Claudiu-Cătălin MUNTEANU[1], Alexandru-Narcis BOZGĂ[2]

[1]The Institute of Agricultural Economics, The Romanian Academy, Bucharest
[2]Faculty of Management, Economic Engineering in Agriculture and Rural Development, University of Agronomic Sciences and Veterinary Medicine of Bucharest, Romania; munteanu.katalyn@yahoo.com; narcis.bozga@gmail.com

THE EFFECTS OF SHRINKFLATION ON BRAND REPUTATION: THE CASE OF DAIRY PRODUCTS IN ROMANIA

ABSTRACT

Shrinkflation is a form of package downsizing that allows companies to maintain operating margins and increase sales volumes while maintaining profitability. It is widely used in practice based on the premise that consumers are deterred more by higher prices than by smaller packaging. This study determines the effects of shrinkflation on brand reputation by analyzing brand perception and consumer response to three shrinkflation-related scenarios for dairy products. Results show that while shrinkflation has little to no influence on brand perception, it significantly alters consumer response, especially in the scenario consisting of package downsizing without any price modification. Therefore, shrinkflation alters brand reputation by increasing consumers' degree of skepticism towards the brand and challenging brand superiority claims. As consumers become increasingly frustrated by package downsizing, brand reputation tends to suffer even in shrinkflation scenarios that also include price modifications.

Key words: shrinkflation; package downsizing; brand reputation; brand perception, consumer response.

JEL Classification: M31, Q13.

1. INTRODUCTION

Shrinkflation is a form of "the invisible handshake" that appears in practice as package downsizing. Basically, for the same price consumers are offered a product smaller in weight, size or quantity. In some extreme cases, the price may even slightly increase or the quality may decrease, while the product size or quantity shrinks.

From an economic perspective, shrinkflation makes sense because the unitary price of a retail goods basket will not increase, thus inflation measures such as Retail Price Index (RPI) are not affected. Basically, shrinkflation allows companies to maintain operating margins and increase sales volumes while maintaining profitability. This approach is based on the premise that consumers believe prices are set on trust and fairness. Fundamentally, consumers redeem as “fair” for a company to react at a cost increase, but an increase of profit margins violates their trust.

On the other hand, from a marketing perspective, shrinkflation doesn’t make sense. Brands attract consumers by offering “more for less”, while shrinkflation reverses this approach, by offering “less for the same” or even “less for more”. Therefore, shrinkflation might negatively affect customer acquisition and/or retention. Also, brand loyalty is maintained by creating a stable and predictable relationship between the brand and consumer. An unchanged price for the product means that consumers are not alerted by the higher prices per unit.

While marketers view shrinkflation as a “contents reduction strategy”, consumers view it as a “stealth” strategy for reducing product value. Therefore, from a marketing perspective, shrinkflation is the inflation a consumer should not notice or notice less. As a result, marketers often try to deflect attention from reducing the size of a product towards a “less is more approach” by claiming environmental benefits, health benefits, storage benefits or ease of use benefits.

Shrinkflation practices are supported by prospect theory, which predicts that in the act of repeated purchases, consumers are deterred more by higher prices compared to smaller packaging (Barberis, 2013). But consumers are becoming more aware and frustrated about this practice. As a result, most attention deflection strategies are inefficient, thus negatively affecting brand reputation.

In practice, brand reputation is based on consumer loyalty and customer confidence in the brand or product (Keller, 2008). While brand reputation management is critical for leveraging growth, analyzing decisions and outcomes that affect brand reputation requires a comprehensive understanding of shareholder theory versus stakeholder theory.

This paper analyzes shrinkflation from the perspective of shareholder theory versus stakeholder theory and evaluates consumer perceptions regarding shrinkflation. The difference between the sales effects of package downsizing versus price increase is not fully explained by the existing literature. By studying the situation for a common item category (dairy products) often purchased by consumers, we will analyze consumers’ response to shrinkflation and determine the effects of shrinkflation upon brand reputation.

2. STATE OF KNOWLEDGE

Many customers are looking for bargains when shopping for food and are concerned about the cost of food. As a consequence, price can be one major selection criteria when buying groceries. Price sensitivity may vary depending on the product, context and point of acquisition. However, price has an increased role in the food category, especially in Romania (Nistor, 2014).

Food producers occasionally transfer their increased costs to consumers by reducing the contents of a package rather than increasing the package price. In some particular circumstances, packaging adjustment may be illegal, but in most common cases it is just perceived as unethical. In this manner, producers remain relevant in the market by downscaling customer expectations, even for those that are extremely price sensitive.

In order to analyze the impact of shrinkflation on consumer perceptions it is necessary to understand the implications of the ethical dilemmas created by shareholder theory versus stakeholder theory.

On the one hand, shareholder theory argues that profit maximization is the primary objective of any organization and the firm doesn't have any other obligation to society other than to generate economic returns while also respecting the law (Moore, 1999). But for example, most people will often lie at their convenience even if they believe lying is morally wrong. In this view of shareholder theory, organizations are not persons, therefore they cannot be morally wrong.

On the other hand, stakeholder theory regards organizational value creation as cooperation between actors engaged in value creation (Moore, 1999). This value creation process must align itself to values, norms and ethical mechanisms integrated into a coherent vision. This holistic view of business reflects an increased awareness of the organization' s short and long-term impact on society.

Basically, shareholder theory advocates for profits, while stakeholder theory advocates for corporate social responsibility. In the context of shrinkflation, shareholder theory argues that consumers are responsible for checking the price and packaging of the products they buy, while stakeholder theory contends that organizations have the moral obligation to notify consumers on changes in packaging in order to protect consumers' best interests.

But things are not that simple in practice. Popular potato chips brands such as Lay's or Chio are often criticized for "selling air", as their packaging is not standardized and does not reflect product quantity. Meanwhile, their main competitor Pringles transformed these critics to a point of differentiation for its product by standardizing its packaging. However, while for Lay's and Chio it is easier to modify prices, consumers are reluctant to pay more and often backlash when prices increase for Pringles.

Another well-known example of shrinkflation is the case of Mondelēz International, which reduced the traditional quantity for Toblerone Swiss Chocolate from 170g to 150g. This quantitative reduction severely altered the shape of the product, while the form of the package remained unchanged. This resulted in severe consumer backlash because the shape of Toblerone Swiss Chocolate is an important point of differentiation and a copyrighted element.

Excessive packaging is sometimes criticized and regarded as a symbol of consumerism and of the "throw-away society" (Chen *et al*. 2017). Organizations exploit this perception and argue that shrinkflation has allowed them to become more environmentally friendly, thus employing a stakeholder approach to the phenomenon. But, while those claims are admirable, most often they are not credible, because most organizations just aim to cut costs. Disguising a cost-cutting strategy as an environmental friendly strategy is a shareholder approach often employed by many organizations in practice.

When regarding shrinkflation through the consumer lens, we argue that consumers are intelligent and want to be respected. Consumers perceive these practices as dishonest and deceptive. Despite consumers' predilection for a stakeholder theory approach to shrinkflation, Haupt (2022) argues that this practice is extremely effective in maintaining consumers' loyalty while also increasing profit margins. Therefore, from a marketing perspective, shrinkflation should be viewed as an event that has the potential to affect brand reputation or corporate reputation.

Reputation is a view or an opinion resulting from an evaluation process based on a unique and subjective set of criteria (Keller, 2008). Basically, reputation is a subjective measure based on individual perceptions. In a business environment, reputation offers an anchor for past or future activities. In other words, in a business environment, reputation influences how consumers and other stakeholders think or act towards a product, brand or organization. Therefore, reputation is very important because it reduces negative spillover effects (Tipton *et al*., 2009) and fosters consumers' loyalty (Gurău, 2012).

For a product, reputation is one of the four primary contributors to perceived quality (Keller, 2008). Consumers expect the quality of the product to improve over time, not to diminish. A perceived diminished quality means in practice decreasing product sales due to unsatisfied customers. In practice, the development of brand reputation means more than keeping consumers satisfied, because it is something a company earns over time and refers to how various audiences evaluate the brand (Veloutsou & Moutinho, 2009).

While there is no unified approach regarding brand reputation measurement or its relationship with consumers' brand perception and consumers' response, a general framework was created (Munteanu *et al*. 2014). This brand reputation framework is presented in Figure 1.

Previous studies have shown the effects of brand reputation on consumers' decision-making process (Veloutsou & Moutinho, 2009), have highlighted how negative product related spillover effects impact brand reputation (Lei *et al*. 2008; Munteanu *et al*. 2014) analyzed the impact of cognitive dissonance generated by product related issues on consumer behavior (Dawar & Pillutla, 2000).

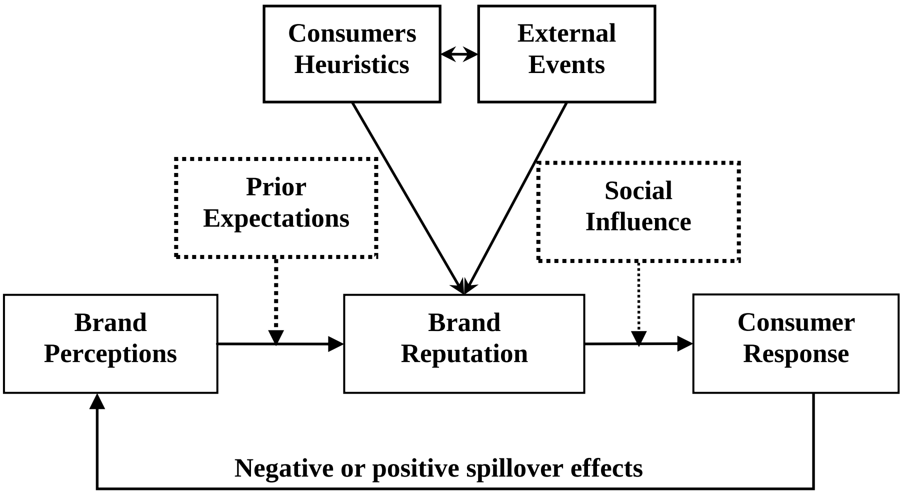

Figure 1. Brand Reputation Framework (Munteanu *et al*. 2014)

Brand reputation can offer consumers a strong reason to buy a product because it directs brand preference. Thus, brand reputation can be regarded as a back-looking asset that creates future benefits. But it is unclear how consumers evaluate brand reputation as a result of events that skew their brand perceptions. Therefore, in the context of our study, we propose the following hypothesis:

H_1. There is a direct and positive effect of brand perceptions on brand reputation for agro-food products.

H_2. There is a direct and positive effect of brand reputation on consumer response for agro-food products.

In general, the perception of low value elicits a negative consumer response, while the perception of high value elicits a positive consumer response. Shrinkflation skews perceived value in two ways. On the one hand, it lowers perceived value by diminishing the quantity of the product bought by the customer. On the other hand, it fosters perceived value by providing relative price stability in a period of economic turmoil. Therefore, we propose the following hypothesis:

H_3. Shrinkflation moderates the relationship between brand perceptions and brand reputation based on consumers' prior expectations regarding agro-food products.

H_4. Shrinkflation moderates the relationship between brand reputation and consumer response as a result of social influence regarding agro-food products.

3. MATERIAL AND METHOD

This study tries to provide a better understanding of shrinkflation related negative effects on brand reputation. In order to test our hypothesis, we propose a model with three constructs:

(i) *Brand perception* – the brand's perceived quality, usefulness, value and consumers' emotional attachment towards the brand (Aaker *et al*. 2003).
(ii) *Brand reputation* – consumers' admiration, respect and confidence in the brand (Keller, 2008).
(iii) *Consumer response* – brand perceived superiority, brand preference, and consumers' skepticism towards the brand (Dawar & Lei, 2009).

The proposed structural model and its constituents are presented in Figure 2.

Figure 2. The proposed structural model

We further assess the impact of shrinkflation by using and assessing the same structural model in three different scenarios:

(i) a 10% reduction in packaging, while price remains constant;
(ii) a 20% reduction in packaging, while price decreases by 10%;
(iii) a 10% increase in packaging, while price increases by 20%.

It must be noted that all of the above situations represent a case of shrinkflation and the 10% increment is significant and easy to understand and to assess by consumers in a controlled setting. In practice, such increments are difficult to observe and even harder to assess by consumers, especially if they are accompanied by "special promotional offers" or specific new package labeling or redesign. Because promotional effects associated with shrinkflation are not the object of our study, we did not provide samples of the products evaluated to our study participants.

The agro-foods industry is fitting for our research because, while not exclusive to this industry, shrinkflation is most often associated with food or drinks and less often to other categories such as cleansing products or body care products. We preferred dairy products because there are numerous brands in this category, product packaging is diverse and mainly functional, and products are sold in liquid, semi-liquid or solid form. Also, dairy products are consumed by most Romanians and are important in Romanians' dietary habits.

Our study included four products: milk, butter, yogurt and maturated cheese. Because we wanted to eliminate the halo effects of brand equity from the study, we only chose brands that are the market leader in their respective subcategory: K-classic milk, Albalact butter, Danone yogurts and Hochland matured cheese. Three other particularities must be noted:

(i) K-classic is a private label brand;
(ii) The market for matured cheese is hypersegmented;
(iii) Some brands are present in more than one subcategory of dairy products.

Despite these particularities, we consider that this type of heterogeneity does not have a significant impact on our study design and does not create an unspecified bias in the obtained results.

We collected data through a field study based on a questionnaire that evaluated each variable included in the model. Each questionnaire item was presented for each brand included in the study. The study included 386 undergraduate student respondents (53% male; 47% female) aged between 18 and 26 (M = 20.08; SD = 1.96). We discarded 26 questionnaires due to an excessive amount of missing data, thus retaining 360 valid answers.

4. RESULTS AND DISCUSSIONS

Based on Figure 2, we created four different structural models. A primary SEM refers to the initial situation where the packaging and price are unmodified, while three other SEMs reflect the three scenarios related to shrinkflation described in the previous section. In order to test the reliability and validity of each measure in the study we performed a confirmatory factor analysis for each variable.

First, we evaluated reliability by calculating composite reliability (CR) and average variance extracted (AVE). The highest CR value obtained was .91, while the lowest CR was .71, thus above the recommended threshold value of .70 (Chin, 1998). AVE values ranged between .66 and .88, thus being above the recommended threshold value of .60 (Afthanorhan, 2013). All measures also exhibit good internal consistency (CR\α > .80) over the recommended threshold of .70 (Afthanorhan, 2013). Therefore, all measures for each model display good psychometric properties.

We employed structural equation modeling (S.E.M.) using R-4.2.1, conceptualizing brand perception, brand reputation and consumer response as second order constructs. Factor loadings for the confirmatory factor analysis alongside the commonly used goodness of fit S.E.M. indicators for each proposed model are presented in Table 1. All models used are not nested models within one another.

In accordance to Wetzels *et al*. (2009), in the confirmatory factor analysis using all variables for each model analyzed, any random pair of two variables exhibits a higher average variance extracted than their related square correlation, thus establishing convergent validity.

On examination of the data regarding the basic model, we accepted our model as satisfactory. Each alternate model based on the three proposed scenarios has strictly poorer goodness of fit indicators compared to the basic model, while those indicators are above the minimum recommended threshold (Afthanorhan, 2013). Therefore, alternate models for each scenario are requisite considering the scope of our research. We present the structural coefficients corresponding to each pathway for all models alongside AIC / BIC in Table 2. All coefficients are standardized and are statistically significant (p < .01).

Table 1

Confirmatory factor analysis factor loadings and model goodness of fit measures

	Basic model	**Scenario I model***	**Scenario II model****	**Scenario III model*****
Brand Perception				
quality	.91	.88 **(25.63)**	.89 **(39.01)**	.85 **(36.02)**
usefulness	.88	.82 (18.32)	.80 (12.38)	.78 (10.17)
value	.89	.75 **(11.23)**	.75 **(14.29)**	.72 **(24.26)**
emotional attachment	.79	.77 (16.35)	.75 (5.63)	.70 (5.21)
Brand Reputation				
admiration	.87	.82 (56.36)	.79 (51.21)	.87 (47.09)
respect	.81	.86 (12.65)	.79 (42.28)	.76 (41.08)
confidence	.83	.82 (12.54)	.82 (17.59)	.80 (114.99)
Consumer Response				
superiority	.66	.71 **(23.32)**	.74 **(24.87)**	.72 (18.65)
preference	.69	.78 (6.30)	.76 (10.03)	.68 (14.56)
skepticism	.75	.61 **(29.63)**	.62 **(32.36)**	.63 **(36.56)**
$\chi 2$/d.f.	14.23	16.66	16.71	27.01
RMSEA	.03	.04	.04	.05
CFI	.98	.97	.97	.95

Notes: t-values for accuracy measurement analysis are presented in parenthesis; statistically significant t-values (p< .05) are presented in bold
*Scenario I - a 10% reduction in packaging, while the price remains the same;
**Scenario II - a 20% reduction in packaging, while the price decreases by 10%;
***Scenario III - a 10% increase in packaging, while the price increases by 20%
Source: Authors' own research results.

Table 2

S.E.M. pathway correlation coefficients and model comparison

	Basic model	**Scenario I model**	**Scenario II model**	**Scenario III model**
BP → BR (t-value)* R^2 (SMC)	.32 – –	.12 (17.63) .811	.23 (15.65) .843	.21 **(20.3)** .836
BR → CR (t-value)* R^2 (SMC)	.46	.63 **(28.36)** **21.36** .923	.60 **(25.63)** **22.45** .911	.55 **(17.56)** **24.63** .93.6
AIC	189.32	318.3	381.03	325.6
BIC	232.31	512	568.31	507.21

Notes: BP – Brand Perception; BR – brand reputation; CR – Consumer response;
*statistically significant t-values (p< .05) for accuracy measurement analysis are presented in bold;
Source: Authors' own research results

For the basic model ($\chi 2$/d.f = 14.23; RMSEA = .03; CFI = .98), all path coefficients are positive and statistically significant. This means that there is a direct and positive effect of brand perceptions on brand reputation for agro-food products (λ = 0.32) while there is also a direct and positive effect of brand reputation on consumer response for agro-food products (λ = 0.46). Also, the basic model presents significantly better AIC and BIC values compared to each of the other scenario-based models. Therefore, it is safe to conclude that hypothesis 1 and hypothesis 2 are both valid.

The proposed scenario-based models explain between 81.1% and 84.3% of the variation in brand reputation as a change in brand perception resulted from the proposed shrinkflation scenarios. The proposed scenario models explain between 91.1% and 93.6% of the variation in consumer response as a change in brand reputation resulted from the proposed shrinkflation scenarios.

All pathway coefficients for the three shrinkflation models are positive and statistically significant at $p < .05$ (see Table 2). Four t-value coefficients for pathway correlations are also statistically significant ($p< .05$). As a result, there are significant differences induced by different shrinkflation scenarios alongside the relationship between brand perception and brand reputation, respectively between brand reputation and consumer response. Notably, shrinkflation has a significant effect upon the relationship between brand reputation and consumer response in all analyzed scenarios (see Table 2). This effect is mainly due to the fact that shrinkflation increases skepticism towards brand claims in all three scenarios (t-value$_1$ = 29.63; t-value$_2$ = 32.36; t-value$_3$ = 36.56; $p < .05$) and reduces perceived brand superiority (t-value$_1$ = 23.32; t-value$_2$ = 24.87; $p<.05$). Therefore, consumers are actually less dissatisfied with a change of price for an item than an equivalent change of received quantity for the same product even in the scenario in which the price increases.

While shrinkflation diminishes product value in all three proposed scenarios (t-value$_1$ = 25.63; t-value$_2$ = 39.01; t-value$_3$ = 36.02; $p < .05$), it only affects the relationship between brand perception and brand reputation in the third scenario (t-value$_3$ = 24.63). This is due to a change in perceived value and perceived quality at brand level. However, when consumers face a 10% price gap between the cheapest and most expensive version of the same product, their perception of value also skews perceived quality.

Based on the aforementioned results, hypothesis three is partially supported, while hypothesis four is fully supported by our results.

5. CONCLUSIONS

Brand reputation has an important role in practice because it provides an evaluation basis for consumers' interactions with the brand. In this study, we have evaluated the impact of shrinkflation on brand reputation by analyzing brand perception and consumer response regarding three shrinkflation related scenarios for dairy products. We evaluated two scenarios with a reduction in packaging accompanied or not by a smaller reduction in price and a third scenario with a potential increase in packaging accompanied by an even larger increase in price.

From a marketing perspective, consumer upscaling can be a valid strategic objective, thus the presence of the third scenario. But results contradict the stakeholder theory predictions in this scenario. We showed that in reality people buy brands that they admire, but they will think twice when purchasing a product when their perceptions are skewed. Skepticism induced by shrinkflation awareness reduces their trust in the brand, thus affecting their respect and admiration towards the brand. Because consumers usually tend to depend on direct price information in order to reduce their perceived risks when making purchasing decisions, having a good brand reputation doesn't help companies alleviate the effects on shrinkflation. Therefore, "more product for greater costs" is not a valid strategy for improving profit margins.

From a theoretical standpoint, our study makes two important contributions. First, it shows that perceived value is severely altered by inflation due to the fact that consumers are actually less dissatisfied with rising prices than with diminished quantity. Secondly, it negates the rising perception that views packaging as a symbol of consumerism and of the "throw-away society". In the eyes and minds of consumers, "less is more" is simply not a valid approach when buying agro-food products. Companies that pursue an environmentally friendly approach to mask the effects of shrinkflation upon their products are simply viewed as dishonest and risk a decrease of their brand reputation. Therefore, transparency in terms of pricing and cost structure has become one of the most prominent demands of consumers nowadays.

The current study has significant contributions for brand management by providing empirical evidence that can enhance the understanding of effects related to events that skew brand perception. Our results partially demonstrate the commercial power of psychological "framing" (by finding only partial empirical evidence for hypothesis three), but fully demonstrate "the silver lining effect" of mixed signaling (by finding full empirical support for hypothesis four). In practice, it also seems critical for retailers to advertise price changes for each product in order to help consumers make more informed purchases.

At least two limitations of this study can be mentioned, which can also constitute venues for further research. First, our study is limited to agro-food products. However, in practice, a lot of different product categories (e.g. cosmetics) can be affected by shrinkflation-related practices. Secondly, brand reputation is based on consumers' perceptions about fairness and legitimacy in practice. Shrinkflation is a practice that increases the perceived unfairness of price increases and the perceived fairness of price decreases. But legitimacy claims are not built upon consumers' price sensitivity, but rather on brand equity. Therefore, the effects of shrinkflation upon brand equity should also be established.

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