MICHIGAN ROSS

Search Term-Intention Congruency in Brand-Ubiquitous Categories and Private Label Receptiveness on the Digital Shelf

by

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Abstract

This paper explains and examines online consumer behavior in brand-ubiquitous categories – categories where brand names are so well-known within the category to the point of becoming synonymous with the generic product name in consumers' minds. The study tries to discern a relationship between consumer search behavior and the likelihood of private label purchase within these categories through a survey (n = 402) simulating an online purchasing environment and analyzing what search terms consumers used, what they were interested in purchasing, and what they ultimately purchased when given a choice between branded and private label products in three categories: bandages, cotton swabs, and dental floss. While much research exists on the factors influencing private label purchase propensity, there has been little to no research conducted within the brand-ubiquitous category space, which alters consumer search behavior significantly, as shown by this study. The study shows support for *search-term intention incongruency* in these categories (where consumers are using the brand name to search for the generic product in these categories). It also shows significant evidence to support a relationship between this incongruency and propensity to consider private label but does not adequately support a similar relationship between incongruency and private label purchase. Implications of these results are discussed, particularly considering search engine relevancy and brand loyalty.

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Introduction

Imagine you have a cut on your finger. Years of running to our parents to solve our problems for us have taught us that the answer is simple; you need a Band-Aid. Most consumers in America would likely react in the same way – they would reach for a Band-Aid to cover up a scrape. If they got the cut while writing out an idea they had, they might have been using a Post-It Note that they took out from a Ziploc on their desk.

Savvy marketers will recognize the chain of products listed here to be brand-ubiquitous products; brands that are so well-known within their categories that they have come to represent the category entirely in the minds of consumers (Gordon, 2020). Indeed, brand-ubiquitous categories make for a truly fascinating marketing study; they are the brand manager's ultimate goal, to have consumers think of your product first and automatically when a need arises. Band-Aid brand adhesive bandages are perhaps the best example of such a successful marketing strategy; first produced in 1920, band-aids were produced by a Johnson & Johnson cotton buyer for his wife as a quick home remedy to manage cuts while preparing food and consisted simply of a piece of cotton and a separate piece of tape (Bellis, 2019). A century later, these products are a household essential, produced by many manufacturers under many different brand names. Even so, while the generic product name is *adhesive bandage,* most Americans know it as a Band-Aid, and refer to all adhesive bandages as such regardless of whether it was produced by J&J or not.

Brand-ubiquitous categories make for a fascinating study as consumers' shopping behavior changes in different purchasing channels. Band-Aids and Q-Tips, for example, find themselves in unique situations where physical retailers like Walgreens and Meijer carry private labels with copy-cat packaging side by side with the branded products at significant price differentials in an attempt to lure consumers to purchase their private label products.

Examples acquired from Walgreens and Meijer in South Eastern Michigan, October 30th, 2020.

In these in-store cases, it is difficult to determine whether a consumer is searching for the category or a specific brand, but in either case, they see both private labels and national branded products in store. This, however, becomes more complex in an online environment. While private labels in brand-ubiquitous categories are inevitable in physical retail environments, their presence (and other brand competitors') on the digital shelf depends on what the consumer searches for in the retailer's search engine. On the digital shelf, the consumer considers only the first few products served (Lewis, 2020), and the search engine must place the most relevant products on the shelf first, which depends on the search engine's ability to properly interpret the consumer's search intentions using just their search terms. In other words, when a consumer types "bandaids" into the search bar, the search engine must figure out, are they looking for "Band-Aid brand bandages" or just "bandages"? Depending on this, each search term will yield different results and will influence the consumer's ultimate purchase decision. Our task in this study is to better understand this phenomenon and discuss its implications for brand and retail managers in online purchasing environments.

Background and Review of Literature

Brand-Ubiquitous Product Categories: What are they?

Brand-ubiquitous categories are known by several different terms, including category-synonymous brands, proprietary eponyms, generic trademarks, and many others. These terms all refer to the phenomenon of when a brand's trademark becomes so widely known within a category that the trademark becomes synonymous with the category itself (Gordon, 2020). Note that according to US common law, trademarks typically identify and distinguish the source of goods of one party from those of others (USPTO), meaning that brand names are valued and protected under marketing law as an identifier of the entity that produces the product. However, in the case of brand-ubiquitous categories, consumers come to denote the brand name or trademark with the generic product or the category as a whole, rather than the specific source itself. In recalling the brand name, consumers do not recall the company or the source of the product, but rather the generic product itself without an association to the source.

Interestingly, it is the goal of every brand manager to have such a high degree of familiarity with consumers that they think of the branded product every time they have a need for the product – known as unaided brand recall (Baumann, et. al. 2015) – but in reality, this level of category-ubiquity has severe implications for brands, particularly when it comes to legal trademark protection and the process known as *genericide.* Once a brand name becomes synonymous with the category or with the generic product, the brand name may be legally declared a generic term and cause the brand name to be *genericized*. The case is dire for legacy brand managers – it means that the brand loses legal trademark protections (a generic term cannot be trademarked) and leaves the mark open for other competitors to begin using in their marketing communications. In this case, the value afforded to the trademark through the

marketing activities and brand associations is entirely lost for the original owner of the brand as it enters the market as a generic product term, resulting in lost value (Oakenfull & Gelb, 1996).

Examples of this phenomenon include Cellophane and Thermos. These are both brand names and legally protected trademarks in the US, but most consumers have a difficult time naming the generic product name to which each of these brands are applied. Cellophane is in fact a brand of cellulose sheet (cling wrap) manufactured by Futamura Chemical UK Ltd., while Thermos was the first vacuum-insulated flask invented by Thermos, LLC (Quirk, 2014).

Oakenfull and Gelb provided a framework in 1996 applying Loftus's concepts for brand and category associations that helps us understand what happens in consumers' minds when brands are genericized. Using a theory that is later explained in literature as neural network associative models, Oakenfull and Gelb base their framework on the notion that consumers create mental maps and associations where brands are stored within existing contexts, such as product categories. References to the product category should prompt thoughts of the brand and vice versa. This is known as category and instance dominance – where category dominance is the strength of the directional association from a product category to a brand (I say razors and you immediately think of Gillette) and instance dominance is the strength of directional association from brand to product category (I say Ziploc and you immediately think of plastic bags). However, the strength of these links in one direction could be different from the other direction, creating asymmetries. In instances of high category dominance and low instance dominance, the brand name has no real link to the product category for the consumer but the product category prompts strong and immediate thoughts of the brand. In this case, the brand is seen as ubiquitous within its category and at risk for genericide (Oakenfell & Gelb, 1996).

While there are many important implications of brand-ubiquitous categories to consumer purchase behavior, genericide is primarily a legal phenomenon. The Lanham Act of 1846 precludes the branding of generic marks, which are known as any common descriptive word of any article. Thus, brands are not able to trademark words that have entered the general public's vocabulary – the legal test to determine when this has occurred was established in the famous case Kellogg Co. v. Nabisco Biscuit Co. [(1938), 305 US 111, 118, 39, USPQ 296, 299] where Kellogg lost its right to the exclusive use of the phrase "shredded wheat." The legal test established from this case is known as the Public Perception Approach, where firms seeking to protect their trademarks must "show that the primary significance of the term in the mind of the consumer is not the product, but the producer." If the firm fails to prove this through consumer surveys and other market research means, the term is genericized and released for public use (Oakenfell & Gelb, 1996).

Trademarks are not genericized equally around the world – it is typically seen as a market-specific phenomenon. For example, brands like Xerox and Sharpie are genericized and found in regular speech by Americans, but for Australians, these brands still denote specific producers of photocopying machines and permanent markers (Blecher, et. al. 2015).

While genericide is the extreme case of brand-ubiquitous categories, the more interesting study for this paper lies in the case where brands are not yet genericized; when the brands come to denote both the source and the product category itself, owing to a high degree of familiarity with the brand. In these cases, advertising by the seller with the category-ubiquitous trademark brand results in spillover effects, where advertising spend that is meant specifically for the brand results in sales lifts for the entire category of products, and where consumer confusion may become a barrier to competition in the market (Rozek, 1982). The brand trademarks are still

legally protected and trademark owners can pursue legal action against competitors for trademark infringement – as a 2014 case of a trademark dispute between Brewskee-Ball and trademark-owner Skee-Ball demonstrates (Rose, 2014). However, these brands are very close to genericide and provide an interesting study into how these product categories fare in the online purchasing environment, how consumers shop in these categories online, and the brands' potential vulnerabilities to private label and other brand competition.

eCommerce Search Engines and the Digital Shelf

eCommerce is a fascinating consumer channel, ripe with questions for market research. Before we can truly understand the unique instance of brand-ubiquitous categories in this channel, we need to understand a few important concepts dictating eCommerce search engines and the digital shelf.

Online shopping environments differ starkly from in-store environments, creating crucial differences in consumer shopping journey considerations for retailers and brand managers. Online digital shelves are an endless array of products, allowing retailers to display their full product catalogue while not limited by the physical constraints of shelf-space in retail environments. Theoretically, consumers could scroll endlessly through the retailer's collection of products, but in reality, the digital shelf is still subject to the rules and regulations of consumer decision making processes. Consumers are not oblivious to search costs and will not endlessly scroll through products, even though the digital shelf affords them the opportunity (Breugelmans, et. al., 2007).

Data shows that the most optimized positions on shelf are in the first few served results – consumers generally do not click past the first page of results, and most of the product clicks occur on the first two rows of products (Lewis, 2020). Additionally, the sequencing of products

on the digital shelf is actually the largest factor contributing to consumers' purchase likelihoods for particular products (Breugelmans, et. al., 2007). Within sequencing, the primacy effect – where consumers pay more attention to earlier discovered items – is one of the strongest predictors of purchase intention and likelihood (Breugelmans, et. al., 2007). Slightly weaker, but still highly relevant, was the proximity effect of products that were placed near focal items, where these products had higher choice probability than products placed further away from the focal item (Breugelmans, et. al., 2007).

Therefore, for brand managers, where discoverability (the necessary predecessor of purchase) on the physical shelf meant availability and once begged memorization of the adage, "Eye-level is buy-level," discoverability on the endless digital shelf now requires optimization of product titles, inclusion of rich images and media, top of fold descriptions, keyword mining and SEO marketing – all in an attempt to meet search intent and game algorithms that serve relevant products in optimized positions on the digital shelf (InRiver, 2020). In other words, brand managers must get their products to the top of the search engine results list.

For search engines, however, the story is one of search engine algorithm effectiveness and result relevancy. In the online eCommerce world, search and purchase functions take on a new importance for consumers as they navigate the digital shelf. In their 2008 paper, Lin and Chan describe the start-to-start task dependency of the search and purchase functions of eCommerce sites, stating that the perceived ease of use and perceived usefulness of the online search function has important implications upon the eventual purchase function of the eCommerce site (Lin & Chan, 2008).

Essentially, with the knowledge that the ordering of products on the digital shelf is incredibly important to the consumer's search processes and that these search processes

necessarily dictate the consumer's ultimate purchase decisions, we realize that the search engine must be able to effectively return a relevant collection of products given the consumer's search query. If a product or brand doesn't show up in the first few results returned by the search engine, the chances of it being added to the consumer's consideration set and ultimately being purchased are very low. Therefore, a retailer that employs a strong algorithm in their search engine and that improves their search engine effectiveness will see more consumer satisfaction, increased adoption of their eCommerce platforms, and increased revenue share through this channel. Similarly, brands that improve their online content strategies will see better results in retailer eCommerce search engines.

Research Questions and Justification of Problem

There is a unique opportunity to better understand consumer search and purchase behavior at the intersection of eCommerce and brand-ubiquitous categories. Typically, research studies do not consider this intersection or take a consumer behavior approach to genericide and brand-ubiquitous categories. In these situations, search intentions become less easy to decipher, which affects eCommerce search engine *effectiveness*. Search engine effectiveness is a well-studied concept in the academic world, often focusing on the retrieval relevancy of search engines, as in how relevant the engine's results are to the search term input (eg. Lewandowski, 2015). Therefore, this relevance is dependent on how accurately the engine can decipher the consumer's search *intention* through the search *terms* used in their query and *how many relevant results* the engine can pull and place in the first few product slots for the consumer to consider.

For most categories, this isn't too difficult; key words and unique brand names make it easy for consumers to properly convey their search intentions, as well as for search engines to properly display relevant results. We can label these cases as search term-intention congruent:

brand-brand congruency refers to consumers who intend to search for a specific branded product, use that brand name as their search term in their query, and expect that specific brand to be the majority of the product selection retrieved by the search engine. Generic-generic congruency indicates consumers who have no specific brand in mind, who have used the generic product name to search for the entire product category online, and who would expect to see a collection of various products and brands related to that category in search results. Most consumers fall into these two types of congruency, while few can be generic-brand incongruent, where they search for the generic category but intended to search for a specific brand (in these cases, we can expect that the consumer will consider and purchase their intended brand). However, brand-ubiquitous categories introduce a complication – this paper hypothesizes that an incongruence between the search terms that consumers will use and their true search intentions will exist in these product categories, which will result in less-than-relevant results retrieved by the search engine.

Take, for example, a user searching for the brand-ubiquitous category of adhesive bandages through an online retailer. We assume that most consumers would use the search term "band-aid" or some similar variation of the brand name, as adhesive bandages are known as a brand-ubiquitous category (Quirk, 2014). As a result, many search engines will return a selection of products specifically coded as "Band-Aid" brand adhesive bandages (see Appendix B). If this consumer is brand-brand congruent and is truly only looking for Band-Aid brand bandages (ie. their search terms match their true search intentions), they will have no opposition to being served only Band-Aid brand products on their digital shelf, and the search engine will be deemed effective at serving the relevant collection of products.

However, the group of consumers who refer to the entire category of bandages as "band-aids" may have incongruent search terms and intentions – as in, using "band-aid" as a search

term when they really intended to search for "bandages" as a category of products, implying that they have brand-generic search term-intention incongruency. This consumer, we can hypothesize, could be more likely to consider a wider range of brands beyond the Band-Aid brand if they were served as such on the digital shelf. But, because this consumer employed the search term of "bandaid," they will only be served Band-Aid brand products and the online retailer misses an opportunity to expose the consumer to their private label products at the exact moment they would be most receptive to more category choices (McIntyre, et. al., 2016).

Here, we see the significance of search term-intention congruence (used here to mean the degree of agreement between the true search intention and the actual search term used by the consumer) in search engine effectiveness. Particularly in the world of brand-ubiquitous categories, the incongruence of search terms and intentions complicates the notion of search engine effectiveness. Technically, when a consumer searches for a brand name and receives only or primarily that brand as results, the search engine has accurately returned relevant results according to the search term used. However, due to incongruence between the search term and true search intention, that collection of results may not encompass the full range of products the consumer was intending to search for and would be receptive to – thereby deeming the engine as ineffective.
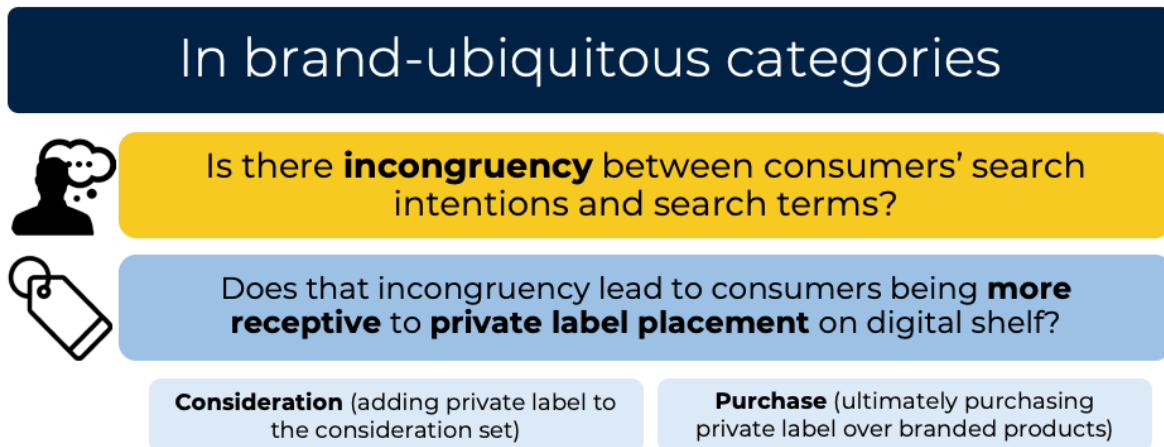
This phenomenon is unique to online purchasing environments, where the consumer is required to enter a search term to receive a collection of products to consider and make a purchase choice from. With in-store retail, regardless of what a consumer is *truly* looking for, be it *Band-Aid brand bandages* or simply *bandages,* they will see the same collection of products, because the in-store shelf is physically unchanging. However, in eCommerce, the specific search term employed does matter as the flexible digital shelf will serve products in a specific order

depending on deemed relevance to the search term. And this order, including the primacy and proximity of products, does influence what consumers ultimately purchase as they typically do not consider products beyond the first few pages of presented results (Lin & Chan, 2008).

Therefore, the question for brand-ubiquitous categories in online purchase environments becomes, "Should search engines return a multitude of brands even when consumers are seemingly searching for a particular brand within these brand-ubiquitous categories?" To answer this question, we first must confirm that this phenomenon of search term-intention exists by understanding whether a significant percentage of consumers actually display incongruency when searching for brand-ubiquitous categories. Methods to determine where consumers use the brand search term but intend to search for the entire category will be discussed in the methodologies section.

Next, we will need to confirm that this phenomenon actually has an effect on consumer consideration and purchase behavior, including what products they notice on the digital shelf and will consider purchasing as well as what products they ultimately purchase. Here, we will measure whether this incongruency predicts or correlates with the consumer's receptiveness to private label placement on the digital shelf, with receptiveness referring both to the consumer's propensity to consider private label products and their propensity to ultimately purchase private label over the national brand. Private label products were chosen to be the antithesis of the category leader in brand-ubiquitous categories as they are the most neutral products with which to test this phenomenon and will allow the study to control for any competitor brand perceptions in consumers' minds – however, it is expected that this logic should be applicable for other brands as well when controlling for brand perception effects.

Therefore, the research questions for this paper can be phrased as:

In brand-ubiquitous categories

Is there **incongruency** between consumers' search intentions and search terms?

Does that incongruency lead to consumers being **more receptive** to **private label placement** on digital shelf?

Consideration (adding private label to the consideration set)

Purchase (ultimately purchasing private label over branded products)

This study hypothesizes that consumers will display brand-generic term-intention incongruency and that these consumers will be more likely than consumers with term-intention congruency to consider *and* ultimately purchase private label products over category-leader brand products.

While the most dire implications of answering this question have to do with consumer behavior and with search engine effectiveness, including the search-engine's ability to decipher consumer search intent and present the correct collection of products, the implications of such a question also extend to national brand managers and to retail managers. Brand managers must consider the threat of private label encroachment on their branded keywords and product slots on the search engine results place, and this study should help qualify some of the risks facing brand managers in brand-ubiquitous categories. Similarly, online retailers have the opportunity to use these questions to inform their search engines' effectiveness, serve consumers a wider range of products that are more relevant to their search intentions, and ultimately produce higher margins through the sale of their private label products.

Theoretical Frameworks and Expected Outcomes

The hypothesis and research question of this paper build off of key assumptions in the consumer purchasing journey and the nuances presented online and within brand-ubiquitous categories. Key to understanding the assumptions guiding this paper are the search and purchase functions of the consumer purchase journey, the task dependency of these functions in online environments, brand inertia within brand-ubiquitous categories, and private label purchase propensity frameworks. This section explains these assumptions and offers expected outcomes and key hypotheses for the research questions.

Online Consumer Journey

Consumer journey models present the processes used by consumers when making purchasing decisions. The original consumer journey was first presented by John Dewey in 1910 as a decision-making process and has since been elaborated on by many researchers, most notably by Engel, Blackwell and Kollat in 1978. The widely accepted model currently consists of five stages – need identification, search, evaluation, purchase, and consumption – and considers the internal (psychological) and external (environmental and situational) influences present at each stage (Olshavsky & Granbois, 1979).

Most researchers have applied this model to traditional, in-person shopping behaviors, but contemporary research has also applied it to online purchasing situations extensively, studying things like website design, prepurchase information seeking, and online shopping behavior (Lin & Chan, 2008). This study will primarily focus on the search, evaluation (known here on out as consideration), and purchase functions – which are often the focus of eCommerce-based studies. After consumers identify a need, they reference a cognitive evoked set – the collection of brands and products that the consumer will consider during their purchase journey,

crested through direct experience within the category and product consumption or through vicarious experience from different marketing variables (Huang & Yu, 1999). In the search phase, we see consumers gathering information for product options, often expanding their evoked set. In the online eCommerce world, their actions in the search phase typically involve entering keywords into website search engines and understanding the selection of products served. The consideration phase then allows the consumer to compare the presented product options, where they will use more detailed information through product description pages and consumer reviews to evaluate which options are the best fit for their needs – often, sites will provide side-by-side comparisons to aid in this consideration process. And finally, the consumer will progress through the purchase function of the site, adding the final product to their cart and entering their purchasing information. There are often many other features on websites that aid the processes before search and after purchase as well, but the most basic features included in every eCommerce site are the search and purchase features, which aid the search, consideration, and purchase processes in the consumer journey (Lin & Chan, 2008).

Lin and Chan developed key findings that explain consumer behavior in eCommerce purchase environments in the search and purchase phases, stating that the search and purchase functions on eCommerce sites are task dependent through their perceived effectiveness and ease of use. In eCommerce, consumers operate through two types of behavior – goal-oriented, where the consumer has a purchase intention pre-determined, and experiential, where they don't and are intending to simply browse (Lin & Chan, 2008). In other words, goal-oriented shoppers intend to purchase a specific product before they move to find it online or in-store, while experiential shoppers are simply browsing without a specific product goal in mind.

In the latter case, search behaviors greatly and necessarily influence purchase behaviors as one cannot be formed without the other. However, in the former, online search can also influence purchase behavior even if the consumer had a purchase goal established (Lin & Chan, 2008). This means that even in the limited cases when goal-oriented consumers begin their purchase journey online with a clear purchase intention, their final purchase can actually be different from intended due to search functions. While this closely mirrors in-person shopping behavior, research has found greater effects of this in online purchasing environments for goal-oriented shoppers due to the task dependency of purchase functions on search functions – consumer purchase decisions are necessarily dependent on the website's search function and its ability to present relevant products online (Lin & Chan, 2008). This theory guides the basic premise of this study – one place where these influences could be most evident is within brand-ubiquitous categories online.

<u>Brand-Ubiquitous Categories Online</u>

Brand-ubiquitous categories (known here on out as BUCs) offer a unique angle on the online consumer journey. As previously mentioned, BUCs are an interesting study because they offer the possibility of brand-generic search term-intention incongruency, which affects the selection of products served to consumers as available for consideration. If the collection of products served was interrupted through overrides to the search engine's relevancy criteria by placing other products, such as private labels, on the digital shelf alongside the category leader brand, it is possible that the site's search function could influence the consumer's consideration and purchase behaviors, allowing them to consider and purchase products that were not originally part of their evoked set or that would not originally be served to them given the search terms they used.

This hypothesis operates under two key assumptions – first that purchase decisions in BUCs are made under brand inertia rather than brand loyalty and are therefore able to be interrupted through digital shelf placement, and that private label has the ability to interrupt category leader brand inertia on the digital shelf. Further explanations of each of these assumptions are provided here:

Brand Inertia vs Brand Loyalty

In categories of shopping that involve low consumer involvement (low levels of attention and resources attributed to decision-making) or where consumers have low cognitive and affective attitudinal involvement, consumers operate through a type of habitual purchase decision-making, known as brand inertia. The definition of brand inertia has been much debated by the academic community, but the concept refers to when consumers purchase the same brands habitually or out of convenience when a need is triggered without dedicating much thought to brand choice and without any real attachment to the specific brand itself (Keller, 1998). Consumers who act on brand inertia make repeat purchases of the same brand as a result of their previous purchasing and consumption experiences, but while this looks similar to the behaviors of brand loyalists, brand inertia is not indicative of brand loyalty. Rather, brand inertia is when consumers purchase brands repeatedly out of habit and convenience and based on situational cues, not because they have a strong partner commitment (Cui, et. al., 2021).

The biggest difference that has been identified by scholars between brand inertia and brand loyalty is that inertia indicates a relative amount of instability in commitment to the purchase – consumers are more likely to respond to marketing variables and external influences if they are strong enough to become noticeable and overcome the inertia (Cui, et. al., 2021). Therefore, consumers with brand inertia have very low switching costs and are theoretically easy

to persuade in purchasing different products, particularly if their habitually purchased product is temporarily unavailable or if a compelling promotion is available (Keller, 1998).

This study operates under the assumption that BUCs are bought by consumers under brand inertia rather than under brand loyalty. Category leaders in these BUCs are synonymous with the category – meaning that when a need is triggered for the product, consumers automatically think of the category leader brand and add it to their consideration set (evoked set) because the brand and the product are synonymous in their minds. In stores and online, these brands generally have strong resources and market penetration that allow them to be perpetually available (in-stock) at regular purchase channels for consumers – allowing consumers to follow their inertia invoked through need identification and conveniently purchase the category leader brand without any friction. In this case, we assume that consumers are not necessarily *loyal* to the category leader brand, but rather that familiarity, availability, convenience, and category ubiquity lead to inertia-fueled purchases. Therefore, this study explores what happens when we introduce friction into the online purchasing environment.

In online purchase environments, we can apply the task dependency of search functions to purchasing functions to create an opportunity to interrupt the consumer's brand inertia. When consumers search for BUCs, if they use the category leader brand name, they will be served majority products with that brand name (see Appendix B) resulting in very little friction to interrupt their brand inertia. However, if there is brand-generic term-intention incongruency as this study hypothesizes, there is an opportunity to place other brands and private labels on the digital shelf next to category leader products to introduce friction and interrupt the consumer's brand inertia with a compelling alternative offer. This is the foundational theory of this study.

<u>Why Private Labels?</u>

While this concept of brand inertia interruption for BUCs on the digital shelf can be applied for competitor brands along with private labels, this study chooses to focus on private labels as there is compelling evidence for private label success over national brands online and, given retailer control over retail websites and stake in their own private labels, private labels are a natural competitor within this space.

Consumers purchase private labels over national brands for many different reasons – up until the 1990's, private label success was attributed almost solely to the steep price discounts afforded through private labels (Hoch & Banerji, 1993). Consumers who were particularly price sensitive would forego the greater quality of national brands to save money with "good-enough" private label iterations of the same functional products. However, as private label quality evolved, so did research in consumer's private label purchase propensity – resulting in more complex understandings of private label's attraction for consumers (Hoch & Banerji, 1993; Rubel, 1995; Dhar & Hoch, 1997). A framework constructed by Richardson, Dick, and Jain in 1996 lays out the consumer factors that influence private label purchase proneness, including perceived value for money through private label, influenced by the consumer's general reliance on extrinsic product cues to determine product quality; perceived risk in buying private label, influenced by perceived quality variation between private labels and national brands and familiarity with the private label; as well as less significant factors like household income and household size (Richardson, et. al., 1996).

Of these factors, one of the most researched within the online context is risk perception, with researchers finding that one of the primary advantages for private label products online is the platform's ability to offer information through product detail pages and through trusted

customer reviews that reduces the perceived risk associated with private labels (de Regt, et. al., 2020; Flanagin, et. al. 2014). In fact, private label significantly improves its competitive position online as compared to national brands through its conquesting power, known as the ability of a brand to attract buyers of other brands (Arce-Urriza & Cebollada, 2017). Therefore, this paper builds on these private label purchase propensity frameworks that state private labels have an enhanced rate of success online and that consumers are more (or at least as) receptive to private label placement on the digital shelf as on the physical, in-store shelf. This constructs the critical assumption of this study that private labels will be able to break the category-leaders' brand inertia within brand-ubiquitous categories if served to consumers on the digital shelf.

<u>Expected Outcomes</u>

Combining these theoretical frameworks, this paper forms the base assumption that brand inertia-based decisions in BUCs can be interrupted online with private labels, due to their increased conquesting power and ability to interrupt the digital shelf and influence purchase decisions. These base assumptions lead to specific expected outcomes at each stage of the online purchasing journey within BUCs, which are outlined below.

Search Stage of Consumer Journey

Following the assumptions and theoretical frameworks explained above, we expect to find a majority of consumers in BUCs with brand-generic search term-intention incongruency in the search stage of the consumer journey. The remaining consumers we expect to be congruent in their search terms and intentions whether they are searching for specific brands or general categories.

Exhibit 1: Search Behavior Expected Outcomes and Hypotheses

Search Intention

	Brand	Generic
Brand	Congruent > 10% of all consumers	Incongruent (brand-generic) > 50% of all consumers
Generic	Incongruent (generic-brand) < 10% of all consumers	Congruent > 10% of all consumers

Search Term (row axis label)

H1: A majority of consumers will be brand-generic incongruent in BUCs.

Consideration Stage of Consumer Journey

Next, based on the frameworks of brand inertia and private label conquesting power, we predict a strong increase in the consideration of private labels along with category leader brands for those consumers who demonstrate brand-generic search term-intention incongruency as compared to those consumers who have search term-intention congruency. Because private labels have stronger conquesting power online, can serve to mitigate risk perceptions, and can attract more consumers of other brands, it has a strong possibility of interrupting the brand inertia for category leaders in BUCs and at least being part of the consumer's consideration set.

Exhibit 2: Consideration Behavior Expected Outcomes

Search Intention

	Brand	Generic
Brand	Congruent Unreceptive, < 5% consider PL	Incongruent (brand-generic) Receptive, > 50% consider PL
Generic	Incongruent (generic-brand) Unlikely condition	Congruent Highly Receptive, 100% consider PL

Search Term (vertical axis label, left side)

H2: Brand-generic incongruency will predict a likelihood to consider private labels.

Purchase Stage in Consumer Journey

Because there are several factors that influence the ultimate purchase decision for private labels, including intrinsic valuations of perceived value and risk and varying levels of risk aversion, it is difficult to accurately and quantitatively predict the effect of private label placement on incongruent term-intention shoppers. However, given the frameworks identified, we expect there to also be a positive relationship between private label purchasing and brand-generic search term-intention incongruency as compared to congruent consumers.

Exhibit 3: Purchase Behavior Expected Outcomes

Search Intention

		Brand	Generic
Search Term	**Brand**	Congruent Unlikely, < 5% purchase PL	Incongruent (brand-generic) Likely, ~30% purchase PL
	Generic	Incongruent (generic-brand) Unlikely condition	Congruent Highly Likely, 50% purchase PL

H3: Brand-generic incongruency will predict a likelihood to purchase private labels.

These charts specifically represent hypotheses within the brand-ubiquitous categories being tested in this study. See Appendix C for comparisons of these expected outcomes to the theoretical expected outcomes for regular (non-brand-ubiquitous) categories based on similar theoretical constructs.

Methodology

To answer the research question, a survey study was conducted that was hosted on Qualtrics and distributed through Prolific to US-based residents self-identified as primary household shoppers. Because the second research question of private label receptiveness posited the existence of the search term-intention incongruence, the first step was to establish the phenomenon of incongruency through testing consumer search behavior in widely-accepted brand-ubiquitous categories.

The brand-ubiquitous product categories of adhesive bandages (category leader: Band-Aid by Johnson & Johnson) and cotton swabs (category leader: Q-tips by Unilever) were chosen to test in this study. These product categories were chosen after consulting examples offered through existing legal and academic literature and confirmed through informal polling of university students easily-accessed by the researcher. To test normal (non-ubiquitous) categories, dental floss was chosen through the same methodology with Procter & Gamble's Oral-B Glide as the category leader.

Consumers were asked to complete a survey that simulated an online purchasing environment. At the start of the survey, they were told they would be shopping for 3 categories at fictional retailer, *Purple Dot*. They were introduced to the Purple Dot private label as, "a reliable private label brand, comparable to other private labels and of 'standard quality.'" A fictional private label was chosen to mitigate any existing associations with or perceptions of other private label products and to provide a clean baseline for all respondents to evaluate private labels against the focus brand. However, the pack shots, product descriptions, pricing, and rating information for these private label products was taken from the Walgreens private label, where

the Walgreens private label name and logo on pack shots was digitally altered and replaced with the fictional Purple Dot logo and name.

Exhibit 4: Example of Purple Dot Private Label Pack Shot Creation

For each category, respondents were taken through a mock purchase journey, consisting of four tests. The first two tests – the Search Term Test and the Search Intention Test – helped determine the respondents' search term-intention congruency, while the second two tests – the Consideration Test and Purchase Tests – helped determine the respondents' private label receptiveness.

Mock Purchase Journey
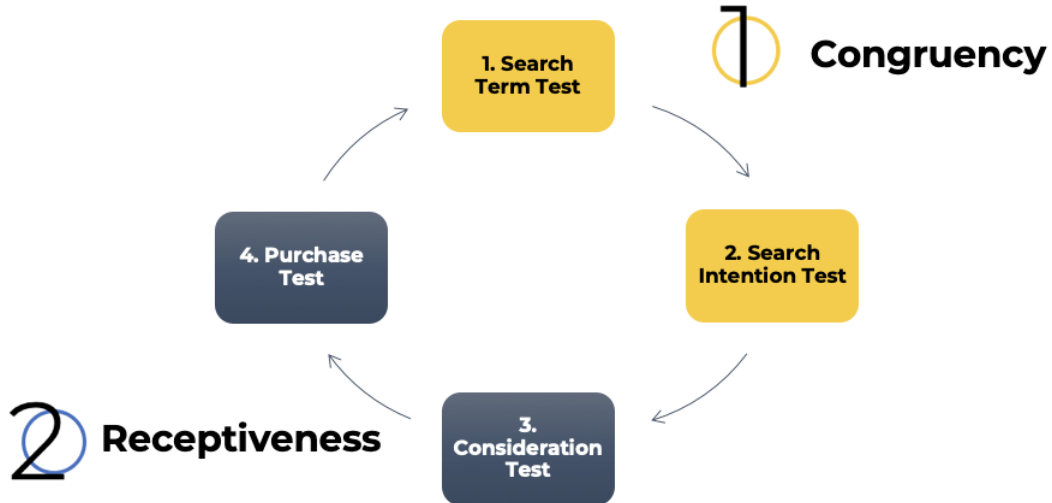
In the Search Term Test for each category, respondents were shown a generic, unbranded version of the product and were asked to "search for this product on the retailer's search engine," by typing into the text box what they would type into the retailer's search bar. Responses were coded as "brand" or "generic" to categorize and allow for comparison to the Search Intention Test (see Appendix D for details on coding process).

Following the Search Term Test, each respondent was shown a collection of related products within the category and other related categories. The products consisted of various national brands (including the focus category leader brand) as well as other generic brands and private labels, and respondents were asked to select all of the images that contained the product they had just searched for. This Search Intention Test would reveal what exactly the respondent was intending to search for. The responses for each consumer were categorized depending on the selection of products chosen and the relative proportions of focus brand versus other brands and private labels included in their selections. For example, if consumers selected only the category-

leading focus brand (such as Band-Aid or Q-tip products), they were coded with a "True Brand" search intention, while if they selected one or more private label, generic, or other national brand products along with the focus brand, they were coded with a "Generic" search intention. With coding from the Search Term Test and Search Intention Test, respondents were categorized into four congruency categories depending on how their term and intention coding aligned, providing data to analyze the first research question and the independent variable for the second question. The table below presents an illustration of how these congruency categories were determined using the adhesive bandage category as an example.

Exhibit 6: Congruency Coding from Search Term and Search Intention Tests

Next within the mock purchase journey were the Consideration and Purchase Tests. In the Consideration Test, consumers were shown a selection of eight products with minimal product details, four of which were labeled with the category-leader focus brand (Band-Aid, Q-tip, and Oral-B Glide, respectively) and four of which were labeled with the fictional Purple Dot

private label. The following figure shows an example of the descriptions provided for the branded and private label products.

Exhibit 7: Product Description Examples from Adhesive Bandage Category

Purple Dot Flexible Fabric Bandages, 30 ct., one size adhesive bandages

$3.79 | $0.13/count

3.5 / 5 stars (40)

Flexible Fabric Band-Aid Bandages, 30 ct., single size adhesive bandages

$3.99 | $0.13/count

5 / 5 stars (174)

The product descriptions contained minimal information to be able to standardize the type and amount of information available for each product and all information was aggregated from retailer product pages like Walgreens.com, Meijer.com, and Amazon.com – even though this isn't entirely reflective of true online purchasing environments, it allowed for control over

other factors influencing purchase decisions and allowed the respondents to tap purely into their perceptions of branded versus private label products without interference from external information. This would allow for a better baseline study of private label's ability to break the brand inertia of brands in brand-ubiquitous categories. Respondents were asked to select all of the products that they would consider purchasing, which created their Consideration Set. From this data, respondents were tagged with dummy variables that indicated whether or not they had selected private label products as part of their Consideration Set. The relative proportion of private label to branded products within their Consideration Set was also tracked and analyzed.

The first Purchase Test asked respondents to rank each of the products within their Consideration Set by how likely they would be to purchase each of them using a 5-point Likert Scale. Finally, the second Purchase Test asked respondents to select one product from their Consideration Set that they would ultimately purchase. These three tests created the dependent variables that provided measures of each respondents' private label receptiveness.

Post-survey questions were also asked to collect demographic variables and measure any confounding variables that may have an effect on the dependent variables being tested. Respondents were asked questions about their online and in-store purchase behaviors in each category as well as their private label purchase propensity in each category to determine the respondents' predisposition to purchase private labels. Respondents were also asked a series of three questions to determine their placement on the spendthrift-tightwad (ST-TW) scale (Rick, et. al., 2008) which was used as a direct proxy to control for several variables that typically influence private label purchase, such as income, education, and other factors identified in private label purchase propensity frameworks. The ST-TW scale questions present respondents with different scenarios and ask questions about their behaviors in each scenario, attempting

to discern the level at which respondents typically control their spending. The scale as was used in this survey ranged from 4 to 26, where lower scores indicated more tight-wad behaviors (consumer controls their spending) and higher scores indicated more spendthrift behaviors (consumer has trouble controlling spending and overspends). This scale and private label purchase propensities were used as moderator covariates in the study analysis to help understand the way that consumers typically approach spending decisions with their private label consideration and purchase propensities.

Data and Results

The survey collected 402 responses through a random sample of respondents in Prolific, who self-identified as US-residents and primary household shoppers. The data collected represented an even mix of women and men (202 females, 192 males, 10 non-binary, and 1 unidentified person), as well as even age and income ranges (see Appendix E). In every category tested, about ⅓ of the respondents indicated they would purchase private labels, and about 90% indicated they would consider private labels in their Consideration Sets.

Exhibit 8: Summary Stats – Purchase of Private Label
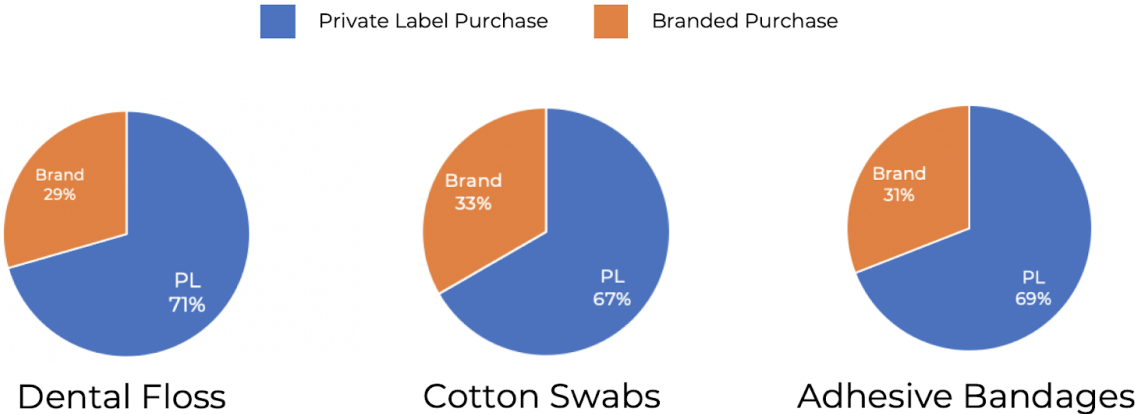
Exhibit 9: Summary Stats – Consideration of Private Label
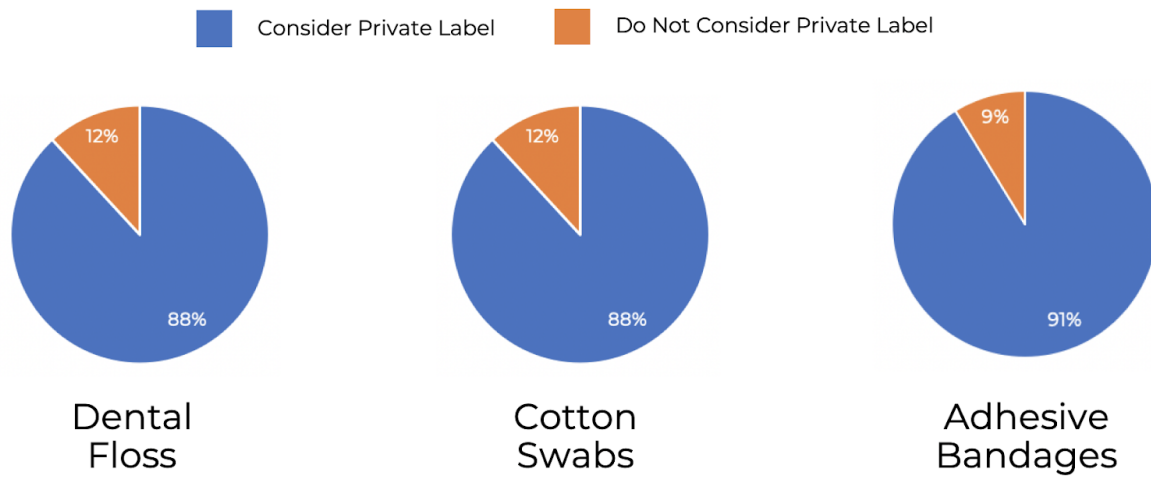
Brand-Generic Incongruency

In both brand-ubiquitous categories, there was sufficient and significant evidence to confirm that brand-generic incongruency does exist within these categories. Appendix F illustrates the collection of the types of search terms used in each category using weighted word clouds. These results reveal that, as expected, consumers mostly associated products from the brand-ubiquitous categories with their respective category leader brands and mostly used some variation of the brand name as their search terms in the Search Test. Also as expected, in the dental floss (normal) category, all consumers used some version of the generic product name, rather than a specific brand, to search for the product – supporting the notion that the identified phenomenon is unique to brand-ubiquitous categories. As stated in the study methodology, these search terms were compared to respondents' indications of their search intentions to sort each respondent into a congruency category. Treemaps were created to represent the relative proportion of each type of congruency within each product category. The results, as well as the data tables from which they were formed, can be seen below.

Exhibit 10: Search-Term Intention Congruency Treemaps
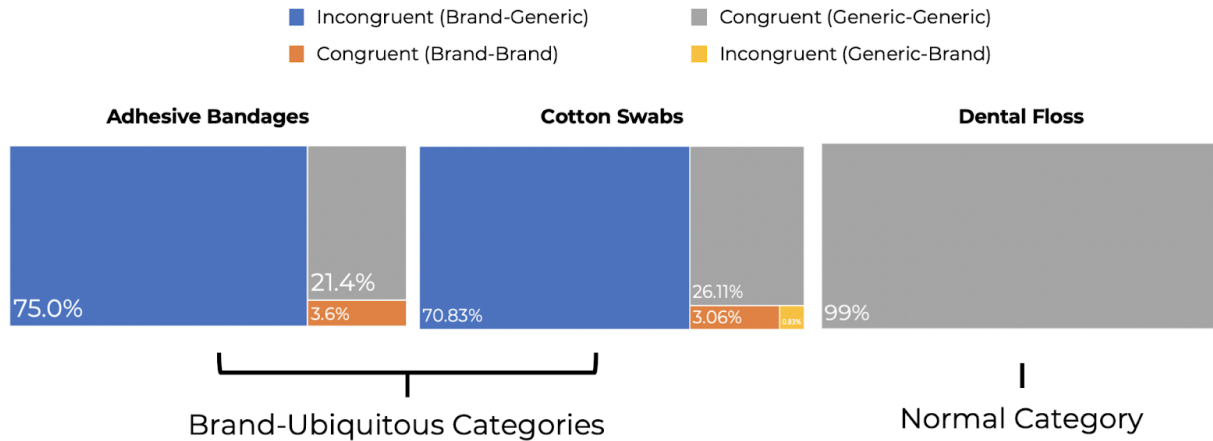
Exhibit 11: Search-Term Intention Congruency Summary Table

		Congruency Type				
		Brand-Generic Incongruent	Generic-Generic Congruent	Brand-Brand Congruent	Generic-Brand Incongruent	Total
Adhesive Bandages	Count	291	83	14	0	388
	Percentage	75.00%	21.40%	3.60%	0.00%	100.00%
Cotton Swabs	Count	255	94	11	3	363
	Percentage	70.25%	25.90%	3.03%	0.83%	100.00%
Dental Floss	Count	0	359	0	4	363
	Percentage	0.00%	98.90%	0.00%	1.10%	100.00%

In each category, unusable data points (such as respondents who were unable to identify the product from the picture presented or those who did not select any of the images in the Search Intention Test) were deleted from the product category data set – resulting in different numbers of usable data pools for each category. In the "normal" category tested (dental floss), almost all consumers (99%) were coded as generic-generic congruent, meaning that they used the generic product name to search for the product and indicated a wide collection of products – including branded, generic, and private label products – as part of their true search intentions. There was no significant amount of incongruence evident in this category, and no respondents

were marked as brand-generic incongruent (our congruency category of interest). However, in the two brand-ubiquitous categories tested, it is clear that sufficient and significant proportions of respondents displayed this brand-generic incongruency: ~75% in the adhesive bandage category and ~70% in the cotton swab category. This means that the majority of consumers in these categories used some form of the category-leader brand name in their search but indicated a wide range of products as their true search intentions.

To further understand these results and to add a quantifiable measure to congruency, the data from the two brand-ubiquitous categories was broken into a 9-point scale, indicating each respondents' level of incongruency, with a value of 0 indicating that the respondent was entirely brand-brand congruent and with each increasing value up to 8 indicating an increased level of incongruency depending on the proportion of non-focus-brand products (brands other than the category leader and private labels) in the respondent's Intention Test. Histograms show the distribution of incongruency levels in both categories.

Exhibit 12: Incongruency Level Distributions
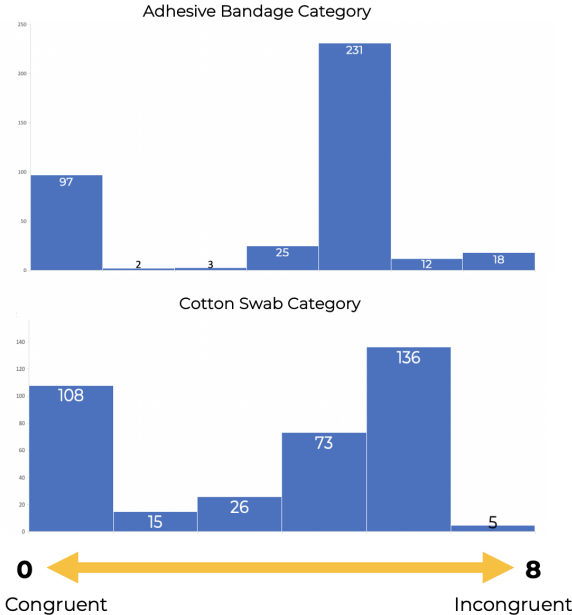
As was mentioned in expected results, consumers were expected to be majority (> 50%) brand-generic incongruent within brand-ubiquitous categories, which is supported by our findings. Consumers were not expected to fall into the generic-brand incongruent category, which was supported mostly by our two brand-ubiquitous categories, with no consumers in this category in the adhesive bandage product category and just 4 respondents (<1%) in the cotton swabs category. We can consider this discrepancy between the two product categories insignificant given survey response errors and marginal coding errors. The other two congruency categories were expected to be somewhat evenly populated – however, the results from these two brand-ubiquitous categories show that consumers tend to be more generic-generic congruent than brand-brand congruent. Therefore, our first hypothesis for the existence of our independent variable (*H1:* A majority of consumers will be brand-generic incongruent in BUCs) is supported both as a majority within each brand-ubiquitous category tested and as compared to the proportion of incongruency in the normal category.

Private Label Receptiveness

Congruency categories and levels (as defined and measured above) were used as independent variables with consideration and purchase measures as dependent variables in simple linear and binary logistic regressions to measure changes in private label receptiveness in brand-ubiquitous categories. These analyses did not consider the dental floss category because there was no significance to congruency in this category that could offer relevant comparisons. In this section, we'll look at various models and measures of each of these dependent variables in turn and explain the relationships demonstrated by the results collected.

Exhibit 13: Binary Logistic Regression for PL Consideration

		Estimate	Std. Error	Pr(>|t|)	Significant
Adhesive Bandages	(Intercept)	0.9163	0.5916	1.21E-01	-
	Congruent GG	1.3218	0.6988	0.0586	Yes.
	Incongruent BG	1.5874	0.6318	0.012	Yes*
Cotton Swabs	(Intercept)	0.1823	0.6055	0.76334	-
	Congruent GG	2.1926	0.7094	0.002	Yes**
	Incongruent BG	1.9104	0.6378	0.00274	Yes**
	Incongruent GB	-0.8755	1.3663	0.52167	

In measuring consideration as a categorical dependent variable, we find evidence to support the hypothesis that brand-generic incongruency has a positive and significant relationship with consideration of private label products. In both the adhesive bandage category and the cotton swab category, binary logistic regressions were conducted that used brand-brand congruency as a baseline to the independent variable and tested congruency types against the dummy variable of whether or not private label was included in the respondents' consideration set. The regressions showed that brand-generic incongruency had a strong predictive relationship for increased likeliness to consider private label products with a P-value of 0.012 in adhesive bandages and 0.00274 in cotton swabs. Both models for adhesive bandages and cotton swabs were well-fit to the data, displayed through the AIC statistics of 231.3 and 258.21, respectively. We also see that the coefficient estimates for the cotton swab category are stronger than the estimates for the adhesive bandages category, with more significant P-values as well.

After adding the moderator variables of private label purchase propensity (PL_PP) specific to each product category and the respondent's overall spendthrift-tightwad score (ST_TW), it is evident that these covariates do partially explain the increase in private label

consideration, but brand-generic incongruency maintains its significant and positive relationship with consideration at nearly the same level within both categories.

Exhibit 14: Binary Logistic Regression for PL Consideration with Moderation Variables

		Estimate	Std. Error	Pr(>|t|)	Significant
Adhesive Bandages	(Intercept)	0.9963	1.0402	3.38E-01	-
	Congruent GG	1.1952	0.7146	0.0944	Yes.
	Incongruent BG	1.5138	0.6455	0.019	Yes*
	PL_PP	0.2504	0.1958	0.201	
	ST_TW	-0.0575	0.0429	0.1809	
Cotton Swabs	(Intercept)	0.7652	1.0045	4.46E-01	
	Congruent GG	1.9752	0.7452	0.00803	Yes **
	Incongruent BG	1.7996	0.6754	0.00771	Yes **
	Incongruent GB	-0.8141	1.3877	0.55742	
	PL_PP	0.3693	0.1496	0.01358	Yes *
	ST_TW	-0.1131	0.0435	0.00928	Yes **

These models display a similar fit for adhesive bandages and a better fit for cotton swabs (AIC = 231.56 and 248.89, respectively). These models provide evidence that, to a degree, congruency is able to predict whether or not a consumer will consider private label products and supports the hypothesis that brand-generic incongruency results in increased consideration of private label products. Generic-generic congruent consumers, however, are more likely to consider private label products than brand-generic consumers, evidenced through stronger correlations between this type of congruency and the consideration variable than with brand-generic incongruency. This is as expected and supported by intuitive logic that consumers who intended to search for generic category products – and who were not looking for a specific brand in either their search terms or search intentions – will be more likely to consider the full range of products available, which in this test environment consisted only of one brand and one private label.

To further explore these results, linear regressions were also conducted that used incongruency levels as an independent variable to determine relationships between the level of incongruency and the likelihood of private label consideration as well as the percentage of private label in the Consideration Set. However, these linear regressions revealed no significant results for adhesive bandages or cotton swabs (see Appendix G). This is likely due to an arbitrariness in the incongruency level measure and its inability to provide an accurate measure of the level of incongruency – indeed, it could be true that no such significant or relevant measure exists and that the only variable of interest should be the categorical designations of congruency versus incongruency.

An analysis of the correlation between the percentage share of private label in the Consideration Set and congruency type was also conducted – results from this analysis were mixed (see Appendix H). The percentage share of private label in the consideration set is a telling statistic that reveals whether the identified correlation is strong and if it can be correlated quantifiably. The more open a consumer is to private label over the category leader brand, the larger the share of private label should be in the consumer's consideration set. However, the results proved that although there was a strong and statistically significant relationship for cotton swabs in this model, there was not one for the adhesive bandage category. This discrepancy (which until now has been relatively consistent across both categories) could be explained by the variance in the products offered for consideration to the respondents. In the adhesive bandage category, there was variance among the product offerings not only in product count in each pack, but also in size and type of product (ie. extra-large skin flex sizes, variety packs, and standard flexible fabrics). By contrast, the cotton swab category offered very little variety in the type or size of product offered – each pack contained the same type of product (a cotton swab) but was

sold in different pack sizes (ie. 375 ct, 500ct, 750 ct, etc.). So, when consumers were selecting various products within the bandage category, it is likely that the various types and sizes provided served as a deterrent to selecting multiple different options over the more-familiar branded options in a way that was not present within the cotton swab category. Both categories, however, do provide strong directional support for our hypotheses that brand-generic incongruency can predict a greater likelihood for a larger share of private label in the consideration set.

Therefore, we can accept our hypothesis as supported (*H2:* Brand-generic incongruency will predict a likelihood to consider private labels). There is evidence to support the notion that brand-generic incongruency *does* predict a higher level of private label consideration than brand-brand congruency or generic-brand incongruency but does not predict a higher level of private label consideration than generic-generic congruency.

Private Label Receptiveness: Purchase

While consideration has a clear relationship identified with congruency, the relation of congruency to the purchase of PL has gathered less support from our results. From similar statistical analyses using brand-brand congruency as a baseline in the independent variable of congruency and conducting binary logistic regressions with dummy variables for whether the final purchase of each consumer was a private label product or not, there is directional but statistically insignificant evidence supporting that brand-generic incongruency can predict PL purchase at any level.

Exhibit 15: Congruency Type and Private Label Purchase Binary Logit Regression

		Estimate	Std. Error	Pr(>|t|)	Significant
Adhesive Bandages	(Intercept)	-0.02673	0.75712	9.72E-01	
	Congruent GG	0.73396	0.60267	0.2233	
	Incongruent BG	0.77786	0.56622	0.1695	
	PL_PP	0.28504	0.12092	0.0184	Yes *
	ST_TW	-0.06062	0.02736	0.0267	Yes *
Cotton Swabs	(Intercept)	0.1838	0.81446	8.21E-01	
	Congruent GG	0.7425	0.66755	0.26605	
	Incongruent BG	0.08355	0.64244	0.19343	
	Incongruent GB	-0.4287	1.3781	0.75574	
	PL_PP	0.26375	0.10014	0.00844	Yes **
	ST_TW	-0.07982	0.0293	0.00645	Yes **

In these regressions, it is clear that our moderator variables of private label purchase propensity and spendthrift-tightwad scores have stronger and more statistically significant relationships to private label purchase than any type of congruency does. Although the estimates do directionally support our original expectations (brand-generic incongruency is positively correlated to private label purchase), the estimates for coefficients are substantially weaker than the estimates provided in the consideration models. It is interesting to note from these models that both product categories indicate correlations where higher private label purchase propensities result in higher likelihood of private label purchase and where lower scores on the spendthrift-tightwad scale (indicating more tightwad tendencies to control spending) result in higher likelihood of private label purchase. The model fits for the bandage category and cotton swab category were AIC = 476.15 and 452.45, respectively, indicating an inferior fit as compared to the models for private label consideration.

A secondary analysis was also conducted to determine if there were any relationships between congruency and the average ranking of the respondent's likeliness to purchase the

private label products in their consideration set in each category to help confirm the findings

from the binary logistic regressions. The results from this analysis were mixed.

Exhibit 16: Congruency and Avg. Ranking of Likeliness to Purchase Private Label

		Estimate	Std. Error	Pr(>|t|)	Significant
Adhesive Bandages	(Intercept)	1.46347	0.042696	6.75E-04	
	Congruent GG	0.31726	0.34457	0.357758	
	Incongruent BG	0.48329	0.32592	0.138937	
	PL_PP	0.11596	0.06449	0.07296	
	ST_TW	-0.01199	0.01468	0.414321	
Cotton Swabs	(Intercept)	0.90691	0.56704	1.11E-01	
	Congruent GG	1.36469	0.47158	0.00404	Yes **
	Incongruent BG	1.34522	0.45514	0.00333	Yes **
	Incongruent GB	-0.5774	0.96142	0.54846	
	PL_PP	0.09546	0.06674	0.1535	
	ST_TW	-0.01016	0.01937	0.6001	

Here, there is a significant and positive relationship in the cotton swab category between

average ranking of likeliness to purchase private label and generic-generic congruency as well as

brand-generic congruency, but not for the bandage category. The discrepancy between these two

models may have something to do with the efficacy beliefs of each product – which will be

discussed in more detail in the next section. However, given that there were weak and

insignificant coefficients found in our primary logit regression model as well as in the bandage

product category in these average likelihood models, it can be concluded that there is insufficient

evidence to support the private label purchase hypothesis. It is possible that with a larger sample

size and perhaps with different covariates or product categories, these results could be significant

at the $P < 0.05$ level, creating an opportunity for further testing.

Therefore, we can conclude that our evidence does not adequately support our third

hypothesis (*H3:* Brand-generic incongruency will predict a likelihood to purchase private labels)

that search term-intention congruency can predict a consumer's likelihood of purchasing private

label products over branded products, although it does provide directional support and a compelling case for further testing.

Discussions, Limitations, and Future Research

The implications of the findings in this study are nothing short of significant. In this section, we will discuss the implications of our findings with respect to term-intention congruency both for researchers' areas of future studies and for retailer eCommerce managers; the implications of the consideration and purchase behaviors of consumers within these categories for brand managers and retail managers; and consider the limitations of this study from a survey design perspective throughout these discussions.

Search Term-Intention Congruency: Finding Implications and Future Research

First and foremost, the key finding in this study confirms the existence of brand-generic search term-intention incongruency within brand-ubiquitous categories. Most often, researchers have focused studies and papers on the legality of brand-ubiquity and genericide, using consumer behavior studies to confirm or deny whether a particular trademark has been genercized. Not many studies exist that look at consumer shopping behavior within brand-ubiquitous categories – this study provides an exploratory look at the types of phenomena that might exist within these contexts as well as methodologies to further study them through the Search Term and Intention Tests featured in the mock purchase journey survey design. Through this study, we were able to find evidence that supported the notion of search term-intention incongruency within brand-ubiquitous categories and found that this discrepancy in consumer search behavior could have implications on the ways that consumers shop these categories online.

The implications of these findings are significant for retail managers and their search engine effectiveness. These findings suggest an opportunity to improve the search functionalities

within retailer search engines. Because the terms that consumers use to represent their search intentions are not always accurate and because these search terms result in specific product results and influence the consumer's ultimate purchase, retailers could consider creating an advanced search system that allows consumers to more accurately reflect their search intentions. For example, the retailer could add secondary filters of brand type or product type to the search function in more prominent places for consumers so that they are able to narrow down or broaden their searches more easily from the search bar. Additionally, retailers could employ pop-ups that are activated for certain keywords that indicate a brand-ubiquitous category and ask consumers what they really meant to search for through visual cues or through other search terms offered – much in the same way that Google provides a hyperlink at the top of their search results page that allows consumers to correct their searches for any mistakes or discrepancies. These processes are examples of ways that retailers can consider making their online search functions more accurate and reflective of consumers' search intentions. If consumers are able to better represent their search intentions, the search function of the site will be more effective and perceived as easier to use, resulting in more purchases and therefore more revenue for the retailer through this channel, as we have seen through Lin and Chan's model of task-dependency between search and purchase functions online (Lin & Chan, 2008).

Of course, such improvements to search functions would require a substantial investment of resources – and dictates a need for expansion of the study done in this paper. This study only considered two categories, which makes it difficult to generalize the findings from this study. We know that category differences are a significant and substantial factor in consumer behavior, both from a search congruency lens and from a consideration and purchase lens. Batra and Sinha conducted an extensive study on the categorical differences in risk perception when consumers

are purchasing private label (Batra & Sinha, 2000), and our study also revealed substantial differences in the ways that consumers were searching and purchasing within the adhesive bandage category versus the cotton swab category. For example, Appendix D highlighted the various different types of terms that were used within each category – with a greater variety shown in the bandage category than in the cotton swab category. Therefore, in other to create a substantial case for improving retail search functions, future studies should be conducted to determine the extent of the search term-intention incongruency phenomenon across many different types of categories, like personal care, household products, food and beverages, etc. While the relative proportions of congruency types were consistent across the two categories tested in this study, it will be interesting to see whether search and intention identification behaviors change across other categories.

Researchers should use the methodology piloted in this study as a framework to continue testing this phenomenon across other categories, making improvements to standardize the types of options given in the Intention Test and providing clearly identifiable generic product images within the Search Test. These were the two biggest limitations in the current methodology that may have impacted results. Options were not standardized across the Intention Tests for both categories, especially the non-category-related products that were offered and the number of other types of brands that were provided. These differences as well as differences in the pack shots and product types offered may have affected responses. For example, in the adhesive bandage category, respondents may have been looking to select products that specifically looked like the generic type of bandage that was offered, and so products that contained different types of bandages or sizes may not have been selected, thereby skewing results due to misunderstandings of survey directions. Additionally, in the dental floss category that was tested,

a substantial proportion of consumers were not able to identify the generic product from the image provided for the Search Test. Perhaps images or videos of the product being used could be provided that would aid the respondents in identifying and properly searching for the product.

Private Label Receptiveness and Congruency: Implications and Discussion of Results

The second key finding from this study was that brand-generic incongruency can predict increased consideration of private label products but not necessarily the purchase of private label when private label is placed next to branded products on the digital shelf. This is an interesting finding – as a whole, the study provides evidence that when consumers search for the brand name within a brand-ubiquitous category, chances are high that they are actually trying to search for the entire category of products and that they will consider brands and private labels beyond the category leader brand, but this doesn't predict what the consumer will ultimately purchase.

Interestingly, in all categories, most consumers ended up purchasing a private label option over the branded option (see Appendix I). As stated in the appendix, this aligns with true sales share data, which suggests that private label products should have a larger share of sales within each of these categories. However, it is important to note that there was likely an effect on the self-reported consumer behaviors due to the survey design; because this was a mock purchasing environment without any real incentives, consumers may have misrepresented their true search and purchase behaviors. A survey design that created real stakes for the consumers or an analysis of real sales data may have helped to further solidify and confirm these results – providing an opportunity for improvement on the methodology for future studies. Regardless of the amount of private label purchase, however, the key finding from our regression analysis is that congruency of search terms and intentions does not entirely predict the consumer's

likelihood of purchasing private labels. There is strong directional support, but even so, our findings don't adequately support our hypotheses.

Because the study's results were relatively inconclusive on this matter of private label purchase due to non-significant regression models and a potentially imperfect survey design, further research will need to be conducted before we are able to generalize the results and provide concrete takeaways. However, assuming that future research does confirm our findings (that incongruency leads to more private label consideration but not private label purchase), the implications are vast for many stakeholders. For brand managers, particularly for Band-Aid, one of the most important implications is that our assumptions of brand inertia-fueled purchases within this category are not supported. Consumers, even though they are using the brand name to refer to the entire category of products, still place a significant amount of value on the brand name; in other words, Band-Aid still means something to consumers in terms of product efficacy and trust. Therefore, there is an aspect of brand loyalty – formed either through cognitive or affective attitudes – that creates an attachment to the brand name, even if consumers don't realize that they are referring to the category itself by the brand name. This likely means that consumers have not actually genericized the brand in their minds – applying Oakenfull and Gelb's framework again, although there is high category dominance in the minds of consumers, there is also high or moderate instance dominance, meaning the brand name does still have a strong link to the category and vice versa in the minds of consumers.

The same can be said of the cotton swab category and the Q-tip brand as well, although to a lesser degree. Our regression models for both correlations between consideration and congruency and purchase and congruency were much stronger in their coefficients and in statistical significance for the cotton swab category than the adhesive bandage category. This

means that the relationships we observed (incongruency being able to predict higher levels of consideration and purchase) were stronger for the cotton swab category and therefore that brand perceptions of Q-tip might be weaker than for Band-Aid. This implies that Q-tip's brand weight or pull for consumers is weaker than Band-Aid, and this does seem to be supported by intuition – through both a brand-building and advertising perspective and through a product efficacy perspective. Awareness for the Band-Aid brand, both through an ad-spend and through a consumer perception perspective, is a marketer's dream – in several brand perception rankings over the years, Band-Aid has consistently ranked at the top, in either the number 1 or number 2 spot, where Q-tip does not have nearly the same level of awareness or ad-spend (Marzilli, 2018; Del Gigante, 2015). Band-Aid has continued to spend ad dollars on campaigns – the most recent being their Digital Detox campaign (Stein, 2018) – while similar ads or campaigns are sparse and difficult to find for Q-tips recently.

As a result, for consumers, there is likely a level of efficacy effects playing into their brand choices – for cotton swabs, there is likely a low level of perceived risk in the category (Batra & Sinha, 2000), because consumers see a cotton swab as a cotton swab, regardless of who produced it. Functionally, every cotton swab performs the same tasks and due to less advertising and brand-building, there isn't a strong affective attachment to the Q-tip brand for consumers either. In contrast, a Band-Aid bandage has certain functional strengths and brand associations with it, particularly in how well its adhesive properties work as compared to other brands or private labels and how much consumers can trust the product for their children or for themselves through the strong advertising associations created for it. There is a different level of perceived risk in the category for purchasing something that might not work as well as the trusted Band-Aid. Therefore, the conquesting power of private labels is likely much stronger in the cotton

swab category than in the adhesive bandage category due to the functional nature of the products and consumers' affective perceptions of them. Future survey designs should include some questions about consumer brand perceptions to be able to control for these factors as well as for private label purchase propensies within each category (which consumers may report differently for each category).

More generally, the implications of these findings for brand managers indicate that private labels on the digital might indeed serve as a threat in BUCs. Brand managers should consider allocating additional spending to SEO marketing and sponsored products for specific search keywords to crowd out any private labels that may be on the shelf. Especially for consumers who are brand-generic incongruent, there is a greater risk in allowing private labels to take space on the digital shelf. For retailers, this same phenomenon provides an opportunity to place private labels in BUC categories more prominently in the first few search results – importantly, private label purchase propensity frameworks should be applied to understand what makes consumers more likely to purchase private labels over branded products and to allow for better success of these private labels on the digital shelf in these categories.

To conclude, this study and its findings provide several avenues for future research, including expanding the methodology across other BUCs, analyzing actual search and purchase data for more concrete results, and looking at the conquesting power of other brands besides private labels in the same contexts. More abstractedly, this study paves the way for conducting more research into consumer behavior within brand-ubiquitous categories online by providing evidence that there are unique and significant effects in how consumers search for and purchase these products, as well as a general discussion of search engine effectiveness and providing ways for consumers to more accurately reflect their search intentions online.

Appendix A – Definitions and Terminology Used

Brand Ubiquitous Categories – brands that are so well-known within their categories that they have come to represent the category entirely in the minds of consumers
>Ex: Band-Aid for Adhesive Bandages, Q-tips for Cotton Swabs
>Aliases: BUC, category-synonymous brands

Category-leader brand in BUC – used to refer to the brand within a brand-ubiquitous category that has come to be synonymous with the category or generic product name. This is typically the focal brand in BUC studies.
>Ex. Band-Aid as opposed to Curad or Nexcare in Adhesive Bandage category
>Aliases: Focus brand, focal brand.

Search term-intention congruency – term to define how accurately a consumer is able to represent their search intentions in online purchasing environments. Consumers enter a string of words term to form their query for the search engine – known as their search term. But their true search intention (what they meant to search for and expect to see as results) may be different than what they represented in the search bar.
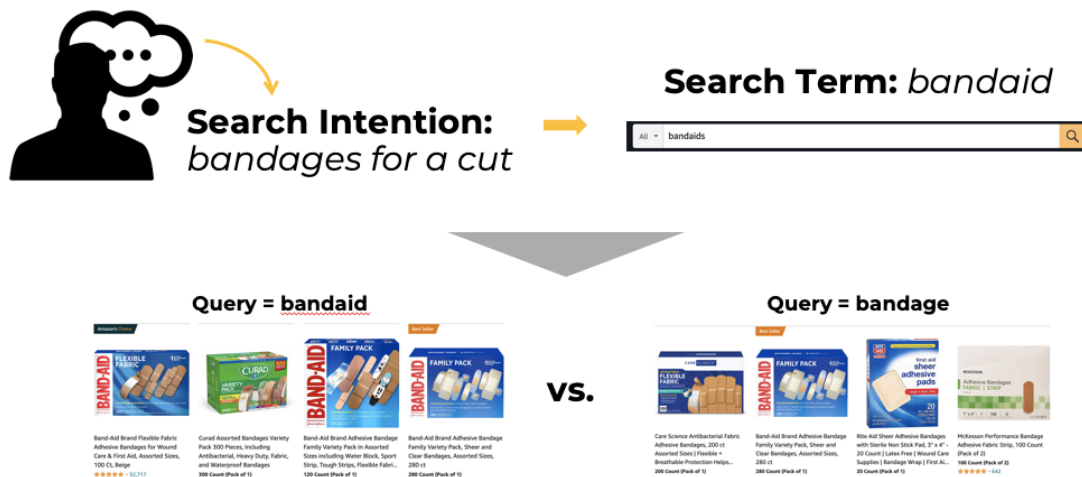
Congruent – when the search term used matched the search intention
Incongruent – when the search term used does not match the true search intention

Brand-Generic Search Term-Intention Incongruency – our congruency category of interest within BUCs. Describes when consumers use the brand name as their search term but they had intended to search for the generic product and would theoretically expect to see a wide collection of products, not just a singular brand.

Respondent Consideration Set – in the Consideration Test during the mock purchase journey, consumers were asked to select which of the products out of the 8 given they

would consider purchasing – their resulting selection of products become their Consideration Set, which was carried through to the end of the survey. These Consideration Sets were unique to each consumer and were analyzed to provide information about how consumers search and consider products within BUCs.

Brand Inertia vs Loyalty – used to describe the phenomenon when consumers repeat their purchases of a particular brand without any affective or cognitive attitudes toward the brand – they have no real attachment or loyalty with the brand – rather, they simply continue to buy the same thing because of convenience and previous experiences that make it easy to not change your choices.

The digital shelf – refers to the collection of products presented to consumers online after having run a search query. This is the collection of results from the search engine that portrays product summaries for the most relevant products to the search query employed.

Receptiveness to private labels – the dependent variable in our research questions, receptiveness to private labels refers to the consumer's willingness to both consider and purchase private label products over branded products. The noun choice of *receptiveness* refers to the idea of brand inertia and that private label products may be placed on shelf but ignored by consumers who are only interested in the branded product – therefore, we use receptiveness as a measure of private labels' ability to break brand inertia and become part of the consumer's consideration set and ultimate purchase decision.

Search and Purchase Functions – in online purchase environments, these terms refer to the technology that aids these stages in the consumer journey. Search functions typically refer to the retailer's search engine and the search bar that allows consumers to search for specific products using keywords. The purchase function refers to the process for a consumer to add a product to their virtual shopping cart and complete their purchase.

Private Label Purchase Propensity – refers to a consumer's predisposition to purchase private label products over nationally branded products. In this study, it was used as a moderator covariate to help explain the patterns of private label consideration and purchase in our regression models between congruency and receptiveness to private labels.

Incongruency Level vs. Incongruency Type – these two variables defined essentially the same thing but in different ways through different types of variables. Both are explaining search term-intention incongruency, where the search term used doesn't match the true search intentions. However, incongruency type is a categorical variable where respondents fall into one of four categories (brand-brand congruent, generic-generic congruent, brand-generic incongruent, and generic-brand incongruent), while incongruency level is a continuous variable on a scale from 0 to 8, where increasing levels indicate increasing proportions of non-focal brand products within the intention test. Both are used within the study's regression models, but incongruency level proves to be a more arbitrary measure than incongruency type, which is what most conclusions are based on.

Appendix B – Amazon Search Results Using Different Search Terms

The following searches were conducted on Amazon.com on April 21st, 2021 in Southeastern Michigan. The results from the first two, non-sponsored rows are presented here, for two different search terms used.

Exhibit B1: Search Term "bandaids" on Amazon.com
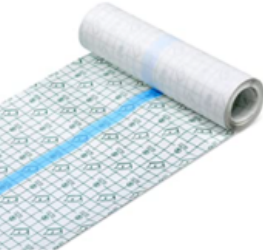
Exhibit B2: Search Term "adhesive bandage" on Amazon.com

Featured from our brands

All Health Antibacterial Bandage Family Value Pack, Variety 225 ct | Various Sizes for First Aid and Wound Care

225 Count (Pack of 1)

★★★★½ ˅ 148

$9⁹⁹ ($0.04/Count)
$9.49 with Subscribe & Save discount
`40% off` your first subscription order
✓prime FREE Delivery **Sat, Apr 24**

Sponsored ⓘ

Self Adhesive Bandage Wrap 12 Pack, Athletic Tape 2 Inches X 5 Yards, Sports Tape, Breathable, Waterproof, Elastic Bandage for Sports, Wrist an...

12 Count (Pack of 1)

★★★★½ ˅ 85

$9⁹⁹ ($0.83/Count)
Save more with Subscribe & Save
✓prime FREE Delivery **Sat, Apr 24**

Sponsored ⓘ

(14-Pack) 2" x 5 Yards | White Self Adhesive Bandage Wrap – Breathable Self Adherent Wrap for People & Pets - Athletic Elastic Cohesive Bandage...

14 Count (Pack of 1)

★★★★½ ˅ 211

$13⁹⁵ ($1.00/Count)
✓prime FREE Delivery **Mon, Apr 26**

Band-Aid Brand Flexible Fabric Adhesive Bandages for Wound Care & First Aid, Assorted Sizes, 100 ct, Beige

★★★★★ ˅ 33,646

$6⁸⁸ $11.99
$6.54 with Subscribe & Save discount
✓prime FREE Delivery **Sat, Apr 24**
More Buying Choices
$6.85 (36 new offers)
FSA or HSA eligible

🌱 Climate Pledge Friendly
See 1 certification ˅

All Health Antibacterial Sheer Adhesive Pad Bandages, 3 in x 4 in, 30 ct | Helps Prevent Infection, Extra Large Comfortable Protection for...

30 Count (Pack of 1)

★★★★½ ˅ 5,327

$7⁹⁹ ($0.27/Count)
Save more with Subscribe & Save
`40% off` your first subscription order
✓prime FREE Delivery **Sat, Apr 24**

Care Science Antibacterial Fabric Adhesive Bandages, 200 ct Assorted Sizes | Flexible + Breathable Protection Helps Prevent Infection...

200 Count (Pack of 1)

★★★★½ ˅ 2,698

$6⁹⁹ ($0.03/Count)
Save more with Subscribe & Save
✓prime FREE Delivery **Sat, Apr 24**
🌱 Climate Pledge Friendly
See 1 certification ˅

RISEN Cohesive Bandage 2" x 5 Yards, 6 Rolls, Self Adherent Wrap Medical Tape, Adhesive Flexible Breathable First Aid Gauze Ideal for Stretch...

6 Count (Pack of 1)

★★★★½ ˅ 5,469

$9⁹⁹ ($1.67/Count) $10.99
Save more with Subscribe & Save
✓prime FREE Delivery **Sat, Apr 24**

Transparent Stretch Adhesive Bandage Waterproof Bandage Clear Adhesive Bandages Dressing Tape for Tattoos (8 Inch x 5.47 Yard)

★★★★½ ˅ 1,279

$15⁵⁹ ($15.59/Count)
✓prime FREE Delivery **Sat, Apr 24**

As can be seen from these site screenshots, searches for the branded term ("bandaid") yield seven out eight Band-Aid branded results, in line with the search term used. Searched for the generic product, however, yield a wide array of different types of products, with only one out of eight being branded with Band-Aid. This illustrates the significance of the task dependency with search and purchase functions and retailer search engine effectiveness.

Appendix C – Expected Outcomes for Regular Categories

Exhibit C1: Search
Expected Outcome

		Search Intention	
		Brand	Generic
Search Term	Brand	Congruent 40% of all consumers	Incongruent (brand-generic) > 10% of all consumers
	Generic	Incongruent (generic-brand) >10 % of all consumers	Congruent 40% of all consumers

Exhibit C2: Consideration
Expected Outcome

		Search Intention	
		Brand	Generic
Search Term	Brand	Congruent Unreceptive, 0% consider private label	Incongruent (brand-generic) Unlikely condition
	Generic	Incongruent (generic-brand) Unreceptive, 0% consider private label	Congruent Receptive, 100% consider private label

Exhibit C3: Purchase
Expected Outcome

		Search Intention	
		Brand	Generic
Search Term	Brand	Congruent Unlikely, 0% purchase private label	Incongruent (brand-generic) Unlikely condition
	Generic	Incongruent (generic-brand) Unlikely, 0% purchase private label	Congruent Likely, ~50% purchase private label

Appendix D – Details on Search Term Test Coding

Adhesive Bandage Category

Brand Name	Generic	Unusable
band aid	adhesive bandage	orange leather
band aid first aid	adhesive bandages	first aid
band aide	bandage	cureband
band aids	bandages	cure band
band-aid	cloth bandage	roll tape
band-aids	cloth self adhesive bandage	biscuit
bandaid	fabric bandages	one time strip tape
bandaide	first aid bandages for cuts	don't know
bandaides	first aid plaster	
bandaids	medical plaster	
cloth band aid	plaster	
cloth band-aid	plaster bandage	
cloth band-aides	skin bandage	
cloth bandaid	small adhesive bandage	
fabric band aid		
fabric bandaids		
generic bandaid		
small band-aids		
tan bandaid		
tough fabric band-aids		
purple bandaid		
band-aid purple dot		
purple dot band aid		
purple dot bandaid		
purple dot bandaids		
purple dot brand band aids		
purple dot fabric band-aid		

Cotton Swab Category

Brand Name	Generic	Unusable
cotton q-tip	cotton bar	ear thing
cue tip	cotton board	tooth pick with ball
cue tips	cotton bud	hygiene
cutips	cotton buds	a tip
q tip	cotton rod	don't know
q tips	cotton sticks	
q-tip	cotton swab	
q-tip swabs	cotton swabs	
q-tips	cotton swabbs	
q-tips purple dot	cottonswab	
q/tips	ear cleaner	
qtip	ear cleaner sticks	
qtipps	ear swab	
qtips	ear swabs	
quetips	earbuds	
quips	purple dot cotton swab	
qutip	swabs	
purple dot q tips		
purple dot q-tip		
purple dot q-tips		

Dental Floss Category

| Generic	Unusable
dental floss	airpods
dental floss machine	pod thing
floss	what is this
floss dispenser	sensor
floss for teeth	wireless phone charger
floss purple dot	don't know
flossing	oral care
generic dental floss	no clue
purple dot dental floss	smart speaker
purple dot floss	earpods
purple dot floss dispenser	pump
roller mouth floss dispenser	pod
tooth floss	speaker
tooth thread	machine
travel floss	bluetooth
waxed dental floss	check up machine
	VR headset
	inhaler

For each of the categories, the text entered by respondents was manually categorized and coded as brand, generic, or unusable. For example, in the adhesive bandage category, any entry with an iteration of "bandaid" was accepted as a brand name term, anything with an interaction of "bandage" or "plaster" was accepted as generic and all others were considered usable. This same logic was applied to the cotton swab category. In the dental floss category, any terms with an iteration of "floss" "dental" or "teeth" was accepted as a generic term and any specific dental floss brand (oral-b, glide, etc.) would have been accepted as brand name terms, but none of these were identified. All other terms were labeled as unusable. It is important to note a discrepancy in the data – more data inputs under the dental floss category were labeled as useable due to the search term test than the other two categories, pointing to a possible flaw in the image used to test the category.

Appendix E – Collected Data Summary Stats and Distributions
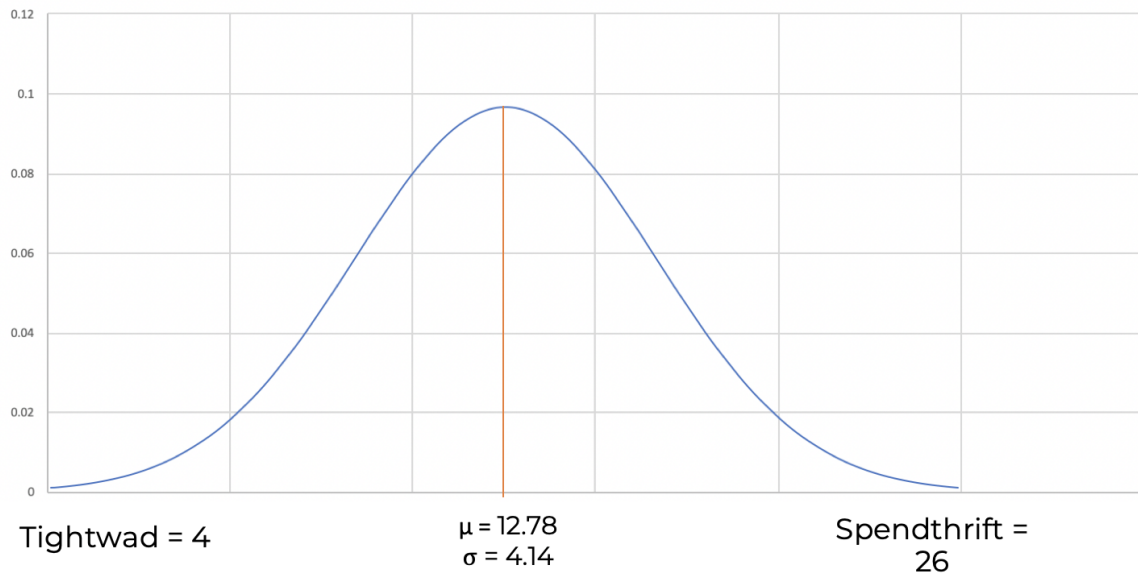

Summary of Gender Distribution of Respondents
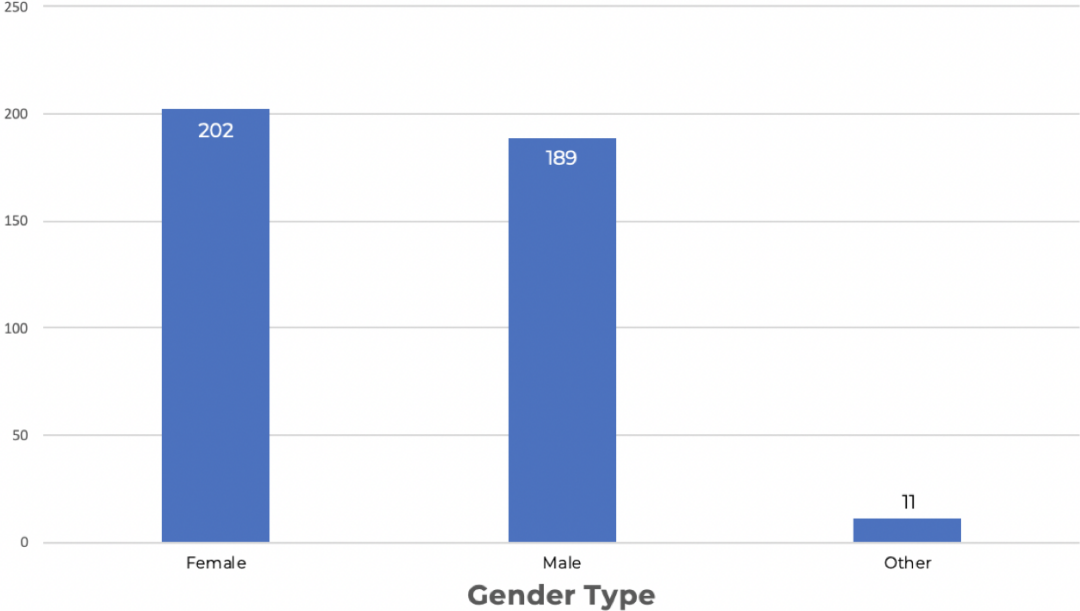
Summary of Age Distribution of Respondents
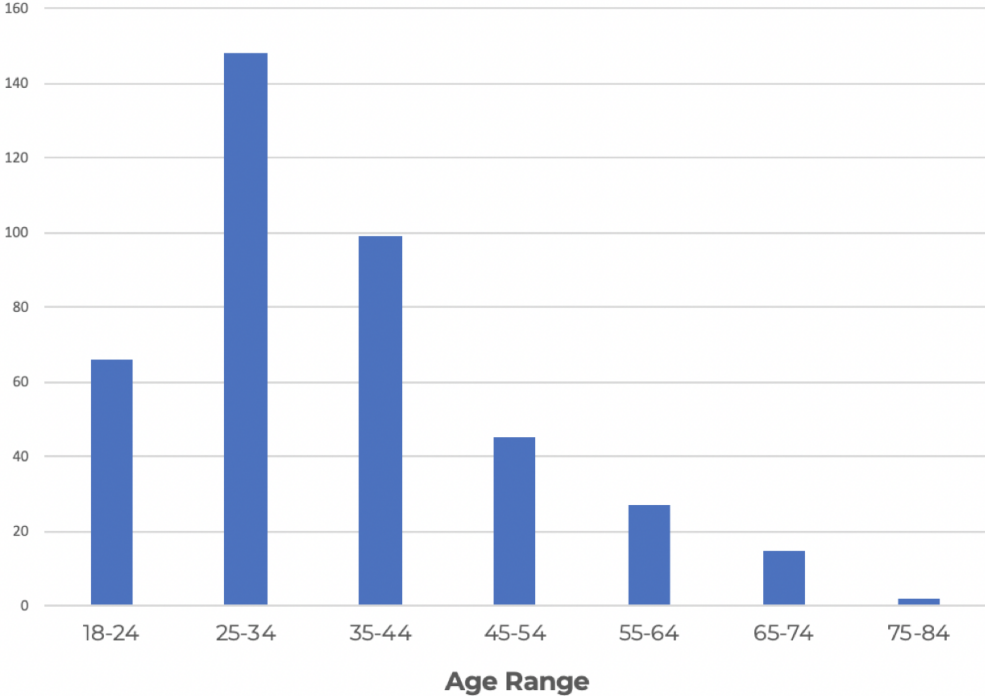
Distribution of Spendthrift - Tightwad Scale in Survey Respondents

Tightwad = 4   μ = 12.78   Spendthrift =
                      σ = 4.14   26

Distribution of Avg Private Label Purchase Propensity

Not likely to   μ = 3.08   Highly likely to
purchase   σ = 0.9170   purchase
private label   private label
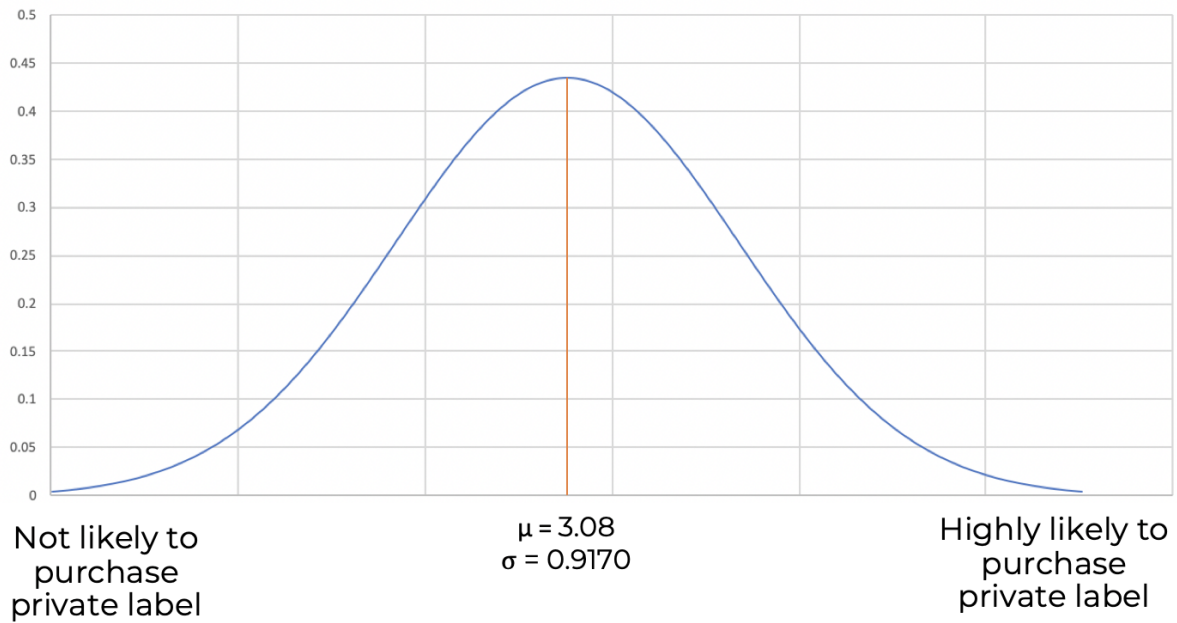
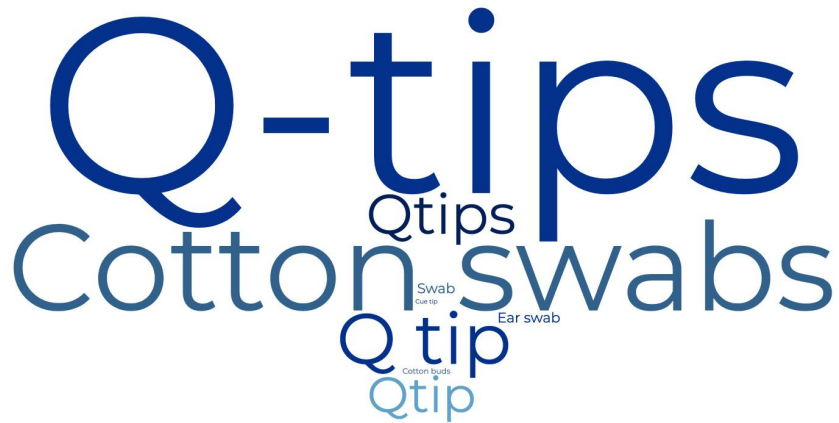**Appendix F – Weighted Word Clouds for Collected Search Terms**

Adhesive Bandage Category

Cotton Swabs

Dental Floss

Appendix G – Incongruency Level as an Independent Variable in PL Consideration

Binary logistic regression models for incongruency levels and consideration of private label:

Adhesive Bandage Category:

```
Coefficients:
                Estimate Std. Error z value Pr(>|z|)
(Intercept)      1.98297    0.92241   2.150   0.0316 *
band_incon_level 0.09286    0.07259   1.279   0.2008
PL_PP            0.27368    0.19576   1.398   0.1621
SpT_TiW         -0.06172    0.04346  -1.420   0.1556
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

(Dispersion parameter for binomial family taken to be 1)

    Null deviance: 230.49  on 387  degrees of freedom
Residual deviance: 224.70  on 384  degrees of freedom
AIC: 232.7
```

Cotton Swabs Category:

```
Coefficients:
                  Estimate Std. Error z value Pr(>|z|)
(Intercept)        2.27306    0.75621   3.006  0.00265 **
cotton_incon_level 0.07062    0.06984   1.011  0.31190
cottonPL_PP        0.40393    0.14678   2.752  0.00592 **
cottonSpT_TiW     -0.12314    0.04272  -2.882  0.00395 **
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

(Dispersion parameter for binomial family taken to be 1)

    Null deviance: 264.15  on 362  degrees of freedom
Residual deviance: 247.30  on 359  degrees of freedom
AIC: 255.3
```

Here, we see that there are weak and statistically insignificant correlations between a consumer's level of incongruency and their tendency to consider private labels. The correlations do show support for our directional assumptions of these correlations (your likelihood of considering private labels does increase with your level of incongruency), but because these results do not pass the $P < 0.05$ significance test, we cannot use these models as evidence in confirming our hypotheses.

Linear regression models for incongruency level and % of private label in consideration set:

Adhesive Bandage Category:

```
Coefficients:
                 Estimate Std. Error t value Pr(>|t|)
(Intercept)      0.616073   0.080128   7.689 1.26e-13 ***
band_incon_level 0.004410   0.006439   0.685   0.4938
PL_PP            0.040823   0.016400   2.489   0.0132 *
SpT_TiW         -0.008848   0.003741  -2.365   0.0185 *
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.3034 on 384 degrees of freedom
Multiple R-squared:  0.03383,   Adjusted R-squared:  0.02628
F-statistic: 4.482 on 3 and 384 DF,  p-value: 0.004157
```

Cotton Swab Category:

```
Coefficients:
                   Estimate Std. Error t value Pr(>|t|)
(Intercept)        0.766275   0.076061  10.074  < 2e-16 ***
cotton_incon_level 0.008361   0.007006   1.194   0.2334
cottonPL_PP        0.032880   0.014175   2.320   0.0209 *
cottonSpT_TiW     -0.019695   0.004123  -4.777 2.6e-06 ***
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.3143 on 359 degrees of freedom
Multiple R-squared:  0.07653,   Adjusted R-squared:  0.06881
F-statistic: 9.917 on 3 and 359 DF,  p-value: 2.688e-06
```

These models show that there are very weak and statistically insignificant relationships between the consumer's incongruency level and the percentage of private label in their consideration set. Again, the model shows directional support for the percentage of private labels in a consideration set given the level of incongruency, but the correlations are very weak and therefore cannot be used as evidence to support our hypotheses. However, we do see that our moderator covariates have significant relationships with the private label percentage of the consideration set – specifically that a lower ST_TW score (indicating more tight-wad behaviors) would result in higher percentages of private label in the consideration set. These relationships are true in both the bandage and cotton swab category.

Appendix H – Incongruency Type and Private Label % Share of Consideration Set

A second analysis was performed between the percentage share of private label in the Consideration Set and congruency type to determine whether the congruency categories had any effect on the relative share of private label in the consideration set.

Adhesive Bandages Category

```
Coefficients:
                                  Estimate Std. Error t value Pr(>|t|)
(Intercept)                       0.519077   0.108735   4.774 2.58e-06 ***
band_congruentCongruent_GG        0.113268   0.087751   1.291   0.1976
band_congruentIncongruent_BG      0.123139   0.083002   1.484   0.1387
PL_PP                             0.039753   0.016425   2.420   0.0160 *
SpT_TiW                          -0.008754   0.003738  -2.342   0.0197 *
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.3031 on 383 degrees of freedom
Multiple R-squared:  0.03821,   Adjusted R-squared:  0.02817
F-statistic: 3.804 on 4 and 383 DF,  p-value: 0.004782
```

Cotton Swab Category

```
Coefficients:
                                    Estimate Std. Error t value Pr(>|t|)
(Intercept)                          0.60064    0.12032   4.992 9.36e-07 ***
cotton_congruentCongruent_GG         0.21713    0.10007   2.170   0.0307 *
cotton_congruentIncongruent_BG       0.19557    0.09658   2.025   0.0436 *
cotton_congruentIncongruent_GB      -0.08545    0.20400  -0.419   0.6756
cottonPL_PP                          0.02906    0.01416   2.052   0.0409 *
cottonSpT_TiW                       -0.01872    0.00411  -4.555 7.18e-06 ***
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.3128 on 357 degrees of freedom
Multiple R-squared:  0.09088,   Adjusted R-squared:  0.07815
F-statistic: 7.138 on 5 and 357 DF,  p-value: 2.216e-06
```

These results provide evidence that congruency types do indeed have correlations to the percentage share of private label in the consideration set, and could predict an increase in private label consideration if the consumer is brand-generic incongruent or generic-generic congruent. While these results are more statistically significant for the cotton swab category, there is still strong directional support for the same relationship in the bandage category and we can hypothesize that with a larger N or with different covariates, these results would prove to be statistically significant as well.

Appendix I – Cross-Tabulation Counts for Congruency and Private Label Purchases

	Congruency Type	Purchased Private Label	% of Total in Category
Adhesive Bandages	Brand-Brand Congruent	7	50.0%
	Generic-Generic Congruent	58	69.8%
	Brand-Generic Incongruent	203	69.7%
	Generic-Brand Incongruent	0	0%
Cotton Swabs	Brand-Brand Congruent	5	45.0%
	Generic-Generic Congruent	64	68.1%
	Brand-Generic Incongruent	174	68.2%
	Generic-Brand Incongruent	1	33%
Dental Floss	Brand-Brand Congruent	0	0.0%
	Generic-Generic Congruent	255	71.0%
	Brand-Generic Incongruent	0	0.0%
	Generic-Brand Incongruent	0	0%

Within each product category, we see that consumers seemed to prefer private labels regardless of their type of congruency. In the BUCs, we see that about the same proportion of consumers chose to purchase private labels within both the generic-generic congruent and brand-generic incongruent congruency categories. These proportions, though slightly lower, are about the same amount as within the dental floss category. The majority of consumers were choosing private labels over branded products, and in fact, true sales share data supports that private labels actually have the higher share over branded products.

The graph to the right shows the dollar sales of the leading bandage brands in the US in 2019 (in millions of USD), retrieved from Statista.
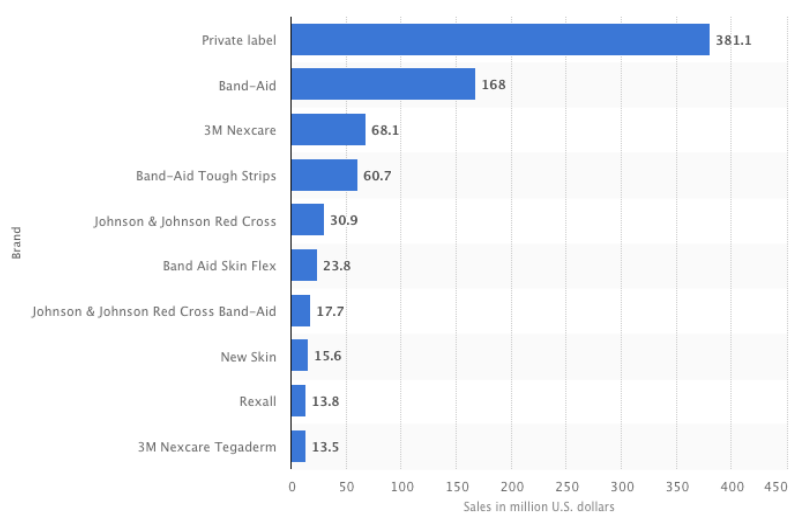
References and Works Cited

Arce-Urriza, Marta, and Javier Cebollada. "Private labels and national brands across online and offline channels." *Management Decision* 50.10 (2012): 1772-1789.

Batra, Rajeev, and Indrajit Sinha. "Consumer-level factors moderating the success of private label brands." *Journal of Retailing* 76.2 (2000): 175-191.

Baumann, C., Hamin, H., & Chong, A. The role of brand exposure and experience on brand recall—Product durables vis-à-vis FMCG. Journal of Retailing and Consumer Services, (2015): 23, 21-31.

Bellis, Mary. "History of Band-Aids: From Earle Dickson to Boy Scouts." ThoughtCo, (2019) www.thoughtco.com/history-of-the-band-aid-1991345.

Breugelmans, Els, Katia Campo, and Els Gijsbrechts. "Shelf sequence and proximity effects on online grocery choices." *Marketing Letters* 18.1-2 (2007): 117-133.

Butters, Ronald R., and Jennifer Westerhaus. "Linguistic change in words one owns: How trademarks become" generic"." *TOPICS IN ENGLISH LINGUISTICS* 45 (2004): 111-126.

Cohen, Dorothy. "Trademark Strategy." *Journal of Marketing.* (1986), Vol. 50, No. 1. pg. 68-71.

Cuneo, Andres, et al. "The growth of private label brands: a worldwide phenomenon?." *Journal of International Marketing* 23.1 (2015): 72-90.

Cui, Rui, Xin, Shuang, & Li, Zhiyong. Interrogating and redefining the concept of consumer inertia. Journal of consumer behaviour, (2021): 20(1), 21–31.

de Regt, Anouk, et al. "How relying on online reviews impacts private label brand preferences: from ANZMAC 2019." *Journal of Strategic Marketing* (2020): 1-13.

Del Gigante, Michael. "Band-Aid is the Brand Loved Most by Moms." *MDG Advertising.* (2015). https://www.mdgadvertising.com/marketing-insights/band-aid-is-the-brand-loved-most-by-moms/

Dhar, S. K., & Hoch, S. J. Why store brand penetration varies by retailer. Marketing science, (1997): 16(3), 208-227.

Dowling, Grahame R., and Richard Staelin. "A model of perceived risk and intended risk-handling activity." *Journal of Consumer Research* 21.1 (1994): 119-134.

Dunn, Mark G., Patrick E. Murphy, and Gerald U. Skelly. "Research note: The influence of perceived risk on brand preference for supermarket products." *Journal of retailing* (1986).

Flanagin, Andrew J., et al. "Mitigating risk in ecommerce transactions: perceptions of information credibility and the role of user-generated ratings in product quality and purchase intention." *Electronic Commerce Research* 14.1 (2014): 1-23.

Gordon, Whitson. "How a Brand Name Becomes Generic". *The New York Times*, (2020). www.nytimes.com/2019/06/24/smarter-living/how-a-brand-name-becomes-generic.html.

Hoch, Stephen J., and Shumeet Banerji. "When do private labels succeed?." *MIT Sloan Management Review* 34.4 (1993): 57.

Huang, M. H., & Yu, S. Are consumers inherently or situationally brand loyal?—A set intercorrelation account for conscious brand loyalty and nonconscious inertia. Psychology & Marketing. (1999): 16(6), 523-544.

Hurley, Rupert A., et al. "Effects of private and public label packaging on consumer purchase patterns." *Packaging Technology and Science* 26.7 (2013): 399-412.

InRiver. "What's the Psychology of the Digital Shelf · InRiver." *InRiver*, (2020). www.inriver.com/blog/whats-the-psychology-of-the-digital-shelf/.

Keller, Kevin Lane, M. G. Parameswaran, and Isaac Jacob. *Strategic brand management: Building, measuring, and managing brand equity.* Pearson Education India, (2011).

Klein, Lisa. "Evaluating the Potential of Interactive Media through a New Lens: Search versus Experience Goods," *Journal of Business Research,* Volume 41, Issue 3, (1998): 195-203, ISSN 0148-2963, https://doi.org/10.1016/S0148-2963(97)00062-3.

LaRose, Robert, and Matthew S. Eastin. "Is online buying out of control? Electronic commerce and consumer self-regulation." *Journal of Broadcasting & Electronic Media* 46.4 (2002): 549-564.

Lewandowski, Dirk. "Evaluating the retrieval effectiveness of web search engines using a representative query sample." *Journal of the Association for Information Science and Technology* 66.9 (2015): 1763-1775.

Lewis, Sarah. "Demystifying the Digital Shelf | Profitero." Profitero. (2020). www.profitero.com/2020/03/demystifying-the-digital-shelf/.

Lin, Julian, and Hock Chuan Chan. "Understanding the beliefs and intentions in search and purchase functions in an E-commerce web site." *IEEE transactions on Engineering Management* 56.1 (2008): 106-114.

Marzilli, Ted. "Band-Aid is the Healthiest Brand in America." *Ana Driving Growth.* (2018). https://www.ana.net/blogs/show/id/mm-blog-2018-08-band-aid-healthiest-brand-in-america

McIntyre, S. H., McQuarrie, E. F., & Shanmugam, R. How online reviews create social network value: The role of feedback versus individual motivation. *Journal of Strategic Marketing,* (2016): 24(3–4), 295–310. https://doi.org/10.1080/0965254X.2015.1095218

Narasimhan, Chakravarthi, and Ronald T. Wilcox. "Private labels and the channel relationship: a cross-category analysis." *The Journal of Business* 71.4 (1998): 573-600.

Oakenfull, G., & Gelb, B. based advertising to preserve brand equity but avoid 'genericide'. Journal of Advertising Research, 36(5), (1996): 65-65.

Olshavsky, Richard W., and Donald H. Granbois. "Consumer decision making—fact or fiction?." *Journal of Consumer Research* 6.2 (1979): 93-100.

Richardson, Paul S., Alan S. Dick, and Arun K. Jain. "Extrinsic and intrinsic cue effects on perceptions of store brand quality." *Journal of Marketing* 58.4 (1994): 28-36.

Richardson, Paul S., Arun K. Jain, and Alan Dick. "Household store brand proneness: a framework." *Journal of Retailing* 72.2 (1996): 159-185.

Rose, J. "Brewskee-Ball founders refuse to be sidelined by trademark case." *NPR.* (2014). https://www.npr.org/2014/05/06/310115756/brewskee-ball-founders-refuse-to-be-sidelined-by-trademark-case

Rozek, Richard P. "Brand identification and advertising: the case of a generic trademark." *Applied Economics* 14.3 (1982): 235-248.

Rubel, C. Price, quality important for private label goods. Marketing News, 29(1), (1995): 24-24.

Sethuraman, Raj, and Catherine Cole. "Factors influencing the price premiums that consumers pay for national brands over store brands." *Journal of Product & Brand Management* (1999).

Steenkamp, Jan-Benedict EM, Harald J. Van Heerde, and Inge Geyskens. "What makes consumers willing to pay a price premium for national brands over private labels?." *Journal of Marketing Research* 47.6 (2010): 1011-1024.

Stein, L. "Band-Aid says to put on bandages and take a digital detox." *Campaign US.* (2018). https://www.campaignlive.com/article/band-aid-says-put-bandages-digital-detox/1464180

Steinfield, Charles, and Pamela Whitten. "Community level socio-economic impacts of electronic commerce." *Journal of Computer-Mediated Communication* 5.2 (1999): JCMC524

USPTO. "Protecting Your Trademark: Enhancing Your Rights Through Federal Registration." *United States Patent and Trademark Office, Dept. of Commerce.* (2020).

Quelch, John A., and David Harding. "Brands versus Private labels-Fighting to win"." *HBR* (1996).

Quirk, M. "15 product trademarks that have become victims of genericization." *Consumer Reports.* (2014).

Vale, Rita Coelho do & Pedro Verga Matos. "The impact of copycat packaging strategies on the adoption of private labels." *Journal of Product & Brand Management* (2015).

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