantage in the long run, one that could not be obtained in any other way. This is why enterprises increasingly often try to list elements of their corporate culture as strategic ethical programs which determine standards for: management decision-making processes, employees' conduct, company operations on the market and in its community (Gasparski, Lewicka-Strzańska, Rok, Szulczewski

2002). What follows is the real value for the entrepreneurs as the market position is increasingly often related to trustworthiness, positive associations, perceived quality, reliability and fair treatment of employees; in other words, all the elements of the company image. The image is also influenced by ethics and ethics-related social responsibilities of entrepreneurs that should be treated as an investment in improving future market position of the company.

CONCLUSIONS

Deliberations presented in this paper tend to assume that businesspeople constitute a part of their society and therefore should obey social norms. Empirical research proves, however, that this „social imperative” does not translate into attitudes presented by people running small and medium-sized enterprises. The research showed that 45% of the interviewed respondents believed that there were no rules to play by. Among those who agreed that not everything is allowed in business, 28% could not name any commonly respected social rule. It could be argued, then, that Polish businesspeople are not fully convinced that ethics is a fundamental value in their operations. Although it is hard to determine whether it stems from current economic situation or is related to some other causes, one may see that a large portion of the respondents was focused on their own needs rather than social ones. Such attitude should not be fully condemned as it is commonly believed that an effective businessperson creates job opportunities, provides market offers, pays taxes and aids the development of a particular community, therefore while caring about their own business, in a sense they do care about the needs of their environment. Current situation, however,

allows to advocate ethical business conduct among small and medium-sized entities' managers, highlighting the benefits for their companies.

As this paper has shown, the literature and practice provides contradictory opinions about the role of ethics in business operations. It is worth mentioning that the less ethical the society, the less ethical the business. Irrespectively of the current situation, whether it is a bull or bear market, the level of obeying ethical norms in business management depends on general ethical sensitivity displayed by a particular society, which is both conditioned historically and related to current economic situation.

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CONSUMER TRUST AND COUNTRY OF ORIGIN (Chinese Product Case on Indonesian Market)

Hotniar Siringoringo¹
E.S. Margianti
Anacostia Kowanda
Trini Saptariani

Gunadarma University
Jalan Margonda Raya No 100 Depok 16424 Indonesia
¹hotniars@staff.gunadarma.ac.id

Abstract

Study on Indonesian consumer trust towards Chinese products is rarely found. Low trust towards Chinese as producer as well as towards Chinese products perhaps is admitted by almost all consumers. However up to this time period this hasn't become researcher's interest. The objective of the study is thus to identify consumer trust towards Chinese products. Electronics product particularly was chosen as research object based on its penetration on Indonesian markets. For this purpose questionnaire was used as research instrument. It was distributed to more than 300 respondents. Results show that consumer trust towards Chinese products is measured using four indicators, such as faith and believe in Chinese products, Chinese high technology and long lasting live. Country of origin has five valid indicators which are Chinese innovativeness on electronics products, Chinese high technology, Chinese creativity in design, good quality in manufacture, and China as prestigious country. The highest contributor in building country of origin is its high technology. On trust factor, the highest contributor is customer believe in Chinese electronics products. It also shows that country of origin influence customer trust significantly.

Key Words : *consumer trust, country of origin, Chinese products, Indonesian market.*

INTRODUCTION

Indonesian market is a very potential market to every producer considering number of population in 2010 is noted around 237 641 326 persons. Among them statistics noted around 169 millions are in the age of work labors (15-64 years old). The attractiveness of Indonesian market is not just its huge population but rather consumer behavior which is more interested with imported products. Among imported products, Chinese products are easy to find on any markets. The products are

ranging from households products, garment, food, cosmetics, electronics, etc.

Up to 2003, China hasn't been reported individually as a country origin of Indonesian import. Instead of China, Hongkong was found as one of dominant exporter to Indonesia. But afterwards up to now, China is positioned as number one exporter for various products, such as electronics products, foods, and fruits. Officially, Chinese products are counted 18.5% of imported market share in year 2010 (Anonim, 2011). Not to mention black market products which are distri-

buted transparency or veiled.

Although consumer cynicism towards Chinese products quality will be heard frequently but they still keep look and buy Chinese products. It can be noted that consumer trust to Chinese products quality is very low. It seems contrary to the importance of trust in marketing (Sahay, 2003). Indeed, many researchers have identified that trust is considered to be, along with commitment, communication and satisfaction, one of the basic pillars supporting the relationship marketing theory (Gundlach and Murphy, 1993; Ganesan, 1994; Coulter and Coulter, 2002).

Trust may be defined as a set of beliefs held by a consumer as to certain characteristics of the supplier, as well as the possible behavior of the supplier in the future (Ganesan, 1994; Coulter and Coulter, 2002). By providing the keywords "Chinese products" on search engines like google, hundreds of thousands of results will be demonstrated in less than a percent second for the conditions of Internet speed in Jakarta, Indonesia. Results indicated by search engine mostly are the news or an individual review of the concerns of defeating local products by Chinese product. Study on consumer trust towards Chinese products is rarely found. Low trust towards Chinese as producer as well as towards Chinese products perhaps is admitted by almost all consumers but up to this time period this hasn't become researcher's interest.

Trust as mentioned before is a very important aspect on marketing practices. Trust towards an object is not suddenly appeared. Various aspects perhaps have role in creating trust, such as privacy and security on internet transaction (Kruck, Gottovi, Moghadami, Broom, and Forcht, 2002; Gavish and Gerdes, 1998), Coun-

try Of Origin (COO), etc. COO-trust relationship can be drawn from COO study on consumer behavior (Schooler, 1965; Nagashima, 1970; Bilkey and Nes, 1982; Roth and Romeo, 1982; Johansson, Douglas and Nonaka, 1985; Kumara and Canhua, 2010). Schooler (1965) studied COO effects on consumers' opinions of products, and concluded that COO shows an effect on consumers' evaluations. Nagashima (1970) defines country image as the picture, presentation and stereotype that businesspeople and consumers attach to products of a specific country. This image is created by such variables as representative products, national characteristics, economic and political background, history, and tradition. Bilkey and Nes (1982) define a product's COO as the country of manufacturer or assembly. Johansson, et al. (1985) define it as the country where corporate headquarters of the company located. According to Roth and Romeo (1982), COO is the overall consumer's perception form of products from a particular country, based on their prior perceptions of the country's production and marketing strengths and weaknesses. Kumara and Canhua (2010) studied the effect of COO on consumer expectation and showed the existing of effect.

However, up to now it is rare to find the study of consumer trust towards Chinese products as well as its antecedent. Study on general consumer trust such as brand trust showed the effect of familiarity, security, privacy, word-of-mouth, advertising, and brand image (Chow and Holden, 1997; Delgado-Ballester and Munuera-Alema'n, 2001; Garbarino and Johnson, 1999; Hoffman, Novak, and Peralca, 1999; Wernerfelt, 1991). The objective of the study is thus to identify consumer trust towards Chinese products.

RESEARCH METHOD

Research model is shown on Figure 1. Customer trust is measured using four indicators and country of origin is measured using five indicators. The influence of country of origin towards customer trust is investigated.

A questionnaire was designed to measure trust and COO. Based on trust definition as a set of belief, it has identified various dimensions in trust. Among these dimensions, perceived honesty and beneence are the most often been associated with consumer trust. Honesty (credibility) relates to sincerity. Honesty indicates the certainty the consumer has in the business' sincerity. and the fact that it keeps its promises (Gundlach and Murphy, 1993). Beneence is related to the consumer's belief that the company is interested in his welfare, that it does not intend to show opportunist behavior (Larzelere and Huston, 1980), and that it is motivated by the quest for joint benefit (Doney and Cannon, 1997). Based on this explanation, consumer trust on this case was developed to measure beneence dimension. It was developed four (4) indicators, i.e.:

1. I believe in Chinese electronic products

2. I have confident in Chinese electronic products
3. Chinese electronic products use high technology
4. Chinese electron products have long lasting

Trust antecedent on this case is COO. COO is measured using five (5) indicators as shown below:

1. China is known as innovative in electronics products
2. China posses advanced technology
3. China is good in design
4. Chinese production maintaining good quality
5. China is a prestigious country

Respondents to the study were Chinese products customers. Prior to trust and COO measurement, questionnaire was validated. For this purpose, questionnaires were distributed to 20 respondents. Valid questionnaire further were distributed to more than 300 respondents. Data collected was analyzed using Structural Equation Modeling (SEM) considering concerned variables are latent in nature.

RESULT AND DISCUSSION

Validity test shows that all country of ori-

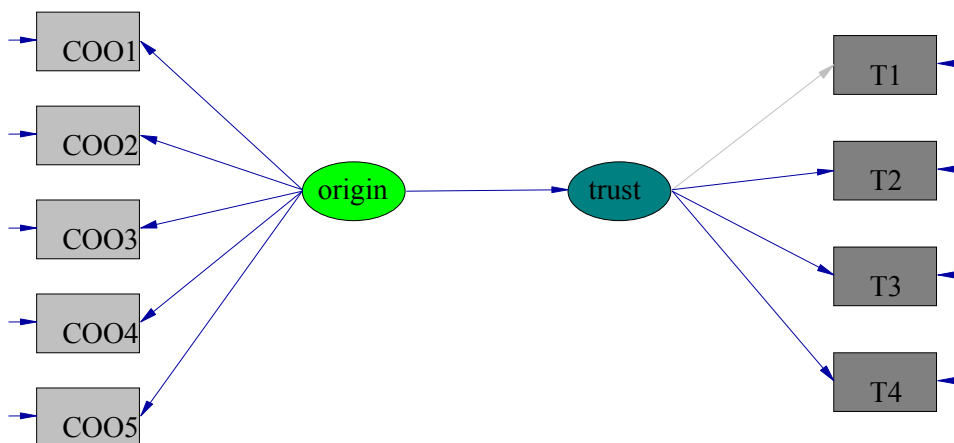


Figure 1. Research Model

gin indicators have high construct validity. Product Pearson moment correlation between each indicator with total is far above 0.5 and significant at 1 percent. Correlation and significance of COO1, COO2, COO3, COO4, and COO5 respectively are 0.761 (0.000), 0.662 (0.001), 0.738 (0.000), 0.769 (0.000), and 0.676 (0.001). It means all indicators are good measurement for country of origin. Even though all five indicators show significance at 1 percent, COO4 which is “China has a good quality in manufacture,” has the biggest correlation.

Same evident was found on trust variable. Four indicators of trust have good construct validity. Correlation and significance of trust1, trust2, trust3, and trust4 respectively are 0.919 (0.000), 0.790 (0.000), 0.842 (0.000), and 0.845 (0.000). It shows all indicators are perfect measurement for trust variable.

Valid questionnaire further was distributed to more than 300 respondents. Of these respondents, a number of 150 were returned back. Data collected was coded as ordinal scale. Following, Confirmatory Factor Analysis (CFA) was performed to validate research model. Validity of the model is based on goodness of fit statistics. The most important to be used to validate the model among fit statistics indexes are Chi Square (p value), Root Mean Square Error Approximation (RMSEA), Normed Fit Index (NFI), Comparative Fit Index (CFI), Root Mean Residual (RMR), and Goodness of Fit Index (GFI). The value of those indexes for country of origin-customer trust relationship is shown on Table 1.

Chi-Square is a statistics fit which specified whether model provides is a perfect fit to data (within the limits of sampling error). Decision towards the hypothesis can be tested based on p-value. P-value greater than 0.05 indicates good fit and closer to 1 indicates perfect fit. As

shown on Table 1 p-value of proposed model is 0.59859 which is above 0.05. It can be interpreted that the model shows a very good fit to the data.

Second fit statistics is RMSEA. RMSEA indicates the close fit of model in relation with degrees of freedom (Joregsborg and Sorborg, 1989; Browne and Cudeck, 1993; Steiger 1990). Value 0.05 or below is very close, 0.08 and below still acceptable, but never used 0.1 and above. Hu and Bentler (1999) recommend a cutoff value of .06. A p-value for testing the hypothesis that the discrepancy is smaller than .05 may be calculated (test of close fit). As showing on Table 1, RMSEA is 0.000, much lower than 0.05. As such data showing a perfect fit to the model.

Norm Fit Index (NFI) suggested by Bentler and Bonett's (1980) is an independent model testing. NFI shows how much better the model fits as compare to the independence model. It measures the proportionate improvement in fit (defined in terms of f^2) as one moves from the baseline to the target model. Value close to 0.9 indicates a good model fit. NFI value for this model is 0.985 which is above of 0.9. It means that the model is fit well to the data. However, NFI has problem that it is biased downward for small N so that not recommended by Hu and Bentler (1999).

Non-Normed Fit Index (NNFI) modified version of NFI designed to lessen its dependence on sample size. However, it may be biased upward for small N when the model is misspecified, and the parsimony correction may be inappropriate. Hu and Bentler (1999) recommend a cutoff value of .95 but other recommend 0.9. NNFI for this study is 1.000, reflects a very good fit.

CFI is measurement of the proportionate improvement in fit (defined in terms of noncentrality) as one moves from the baseline to the target model. Hu and Bentler (1999) recommend a cutoff value of .95. CFI for this study verify a

very good fit as it shows value of 1.000.

Goodness of fit Index (GFI) is proportion of the variances and covariances in S accounted for by the fitted model. This index should fall between 0 and 1, although it can be smaller than 0. Values greater than 0.9 sometimes deemed desirable. However this index is not recommended by Hu and Bentler (1999). GFI for this study is 0.987, means a very good fit of the model.

Adjusted GFI is adjustment based on the same logic as in the case of an adjusted R². Values greater than .9 are sometimes deemed desirable. Similar to GFI, it is not recommended by Hu and Bentler (1999). AGFI for this study is 0.960 which means a very good fit for the data. Overall, it can be said that the model is showing a very good fit to the data.

Figure 2 shows CFA of the model. Country of Origin (COO-origin) is valid measured using five indicators. All indicators are shown valid with factor loading respectively for COO1, COO2, COO3, COO4, and COO5 are 0.83, 1.37, 0.87, 0.37, and 0.38. All factor loadings are positive. It means the more indicators be improved, the better China image as a country of origin of electronics product. Chinese image as a country of origin of electronics products in this case is composed by Chinese innovativeness on electronics products, its high technology, creativity in design, good quality in manufacture, and its' prestigious as a country.

The validity of indicator of "China is a prestigious country" may be considered as stated by theory "the effect of size

and reputation towards trust (Jarvenpaa and Tractinsky, 1999). China is the largest country in this world. However some researchers found that reputation and size are important in forming consumer trust (Grazioli and Jarvenpaa, 2000; Pavlou, 2003; Kim, Xu, and Koh, 2004; Koufaris and Hampton-Sosa, 2004). Chinese image on customer mind as a country of origin of electronics products is dominantly built by its high technology.

The attribute role of COO refers to the believing effect on product evaluations. Notice that the statement no 1 until 5 show respondent believe in Chinese electronic products. More concretely, respondent believes that China is innovative in producing electronics products. This innovativeness is supported by the possession of advanced technology.

Customer trust towards Chinese products consists of four indicators. All indicators are valid measurement for trust. All factor loadings are positive so that any improvement in any indicator will bring an improvement on customer trust. Factor loading of customer believe in Chinese electronics products, confidentiality on Chinese electronic products, perceiving deploying high technology, and long lasting life of electronic product respectively are 0.75, 0.88, 0.61, and 0.54. Based on this statistics it can be stated that Indonesian consumers have confidentiality on Chinese electronic products.

The effect of COO on customer trust is significant for 1%. It means that COO influences customer trust strongly. With this study it shows the direct relationship between

Table 1.
Goodness of fit statistics

Index	Acceptance value	Value
Chi-Square (P-value)	> 0.01	0.59859
Root Mean Square Error (RMSEA)	<0.08	0.000
Normed Fit Index (NFI)	Close to 0.9 is a very good fit	0.985
Non-Normed Fit Index (NNFI)	Close to 0.9 is a very good fit	1.000
Comparative Fit Index (CFI)	Close to 0.9 is a very good fit	1.000
Goodness of Fit Index (GFI)	Close to 0.9 is a very good fit	0.987
Adjusted Goodness of Fit Index (AGFI)	Close to 0.9 is a very good fit	0.960

COO and consumer trust. Most previous researches on COO show its direct effect on product evaluation (Bilkey and Nes 1982; Janda and Rao, 1997; Peterson and Jolibert, 1995; Roth and Romeo, 1992), buyer perception (Peterson and Jolibert, 1995; Roth and Romeo, 1992; Quester, Dzever, and Chetty, 2000), customer attitudes and subsequent choice behavior (Samiee, 1994), buying intentions (Bilkey and Nes 1982; Ozsomer and Cavusgil 1991; Monroe 1973; Rao and Monroe 1989; Dodds, Monroe, and Grewal 1991). Instead of direct effect, Li, Monroe, and Chan (1994) showed the indirect influence of COO on buying intention through perceived value in which

sary skills in manufacturing a product (a cognitive product evaluation process).

On consumer trust itself, it can be found studies on brand trust, online shopping trust, etc. As stated above, familiarity, security, privacy, word-of-mouth, advertising, and brand image influences brand trust (Chow and Holden, 1997; Delgado-Ballester and Munuera-Alema'n, 2001; Garbarino and Johnson, 1999; Hoffman, et al., 1999; Wernerfelt, 1991). Analogically to brand trust, this theory is applicable to consumer trust towards particular country's product. It means that consumer trust towards Chinese electronics products is influenced by familiarity,

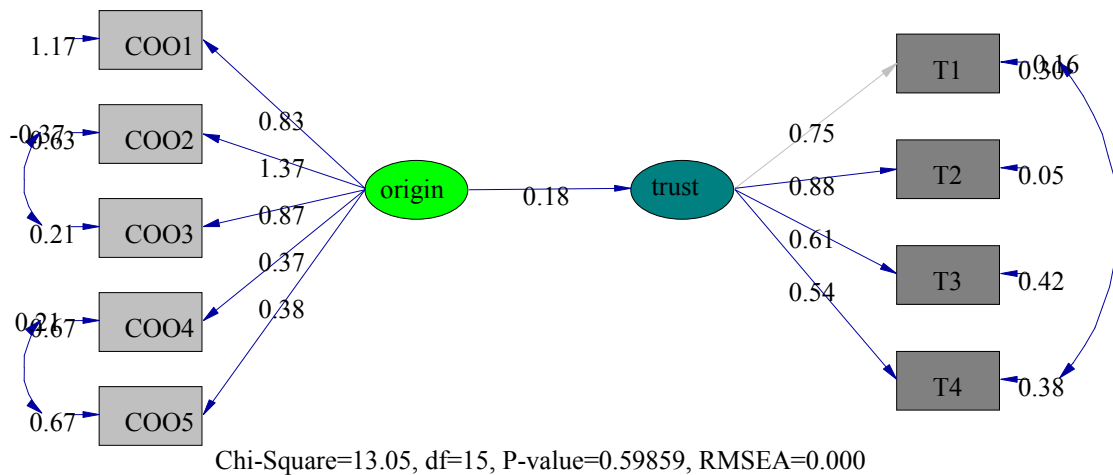


Figure 2. CFA of Research Model

perceived value is influenced directly by perceived quality and perceived quality is influenced directly by COO. Further they showed that COO influences perceived quality positively. Subsequently perceived quality influences perceived value positively. Finally perceived value influences buying intention positively.

Relating to product evaluations, Li and Monroe (1992) showed that COO plays two roles, namely, signaling and attribute roles. Specifically, the signaling role of COO information suggests that consumers use it as a signal to infer whether a country possesses the neces-

security, privacy, word-of-mouth, advertising, and country image. Country image in this sense is measured on COO. Specifically, brand trust on online shopping is a concern and found the existence of familiarity analysis (Chaudhuri and Holbrook, 2001; Cheskin Research and Sapien, 1999; Garbarino and Johnson, 1999; Hoffman et al., 1999; Tractinsky, Jarvenpaa, Vitale, and Saarinen, 1999; Urban et al., 2000).

Factors affecting brand trust on online purchase are privacy, security, brand name, word of mouth, experience, and information (Ha, 2004). Ha (2004) per-

formed the study on internet consumer behavior. Ha (2004) found that the higher privacy and security the higher brand trust. It is also found that perceptions of favorable and reputable Web site as a brand on the Internet are associated with higher levels of brand trust; the Web sites built by positive WOM are perceived to have higher levels of brand trust than marketer-controlled advertising; Experiences that are enjoyed through specific Web sites are perceived as having the highest level of brand trust; and the perceived level of brand trust increases with the quality of information offered.

The strong effect of COO on trust on this study therefore is supported by those studies as the idea to investigate COO-consumer trust relationship is also stem from consumer experiences with Chinese electronics products. Many of them showed the effect of experience on consumer trust. As shown above, familiarity influences brand trust. According to Alba and Hutchinson (1987), brand familiarity is a continuous variable that reflects a consumer's level of direct and indirect experiences with a product. It's common to hear consumer scrutiny towards Chinese products.

Concluded from above explanation, the direct effect of COO on consumer trust which is found on this study is a new concept. This concept is important to marketers in placing the "made in" label on their products. As a matter of fact, consumer cynicism towards Chinese products quality will be heard frequently. However they still keep look and buy Chinese products. As shown on this study COO plays positive effect on consumer trust towards Chinese electronics products. Therefore above presumption that consumer trust to Chinese products quality is very low is rejected.

More important, consumer trust plays some important role in consumer

behavior. Further brand trust affect brand commitment (Ha, 2004). Pavlou (2003) showed the role of trust in influencing consumer intention indirectly thorough perceived risk, perceived usefulness, and perceived easy of use. Repeating buying is the result of buying intention. Prior to buying intention, consumer trust plays role in building perceived risk, perceived usefulness, and perceived easy of use. Perceived risk, perceived usefulness, and perceived easy of use subsequently play role in building buying intention. As for Chinese electronics products case, trust is not the main factor affecting repeat buying (Siringoringo, Murtiasih, and Susilowati, 2011). They showed that price is the most important consideration in deciding buying Chinese electronics products. Following are availability and promotion. Trust itself plays as the fourth order in influencing intention to buy.

CONCLUSION AND SUGGESTION

Consumer trust towards Chinese electronics products is measured using four indicators, namely, faith and believe in Chinese products, Chinese high technology, and long lasting live. Those indicators are valid manifest variables to consumer trust towards Chinese electronics products. Country of origin has five valid indicators which are Chinese innovativeness on electronics products, Chinese high technology, Chinese creativity in design, good quality in manufacture, and China as prestigious country. The highest contributor in building country of origin is its high technology. On trust factor, the highest contributor is customer believe in Chinese electronics products. It also shows that country of origin influence customer trust significantly. Positive image on China as electronics products producer contributes in enhancing consumer trust towards Chinese electronics products.

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THEORY, REALITY AND PERCEPTION OF CSR: COMPARATIVE STUDY BETWEEN INDIA AND THE SLOVAK REPUBLIC

Peter Bielik¹
Elena Horska²
Andrea Ubreziova³

Slovak University of Agriculture in Nitra, Slovak Republic

¹Peter.Bielik@uniag.sk

²correspondent author : Elena.Horska@fem.uniag.sk

³Andrea.Ubreziova@fem.uniag.sk

Abstract

During last decades global society has witnessed remarkable growth of global issues, both on social and environmental level, that have resulted in broad changes in the global economy. These aspects have increased the necessity for more systematic and sustainable approach towards the way business is done on local and global level. Therefore, corporate social responsibility (CSR) has become an effective tool, many companies have decided to apply within domestic as well as international environment. The main goal of this paper is therefore to describe CSR policy and strategies of McDonald's – worldwide fast food chain leader. Moreover, we analyze reasons of different perception of McDonald's CSR strategies between Indian and Slovak consumers. CSR has become an important instrument to develop and implement more responsible business strategies that contributes not only to development of companies' themselves, but towards development of society and environment as well. Although, we can find difference in approach towards CSR implementation in business strategies and the strength of their impact on society and environment. Significant role in the strength and kinds of influence CSR has, plays the context in which companies are motivated to support and develop CSR strategies and the type of initiative. Various approaches (including motives and initiatives) can result in different perceptions of company's CSR strategies and attempts as we will see in presented case comparative study.

Key words: *consumer, corporate social responsibility (CSR), global environment, local business, perception, sustainable business*

INTRODUCTION

In general, CSR can be defined as 'voluntary alignment' of social and economical goals within business activities of a company (Dytrt, 2006). It can be understood as a building process of trust among business partners following economical as well as social aspects of their activities. CSR is one of the most efficient tools that help to achieve

missions and objectives of the companies and in the same time it is a tool that is interconnecting and honoring the triple bottom line: people, profit, planet (Bielik –Smutka – Horská, 2009). There are several reasons why CSR concept has been established as increasing competition, change of consumers' position, higher social and environmental awareness of global society, changing attitude of investors preferring not only economical

attitude considering business activities, accelerating economic globalization with special focus on transnational (TNCs) companies, etc. (Zemigala, 2007, Audl, Bernstein, Cashore, 2008). While analyzing CSR it is important to distinguish among its three levels: economical, social, environmental level (Zorkociova, 2007).

From the companies point of view, applying CSR strategy contributes not only to sustainable business and success on markets, but it has become a synonym for 'competitiveness' too. CSR fosters relationships among companies, trade unions and NGOs as well as with those directly involved in the company, customers and the public in general (Davis, 2005). However, companies' competitive advantage is a combination of various aspects. Even in terms of CSR as competitive advantage, the dilemma of standarding or adaption holds on (Cateora, Graham, 2006). Expectations of both ethical and socially responsible conduct can vary in cultures of different countries, although they may be quite common to many countries, particularly if they are culturally close. Even among those, the specific interpretation, implementation and priorities of ethics and social responsibility could vary. Thus, an MNC must take into account the stakeholders at the three tiers as it formulates core CSR goals and strategies at the levels of MNC headquarters (HQ), region and host country (Horská, Löbl, Rovný 2010).

According to Webb, Mohr, Harris (2008) socially responsible consumption is increasing and many companies are responding to the desires and, in some cases, demands of socially and environmentally responsible consumers. Socially responsible consumption (SRC) can be understood as a wish to express social and environmental concerns through

consumption choices (Gonzales, Korchia, Menuet, Urbian, 2009). The definition of SRC assumes two dimensions, claims Lau (2010): environmental and more general social concern. Horská (2009) defines socially responsible consumer as a person well-informed aware of his/her consumption habits choosing consumption that maximize positive and minimize negative effects on society and environment. SRC can be seen as a social change and collective learning. In spite of the fact, only in recent years a pervasive communication effort has been made to encourage questioning and critical behavior among consumers. (CP/RAC, 2009).

Following ideas presented above, the purpose of the study is therefore to describe and evaluate current CSR status in terms of a chosen MNCs (*McDonald's corporation*), to verify the differences in perception of McDonald's CSR by Slovak and Indian consumers, to analyze influence of existing CSR strategies on consumers behavior on markets of McDonald's (Slovak and Indian) and to describe possible strategies and steps that could improve current status of CSR strategies and activities and increase influence in change of consumers' behavior towards socially responsible consumption (SRC).

RESEARCH METHODS

Research paper presented is based on primary data gathered via questionnaire survey called "Corporate Social Responsibility of McDonald's". The survey was conducted during November 2010 – February 2011 on Slovak and Indian market. Sources for secondary data were Corporate Responsibility report of McDonald's 2009, 2010 as well as financial reports and articles related to the topic on company's website.

Questionnaire that helped us to

obtain primary data for our research consisted of 4 questions considering basic information about respondent from India and Slovakia and 15 questions considering various aspects of corporate social responsibility of McDonald's. For evaluation of the questionnaire contingency tables were used. The contingency table served us as the basis for interpretation and evaluation of data gained via survey.

In order to support our finding, panel discussion with Indian and Slovak consumers was provided. Panel discussion can be characterized as discussion of a subject of public interest by a group of persons forming a panel usually before an audience. Information gained via panel served us as feedback for information presented in survey.

RESULTS AND DISCUSSION

Since been established in 1955 by Mr. Ray Kroc, *McDonald's corporation* has become the biggest fast food retailer acting on markets worldwide. Currently, McDonald's is the leading fast food service retailer with approximately 32 737 restaurants around the world in 117 countries. At the end of 2010, more than 43% of McDonald's stores were situated in USA.

The second largest group of McDonald's restaurants (26%) was located in APMEA (the geographic sector of Asia, Pacific, Middle East and Africa), 21% is in the geographic sector of Europe, with 6% in Latin America and 4% situated in Canada. More the 75% of McDonald's stores around the world is owned and operated (based on principles of franchising) by independent local businessmen/women.

According to the Annual Report 2010, McDonald's Corporation achieved strong results in year 2010 and it continues to strengthen its position around the

world mainly through connection with customers. The principles of McDonald's in relation to its customers consist of exceeding the customers' expectations at any time and providing customers with unparalleled levels of Quality, Service, Cleanliness and Value as well as constant process of building trust and honesty.

The process is applied in relation towards Corporate, Franchise and Supplier partners as well. In alignment with motto "Better, not just bigger" McDonald's served every day in 2010 of 64 million customers thanks to 1,7 million employees worldwide, in comparison to 58 million customers each day in 2008.

Additionally, McDonald's restaurants generated in 2010 total revenues of US \$24 075 million, which represents an increase by 6 % in comparison to US \$ 22 745 million in 2009. Considering the amount of total revenues, the United States (U.S.), Europe, and Asia/Pacific, Middle East and Africa (APMEA) can be mentioned as significant reportable segments. The U.S., Europe and APMEA segments account for 34%, 40% and 21% of total revenues, respectively. The United Kingdom (U.K.), France and Germany, collectively, account for over 50% of Europe's revenues. China, Australia and Japan, collectively, account for over 50% of APMEA's revenues. These six markets along with the U.S. and Canada are referred to as "major markets" and comprise approximately 70% of total revenues of McDonald's.

McDonald's in Slovakia

McDonald's has been operating in Slovakia since 1995 with first restaurant opened in Banska Bystrica. Over the years 1995 – 2010 McDonald's was continually expanding its restaurant chain. Currently, 23 McDonald's restaurants are situated in area of the Slovak republic with more than 1547 employees serving 14, 4 million

customers per day in 2010. During its existence (15 years), more than 89 million customers were served in McDonald's restaurants in Slovakia. Numbers of customers were growing constantly as we can see on Figure. 1 below.

Considering customers, our research conducted in 2010 – 2011 in region of Nitra showed that the largest group of customers is represented by young people in age category 16 – 24 years (77, 3%), mostly student with secondary or higher education (79,1%). The largest group of customers coming to McDonald's restaurant regularly (at least one time per month – 41% of respondents) was represented by student aged 16 – 24 years with secondary education (53, 6%) mainly from city area.

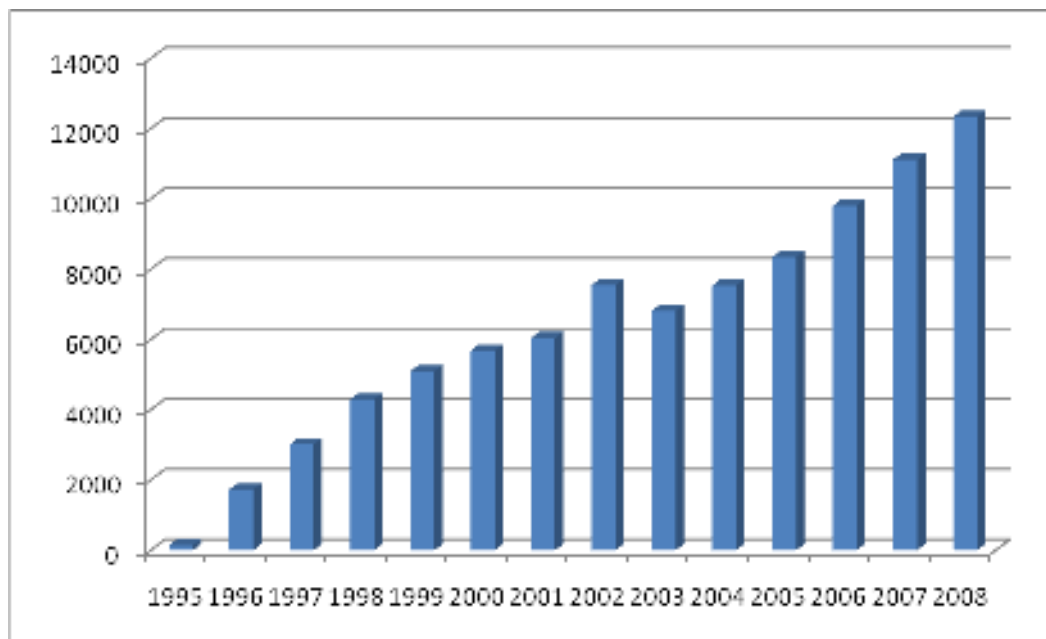
As the most frequent argument to visit McDonald's, 38% customers reported comfort and 'time save', 21% discount coupons and 15% wide range of products. In accordance to the customers' growth, McDonald's revenues have been increasing continually by exceeding the

value of one billion (33, 8 million €) in 2007. In 2010 McDonald's generated revenues at level of 47, 9 million € exceeding revenues of 42, 5 million € in 2009 by approximately 12, 6%. In upcoming period McDonald's plans to expand the number of restaurants (10) mainly with McCafé stores.

McDonald's in India

The term 'mcdonaldization' describes the current processes and trends of globalization, especially considering fast food markets. McDonald's Corporation represents an example how multinational companies have learned to be globally efficient with the response to the local requirements, needs and limits as well. This ongoing process, while considering McDonald's company, can be observed at the geographic segment of south and East Asia, where many different cultures and religions meet on daily basis.

One of such examples is the state of India, where first McDonald's restaurant was opened in 1996 in Mumbai. All



Source : www.mcdonalds.sk

Figure 1: Growth of McDonald's customers in 1995 - 2008 in Slovakia

the restaurants are situated in two geographical locations: northeast and southwest. Over 12 years of its existence on Indian market, McDonald's has become a leader in food retailing service in India with network of more than 132 restaurants in 2006. Up to date, there are already more than 160 restaurants spread over the country. In period of three years, there is a plan to establish around 250 new McDonald's stores mainly in southwest geographic location.

According the Indian website, McDonald's its situated in approximately 30 cities, and employs over 4000 people, serving more than 500 000 customers. Deeper analysis of customers' composition in our research showed that almost 85, 3% of McDonald's is represented by student aged 16-24 with higher education level (university, college). This finding was supported by panel discussion when students claimed that many of McDonald's restaurants are situated in university cities as most of the customers find McDonald's stores as one of the cheapest option to eat out.

It also represents an example of successful adaption to the needs of Indian customers who are very price sensitive. Sensitivity on price confirmed 37% of Indian customers who reported the price as the most important reason why to eat at McDonald's. 29% reported comfort as the second most reasonable argument to visit McDonald's and 15% of Indians choose McDonald's due to its wide product range.

Behind the success on Indian markets stands as well sourcing of almost all products from within the country (almost 99%) and ability to local culture. More than 80, 5% of inhabitants of India are Hindus. Therefore they deny consuming especially cow and pork meat. In line with local culture, McDonald's in India has developed wide range of

vegetarian products. It also makes sure, that vegetarian and non – vegetarian products (Maharaja Mac, Fish –O – Fillet, and Chicken Maharaja Mac) are separated through the whole process of preparation, cooking and serving.

McDonald's Corporate Social Responsibility

Over last few decades McDonald's belongs among MNCs that have realized that success at any market is not just about results. With constantly growing restaurant chain worldwide, strongly adapted company values, shared commitment, effective communication and continues innovation, McDonald's has power to create and achieve considerable positive impact towards sustainable development honoring triple bottom line: planet, people, profit.

Guided by company values, strongly implemented throughout the whole company, McDonald's focuses in terms of CSR on five key areas, presented on Figure 2. Considering socially responsible business activities, McDonald's support and strengthen its efforts by cooperation with international organizations as Greenpeace, World Wildlife Fund, Global Food Safety Initiative.

In order to provide high quality nutritious food, McDonald's cooperate with customers themselves (e.g. Mom's Quality Correspondents). McDonald's company has reached remarkably positive results in all key areas mentioned above.

Considering areas of waste management and use renewable resources, we found out, that more than 29,2% of packaging is made from recycled paper. In Europe itself, the amount counts for more than 88%. Outstanding results are being achieved in area of saving energy. By progressing instalation of new energy saving toasters, McDonald's saves more than 28% of energy while preparing food

per restaurant.

Other successful program to be mentioned is program launched by McDonald's in Europe. McDonald's Agricultural Assurance Program (MAAP) which is designed to increase company's influence through supply chain to the primary producer level is one of the program. Moreover, the framework of the program is promoting food safety, quality and sustainable agricultural production.

In order to strengthen the positive impact of its CSR policy and activities, McDonald's uses wide selection of communication tools such as internet sites, POP (point of purchase) communication, green logo and restaurants design (combinations of green and yellow, wood and stones), national as well as international campaigns ('Someday nature will bite back', Anti – littering day in UK, Clean up Switzerland day, etc.).

Other step McDonald's has taken is presentation of results achieved in CSR area through via final reports as CR Report or "Best of Green cookbook" highlighting environmental best practice innovations in a wide spectrum of areas with tangible impacts for McDonald's

business and brands.

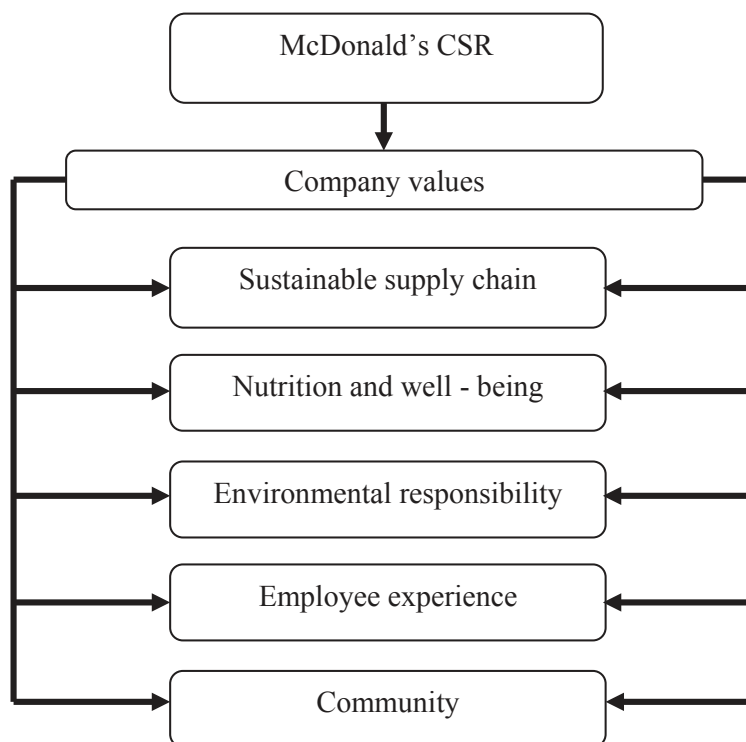
On the other side, as our deeper analysis showed, most of the positive results are achieved mainly on 9 biggest McDonald's markets around the world (Australia, Brazil, China, Canada, France, Germany, UK, USA and Japan). In spite of remarkable effort of McDonald's to create and preserve sustainable practices in all of its business areas, uneven spread of its CSR activities is negatively reflected in opinions of customers on other McDonald's markets, who do not perceive McDonald's as socially responsible and trustworthy company at full rate. Disability to create consistent image of socially responsible corporation on all McDonald's markets weaken its possibilities to progress and reached positive results in CSR area worldwide as well as to increase its impact on consumer.

Further research will show the status of McDonald's perception as CSR Company from perspective of Slovak and Indian customers, weaknesses in CSR area on both markets as well as areas McDonald's should focus on in upcoming future considering analyzed area.

Table 1
Results of McDonald's in CR Key areas

Key area	Activities	Partial Results Achieved
Sustainable supply chain	Animal Welfare Program Environmental Scorecard (ES)	- No antibiotics while feeding chickens : 60% of all farmers - 100% suppliers processing plants audited - 100% restaurants (in/out) providing nutrition information
Nutrition and well – being	Fruit and vegetable	- Items/per menu containing at least one fruit or vegetable item – 6,9
Environmental responsibility	Happy Meal and Happy Animals campaign	- 1 million € raised
Employees experience	McDonald's Hamburger University	-96,2% of HU certificated managers - 26,5% of women top managers worldwide

Source: CR Report 2009, 2010, www.mcdonalds.com



Source: McDonald's CR report 2010, own research

Figure 2. Key Areas of McDonald's CSR

McDonald's CSR: Slovak and Indian market comparison

How McDonald's succeeded in adapting itself in CSR area considering Slovak and Indian markets? In general, Slovak and Indian customers perceive McDonald's mainly as one of the leading fast food retailers worldwide. Majority of customers (92, 7% Slovaks and 85% Indian) associate the company mostly with its core products (burgers and French fries). Other the most often associations where at Slovak markets obesity (63, 4%), whereas Indian costumers associate McDonald's as one that offers its product for reasonable prices (34%). In this area McDonald's succeeded in adaption itself on financial situation of most Indian consumers. None of the customers associated the brand 'McDonald's' as socially responsible at first place.

This was surprising fact as we know; corporate social responsibility has become essential for McDonald's and the

company devotes every year effort, time and investment to generate positive and sustainable impact via on its markets, considering stakeholders, community and especially customers. Therefore, the next step we took was to analyze understanding of CSR by customers on Slovak and Indian market.

Research focused on expectations considering activities of socially responsible company towards customers. The survey showed that both Slovak (38%) and Indian (34%) consumers expect to include all aspects (ethical, social, ecological, economical) providing CSR activities, although there were some respondents who had more specified preferences. For instance 30% of Slovak customers would concentrate on social and ecological aspect while doing business and 34% of Indian customers would focus more on ethical aspects and behavior towards customers and employees.

As for relation of socially responsible company to customers expectations on both markets where more homogenized. More the 34% of Indian and 41% of Slovak customers admitted SR companies should be oriented on providing relevant information, safe and healthy products, respect customer's privacy, etc. The same percentage of Slovak and Indian customers (17%) underlined the need of SR companies to meet their need and requirements.

Based on findings above we asked customers: *If they perceive McDonald's as socially responsible corporation?* According to the survey 31,7% of Slovak and 37% of Indian customers partially agree with perception of McDonald's as socially responsible company. Almost the same percentage of Slovaks (30%) with such picture of McDonald does partially disagree. The reason for this is mainly that most of CSR activities conducted on Slovak markets are sport and charity events which do not correspond with desirable activities in this area (only 2% would consider it as main activity of CSR Company on Slovak market).

On contrary, for 44% of Indian customers, McDonald's CSR policy and activities represents especially offer of healthy and balanced food. It is based on a fact that McDonald's succeeded in adapting itself on Indian markets while respecting multicultural and religious environment with menu corresponding to the needs of Indian consumers with vegetarian menu.

The differences among Slovak and Indian customers were demonstrated especially in one area – *nutrition and well being* – as one of the key areas included in McDonald's socially responsible policy. Customers were given questions considering quality of food menu, quality and amount of product information provided as well as information about

nutrition GDA (guideline daily amount of nutrition). While 66% of Indian customers admitted McDonald's food to be balanced and high quality, whereas Slovak customers 85% are against. 67% customers on Slovak market do not consider McDonald's to be a company that helps them with achieving healthier lifestyle, while on Indian market this opinion shared only 31%.

More uniformed opinions of Slovak and Indian customers were presented in area of information quality. Approximately the same percentage (38% on Slovak and 37% on Indian market) customers agreed, McDonald's does not provide them with sufficient amount of information about its products. In case of Indian market this result can be acceptable as there are missing nutrition information on packaging of products and website as well. Opposed to that, Slovak customers have many ways to gain relevant nutrition information: on website, packaging and leaflets directly at McDonald's restaurants.

During our research, we were dealing with the level of McDonald's activities, considering waste management, protection of environment, level of influence over Slovak and Indian customer considering ecological consumption (*as part of SRC*) and opportunities McDonald's create for customers on both markets in order to enable them participate on activities mention above and raise their awareness about acting more sustainably and responsible. While most of Slovak consumers were clear about their statements towards ecological activities of McDonald's, Indian consumers showed to be unsure. An example is demonstrated in following tables.

One of the best ways to support an effort and activities and also positive image in area of corporate social responsibility companies in general should use the most effective tools to communicate results

Table 2
Responses to The Question "By Buing McDonald's products I have Opportunity to Support Protection of Environment"

	Disagree	Partially disagree	No opinion	Partially agree	Agree
Slovak market:	32%	22%	29%	11%	6%
Indian market:	27%	34%	29%	10%	

Source: own survey

Table 3
Response s to The Question: "McDonald's Leads Me towards Ecological Consumption".

	Disagree	Partially disagree	No opinion	Partially agree	Agree
Slovak market:	52%	12%	22%	5%	6%
Indian market:	27%	29%	27%	12%	5%

Source: own survey

Table 4
Responses to The Question : "McDonald's Educate People How to Protect Environment in My Area."

	Disagree	Partially disagree	No opinion	Partially agree	Agree
Slovak market:	46%	24%	16%	7%	6%
Indian market:	27%	29%	27%	10%	7%

achieved. As we mentioned, McDonald's uses many tools, but the question is their effectiveness.

McDonald's "Best of Green" report contains the most innovative practices how to build better and sustainable business around the world. Mostly it is presented on websites of the company and available for everyone. In spite of this almost 66% of Indian and 77% of Slovak customers never read it. Our survey showed that 70, 7% consumer would prefer television advertisements, 43, 9% poster and leaflets and only 26, 8 % internet to demonstrate results achieved.

Television broadcast would be preferred by 64, 6% of Slovaks, followed by 34, 1% preferring billboards. Surprisingly almost 68% would prefer

internet as a channel to communicate. While dealing with communication, McDonald's can use one of the most effective tools to increase and improve CSR are called 'voice of customer'. What does 'customer voice' say on both markets considering activities of McDonald's?

Indian consumers would prefer mainly if McDonald's invest in education of children, support their carrier growth, create programs to protect them from work in early age, support development in local areas and villages not only cities. As for communication they consider interpersonal communication as the best way to influence consumer's behavior. In next step McDonald's can educate people on how to recycle and consume responsibly, offer such examples as

additional value to products sold (energy-saving light bulb), or increase visibility of topic related advertisements via mascots, etc.

As for Slovak markets, customers would prefer higher level of inclusion in McDonald's CSR activities and projects, collecting ideas and realizing project with help of university student (supporting them financially), realization of more visible campaigns, oriented on consumers and non – consumers of McDonald's and all age categories (not only kids). In order to improve healthy life style McDonald's could offer salad to chosen menu offer for free or special coupons reducing prices when choosing at least one fruit or vegetable item in combination with classic menu, etc.

CONCLUSION

One thing is clear: in spite of enormous activity McDonald's is developing in area of CSR in order to create and preserve sustainable business practices and positive impact on customers, business partners, community and planet itself, there are still pitfalls it must avoid in order to reach full impact on all of its markets. The size of McDonald's markets, different preferences by customers, various social, cultural and political backgrounds are only few reasons, why it has not yet succeeded in creating its uniformed perception as socially responsible company, increasing its influence on customer's behavior towards more responsible consumption.

The variety of markets does not allow McDonald's to use harmonized marketing and CSR strategies as well. On the other hand there are ways to improve current situation: reduction of expansion of McDonald's restaurants chain, higher investments to improve sustainable

business practices on existing markets, increasing influence and education via interactive and modern media tools (information panels about CSR results and activities in restaurants, screens at restaurants, and games with CSR topics), support of green strategies and so on.

As research showed, there are differences in perception of McDonald's as socially responsible company on Slovak and Indian that has roots in variable values and requirements, types of communication used and scope of activities realized on both markets. Important is that not all effort lies on shoulders of the company itself. Real effort and activity must be taken on consumers' side as well. Current development of information and communication technologies, new media – social networks, market performance primarily oriented on fulfilling needs and requirements of customers, voice of the customer, knowledge available create opportunities and access for customers to participate actively towards sustainable development of global society including all its subjects. Only through cooperation of both market sides (companies and consumers primarily) long lasting and maximized effect in area of corporate social responsibility can be created.

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CAPITAL MARKET TRADING BEHAVIOUR WITHIN CRISIS PERIOD

Bramantyo Djohanputro

*Corporate Finance, Risk, and Governance
PPM School of Management
Jl Menteng Raya 9 Jakarta 10340
brm@ppm-manajemen.ac.id; bram.finance@gmail.com*

Abstract

This paper aims at exploring the investors' behavior on investment decisions, especially on how they express their daily behavior in considering trading volume, market returns, and market volatility in their trading or investment decisions within the crisis period as the impact of the subprime mortgage crisis in the United States of America. They are expected to employ current and past information contained in trading volume, returns, and volatility, in their decision making under market pressure because of crisis. To explore those relationships, regressions with Autoregressive Conditional Heteroskedasticity, or ARCH, are employed. More specifically, TARCh model is applied to explore the possibility of asymmetric response of negative and positive information. The study reveals that traders are more concerned with volatility than with return within the crisis period. Also, they tend to behave differently to different types of information, i.e. negative and positive information.

Keywords: *return, volatility, volume, TARCh, asymmetry*

INTRODUCTION

Indonesian capital market is expected to become more mature and efficient after experiencing the economic crisis that hit most Asian capital markets in 2009. Within that period, most market indices went down sharply, many investors retreated from the market, and most short term traders behaved carefully in very trading decision. The maturity and efficiency mean that traders tend to exploit various data to extract information and to make decision. Investors are quite confident to the information contained in the trading activities. They believe to be able to learn and extract some material information from those trading activities to make buy, hold, sell, and portfolio decisions.

Trading volume represents trading activities. Brown, Crocker, and Foester

(2009) argues that trading volume is important because it reflects some proxies, including liquidity, momentum, and information. Rompotis (2009) suggests that trading volume is a determinant factor, but not the sole factor, to influence market movements. Some studies suggest that trading volume influences returns (Lamoureux, 1990; Chowdury, and Howe, Ji-Chai-Lin, 1993; Andersen, 1996; Easley, Kiefer, Maureen, and Joseph, 1996; Hrazdil, 2009; Kymaz and Girard, 2009; Yen and Chen, 2010). Other studies propose the influence of trading volume on both market returns and volatility (Gerety and Mulherin, 1992; Lee, Mark, and Paul, 1994; Sabri, 2004).

How does information influence market? Trading volume may indicate the flow of information, and the flow of information encourages price changes

(Amihud and Mendelson, 1991; Brailsford, 1994; Nawrocki, 1996). Note that the information is diverse in quality, depending on the ability of traders to treat the data. Traders distinguish private from public information. Private information only belongs to certain persons who have ability to evaluate data and certain access to the sources of information. Public information belongs to everybody. Sometimes traders have different confidence on those types of information (Lin, Rahman, and Yung, 2010). In addition, the magnitude of price change depends on the quality of information contained in the trading volume (Choi, Hoyem, and Jung-Wook, 2009).

Trading activities may influence returns and volatility permanently or temporarily. It is permanent if traders are able to extract material information that influences the fundamental values of stock listed in the market. It is temporary if traders are only able to obtain news that creates a shock in the market. The returns or volatility movements under a shock survive in a short period and they will reverse as soon as traders realize their mistakes. Therefore, the sustainability of returns and volatility depends on whether the trading activities have fundamental information or merely reflect psychological shock. The existence of fundamental information in the trading activities will affect permanent volatility, while psychological shock in the trading activities will only influence volatility temporary. Girard and Omran (2009) use the words expected and unexpected components to express fundamental information and news.

Based on the arguments aforementioned, it is interesting to explore the investors' behavior on investment decisions, especially on how they express their daily behavior in considering trading volume, market returns, and market volatility in

their trading or investment decisions. They are expected to employ current and past information contained in trading volume, returns, and volatility in their decision making under market pressure because of crisis.

This research, then, attempts to answer the following questions. Firstly, how and to what extent do investors use the trading volume and past returns as the sources of information on trading that affect returns? Secondly, to what extent do investors use trading volume and past volatility as the sources of information on trading that affect current volatility? Thirdly, how do investors behave on different types of information, i.e. positive and negative information?

To answer those questions, this research employs the data within a crisis period, i.e. the data from January to December 2009. This study employs the following variables: trading volume, market returns, market volatility, their lags, and dummy variables. Trading volume is represented by the natural logarithm of trading volume. The use of natural logarithm is to scale down their values. Besides, the use of the natural logarithm provides information regarding the elasticity of returns and volatility on the trading volume. Market daily returns derive as the difference in the logarithms of stock index levels. Volatility is generated as the squared daily returns. Dummy variables represent days of the week effect.

This study indicates the return–volume relationship as expected, while volatility–volume relationship is not quite clear. Apart from that, one may expect that the market response is quick enough, and quicker than under normal trading period. By employing total, expected, and unexpected trading volume, this study gives a rich explanation on those relationships.

This paper is organized as follows. The first section is introduction. The following section describes the proposed models and hypotheses. The next section elaborates data employed in this study and their analysis. This paper is closed with the conclusion.

RESEARCH METHOD

The following models derive from two main bases: the linear relationship models of return – volume and volatility – volume, and the asymmetric response to different types of information. Assume that transactions are conducted by both informed and non-informed traders. An informed trader has some choices. He (she) may trade on one stock with large volume, or many stocks with low volume for each stock. He (she) may also transact index or a stock portfolio. Depending on the type of information, he (she) will trade on a certain side, either buy side or sell side. Even though his (her) transaction for each stock is not large, his (her) persistence in trading may cause the trading volume increases significantly.

As informed traders are able to predict the market movement, they know the expected trading volume. Non-informed traders, however, do not know exactly the volume they want to transact until the time come. For this reason, trading volume needs to be separated between informed-based against non-informed-based trading volume, as shown in the Equation 1.

$$\begin{aligned} & [\text{Total Volume}]_t = \\ & [\text{Expected Trading Volume}]_t \\ & \quad + \\ & [\text{Unexpected Trading Volume}]_t \quad (1) \end{aligned}$$

Following Epps (1975), Copeland (1977), and Campbell, Sandford, Jiang (1993), Andersen (1996), Easley et al (1996), and Kim and Karanasos

(2006), trading volume becomes one of independent variables. The data of trading reflect underlying information structure according to the trading directions, either buying or selling-pressure conditions. Furthermore, a joint dependence of return and volume applies on an underlying latent event or information variable. Traders may arrive at the market sequentially and in a random and anonymous fashion. This type of information arrivals induces a dynamic learning process of price discovery or information assimilation phase. When all agents agree on the price, the market goes to the equilibrium direction characterized by uniformed valuation and low buy-sell spread.

ARCH is put as the variance equation to accommodate the way traders respond to information arrivals. More specifically, Threshold Autoregressive Conditional Heteroskedasticity (TARCH) is applied to capture the possibility of asymmetric response to different types of information, i.e. negative and positive types of information.

Return–Volume Relationships

Hypothesis 1: Past and current trading volume, together with past market returns, significantly influence the current market return, as shown in Equation 2 and Equation 3.

$$\text{Return}_t = a + \sum_{i=1}^n b_i \text{Return}_{t-i} + \sum_{j=0}^m c_j \text{Volume}_{t-j} + \sum_{k=1}^4 d_k D_k + e_t \quad (2)$$

$$\sigma_t^2 = \omega + \sum_{j=1}^q \beta_j \sigma_{t-j}^2 + \sum_{i=1}^p \alpha_i \varepsilon_{t-i}^2 + \sum_{k=1}^r \gamma_k \varepsilon_{t-k}^2 I_{t-k} + \zeta_t \quad (3)$$

With $I_t = 1$ if $\varepsilon_t < 0$ and 0 otherwise. Return_t is the daily market return. It is defined as the change in daily market index, as shown in Equation 4.

$$\text{Return}_t = \frac{\text{Index}_t}{\text{Index}_{t-1}} \quad (4)$$

The closing daily indices are used in this study. The reason is that closing indices accommodate all flows of information before and within the day. Therefore the closing indices reflect the fair market prices. The daily returns do not include dividend yield as the reasons are the fact that this model of calculation is common for daily returns and the distribution of dividend is very rare, i.e. normally only twice a year. Therefore, excluding dividend yield does not significantly influence the time series of return.

The use of the lags of return, Return_{t-i} , is to extract the information contained in the previous trading days. Some investors, either informed or noise traders, may find certain information to follow from the way prices moves. The number of lag very much depends on the speed of those traders obtain information and their capability to bear risk in trading.

Volume as an independent variable represents how traders behave in the market. This model employs current trading volume (Volume_t) as an independent variable. The reason is that transaction takes place before the last, or closing, price is formed. This means that Volume_t may contain information useable to influence the closing price. The use of natural logarithm of trading volume is to scale down the figure and to find information on sensitivity.

Variables D_k represent daily dummy variables. Because there are five trading days within a week, this study employs four daily dummy variables. These variables are to extract the difference in trading behavior and characteristics on daily basis.

In addition, Equation 2 employs TARCh model (Threshold Autoregressive Conditional Heteroskedasticity). This

follows previous implementation of ARCH and its variance process (Bollerslev, 1986; Bierens, 1993; Kim and Schmidt, 1993; Scwaiger, 1995, Kim and Karanasos, 2006, and Faff and McKenzie, 2007). The use of TARCh process is to improve the efficiency of the volatility in Equation 1. The use of conditional variance, h^2 , is to make the homoskedasticity variance. The use of TARCh is to catch the asymmetric effect of information on traders' behavior on negative and positive information. Such effect is captured by γ_t on Equation 2.

Under a crisis period, in which selling pressure is stronger than buying pressure, trading volume is expected to influence market return negatively. The higher the trading volume, the lower the market price, hence the lower is the market return.

Volatility–Volume Relationship

Hypothesis 2: Current and past trading volumes influence current market volatility. These hypothesis represent in Equation 5 dan 6.

$$\text{Volatility}_t = a + \sum_{i=1}^n b_i \text{Volatility}_{t-i} + \sum_{j=0}^m c_j \text{Volume}_{t-j} + \sum_{k=1}^4 d_k D_k + e_t \quad (5)$$

$$\sigma_t^2 = \omega + \sum_{j=1}^q \beta_j \sigma_{t-j}^2 + \sum_{i=1}^p \alpha_i \epsilon_{t-i}^2 + \sum_{k=1}^r \gamma_k \epsilon_{t-k}^2 I_{t-k} + \zeta_t \quad (6)$$

This study employs the squared returns to represent the market volatility. The use of past volatility in Equation 5 is because traders may behave to previous price fluctuation before considering trading. In this case, one expects b_i 's are significant. The length of the lags depends on how fast traders react to the volatility.

The explanation of the remained variables and the variance equation is similar to the explanation in the previous part.

Traders tend to watch the market

movement closely within a crisis period. When the market is in rush, traders jump to the market. The problem is that some traders have various types of information, while noise traders do not have information at all. This last type of traders makes market volatile because the way they trade depends on which informed traders are followed.

The above argument lead to the hypothesis that trading volume positively influence market volatility. In other words, the coefficients of trading volume are expectedly to be significantly positive.

RESULT AND DISCUSSION

This study employs data from the beginning to the end of year 2009, the year after the subprime mortgage crisis in the US. The use of only one year period is because the economy of Indonesia started to rebound from the beginning of year 2010. Most companies were very optimistic that business was much better in year 2010.

The Jakarta Composite Index and trading volume data are taken from yahoo.com. The index is applicable because they are always adjusted to every corporate action (as comparison, see Pinfold and Qiu, 2007). However, the time series is scrutinized line by line because there are many missing data. As applied in many studies, the missing index is filled with index of its previous day. The missing data of trading volume, on the other hand, are replaced by zero.

Return – Trading Volume

Table 1 shows the results of three main regressions. The difference among them is the use of volume_{t-1} as an independent variable. The first regression, shown in column 2, employs total trading volume. The second regression, shown in column 3, employs expected trading volume.

The third regression, shown in column 4, employs unexpected trading volume. The results of TARCH models are shown at the bottom part of the table.

Based on experience of using data outside crisis period, those three regressions employ a quite long lags of return and volume as regressions. In some cases, the use of lags 5, 10, and 20 is quite normal to capture the weekly, bi-weekly, and monthly effects. Before coming to those final models, this study has tried to implement longer lags for both returns and volume. However, those final models are employed based on maximum likelihood, Akaike information criteria, and Schwarz criteria, besides the fulfillment of stationary and normality requirements.

Regressions using the data within the crisis period seem that the market responds much more quickly. As Table 1 indicates, only trading from the last two days influences the current market return. Table 1 column 2 shows that past return and trading volume does not influence the current market return at all. There is no single independent variable that has significant coefficient, even at 10% significance level.

The variance equation shown in column 2 indicates the behavior of asymmetric response to different types of information. In relation to TARCH model, the coefficient of $\epsilon_{t-1}^2 I_{t-1}$ is positive and significantly different from zero at 10% significance level.

The regression of return on the expected trading volume, as shown in column 3, indicates different responses from those shown in column 2 and confirms the importance of trading volume. All coefficients of trading volume, i.e. Volume_t, Volume_{t-1}, and Volume_{t-2}, are significantly different from zero at 1% significant levels. This means that current and past trading volumes very

significantly influence the current market return.

The coefficients also tend to be as expected, i.e. they tend to have negative signs. They indicate the opposite relations between market trading and return. The increase in market trading activities within crisis period indicates the selling pressure. Therefore, the increase in market volume tends to push the price down or results in negative return. This is shown by the coefficients of Volume_t and Volume_{t-2} .

The positive coefficient of Volume_{t-2} indicates that market prices tend to fluctuate within three days of trading. Suppose that today's trading volume is high. This pushes the price down, and results in the negative return today. However, the price tends to rebound or reverse the next day. This suggests that traders are not sure about the price movements as a result of yesterday's information contained in the trading volume. Traders want to remove the noise in the price. The third day, however, traders still attempt to revise the price on the basis of information contained in the trading volume.

The last column of Table 1 shows the result of regression using unexpected trading volume as independent variables. In terms of significance levels of all variables, the regression results of column 4 and column 2 are the same, in the sense that there is no single independent variable that has a significant coefficient, except the coefficient of variance equation shown at the bottom of the table. This result could indicate the dominance of noise trading over informed trading within the crisis period. Because of the small portion of informed trading compared to noise trading, the importance and the significance of informed trading do not significantly appear in the total effect.

The minority influence of informed

trading is supported by the regression results, especially in terms of R^2 . The low R^2 of all three regressions suggest that even though informed trading significantly influence the price movement, there are other factors that have significant influence on the price movements. If one could identify those factors and accommodate them into the models, the explanation power of the model will go up.

The fluctuation of returns significantly in relation to trading volume within three days indicates some important lessons learned. First, crisis period, similar to the bearish condition, tend to be dominated by selling pressure. Under this situation, the increase in trading volume means the increase in stock to be sold. This is perceived as negative information that brings the price down. Second, traders tend to evaluate the expectation of trading as the sources of information to be accommodated into price. Third, even though there is a diversity of interpretation and existence of sequential trading activity, the interpretation of information tends to be quick and informed traders tend to come up with the converged information within a short period, i.e. within two days. Fourth, traders are not affected by noise trading activities in evaluating the market price.

Volatility–Trading Volume

Table 2 shows the results of three regressions. Each regression contains both main equation and variance equation. Similar to the return-volume regressions, the volatility-volume models also employ three types of trading volume, i.e. total trading volume, as shown in column 2, expected trading volume, shown in column 3, and unexpected trading volume, shown in column 4.

In terms of significance levels, columns 2 and 4 indicate some significant coefficients of independent variables.

Table 1
The Regression of Return on Its Lags and Trading Volume
with TARCh Model for Variance Equation

Independent Variable	Coefficient (Volume _t = Total Volume)	Coefficient (Volume _t = Expected Volume)	Coefficient (Volume _t = Unexpected Volume)
(1)	(2)	(3)	(4)
Main Equation			
C	0.002	-0.130 ***	0.003
Return _{t-1}	0.003	-0.037	0.025
Return _{t-2}	-0.038	-0.055	0.052
Return _{t-3}	0.000	-0.013	0.023
Return _{t-4}	-0.039	-0.044	-0.067
Return _{t-5}	0.029	-0.014	-0.007
Variance Equation			
DUM1	-0.003	-0.004	-0.003
DUM2	-0.002	-0.002	-0.001
DUM3	-0.001	-0.001	0.001
DUM4	-0.001	-0.002	-0.000
Volume _t	0.000	-0.063 ***	0.000
Volume _{t-1}	0.000	0.154 ***	0.000
Volume _{t-2}	-0.000	-0.084 ***	0.000
C	0.000 *	0.000 **	0.000 ***
Resid _{t-1} ²	0.054 *	0.029 **	0.046 **
Resir _{t-1} ² x [Resid _{t-1} <0]	0.083 *	0.112 **	-0.108 ***
GARCH _{t-1}	0.955 ***	0.996 ***	0.968 ***

Note:

- All coefficients are rounded to three decimals; as a result, some coefficients which are very smalls are shown as 0.000, even though they are actually not zero.
- The sign of significance level: *** means significant at 1%; ** means significant at 5%; * means significant at 10%.

However, column 3, mainly on the main regression, indicates no single significant coefficient. It is the opposite of the results shown in Table 1, in which some significant coefficients appear on column (3) while no single significant coefficient appears on columns (2) and (4).

Let focus on columns (2) and (4). The significant coefficients of the lags of volatility shown in column (2) are different from those shown in column (4). In column (2), the coefficient of yesterday's volatility, or lag 1, is significantly different from zero at 10% significant level. In column (4), the coefficients of lags 3 and 4 are significantly different from zero at 10% and 5% significant levels, consecutively.

In terms of significant levels, Dummy and Volume_t variables have similar characteristics between column (2) and (4). The coefficient of DUM1, or dummy for Monday, is different from zero at 1% significant level. The positive figure for this coefficient indicates that the volatility of Monday tends to be higher than the volatility of Friday. The coefficient of DUM4, or dummy for Thursday, is different from zero at 5% significant level. The positive figure for this coefficient indicates that the volatility of Thursday tends to be higher than the volatility of Friday.

The coefficients of Volume_t are quite interesting. The coefficient of Volume_t, or the current trading volume,

tends to be negative even though it is not significantly different from zero. This indicates that there is a tendency that the increase in trading volume is followed by lower volatility and the decrease in trading volume is accompanied by the increase in market volatility. On the next day, however, the volatility significantly increases as an impact of yesterday's increase in trading volume. The result shown on column 4 indicates that the similar directions of trading volume and volatility still take place on the third day.

Another important lesson from columns 2 and 4 is the concern of the unexpected trading volume. The coefficients of trading volume which are significantly different from zero shown in

columns 2 and 4 are similar, i.e. $Volume_{t-1}$ and $Volume_{t-2}$. These may indicate that the fluctuations of total and unexpected trading volume are strongly in line. If it is true, the lesson is as follows. While informed traders transact in an ordered sequence, non informed traders transact randomly and this behavior makes the total trading move randomly. While informed traders focus on the expected trading volume and know the price movements, non informed traders do not know exactly the price movement and cannot distinguish the informed trading from non informed trading. As a result, non informed trading tends to encourage the higher volatility at the time of large trading volume.

Table 2
The Regression of Volatility on Its Lags and Trading Volume
with TARCh Model for Variance Equation

Independent Variable	Coefficient ($Volume_t =$ Total Volume)	Coefficient ($Volume_t =$ Expected Volume)	Coefficient ($Volume_t =$ Unexpected Volume)
(1)	(2)	(3)	(4)
Main Equation			
C	0.002	-0.003	0.000
Volatility _{t-1}	0.166 *	0.115	0.147
Volatility _{t-2}	-0.066	0.016	-0.047
Volatility _{t-3}	0.072	0.050	0.083 *
Volatility _{t-4}	0.076	0.042	0.088 **
Volatility _{t-5}	-0.051	-0.017	-0.050
DUM1	0.000 ***	0.000	0.000 ***
DUM2	0.000	0.000	0.000
DUM3	0.000	0.000	0.000
DUM4	0.000 **	0.000	0.000 **
Volume _t	-0.000	0.001	-0.000
Volume _{t-1}	0.000 *	-0.001	0.000 **
Volume _{t-2}	-0.000 **	-0.001	0.000 **
Variance Equation			
C	0.000 ***	0.000 **	0.000 ***
Resid _{t-1} ²	0.113 **	0.150 **	0.106 **
Resid _{t-1} ² x [Resid _{t-1} < 0]	-0.524 ***	0.050	-0.497 ***
GARCH _{t-1}	0.406 **	0.600 ***	0.495 ***

Note:

- All coefficients are rounded to three decimals; as a result, some coefficients which are very smalls are shown as 0.000, even though they are actually not zero.
- The sign of significance level: *** means significant at 1%; ** means significant at 5%; * means significant at 10%.

CONCLUSION AND FURTHER RESEARCH

This study attempts to investigate the relationships of market return and volatility against trading volume within a crisis period. The analysis focuses on the Indonesian Stock Exchange for the period of January 2009 to December 2009. It is expected that a crisis period indicates specific characteristics in terms of return-volume and volatility-volume relationships.

The study of return–volume and volatility–volume employs ARCH–autoregressive conditional heteroskedasticity–and because there is a possibility that variance influences the return and volatility behavior. Considering that traders may behave differently to positive and negative information, the study employs TARCH–thresholds autoregressive conditional heteroskedasticity – to extract and to accommodate that asymmetric behavior on information. To assure the effect of variance on return and volatility, this study also uses conditional variance as a regressor on the models whenever statistically appropriate to be implemented.

It is important to note at the first place that return behavior is significantly affected by expected trading volume while volatility behavior is significantly affected by total and unexpected trading volume. This implies that the fluctuation of total trading volume is in line with the fluctuation of unexpected trading volume. In other words, the fluctuation of trading is mainly the result of non informed traders jumping into the market to transact.

Second important point to note is that market response to information contained in the trading is much faster

than the market response in the normal trading period. While the response and the extraction of information exhaustively needs only two or three days within a crisis period, the response may take a month within a normal period. It seems that traders attempt to rush to the market as soon as they find new information. Traders still exploit information on the trading volume last week, last two weeks, and last month. In this sense, market sequential hypothesis does not really work in the crisis period but it works quite well in the normal period.

Third important lesson is that the return-volume relationship within the crisis period under study is as expected. The increase in market trading activities within crisis period indicates the selling pressure. Therefore, the increase in market volume tends to push the price down or results in negative return. The volatility-volume relationship, on the other hand, is not as one expects, at least there is a confusing relationship. It is shown by the relationship within the first three days in which the relationship fluctuates, not in one direction, but in mixed positive or negative relationships. This is understandable because of the dominance of unexpected traders that influence the market trading fluctuation.

The last point is the fact that the low powers of explanation of return-volume as well as volatility-volume indicate the importance of other variables that influence the return and volatility movement. The market behavior, shown by the significances of variance equations of TARCH, is one factor, in which market tends to behave differently to positive and negative information. Other factors are not identified in these models and quite interesting to be explored.

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TECHNICAL ANALYSIS IN PREDICTING STOCK PRICES MOVEMENT AND TESTING EFFICIENT MARKET HYPOTHESIS IN INDONESIA STOCK EXCHANGE

*Sri Murtiasih
Ferry Ferdian*

*Jurusan Manajemen Fakultas Ekonomi, Universitas Gunadarma
Jalan margonda Raya No. 100 Depok 16424
murti@staff.gunadarma.ac.id*

Abstract

This study aims to evaluate the use of technical analysis in predicting stock price movements in Indonesia Stock Exchange (ISE). The study also aimed to determine the implications of technical analysis of the efficiency of information on the Stock Exchange. The population in this study are listed companies on the Stock Exchange from 2006-2010. The data used in this study is the stock price data during the observation period with the yield on the shares of profits (losses) of capital. Wilcoxon sign rank test used to differentiate stock returns using technical analysis with a passive investment strategy. The results suggest that technical analysis is useful for predicting stock price movements on the Stock Exchange in the future. Furthermore, this result is an early indication that ISE is not weak form efficient market. In other words ISE is an inefficient market based on information.

Key Words: *technical analysis, efficient market hypothesis, stock price, Indonesian Stock Exchange.*

INTRODUCTION

Technical analysis is one out of two models which is generally used recently as the basis of investment decisions for the majority of investors (Vanstone, Finnie, and Tan, 2004). Technical analysis studies the behavior of investors and are generally only focus on price and volume data of the past to predict future price movements.

Technical analysis is popular both in academics and practitioners. In their research, Vanstone and Tan (2003) examined 30 studies related to the application of artificial intelligence in making investment decisions during the years 1989-2002. Of the 30 studies, 23 of which examined the technical analysis. Popularity of technical analysis among practitioners,

particularly on investment manager was reviewed by Menkhoff (2010). Menkhoff surveyed 692 fund managers over the years 2003-2004 in five (5) states, namely the United States, Italy, Germany, Switzerland, and Thailand. The survey results showed that the majority of investment managers use technical analysis as shown on Figure. 1.

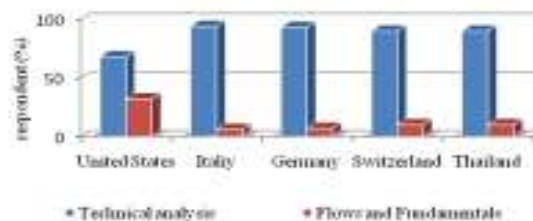


Figure 1. Menkhoff Survey Result

The ability of technical analysis to predict stock price movements in the fu-

ture, has become a controversial subject for a long time. Some researchers question the usefulness of technical analysis, arguing that technical analysis can not produce more profits than a passive investment strategy (buy and hold). Some studies, for example, Fama and Blume (1966) and Jensen and Benington (1970), did not see the usefulness of technical analysis. On the other hand, there is strong evidence that simple forms of technical analysis contain significant forecasting power. At least the evidence was discovered by Brock, Lakonishok, and LeBaron (1992), Lo, Mamaysky, and Wang (2000), and Wong, Du, and Chong (2005). Park and Irwin (2007) reviewing 95 studies on the ability of technical analysis in making a profit, which was published during the years 1988-2004. Of the 95 studies, 56 of which found positive results regarding the ability of technical analysis.

Technical analysis based on the fact that stock prices react slowly to new information coming in the market, and therefore it is possible to obtain abnormal returns by observing the trend of past prices (Bodie, Kane, and Marcus, 1999). This method is contrary to the Efficient Market Hypothesis (EMH) which states that stock prices reflect all available information.

In general, it can be said that any information that can be used to predict the performance of the company will be reflected in stock prices. As soon as there is information indicating that stock prices are too low or if there are profit opportunities, then the investor will be clustered to buy stock and immediately push prices to a reasonable level, where there is only a normal return can be expected.

However, if the shares immediately negotiable at reasonable prices, with all the information available, the increase or decrease was in response to new information. By definition, new information

should not be predicted, because if it can be predicted then the prediction is part of the information today. As a result, stock prices change in response to new information (which is unpredictable), is also unpredictable.

This is a core argument that stock prices will follow a random walk, namely that price changes are random and unpredictable. If the stock price movements can be predicted, there is evidence that the market moves is inefficient, because the ability to predict the price is an indication that all information provided has not been reflected in stock prices.

Eugene Fama (1970) distinguish the EMH in three versions, namely weak, semistrong, and strong. Weak form hypothesis states that stock prices reflect all information that can be derived by examining market trading data of past prices, trading volume, and interest on the loan. Semistrong form hypothesis states that all publicly available information about the prospects of a company should be reflected in stock market prices. Finally, the strong version of the form states that market prices reflect all relevant information for the company, including the information available to people within the company.

If the weak form efficient market hypothesis is accepted, the use of technical analysis is useless because past price already reflected in current prices and no evidence of movement in the future. Instead of technical analysis believe that the price of the past can detect changes in future prices. If technical analysis proved beneficial and help investors gain greater advantage of the market using only past information, then the weak form efficient market hypothesis is not accepted (Karampatsas and Blanas, 2010).

This phenomenon is of course interesting analysis on the ISE. The purpose of this study therefore was to evaluate

Table 1
Summary of Park and Irwin Study

Research	Number of Researches		
	Positive results	Mix	Negative results
Stock markets	26	12	10
Foreign Exchange Market	24	6	8
Future Markets	6	1	2
Total	56	19	20

the ability of technical analysis to predict stock price movements in ISE in the future. The study also aimed to determine whether ISE market is weak form efficient or not.

The ability of technical analysis to predict stock price movements in the future is contrary to the weak form EMH. Weak form EMH states that past price information has been reflected in current prices and no evidence of movement in the future. In the efficient market information, the best investment strategy is passive investing (buy and hold).

If the stock returns in the form of capital gains which is obtained by using technical analysis can not afford more than a passive investment strategy, means that technical analysis is not able to predict the movement of stock prices in the future. The implication is weak form efficient market because of past price information is reflected in current prices.

Conversely, if the stock returns in the form of capital gains is obtained by using technical analysis is capable exceed passive investment strategy, means that technical analysis is able to predict stock price movements in the future. The implication is that market to be inefficient, because of past price information has not been reflected in current prices.

RESEARCH METHODS

Data used in this study is secondary data, ie. stock price data during the observa-

tion period (2006-2010), downloaded from <http://finance.yahoo.com>. In the study population is under the firm with the characteristics listed on the ISE from 2006 until 2010.

Characteristics of the company that is the subject of research are:

1. Companies listed on ISE in the period 2006-2010.
2. Continuously categorized into the list of 50 stocks with largest market capitalization in ISE during the observation period. The number of stock market capitalization of the 50 largest cap is $\pm 80\%$ of the total market capitalization at the ISE, so it is supposed to represent the entire stock in ISE.
3. Did not do a stock split or reverse stock split during the observation period. The calculation of MA and profit (loss) from capital using stock prices of the stock split or reverse stock split will be biased.

There are 425 companies listed on ISE during 2006-2010. Among them only 31 companies continuously listed on top 50 stocks with biggest capitalization distributed on ISE during observation period. Finally only 25 companies did not do stock split or reverse stock split during observation period. It means the study was performed on 25 companies. Table 3 below shows listing of those 25 companies.

Research variable is return of shares

Table 2
Previous Research Summary

No.	Researcher (year)	Research object	Finding
1.	Fama dan Blume (1966)	Dow Jones Industrial Average	Technical trading rules are not able to produce higher profit than passive investment strategy (<i>buy and hold</i>).
2.	Jensen dan Benington (1970)	New York Stock Exchange	Technical trading rules, averagely, are not able to produce more profit significantly compare to passive investment strategy.
3.	Allen dan Taylor (1990)	London foreign exchange market	Currency produced using technical analysis of forecasting is not different significantly with actual currency
4.	Neftci (1991)	Dow Jones Industrial Average	Technical analysis which is performed by <i>Moving Average (MA)</i> method has significant forecasting accuracy.
5.	Brock, Lakonishok, dan LeBaron (1992)	Dow Jones Industrial Average	Technical trading rules are successfully outperformed the market.
6.	LeBaron (1999)	London foreign exchange market	Simple trading rules produce extraordinary profit and become a challenge for EMH.
7.	Lo, Mamaysky, dan Wang (2000)	New York Stock Exchange, NASDAQ Stock Exchange	Certain technical patterns, when applied on a number of stocks in long term period, will provide addition information and show practical value, especially on NASDAQ stock.
8.	Wong, Manzur, dan Chew (2003)	Singapore Stock Exchange	MA and Relative Strength Index (RSI) are able to be deployed to produce significant stock return in Singapore Stock Market.
9.	Wong, Du, dan Chong (2005)	Shanghai Stock Exchange, Hongkong Stock Exchange, Taiwan Stock Exchange	MA works perfectly on SSE, HSE, dan TSE. It indicates that three stock markets are not efficient.
10.	Karampatsas dan Blanas (2010)	Athens Stock Exchange	Few of technical trade rules are able to produce more stock return on FTSE-20 index, and MA

in form of profit (loss) from capital or capital gain (loss). Capital gain is an advantage or profit from investments in securities such as stocks, bonds or in property, where the value exceeds the purchase price (Sullivan and Sheffrin, 2002). In contrast, capital loss occurs if securities or property is sold at a price lower than buying price. Calculation of stock returns in this study was done using MetaStock 10.1 software to simulate trading.

The research hypothesis

Hypotheses to be tested are shown on Table 4

The analysis tools deployed are the assumptions of parametric and compare means paired samples tests. Testing the assumptions of parametric consists of testing the normality and homogeneity assumptions. Test for normality using the Shapiro-Wilk test in order to test the normality of the distribution of sample data. Decision-making using the Shapiro-Wilk test is based on significance value. Sig-

nificance or probability value less than 0.05 indicates that the data are not normally distributed. In contrast, the significance or probability value greater than or equal to 0.05 indicates that the data are normally distributed.

Homogeneity test performed using the Levene test. Decision making is still based on significance value. Significance or probability value less than 0.05 indicates that the data come from populations having variances are not similar (not homogeneous). Significance or probability value greater than or equal to 0.05 indicates that the data comes from populations that have similar variance (homogeneous).

Compare means for paired sample can be performed using the paired t test or Wilcoxon sign rank. Paired t test is suitable to be used if the sample data distribution follows normal distribution and data derived from populations that have similar variance (homogeneous).

Table 3
Listing of Research Sampel

No.	Stock code	Company's name
1.	AALI	Astra Agro Lestari Tbk
2.	ASII	Astra International Tbk
3.	BBNI	Bank Negara Indonesia Tbk
4.	BBRI	Bank Rakyat Indonesia Tbk
5.	BDMN	Bank Danamon Indonesia Tbk
6.	BMRI	Bank Mandiri (Persero) Tbk
7.	BNGA	Bank CIMB Niaga Tbk
8.	BNII	Bank Internasional Indonesia Tbk
9.	BNLI	Bank Permata Tbk
10.	BUMI	Bumi Resources Minerals Tbk
11.	EXCL	XL Axiata Tbk
12.	GGRM	Gudang Garam Tbk
13.	HMSP	HM Sampoerna Tbk
14.	INDF	Indofood Sukses Makmur Tbk
15.	INTP	Indocement Tunggal Prakasa Tbk
16.	ISAT	Indosat Tbk
17.	KLBF	Kalbe Farma Tbk
18.	LSIP	PP London Sumatera Tbk
19.	PNBN	Bank Pan Indonesia Tbk
20.	PTBA	Tambang Batubara Bukit Asam Tbk
21.	SMAR	SMART Tbk
22.	SMCB	Holcim Indonesia Tbk
23.	TLKM	Telekomunikasi Indonesia Tbk
24.	UNTR	United Tractors Tbk
25.	UNVR	Unilever Indonesia Tbk

Table 4.
Research Hypotheses and Description

Null hypothesis	Alternative Hypothesis	Description
$\bar{R}_{SMA} \leq \bar{R}_{b\&h}$	$\bar{R}_{SMA} > \bar{R}_{b\&h}$	\bar{R}_{SMA} : stock return using <i>Simple Moving Average</i> (SMA)
$\bar{R}_{EMA} \leq \bar{R}_{b\&h}$	$\bar{R}_{EMA} > \bar{R}_{b\&h}$	\bar{R}_{EMA} : stock return using <i>Exponential Moving Average</i> (EMA)
$\bar{R}_{DMA} \leq \bar{R}_{b\&h}$	$\bar{R}_{DMA} > \bar{R}_{b\&h}$	\bar{R}_{DMA} : stock return using <i>Dual Moving Average</i> (DMA)
$\bar{R}_{DEMA} \leq \bar{R}_{b\&h}$	$\bar{R}_{DEMA} > \bar{R}_{b\&h}$	\bar{R}_{DEMA} : stock return using <i>Dual Exponential Moving Average</i> (DEMA)
		$\bar{R}_{b\&h}$: stock return using passive investment (<i>buy and hold</i>)

Conclusion is based on the significance value. Significance value less than 0.05 indicates that two different samples originated from different populations. Significance value greater than or equal to 0.05 indicates that both samples come from the same population.

Wilcoxon Signed Rank Test is used if the distribution of the sample data do not follow a normal distribution or data derived from populations having variances are not similar (not homogeneous). Conclusion again is based on significance value. Significance value less than 0.05

implies that the two samples originated from different population. In contrast, the significance value greater than or equal to 0.05 implies that both samples come from the same population.

For data processing purposes, it used several tools. Microsoft Office Excel was used to calculate initial stock price. MetaStock version 10.1 was deployed to simulate trading rules and passive investment strategy (buy and hold) as the part of technical analysis. SPSS version 12.0 is used for processing data in a statistical test.

RESULT AND DISCUSSION

To provide more complete information of stock progress to public, ISE publishes stock price data through print and electronic media daily. Indicator of stock price movement is the stock price index, whereas Composite Stock Price Index (CSPI) plays as the main index. Figure 3 shows the movement of stock index during the years 2006-2010



Figure 3. Composite stock price index movement during 2006-2010

During the year 2006-2010 CSPI experienced significant growth of 218.72%, although in 2008 a very drastic decrease of 50.89% due to the global financial crisis. This illustrates the increasing confidence of investors, both foreign and domestic, to the capital market in Indonesia.

Technical Analysis for Efficient Market Hypothesis Test

Prior in deploying technical analysis, stock return should be calculated. The stock return is the result of stock trading simulation using the optimal MA period (provide the greatest return), which is different for each stock and the type of MA. Trading was simulated using MetaStock software version 10.1, in which the stock price data in 2006-2010 was used as an input. Figure 4 shows an example of simulated data using SMA trading rules.

The simulation results using SMA trading rules on stock AALI indicates the period 50 as the greatest return. Return stock at this period is 34.150 points for

5 years. In terms of percentage, the stock return for 5 years amounted to 690%, or 137.98% per year. Table 5 presents the optimal MA period of the entire stocks of the sample in this study.

We may note that each stock has different optimal period. This means that each stock does not have the same price movement. Each stock has its unique price movement characteristics. MA period varies from 5 (the shortest) to 200 (the longest). These results are consistent with Karampatsas and Blanas (2010) who found that the profitability of MA depends on the length of the period used.

Table 6 presents the overall return on an annualized return of the study sample year 2006-2010.

The simulation results for 25 stocks trading in years 2006-2010 showed varying stock return. For Astra Agro Lestari Tbk. stock, the return per year are at 137.98% using SMA, 134.14% with EMA, 131.92% with DMA, 132.12% with DEMA, 85.86% with buy and hold. Largest return obtained by the Bukit Asam Coal shares Tbk, over 200%, with the SMA at 233.89%, amounting to 245% EMA, DMA at 228.33, 234.72% of DEMA, and buy and hold is 235%. For Indosat Tbk. shares, the return is comparatively very small, below 5%, amounting to 4.82% with SMA, EMA at 3.13%, 2.32% for DMA, DEMA at -1.79%, and buy and hold at -0.71%. Table 7 below shows the results of descriptive statistics using the MA return stocks and buy and hold strategy during the years 2006-2010.

During the years 2006-2010, the lowest return obtained by the DEMA for -1.79% of the shares of Indosat Tbk. The highest return is the EMA of 245% of the shares of Bukit Asam Coal Limited. On average, buy and hold strategy produced the lowest return of 63.23%. While the DMA produces the highest return of 83.75%.

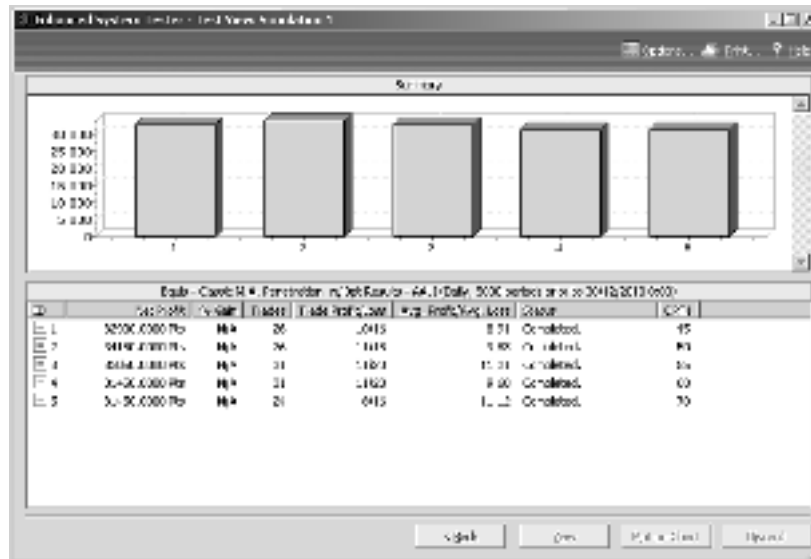


Figure 4. Trading simulation for AALI stocks using SMA trading rules

Table 5
MA Optimal Period

No.	Stocks Code	SMA	EMA	DMA	DEMA
1.	AAJI	50	45	5/105	15/65
2.	ASII	105	135	10/135	15/110
3.	BBNI	80	155	15/175	15/140
4.	BBRI	5	5	10/200	20/160
5.	BDMN	165	35	10/165	15/165
6.	BMRI	180	140	15/170	5/130
7.	BNGA	20	45	10/60	10/55
8.	BNII	15	50	5/125	10/100
9.	BNLI	15	5	20/150	5/195
10.	BUMI	15	15	10/80	10/50
11.	EXCL	190	55	10/185	10/60
12.	GGRM	75	200	10/95	20/60
13.	HMSP	55	85	15/95	20/80
14.	INDF	125	80	10/160	5/55
15.	INTP	170	130	15/105	20/55
16.	ISAT	5	120	15/195	20/180
17.	KLBF	95	5	5/105	5/155
18.	LSIP	5	5	5/90	5/105
19.	PNBN	50	30	5/175	10/145
20.	PTBA	165	200	10/70	15/170
21.	SMAR	55	15	5/55	15/55
22.	SMCB	155	185	5/155	20/105
23.	TLKM	115	95	10/135	10/115
24.	UNTR	180	130	20/120	20/115
25.	UNVR	70	135	15/190	20/160

Hypotheses Testing

Normality and Homogeneity Tests

Normality test of stock return using Shapiro-Wilk test is shown on Table 8. All data produced using the five strategies are not normal for 95% confidence. It means hy-

potheses testing should be performed using Wilcoxon signed rank test.

Homogeneity test was performed using Levene test. Output produced is as follows. Statistics, first degree of freedom, second degree of freedom, and significance respectively are 0.812, 4, 120,

Table 6
Annulaized Stock Return Imbal Year 2006-2010 (in percentage)

No.	Stocks Code	SMA	EMA	DMA	DEMA	Buy & Hold
1.	AALI	137,98	134,14	131,92	132,12	85,86
2.	ASII	92,91	89,51	99,32	97,67	85,92
3.	BBNI	56,48	52,81	51,56	53,05	40,55
4.	BBRI	42,00	38,83	47,33	53,50	50,00
5.	BDMN	13,51	14,76	22,20	21,57	3,87
6.	BMRI	59,76	59,15	63,41	65,55	59,27
7.	BNGA	68,64	76,79	80,74	82,22	74,32
8.	BNII	105,60	79,60	102,40	91,87	84,00
9.	BNLI	37,04	34,51	37,46	36,90	30,42
10.	BUMI	198,68	188,82	190,13	194,61	59,61
11.	EXCL	41,55	23,64	34,05	28,32	28,18
12.	GGRM	58,43	54,42	67,22	61,04	49,57
13.	HMSF	50,00	49,55	56,40	54,49	43,26
14.	INDF	93,30	107,58	101,65	115,38	87,14
15.	INTP	69,14	67,14	78,71	74,71	71,14
16.	ISAT	4,82	3,13	2,32	-1,79	-0,71
17.	KLBF	50,71	49,29	48,28	48,48	45,66
18.	LSIP	129,75	138,32	90,76	86,05	66,39
19.	PNBN	36,83	20,49	28,05	38,54	35,61
20.	PTBA	233,89	245,00	228,33	234,72	235,00
21.	SMAR	156,12	134,59	226,71	211,29	97,65
22.	SMCB	96,42	80,63	97,89	96,84	74,74
23.	TLKM	9,75	8,57	14,79	15,80	6,72
24.	UNTR	109,93	109,39	136,60	127,35	109,52
25.	UNVR	22,81	29,94	55,67	54,74	57,19

and 0.520. Based on significant value we can conclude that data is homogeny for 0.01. Although homogeneity criteria is verified, compare means test of parametric test should not be performed as the data is not normally distributed.

TPaired Compare Means

Wilcoxon signed rank test for compare two means among the strategies is shown on Table 10 and Table 11. Based on Table 10 it shows that stock return with SMA exceed stock return with passive investment strategy (buy and hold) on the 20 shares. Contrary stock return with buy and hold strategy exceed SMA for 5 shares. Stock return with EMA exceeds the stock return resulted using buy and hold strategy for 17 shares. Conversely, stock return with buy and hold strategy exceeding EMA for 8 shares. Stock return which was calculated with DMA exceeds stock return which was calculated using

buy and hold on 21 shares. Conversely, stock return with buy and hold strategy exceeding DMA strategy for 4 shares. Finally, stock return which was calculated with DEMA exceeding buy and hold strategy for 22 shares. Conversely, stock return with buy and hold strategy exceeding DEMA strategy for 3 shares. Overall MA strategy managed to outperform the buy and hold strategy in terms of profitability, with DEMA be best compared to the SMA, EMA, and DMA.

Based on Table 11 we can conclude that all null hypotheses are rejected. It means the acceptance of alternative hypotheses. Statistically we can state that stock return calculated with SMA, EMA, DMA, and DEMA exceeds buy and hold strategy significantly at 5%. The result proves that technical analysis (which is represented by MA trading rules) is useful in predicting future stock price in ISE. Further, this result indicates that ISE

Table 7
Stock Return Statistics Year 2006-2010
(in percentage)

	Minimum	Maximum	Average	Standard Deviation
SMA	4,82	233,89	79,04	57,69
EMA	3,13	245,00	75,62	58,36
DMA	2,32	228,33	83,75	60,45
DEMA	-1,79	234,72	83,00	59,81
Buy & Hold	-0,71	235,00	63,23	45,97

Table 8
Normality Test Result

Strategy	Statistics	df	Sig.	Decision
SMA	0.913	25	0.035	not normal
EMA	0.903	25	0.021	not normal
DMA	0.889	25	0.011	not normal
DEMA	0.896	25	0.015	not normal
Buy & Hold	0.820	25	0.001	not normal

is not efficient market weak form. ISE should be categorized as inefficient market informationally.

These results prove that the stock price movements can be predicted using technical analysis. However the study result contradicts with the Efficient Market Hypothesis (EMH) which was first proposed by Fama (1970). On EMH it states that stock prices will follow a random walk and can not be predicted because the stock price movements reflect changes in the information available in the market.

The results of this study can be taken into consideration for investors to use technical analysis in investment decision-making in the capital markets, especially equity investment in Indonesia Stock Exchange.

CONCLUSION AND SUGGESTIONS

Conclusion

Based on the analysis and discussion in the previous chapter, the conclusions obtained are as follows:

1. The return using Moving Average trading rules is proven exceeds passive investment strategy (buy and hold). This means that technical
2. analysis is useful for predicting stock price movements in Indonesia Stock Exchange in the future.
3. Ability of technical analysis to predict stock price movements in Indonesia Stock Exchange in the future, be an early indication that the ISE is not weak form efficient market. In other words ISE is an inefficient market information.

Suggestion

Some further research can be done. The data used in this study came from only one market share in certain periods. However, further research can be done with data on

Table 10
Wilcoxon Signed Rank Test Result

	Sign	Frequency	Average	Total
Buy & Hold<SMA	+	20	13.65	273.00
Buy & Hold>SMA	-	5	10.40	52.00
Buy & Hold=SMA	Equal	0		
Buy & Hold<EMA	+	17	13.88	236.00
Buy & Hold>EMA	-	8	11.13	89.00
Buy & Hold=EMA	Equal	0		
Buy & Hold<DMA	+	21	14.43	303.00
Buy & Hold>DMA	-	4	5.50	22.00
Buy & Hold=DMA	Equal	0		
Buy & Hold<DEMA	+	22	14.36	316.00
Buy & Hold>DEMA	-	3	3.00	9.00
Buy & Hold=DEMA	Equal	0		

Table 11
Wilcoxon Signed Rank Hypothesis Test Result

	Z	Sig.	Decison
Buy & Hold – SMA	-2.973	0.003	Reject H ₀
Buy & Hold – EMA	-1.978	0.048	Reject H ₀
Buy & Hold – DMA	-3.780	0.000	Reject H ₀
Buy & Hold – DEMA	-4.130	0.000	Reject H ₀

more than one market share for various periods. Moreover, further research can also be done using other trading rules, because these studies only use indicators moving average (MA). Other researches can consider using transaction cost in the calculation of the return.

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RESIDENCES SATISFACTION TOWARDS SERVICE QUALITY PROVIDED BY BOGOR LOCAL GOVERNMENT

*Adi Kuswanto*¹

*Teddy Oswari*²

*Budi Setiawan*³

^{1,2} Faculty of Economics, Universitas of Gunadarma

³ Faculty of Information System, Universitas of Gunadarma

¹(kuswanto@staff.gunadarma.ac.id)

³(buset@staff.gunadarma.ac.id)

²(toswari@staff.gunadarma.ac.id)

Abstract

The lowest local government as a frontline government has some crucial duties includes residences administration, village development, residences identity, land administration, and other duties. Up to present, the performance of the lowest local government is measured based on the regulation, but has never been measured based on the perception of its residences that have had service directly. The objective of the study are (1) to explore whether there is a differences between the perception and the expectation of the residences towards the service quality provided by the lowest local government; (2) to analyze the effect of service quality of the lowest local government on the satisfaction of the residences. The sampling method used in the research is stratified random sampling and collect 681 residences that have ever dealt with the lowest local government. The service quality was measured by comparing expectation and perception in which using six dimensions namely tangible variable, reliability, responsiveness, assurance, empathy, and competence. The result of the study shows that the perception of residences on service quality is lower than their expectation. The service quality that affects on the residences satisfaction is tangible, reliability, responsiveness, and competence variables. Assurance and empathy variables did not affect residences satisfaction.

Keyword: Service, quality, government, satisfaction, residences

INTRODUCTION

The development of information technology has contributed benefits to the performance of many organizational activities both private and government organizations. Information technology has been used widely in all human life to do activities more effective and efficient. Companies apply it to increase their competitiveness. Government bodies apply it to increase the service quality to the residences including service of private business and required information.

In globalization, the need for information keeps increasing for public. Investors require the information of financial statements and business prospect in the future. The government bodies require information to expose the operation and financial of the private companies for taxation. The government also publishes reports to stakeholders on operation and financial activities during the year.

Mostly central government bodies have benefited from applying the information technology. Nevertheless, the middle and the lowest local government such as towns, sub-

district, and village government have not applied the information technology optimally.

Region that has successfully applied the information technology on stop service is Sragen. The region serves residences such as business permission certification, birth certification, and other business at one stop service within fixed price and certain time.

Mostly central and local service governments have not determined the price of each service and the certainty of service duration. They price the services differently. It means that the service mechanism is not based on market mechanism. This will lead to unfavourable situation to public served. Government staff perhaps will set up the cost as high as possible considering residence will pay any price as they need the services. However, residences are customers whose need to be satisfied. Residence satisfaction then has similar concept as general customer satisfaction which is generally defined as an evaluative response to the perceived outcome of a particular consumption experience (Cadotte, Woodruff, and Jenkins, 1987; Day, 1984; Westbrook and Oliver, 1981, 1991; Yi, 1990).

Government should provide better and prompt services. Staffs performances should be measured and evaluate continuously. Public services should be view as marketing-oriented. Many researches have been done in measuring customer satisfaction such as (Bielen and Demoulin, 2007; Olorunniwo, Hsu, and Udo, 2006; Law, Hui, and Zhao, 2004; Antonides, Verhoef, and Van Aalst, 2002; Homburg and Giering, 2001; Cronin, Brady, and Hult, 2000; Dabholkar, Sheperd, and Thorpe, 2000; Cronin and Taylor, 1992; Dabholkar, 1995), but the study is still rare on public services.

Moreover, based on government policy which is "residences satisfaction continuously", residences satisfaction measurement is a must. Measurement output subsequently will be useful in improving services.

Therefor the objective of the study are (1) to explore whether there is a difference between the perception and the expectation of the residences towards the service quality provided by the lowest local government; (2) to analyze the effect of service quality of the lowest local government on the satisfaction

of the residences.

RESEARCH METHOD.

The population of the study is all residences at Bogor City who have ever engaged deals with the village government. Bogor city is small city located near to Jakarta. The activities linked between residences and public staffs include application of identity card, the payment of land and building tax, house certificate, meeting invitation, village head election, etc. Bogor city has 6 subdistricts as shown on Table 1.

Bogor population is about 949,066 which consists of 484,648 males and 464,418 females. Considering big number of population which will take big efforts and time consuming subsequently, sampling should be deployed. Sampling method used in the study is cluster random sampling. Total number of sample is 720 who are distributed in 6 subdistricts. For each district, 120 questionnaires were distributed. It means samples from each district are 120. Among village residences, 120 respondents were recruited randomly.

Satisfaction is a latent variable which is measured based on customer perception and expectation towards service quality (Boulding, Staelin, Kalra, and Zeithaml, 1993; Churchill and Surprenant, 1982; Oliver, 1980; Oliver and DeSarbo, 1988; Westbrook and Oliver, 1991). Questionnaire development was done based on Parasuraman, Zeithaml, and Berry (1988). Based on it, service quality dimensions are tangible, reliability, responsiveness, assurance, empathy, and competence. Tangible dimension is defined as physical facilities, tools, and the performance of the personnel. Reliability is defined as the ability to provide promised service accurately and reliably. Responsiveness is defined as desire to help customers to provide service timely. Assurance is knowledges and courtesy of public staff's personnel and their ability to increase respect to customers. Empathy is defined as payment attention individually by the personnel of public staff to customers. Competence includes aptitudes and abilities. Aptitudes is ability to learn something and abilities is capacity owned by someone to do many duties successfully.

Prior to questionnaire distribution, va-

Table 1.
Subdistricts and Villages

Subdistrict	Villages
Bogor Utara	Bantar Jati, Tegal Gundil, Cibuluh, Kedung Halang, Tanah Baru, Cimahpar, Ciluar, Ciparigi
Bogor Selatan	Rangga Mekar, Bojong Kerta, Kertamaya, Rancamaya, Harjasari, Muarasari, Mulyaharja, Bondongan, Empang, Lawanggantung, Batutulis, Cikaret, Cipaku, Pakuan, Pamoyanan, Genteng
Bogor Timur	Baranangsiang, Sukasari, Tajur, Katulampa, Sindang Sari, Sindang Rasa.
Bogor Barat	Menteng, Pasir Kuda, Pasir Jaya, Pasirmulya, Gunung Batu, Bubulak, Situgede, Margajaya, Balumbang Jaya, Semplak, Cilendek Timur, Cilendek Barat, Curug, Loji, Curug Mekar, Sindang Barang
Bogor Tengah	Pabaton, Tegallega, Sempur, Babakan Pasar, Panaragan, Cibogor, Babakan, Paledang, Ciwaringin, Gudang, Kebon Kelapa
Tanah Sareal	Tanah Sareal, Kebon Pedes, Kedung Badak, Kedung Jaya, Kedung Waringin, Sukadamai, Sukaresmi, Cibadak, Kencana, Mekarwangi, Kayumanis

Validity and reliability tests were performed. Validity refers to the extent to which a test measures what we actually wish to measure. Reliability is concerned with estimates of the degree to which a measurement is free of random or unstable error. Validity test was performed using correlation technique. Reliability test was performed using *Alpha Cronbach*.

In order to measure residence satisfaction, data collected further was analyzed using statistics method. In measuring residence perception and expectation gap, compare means was deployed. Furtherly multiple regression was deployed to explore the effect of tangibles, reliability, responsiveness, assurance, empathy and competence on residences satisfaction.

RESULTS AND DISCUSSION.

Questionnaire was distributed to six subdistricts in Bogor City. From 720 questionnaires distributed, 681 were returned back. The composition of questionnaire distribution among six districts along with returned back and valid questionnaire are shown on Table

The results of the study begin with exploring the respondent characteristics. Based on sex, from 681 valid questionnaires, 340 are females and 341 are males. The composition is almost similar. From the point of view of age, the youngest is on 12-18 range and

the oldest is on 75-81 range. The biggest respondents are laid on 19-25 years old range whereas the least is on 68-74 years old. More detail about respondent age is shown on Table 3.

Based on respondent education, the biggest percentage is included on Senior High School level and the least is doctoral degree. More complete on respondent educations are shown on Table 4. Most of respondent job is private officer as shown on Table 5. However, respondent job varies from state officer which is also public staff until students.

Based on services provided, the most widely is applying identity card and the least is consultation. More detail should be referred to Table 6.

Compare Means between Perception and Expectation of Service Quality

Most commonly, customer complaint towards services they get. Similar evidence happened with public services. Considering public services are monopolies, there is tendency that public staffs are not performed as expected. It is not surprisingly then to accept complaint from residence. To evaluate this evidence in Bogor public services, compare means with paired samples t test was performed to evaluate the gap between perception and expectation. Table 8 shows mean, standard deviation, and standard error for each pair.

Table 2.
Questionnaire Distribution and Valid Questionnaire Returned Back

Description	Subdistrict						Total
	Bogor Selatan	Bogor Barat	Bogor Tengah	Bogor Timur	Bogor Utara	Tanah Sareal	
The amount of questionnaires sent	120	120	120	120	120	120	720
Unreturned questionnaires	4	11	0	8	0	0	23
Incomplete questionnaires	0	4	12	0	0	0	16
Amount of samples	116	105	108	112	120	120	681

Table 3
Respondent Description Based on Age

Interval class	Frequencies	Percentage
12- 18	62	9
19 - 25	200	30
26 - 32	149	22
33 - 39	87	13
40 - 46	85	13
47 - 53	54	8
54 - 60	27	4
61 - 67	5	1
68 - 74	2	0
75 - 81	3	0
	674	

Closer look on Table 9, we can conclude that there is a different between perception and expectation significantly for all dimensions. Significance values for all pairs are lower than 0.01. It means there is a very strong gap between perception and expectation. Mean values is negative which shows that the expectation is much more higher than perception. It's not surprisingly as citizens in all nations always expect creation and delivery of high quality services from their respective governments.

In respect with this, local government needs to improve the services in all aspects. Facilities such as waiting room, office, physical performance of staffs should be improved. Providing services accurately and timely should be performed. Staffs should be trained to respect residences who need services and motivate their desire to help them.

Furthermore satisfaction model based on service quality dimensions was tested.

Table 10 shows the result. Based on Table 10 we may conclude that the model is fit. Residences' satisfaction towards public services in Bogor city can be measured using tangible, reliability, responsiveness, assurance, empathy, and competence dimensions. This result enriches the study on service quality measurement. Those dimensions have been applied in various type of services (such as Churchill and Surprenant 1982; Swan and Trawick 1981; Tse and Wilton 1988; Westbrook 1980, Johnston, 1997; Yang and Fang, 2004; Wirtz and Mattila 2000).

Table 10 shows that coefficient determination value (R Squared) is 0,935. It indicates that the level satisfaction of residences can be explained by variable of tangible, reliability, responsiveness, assurance, empathy, and competence at value of 95,3 percent.

F test (Anova) has significant value of 0.00 below 0.05. It indicates that the regression model can be used to predict the level

Table 4.
Respondent Description Based on Level of Education

Level of education	Frequencies	Percentage
Elementary school	27	4
Junior high school	47	7
Senior high school	345	51
Diploma	10	1
Undergraduate	137	20
Postgraduate	114	17
Doctoral	1	0

Table 5.
Respondent Description Based on Occupation

Occupation	Frequencies	Percentage
State officer	73	11
Entrepreneur	97	14
Private officer	183	27
Labor	21	3
Housewife	58	9
Teacher	12	2
Student	165	24
Other	71	10
	680	

Table 6.
Frequency of Interaction with Public Services

Deals	Frequencies	Percentage
Applying identity card	348	51
Tax	23	3
House certificate	18	3
Land certificate	14	2
House/land trade certificate	4	1
Meeting invitation	4	1
Consultation	3	0
Others	45	7
Applying identity card and tax	135	20
Applying identity card and Meeting invitation	15	2
Applying identity card and others	3	0
More than 2 deals	69	10
	681	

satisfaction of residences. Based on t test, the independent variables which have significant value less than 0.05 are tangible, reliability, responsiveness, and competence. It indicates that each of those variables have effect significantly on the level satisfaction of residences. Variables which have significant value greater than 0.05 are assurance and empathy. It indicates that each of those variables have not effect significantly on the level satisfaction of residences.

The results of multiple regression show that the residences of Bogor City are satisfied with physical performance of village governments. The physical performance is in

the form of near village location and easily reached by residences, safe and comfortable park area, modern building, clean village office, and attractive village officers.

The residences satisfaction is explained by realibility in the form of energetic and quick village officers to serve residences, their helps to residences. It is also explained by responsiveness in the form of easily to make promise with village officers and their commitment to keep it, their paying attention about complaint of residences, and their detailed explanation about filling up the form and services cost.

Lastly, the competence variable affects

Table 8.
Paired Samples Statistics for Service Quality

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	P_Tangible	4.5944	681	.75192	.02881
	H_Tangible	5.3298	681	.86985	.03333
Pair 1	P_Reliability	4.5560	681	.72276	.02770
	H_Reliability	4.6628	681	.81488	.03123
Pair 1	P_Responsiveness	4.7003	681	.81539	.03125
	H_Responsiveness	5.5261	681	.90594	.03472
Pair 1	P_Assurance	4.5455	681	.87287	.03345
	H_Assurance	5.5918	681	.98519	.03775
Pair 1	P_Empathy	4.7394	681	.84800	.03250
	H_Empathy	5.5015	681	.93894	.03598
Pair 1	P_Competence	4.6520	681	.79042	.03029
	H_Competence	5.5103	681	.89035	.03412

Table 9.
Paired Samples Test for Service Quality

		Paired Differences		95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)	
		Mean	Std. Deviation	Std. Error Mean	Lower				Upper
Pair 1	P_Tangible - H_Tangible	-.73539	.87795	.03364	-.80145	-.66933	-21.859	680	.000
Pair 1	P_Reliability - H_Reliability	-.10671	.83629	.03205	-.16963	-.04378	-3.330	680	.001
Pair 1	P_Responsiveness - H_Responsiveness	-.82575	.95758	.03669	-.89779	-.75370	-22.503	680	.000
Pair 1	P_Assurance - H_Assurance	-1.04626	1.15191	.04414	-1.13293	-.95959	-23.702	680	.000
Pair 1	P_Empathy - H_Empathy	-.76211	1.01711	.03898	-.83864	-.68559	-19.554	680	.000
Pair 1	P_Competence - H_Competence	-.85835	.99072	.03796	-.93289	-.78380	-22.609	680	.000

Table 10.
Results of Multiple Regression

Model Summary^b

Model	R	R Square	Adjusted Square	R Std. Error of the Estimate
1	.967 ^a	.935	.934	1.17862

a. Predictors: (Constant), Tangiable, reliability, responsiveness, assurance, empathy, and competence

b. Dependent Variable: residences satisfaction

ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	13348.008	11	1213.455	873.533	.000 ^a
	Residual	929.331	669	1.389		
	Total	14277.339	680			

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-2.674	.420		-6.361	.000
	Tangiable	.428	.104	.070	4.103	.000
	Reliability	.422	.085	.067	4.975	.000
	Responsiveness	.172	.093	.031	1.862	.063
	Assurance	.050	.073	.009	.677	.498
	Empathy	-.052	.084	-.010	-.624	.533
	Competence	.517	.095	.089	5.448	.000

on the level of residences satisfaction in the form of good knowledges and skillful of village officers to serve residences, their capability to serve variety of services, and the accurate information provided by village officers.

Assurance and empathy variables do not affects on the level of residences satisfaction. It is caused by uncertainty of service cost, unstandard and unstable services, and uncertainty about duration of deals settlement.

CONCLUSSION

The study is about service quality of the lowest local government at Bogor City and the level of residences satisfaction. The conclusion taken from the results and discussion above that service quality provided by village government at Bogor city is lower than ex-

pected by the residences. The service quality can be in the form of tangiable, reliability, responsiveness, assurance, empathy), and competence. The residences satisfaction is affected by tangiable, reliability, responsiveness, and competence. The residences satisfaction is not affected by assurance and empathy.

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AUTHOR GUIDELINES

Article structure

- Title page
- Abstract and key words
- Background
- Research Method
- Result & Discussion
- Conclusion and Suggestion

General guidance

- Use American English
- Use page layout with margin 3 cm, A4
- 12 -16 pages length
- Single space, single column, TNR 12 pt.

Essential title page information

- Provide in separate page.
- ***Title.*** Concise and informative. Titles are often used in information-retrieval systems. Avoid abbreviations and formulae where possible.
- ***Author names and affiliations.*** Where the family name may be ambiguous (e.g., a double name), please indicate this clearly. Present the authors' affiliation addresses (where the actual work was done) below the names. Indicate all affiliations with a lower-case superscript letter immediately after the author's name and in front of the appropriate address. Provide the full postal address of each affiliation, including the country name, and, if available, the e-mail address of each author.
- ***Corresponding author.*** Clearly indicate who will handle correspondence at all stages of refereeing and publication, also post-publication. **Ensure to provide the e-mail address and the complete postal address. Contact details must be kept up to date by the corresponding author.**
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Abstract & Key Words

A concise and factual abstract is required. The abstract should state briefly the purpose of the research, the principal results and major conclusions. An abstract is often presented separately from the article, so it must be able to stand alone. For this reason, References should be avoided, but if essential, then cite the author(s) and year(s). Also, non-standard or uncommon abbreviations should be avoided, but if essential they must be defined at their first mention in the abstract itself.

Immediately after the abstract, please provide 3 until 5 keywords, using American spelling and avoiding general and plural terms and multiple concepts (avoid, for example, “and”, “of”). Be sparing with abbreviations: only abbreviations firmly established in the field may be eligible. These keywords will be used for indexing purposes.

Abbreviations

Define abbreviations that are not standard in this field at their first mention. Ensure consistency of abbreviations throughout the article.

Acknowledgements

Collate acknowledgements in a separate section at the end of the article before the references and do not, therefore, include them on the title page, as a footnote to the title or otherwise. List there those individuals who provided help during the research (e.g., providing language help, writing assistance or proofreading the article, etc.).

Units

Follow internationally accepted rules and conventions: use the international system of units (SI). If other units are mentioned, please give their equivalent in SI.

Math formulae

Present simple formulae in the line of normal text where possible and use MS Equation to construct the formulae. Use the solidus (/) instead of a horizontal line for small fractional terms, e.g., X/Y. In principle, variables are to be presented in italics. Powers of e are often more conveniently denoted by exp. Number consecutively any equations that have to be displayed separately from the text (if referred to explicitly in the text).

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Footnotes should be avoided. In the case that it is very important, used sparingly. Number them consecutively throughout the article, using superscript Arabic numbers. Many wordprocessors build footnotes into the text, and this feature may be used. Should this not be the case, indicate the position of footnotes in the text and present the footnotes themselves separately at the end of the article. Do not include footnotes in the Reference list.

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Please make sure that artwork files are in an acceptable format (TIFF, EPS or MS Office files) and with the correct resolution. If, together with your accepted article, you submit usable color figures then we will ensure, at no additional charge, that these figures will appear in black and white in the printed version. **For color reproduction in print, you will receive information regarding the costs from us after receipt of your accepted article.** Please indicate your preference for color in print.

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Figure captions

Ensure that each illustration has a caption. Supply captions separately, not attached to the figure. A caption should comprise a brief title (**not** on the figure itself) and a description of the illustration. Keep text in the illustrations themselves to a minimum but explain all symbols and abbreviations used.

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Number tables consecutively in accordance with their appearance in the text. Place footnotes to tables below the table body and indicate them with superscript lower-case letters. Avoid vertical rules. Be sparing in the use of tables and ensure that the data presented in tables do not duplicate results described elsewhere in the article

Subdivision

Divide your article into clearly defined sections or subsections but no need to be numbered. Sections are marked with full capital and subsections are marked with capitalized first letter for each word, underline and bold.

Appendices

Keep appendices to minimum. If there is more than one appendix, they should be identified as A, B, etc. Formulae and equations in appendices should be given separate numbering: Eq. (A.1), Eq. (A.2), etc.; in a subsequent appendix, Eq. (B.1) and so on. Similarly for tables and figures: Table A.1; Fig. A.1, etc.

References

This style of referencing requires that you acknowledge the source of your information or ideas in two ways:

- **in the text** of your work, when you refer to ideas or information you have collected during your research. Each reference is indicated by including the author and date of the publication referred to, or cited.
- in a **reference list** at the end of your text, which gives the full details of the works you have referred to, or cited.

In text referencing

You may acknowledge the source of your information or ideas within the text of your work in various ways.

Quotation

You may **quote** the author’s exact words to support your argument.

Author’s original text

Biological time is not only scientifically important, but it also greatly affects the productivity and health of a nation. The cost to the nation’s health of working out of phase

with our biological clocks is probably incalculable at present. In the short term, poor sleep, gastrointestinal problems, higher accident rate, and social problems are evident.

Rajaratnam, S 2001, 'Health in a 24-hr society', *Lancet*, 358, pp. 999-1005.

The first example below places more emphasis on the writer, the second on the idea.

Citing example:

Rajaratnam (2001, p. 1005) concludes that, 'The cost to the nation's health of working out of phase with our biological clocks is probably incalculable at present.'

'The cost to the nation's health of working out of phase with our biological clocks is probably incalculable at present' (Rajaratnam 2001, p. 1005).

Paraphrase

You may **paraphrase** an author's words or ideas - restating them in your own words, but without altering their meaning or providing your own interpretation of

Author's original text

Biological time is not only scientifically important, but it also greatly affects the productivity and health of a nation. The cost to the nation's health of working out of phase with our biological clocks is probably incalculable at present. In the short term, poor sleep, gastrointestinal problems, higher accident rate, and social problems are evident.

Rajaratnam, S 2001, 'Health in a 24-hr society', *Lancet*, 358, pp. 999-1005.

Citing example:

Rajaratnam (2001, p. 1005) argues that, while the notion of biological time is of scientific importance, it is also economically and socially significant at a national level. He points to the health, productivity and social problems which may be attributed to individuals working 'out of phase' with their internal clocks.

Summary

You may **summarize** - use your own words to present the key points of an author's argument or ideas, without altering the meaning.

Author's original text

Biological time is not only scientifically important, but it also greatly affects the productivity and health of a nation. The cost to the nation's health of working out of phase with our biological clocks is probably incalculable at present. In the short term, poor sleep, gastrointestinal problems, higher accident rate, and social problems are evident.

Rajaratnam, S 2001, 'Health in a 24-hr society', *Lancet*, 358, pp. 999-1005.

Citing example:

In his conclusion, Rajaratnam (2001, p. 1005) points to the possible economic and social costs incurred by a nation, when individuals work 'out of phase' with their bio-

logical clocks.

Citing page numbers in-text

- Page numbers are essential if you are directly quoting someone else's words. Insert page numbers after the year, separated by a comma. When paraphrasing or summarising, page numbers may also be included.
- If a work being referred to is long, page numbers might be useful to the reader. In this case, include them in the in-text citation, separated from the year by a comma.
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The reference list, normally headed '**References**', should appear at the end of your work, and should include details of all the sources of information which you have referred to, or cited, in your text.

Order of items in the list

The items in the reference list are arranged alphabetically by the authors' surname. Where you have cited more than one work by the same author, those items are then arranged by date, starting with the earliest.

Format of citations in the reference list

The details which need to be included in each citation in the list depend on the type of item referred to, e.g. book, journal article, or website.

The details, or elements, which are included in most citations, should be presented in this order: author - date- title of work - title of larger work (if any) - publishing details

Punctuation and spacing in the citation

Some general rules apply:

- **Authors' names:**
 - Use only the initials of the authors' given names.
 - Use full stops and spaces between initials.
- **Titles of works:**
 - Use minimal capitalization for the titles of books, book chapters and journal articles.
 - In the titles of journals, magazines and newspapers, capital letters should be used as they appear normally
 - Use italics for the titles of books, journals, and newspapers.
 - Enclose titles of book chapters and journal articles in single quotation marks
- **Page numbering:**
 - Books; page numbers are not usually needed in the reference list. If

they are, include them as the final item of the citation, separated from the preceding one by a comma, and followed by a full stop.

- Journal articles: page numbers appear as the final item of the citation, separated from the preceding one by a comma, and followed by a full stop.
- Use the abbreviations p. for a single page, and pp. for a page range, eg pp. 11-12

- **Whole citation:**

- The different details, or elements, of each citation are separated by commas.
- The whole citation finishes with a full stop.

Works by the same first authors, published in the same year

Single author entries come first in the reference list

Example:

Bessant, J 2001, 'The question of public trust and the schooling system', *Australian Journal of Education*, vol. 45, no. 2, pp. 207-226.

Bessant, J & Webber, R 2001, 'Policy and the youth sector: youth peaks and why we need them', *Youth Studies Australia*, vol. 20, no. 1, pp. 43-47.

Robbins, SP 2004, *Organizational behaviour*, 11th edn, Pearson Prentice Hall, Upper Saddle River, NJ.

Robbins, SP & DeCenzo, DA 2004, *Fundamentals of management: essential concepts and applications*, 4th edn, Pearson Prentice Hall, Upper Saddle River, NJ.

Works by the same author, published in the same year.

In your reference list, order these works alphabetically according to the title of the work and use the letters a, b, c ... after the publication date to distinguish between them in your citations.

Reference list:

Example:

Blainey, G 2003a, *Black kettle and full moon: daily life in a vanished Australia*, Penguin/Viking, Camberwell, Victoria.

Blainey, G 2003b, *The rush that never ended: a history of Australian mining*, 5th edn, Melbourne University Press, Carlton, Vic..

Scutt, JA 2003a, 'Future access - discrimination and the Disability Discrimination Act', *Access*, vol. 5, no.3, pp. 6-10.

Scutt, JA 2003b, 'Without precedent: sex/gender discrimination in the High Court', *Alternative Law Journal*, vol. 28, no. 2, pp. 74-77.

Citing example:

Scutt (2003b p. 74) looks at the issues arising from the lack of High Court precedents in sex/gender discrimination law.

JUDUL (dalam bahasa Indonesia dan Bahasa Inggris)

Nama penulis pertama

Nama penulis kedua

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¹Alamat penulis pertama (lengkap dgn email)

²Alamat penulis kedua (lengkap dgn email)

Misal : Jurusan Akuntansi, Fakultas Ekonomi, Universitas Gunadarma

(alamat instansi, bukan rumah)

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ABSTRAK

(abstrak ditulis dalam bahasa Indonesia dan bahasa Inggris)

Satu paragraf, memuat tujuan, metode penelitian yang digunakan, hasil, dan maksimum lima kata kunci.

Kata Kunci: aaaa, bbbb, cccc, dddd, eeee.

PENDAHULUAN

Pendahuluan memuat latar belakang penelitian secara ringkas dan padat, dan tujuan. Dukungan teori tidak perlu dimasukkan pada bagian ini, tetapi penelitian sejenis yang sudah dilakukan dapat dinyatakan.

METODE PENELITIAN

Metode penelitian merupakan prosedur dan teknik penelitian. Antara satu penelitian dengan penelitian yang lain, prosedur dan tekniknya akan berbeda. Kalau tidak berbeda, berarti penelitian itu hanya mengulang penelitian yang sudah ada sebelumnya. Tapi bukan berarti harus berbeda semuanya. Untuk penelitian sosial misalnya, populasi penelitian mungkin saja sama, tapi teknik samplingnya berbeda, teknik pengumpulan datanya berbeda, analisis datanya berbeda, dan lain.lain. Mohon diuraikan dengan jelas, bukan hanya mengopi dari penelitian lain. Kalau mau disertakan penelitian yang dilakukan termasuk ke dalam kategori penelitian yang mana, mohon diperhatikan dengan baik, jangan asal mengopi dari teori Metodologi Penelitian.

Bagian ini bisa dibagi menjadi beberapa sub bab, tetapi tidak perlu mencantumkan penomorannya.

PEMBAHASAN

Bagian ini memuat data (dalam bentuk ringkas), analisis data dan interpretasi terhadap hasil. Teori-teori yang sudah ada digunakan pada bagian ini untuk interpretasi, tentu saja bukan dengan *copy and paste*, tapi dengan penyesuaian kalimat sebagai interpretasi. Jika dilihat dari proporsi tulisan, bagian ini harusnya mengambil proporsi terbanyak, bisa mencapai 50% atau lebih. Referensi banyak yang tercantum dalam Daftar Pustaka harusnya dimuat pada bagian ini dalam bentuk rujukan (hanya menuliskan nama belakang penulis dan tahun terbit).

Bagian ini bisa dibagi menjadi beberapa sub bab, tetapi tidak perlu mencantumkan penomorannya.

SIMPULAN DAN SARAN

Simpulan dan saran dapat dibuat dalam sub bagian yang terpisah. Simpulan menjawab tujuan, bukan mengulang teori, berarti menyatakan hasil penelitian secara ringkas (tapi bukan ringkasan pembahasan). Saran merupakan penelitian lanjutan yang dirasa masih diperlukan untuk penyempurnaan hasil penelitian supaya berdaya guna. Penelitian tentunya tidak selalu berdaya guna bagi masyarakat dalam satu kali penelitian, tapi merupakan rangkaian penelitian yang berkelanjutan.

DAFTAR PUSTAKA

Bagian ini hanya memuat referensi yang benar-benar dirujuk; dengan demikian, referensi yang dimasukkan pada bagian ini akan ditemukan tertulis pada bagian-bagian sebelumnya. Sistematika penulisannya didasarkan pada *Harvard style* tapi dengan sedikit modifikasi adalah:

- Menurut abjad, dengan tata penulisan (baik bagi penulis pertama, kedua, dan seterusnya): nama belakang, lalu diikuti nama pertama dan seterusnya dalam bentuk singkatan. Contoh : Siringoringo, H.
- Tidak perlu dikelompokkan berdasarkan buku, jurnal, koran, ataupun berdasarkan tipe publikasi lainnya.
- Sistematika penulisan untuk buku: nama penulis tahun publikasi *Judul buku* Penerbit, kota. Contoh : Siringoringo, H. 2009 *Simulasi Sistem Industri* Gunadarma, Depok.
- Sistematika penulisan untuk jurnal: nama penulis Tahun publikasi “Judul tulisan” *nama jurnal* Volume, nomor (halaman). Penerbit, kota. Contoh : Siringoringo, H. 2009 “Consumer shopping behavior among modern retail formats” *Delhi Business Review* 10(1) 1-6.
- Sistematika penulisan untuk skripsi/tesis/disertasi: nama penulis. Tahun lulus. *Judul skripsi/tesis/disertasi*. Penerbit, kota.
- Sistematika penulisan untuk artikel dari internet: nama penulis. Tanggal, bulan, dan tahun download. *Judul tulisan*. Alamat situs.
- Sistematika penulisan untuk artikel dalam koran/majalah: nama penulis. Tanggal, bulan dan tahun publikasi. “Judul tulisan.” *Nama koran*. Penerbit, kota.

Aturan Penulisan

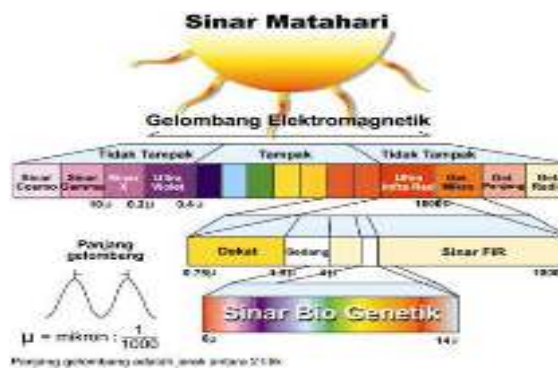
- Tulisan merupakan hasil penelitian
- Tulisan ilmiah menggunakan bahasa Indonesia baku, setiap kata asing dicari padanannya dalam bahasa Indonesia baku, dan tidak perlu menyertakan bahasa asingnya.
- Kalimat yang diambil dari tulisan ilmiah dalam bahasa asing diterjemahkan dalam bahasa Indonesia baku.
- Referensi menggunakan aturan penulis, tahun, hanya mencantumkan nama belakang penulis dan tahun tulisan (contoh: Kotler, 2000) dan mohon diperiksa ulang dengan daftar pustaka (sangat membantu jika menggunakan fasilitas bibliografi yang ada di perangkat lunak pengolah kata)
- Tidak menggunakan catatan kaki
- Tulisan ilmiah dikirimkan dengan format:
 - o Ukuran kertas yang digunakan A4
 - o Panjang tulisan minimum 12 halaman, maksimum 16 halaman
 - o Marjin keliling 3 cm
 - o Spasi 1
 - o Dalam bentuk 1 kolom (standar, tidak perlu dibuat kolom)
 - o Huruf *Times New Roman*, ukuran 12
 - o Semua jenis rumus ditulis menggunakan *Mathematical Equation* (bagi pengguna MS Word ada di bagian Insert => Equation), termasuk pembagian/fraksi, Zigma, Akar, Matriks, Integral, Limit/Log, Pangkat, dsb
 - o Semua jenis symbol menggunakan simbol standar yang ada di pengolah data (bagi pengguna MS Word ada di bagian Insert => Symbol)
 - o Judul tabel dan gambar ditulis di tengah, *sentence case*, dengan jarak 1 spasi dari tabel atau gambarnya. Tulisan “Tabel” atau “Gambar” dengan nomornya diletakkan satu baris sendiri. Judul tabel diletakkan di atas tabel (sebelum tabel) dan judul gambar diletakkan di bawah gambar (setelah gambar). Penulisan sumber tabel atau gambar diletakkan di bawah tabel dan gambar (center pada gambar dan sejajar tabel pada tabel dengan huruf 10 pt). Pada gambar, penulisan sumber diletakkan setelah judul gambar dengan jarak 1 spasi. Tulisan dalam tabel 10 pt.

Tabel 1.
Rasio Keuangan Bank Mandiri Tahun 1998-2005

Tahun	PA	PE	RPE	RPTA
1998	-123.49%	n.a	n.a	201.40%
1999	-30.01%	-763.87%	2445.65%	96.07%
2000	0.47%	8.28%	1676.43%	94.37%
2001	1.05%	25.48%	2333.83%	95.89%
2002	1.43%	24.84%	1634.64%	94.24%
2003	1.84%	22.49%	1123.02%	91.82%
2004	2.12%	21.08%	895.21%	89.95%
2005	0.23%	2.60%	1034.54%	91.19%

Sumber: Siringoringo (2007)

Contoh gambar:



Gambar 1. Sinar yang dihasilkan matahari
Sumber: Prasetyo (2007)