Does Double Jeopardy apply using average spend per buyer as the loyalty metric?

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ABSTRACT

Double Jeopardy describes how smaller brands lose twice; they have fewer buyers who are slightly less loyal. A common loyalty measure is how often people buy the brand in a given time period. An alternative loyalty measure is how much people spend, which reflects purchase frequency *and* price paid. The brand equity literature suggests that high equity brands should reap high purchase rates and high prices. It is therefore possible that Double Jeopardy might become obscured when using a revenue-based measure such as spend per buyer. The reason is that price variation could create more, and more pronounced deviations from the Double Jeopardy pattern. We demonstrate that Double Jeopardy holds for spend in thirteen consumer goods categories: smaller brands have fewer buyers who spend somewhat less on the brand. We further find no relationship between brand share and average price and no relationship between excess/deficit loyalty and average price.

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1. Introduction

Double Jeopardy is a natural scientific law, a pattern that holds across many known conditions. For brand buying it is often stated as smaller brands having fewer buyers, who are slightly less loyal (Ehrenberg et al., 1990). Brand size is commonly measured as penetration, which is the proportion of households that bought a brand at least once in a given time period, while brand loyalty is commonly measured as purchase frequency, namely the average number of occasions which the brand was purchased in the same time period (e.g. Uncles et al., 1994). Double Jeopardy is a simple but valuable piece of knowledge for marketers because it provides norms to reasonably evaluate a brand's loyalty performance. If a brand is small, the expectation is that its loyalty level should be slightly lower than that of its larger competitors by the virtue of having fewer customers (not because marketing efforts are ineffective).

Most published work on Double Jeopardy, and indeed most work on repeat-purchase loyalty, examines brand loyalty according to the number of *occasions* the brand was bought in a specified time period (e.g. Ehrenberg et al., 1990; Uncles et al., 1994). Calculating the brand's average occasions divided by the average rate its buyers purchase the category gives another metric, called the brand's Share of Category Requirements or SCR (Ehrenberg, 2000; Uncles et al., 1994). An alternative is to base SCR on the number of units bought rather than occasions (Bhattacharya, 1997). This body of work, and related work employing the NBD-Dirichlet model (e.g. Ehrenberg et al., 2004) has shown that many aspects of buyer behaviour and brand performance metrics are routinely predictable.

Brand managers are certainly interested in metrics such as purchase frequency and SCR, but they are also interested in revenue or value-based metrics, where brand sales are expressed in dollars rather than occasions or units (e.g. Farris et al., 2016). Value metrics provide another perspective on a brand's competitive position. Two brands can have similar purchase frequencies leading to similar volumes of product sold, but vary considerably in value because one is priced higher than the other. This reality invites an interesting question: would the Double Jeopardy relationship continue to hold if the loyalty metric is measured as spend per buyer instead of purchased units or occasions?

Arguably, the Double Jeopardy pattern might not hold under this condition for a number of reasons. First, competing brands do sell at different price points and this fact alone might obscure a Double Jeopardy-type relationship between brand size and average spend per buyer (ASPB). If large Brand A is purchased two times in a year on average at $10, whereas small Brand B is purchased only once in a year on average at $20, both brands have the same ASPB. Plotting average spend against penetration for these brands would form a flat line and not conform to Double Jeopardy. Second, if there is some systematic relationship between brand share and price, Double Jeopardy for value might not hold at all.

There is limited and mixed evidence as to whether brand share and price are actually correlated. Chaudhuri and Holbrook (2001) found no correlation. Sethuraman et al. (1999) found a positive correlation, but this was due to manufacturer brands having both higher prices and higher share than private label brands. However, Kahn et al. (1988) argue that small, niche brands should earn higher prices

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because they uniquely satisfy their customer's needs. On this basis, suppose there are some 'niche' brands (i.e. small brands with unusually high purchase frequency that tend to sell at high prices), the high price will magnify the effect of the heightened purchase frequency to produce a very high ASPB for the small brand (e.g. Doyle, 1990). Together such effects might void the usual Double Jeopardy pattern. Given (a) the ubiquity and usefulness of Double Jeopardy, and (b) the relevance of revenue-based metrics for brand managers, this study investigates if Double Jeopardy applies to a revenue-based loyalty metric, using a 12-month time period for the analysis.

Next, ASPB is a function of purchase frequency and brand's selling price. In turn, purchase frequency is a measure of loyalty, and it is often asserted in the literature that high loyalty for a brand will translate into a price premium (e.g. Aaker, 1991; Lassar et al., 1995). Therefore, we also investigate if there is a link between unusually high purchase frequency for a brand and high selling price in the category. We use the Dirichlet model (Bound, 2009; Sharp et al., 2012) to calculate normal or expected purchase frequency for brands in multiple categories and identify when brands depart from expected loyalty levels; that is, they have excess or deficit loyalty. This analysis will allow us to clarify any association between a brand's loyalty and its ability to sustain a price premium.

In the following section, we begin by reviewing the past work on Double Jeopardy that has principally used a purchase-based loyalty measure and the possible implications of using a revenue-based loyalty measure. We then discuss how some brands show higher or lower loyalty than expected, and how these differences to expected loyalty levels (which are commonly attributed to or a signal of 'brand equity') might then be associated with the brand's selling price. We then outline the method and results related to each of the research questions. We conclude with a discussion of the findings.

2. Background

2.1. Double Jeopardy

Sociologist William McPhee (1963) first identified the Double Jeopardy pattern when looking at reader's attitudes towards comic strips. He found lesser-known comic strips suffered in two ways; fewer people bought them and they were also less liked by those who had. Since then, the Double Jeopardy pattern has been repeatedly observed in consumer attitudes, as well as behaviour across different time periods and diverse contexts such as packaged goods (e.g. Ehrenberg et al., 1990; Pare and Dawes, 2011); media choices (Redford, 2005); political parties (Solgaard et al., 1998); industrial goods, such as aviation fuel (Ehrenberg, 1975); charitable donations (Faulkner et al., 2016); cigarettes (Dawes, 2014); financial services (Wright and Riebe, 2010); and cars (Colombo et al., 2000), among others. Indeed, today it is more commonly known as being associated with brand buying behaviour than attitudes.

McPhee's (1963) original explanation for why Double Jeopardy occurs was based on exposure. He proposed that most people would rate the most popular or widely known option as their favourite because they know comparatively little about the alternatives. Meanwhile, the smaller group of people who have greater knowledge of competitive options (based on having more experience with the category) would 'split their vote' between the well-known option and the lesser-known option. Many researchers since have more explicitly attributed the Double Jeopardy pattern to the effects of mental and physical availability (e.g. Kucuk, 2008; Reibstein and Farris, 1995; Sharp, 2010). Bigger brands tend to have larger marketing expenditure for activities like advertising, coupled with larger distribution networks, including more store locations and more shelf space within stores (Dyson et al., 1997; Reibstein and Farris, 1995; Romaniuk and Sharp, 2016; Sharp, 2013). Consequently, many buyers of bigger

brands will not have equal opportunity to buy smaller brands that are not as readily available to be considered, mentally or physically.

As mentioned earlier, analyses showing the Double Jeopardy pattern generally measure brand loyalty in terms of frequency of purchase occasions (Pare and Dawes, 2011). Some studies have used SCR, also based on purchase occasions (Uncles et al., 1994) or units of the brand bought by a household as a proportion of their total unit purchasing of the category (Bhattacharya, 1997). These measures are vital brand performance metrics for managers. However, managers are arguably also interested in value or revenue-based metrics, for example average spend per buyer (ASPB), not just average occasions per buyer. This is evidenced by widespread interest in value-based metrics such as share-of-wallet (Cooil et al., 2007; Farris et al., 2016) and customer spend (Blattberg and Deighton, 1996).

Presently it is not known whether the Double Jeopardy pattern would hold if ASPB were used as the loyalty measure for a brand, rather than the average number of occasions or units purchased. There is a reasonable case to think it should, given that the ASPB on a brand will be heavily influenced by the number of times customers buy it in the time period. That said, in many categories there is a wide dispersion of prices among competing brands, in percentage terms at least. It may be the case that some small, high-priced brands, with no more than expected levels of purchase frequency, could enjoy high ASPB, comparable to that of the market leaders in their category. Likewise, it could also be the case that some market leading brands that engage in excessive discounting show far lower ASPB in the time period relative to their medium to smaller size counterparts.

Much has been written about the need for marketing managers to speak the language of finance (e.g. Stewart, 2009). If loyalty metrics are aligned with dollars and revenues, establishing the connection to marketing expenditure becomes easier. Therefore, clarifying if Double Jeopardy applies to ASPB would be a contribution to the literature pertaining to consumer purchasing behaviour and brand metrics (e.g. Jung et al., 2010; Ehrenberg et al., 2004), as well as to work on the marketing-finance interface (Cook et al., 2007). Therefore, our first research question is:

RQ1. Is the Double Jeopardy pattern evident if average spend per buyer (ASPB) is used as the loyalty metric?

2.2. Excess loyalty and pricing

The Double Jeopardy law has been shown to hold in numerous categories and applications (Ehrenberg et al., 1990). However, within a category there can be exceptions to the general pattern (e.g. Ehrenberg et al., 1990; Pare, 2008). Sometimes brands have higher or lower loyalty than expected, given their size. Small brands with higher than expected loyalty are called niche brands (Kahn et al., 1988), whilst small brands with lower than expected loyalty are called change-of-pace brands (Danaher et al., 2003). Some research has also pointed to market-leading brands enjoying higher than expected loyalty (Fader and Schmittlein, 1993; Pare and Dawes, 2011), i.e. slightly higher than predicted by the Dirichlet model.

There are several potential explanations for brands with deficit penetration and excess loyalty (niche brands). Restricted availability is one explanation for higher loyalty, such as a private label brand that is only available in a single retailer (Ellis and Uncles, 1991), or perhaps a brand sold in only one geographic region. Private label or regional brands can be very large *where they are sold*, raising their purchase frequency in that retailer or region. However, when brand metrics are aggregated for the total market (all retailers or all regions), such brands appear to have low total penetration but their high purchase frequency remains. In other words, limited availability inflates a brand's loyalty relative to its market-wide penetration. There is some evidence to support this notion, with