Structure of the Retail Market for Metal Products in Kakamega County, Kenya

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Abstract: This article investigates the structure of the retail market for metal products in Kakamega County, Kenya in bid to assess its competitiveness. The primary data used to analyze the market structure is based principally on a survey of 249 respondents interviewed in 2015 in the Towns of Kakamega and Mumias. Concentration ratios, Lorenz curves and Gini coefficients, derived from empirical data, are used as measures of market concentration, a proxy for market structure. The results show a low concentrated market structure supported by Gini Coefficient of 0.0446, which is less than the cut-off mark of 0.5, HHI of 299 which is less than the cut of mark of 1000 and an average concentration ratio of 24.55% which is less than the cut off-point of 70%. Thus the retail market for metal products in Kakamega County can be described as perfectly competitive. In addition, results indicate ease of entry and exit into the market with substantial product differentiation practices. The findings have distinct policy relevance in several respects. First, they point to the need for keen evaluation of the market structure in order to formulate appropriate measures to encourage competition. Second, policy measures to enhance mobility of factors of production and fair trading practices should be formulated. Third, incentives to encourage large scale firms to hire more people and invest more in new branches or market niches should be provided. Finally, there is need for continuous market restructuring in order to ensure that effective competition is maintained.

INTRODUCTION

The article analyzes the structure of the retail market for metal products in Kakamega County, Kenya in an effort to ascertain the nature and intensity of competition. The metal products sector has gained international prominence due to practical applicability in various sectors. Based on the International Standards of Industrial Classifications (ISIC) of all Economic Activities, the codes for manufacture of metal products range from 2410 (iron and steel) to code 2599 (other fabricated metal products not elsewhere classified) (UNIDO, 2011; 2015; GoK, 2010).

The multi-use nature of iron and steel to produce a wide variety of products for use across sectors has endeared many governments around the globe to prioritize manufacturing of metal products (UNIDO, 2015). This is because these products can be used in sectors such as defence, transport, heavy engineering, energy, construction- including structural, aeuronetical and shipping. Metal products are also closely linked to chemical and light industry, thus showing that investments in iron and steel industries has the potential to contribute to competitiveness and growth of the regional, national and local economies (Delloitte, 2015; WSD, 2013; UN, 2011).

In an effort to spur growth in the Manufacturing sector, the Government continues to promote the micro, small and medium scale enterprises as vehicles for employment creation and poverty reduction (GoK, 2015). These enterprises create job opportunities since they are labour and skills – intensive. In sum, they reduce income inequalities and train indigenous entrepreneurs for future manufacturing industry employment (Delloite, 2013; Hanh, 2005).

According to the Kakamega County Revenue Department, the agents of metal products deal in a wide range of products including; steel, structural metal products (window frames, doors, prefab buildings, etc.); cutlery, tools, kitchenware and general hardware; boilers, metal tanks and containers, steam generators; forging, metal coating, turning, welding; and metal casting; and more (GoK, 2014).

Reforms in the Kenyan SME sector have resulted in two opposite forces. While the policy and regulatory changes are expected to bring in greater competition in the market and, thereby, to enhance efficiency of the firms, the strategic responses of these firms are likely to limit market competition in pursuit of profits or returns. Thus there is need for a comprehensive study to understand the market dynamics of micro, small and medium scale enterprises and particularly

focusing on metal products industry and thus design policies to foster competition (KPSA, 2015).

Most studies on market structure have been undertaken in the large liberalized markets of America and the European Union. Few studies focus on localized but liberalized makets such as Kakamega County. Classical economic wisdom suggests that comprehending the fundamental forces that drive an industry is vital to its success and to the individual firms that compete in it (Chamberlain, 1933, cited in Kibwage, 2008; Bain, 1951, cited in Ma, 2008; Tregenna, 2009).

One of the factors influencing competition in the metal products sector arises from the fact that most inputs are imported and subject to international demand - supply pressures, Secondly, the sector is undergoing rapid technologically induced changes that are delivering dynamic products to fit the dynamic market needs. Thirdly, the market participants whose number and size distribution are changing rapidly are in transitional state of learning the art and skills to maximize technical and economic efficiency in the production and marketing of metal products (KPSA, 2015). Further, major manufacturers of metal products are located in Nairobi and Mombasa, thus indicating existence of mobility barriers, since it takes time, efforts and resources to move into new industries (GoK, 2010).

Again, the market for metal products is dynamic and faces stiff competition- based on pricing and quality differences - from substitutes of clay, stone, bricks, blocks, wood, plastic, bamboo, pulp, organic briquettes and fibre. Also, overreliance on local markets and unfavourable zoning regulations are cited as an impediment to the growth of the sector (GoK, 2014; KPSA, 2015; CGK, 2013).

Thus faced with international trade dynamics, facing stiff competition as well as serving localized markets presents an opportunity to explore how the market for metal products - which appear to perform well nationally - responds to the stated challenges and whether market potentials exist within the study area to attract investors in the fields of metal products manufacturing, transportation, warehousing and advertising that may lead to price stability and job creation (GoK, 2015; World Bank; 2014). This can only be done if the market Structure of the retail market for metal products in Kakamega County is ascertained.

Market Concentration and Performance

Several market structure models that had concentration as a central component were derived from classical economic theories relating to various forms of competition such as oligopolies and monopolies (Chamberlain, 1933, cited in

Kibwage et al, 2008). Research related to competitiveness and concentration was originally fueled by legal concerns over antitrust matters in certain industries. Several early authors looked at these and other factors not just from an economic perspective but also in the context of deterring market abuses of monopolies (Tung, 2008). In essence, the degree of concentration (high, moderate, or low) of an industry tells us whether its market structure can be characterized by monopoly, oligopoly, monopolistic competition, or pure competition (Bain, 1951; Weiss, 1974, cited in Sahoo & Mishra, 2012).

The concentration ratio is the percentage of market share owned by firms in an industry. The higher the concentration level, the less competitive the market will be (Gichangi, 2010). Subsequently, the work of Bain and others was an impetus for a national antitrust policy to prevent mergers that would lead to significantly concentrated industries (Njegomir, 2010; Byaruhanga, 2002).

Various authors have categorized competition in a market system based on the level of concentration. Clay (2003), takes a Gini coefficient of 0.40 and below for an industry as indicative of effective competition, or otherwise as non-competitive or oligopolistic. United states Department of Justice (1996) define "high concentration as a situation where 4 largest firms control 50% or more of the market share. According to Bain (1951) and Chamberlin (1933) a critical level of concentration occurs when the 8 largest firms control 70% or more of the market. While Demsetz (1973) puts the critical level where the first 4 firms control 30% of the trade, Faulkner and Campbell (2003) propose that substantial oligopoly exists where the top 8 firms handle 50% of the sales.

Entry and exit barriers

The WorldBank (2012) and UNIDO (2012) and a host of authors establish a link between barriers and performance of firms and industry. Some of the common barriers include; financial, technical and government-imposed barriers such as licenses, permits, and patents (World Bank, 2010; Beccalli, 2006).

Coupled with the effectiveness of entry barriers in reducing competition, prudent managers may seek out entry deterrent strategies to either maintain or improve their profitability margins. Barriers to entry can be classified as being capital requirements, governmental approvals, product differentiation, absolute costs, scale economies (Weiss, 1974, cited in Tregenna, 2009).

Dorfman (2008) finds that certain aspects of the business environment have important effects on the entry, price setting

and operation of firms. Start-up procedures, including both administrative and industry-specific licenses, are a typical constraint. Such regulations may be the symptom of policies that reinforce an uneven playing field in certain subsectors, brought about by political connectedness, protection of national industries, and industrial policy, among other reasons (OECD, 2015 a; KPSA, 2015; MIIT, 2015; Symeonidis, 2003).

Product Differentiation

The concept of segmentation (or product differentiation as it is referred to in the economic literature), is the process of dividing the overall market into narrowly defined consumer groups and products (Zouari, 2010). Segmentation has a long history in the United States. In 1921, Alfred Sloan and General Motors Corporation made a strategic decision to establish a complete spectrum of product offerings at every price position in the automobile market (Scherer & Ross, 1990, cited in Byeongyong and Welss, 2008). Subsequently, numerous other companies and industries have used segmentation as an opportunity to broaden their consumer appeal and to grow their revenues (Berstain, 2005; Byaruhanga, 2002).

In a segmented competitive environment, brands positioned in different segments do not compete directly, but rather, indirectly (Samad, 2008). Seelanatha (2010), states that brands are more competitive if there is a lot of switching between them. Hence, each brand attempts to make consumers think that its offerings are different from the products of its competitors to create some degree of market power. The primary incentive for brands to differentiate is the reduced substitutability between products. With reduced substitutability between products, price-cutting does not result in a complete loss of one's marker share (Fernandez, 2005).

Product differentiation thus gives a firm a certain power within its own segmented portion of the market. Conversely, when an entire market is represented as one large homogeneous unit, the intensity of competition is much greater than when the market is segmented (Platts, 2015). That is, when the products offered by different competitors are perceived by customers to be more or less similar, firms are forced into price and to a lesser degree, service competition. In such situations, competition can become very intense (AL-muharrami and Matthews, 2009).

METHODOLOGY

Research Design

The study used descriptive survey and causal designs. Descriptive survey design was used to obtain information concerning the current status of the market structure and to describe "what exists" with respect to variables under study. Causal design (multiple regression model) was used to measure what impact a specific change will have on existing norms and assumptions within the market structure constructs. This design was suitable because it enabled testing of hypotheses as well as help explain how variation in one phenomenon, an independent variable, leads to or results, on average, in variation in another phenomenon, the dependent variable (Kothari, 2004).

Study Area

The study was undertaken in Kakamega and Mumias Towns of Kakamega County. The County covers a total area of $3051.2 \ km^2$ (GoK, 2009). The study area lies between longitude 34° 20' and 35°E and latitude 0° 15' and 1° N. Kakamega and Mumias towns were selected for the study because they host the highest proportion of metal enterprises and are also the biggest beneficiaries of the massive county infrastructure improvement programme. The population for the study comprised of 701 registered retail enterprises dealing in metal products and operating within Kakamega (421 enterprises) and Mumias (280) Towns of Kakamega County.

Sample Size

The sample size was determined using Cochran 1963 formula:

$n_0 = z^2 pq / e^2$,

where;

n_0 = calculated sample size,

p = maximum variability

q = 1-p and e = desired level of precision

$n_0 = (1.96)^2 (.5) (.5) / (0.05)^2 = 385$

True sample for the study population of 701 was computed thus;

$$n = \frac{n_0}{1 + \left(\dfrac{n_0 - 1}{N}\right)}$$

$$n = \frac{385}{1 + \left(\dfrac{385 - 1}{701}\right)}$$

$$n = \frac{385}{1.5478}$$

$$n = 249$$

Table 1 shows the distribution of the sample respondents in the study area.

Table 1: Sample Distribution

S/No	Enterprise description	Population	Geographic spread of sample size		No of Respondents
			Kakamega	**Mumias**	
1	Medium	170	36	24	60
2	Small	234	50	33	83
3	Micro	120	26	17	43
4	Large	177	38	25	63
		701	**150**	**99**	**249**

The specific sample distribution for each town was arrived at as follows;

$n_d = N_p/701*249$ where n_d is the distributed sample and N_P is the distributed study population

The result obtained is then distributed proportionately using 0.6 and 0.4 for Kakamega and Mumias towns respectively. Thus total sample for medium category for Kakamega and Mumias towns was computed as $n_{dk} = 170/701*249 = 60$ and distributed as ($60*0.6 =36$ and $60*0.4 = 24$ for Kakamega and Mumias respectively). Applying the same concept ensured that all the 249 respondents were distributed across all the enterprise types with a total of 150 and 99 respondents for Kakamega and Mumias Towns respectively.

Data Collection

1. Data Collection Methods

The study utilized both qualitative and quantitative data. Both primary and secondary data was used in the study. Primary data was collected through structured questionnaires, which were ideal because they provided an opportunity for respondents to provide detailed responses. They also allowed respondents to openly express themselves and served low – literacy respondents conveniently levels since the research assistants helped to translate or simply the questions further. Primary data collected on market structure constructs included; the number of firms in the metal products industry, average monthly turnover and asset value.

Secondary data on the other hand were collected from various sources such as archival records comprised of journals, market competition publications, policy documents, Acts of Parliament, official reports, internet and any other relevant literature. These sources yielded information on enterprise profile, including business types, legal orientation, enterprise ownership and years in operation. Additionally, secondary sources generated information used to enrich the findings and discussion.

Analytical Techniques

The market structure is analysed in terms of concentration, conditions of entry and exit and the degree of product differentiation. Generally, the structure of a market is examined in terms of the degree of sellers' concentration as it is an important feature of the extent of imperfect competition in the market. The industrial organization literature suggests several measures of market concentration such as market shares of the firms dealing in metal products, n-firm concentration ratio, the HHI, and the Gini Coefficients to measure the extent of market concentration in retail market for metal products in Kakamega County. While market share indicated the position of an individual firm in the market, the 4-firm concentration ratio, the HHI, and the Gini Coefficients were used to measure the degree of concentration in the market as a whole.

The concentration ratio developed by Hannah and Kay, (1977), cited in Byaruhanga, (2002), was employed to measure retail market concentration;

$$CR_X = \sum_{i=1}^{x} Si$$

Where,

CR_x=the X firm concentration ratio

S_i=the percentage market share of the ith firm

A value close to zero indicates that the largest X firms supply only a small share of the market; 100% indicates a single supplier. The concentration ratio is popular because its data requirement is particularly modest. Unfortunately, this arbitrary choice of the number of firms provides no indication as to whether the remainder of the market is supplied by a few

relatively large firms or by a multiple of very small suppliers Lorenz curves and Gini Co-efficient are used to analyze the level of inequality in the retail market for metal products. The curve shows the actual quantitative relationship between cumulative percentage of market share and cumulative percentage of market participants. According to Ferguson et al (1994), a Lorenz curve coinciding with diagonal line (line of perfect equality) implies even distribution of market shares. However, the degree of inequality can be judged by the extent to which the Lorenz curve deviates from the diagonal. The greater the degree of inequality, the greater the bend and the closer to the bottom horizontal axis the Lorenz curve will be. The extreme case of perfect inequality would be represented by the congruence of the Lorenz curve with the bottom horizontal and right hand vertical axes.

The Gini coefficient summarizes the above information into a single statistical measure.It measure the dispersion of concentrations in the total market (Rhoades, 1995 cited in Kibwage et al, 2008). Several methods can be used to compute Gini coefficient. A commonly used approach involves computing the area of small squares bound by the Lorenz curve and the 45 line (line of equality). The sum of these is then expressed as a ratio of the total area under the 45 line. This approach was found inappropriate because counting small squares proved cumbersome and inaccurate since some squares traversed by the Lorenz curve and line of equality would not be full squares. According to Byaruhanga (2002), the most accurate method of calculating Gini coefficient is by integrating the equation of the curve. Since, in the current study, the Lorenz curves were drawn from empirical data and thus their equations were not known, this approach was also found inapplicable.The Gini Coefficients were computed using Andic and Peacock Model (1961), cited in Kibwage et al, (2008), as follows;

$$Gc = \sum_{k=2}^{j} \left(P_{k-1} Q_{k} \right) - \left(Q_{k-1} P_{k} \right) \times \frac{1}{10,000}$$

Where,

Gc = Gini coefficient

P = Cumulative percentage of metal products /traders

Q = Cumulative percentage of market shares (cumulative% sales volumes of metal products handled by traders).

K = serial order of the cumulative percentages for metal products traders.

The Gini coefficient can vary anywhere from zero (perfect equality) and one (perfect inequality). The coefficient for markets with highly unequal market share distribution typically lies between 0.50 and 0.70, while for markets with relatively equal distributions, is on the order of 0.20 to 0.35. Ferguson and Glenys, (1994), further explains that oligopolistic tendencies increases as the coefficient value approaches one while the market becomes more competitive as Gini coefficient tends towards zero.

RESULTS AND DISCUSSION

The market structure is analyzed in terms of concentration, conditions of entry and exit and the degree of product differentiation.

Market Concentration

Herfindahl Hirschman Index (HHI) was used to evaluate the nature of competition that exists between the enterprises dealing in metal products by size. Thus calculating HHI based on enterprise sizes in the study helped to understand the market endowments of each category.

Table 2 presents the results on HHI by enterprise sizes.

$$HHI = s_1^2 + s_2^2 + s_3^2 + \ldots \ldots + s_n^2$$

Table 2: HHI by Firm Size

	Micro	Small	Medium	Large	Average
No of Firms	50	79	47	73	249
HHI	371	249	300	276	299

Survey Data, 2015

The results from table 2 show HHI values below 1000, thus the market for metal products in Kakamega County is less concentrated and this indicates the presence of effective competition. Unlike the concentration ratio, the HHI will change if there is a shift in market share among the larger firms. The U.S. Department of Justice (DOJ) uses the HHI in guidelines for evaluating mergers. An HHI of less than 1000 represents a relatively unconcentrated market, and the DOJ likely would not challenge a merger that would leave the industry with an HHI in that range.

An HHI between 1000 and 1800 represents a moderately concentrated market, and the DOJ likely would closely evaluate the competitive impact of a merger that would result in an HHI in that range. Markets having an HHI greater than 1800 are considered to be highly concentrated; there would be serious anti-trust concerns over a proposed transaction that would increase the HHI by more than 100 or 200 points in a highly concentrated market.

Equality and Inequality in the Metal Products Industry

In order to show whether all firms in the industry were equal in size, Lorenz curves were drawn from cumulative percentages of the Metal products sold by type and arranged from the smallest to the largest. Figure - shows the visual representation of the degree of equality or inequality in the Metal products industry in Kakamega County.

The Lorenz Curve and Gini Coefficient are also used to measure inequality in resource distribution. This concept was developed initially to study the distribution of income and wealth in society. The Lorenz Curve is often used to measure income inequality while the Gini coefficient measures inequality of income distribution. The greater the degree of inequality, the greater the bend and closer to the bottom of the horizontal axis the Lorenz curve was. When the Lorenz curve is the same as the diagonal line, all firms in the industry are said to be equal in size.

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Deviations of the Lorenz curves from the diagonal line hence emphasize the inequality in the market for the Metal products. The results concur with those of Ferguson and Glenys (1994) cited in Kibwage et al (2008) who established that the degree of inequality in a given industry can be judged by the extent to which the Lorenz curve deviates from the diagonal line. The inequality could be attributed to effective competition in the study area due to differences in consumer tastes and preferences.
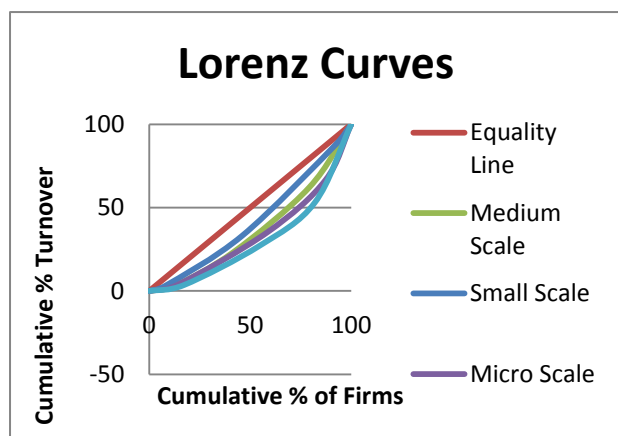

Lorenz Curves

Figure 1: Lorenz Curves

To illustrate further the degree of inequality in market shares, the Gini coefficients (Table -), are employed. Gini Coefficients were computed to help in understanding the market structure that the enterprises dealing in Metal products operate in. Table 3 shows the computed Gini Coefficients.

Table 3: Gini Coefficients for Metal Products

Firms	Gini Coefficient	Corresponding market structure
Small scale	0.016	perfect competition
Medium scale	0.025	perfect competition
Large scale	0.083	perfect competition
Micro scale	0.0545	perfect competition
Average	**0.0446**	**perfect competition**

Survey Data, 2015

The results indicate that concentration varies among the market participants. Although the Gini coefficient of large scale enterprises (0.083) is higher than that of micro scale enterprises (0.0545) and medium scale enterprises (0.016), they all show an egalitarian market share distribution thus depicting a competitive market situation. Based on Gini coefficient cut-off of 0.40 recommended by Colander (2001) the retail market (GC = 0.0446), falls in the range of effective competition, with no significant player who can dictate market prices

Market Concentration Ratio

Empirical inequality in the market for Metal products is shown by concentration ratios in table 3. The concentration ratio can be expressed as:

$$CRm = S_1 + S_2 + S_3 + ... + S_m$$

Where S_i = market share of the ith firm.

If the CR_4 were close to zero, this value would indicate an extremely competitive industry since the four largest firms would not have any significant market share, (Ferguson et al 1994, cited in Kibwage, 2008).

Table 4: Concentration Ratios of the Retail Market for Metal Products

Firms by size	The first smallest 4 and 8 enterprise branches		The first largest 4 and 8 enterprise branches	
	CR4	CR8	CR4	CR8
Small scale	0.59	1.36	13.27	25.54
Micro scale	1.54	3.08	21.87	33.43
Large scale	21.13	51.47	39.43	72.80
Medium scale	6.00	17.51	32.85	50.84
Average	**7.32**	**18.36**	**26.86**	**45.65**
Overall average	**24.55**			

Survey Data, 2015

Results from Table 4 show that the first smallest four and eight enterprises have an average concentration ratio of 7.32% and 18.36% respectively, while the first largest four and eight enterprises have an average concentration ratio of 26.86% and 45.65%, respectively.

Similarly, the overall average concentration ratio of 24.55% and all the averages for concentration ratios lies below Chamberlin's (1933) critical value of 70%, thus suggesting the lack of considerable barriers to entry into the formal retail market for Metal products (Byaruhanga, 2002). Clarkson and LeRoy, (1982), concur with this finding as they noted that a concentration ratio of less than 60% depicts the lack of significant barriers to entry into a market. Similarly, the average for CR_4 is 26.86% which is below 29% thus indicating the absence of monopolistic market conditions (Byaruhanga, 2002).

The results therefore show that the retail market for metal products is characterized by low concentration due to the presence of many enterprises all operating in a liberalized market. Thus, based on the polar extremes of the market spectrum of perfect competition and monopoly, the retail market for metal products in Kakamega County can be described as perfectly competitive.

Number of firms in the industry

Respondents were asked to rank market structure constructs involving number of firms and number of customers per month in the Metal products market in Kakamega County. The results are presented in table 5.

Table 5: Number of Firms and Number of Customers in the Industry

No. of firms in the industry	Frequency	Percent	Rank
Very many	125	50	1
Many	62	25	2
Few	37	15	3
Very few	25	10	4
Total	**249**	**100**	

NB: 1= Very many (>1000), 2= Many (500 – 999), 3 Few (100 - 499), 4= Few (< 100)

No. of customers per month	Frequency	Percent	Rank
1 – 300	25	10	4
900 >	145	58	1
301 – 600	37	15	3
601 – 900	42	17	2
Total	**249**	**100**	

The results from table 5 indicate that the market has very many firms dealing in Metal products with 50% (125) of respondents affirming. This could be attributable to the increasing number of general merchandise firms that deal in a wide variety of products. The same could also be explained by the multi-use nature of Metal products in various sectors including domestic, construction, commercial and agriculture. This multi-use feature enables many firms to stock various types of Metal products targeting different customers and market niches.

These findings corroborate the work of (Kibwage et al, 2008) and (Tung, 2008) who concluded that an industry composed of many firms defines the relationship between market structure, firm conduct and firm performance. This relationship in turn postulates that the existence of entry barriers is the major determinant of firm profits, thus the greater cost of entry makes it easier for existing firms to maintain monopoly profits. Thus public oversight is expected whenever entry barriers are significant. (Baumol et al, 1982, cited in Tookies, 2008) agrees that to enhance market stability, public oversight is required in monitoring trends in concentration and turnover.

Considered differently, new entrants will diminish the level of those profits. Therefore, market concentration decreases the cost of collusion between firms and results in abnormal profits for existing firms in the market. The high number of buyers and sellers point to the liberal nature of the Kenyan economy that prioritizes small scale businesses and ventures that create jobs and contribute to national productivity (GoK, 2014).

Disparities in market demand

Empirical determination of disparities in the demand for Metal products in the different market segments (Kakamega and Mumias) was conducted using ANOVA at 0.05 significance levels as a statistical method for determining the existence of differences among several population means. An investigation into the differences was aimed at finding out whether or not the performance of Metal products in terms of sales volume was equal in the market segments.

ANOVA a for Metal Products in Kakamega Town

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	8977.529	12	748.127	.466	.863
Within Groups	6424.000	4	1606.000		
Total	15401.529	16			

Survey Data, 2015

At 0.05 sig

From the result, F_{stat} = 0.466.

Therefore 1-0.863 = 0.137 hence P > 0.137

ANOVA b for Metal Products in Mumias Town

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	1472.598	13	113.277	.165	.992
Within Groups	2061.167	3	687.056		
Total	3533.765	16			

Survey Data, 2015

At 0.05 sig

From the result, F_{stat} = 0.165.

Therefore 1-0.992 = 0.008, hence P > 0.008

The results show that there is a significant difference between the means of Metal products sold in Mumias Municipality and Kakamega municipality. ANOVA and ANOVA b show that there was significant difference in the means of Metal products sold in the two towns at P > 0.137 and P > 0.008 for Kakamega and Mumias respectively. These differences could be attributable to the economic orientation of the two towns, with Kakamega focusing so much on the construction and commercial sectors, with Mumias dominating in the agricultural sector. Prices never led to such significant differences because the market price for each product was equal in all the towns.

This scenario suggests that the likely factors that led to such significant differences are locational differences, locational differentiation and economies of large scale sales which made it possible for some of the metal products to be transferred from one branch to another where demand for such products was relatively higher. (Poole, 1994) concedes that geography plays a significant role in the retailing of many goods and services as people tend to visit the nearest market places for convenience.

CONDITIONS OF ENTRY AND EXIT

Results from table 6 indicate ease of entry and exit into the industry with 64% (n= 160) of respondents affirming. Difficulties in ease of entry and exit is confirmed to exist by 6% (n=17) of the respondents. Ease of entry and exit is ranked 1 and 2 meaning very limited difficulties are

encountered in the two business processes. According to (Froeb, 2004)**,** entry has a disruptive effect on collusive behaviour. The mere threat of entry makes collusion less sustainable: when effective entry is likely, incumbent players may find it difficult to maintain high prices in the market without risking sudden loss of customers.

Table 6: Conditions of Entry and Exit

Conditions of entry and exit	Frequency	Percent	Rank
Very easy	50	20	1
Easy	160	64	2
Slightly easy	22	8	3
Not easy	17	6	4
Total	249	100	
Entry Barriers	Frequency	Percent	

Conditions of entry and exit	Frequency	Percent	Rank
High marketing costs	8	3.3	
high cost of licence/business permit	**155**	**62.4**	
High Start Up Capital	62	24.8	
High Rental Cost	4	1.4	
High Logistics & Transport Costs	12	5.2	
High Labour Costs	4	1.4	
Patents	4	1.4	
Total	**249**	**100.0**	

Survey Data, 2015

To better understand market entry conditions, respondents were asked to identify key difficulties they faced in setting up businesses. Results from table 6 indicate that 62.4% of the respondents experienced high cost of licenses/business permits as the main difficulty in setting up the business 24.8% experienced shortage of funds, 5% had shortage/poor quality of inputs, 1.4% had not been strategically located1. 4% experienced shortage of skilled labour. Relatively bigger sizes of enterprises imply the existence of economies of scale, possibly due to higher fixed costs and barriers to entry.

Bigger average size should therefore imply lower likelihood of entry. Just like in the findings of (Kibwage, Odondo, & Momanyi, 2008), the entry barriers could be attributed to lack of constant supply of Metal products, customer loyalty and competition from substitute products. Baumol 1982 (cited in Tung 2008) in his work Contestable markets concurs that economies of scale are associated with lower likelihood of entry.

Despite fierce enterprise competition being identified as significant barriers to entry into the market, it is still overt that metal products are demanded in the market. Other market barriers identified included lack of constant supply of the metal products, customer loyalty and inter-enterprise competition. Inter-enterprise competition was noticed among the market participants where dominant players were establishing new branches to capture a wider market share.

Perhaps the legal obstacles which could have multiplier effects on the retail market were being experienced by the micro enterprises operated by welders, who had to extract raw wooden materials required as handles for Metal tools such as spades, hand hoes, slashers, knives, axes, swords and pangas. This is because they have to cover the additional costs of obtaining the relevant permits to handle forest products. Competition as an entry barrier was analysed to provide a better understanding of the nature and type of competitors.

Table 7: Main Competitors

	Frequency	Percent
Dealers in metal products	194	78.1
Dealers in plastic substitutes/complementaries	23	9.0
Dealers in wooden substitutes/complementaries	32	12.9
Total	**249**	**100.0**

Survey Data, 2015

The results from table 7 indicate that 78.1% of the competitors comprised of dealers in Metal enterprises, 9.0% were producers of plastic substitutes and 12.9% were producers of wooden substitutes/complements.

Metal Product Differentiation

Product Differentiation in the industry was analysed based on product texture, shape, colour and packaging. Table 8 shows the results. The results show that texture, colour and shape are important factors of differentiation and that firms with capacity to innovate along such lines may gain large market shares.

Table 8: Product Differentiation

Differentiation element	Rank			Highest frequency
	1st	2nd	3rd	
Texture	90 (36%)	100(40%)	50(20%)	100(40%)
Shape	96 (39%)	57(25%)	92(37%)	96 (39%)
Colour	60 (24%)	77 (31%)	98(39%)	98(39%)
Packaging	3 (1%)	10 (4%)	9 (4%)	10(4%)
	249	249	249	

Survey Data, 2015

Such a situation helps in the maximization of welfare of market participants Tung (2008).

Firms were also asked about how they believed their product quality compared to competitors. This data is shown in Table 9.

Table 9: Perceptions on Quality of Metal Products

Competitors	MICRO	SMALL	MEDIUM	LARGE
Kenyan enterprises	2 (65%)	1 (73%)	1 (84%)	1 (90%)
East Africa	1 (45%)	1 (54%)	1 (71%)	1 (80%)
COMESA	2 (30%)	2 (58%)	2 (67%)	2 (76%)
African Enterprises	3 (12%)	3 (15%)	3 (17%)	3 (38%)
European Union	4 (75%)	4 (71%)	4 (45%)	4 (41%)
China	3 (20%)	3 (22%)	2 (48%)	2 (42%)

NB: 1= High quality, 2= good quality, 3= Medium quality, 4= Low quality

 Survey Data, 2015

Amongst micro and small firms 65% and 73% respectively believed their products to be of better quality than local competitors. This figure drops to 45% and 54% respectively for East African competitors. A majority of firms believed that their product quality was higher than their competitors from Kenya. 71% of medium and 80% of large firms believed that their product quality was higher than competitors from East Africa, but only 38 and 17% of lareg and medium scale firms said that they produced better quality goods than other African firms respectively. 75% and 71% of Micro and small enterprises indicated that they dealt in low quality Metal products compared to European Union competitors.

CONCLUSION AND POLICY IMPLICATIONS

Based on the study findings, the retail market for metal products in Kakamega County can be described as perfecticly competitive. The retail market has a low concentration structure and is thus highly competitive. This implies that the market has potential of becoming more competitive at the brand level, primarily because of the enhanced demand and introduction of new brands and brand extensions

The foregoing analysis can inform policy decisions in several respects. Given the bidirectional relationships between market structure of the firms, their conduct and their profitability (performance), there is need for keen evaluation of the market structure in order to formulate appropriate measures to encourage competition.

Policy initiatives can be wide-ranging, involving measures to enhance mobility of factors of production and fair trading practices. Alternatively, incentives to encourage large scale firms to hire more people and invest more in new branches or market niches could be applied. Doing so would enable the private sector to compliment the role of the state in meeting social and economic objectives while helping to keep markets competitive. For micro and small firms, policy measures should focus on enhancing market access, enterprise capitalization, firm size, product innovation and effective business management. Proper application of these measures would act as a catalyst for growth of the firms and help to boost competition and profitability.

Finally, given the dynamic nature of the market for metal products (changing technologies, mergers, acquisitions, the level and pattern of demand), a continous market restructuring may be required in order to ensure that competition is maintained. Policy initiatives can be broad-based, involving attractive tax regimes to encourage entry and thus inhibit evolution of dominant firms in the retail market for metal products in Kakamega County. For all the suggested legal, institutional and administrative actions, care is needed to avoid policy failure.

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