Perceived Brand Quality in Uganda’s Pharmaceutical Industry: The Role of Country of Origin, Marketing Orientation and Brand Affordability

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Abstract

The study set out to determine the role played by country of origin, marketing orientation and brand affordability in influencing the perceived brand quality of pharmaceuticals in Uganda. In a sample of 352 doctors selected through a stratified random sampling, statistical analysis revealed significant positive relationships between the variables, that is; Country of Origin, pharmaceutical marketing orientation, brand affordability and perceived brand quality. Regression results confirmed that country of origin image, brand affordability and marketing orientation were strong predictors of perceived brand quality. Overall, the independent variables explained 32.4% of the variance in perceived brand quality. It is therefore suggested that the pharmaceutical companies should analyze the country of origin image in detail and recognize the capacity of the country within different product categories. However, given the continuous globalization of markets, it is possible to neutralize the effect of country-of-origin on the evaluation of product quality and the influence on purchasing decisions. Evidence from the literature revealed that if other forms of product quality attributes were highlighted during the product’s promotion and marketing campaigns, country-of-origin would have low effect on consumers’ perception of product quality in the pharmaceuticals.

JEL classification numbers: L65
Keywords: Country of Origin, Pharmaceutical Marketing Orientation, Brand affordability.

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1 Introduction

Globalization has increased the opportunities for companies to distribute their goods to consumers all over the world. In this more open and globalized business environment, nations are under pressure to develop and commercialize their “national brands” to position themselves favorably on the mental maps of the consumers. In any industry, a positive country image can have an impact on an enterprise’s ability to compete in the global market (Chandra, Fealey, & Rau, 2006). Therefore, country of origin is an important variable to consider when studying consumer evaluation of foreign products. The topic of country of origin effects has been studied extensively with over 750 major publications by over 780 authors in the past 40 years (Papadopoulos and Heslop, 2002).

From these studies it has become widely accepted that a product’s country of origin can influence consumers’ quality perceptions, product affordability as well as directing the marketing activities. Countries and their companies are actively marketing their countries for favorable perception of product quality in the countries to which they export their brands (Kotler and Keller, 2009). In Uganda, pharmaceutical brands which are of Asian origin are perceived to be of inferior quality than the pharmaceutical brands from United Kingdom and United States of America for examples. In a pre-study survey, we found Asian pharmaceutical brands (60 – 80%) cheaper than those from European or United States origin and, the same survey, revealed that these Asian pharmaceutical brands take up to 80% of the pharmaceutical market in Uganda. (NDA register, 2009). An examination of the product price list at Uganda Health Marketing Group (UHMG) revealed that zinc sulphate 200mg tablets as a medicine use to combat diarrhea in children, which were supplied into the country both from India and France through UHMG exhibited significant disparity in pricing points. Whereas the zinc sulphate from India costs 4,500 for a pack of 100 tablets, the same drug from France costs 12500 for the same presentation and specification (UHMG Price List 2013). Successful marketing of a pharmaceutical product is however through a well-structured technical information flow from the manufacturer to the consumers. According to NDA Drug Policy Act (2002), it must be through the technical representative to opinion former such as the doctors, pharmacists, nurses and other clinical services providers and finally to the consumer-the patient. This suggests that the strategies put forward can influence both the affordability and the pharmaceutical brand quality perception to the customer who will make the buying decision. The quality perception is not only for developing countries like Uganda but even developed economies (Battra et.,al 2014). Taking the case of Australia (Al-Hawari, M, & Ward, 2006), community pharmacists were found responsible in advising patient on which drugs to take according to their own quality perception. Being a developing country Uganda, the customers are price sensitive and as well look for most cost effective brand. They purchase a brand depending on their perception of quality and what they can afford (Kotler & Keller, 2007). When the quality perception is good about the brands, its affordability is considered important, and the brand tends to succeed in the market. For example, a study in Germany found an increased prescription of generics brands which generated savings of € 2.7 billion in the year 2002 (Erikson et al 1995) due to affordability evaluation of the products. But, when the quality perception of a brand is bad, the brand suffers acceptance. In the same study above, it was shown that from the introduction of drug budgets the German facilities, physicians steadily reduced the number of prescriptions for drugs with disputed effectiveness, while prescriptions for
drugs with undisputed effectiveness remained at a constant level. This finding and the finding about Uganda pharmaceutical market structure offers a real challenge to pharmaceutical marketers and consumers alike. Notwithstanding then, is the dilemma faced by pharmaceutical marketers on how to draw market penetration strategies and use country of origin image to influence affordability and positive quality perception of their pharmaceutical brands in this market.

2 Literature Review and Hypotheses

2.1 Country of Origin and Customer’s Quality Perceptions

Consumers’ perceived quality of a brand is shaped because of the process of perceptions involved in the decision-making process. High perceived quality occurs when consumers recognize the differentiation and superiority of the brand relative to competitors’ brands. This will influence their purchase decisions and would drive them to choose the brand rather than competitors’ brands. This implies that high perceived quality would influence consumer’s choice, which will consequently lead to an increase in brand equity/quality perceptions. To the marketer, high perceived quality could support a premium price, which in turn can create a greater profit margin for the firm that can be reinvested in brand equity (Yoo et al., 2000). Country of origin image is consumer’s general perceptions of quality for products made in a particular country (Bilkey and Nes, 1982). Brand equity is largely supported by the associations that consumers make with a brand, which contributes, to a specific brand image. Brand associations are complicated and connected to one another, and consist of multiple ideas, episodes, instances, and facts that establish a solid network of brand knowledge (Yoo et al., 2000). It is formed as a result of the consumer’s brand belief, which can be created by the marketer, formed by the consumer himself through direct experience with the product, and/or formed by the consumer through inferences based on existing associations (Aaker, 1991). Consumers’ favorable brand beliefs will influence their purchase intentions and choice of the brand. These behavioral responses have implications on brand equity. In the context of products such as electrical appliances, brand associations would represent the functional and experiential attributes offered by the specific brand. The intangible qualities that consumers associate the brand with, such as innovativeness, distinctiveness, dynamism and prestige are also considered as brand associations. The combination of tangible and intangible attributes creates a brand identity, that is “a unique set of brand associations that the brand strategist aspires to create or maintain,” which drives brand associations (Aaker, 1996). Therefore, the identity of the specific brand may impact brand associations and ultimately brand equity.

Some other researchers view country image as consumers’ general perceptions about the quality of products made in a particular country (Han and Terpstra, 1988; Parameswaran and Yaprk, 1987) while some others view it as the “defined beliefs about a country’s industrialization and national quality standard” (Srikatanyoo and Gnoth, 2002). Most of the previous studies suggest that country-of-origin information which is indicated by the “Made in ...” label serves several purposes in consumer decision-making. It act as a salient attribute in consumer product evaluation (Johansson, 1989), stimulates consumer’s interest in the product (Hong and Wyer, 1989), affect behavioral intentions through social norms (Fishbein and Ajzen, 1975) and influences buyer behavior through affective
processes as in the case of consumer’s patriotic feelings about their own country (Han and Terpstra, 1988). The overall evaluation of products is influenced by country stereotyping, that is, the image that consumers have about a certain country will influence their perceptions of products from that country (Bilkey and Nes, 1982). Since consumers’ perception of a particular country-of-origin influence their evaluation of products from that country, this will influence their preference, purchase intention and choice of a particular brand. Obviously, this has implications on the perception of the brand’s quality. 

H1. Country of Origin image has a significant positive effect on consumer’s quality perceptions of a brand.

2.2 Marketing Orientation and Quality Perceptions

Market orientation is “the organization-wide generation of market intelligence, dissemination of its intelligence across departments, and organization-wide responsiveness to it” (Kohli and Jaworski (1990)). Being market-oriented implies that the organization will seek information about customers’ needs and preferences and will continuously modify its offering mix as a result of changing needs and expectations and competitor’s actions. Therefore we can expect market oriented organizations to be more likely to meet or exceed customers’ expectations and hence meet customer’s quality perceptions. (Chang and Chen, 1998)

While some brands are heavily marketed (up to 20% of revenue spend), majority are marketed as generics or copies of the original brands. In Uganda, only a few of the Asian brands have gone into active promotion of their brands unlike the European or USA who go a long way utilizing differentiation strategies, offer premium price for premium acclaim of quality of their brands. Zaheer ud din Babar (2005) established that that in terms of firm market orientation, some companies in their export strategies use differential medicine pricing system to curb public expenditures where prices for public is lower than prices in the private sector. This was also established in the works of (Kotler et al., 2007), countries and companies are now marketing their countries as a brand to improve the image. All this seems to agree that pharmaceutical marketing orientation can influence cost/affordability and brand’s perceived quality. Thus,

H2. Marketing orientation has a significant positive effect on consumer’s quality perceptions of a brand.

2.3 Brand Affordability and Quality Perceptions

The customers may have a lower threshold below which prices may signal inferior or unacceptable quality, as well as an upper threshold above which prices are prohibitive and seen as not the worth the money (Kotler, 2006). The researcher tends to agree to Kotler’s work because of the marked price disparity between drugs from developed and developing countries between 8 – 10 folds or even more (pre study survey). And this is a concern in pharmaceutical brand perceived quality because many consumers use price as an indicator of quality (Kotler, 2006). Many have however argued that consumers may choose products because of cost, and they are doing so because they are meeting a trade-off of cost saving for drug’s safety profile. This behavior is not only typical of developing country but also with advanced economies (Fincham, 2005) such as USA where customers made choices based on trade-offs of safety for savings to be gained, and the country of origin of the medications. For example, in the above USA study, customers
expressed willingness to purchase imported medicines if 26% of saving was guaranteed; and if safety was not an issue, a saving of 15% was necessary. These reviews tend to confirm that the cost of a pharmaceutical brand is an antecedent of the brand’s perceived quality subject to study in Ugandan market.

H3. **Brand affordability has a significant positive effect on consumer’s quality perceptions of brands**

### 3 Methodology

Using a cross-sectional survey design, the study utilized responses from a proportionate stratified sample of 352 selected respondents from a population of 1841 medical doctors in Kampala district. This sample size was determined based on Krejcie and Morgan’s formula for sample size determination (Krejcie & Morgan, 1970). The constructs were measured using the already existing instruments developed and used by earlier scholars. Marketing orientation was operationalized and measured by the tools developed by Ajay K. Kohli, Bernard J. Jaworski and Ajith Kumar (1993) which basically defines market orientation as the organization wide generation of market intelligence pertaining to current and future needs of customers, dissemination of intelligence horizontally and vertically within the organization, and organization wide action or responsiveness to market intelligence. Country of Origin was measured by scales developed by Lala, V., Allred, A. T., & Chakraborty, G. (2008), brand affordability was measured by tools developed by Niëns, L. M., & Brouwer, W. B. (2013) while quality perceptions was operationalized by tools earlier developed by Bahia, K., & Nantel, J. (2000) All the measures were anchored on a five-point Likert scale ranging from strongly disagree to strongly agree. The instruments were largely structured and self-administered questionnaires. Though the study adopted already existing validated scales already tested for reliability, we went ahead to ensure reliability of the scales by extracting their Cronbach alpha coefficients. All the scales yielded Cronbach alpha values above the recommended cut-off of 0.6 (Nunnally, 1978) - see table 1, confirming that the instruments were reliable. Country of origin had a Cronbach alpha value of 0.724, pharmaceutical marketing orientation yielded a Cronbach alpha value of 0.771, brand affordability yielded 0.712 while brand perceived quality yielded a Cronbach alpha value of 0.646. Data was collected with the help of well-trained research assistants. After data collection, the usable questionnaires were entered in SPSS software version 2.0. Data was cleaned, edited, explored and made ready for analysis. The missing values were filled using linear interpolation. Since the hypotheses were relational, correlation analysis was conducted to test the hypotheses, followed by multiple regression analysis. Specifically, hierarchical regression was conducted to determine the individual contribution of each independent variable to the dependent variable, as well as the overall explanatory power of the model. In model one of the hierarchical regression we entered Country of Origin, in model two we entered pharmaceutical marketing orientation and in model three we entered brand affordability. The correlation and hierarchical regression results are shown in tables 2 and 3.
4 Main Results

4.1 Country of Origin and Customer’s Quality Perceptions

We observed a significant positive relationship between Country of origin and customer’s quality perceptions \((r=0.270**; p<0.01)\), supporting hypothesis H1. Thus Country of origin image shapes the quality perception of customers. This means that consumers of pharmaceutical products will evaluate quality of different products based on the countries where they come from. The hierarchical regression in table 2 also indicates that Country of Origin is a significant predictor of perceived brand quality \((\text{beta} = 0.363**\)) providing further support for hypothesis H1. Country of Origin accounts for 13.2\% \((R^2 = 0.073)\) of the variation in perceived brand quality, and the model was statistically significant \((\text{sig.} = 0.000, p<0.001, F = 27.602)\). In a study conducted by Chen (2006) he postulates that Country of origin image is significantly positively related to consumer’s purchase intention and quality perceptions. Lee & Lee (2011) confirms our findings that country of origin image is an important extrinsic product cue, and researches show that it affects consumer quality perceptions, purchase intentions and overall evaluations of the product. Many researchers report that consumers prefer products made by developed countries over those from less developed countries (Lee & Lee, 2011; Lee et al., 2013; Ha-Brookshire & Yoon, 2012). Indeed, in our research we found out that pharmaceutical brands from German and the Americas were rated highly in terms of quality compared to the products from Asia. We also found out that the higher the country of origin image of particular brands the higher the prices. Therefore, countries should market their brands to ensure higher ratings in terms of quality perceptions so as to attract big numbers and loyal consumers of their products. With loyal customers, pharmaceutical companies will spend less on marketing campaigns and other overheads, hence ensuring business profitability in the long-run.

4.2 Marketing Orientation and Quality Perceptions

We also observed a significant positive relationship between marketing orientation and customer’s brand quality perceptions \((r=0.316**; p<0.01)\), supporting hypothesis H2. Thus the marketing activities of pharmaceutical companies’ i.e. branding, advertising, sales promotion etc. will determine how customers perceive the quality of given pharmaceutical brands. This means that consumers of pharmaceutical products will evaluate quality of different products based on the product knowledge and information acquired from the marketing orientation of different brands. The hierarchical regression in table 2 also indicates that Pharmaceutical Marketing Orientation is a significant predictor of perceived brand quality \((\text{beta} = 0.374**\)) providing further support for hypothesis H2. Pharmaceutical Marketing Orientation accounts for 39.2\% \((R^2 = 0.154)\) of the variation in perceived brand quality, and the model was statistically significant \((\text{sig.} = 0.000, p<0.001, F = 33.288)\). As previously studied by Vargo & Lusch, (2004) highly market-oriented organizations design their services based on the needs of existing and prospective members. Consequently, members that have positive evaluation of an organization’s market orientation are also likely to perceive relevant benefits from participating in the programs/activities offered by the organization. This is because the members believe that the programs/activities offered by the organization are designed with the needs of its members in mind. Therefore, given the fundamental objective of market orientation of
creating superior value for the customers (Narver & Slater, 1990), evaluation of quality perceptions will be based on the information that is passed on to the customer during the marketing orientation hence shaping customer’s brand quality perceptions.

4.3 Brand Affordability and Quality Perceptions

We further observed a significant positive relationship between brand affordability and brand quality perceptions ($r=.516**; p<.01$), supporting hypothesis H3. Thus brand affordability leads to perceived brand quality. This means that consumers of pharmaceutical products will evaluate quality of different products based on whether they can or cannot afford that particular brand. The hierarchical regression in table 2 also indicates that brand affordability is a significant predictor of perceived brand quality ($\beta = .540**$), providing further support for hypothesis H3. Brand affordability accounts for 31.2% ($R^2 = .312$) in perceived brand quality, and the model was statistically significant ($\text{sig.} = 0.000, p<0.001, F = 80.304$). Kotler (2006) confirms that many consumers use affordability as an indicator of quality. Consumers should use a product's price to determine if the product is affordable. However, consumers also appear to use a product's price as a measure of the product's quality. Many empirical studies (e.g., see reviews by Monroe 1973 and Olson 1977) have shown that when consumers have some uncertainty concerning a product's quality, the consumer often assumes that a higher product price indicates a higher level of quality and vice versa. However, we should understand that that in order to understand consumer perceptions of the price-quality relationship (affordability), we must fully understand the environment in which these perceptions are formed. Consumers rarely have complete information and use various strategies to fill the gaps in their knowledge as they consider and choose products. One of these strategies involves using naive theories: informal, common sense, explanations that consumers use to make sense of their environment. For example, consumers may believe that popular products are high in quality while also believing that scarce products are high in quality (Hélène Deval, 2013)


Table 1: Cronbach Alpha ($\alpha$) coefficients.

<table>
<thead>
<tr>
<th>Construct</th>
<th>Number of scale items</th>
<th>Cronbach alpha ($\alpha$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Country of Origin Image</td>
<td>11</td>
<td>.724</td>
</tr>
<tr>
<td>Pharmaceutical Marketing Orientation</td>
<td>12</td>
<td>.771</td>
</tr>
<tr>
<td>Brand Affordability</td>
<td>15</td>
<td>.712</td>
</tr>
<tr>
<td>Brand Perceived Quality</td>
<td>11</td>
<td>.646</td>
</tr>
</tbody>
</table>
Table 2: Correlation coefficients.

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>S.D</th>
<th>Min</th>
<th>Max</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Country of Origin(1)</td>
<td>2.78</td>
<td>.546</td>
<td>1.00</td>
<td>5.00</td>
<td>1.00</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>2. Pharma Mkt Or (2)</td>
<td>2.98</td>
<td>.377</td>
<td>1.00</td>
<td>5.00</td>
<td>.426**</td>
<td>1.00</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Brand affordability(3)</td>
<td>3.50</td>
<td>.534</td>
<td>1.00</td>
<td>5.00</td>
<td>.304**</td>
<td>.305**</td>
<td>1.00</td>
<td>--</td>
</tr>
<tr>
<td>4. Brand Perceived Quality (4)</td>
<td>3.41</td>
<td>.449</td>
<td>1.00</td>
<td>5.00</td>
<td>.270*</td>
<td>.316**</td>
<td>.516**</td>
<td>1.00</td>
</tr>
</tbody>
</table>

** Correlation is significant at the .001 level (2-tailed)

Table 3: Hierarchical regression results with perceived brand quality as the dependent variable.

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th></th>
<th>Model 2</th>
<th></th>
<th>Model 3</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Beta</td>
<td>Sig.</td>
<td>Beta</td>
<td>Sig.</td>
<td>Beta</td>
<td>Sig.</td>
</tr>
<tr>
<td>COOI</td>
<td>0.363*</td>
<td>0.00</td>
<td>0.281*</td>
<td>0.00</td>
<td>0.270*</td>
<td>0.00</td>
</tr>
<tr>
<td>PMO</td>
<td>0.200**</td>
<td>0.00</td>
<td>0.108 **</td>
<td>0.004</td>
<td>0.425**</td>
<td>0.00</td>
</tr>
<tr>
<td>BAF</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>51.139</td>
<td>33.207</td>
<td>52.691</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sig. F change</td>
<td>0.000</td>
<td>0.00</td>
<td>0.000</td>
<td>0.00</td>
<td>0.000</td>
<td>0.00</td>
</tr>
<tr>
<td>R</td>
<td>36.3%</td>
<td>40.7%</td>
<td>56.7%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>R²</td>
<td>13.2%</td>
<td>16.5%</td>
<td>32.4%</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>R² change</td>
<td>13.2%</td>
<td>3.3%</td>
<td>15.9%</td>
<td></td>
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</tr>
<tr>
<td>Adjusted R²</td>
<td>13%</td>
<td>16%</td>
<td>31.5%</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

** Correlation is significant at 0.01 level 2 tailed
* Correlation is significant at 0.05 level 2 tailed

5 Conclusions

Our study finds significant positive relationships between country of origin, pharmaceutical marketing orientation, brand affordability and perceived brand quality. In the hierarchical regression (table 3), all the three constructs (Country of Origin, Pharmaceutical Marketing Orientation and brand affordability) are significant predictors of perceived brand quality, and account for 31.2% of the variation in perceived brand quality. In the final model (model 3), brand affordability has the largest effect on perceived brand quality (beta = .461) followed pharmaceutical marketing orientation (beta = .317) and then Country of Origin (beta = .270). Therefore, customer’s quality perceptions are built majorly on the affordability of the brand (determined by price & quality). For customer’s to determine whether they can afford a particular brand or not will depend on how much information they have regarding that brand (marketing orientation). Finally, consumers will now seek knowledge of where that brand/product originates from...
whether it depicts good quality of poor quality. This means that irrespective of whether the product originates from the preferred Country of Origin, customers will buy less of that brand if it is not affordable and if they do not have enough information about it. Therefore, marketers should carry out successful marketing campaigns which will ensure consumers full knowledge about the products which will provide tangible quality cues to aid both price and quality affordability. Future studies may consider exploring the other factors that explain the over 70% of the variation in perceived brand quality that is not accounted for in this study. Future scholars may also consider examining the mediating effect of brand affordability and pharmaceutical marketing orientation on the relationship between Country of Origin and perceived brand quality.

References


