



Imperfect monitoring, cyclical, and learning model perspectives: Price war in the Indonesian lighting industry

Dominicus Edwinarto¹

¹Bina Nusantara University – Jakarta, Indonesia

*Corresponding author E-mail: dominicus.edwinarto@binus.ac.id

Abstract

In marketing terms, the phenomenon of price war is regarded as the result of over-competition and retaliatory reaction in order to win market share. Based on the available literature, three refined models of price war antecedents has been identified: the imperfect monitoring model, the cyclical model, and the learning model. This article was written as part of a recent empirical observation of four Indonesian lighting companies who consider themselves to be currently engaged in price war. Based on the proposition made earlier by Heil and Helsen (2001), this study was prepared as a qualitative survey using an open-ended questionnaire method. The study found that price war is a result of competitive interaction in periods where demands are declining and induced by intra-brand competition. In conclusion, propositions to manage activities in conditions of price war are presented.

Keywords: Price War; Intra-Brand Competition; Lighting Industry

1. Introduction

Price war can be considered as the result of *over competition*(1) and retaliatory reactions made by firms in order to win market share(2). Its origins can be traced back to the earlier studies of business warfare and abnormal managerial behavior (3) and has since become a common discussion in various marketing literature(4-6). Under game theory, price war was assumed as the result of competitive punishment made by firms in breach of market's tacit collusive agreement (7). In this scenario, price war is triggered when one or more firms decrease their price in an attempt to win customers, despite the fact that competing firms have previously implicitly agreed to charge a certain price which considered close to the monopoly price. When the cut in price is received by the market, other firms retaliate by charging the competitive (zero-profit) *Bertrand price* for the remainder of the game(8).

In 2001, Oliver Heil and Kristiaan Helsen introduced the price war's early warning signals (EWS), which summarize the phenomenon's antecedents into four main variables: market condition, customer condition, firm condition, and product condition (9). The model was later used as a conceptual framework created to understand the origins of price war, and what firms could do to avoid it. While the article could be regarded as one of the most prominent research in price war literature, further testing and discussion of the topic are certainly required.

This article answers to the suggestion made by Heil and Helsen (9)for the need of empirical research. As past research in price war was usually conducted through means of quantitative approaches (10-13), qualitative observations are rare and uncommon. In addition, specific discussions in the lighting industry can be considered scarce. Where it is available, arguments are generally conducted in consumer product markets (14, 15) and the service industry (16-18). Based on this apparent scarcity, research topic in the Indonesian lighting industry could offer new perspectives in

price war discussions while a qualitative approach into the phenomenon could expand existing theoretical concepts previously provided in the field of marketing and strategic management.

Using the three refined model of price war antecedents proposed by Heil and Helsen(9), qualitative data has been collected and constructed as discussion results in regard to individual variables that considered influential to the occurrence of price war. In the subsequent section, we will briefly discuss literature in regard to price war and its connection with intra-brand competition, followed by a discussion of study results and concluded with recommendations for future actions.

2. Literature Review

The work of Heil and Helsen(9) summarized price war into three prominent models: (1) imperfect monitoring models, (2) cyclical models, and (3) learning models. Within their understanding, the basic framework of antecedents to price war can be seen as the result of differing perceptions in regard to market information, which result in the collision of agreement in price. In brief summary, the three models can be understood as follows:

2.1. Imperfect monitoring model

This model starts from the premise that firms only have the ability to observe their own outputs, and they cannot observe the outputs of their rivals. The model could be understood through the framework of Green and Porter (19), where firms decide on the output and observe price on the level of industry. Tacit collusion among firms in the industry is supported by a trigger price strategy. When an unusually low price was found, two scenarios can be derived: (1) one or more rivals break the rule of tacit collusion, or (2) decrease in price was induced by an unexpectedly low demand. In

their prediction, price war can only occur during economic downturns.

2.2. Cyclical model

This model focuses on the difficulty of sustaining tacit collusion in the face of cyclical macro-economic conditions. In contrast with the previous model, all players within an industry have the opportunity to observe all variables where uncertainty is not a critical issue. The model was exemplified by Rotemberg and Saloner(20), where rivalries between firms are considered to be a decisive price setter. Their model assumes that demand shocks are observable to all players, and by decreasing selling price during economic rise, firms can capture a large market share when demand is high. Price war in this sense will later occur when demand returns to normal where competitive actions are based on the assumption that market absorption will continue to increase. In this model, price war is most likely to occur during good economic period.

2.3. Learning model

This model is centralized on the uncertainty of demands and cost parameters. Examples can be understood through the work of Slade (12), where the demand variables are unknown and difficult to observe. While the parameters of demand could remain constant for a while, it could shift on a sudden and results in a permanent obsolescence of strategy. When the shifts happen, firms will adjust their prices and these movements in price will trigger a price war. In Slade's model, price war is regarded as an information-gathering device(7).

All these three models are presented with the assumption that price war is defined as a competition with price pressured to a downward trend, where firms are competing through a single variable (i. e. price), in order to gain or attain market share. Nevertheless, while many industries are not sterile from the occurrence of price war, the phenomenon is likely to be felt worst in the commodity or near-commodity markets (Roland Berger, 2014). In this case, the evolution of competitive interaction and market conditions could be the cause of price wars, as competitive misunderstanding occurs (21) and managers with insufficient competitive irrationalities respond to competition through price retaliation(22). In relation to price war and in regard to marketing, most literature has acknowledged price as the a unique variable compared to all other marketing mix instruments(9, 23, 24). It is the most flexible and can be used rapidly, as it can be changed downward or upward, in unlimited variations across customer and market segments. This unique attribute made price become the preferred method for competitive interaction in markets with a high number of homogeneous products, as other forms of marketing variables are more difficult to assess (2). However, an effect of price which is often misunderstood by many lies within its ability to create immediate results that are easily measurable in the form of sales changes and competitive reactions. In a market where the size of competition is limited and products are distributed with a certain degree of constraint, sudden changes in price could create an abnormal demand shock which results in higher-than-average return. Nevertheless, this effect is temporary and firms usually fail to increase their pricing structure back to its original level, as competitive rivalries have now acknowledged the changes as the market's new equilibrium price.

Although little attention has been made in relation to open market pricing regulations, firms in the market rely on a definite certainty when it comes to the structure of price. However because our modern competitive interactions are based on the notion of inequality where differences in resources lead to competitive advantages (25), all activities conducted by firms at the end of the day creates a network of operations that serves as a structure of the whole industry. Price in this sense serves as the industry's decisive long-term sustainability factor that ironically continues to be used as the only short-term competitive differentiator.

3. Methodology/Materials

Based on the three antecedent model presented by Heil and Helsen (9), four main dimensions are prepared as the core question in the study, as means to understand price war seen from the views of industry players. These sets of questions are organized in the simplest way possible to avoid respondent confusion. The study consists only three main parts: (1) respondent's type of business and their perceived market role, (2) respondent's view in regard to antecedents of price war seen from the market conditions, firm characteristics, product characteristics, and consumer characteristics, and (3) the respondent's view of price war in regard to their business' evolution.

The first sets of questions are aimed to characterize the respondent's type and size of business, in relation to the Indonesian lighting industry. Based on the number of brands carried on display and their size of stock keeping units (SKUs) in the respondent's inventory, three types of respondents were identified:

Retailers – firms who carry more than fifty brands on display, where their product selection consists between one hundred to two hundred SKUs. This group of respondent varies greatly in financial size and therefore measurement was constructed through the size of active inventories.

Wholesalers – firms who carry more than twenty brands with more than two hundred SKUs. The types of products sold by this type of customers are fashioned by the demand of retailers, where they usually focused on fast-moving items with high turnover rate.

First-tier distributor – firms who are assigned as direct representatives of brand principals, who are formally bounded by legal agreement, and carries not more than five brands in their portfolio. These type of firms are positioned higher compared with the retailers and wholesalers, as they have direct and greater access to the brand's supply chain structure. Although these firms carry a lesser number of brands within their portfolio, their size of inventories is usually three to four times greater than general industry players. In the lighting industry, a typical first-tier distributor on average carries more than five hundred SKUs per brand.

The second sets of questions were arranged in sequence with the first sets of questions, considering that differing views may arise in regard to the understanding of price war in connection with a firm's market position in the lighting industry. For example, a retailer may not consider price war to be an important market phenomenon, as long as they are able to continue their purchasing activities with the best available price in the market. With more than fifty brands in their inventories, margins could be derived from product switch, as long as the end user does not have a specific preference for a certain brand.

However, this condition may differ for firms with higher market positions, as competition is most likely based on competitive pricing rather than brand preference. A wholesaler who carries lesser brand selection usually focuses their activity efforts on the size of turnover, rather than portfolio superiority. Price war for the wholesale-type firms could be seen from the perspective of intra-brand competition, where they compete with rivals to serve the retailers with price as their primary variable. As these type of firms relies heavily on the turnover rate of fast-moving and homogenous products, they have a much more modest structure in regard to margin.

4. Results and Findings

It has been argued that in the core of business operations, practitioners (i.e. managers) should pay attention to the signals that may contribute to the likelihood of price war, as their organization's involvement and future profit opportunities are usually within the control of their operational activities (9). However, this notion of market control is vague in various perspectives and many practitioners, in general, are unaware that they have the ability to shape the market according to their own distinctive organizational traits.

Based on this argument, we discuss their input and responses to the four dimensions of price war antecedents below.

4.1. Market Conditions – Competitive Entry

A unique and particular trait of the Indonesian lighting industry revolves around the known fact that one particular brand serves as the industry's leading product. Within the retail segment, competitive entry by competitors are considered frail and usually responded with market skepticism. While several brands were successful in creating display visibility and capturing customer attention, these efforts were scattered in various geographical areas and competitive entry could only be achieved when sales activities are combined with substantial cash incentives. An interesting phenomenon remains nevertheless, where a majority of respondent mention that the intensity of competition within the context of intra-brand is greater than inter-brand rivalries, which in their opinion, is the source of price war.

Proposition 1 – *Competitive entry in the lighting industry causes price war only in an intra-brand context.*

4.2. Market Conditions – Excess Capacity

While there is no definite measurement to market capacity, the respondents were asked how much on average, they conduct transaction activities as a means of preserving inventories under the average demand condition. In relation to the context of price war, overcapacity was not considered to be an issue by respondents who fall under the retailers' category. This response, however, slightly differ when the same question was derived from respondents within the wholesalers and direct distributor category. Both of them have sufficient awareness of the manufacturer's overcapacity through the intensity of sales calls. Whenever certain transactional reluctance was met, a cut in price is most likely to follow. These activities have, in turn, provide signals of excess capacity condition at one end of the market, which results in price war at the other.

Proposition 2 – *Excess Capacity causes price war and is easily indicated through price cuts.*

4.3. Market Conditions – Growth

Most of the respondent have mentioned that sales activities have generated less revenue during recent years. They have acknowledged the need to generate profit through sales to new customers, which indicate that their current revenue base is slowly declining or even disappearing. In its core, industry growth could be derived from the context of product expansion or customer exploitation. Nevertheless, in the case of price war, market growth or decline could be caused by a slowing demand due to utility fulfilment life-cycle. Especially in the case of the lighting industry, a customer who bought a light bulb may not need to purchase another until a significant period has passed, meaning that the quality of the product could become the industry's decisive growth factor.

Proposition 3 – *Market decline leads to price war, as sellers strive to capture new customers from their rivals.*

4.4. Market Conditions – Distribution of Power and Market Fragmentation

While most respondent knows that there are several big players in the Indonesian lighting industry, they do not consider a highly concentrated market power to be the causes of price war. However certain responses do acknowledge the role of power in a highly fragmented market as one of the causes of price war because firms compete with similar pricing and cost structures in the same market.

Proposition 4 – *Distribution of power in a highly fragmented market is likely to cause price war.*

4.5. Firm Characteristics – Exit Barriers

Respondents in the retailer's group do not consider exit barriers to be a critical issue of price war, while on contrary, the wholesalers and direct distributors we found to be more concerned with their long-term return on investments. These conditions arguably understandable as those who operates within the lower level of the market pyramid are usually more agile to changes in market trend, while on the other hand, firms who focus their activities on a limited product selection are bounded to long-term commitment with brand owners and have less flexibility when it comes to switches in trend. The study response has indicated that price wars could occur when firms have high exit barriers, especially if they have limited alternatives when they are forced to leave the lighting industry.

Proposition 5 – *Limited alternatives to market exit leads to price war.*

4.6. Firm Characteristics – Price Leadership

Due to the size of market share, the respondents acknowledged the fact that the current leader in the lighting industry has the power to control the standard in price and its movement. However as the current competitive trend is more influenced by intra-brand rather than inter-brand competition, price war in terms of price leadership happens where the same products are sold by various sellers with different price structures in the same market. The resulting trend is known to be destructive as the market became entranced by a leading brand who are competing to gain share against their own supposedly internal allies. Based on these findings, the following proposition is proposed:

Proposition 6 – *Price war caused by price leadership in an intra-brand condition are destructive to the whole industry especially when the brand is regarded as the market leader.*

4.7. Firm Characteristics – Firm Reputation

Respondents in regard to this query acknowledge that some companies are much more intense in defending their existence through price strategies. Suppliers who are known to be reluctant to give extensive promotions through direct cash discounts usually considered by the market as their highest price-setter standard, while those who are known to reduce price at the end of the performance period (i.e. the closing week in a month or quarterly periods) have always been expected by retailers and wholesalers. Based on these findings, the following proposition is proposed:

Proposition 7 – *Price war is caused by firms who use pricing strategies as their only differentiator and are known in the market to reduce prices at the end of accounting closing period.*

4.8. Firm Characteristics – Financial Condition

As most of the respondents are reluctant to define financial conditions as the causes of price war in the market, there is little-known information whether this variable has a significant effect on the market's current condition. Nevertheless, it is only natural that firms are seldom willing to share information in regard to the subject especially if their current pricing structure is deteriorating the value of their investments. In the case of the Indonesian lighting industry, price wars that are caused by a worsening financial condition can only be identified following an exit made by firms who were previously known to cut prices. Based on these findings, the following proposition is proposed:

Proposition 8 – *Price war is caused by actions of firms who have deteriorating financial condition and are approaching bankruptcy.*

4.9. Product Characteristics – Importance

All respondents acknowledged that the continuity of their business majorly depends on the sales of fast-moving products. Almost all of them mentioned market demand as the core driver of product inventory selection because it gave them incentives to conduct less marketing effort to promote certain unfamiliar products to their

customers. These findings indicate that the Indonesian lighting industry is driven only by a handful of fast-moving products which in turn, has fueled the intensity of price war due to the product's importance to almost every firm in the industry. Based on these findings, the following proposition is proposed:

Proposition 9 – *Price war is induced when products have high strategic importance to a company.*

4.10. Product Characteristics – Portfolio Differentiation

As acknowledged by the respondents, the Indonesian lighting industry is driven by homogeneous products with limited differentiation. Nevertheless, what constitutes the meaning of differentiation differs between respondents who have certain experience in one particular market channel compared to others in a different market channel. For example, respondents who conduct their business in the consumer retail channel refer to one set of products as their core source of revenue, (the CFL-I or compact fluorescent bulbs), while those who conduct their business in the professional trade channel refer to another set of products as their core business offering (the LED Tubes). These two different answers indicate that although differentiation exists across different market channels, they were not considered as such due to the nature of product utility or customer preference within these channels. When the notion of differentiation expanded further, it is clear that price war is caused by portfolio limitation but only in a specific market to specific customers, and could be avoided if a firm has the power to switch their product offering across different channels. Based on these findings, the following propositions are proposed:

Proposition 10A – *Price war occurs in a market with limited differentiation.*

Proposition 10B – *Price war that was caused by a specific set of products can be eased when introduced or sold in a different market channel.*

4.11. Product Characteristics – Head-To-Head Products

During the past ten years, many respondents recalled how various brand began to enter the lighting market following the success of the market leader in the CFL-I sector. However, according to some respondents, the move made by these various brands had little effect in the effort to gain share from the industry's market leader. As a result, the market established their own two streams of product segmentation: the Leader and the Others. This segmentation had little effect when compared from an inter-brand perspective, thus creating little friction in terms of price war between brands, even though many head-to-head products are available in the market. Nevertheless, the issue of price war became apparent when the term is discussed in an intra-brand context, as sellers of the leading brand strive not to enlarge their share, but to increase revenue through their product's popularity. This action resulted in worsening price condition which nowadays is referred by the respondent as the initial root of the Indonesian lighting industry's current price war. One of the aspects of head-to-head product that may not be apparent when discussed in the context of market share is the fact that certain brands have their own competitive establishment in the market which made them immune to external attack. This idea mimics the nature of perfect competition as discussed by Besanko et al.(4), where many sellers of the same product are available in the market but only matters to that particular market, which means when competition happens outside the established market of a certain product (or brand), friction in price does not affect the overall performance of that particular brand. Based on these findings, the following proposition is proposed:

Proposition 11 – *Head-to-Head products between market leader and follower had little effect in price war due to their different historical establishment in the market.*

4.12. Consumer Characteristics – Brand (Supplier) Loyalty

The majority of respondents acknowledge that certain consumers are more loyal to a particular lighting brand, while others who are not, usually based their actions on boundaries in budget size or product unavailability. Nevertheless, as the study is directed at product resellers instead of end users, the term brand loyalty should be substituted by the term supplier loyalty, due to the fact that consumers in the Indonesian lighting market have been exposed only to limited lighting brands. This condition has created a condition where resellers no longer need to drive the market in their direction, but rather, how they can fulfil market demand through price leadership, which ultimately increase the likelihood of worsening price competition of a particular brand among numerous resellers and suppliers. Based on these findings, the following proposition is proposed:

Proposition 12 – *Lower supplier loyalty increases the likelihood of price war in an intra-brand context.*

4.13. Consumer Characteristics – Price Sensitivity

In the Indonesian lighting industry, price sensitivity has become a crucial differentiator, especially in the intra-brand context, due to limited segmentation between market and dependency to one particular product range. Retailers consider price sensitivity as an important aspect but only at the supply side of a business, while Wholesalers consider it as a crucial aspect of operations from both supply and demand side of a business. This differences in sensitivity could probably be explained in terms of customer variance, as each respondent group serves a different type of buyers (the retailers sell to end users, while the wholesalers sell to resellers). Seen from an intra-brand competition, price sensitivity becomes a crucial antecedent of price war in a condition where market size and product selection are limited. Based on these findings, the following proposition is proposed:

Proposition 13 – *Price sensitivity increases the likelihood of price war, especially where market size and product selection are limited.*

5. Conclusion

Study results indicate that price war in the Indonesian lighting industry falls under the imperfect monitoring model, while in certain cases the learning model could also be used to observe the trend in a much detailed effort. Since activities in the industry are centered on successful transactional accomplishment in the context of sales, measuring real demand or purchase intention of buyers outside these perspectives are proven to be difficult. This condition has created a paradigm among the industry players, in which any information they receive in regard to price, will become the accepted guideline in the market, no matter how obscure or unclear. These results lead to controversy in terms of price, where business practitioners retaliate and respond failure to generate revenue through a cut in price, triggering the likelihood of price war.

While some respondent did not consider price war as an unusual occurrence, most of them admit that the condition has become worst in recent years. Surprisingly, it was found that especially in the industry, considerable competition takes place in the intra-brand level (competition within the same brand), and not the inter-brand level (competition between different brands). Some explanation to this phenomenon could be derived from the industry's brand share, where especially in the trade retail market, competition was led by the leader with more than 80% market share (26-28), and almost all industry players consider it to be their dominant source of revenue when it comes to lighting products. The case of price war in the Indonesian lighting industry remains interesting to discuss nevertheless because mixed perceptions have been received from the study where not all players view price war as a real-time market phenomenon. Respondents who are posi-

tioned higher in market structure (i. e. wholesalers and first-tier distributors) view price war as a hazardous condition that could lead to market meltdown, while those who are positioned lower in the market (i. e. retailers) view the condition as a common transactional occurrence. Further studies in regard to this irregularity in opinions should be conducted because it has the potential to affect the industry's future development, where market intensity towards price strategies could create a lower standard (or selection) in product differentiation strategies.

Meanwhile, as the industry's technological structure has not been changed dramatically before the arrival of LED lighting systems, established businesses may find it difficult to expand their activities to other market segments due to knowledge barrier. Results of the study have indicated that perception towards price war differ from one segment to another, where economic boom in a particular market may not or yet to happen in another market. Seen from the cyclical monitoring model, firms in the Indonesian lighting industry have opportunities to observe information of their rivals when they operate within a pre-defined activity framework, which means that price war in this particular sense are likely to happen when the prospect of generating positive margin is high. However as the concept of market growth or economic boom varies in term of segment and product maturity, many players in the industry seemed to be trapped in their own competency and unable to expand their product portfolio selection or reach into new markets.

This last occurrence has indicated that despite all odds, the Indonesian lighting industry has the ability to generate their own solutions to ease price war through the learning models by differentiating product selection. Unlike common external pressure that could be used to drive strategic changes in order to ensure business performance (29), price war in its own right can be used by practitioners to reanalyze their competitive positioning in a smaller context, through the selective management of product portfolio. Although it is understood that a shift in customer preference may induce negative growth in a particular product group and increase the likelihood of price war, embedding product knowledge in the mind of customers can only be achieved through extensive investment in time and effort.

Nevertheless, we should understand that not all firms are prepared to commit their effort in order to fulfil an ambiguous demand in product and differentiation, due to the fact that the nature of our commercial activity is dictated by rapid exploitation of sales prospects. Based on this phenomenon, however, it is important to know that opportunities to generate margin remain available in-between the gaps that are created when the initial shift in customer's product preference occur.

References

- [1] Griffith DE, Rust RT. The Price of Competitiveness in Competitive Pricing. *Journal of the Academy of Marketing Science*. 1997;25(2):109-16.
- [2] Ramaswamy V, Gatignon H, Reibstein DJ. Competitive Marketing Behavior in Industrial Markets. *Journal of Marketing*. 1994;58(2):45-55.
- [3] Cassady R. *Price Warfare in Business Competition: A Study of Abnormal Competitive Behavior*: University of Michigan; 1963.
- [4] Besanko D, Dranove D, Shanley M, Schaefer S. *Economics of Strategy*: John Wiley & Sons; 2013.
- [5] Grim C, Lee H, Smith K. *Strategy as Action*: Oxford University Press; 2006. 1-278 p.
- [6] Rogers DL. *The Digital Transformation Playbook: Rethink Your Business for the Digital Age*. New York: Columbia Business School Publishing; 2016.
- [7] Slade ME. Strategic pricing models and interpretation of price-war data. *European Economic Review*. 1990;34(2-3):524-37.
- [8] Friedman JW. *Oligopoly Theory*. Cambridge: Cambridge University Press; 1983.
- [9] Heil OP, Helsen K. Toward an understanding of price wars: Their nature and how they erupt. *International Journal of Research in Marketing*. 2001;18(1-2):83-98.
- [10] Elzinga KG, Mills DE. Price Wars Triggered by Entry. *International Journal of Industrial Organization*. 1999;17(2):179-98.
- [11] Klemperer P. Price Wars Caused by Switching Costs. *The Review of Economic Studies*. 1989;56(3):405-20.
- [12] Slade ME. Price Wars in Price-Setting Supergames. *Economica*. 1989;56(223):295-310.
- [13] Urbany JE, Dickson PR. Competitive price-cutting momentum and pricing reactions. *Marketing Letters*. 1991;2(4):393-402.
- [14] Sotgiu F. Not All Promotions are Made Equal: From the Effects of a Price War to Cross-chain Cannibalization: Erasmus University Rotterdam; 2010.
- [15] van Heerde HJ, Gijsbrechts E, Pauwels K. Winners and Losers in a Major Price War. *Journal of Marketing Research*. 2008;45(5):499-518.
- [16] Busse M. Firm Financial Condition and Airline Price Wars. *The RAND Journal of Economics*. 2000;33(2):298-318.
- [17] Haryadi S, Hermawan A, editors. *Recommendations for Handling Price War Between Telecom Operators in Indonesia 2014*; Denpasar: IEEE Conference Publications.
- [18] Shao J, Qinglong G, Zhang J, Liang L. Service quality decisions for express delivery companies with learning effect. *International Journal of Applied Management Science*. 2014;6(3):191-211.
- [19] Green EJ, Porter RH. Noncooperative Collusion under Imperfect Price Information. *Econometrica*. 1984;52(1):87-100.
- [20] Rotemberg J, Saloner G. A Supergame-Theoretic Model of Business Cycles and Price Wars During Booms. *American Economic Review*. 1986;76(June 1986):380-407.
- [21] Schunk H. *The Evolution of Competitive Interaction*. 1999.
- [22] Arnett DB, Hunt SD. Competitive irrationality: The influence of moral philosophy. *Business Ethics Quarterly*. 2002;12(3):279-303.
- [23] Bertini M. Price wars and the managers who start them. *Business Strategy Review*. 2014;25(4):52-5.
- [24] Stigler GJ. *The Theory of Price*. New York: Macmillan Publishing Company; 1987.
- [25] Barney J. Firm resources and sustained competitive advantage. *Journal of management*. 1991;17(1):99-120.
- [26] Frontier Consulting G. *Top Brand Index 2014 Phase 2*. 2014.
- [27] Frontier Consulting G. *Top Brand Index 2015 Phase 2*. 2015.
- [28] Frontier Consulting G. *Top Brand Index 2016 Phase 2*. 2016.
- [29] Arief M, Basuki YT. Impact of Information Communication Technology in implementation Integrated Marketing Communication at Fast Food Outlet. *Advanced Science Letters*. 2015;21(4):690-4.