IOSR Journal of Economics and Finance (IOSR-JEF)
e-ISSN: 2321-5933, p-ISSN: 2321-5925.Volume 6, Issue 3. Ver. III (May.-Jun. 2015), PP 76-81
www.iosrjournals.org

Price Panicking and Competition: The financial implications for theNigerian flour industry

C. Chris Ofonyelu
Department of Economics AdekunleAjasin University AkungbaAkoko, Ondo State, Nigeria

Abstract: *The last five years in Nigerian flour industryhave witnessed massive usage of price panicking as a marketing strategyto achieve short run boost in sales target. The continued usage of the strategy had overtime weakened the loyalty bond between the flour firms and their customers.Using evidence from the sales volume of the two leading flour mills, Flour Mills of Nigeria (FMN) and Honeywell Flour Mills (HFM), and evaluating the outcomes from7 occurrences of price panics in the industry between July, 2012 andMarch, 2015, the study observeda near-equal average growth rate in the sales of the two firms with and without the adoption of price panicking. Were price panicking allowed to continue with the rapidity as currently being practiced, the uncertainty and distortions that will be created therefrom would retard, rather than boost sales in the long run. The study suggests a rethinking by theNigeria Flour Mills (NFM) and Honeywell Flour Mills (HFM) who are the leading promotersof the dangerous strategy, and argued that both the firms and the industry potentially stand to lose were panicking to be sustained long into the future.*

Keywords:*Price panicking, competition, grim trigger, Nigerian flour industry*.

I. Introduction

Price panicking occurs when firms induce their customers to place immediate order for goods by creating fearof imminent price hike. The occurrenceis a new dimension in the intensifying competitions among theleading flour mills in Nigeria.The occurrence is particularly worrisome for four reasons. First,the strategy is being used by the leading firms to harness sales and increaseasymmetric capture of the market by the leading firms at the detriment of the smaller firms. The leading firms by panicking strategically undercut the prevailing market prices and capture additional sales.In effect, the practice has seen to the systemic closure of over six firms in the industry in the last five years (Ofonyelu, 2014a). Second, firms by colluding to panic undermine the impact of the price fixing power bestowed on the Flour Millers Association of Nigeria (FMAN). All of the flour mills belong to FMAN, and the major role of the association is in the fixing of the invoice price of50-kg bagged flour in the industry. By creating panics, customers' demand becomes not only depended on current price but also on theexpectations of future change in price (eitherto rise or fall).When it is contemplated that price will increase[1], customers make more orders but when it is envisaged that price will fall, panicking is ineffective. It is for this reason that most panicking havebeen about price hike. Thirdly, the creation of panic enhances the occurrence of asymmetry in the pricing of flour in Nigeria. When a firm indulges in panicking, it indirectly distorts the information possessionbetween the firms and their customers in a mutually inclusive contract. With the panic, the seller thereby becomes the informed against the informationally captured buyers. The essence of the information distortion is essentially to sway the buyer to over-demand in the current time,flood the market and maximize profit. Once seller over stock, they are tempted to sell their products at old priceseven if a new price regimeemerges after the panic. The theoretic argument has often suggested that such asymmetric relationship under such context would facilitate firm collusion (Bernheim and Whinston (1990) and Darguad and Jacques (2012)). Thus rather than cost (which is endogenous to all of the firms) being a disincentive to collusion as more efficient firm has both more to gain from a deviation and less to fear from retaliation than less efficient firms (Miklos-Thal, 2008), the gain from the panicking provides additional incentive to leverage from the cost differentials.

Lastly, the occurrence of the phenomena gives weight to the dichotomy in closing the accounting years of the flour firms in Nigeria. While thetwo leading firms in the industry, Flour Mills of Nigeria (FMN) Plc and Honeywell Flour Mills (HFM) Plc close their accounting year at the end of March every year, Life flour Mills (LFM) plc, Olams Flour Mill (OFM) Ltd, Dangote Flour Mills (DFM) plc, and the rest have their accounting years closing by December. This thereby gives incentive to the firms to sustain panicking (especially towards the end of their financial years) to boost the sales and profit record, as well as the share price value in the stock exchange market.

[1]This is common when dollar price appreciates, the benchmark currency by which wheat is imported into Nigeria. Speculations are always placed on currencies of US, Russia and Brazil as they supplied the greater part of the wheat used in flour production in Nigeria

What is evident in the occurrence of the panics is that asymmetry is introduced in the price of flours across the channels of distributions (wholesale and retail) whenever it happens, and only leading firms that have the capacity to flood the market whenever it occurs (or meet such demand) rip-off in the gain. Within a competitive setting, the panicking creates more sales for the big firms than for the small ones.The leading argument in this study is that were thepanicking allowed to go on, given the uncertainties and the distortions created there from, the flour industry may gradually be losing their customers' loyalty and the efficiency of the marketing chain. Should this continue for a long time, the huge financial commitmentthat will be required to restore the customers' reliability via sales promotions would be overwhelming.The motivation to sustain profit may force the big firms to collude against weak antitrust policy of the country. The rest of this study is organized as follows. Section II discusses the motivations for price panic and changing marketing strategies among the firms. In section III, the gains and losses from panicking were analyzed. Section IV concludes the study.

II. Brief Background to price panicking in Nigerian flour mills

The specific period when price panickingwas first played out as a marketing strategy in the Nigerian economic environment cannot be specifically traced. However, there are a number of evidencesto suggest that the act has been more emphasized in the recent time than before[2]. The occurrence of panicking have in the last one decade occurred more than twenty five times in the petroleum industry alone. The occurrences are not without their own gains. In the downstream oil sector for instance, one-day price panic can clear millions of liters of petroleum products from the depots, while skimming huge profits to the fortunate marketers. Even though thedemand for flour differs from that of petroleum products in term of elasticity, panicking wherever it occurs maximizesshort run sales (and/or revenue). By working on the psychology of the buyers, an artificial urge is created in the mind of the customers to accumulate excess stock as a hedge against perceived future price increase whenever panic occurs. For firms whose products dominate the market, a false announcement of futuristic price increase could cause customers to make demand for as much as two months' request within a week. A very special case is the two events that played out in March 2014 and December 2014/January 2015. Bearing in mind the worsening depreciation of naira towards the end of the year 2014 and the fact that the flour mills depended heavily on imported wheat, the flour mills prepared for a price increase atthe commencement of the year 2015. As a result, the deadline was ruled on mid-night, December 31, 2014. But given the New Yearand the Muslim holiday on the first two working days of the year 2015, HFM allowed their customers to still pay in the old price until mid-night January 5, 2015. For both of the two leading flour mills, the greater part of January was used in loading the requests made over the panic time.For the HFM, the company ensured that customers were flooded until all their requests were exhausted.For life flour mill (LFM) and Mama Gold, requests were still accepted in the old prices up to the end of the second week of January after FMN and HFM had dead lined.The ₦600 price increase starting from January 2015rarely reflected in the market because of the heavy supplies of the old requests through the month. In the main, a number of the smaller flour mills saw the new price increase as an opportunity to carpet some customers off from the bigger firms. In effect,Dangote Flour Mills Plc maintained its ex-factory price (to be delivered by its trucks) as ₦6280 despite the increase in prices by other flour firms. Before 2014, price panics implied a change in the invoice price of 50-kg bags of flour. However,the latest occurrences of panics are now associated with changes in the rebate structure, bonus and discount allowance. The growing commercialization of panicking in the industry creates some concerns as more firms may likely go under as their profits are drifted away arising by the panicking. The expanded scope of variables affected by panicking explained the increasing pervasiveness of panic in Nigeria.

Following the deep slump in the sales from January 2015, the flour mills adjusted theirrebate structure[3]. While HFM retained the rebate of 20 bags for every 600bags purchased during the price increase, it followed FMN by introducing N300 per bag purchased from February 10 and back-dated this to the beginning of February, 2015. This incentive lasted through the February month.A look at table 1 reveals the trends of panicking in the two leading flour mills in Nigeria and the short run revenues accruing in each of the panic periods. For each of the years 2013 and 2014, panicking occurred for three months of the years. For the years, the months of December/January and March were always reoccurring since the last three years. The months were spectacular because of its strategic importance. Being the end of year/ commencement of every year, the

[2] The petroleum industry has been known to be very novel with panicking. However, following the asymmetric gains made by many firms after the 'occupy Lagos' protest of January 2012 in response to the hick in fuel price increase in the year, many more companies have found it profitable to panic their customers. Lagos, being the commercial nerve centre of the country has also been instrumental to the growing popularity of the panicking strategy. Whenever there is distortion or disturbance in Lagos, production and supply chains are disturbed, and as a result setting the first order condition ready for panicking to occur.

[3] Since December 2014, Golden Penny flour began giving 20 bags of flour for every 30 tonnes of flour (600 of 50-kg bags) purchased. This incentive was dropped at the beginning of February and replaced by an incentive of N300 per every bag purchased which was stopped in the middle of February.

months December /January were always targeted. The choice of March for the panicking was because of its strategic importance as the end of the financial year for the flour mills.In effect, FMN placed the deadline for payment on the old price on March 20, 2015 price, while HFM allowed customers to still make payment through the whole month of March. Life Flour Mills (LFM) maintained their price at N6540 as at the beginning of the year 2015. But for Olams Flour Mills, producer of Mama Gold flour, they adjusted their price from N6450 to N6950 (delivery cost inclusive) in line with that of the two market leaders.

Table 1: The size of Panic demand among the flour mills

Panic Periods	Honeywell Flour Mills Plc (Average quantity sold)		Flour Mills of Nigeria Plc(Average quantity sold)		Extra Demand attributable to panic (panic gain for FMN)	Extra Demand attributable to panic (panic gain for HFM)	Value of the panic gain to FMN (₦'000000)	Value of the panic gain to HFM (₦'000000)
	Non-panic time	During Panic	Non-panic time	During Panic				
Jul-12	242282	255776	351309	370875	19566	13494	1350.054	931.086
March, 2013	254514	319720	369045	463594	94549	65206	6523.881	4499.214
Oct/Nov., 2013	360043	426294	522062	618526	96067	66251	6628.623	4571.319
Dec.,2013/Jan., 2014	351612	488298	509837	709234	198195	136686	13675.455	9431.334
March, 2014,	410493	582747	595215	845712	249768	172254	17233.992	11885.53
Dec.,2014/ Jan.,2015	417917	639200	605979	926840	330860	221283	22829.34	15268.53
March, 2015	425339	385559	645878	568314	-57681	-39780	-3979.989	-2744.82
Total Sales	2462200	3097594	3599325	4503095	931324	635394	64261.36	43842.19

Source: Computed from the companies' sales invoices

Note: (i) Computations made only for the two leading flour mills in Nigeria, FMN and HFM

(ii) Value of the panic made at current wholesale price of ₦6900 per bag

In the latest orchestration of panicking, over N22829.34 and N15268.53 millions was made as the value of additional sales accruing from December/January 2015 for FMN and HFM. In view of the gain there from, the firms attempted a repeat of the action at the close of the financial year in March. The attempt however yielded a reverse consequence. Rather than an upsurge in sales as in the immediate previous occurrence, the sales declinedby 57681 and 39780 bags respectively for the two firms. The downturn is equivalent to loss of ₦3.9b and ₦2.7b in the sales that FMN and HFM would have been made had the panicking not been introduced in that month. For the many customers who had tied up their working capital by overstocking in the December/January panic,there was a plunge in sales starting from February, 2015 following fears about the impending presidential election. For these occurrences, many distributors were forced to clear their stock by selling at discounted prices given the fact that the shelf life of flours once bagged is 90 days.Panicking around the close of accounting year of the companies is a way of creating bubble sales to shore up the financial performance. Being the end of the financial year for the firms, the firms employed panicking as a sale-boosting strategy but was strong dissatisfaction from the distributors and the attendant financial pressure the exercise exert on their financial base is beginning to dominant the expected gains from the exercise. The major lesson for the dismal outcome of the March 2015 end-of- the year panicking suggest the future reality of the consequence of the continued deployment of panicking as a marketing strategy in an industry that is skewed heavily towards duopolistic competition.

Flour panics generate three main effects whenever they occur. The effects are on sales (for the producers), Profit (for the distributors/sellers) and consumers' surplus (consumers). Given the form of high concentration in the flour industry (CR_2 = 75%), price panic posses concern to economists, business strategists and government agencies as the dominancy of the two firms (FMN and HFM) lead to price collusion or be exploited to making the industry become a concentrated oligopoly.While a number of the weaker firms had gone underground (see Ofonyelu, 2014a), the manifestation of the paradox of industrial growth with increasing firm concentration should be worrisome to industrial analysts and policy makers in Nigeria.Second, given the fact that managers of firms that are highly concentrated stand the chance to be induced to gearing for high profits (Ramsey and Blair, 1993; Halioui and Jerbi, 2012), there are chances that the actions of such agents could be a source of asymmetric shocks into the domestic economy.The nature of industrial concentration remains a matter of public policy concern for government in all economies (Shughart, 2004).Thirdly, panicked products, by being flooded into the market are likely to be sold at competitive prices and thereby raising the consumer surplus. Increased consumer surplus is likely to accentuate sales.

III. The financial implication of price panicking in Nigeria

The reality of the continuous use of panicking strategy in Nigerian flour industry can be very daunting when we consider the long-run cost against the short-run gains. A firm by panicking the customers maximizes sales and floods the market. The main consequence of panicking is the impact of the action in eroding the trust between flour firms and their consumers. Given the fact that it is very costly to build a loyalty bond from

customers within a competitive setting as in the flour industry, destruction of the bond portends future expenditure for the firms. Secondly, were the panicsallowed to continue, the companies may begin to have problem predicting their customer's demand. Since the massive panicking in the industry lately, consumers of flour unlike before find it difficult to predict the price at which they get supply. On the part of the distributors, they are now more apprehensive than before about stocking their demand because of the frequent changes in prices. In essence, rather than making actual demand, requests and stocking become transitory and speculative. When the price of dollar decreases or the international price of wheat falls, speculative demand falls. And when the otherwise is expected, demands rise in anticipation that firms will raise their prices. This kind of speculative response from the demand side imposes a kind of competitiveness to the flour industry.

With the growing competition in the Nigerian flour industry, firms face increasing cost of advertising their products. For new firms, the cost may well be more than double as would have been expended by existing firms in the launching of new products. In marketing of flour products, news firms are faced with huge financial obligations because of the existence of established brand names. For a new product to enter the market for instance, the major challenge is in creating scarcityof the existing products so that the new products can penetrate into the market.

Table 2: Projected Growth Rates for FMN and HFM

	Honeywell Flour Mills Plc (Average quantity sold)		Flour Mills of Nigeria Plc(Average quantity sold)	
Periods	Non-panic time	During Panic	Non-panic time	During Panic
January	6.83	6.92	7.11	6.98
February	6.40	6.47	6.64	6.53
March	6.01	6.08	6.23	6.13
April	5.67	5.73	5.86	5.77
May	5.37	5.42	5.54	5.46
June	5.09	5.14	5.25	5.18
July	4.85	4.89	4.98	4.92
August	4.62	4.66	4.75	4.69
September	4.42	4.45	4.53	4.48
October	4.23	4.26	4.34	4.29
November	4.06	4.09	4.16	4.11
December	3.90	3.93	3.99	3.95
Average	5.12	5.17	5.28	5.21

Source: Computed from the companies' sales invoices

For a very quality product all that is required at the penetration point is for the consumers to have a taste of it and once the product is good, it automatically pool its own share of the market. Were the product to be superior to the existing one, the market shares of the existing flour mills are altered. This nature of competition subsists primarily because customer's preferences are relatively homogeneous (or heterogeneity is ignored). Table 2 show the projected average rate of growth in the sales volume of the two dominant flourmills in Nigeria. On the average, the supply for HFM increased by 5.17% compared to 5.12% that would have been recorded had panicking not been introduced. For the FMN, panicking was projected to increase supply by 5.28% compared to 5.21%had panicking not been introduced. The general inference from the table revealed that panicking only generates a marginal effect on the sales volume of the flourmills. Thus, when we consider the uncertainty and loss of loyalty bond created by the adoption of panicking, the exercise generates more of cost than benefit. As customers (and distributors) continue to lose confidence in the firms, it is imperative that new actions are taken to regain the confidence by developing building certainty and stability in the price setting template of the flourmills. Prior to the introduction of panicking in the flour industry, the flour firms enjoy strong brand loyalty and consumers will rarely want to taste another product apart from that of their primary brand. But with the introduction of panicking, both distributors and consumers were made to taste-trip across the mills. The main consequence of this is that the flourmills become more interdependent. Strong interdependence among the firms raises competitions (Ma, 2005).In the case of the Nigerian flour industry, the rivalry has been more for profits and market capture in the last few years. As a result, when a leading firm introduces a marketing strategy, such as price cut, increased rebate or sale promotion, the other firms immediately respond by initiating similar action – leading to a chain of unending price war. In the last one decade, individual firms acquired additional capacities, improved technology and undercut prices as key competitive strategies to survive the oligopolistic market.

The competition in the Nigerian flour industry is spectacular for a number of reasons. First, the top two firms, FMN and HFM control at least 75% of the total market share (Ofonyelu, 2014b). Second, the current depreciation of Naira against the dollar has introduced a sort of volatility in the price setting module of the flour firms. Were the firms to continually respond to the exchange rate dynamics, the fluctuations that would be

experienced in the industry will make a caricature of sale and profit projections for all of the firms. For firms to be competitive, each therefore will have to internalize the additional cost of the devaluation on its production function while keeping the price unchanged. As typical in any firm, profits are made either from the sale of additional units or increase in the margin per product. In the case of the Nigerian flour industry, the most feasible profit maximization option is that sale maximization. Every firm seems to be determined in pushing more supply into the market than raising the gain per unit.

The main attraction incentive in the flour industry for the two dominant flour mills; Flour Mills of Nigeria (FMN) and Honeywell Flour Mills (HFM) Flour is that they close their financial year in March every year. As a result, the last months preceding the close of the financial years are always marked with massive intrigues and outplay of price competitions and price volatility. Price panicking has been a major strategy usually employed. In the months, especially starting with December and January, it is not uncommon to see prices panicked as much 2 or 3 times within a month. For those months where prices do not change, firms manipulate the rebate and incentives structures, principally to undercut price and annex more sale in the period. For the sales managers (SM) of the firms, it is at this period that the companies set the hardest targets for them to meet. It is at this time that the sales representatives and agents of the firms become closest to their customers; calling them often to tell them about the latest offers on their products and reach out for new markets.At the sales department of the flour mills, close watch are kept on customers' accounts for their (credit) balances. Depending on the category of customers, the sale representatives will on detecting build-up of funds in any customers' account unilaterally raise order in order to meet the sale targets.For most situations, the orders are raised without consulting with the customer (buyer) whether he/she is prepared to receive the stock. Again, it is at this period that massive diversions of trucks and cross carpeting of sales area are massively experienced. A sales representative covering Ogun state may out of desperation to meet targets be caught in diverting goods to Kogistate. The dominant concerns on the side of the firms were always that supply need be made so that there could be adequate space for continued production in the mills and sale (profit) maximization. By ensuring regular supply, spaces are created for the flour mills to continue production and the market price for their products suppressed. Given that flour, once bagged has a shelf life of 90 days, the sellers by the excess supply are indirectly pressured to pushing out their stocks, and this can only be possible by lowering prices. For firms whose products dominate the market, a forged announcement of futuristic price increase is a way of clearing excess production and flooding the market.

IV. A Model of Optimal Trading Contract

The economic intuition of this model is derived from Aghion and Bolton (1987). Based on the theory, a buyer (hereafter the customer) and the seller (the firm) can enter into a contract to create monopoly situation by the strategy they play in a market within an oligopolistic setting. This is because they can jointly determine the price barrier for new entrants who may want to sell to customers in the same market. By the contract, the buyer is not permitted to trade with a new entrant if it would not pay the default price of the contract. The default price a new entrant has to pay is additional amount a new firm has to pay to be able to attract existing customers from their suppliers. In the case of the Nigerian flour mills, new firms the market faces such costs which will eventually form part of the sales price.For a new firm who cannot afford such contract, social costs are createdas the entry of new firms that may be more efficient that the incumbent seller in the industry is excluded. This explanation of the Nigerian flour industry does not suggest a written and enforceable contract, but an implicit strong relationship that buyers are entangled into with respect to exercising his discretion to trading with any entrant (other firms outside the established firm provided there is a market for the firm's product). In the succeeding analysis, we develop a two-period model within the settings of a non regulatory duopoly. We consider two firms, A and Bproducing aggregate output Y (= y_a+ y_b) bags of flour, a homogenous product to a competitive small market. Firm B is informationally captured and as a result seek to mirror the rival's action as a marking strategy. Firm A is a low cost firm but this is unknown to the otherfirm and it seeks to exploit this advantage by undercutting price and/or panicking to harvest the sale of the other firm.For the sake of simplicity, we assume aCournotanology, such that firm A panic will only occur if $y_a+\sigma>y_b$ leads to $\Pi a>\Pi b$, and that this is only possible in the first stage of the game.σ is the maximum additional quantity that can be appropriated by panicking.For firm B, though cannot observe σ, the distribution of the function leading to σ is known. On the demand side, customers have a reservation quantity G, which they would not want to exceedwhile making purchases; otherwise they may incur some losses arising from expiry of the product[4], storage cost, etc. Each of the firms has potentially inbuilt capacity to produce above the Cournot output levels y_a and y_b.Because of the potential idle capacity harbored by each firms, firm A attempts to produce $y_a+\sigma$, but this plan is unknown to the other firm as far as it happen only through panicking.We attempt here to model in the simplest way a situation where information advantage is used to subvert Cournot equilibrium by panicking. In the foregoing, it is

[4] Flour, once bagged has a shelf life of 90 days. As a result, customers are weary of the expiry date on purchase.

implicitly assumed that a panicking firm enjoys lower cost advantagesuch that the motive of the panicking is not directly to raise prices but market capture.Drawn into an implicit bilateral contract, the customers suffer from asymmetric information (about whether a price hike was to be real or not) but in order to maximize profit is forced to exceed the storage level G, which also has its cost. We assume the cost of exceeding G isc(g), while the profit from overstocking in the event of price rise after panicking is h(a). We can therefore write the customers profit function as:

$$\Pi = \lambda[(y_a - c(a)] - c(g) + h(a) \quad (1)$$

For a typical customer, we expect that h(a) > c(g). Otherwise, there would be not effect from panicking. The timing of the game is as follows: In the first period, A is able to clear quantity $y_a+\sigma$ offlour in the market by panicking the customers. In the second period, the customers having accessed their gain [h(a) -c(g)] in period 1 have reviewed their expectation. In reaction to the panic, firm 2 retained price and as a result stalled the proposed price increase. If not price increase in period 2, so that h(a) >0, then customers would not respond to panics anymore. For the customers, their expected payoffs is given by

$$\Pi = \lambda[(y_a - c(a)] - c(g) + h(a) > \lambda[(y_a - c(a)] - c(g) \quad (2)$$

Should there be no price increase, such that the customers can sell at new price, then equation (2) fails and there will not be any more incentive for panicking. Hence the customers gain nothing from the panic (- c(g)), which is an additional cost. Given the memory of the customers when such situation is repeated, the most likely outcome is the grim trigger effect, which will lead to worse outcomes in the plays. Since a single defect by the firms will triggers lack of cooperation forever, panicking would lead to worse outcomes for the industry. The grim trigger effect, more than the cost asymmetry of Miklos-Thal(2008) will hinder the possibility of collusion. The Nigerian flour industry, despite the increasing concentration in the recent years has shown more tendencies to forming a non collusive market. Despite the weak antitrust policy to deter collusion in the country, the firms have in the past three years been moved by the desire for market capture and customer retaliation to remaining oligopolistic rather than monopolist.Were panicking to lead to the closure of more firms (as occurring in the current decade), there is likelihood of the industry moving to near monopolistic competition in the near future.

V. Conclusion

The introduction of price panicking as a marketing strategy in the ensuing competition among the leading flour mills in Nigeria has become a worrisome phenomena.Primarily, a price panic when created is used to whip up demand, raise sales and maximize revenue. However, evidence from the study has shown that such increases were only obtainable in the short-run and with worsening implications for the long run.Flour firms employ price panicking as a marketing strategy in the build up to the end of their accounting year. Using evidence from the two leading flour mills, Flour Mills of Nigeria (FMN) and Honeywell Flour Mills (HFM), and evaluating the outcomes from 7 occurrences of price panics in the industry between July, 2012 and March, 2015, the study observed a near-equal average growth rate in the sales volumes for two firms with and without the adoption of price panicking. Because of the grim trigger effect, should customers be swayed into obtaining losses from the act, the firms would need to spend more to win such loyalty again, and this have implication on the market quantity that can be sold and the firm concentration.

References

[1]. Aghion, P. and Bolton, P. 1987. Contracts as Barriers to Entry, American Economic Review, 77: 388-401.
[2]. Bernheim B.D, Whinston M. D (1990) Multimarket contact and collusive behavior. Rand Journal of Economics, 21: 1-26
[3]. Cournot, A. 1838.Researches into the Mathematical Principles of the Theory of Wealth.N. Bacon. Eds. Macmillan. Reprinted 1897.
[4]. Jarguad, E. and Jacques, A. 2012.Hidden Collusion by Decentralization: firms' organization and antitrust policy. Retrieved on 10.05.2015 from https://www.gate.cnrs.fr/IMG/pdf/Dargaud2013.pdf
[5]. Halioui, K. and &Jerbi, A. 2012.The Effects of Blockholders on EarningsManagement: The Case of TunusianListed Firms, International Journal of Multidisciplinary Research, 2(2):56.78
[6]. Ma, T. 2005. Strategic Investment and Excess Capacity: A study of the Taiwanese Flour Industry,Journal of Applied Economics 8(1):153-170.
[7]. Miklos-Thal, J. 2008. Optimal Collusion under Cost Asymmetry, The Selected Works of Jeanine Miklos-Thal. Accessed on 10.5.15 from http://works.bepress.com/jmiklosthal/1
[8]. Ofonyelu, C. C. 2014. Strategic capacity utilization and competition: An analysis of competitions in Nigerian flour industry, Issues in Business Management and Economics, 2(10):186-192.
[9]. Ofonyelu, C.C. 2014.Strategic Capacity Utilization with Zero Conjectural Variation in Output: Experience from the Nigerian flour industry. ANSU Journal of Arts and Social Sciences, 3(1):84-93.
[10]. Ramsey, I. and Blair, M. 1993. Ownership Concentration, Institutional Investment and Corporate Governance: An Empirical Investigation of 100 Australian Companies,Melbourne University Law Review, 19:153-194.
[11]. Shughart, W. F. II. 2004. Regulation and Antitrust, In Charles K. Rowley and Friedrich Schneider, eds., The Encyclopedia of Public Choice, Boston: Kluwer, 1: 263–283.