

Consumers Sentiment Analysis - A Comparison of PLBs, National and MNCs Brands

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Abstract

Researchers and marketers investigate the consumer review data available from social media, blogs and product websites. The research is helpful to identify the market segments and add insights on online consumer behavioural characteristics. In this research, we compare consumer sentiments across the private label, national and MNC brands. To compute the level of consumer sentiment, we collect online consumer reviews from a product review website using text mining and assign a sentiment score for each review. The scores are compared for the private label brands (PLBs) vis-à-vis national and MNC brands. In addition, to broaden the understanding of PLBs, we compare online consumer reviews for regular as well as organic brands. The results show that PLBs have higher sentiment scores than national and MNC brands. In the comparison of regular and organic products, the sentiment scores are significantly higher for PLBs than national and MNC brands. Except for the organic beverages, the sentiment scores are better for the PLBs. The findings establish that PLBs' performance is better in the product categories studied. The results suggest that PLBs can be considered as a position defence strategy for retail chains and super/hypermarkets to tackle competition.

Keywords: Sentiment Analysis, Organic Products, Private Label Brands, eWOM, Text Analytics

Introduction

Indian markets are filled with multiple brands in the food and beverages categories. Private label brands (PLBs) in groceries and fashion accessories were launched in Indian markets in 2004. A report by KPMG (2020) shows that PLBs have gained significant market share in grocery (40%) and apparel (25%). To meet consumer expectations, many retail businesses predominantly depend on store brands' or PLBs' (e.g., Reliance Fresh and

More), and only a few retailers operate with a mix of PLBs, national and MNC brands. Due to their distinction and uniqueness, PLBs have lower acceptance in the beverages category (alcoholic and non-alcoholic beverages).

Similarly due to trust and reliability factors limit the entry and success of PLBs in the baby products category. Consumer studies address the motives, attitudes and purchase decision process of PLBs, and it has become an emerging domain of research in marketing and consumer behaviour. Consumer experimentation proves that PLB attributes are rated better than the attributes of the national brands (Olsen et al., 2011). Moreover, PLB shows a negative relationship between attitude and risk (Horvat & Dosen, 2013).

Introduction of new brands, addressing the niche needs, upward and downward brand extensions and

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line extensions are popular growth strategies used by marketers. If a store introduces a brand or line extension, it has a set of dynamics in consumer acceptance. A study on the branded commodity food product in the Indian context proves that brand image is an essential factor influencing product purchase (Kathuria & Gill, 2013). Brand or line extensions have their strengths and weaknesses. A study on upward line extension shows that the addition of premium sub-brand can alter consumers' perceptions about value, opinion about current brands and perception about the competition (Caldieraro et al., 2015). However, many retailers offer premium private labels to compete with national brands. Superior private labels suffer from the brand image perspective while competing with the national brands (Rossi et al., 2015).

Organic products are unique extensions that are relatively newer to the Indian markets, and many retailers have introduced premium extensions in addition to the regular PLBs. A comparison of conventional and organic food products shows no significant differences in the nutritional quality or the health outcomes of organic products against the traditional products (Woodbury & George, 2014). Another research on global green brand behaviour shows inconsistencies between consumer attitude and actual behaviour (Resnik & Koklič, 2018).

Studies based on online consumer reviews are useful to understand consumer behaviour about products or services. Research has focussed on review length, helpfulness of review and sentiment analysis from online consumer reviews. As an advancement, researchers are also focusing on the quality and genuineness of the reviews and fake or spam reviews (Fang & Zhan, 2015). A high degree of informality and specialized languages used in blogs and social media sites create constraints in applying text mining tools (Kouloumpis et al., 2011). A recent development in text mining is

the analysis of consumer sentiments from online sources. Sentiment analysis brings out people's opinions, attitudes or evaluations and emotions towards an entity (Rout et al., 2018). Researchers proved relationships between brand perception vis-à-vis battery life, screen quality, and operating system (Arora et al., 2015). Work on the message characteristics analyses the relationship between review length and sentiment associated with the message (Ghasemaghahi et al., 2018).

Analyzing the online reviews and computing the sentiment analysis for PLBs are infrequent research interests due to the computational requirements of the text data and access to the data itself. One research gap in the marketing literature is the study of the consumer sentiments for the traditional and organic products across the level of branding (PLBs, national and MNCs). We compare the consumer sentiments for the PLBs, National and MNC brands and later addresses a comparison on regular and organic products branding for the product reviews collected from the website of Amazon India.

Review of Earlier Studies and Hypotheses

Firms periodically analyze online reviews from social media sites and online product reviews sites to learn consumer behaviour and the competition. Reviewing online information sources has become a routine in consumer's information search stage. When a consumer browses the web for information, he is unsure about the focus and clarity in what he wants. However, firms should be aware that a consumer's information need is not tailor-made and the online sources cannot provide instant delivery of the needed information.

Theoretical Foundation for the Study

Branding, brand image and brand equity are central for any marketer to create a competitive advantage for a brand. It helps a firm to improve marketing-

based productivity and strategies (Keller, 1993). When a customer faces uncertainty, brands act as a signal and hence the marketers use them to create product positioning and credibility establishment (Erdem & Swait, 1998). Branding and brand equity are not concepts related exclusively to physical format alone. Studies in the online context show that brand equity moderates the relationship between online reviews and sales (e.g., Ho-dac et al., 2013). Firms use branding and brand extensions to reach out to more consumer groups and markets to improve their market share (Zeng et al., 2019). However, few research works have addressed online consumer reviews in the context of private label/national/MNC branding.

Role of eWOM in Purchase Decision

Identifying and using appropriate sources of information is not easy for consumers. A study result from online source usage suggests that voluminous details available online create more confusion than clarity in consumers' decision processes (Baek et al., 2012; Sturiale & Scuderi, 2013). In many instances, consumers may not understand the dynamics of online reviews. Product characteristics or consumer characteristics influence the message characteristics. Online reviews that are valuable and credible create a positive attitude towards online reviews. Customers rely on those online reviews for the purchase decision process (Mumuni et al., 2019). In addition, a systematic variation between social media presence and engaging in eWOM is reported (Anastasiu & Dospinescu, 2019). Despite lower presence on social media platforms, few consumers engage in negative word of mouth behaviour whenever they had a poor experience of the product. Application of a product review's usefulness in decision making varies with the utilitarian or hedonic nature of the product (Sen & Lerman, 2007). A new user or an occasional buyer cannot comprehend the nuances of the message

characteristics within a reasonable time.

Improving eWOM

However, firms may make systematic efforts to reduce the expectation-performance gap of using online information sources by the consumers. The online review system should inform about the expertise and trustworthiness of the reviewers to add review credibility to online consumers (Mumuni et al., 2019). To facilitate consumers' online decision process, firms should ensure that helpful reviews are readily available (Baek et al., 2012). Firms may encourage happy customers to create testimonials and referrals (Anastasiu & Dospinescu, 2019). A research finding shows that firms hire and employ people to post online product reviews, resulting in increased sales (Lin et al., 2018).

PLB Evaluation

Many retailers consider the introduction of Private labels as a strategy to tackle national and MNC brands (Narasimhan & Wilcox, 1998). PLBs had a weak positioning strategy in the past. Many PLBs are considered as cheap version of national brands or imitations of a national brands. Hence marketers of PLBs considered them a low-price band competitor for category leaders (Ailawadi, 2001). PLBs are often considered a downscaled extension to compete with national players (Ryan & Alexander, 2010). Intense competition from the leading brands is a determinant of PLBs competing power (Draganska & Klapper, 2007). Studies prove that number of PLBs in a category is positively related to the number of leading brands in that category (Narasimhan & Wilcox, 1998).

However, in recent years' marketers repositioned their PLBs. For instance, a few brands are repositioned as innovative products, whereas another set of brands re-launched in the premium category. A study result shows that even though consumers expect high quality from a PLB, they

have apprehension about its brand image (Rossi et al., 2015). However, sentiment analysis-based studies on PLBs and the comparison with a national or an MNC brand is a research gap in the marketing literature. Hence, we propose hypothesis H_1 to understand online consumer reviews of PLBs and a comparison with the national and MNC brands.

H₁: Mean sentiment scores of MNC brands, national brands and PLBs are significantly different from one another.

Brand Extensions-Organic Category

Brand and line extensions are popular strategies for marketers to leverage the power of a brand name. A line extension is an extension of the brand name to a new entrant in the same category. Researchers expect that line extensions will be less profitable than brand extensions because the line extension and the parent brands are in the same category (Carter & Curry, 2013).

In the Indian context, the introduction of organic versions of various products has changed the consumers' attitude. Organic line extensions are popular in the food category, and many firms introduce this upward extension to leverage brand equity (Caldieraro et al., 2015). Organic versions are of higher quality with a price premium and fit into the definition of an upward extension (Zeng et al., 2019). Studies on green or organic products have documented various aspects of consumer behaviour related to organic products. A consumer experiment on the organic product proves that the consumers will pay a higher price for the organic versions than the regular products (Krystallis et al., 2006). Another research work on organic products shows that consumers' willingness to pay price premiums depends on the credibility of the certifying agencies (Janssen & Hamm, 2012).

Analyses of consumer reviews and sentiment scores comparisons of regular and organic versions are not

documented in the marketing literature. To bridge this gap and to broaden the understanding of PLBs, we propose hypothesis H_2 .

H₂: Mean sentiment scores of MNC brands, national brands and PLBs are significantly different from one another for regular and organic variations.

Marketing literature classifies products as search and experience goods. Experience goods are dominated by attributes that cannot be assessed until someone uses them (Bei et al., 2004a). A study on the online information search behaviour of the consumers shows that a recommendation by others is an essential dimension of information search behaviour for experience goods (Bei et al., 2004b). Marketers bring brand-related news in the online brand communication mix to improve brand attitude (Micu & Pentina, 2015).

Purchasing organic products is affected by many factors, including the social and individual values of the consumers (Vlachos & Georgantzis, 2016). Another study related to the attitude and behaviour gap of buying organic products suggests that the importance attached to the motives and barriers varies with product categories (Padel & Foster, 2005). A specific study on PLBs and organic versions of PLBs brand positioning show that organic products are positioned below the national brands and above the non-organic versions of the PLB brand (Górska-Warsewicz et al., 2018). Hence, in general, organic brands have better positioning in terms of quality and price.

To understand the consumers' perception towards PLBs and organic versions of the PLBs, we formulate hypothesis H_3 on the sentiment scores variations across the versions and brands.

H₃: Mean sentiment scores of MNC brands, national brands and PLBs are significantly different from one another for regular and organic variations as well as for the products.

Research Methodology

Using online product reviews of consumers, this research aims to bring out sentiment score associated with three-experience category products, viz., beverages, ghee, and honey. Signalling is an essential aspect of consumer decisions, especially for the experience category, where the product quality is not readily available (Inés López-López & Parra, 2016). Specifically, the sentiment score variations of national brands, international brands and PLBs are studied for the three products. Besides, these categories have specific upward line extension organic, and the sentiment scores are compared between the regular and organic variations. The organic variety has been offered with a price premium and fits into the definition of the upward line extensions (Zhang, 2017). This study addresses the level of acceptance in the market for organic extensions by analyzing the sentiment scores, which is unique in the Indian context. From online consumer reviews, we collect the review text. We have added additional information like branding (national or PLB or MNC) and version (regular

offering or organic) in the reviews. Thus, this study could be classified as formal and descriptive (Cooper & Schindler, 2002).

To test the hypotheses, we collected consumer reviews for beverages, ghee and honey; samples were collected from regular and organic versions so that comparisons could be possible across the categories. Amazon India provides free sample reviews written by consumers, and scrappers are available to scrap up to 30% to 40% of the reviews available or a maximum of 3000 reviews. The purposive sampling method enables us to collect samples/reviews from the website using Google Chrome Scrapper. Beverages constitute 55 per cent of the samples, and the rest is taken from honey (22%) and ghee (23%). Regular products include 45 per cent of the sample size, and the rest are organic products. Table 1 summarises the sample details. The product categories are further divided into regular and organic based on the claim by the manufacturer/marketer of the brand. Table 2 summarises the brands and classification details across the product category chosen for analysis.

Table 1: Classification of Sample Reviews

Brand			Class		Total
			Regular	Organic	
International	Category	Beverages	2637	6836	9473
		Honey	74	113	187
		Ghee	60	163	223
	Total		2771	7112	9883
National	Category	Beverages	413	1026	1439
		Honey	757	1281	2038
		Ghee	2927	282	3209
	Total		4097	2589	6686
Private Label	Category	Beverages	586	106	692
		Honey	671	1814	2485
		Ghee	1492	147	1639
	Total		2749	2067	4816
Total	Category	Beverages	3636	7968	11604

		Honey	1502	3208	4710
		Ghee	4479	592	5071
		Total	9617	11768	21385

Table 2: Summary of Brands

Category	Classification	Brands
Ghee	Regular	Nandini Pure Ghee, Nestle Everyday Ghee, Patanjali Cow's Ghee, GRB
Ghee	Organic	AMOREARTH, Brij Gwala, Brijmohan, Gau Organic, Gits Pure, Indicow Organic Dairy, Isha Vasyam A2 Ghee, Shree Radhey Gir Cow Ghee, Trihoot Cow Ghee, Umanac Organic, Vanalaya Organic
Honey	Regular	Al Qusai, Dabur Honey, DYU Honey, Forever Living Products, Honey and Spice Wild Honey, Zandu Pure Honey
Honey	Organic	Bare Elixir Organic, DADEV Organic, First Bud Organics, Hi Honey, INDIGENOUS HONEY, Organic India, VANTATTVA, Wnature Organic
Beverages	Regular	Bournvita, Horlicks, Horlicks Health, Brooke Bond Red Label, Brooke Bond Taj Mahal, Nescafe Classic, Tata Tea Agni
Beverages	Organic	Lipton Honey Lemon, Lipton Pure Light, Organic India Tulsi, Tetley Green

Pre-processing the data

We use R-Studio and plugins like tm, wordcloud, wordcloud2 and sentimentr to pre-process the text data. In line with earlier studies, the text columns – review and header of the review – are treated for the data cleaning process (Al-Otaibi et al., 2018; Gaikar & Marakarkandy, 2015). This process includes removal of punctuations/ special characters/ numbers/ symbols, lowercasing the words, removal of stem words and blank spaces. In R-Studio, using these packages and the command 'gsub', the data were cleaned.

Computing Sentiment Score and Review Length

Once the pre-processing is completed, the comments are simple plain English. Through another plugin sentimentr, we computed the sentiment scores for each customer review and stored them back in the

respective row. However, for our research purpose, we use only the sentiment score of the review comments. These computed variables are added back to the original dataset for further analysis.

Results

To compare means of the sentiment scores of three levels of branding, we use One-way ANOVA with the reviews' sentiment scores as the dependent variable and the level of branding as the factor variable. Results from the One-way ANOVA confirm that mean sentiment scores are higher for PLBs than the national and international brands. Thus, the result supports hypothesis H1, that the sentiment scores vary significantly across the brands. Further, post-hoc tests like Duncan Range Test and Tukey Test confirm that the means are significantly different from one another. The results are summarised in Table 3 and Table 3A.

Table 3: Consumer Sentiment Across Branding

Brand	Number of Reviews	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		F Ratio (sig.)
					Lower Bound	Upper Bound	
MNCs	9883	0.4514	0.3591	0.0036	0.4443	0.4585	165.572 (0.000)
National	6686	0.4258	0.3969	0.0049	0.4162	0.4353	
Private Label	4816	0.5574	0.4782	0.0069	0.5438	0.5709	
Total	21385	0.4672	0.4035	0.0028	0.4618	0.4726	

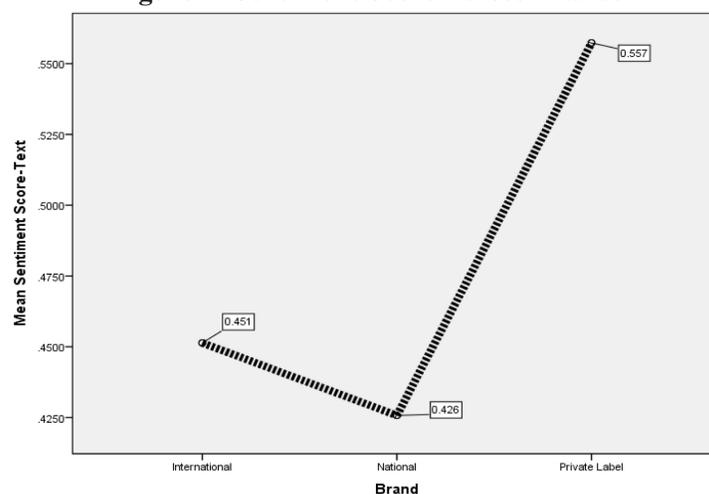
Table 3A: Post-Hoc Test Results: Consumer Sentiment Across Branding

Post Hoc Test	Brand	Number of Reviews	Subset for alpha = 0.05		
			1	2	3
Tukey HSD ^{a,b}	National	6686	.425748		
	International	9883		.451375	
	Private Label	4816			.557335
	Sig.		1.000	1.000	1.000
Duncan ^{a,b}	National	6686	.425748		
	International	9883		.451375	
	Private Label	4816			.557335
	Sig.		1.000	1.000	1.000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 6544.627.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Figure 1: Sentiment Score Across Brands

Higher sentiment scores for PLBs are a welcoming finding for the marketers of PLBs. The mean sentiment score of PLBs is higher, despite a good market share captured by national and MNC brands. National and MNC brands' sentiment scores are closer to each other and are significantly lower than PLB scores, which prove the underperformance of these brands in the chosen product category (beverages, ghee and honey).

To compete effectively in the pantry segment, many firms introduce a niche upward category extension, organic. The brands and the reviews are analyzed across the category variations – Regular and Organic to broaden the understanding of the online consumer evaluations. The One-way ANOVA results support the hypothesis H2 on the sentiment scores variations across the regular and organic versions in the category. Further, post-hoc tests like Duncan Range Test and Tukey Test confirm that the means of brands in the respective category are significantly different from one another. The

results are summarised in Table 4A and Table 4B. The sentiment scores vary significantly across the brands for both categories – Regular brands as well as Organic brands. Surprisingly, PLBs do better and have better sentiment scores than the national and MNC brands in the regular as well as organic versions.

In this range of products, there is tough competition between the national and the MNC brands. To compete effectively with the limited resources and gain a competitive advantage, PLBs introduce niche versions like Organic forms. From the sentiment scores, it is evident that PLBs have gained significant acceptance from the consumers and could fulfil their expectations, which has caused higher sentiment scores than that of the national and MNC brands. Thus, organic could be a niche category to tackle the competition from giant MNCs and national players, and PLBs performance has carved a unique position in the consumers' memory.

Table 4: Consumer Sentiment Across Brands & Category

Category	Brand	Number of reviews	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		F Ratio Sig.
						Lower Bound	Upper Bound	
Regular	MNCs	2771	0.4282	0.3713	0.0071	0.4143	0.4420	38.743 (0.000)
	National	4097	0.3867	0.4193	0.0066	0.3739	0.3995	
	Private Label	2749	0.4752	0.4296	0.0082	0.4592	0.4913	
	Total	9617	0.4240	0.4107	0.0042	0.4158	0.4322	
Organic	MNCs	7112	0.4604	0.3538	0.0042	0.4522	0.4686	230.182 (0.000)
	National	2589	0.4876	0.3498	0.0069	0.4741	0.5010	
	Private Label	2067	0.6665	0.5165	0.0114	0.6442	0.6888	
	Total	11768	0.5026	0.3940	0.0036	0.4955	0.5097	

Table 4A: Post-Hoc Test Results: Consumer Sentiment Across Brands & Regular Category

Post Hoc Test	Brand	Number of reviews	Subset for alpha = 0.05		
			1	2	3
Tukey HSD ^{a,b}	National	4097	.386695		
	International	2771		.428171	
	Private Label	2749			.475240
	Sig.		1.000	1.000	1.000
Duncan ^{a,b}	National	4097	.386695		
	International	2771		.428171	
	Private Label	2749			.475240
	Sig.		1.000	1.000	1.000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3096.837.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Table 4B: Post-Hoc Test Results: Consumer Sentiment Across Brands & Organic Category

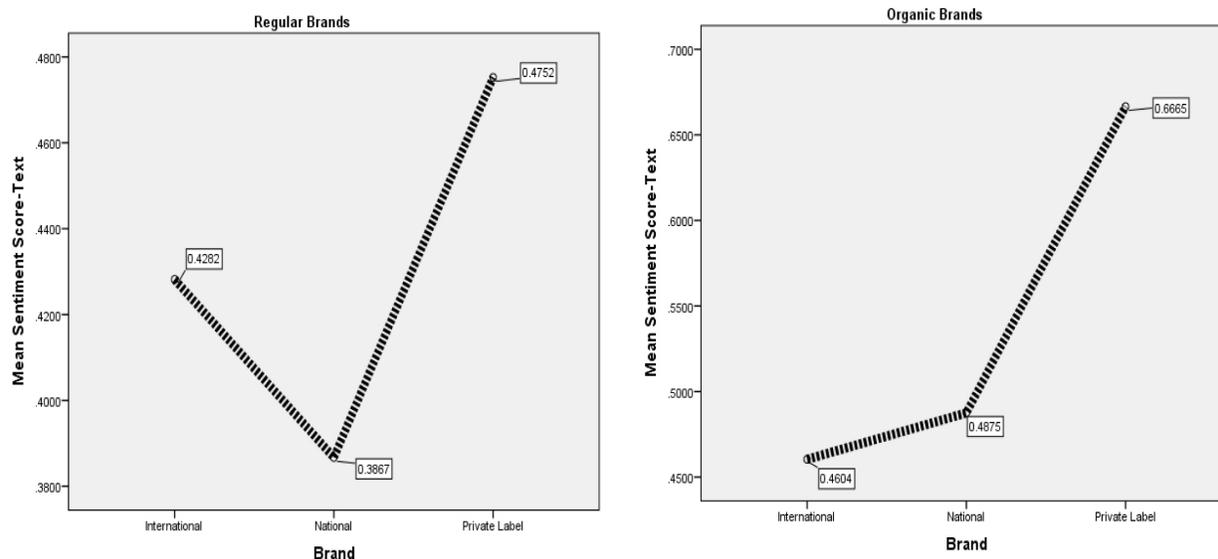
Post Hoc Test	Brand	Number of reviews	Subset for alpha = 0.05		
			1	2	3
Tukey HSD ^{a,b}	International	7112	.460416		
	National	2589		.487550	
	Private Label	2067			.666519
	Sig.		1.000	1.000	1.000
Duncan ^{a,b}	International	7112	.460416		
	National	2589		.487550	
	Private Label	2067			.666519
	Sig.		1.000	1.000	1.000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 2968.387.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Figure 2: Sentiment Score Across Category



We repeated the One-way ANOVA procedure across three product categories: beverages, honey, and ghee for the regular and organic versions to better understand consumers' sentiment scores. The results of the ANOVA support hypothesis H3. The mean sentiment scores for the products vary significantly across the brands and within the versions (regular/organic). Further, post-hoc tests like Duncan Range Test and Tukey Test confirm that the means of brands in the respective category are significantly different from one another. The results are summarised in Table 5A, Table 5B and Table 5C.

However, the results show wide variations in the sentiment scores. For the regular versions of beverages, PLBs have better mean sentiment scores than national and MNC brands, but the results are reversed in organic versions. For the organic and the traditional honey brands, PLBs and MNC brands have better sentiment scores than the national brands. Again, for the organic and regular ghee, national brands and PLBs have better sentiment scores than the MNC brands.

Table 5: Consumer Sentiment Across Brands, Category & Segment

Segment	Category	Brand	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		F-Ratio (Sig.)
							Lower Bound	Upper Bound	
Regular	Beverages	MNCs	2637	.424183	.3604949	.0070201	.410418	.437948	213.636 (0.000)
		National	413	.085224	.3935469	.0193652	.047157	.123291	
		Private Label	586	.530177	.2578151	.0106502	.509259	.551094	
		Total	3636	.402764	.3699981	.0061360	.390734	.414795	
	Honey	MNCs	74	.702432	.5080902	.0590643	.584717	.820147	17.552 (0.000)
		National	757	.500845	.4365862	.0158680	.469695	.531996	
		Private Label	671	.635753	.5050021	.0194954	.597473	.674032	
		Total	1502	.571045	.4770763	.0123099	.546899	.595192	
	Ghee	MNCs	60	.265167	.4742719	.0612282	.142649	.387684	3.931 (0.020)
		National	2927	.399710	.3983411	.0073628	.385273	.414146	
		Private Label	1492	.381475	.4215991	.0109148	.360065	.402884	
		Total	4479	.391833	.4075765	.0060900	.379894	.403772	
Organic	Beverages	MNCs	6836	.456278	.3490554	.0042218	.448002	.464554	102.537 (0.000)
		National	1026	.520386	.3020265	.0094291	.501883	.538888	
		Private Label	106	.023150	.2747620	.0266872	-.029766	.076066	
		Total	7968	.458771	.3468111	.0038852	.451155	.466387	
	Honey	MNCs	113	.783097	.4614420	.0434088	.697088	.869106	124.021 (0.000)
		National	1281	.469016	.3785232	.0105759	.448268	.489764	
		Private Label	1814	.723760	.5040135	.0118338	.700550	.746969	
		Total	3208	.624127	.4736541	.0083627	.607730	.640524	
	Ghee	MNCs	163	.410245	.3606132	.0282454	.354469	.466022	0.711 (0.492)
		National	282	.452270	.3669677	.0218526	.409254	.495285	
		Private Label	147	.424082	.4071093	.0335778	.357720	.490443	
		Total	592	.433699	.3754433	.0154306	.403394	.464005	

Table 5A: Post-hoc Tests Summary: Consumer Sentiment Across Brands, Category & Segment

Regular-Beverages						Regular-Honey				
Post Hoc Tests	Brand	N	Subset for alpha = 0.05			Post Hoc Tests	Brand	N	Subset for alpha = 0.05	
			1	2	3				1	2
Tukey HSD ^{a,b}	National	413	.085224			Tukey HSD ^{a,b}	National	757	.500845	
	Inter-national	2637		.424183			Private Label	671		.635753
	Private Label	586			.530177		Inter-national	74		.702432
	Sig.		1.000	1.000	1.000		Sig.		1.000	.365
Duncan ^{a,b}	National	413	.085224			Duncan ^{a,b}	National	757	.500845	
	Inter-national	2637		.424183			Private Label	671		.635753
	Private Label	586			.530177		Inter-national	74		.702432
	Sig.		1.000	1.000	1.000		Sig.		1.000	.176
Means for groups in homogeneous subsets are displayed. a. Uses Harmonic Mean Sample Size = 665.630. b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.						Means for groups in homogeneous subsets are displayed. a. Uses Harmonic Mean Sample Size = 183.769. b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.				

Table 5B: Post-hoc Tests Summary: Consumer Sentiment Across Brands, Category & Segment

Regular Ghee					Organic-Beverages						
Post Hoc Tests	Brand	N	Subset for alpha = 0.05		Post Hoc Tests	Brand	N	Subset for alpha = 0.05			
			1	2				1	2	3	
Tukey HSD ^{a,b}	Inter-national	60	.265167		Tukey HSD ^{a,b}	National	413	.085224			
	Private Label	1492		.381475		Inter-national	2637		.424183		
	National	2927		.399710			Private Label	586			.530177
	Sig.		1.000	.911			Sig.		1.000	1.000	1.000
Duncan ^{a,b}	Inter-national	60	.265167		Duncan ^{a,b}	National	413	.085224			
	Private Label	1492		.381475		Inter-national	2637		.424183		
	National	2927		.399710			Private Label	586			.530177
	Sig.		1.000	.680		Sig.		1.000	1.000	1.000	
Means for groups in homogeneous subsets are displayed. a. Uses Harmonic Mean Sample Size = 169.697. b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.					Means for groups in homogeneous subsets are displayed. a. Uses Harmonic Mean Sample Size = 284.228. b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.						

Table 5C: Post-hoc Tests Summary: Consumer Sentiment Across Brands, Category & Segment**Organic Honey**

Post Hoc Tests	Brand	N	Subset for alpha = 0.05	
			1	2
Tukey HSD ^{a,b}	National	1281	.469016	
	Private Label	1814		.723760
	Inter-national	113		.783097
	Sig.		1.000	.255
Duncan ^{a,b}	National	1281	.469016	
	Private Label	1814		.723760
	Inter-national	113		.783097
	Sig.		1.000	.115

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 294.653.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Organic Ghee

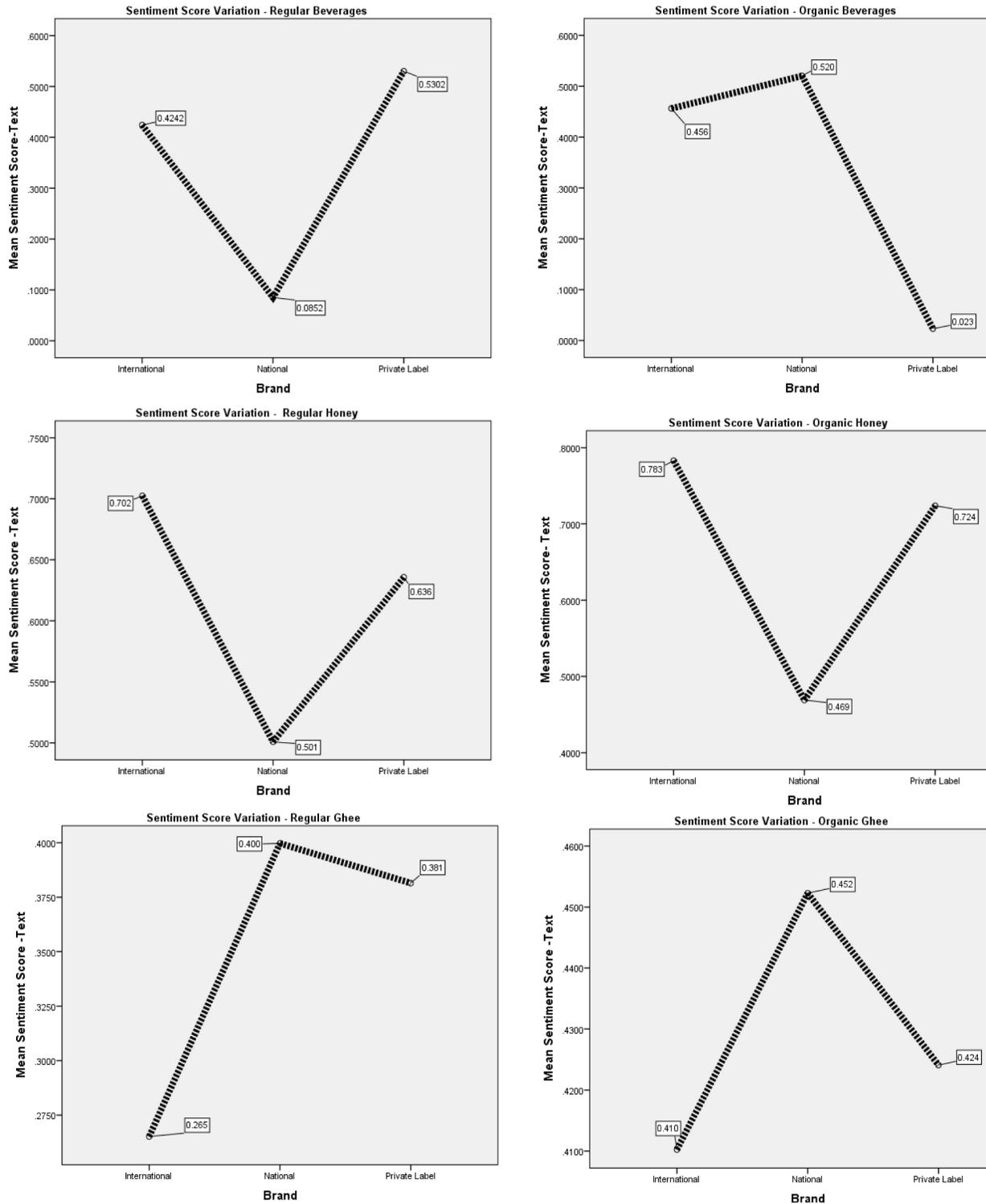
Post Hoc Tests	Brand	N	Subset for alpha = 0.05	
			1	2
Tukey HSD ^{a,b}	International	163	.410245	
	Private Label	147	.424082	
	National	282	.452270	
	Sig.		.535	
Duncan ^{a,b}	International	163	.410245	
	Private Label	147	.424082	
	National	282	.452270	
	Sig.		.318	

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 181.997.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Figure 3: Sentiment Score Across Variations



Discussion

Several pieces of research have reported competition from the local brands, but no depth research informs about the success factors, comparisons with MNCs or national brands (Chernatony et al., 1995; Douglas et al., 2001; Holt et al., 2004). In this research, we addressed the research gap by analyzing the sentiment scores of these brands. We also compared the sentiment scores across PLBs, national brands and MNC brands. The analysis shows that consumers assign higher sentiment scores for PLBs than MNCs and national brands. Higher sentiment scores are considered as reflections of performance, quality and acceptance (Ozsomer, 2012). A study result on the message characteristics proves that sentiment scores are proxy for customer satisfaction (Al-otaibi et al., 2018).

By combining findings from earlier studies and current results, we argue that PLBs have a significant level of satisfying consumer segment and prove their presence in the competition. Researchers of online reviews argue that higher sentiment scores will result in a higher likelihood of buying PLBs (Ozsomer, 2012), and positive reviews have a greater degree of impact on the attitude towards the review and purchase intention (Wang et al., 2015). From these arguments and study findings, we argue that PLBs have a more significant role in the competition, and the national and international brands are expected to develop strategies to tackle these niche players.

Brand and line extensions are popular strategies to unleash a brand's power. Firms use upward line extension as a strategy to fight competition as well as to get profits. This study compared organic versions, which is an upward line extension, with regular ones. In the Indian subcontinent, many marketers introduced organic extensions and have been successful in the market. A comparison of the

local and international brands shows an interesting dimension, viz., local iconness (Steenkamp et al., 2003). The local iconness is defined as a brand's ability to symbolize the value, need and aspiration of the local community. In contrast, some studies have shown that consumers may prefer brands with local connections, and some argue that there is no intrinsic consumer preference for international and global brands (Mooij & Hofstede, 2002).

Recent empirical studies have demonstrated that prestige is the second important factor driving a global brand's preference over the other brands in the category (Steenkamp et al., 2003) (Holt et al., 2004). In the current research, we have not only compared PLB against national and MNC brands; a niche connects to the Indian context and the category organic is also studied. The results are encouraging for the local players, where better sentiment scores are found for the regular as well as organic PLBs than national and MNC brands.

Comparing the earlier research with the present study outcomes of PLBs sentiment scores, we conclude that PLBs do better in the regular as well as organic versions. The results clearly show a preference for PLBs, which may be due to their trust-based attachment and emotional bonding by the consumers.

Studies address the sentiment scores and variations in the sentiment scores among the industries, services and brands. One such study has reported that consumer services industries the highest negative sentiment scores among the industries sampled (Hu et al., 2017). However, the results from online reviews are favourable and encouraging for the green product category. The findings from a global green brands sentiment analysis study using Twitter reviews revealed that the number of positive tweets exceeded the number of negative tweets for the 26 green brands studied (Resnik & Koklič, 2018).

Thus, we expect the sentiment scores to vary across products, and the results confirm the same. Honey has better sentiment scores in the regular as well as organic versions than other products. Traditional and organic versions of ghee and beverages have very similar sentiment scores.

Organic products are not only associated with higher sentiment scores; there is a significant relationship between consumer attitude towards organic brands and purchase intentions (Kathuria & Gill, 2013). The sentiment analysis of reviews for beverages, ghee, and honey generates an important outcome, encouraging PLBs. Except for the organic beverage category, the performance of PLBs is highly commendable in the product categories studied.

In recent times, consumer awareness of environmental concern is growing, influencing purchase decisions (Joshi & Rahman, 2015). As sentiment scores are better for PLBs than for the national and MNC brands, the marketers should create suitable campaigns with themes on environmental awareness and concern. Better sentiment scores for PLBs prove that local brands have a better understanding of the specific requirements of the local customer segment, unlike the standardized offering from national or MNCs across the countries.

Implications for Marketers

As the consumers continuously generate product or service reviews and opinions through various social media platforms and blogs, mega databases and voluminous online information are available to the consumers as well as marketers. Identification of meaningful patterns or positive/negative/neutral reviews is challenging task for many users. Product- and brand-related information has the potential to influence consumer decisions and sales volumes. Marketers will benefit from the information sources by close monitoring and periodical feedbacks. This

process will help marketers monitor the changes, develop a better understanding of the brand and the competition, and establish a competitive advantage for sustained growth.

The results show variations in the sentiment scores across branding, versions (regular and organic) and products. PLBs sentiment scores are better despite cutthroat competition from the national and MNC brands. The organic category is gaining particular attention in recent times as a niche segment. The higher sentiment scores for various organic versions in the PLBs are signs of a dominant presence of PLBs in the competition. Marketers of regular as well as organic PLBs have to be more vigilant to face the game from the national and MNC brands.

In all products chosen for the study and versions, MNCs are evaluated better. Moreover, the mean sentiment scores vary significantly across beverages, honey and ghee. In the beverage category, regular brands do better than organic versions, and the sentiment scores have high variations. Organic PLB honey receives better sentiment scores than national brands and other traditional versions. In ghee, the national players received better sentiment scores for regular as well as organic variations.

Research Implications/Contributions

Analyzing online reviews and gaining consumer insights has become a popular method of understanding aggregate consumer behaviour. In the past, marketing researchers were constrained by accessing and analyzing unstructured text data. Earlier studies focused on text mining concepts and algorithms development. Penetration of open-source text analysis software provides a significant advancement in accessing and analyzing unstructured data. This research on understanding consumer evaluations of brands from online reviews illustrates methodological approach to analyze unstructured data in marketing/eWOM contexts.

Very few studies are conducted in the context of search and experience goods. We addressed this research gap by analyzing consumer evaluations from online review data for the experience goods category. The findings of experience goods and brands provide a broader understanding of brand performance in the Indian context. Green products and organic formulations are a buzzword in the marketing domain. There is a growing acceptance of an upward brand extension in PLBs. The success stories of the PLBs from online sources can be combined to get better insights on PLBs performance. Using online user-generated data in researches could emerge as a newer methodological approach to understand PLBs.

Conclusion

The results have brought an important dimension of competition in the pantry segments by analyzing sentiment scores. An earlier study on the sentiment analysis from online reviews of consumers suggests that sentiment scores could be viewed as satisfaction with products or services (Al-Otaibi et al., 2018). The results substantiate the positive consumer acceptance of regular as well as organic versions from PLBs. Further, we expect that PLBs will have patronage and loyal consumers segments from the higher sentiment scores. Positive and pleasant online reviews potentially have a higher likelihood of purchasing of a brand or service (Guo et al., 2020). The results have found better sentiment scores for regular and organic segments of PLBs, which suggest that consumer acceptance of PLBs and their satisfactory performance against national and MNC brands.

The study also zed the niche extension of PLBs organic versions through consumer sentiment scores; not only are PLBs regular brands have higher sentiment scores, but the organic extensions also have higher sentiment scores. An earlier study

on sentiment scores suggests that sentiment scores as an image fit index for a brand (Carter & Curry, 2013). Hence, the marketers of organic PLBs may consider the higher sentiment scores as an image fit measure and successful extension of PLBs in the premium category.

In general, global brands have a higher perceived quality and prestige value for the consumers (Barone et al., 2000; Rosenbloom et al., 2009). Moreover, from the strategic dimension, when the consumer acceptance of a brand is higher, it would result in a higher acceptance of its extensions as well (Blomquist & Holm, 2004). The higher sentiment scores in this study associated with PLBs organic extensions could be considered as accepting parent brand (regular versions) and prestige value positioning by the organic extensions. Thus, the results provide a welcoming situation prevailing in the market and feedback for the marketers.

Limitations and Future Research Directions

Due to the social media policy of a particular website, studies based on consumer reviews have limited access to consumer demographics. In developing countries like India, consumer demographics could provide focused, actionable findings for the firms. This research is also constrained in terms of accessing demographic data. Another limitation in data collection is accessing the user's purchase status. Reports suggest the existence of specialized consumer segments, which predominantly use online shopping for specific product categories exclusively. Many online product review websites do not provide access to such information.

A study on offline consumers suggests that mood affects systematic information processing and tends to influence the buyer during shopping (Guo et al., 2020). Developments in text mining facilitate retrieve the consumers' moods from the data.

The mood of the consumers can be computed by segregating the positive and negative words in the reviews. Consumer mood may be considered as an antecedent and its influence on sentiment could be analyzed. Since the current study predominantly uses experience products, future studies can focus on search goods and contents from specific line extensions of the search goods.

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