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Jan-Benedict E. M. Steenkamp, Inge Geyskens

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Manufacturer and Retailer Strategies to Impact Store Brand Share: Global Integration, Local Adaptation, and Worldwide Learning

Jan-Benedict E. M. Steenkamp

Kenan-Flagler Business School, University of North Carolina at Chapel Hill, Chapel Hill, North Carolina 27599,
jbs@unc.edu

Inge Geyskens

Tilburg School of Economics and Management, Tilburg University, 5000 LE Tilburg, The Netherlands,
i.geyskens@tilburguniversity.edu

Although store brands (SBs) are becoming increasingly important across the world, their success varies dramatically across consumer packaged goods categories and countries. The purpose of this paper is to provide insight into how such differences in SB success originate. Using a unique data set that combines scanner data for a three- to five-year period with consumer survey data ($n = 20,987$) for scores of food, household care, and personal care categories from 23 countries around the world, we identify cross-national regularities as to the role of nine manufacturer and retailer factors in explaining SB market share. For each manufacturer and retailer factor, we determine whether it can be part of a global integration strategy, whether it can be included in a local adaptation strategy, or whether it is a candidate for worldwide learning. Our findings have important implications for national brand manufacturers and retailers.

Key words: store brands; national brands; global strategies; worldwide learning; empirical generalizations; international marketing

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Introduction

According to the *Wall Street Journal*, “Every year, U.S. shoppers buy more generic goods, many of them trading down from more expensive, name-brand labels to save money” (Karp 2012, p. B1). The growth of store brand (SB) sales has outpaced national brand (NB) growth every year in the 21st century. Currently, more than one out of every five dollars spent on consumer packaged goods (CPG) is spent on SB products. Indeed, the growing sales of SBs pose significant challenges for NBs, not only in the United States but worldwide (Kumar and Steenkamp 2007).

Notwithstanding the general success of SBs, their market share varies substantially across countries and CPG categories. For example, SB share is considerably higher in the United Kingdom (46%), Germany (35%), and Spain (33%) than in Italy (11%) or Japan (4%). At the category level, cross-national differences in SB share are also substantial. Whereas the SB share for fruit juice is 54% in Spain and 82% in the United Kingdom, it is only 22% in the United States and 18% in Slovakia. On the other hand, the SB share for tea is broadly comparable between the United States (14%)

and the United Kingdom (18%) while being much higher in Spain (30%) and negligible in Slovakia (4%).

These visible cross-national differences in SB share may give managers the idea that “everything is different” (Farley and Lehmann 1994, p. 111). Managers working in local markets often embrace this view, and for understandable reasons—after all, differences between countries are the *raison d’être* for their jobs. If, indeed, the effectiveness of marketing instruments depends completely on the institutional (country) context in which they are working, the only reasonable strategy to fight (NB manufacturers) or boost (retailers) SB share is a *local* strategy, i.e., a strategy that is developed and executed locally.

An alternative point of view is that cross-national differences in SB share are misleading in that they are due to differences in *mean levels* of marketing instruments rather than to differences in the *effectiveness* of marketing instruments under the control of NB and retail managers (cf. Farley and Lehmann 1994). If the effects of marketing instruments are the same across countries, this insight can be used in the development of a *globally integrated strategy* to fight or boost SB share.

It is also possible that the reality is somewhere in between. That is, the effects of marketing instruments differ across countries, but they do so in a predictable manner. If the cross-national variation in SB-share response parameters can be explained by the institutional characteristics of the country in question, local managers can make an informed adjustment of the overall effect found across countries based on knowledge about the specific country context in which they operate (Grewal et al. 2008). Thus, insight into the sources of the cross-national variation in SB-share response parameters offers potential for *worldwide learning*.

Finally, to complicate things, there is no reason to assume that the conclusion will be the same for all marketing levers. It is quite possible that some instruments could be part of a global integration strategy, others could be included in a local adaptation strategy, and still others may be prime candidates for a strategy of worldwide learning. This view is consistent with the contemporary opinion in international marketing that argues against a one-size-fits-all strategy (Kotabe and Helsen 2010, Yip and Hult 2012).

Unfortunately, existing research on the drivers of SB success is almost completely based on U.S. data. Consequently, internationally operating NB manufacturers and retailers have no guidance in deciding (1) whether they can apply existing U.S. insights to

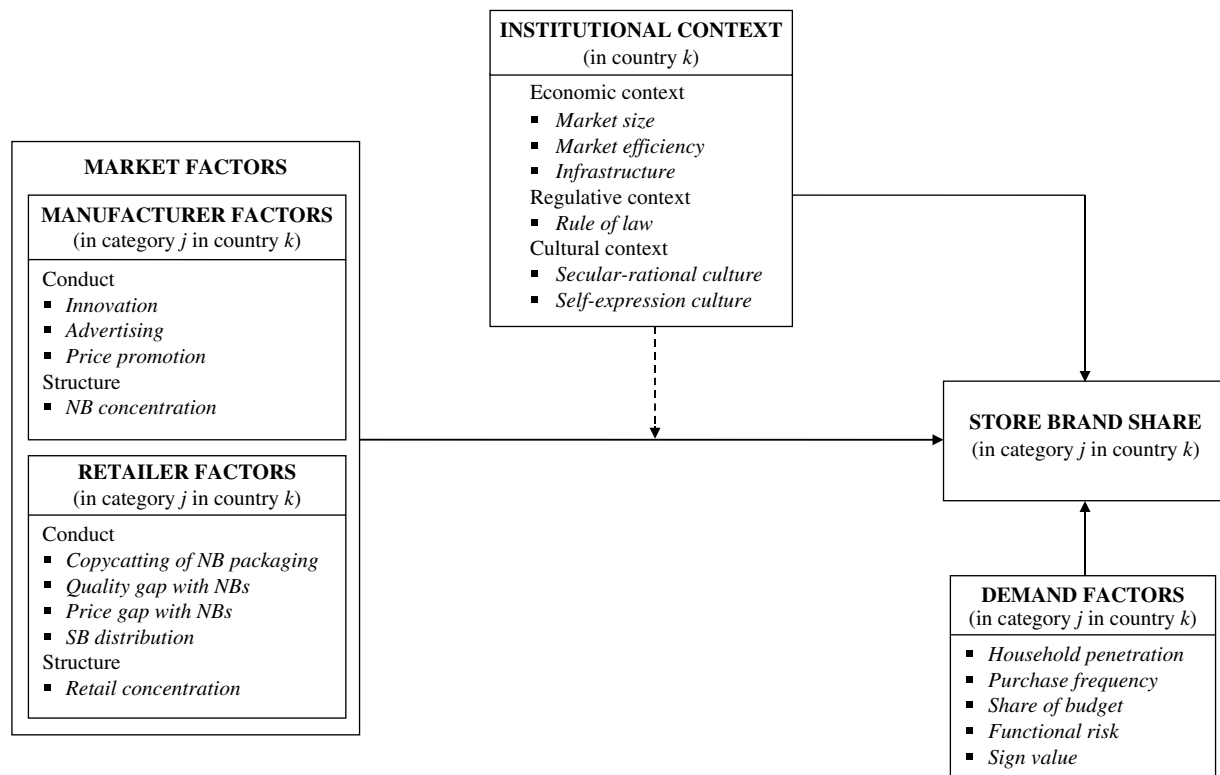
other countries as part of their internationalization strategy (global integration), (2) whether they have to figure out again and again what is best for each market (local adaptation), or (3) whether they can make informed adaptations to U.S. insights (worldwide learning). Moreover, local (non-U.S.) players are also unsure whether received insights into the drivers of SB success are applicable to their markets.

The purpose of this paper is to give NB manufacturers and retailers strategic guidance on this issue. In our work, we focus on the generic battle between SBs and NBs, rather than on specific SBs or NBs (see, e.g., Dhar and Hoch 1997 and Lamey et al. 2012 for a similar generic perspective). We estimate the SB-share response parameters for nine key marketing instruments (predominantly) under the control of either NB managers or retail managers using a unique data set covering 23 countries in Asia, Europe, Latin America, and North America. We combine scanner data covering a three- to five-year period for scores of CPG categories per country with dedicated consumer survey data from 20,987 respondents around the world and secondary country data.

Research Framework

Our global framework of the drivers of SB share (see Figure 1) takes into account *micro-level market* (NB manufacturer, retailer) factors and *demand* (consumer)

Figure 1 Research Framework



factors, as well as *macro-level institutional* (economic, regulative, cultural) factors. We consider both market factors that are primarily under the control of (or are at least influenceable by) the NB manufacturer and market factors that are primarily under the control of the retailer.¹ Furthermore, we consider factors that can be modified relatively easily in the short run (e.g., advertising or price-promotion activity) as well as factors that can only be affected in the long run (e.g., NB concentration or retail concentration).² To make this distinction transparent, we label the former factors *market-conduct variables* and the latter factors *market-structure variables*. Although our focus is on the impact of the market factors and how their effect varies—or does not vary—across countries in function of the country's macro-level institutional context, we control for demand factors to arrive at more precise estimates of the effects of the market factors.

In our theorizing, we mainly build on three large-scale studies (Dhar and Hoch 1997, Hoch and Banerji 1993, Sethuraman 1992) that investigated determinants of cross-category variation in SB share in the United States (see Sethuraman 2009 for a comprehensive review of the SB literature). We use previous research as a point of departure for developing generalized (country-free) expectations as to the likely effect of each market factor. These expectations are the basis for analyzing the global generalizability of SB-share response parameters. We further study characteristics of the institutional context in which SBs and NBs operate. We expect that certain institutional environments are more conducive to the development of SBs, giving rise to mean differences in SB share across countries. Moreover, we allow for contingency of SB-share response parameters on country-level institutional characteristics. In the remainder of this section, we develop the rationale underlying the expected generalized main effects of the drivers of

¹ In any multilayered marketing channel, few market factors will be fully under the control of either the NB manufacturer or the retailer. We use Dhar and Hoch (1997) to categorize a particular factor as being primarily under the control of the NB manufacturer or the retailer. Note that, consistent with other large-scale studies into drivers of SB share, all market factors are at the level of individual categories.

² In the short run, NB and retail concentration are a given, rather than under the control of the manager. However, in the longer run, NB concentration can be consciously increased by merging or delisting brands, whereas it is reduced by brand proliferation (Kumar 2003). It is noteworthy that at the 2012 T+PM conference, former chief executive officer (CEO) of Procter & Gamble (P&G), A. G. Lafley, said that in the last 10 years, the company consciously reduced the number of its brands and put its resources behind a small number of mega brands. In a similar vein, the retail concentration in the category can be affected by retailer decisions to make particular categories a strategic priority or, alternatively, by deemphasizing categories.

Table 1 Expected Main Effects of Drivers of Store Brand Share

Driver	Expected sign
Market factors	
Manufacturer factors	
Innovation	—
Advertising	—
Price-promotion activity	—
NB concentration	—
Retailer factors	
Copycatting of NB packaging	∩
Quality gap with NBs	—
Price gap with NBs	+
SB distribution	+
Retail concentration	+
Demand factors	
Household penetration	+
Purchase frequency	+
Share of budget	+
Functional risk	—
Sign value	—
Institutional factors	
Market size	+
Market efficiency	+
Infrastructure	+
Rule of law	+
Secular-rational culture	—
Self-expression culture	+

SB share. Table 1 lists the variables and the expected effects of each.

Category Drivers of SB Share

Manufacturer Factors

Innovation. New products decrease the substitutability between SBs and NBs. Major innovations are an important source of NB sales and leave SBs in the unenviable position to copy yesterday's favorites. SB growth can also be held back by a continuous program of small improvements, such as the numerous improvements P&G made to its Tide detergent over the years (Quelch and Harding 1996).

Advertising. Heavy advertising is a powerful weapon to increase demand for NBs via differentiation and loyalty building. Brands use advertising to “insulate” themselves from competition. This should curtail switching from NBs to lower-priced SBs. Heavy advertising also raises barriers to entry, and it plays an important role in building brand imagery, which provides symbolic benefits to consumers that are difficult for SBs to copy (Kumar and Steenkamp 2007).

Price-Promotion Activity. It has been suggested that heavy promotional spending by NBs can crowd SBs out of the market (Lal 1990). On the other hand, heavy reliance on promotions can commoditize the category and teach consumers to focus on

price, which should hurt NBs. Empirical evidence suggests that the crowding-out effect is stronger. Although Hoch and Banerji (1993) found a positive but nonsignificant effect of promotion intensity on SB share, Dhar and Hoch (1997) and Sethuraman (1992) reported a negative effect.

NB Concentration. NB power is greater if a few brands account for most NB sales (Steenkamp et al. 2005). More powerful brands typically have wider distribution and more and better shelf space (Reibstein and Farris 1995). Moreover, a retailer may find it more difficult to find a supplier for its SB in markets with higher NB concentration (Scott-Morton and Zettelmeyer 2004). Conversely, in fragmented markets, each brand is not very strong, which provides more opportunities for SBs to gain share.

Retailer Factors

According to Mills (1995), the main aim of SBs is to be close substitutes for NBs in the category. If they achieve this while offering a lower price, success should follow. This is consistent with Kumar and Steenkamp's (2007) observation that copycat SBs are the dominant type of SB. The two key dimensions on which SBs attempt to be close substitutes for NBs are packaging and product quality (i.e., the extrinsic and intrinsic characteristics of the product).³

Copycatting of NB Packaging. Retailers often consciously copy the packaging of a leading NB (Scott-Morton and Zettelmeyer 2004). Intuitively, one would expect that the more similar the packaging of the SB is to the packaging of a leading NB, the greater its success in the marketplace. However, van Horen and Pieters (2012) argued that reality is more complex. These authors noted that the effect of "accessible information" (i.e., information that consumers have stored in memory about the leading NB) on the evaluation of the SB copycat can be assimilative or contrastive. Assimilation occurs when accessible information guides the interpretation of the SB, causing a shift to the activated positive NB evaluation. Contrast occurs when accessible information is

used as a contrast comparison standard in evaluation, causing a shift away from the activated positive NB evaluation. van Horen and Pieters (2012) proposed that the degree of package similarity between copycat and leader brand, and the way consumers make their evaluation, play a critical role in determining whether assimilation (desired by the retailer) or contrast occurs. They provide lab-based evidence that if the shopping situation enables consumers to easily compare the copycat SB with the NB—which is facilitated by typical shelf layouts (Scott-Morton and Zettelmeyer 2004)—"blatant [high-similarity] copycats will lose and subtle copycats [medium similarity] will gain" (van Horen and Pieters 2012, p. 84). This is because, for blatant copycats, consumers are likely to become more aware of the retailer's potential ulterior motives in enticing consumers to buy a SB through (unfair) similarity, which results in contrast. In that case, consumers are likely to adjust their evaluation of the SB by consulting their naïve theories of marketing persuasion. Based on these experimental findings, we expect that medium similarity is evaluated more positively than high similarity, which suggests an inverted-U shape between the copycatting of NB packaging and SB share.

Quality Gap with NBs. The demand for low-quality products is always limited as there is a significant portion of consumers that will not buy a low-quality product, more or less regardless of the price (Bronnenberg and Wathieu 1996). For a long time, the success of SBs was held back by their poor perceived quality (Kumar and Steenkamp 2007). This is no longer the case. Over the last few decades, SBs have made remarkable strides in approaching—and sometimes even exceeding—the quality of NBs (Apelbaum et al. 2003). Consequently, the degree to which SBs have been able to close the perceived quality gap with NBs should have a positive effect on SB share.

Price Gap with NBs. SBs are nearly always sold at a lower price than NBs. Economic theory dictates that the bigger the price gap between NBs and SBs in a given category, the greater the incentive for consumers to buy the SB.

SB Distribution. For SBs to have a high market share in the category, they must have a wide distribution. After all, few grocery shoppers are willing to travel long distances. The effect of SB distribution is not only interesting in its own right; by controlling for SB distribution, we can also more accurately estimate the effects of the other retail factors on SB success in the category.

³ Although some retailers have begun to advertise their SBs and launch their own product innovations, the intensity of these activities is minor compared with NBs (Lamey et al. 2012). Brand economics argue against such investments (Steiner 2004). NB manufacturers have a much greater stake in their categories than retailers, who after all carry hundreds of categories. Retailers also operate on far smaller markups than NB manufacturers. Consequently, they lack the financial resources to support any specific category with sustained advertising, and neither they nor their dedicated SB suppliers—whose margins over variable costs are typically very low (Connor and Peterson 1992)—have the financial resources to afford cutting-edge research and development facilities necessary to be innovation leaders (Hoch and Banerji 1993).

Retail Concentration. If a small number of retailers account for most of total category sales, they will be in a stronger, more powerful position to procure good SB products by ensuring that SB suppliers meet retailer specs (Kumar and Steenkamp 2007). Moreover, as observed by Dhar and Hoch (1997), in less concentrated categories retailers must focus on stealing customers and defending their own turf. Hence, they are more likely to leverage NB resources to build store traffic. In contrast, in concentrated categories retailers have plenty to gain by exploiting existing store traffic, an objective that SBs are particularly well suited to achieve.

Demand Factors

We include several demand factors as covariates. Although demand factors are not the substantive focus of the paper, controlling for their effect allows for more precise testing of the effects of the market factors (Greene 2003). Consumers may be more likely to look for a good value and low price, and hence be more receptive to SBs, if they *purchase* the category more *frequently* or when the category accounts for a greater *share of budget* (Sethuraman 1992). SBs may also be more successful in categories that have achieved high *household penetration*, since it is more difficult for retailers to build sufficient expertise in categories that are bought by only a few households only (Dhar and Hoch 1997). Purchasing an NB is a well-known risk-reduction strategy that many consumers employ in categories that are characterized by high perceived risk (Erdem et al. 2004). Thus, SB share may be lower in categories in which consumers perceive a lot of *functional risk* associated with the purchase. Finally, NBs should be more successful in categories high on symbolic or *sign value* (Laurent and Kapferer 1985) as NBs excel on brand imagery compared with SBs, which are still sold more on functionality.

The Role of a Country's Institutional Context

Thus far, we have abstracted from the country context in which NB manufacturers and retailers operate. Thus, we implicitly assumed that “everything is the same.” However, global reality may be considerably more complex. After all, one cannot deny that there are substantial cross-national differences in SB share, both on average and for specific categories. The country context can influence SB share in two ways. First, particular country contexts can be more conducive to SB success than others. This may explain the difference in *overall* SB share in countries. Second, and more interesting for our purposes, the country context may

systematically moderate SB-share response parameters. We will first discuss the main effects of the country context on SB share and, subsequently, consider the complicated realities of cross-national similarities and differences in SB-share response parameters.

To understand the role of the country context in shaping SB share, we turn to institutional theory. Institutions are humanly devised economic, regulative, and social constraints that shape human interaction (North 1990, p. 3). The institution-based view on strategy holds that firms need to take into account wider influences from society when crafting their marketing strategies (Peng 2009). Based on the work of the sociologist Scott (2001) and the economist Williamson (2000), we distinguish between three interrelated but distinct “pillars of institutions”: the economic, regulative, and cultural systems. The *economic* system specifies the way in which the country's economic institutions fulfill the (material) needs of its people. The *regulative* system involves the capacity to establish formal rules, inspect society members' conformity to them, and impose sanctions, if necessary. The *cultural* system represents the customs, traditions, norms, beliefs, values, and habits of a society. In the words of Williamson (2000, p. 599), the economic system is the “play of the game,” the regulative system specifies the “formal rules of the game,” and the cultural system stipulates the “informal rules of the game.” Some of the key characteristics of the three pillars of institutions are summarized in Table 2.

Economic System

The economic system concerns the efficient production, transaction, and distribution of products and

Table 2 Three Pillars of Institutions

Characteristic	Economic (Play of the game)	Regulative (Formal rules of the game)	Cultural (Informal rules of the game)
Basis of compliance	Enlightened self-interest	Expedience	Taken for grantedness Shared understanding Social opprobrium
Basis of order	Discipline of the marketplace	Regulative rules	Constitutive schema
Basis of legitimacy	Capitalistic ideology Efficiency	Legally sanctioned under the law	Comprehensible Recognizable Culturally supported
Key mechanisms	Market transactions	Due process	Mimetic
Key organizations	Corporations	Courts Parliament	Families Schools Social organizations
Primary scientific domain	Economics	Law Political science	Psychology Sociology

Source. Derived from Scott (2001) and Williamson (2000).

services. We consider all three components of the economic system. First, *large markets* allow for economies of scale in production, which are especially important for retailers as NB manufacturers can generate economies of scale by selling the same brand in multiple countries. In contrast, only in large markets do even modest SB shares translate in the large production volumes that generate economies of scale.

Second, exchanging products between market parties entails transaction costs (Geyskens et al. 2006). The efficient functioning of markets is crucial for lowering these transaction costs (Peng 2009). Healthy market competition is important in driving *market efficiency* by ensuring that the most efficient firms are those that survive (North 1990). Few retailers have the capabilities to manufacture SBs themselves. Rather, they source them from independent suppliers. Efficient markets with low transaction costs allow retailers to compete more effectively against NB manufacturers by securing an independent supply at lower costs (Williamson 2000).

Finally, efficient distribution of products depends critically on the quality of the *infrastructure*. Selling CPG products requires a fine-grained network of retail outlets, which requires a sound infrastructure. In the absence of a well-developed infrastructure, the physical-distribution costs for both NBs and SBs will be high, which puts SBs at a disadvantage vis-à-vis NBs as their (absolute) margins are slimmer. Thus, an inadequate infrastructure makes selling SBs less attractive for the retailer than selling NBs. In sum, we expect SBs to be more successful in large economies, characterized by a high degree of market efficiency and a good infrastructure.

Regulative System

The regulative system includes the presence and efficacy of regulatory institutions and the associated legal system that exist to ensure stability, order, and continuity in society (Arndt 1979). It is generally recognized that the *rule of law* is a crucial component of the regulative system (Scott 2001, Steenkamp and Geyskens 2006). The rule of law deals with the degree to which the behavior of individual persons and organizations (including government authorities) is guided by formal, transparent legal rules that apply to everybody, regardless of rank and status (Licht et al. 2005).

As retailers typically source their SBs from independent suppliers, a strong rule of law provides effective protection against fraud and adulteration of products. This safeguard disciplines SB suppliers to fulfill the product specifications as laid out in the contract. It is no surprise that many product-harm scandals originate in countries with a weak rule of law. Thus, we expect that SB share will be higher in countries with a stronger rule of law.

Cultural System

The cultural system represents the culturally supported beliefs, attitudes, habits, and behaviors in a society (Triandis 1989). The best-known cultural systems are the frameworks proposed by Hofstede (2001), Inglehart (Inglehart 1997, Inglehart and Baker 2000), and Schwartz (1994). For our purposes, the Inglehart and Baker framework is especially useful since it is grounded in materialism and modernization theory.

The central claim of Inglehart's theory (Inglehart 1997, Inglehart and Baker 2000, Inglehart and Welzel 2005) is that a country's level of socioeconomic development is linked with coherent changes in society. Socioeconomic development gives rise to two major dimensions of cross-cultural variation, one linked with modernization and industrialization (the *traditional/secular-rational* dimension) and the other linked with postmodernization and postindustrialization (the *survival/self-expression* dimension). Industrialization gives rise to the bureaucratization, centralization, rationalization, and the materialistic secularization of society. This change in society is associated with a shift from *traditional* values to *secular-rational* values. Secular-rational societies are characterized by materialistic ideologies (Inglehart and Welzel 2005, p. 26). Brands—as one of the most visible exponents of a materialistic world (McCracken 1986)—are expected to do well in these societies. Thus, we expect that SB share is lower in countries that rate high on the secular-rational dimension.

Postindustrialization leads to a second major process of change: the centralizing and bureaucratic influences decline and are increasingly superseded by an emphasis on individual autonomy and self-expression. This change in society is associated with a shift from *survival* values to *self-expression* values. According to Inglehart, the best-documented aspect of the rise of self-expression values is increased emphasis on postmaterialist priorities. Postmaterialist priorities are associated with a reduced importance of brands (Holt 2002), which should benefit SBs at the expense of NBs.

Global Strategies in Function of Cross-National Generalizations

The institutional context in which firms operate can have a significant impact on the effectiveness of their marketing instruments (Peng 2009). This raises issues for the development of effective manufacturer and retailer strategies. According to Grewal et al. (2008), multinational companies may pursue three types of global strategies: global integration, local adaptation, and worldwide learning. To complicate matters, international marketing theory informs us that the appropriate strategy is likely to vary across marketing instruments (Kotabe and Helsen 2010; Yip and

Table 3 Global Strategies in Function of Cross-National Generalizations

Global strategy	SB-share response parameter		
	Overall effect significant?	Cross-national variation in response parameter?	Significant reduction in cross-national variation by introducing institutional factors?
Global integration (the earth is flat)	Yes	No	n.a.
Local adaptation (everything is different)	Yes	Yes	No
	No	Yes	No
	No	No	n.a.
Worldwide learning (it depends)	Yes	Yes	Yes
	No	Yes	Yes

Note. n.a., not applicable.

Hult 2012, Chapter 6). To address which of the three global strategies identified by Grewal et al. (2008) is best for each manufacturer and retailer factor, we assess to what extent the effect of each market factor is cross-nationally generalizable (see Table 3).

In case of *global integration*, the effect of a particular market factor is similar across countries (“the earth is flat”). A globally integrated strategy is appropriate when the overall (global) effect of a particular factor is significant and the SB-share response parameter does not vary across countries (Farley and Lehmann 1994). In the opposite case, *local adaptation*, the effect of the market factor is completely local (“everything is different”). The company can learn little, if anything, from experiences in other countries, and therefore, maximum flexibility is recommended (Grewal et al. 2008). A local adaptation strategy is called for if the SB-share response parameter varies across countries, and this variation term *cannot* be reduced by introducing country factors (Farley and Lehmann 1994). An extreme case of local adaptation is when the market factor has no globally generalized effect and there is also no cross-national variation in the response parameter. In that case, the effect is completely idiosyncratic to the category and country in question.

Unfortunately, discussions of cross-national generalization seem to polarize on the trade-off between integration and adaptation. It has been called “the strategic choice on which the literature on global strategy has traditionally focused” (Ghemawat 2007, p. 198, *italics in original*). In many situations, it may be more useful to recognize that the effect of a market factor differs across countries in some predictable way (“it depends”). In this intermediate case, the marketing instrument is a prime candidate for *worldwide learning*. By understanding the effect of institutional characteristics on the effectiveness of the marketing instrument in question, the company can adjust it to

different countries in a predictable manner. Potential for worldwide learning is present if (1) a particular SB-share response parameter varies across countries *and* (2) a significant portion of the cross-national variation can be explained by institutional factors (Farley and Lehmann 1994). That is, the overall effect is systematically and predictably modified according to the institutional characteristics of the country.

In our empirical study, we will investigate which manufacturer and retailer factors are prime candidates for global integration, local adaptation, and worldwide learning strategies. We allow the SB-share response parameters to vary across countries within a common framework. Following Farley and Lehmann (1994), if an effect varies across countries, we will test whether there is an identifiable systematic component in this variability that can be explained by the institutional context of the country in which the firm operates. Marketing theory is not sufficiently developed to allow us to develop a comprehensive set of a priori expectations concerning (1) which SB drivers vary across countries and (2) how this cross-national variation can be systematically explained by institutional factors. Therefore, we will examine the moderating role of institutional factors using inductive reasoning. Our inductive approach is philosophically backed by Bass (1995) and more recently by Alba (2012) who wrote admiringly about marketing scientists’ “ability to produce empirical generalizations about fundamental marketing phenomena [that] has advanced understanding and practice, irrespective of underlying theory” (p. 984).

Method

Data Collection

We combine scanner data with dedicated consumer survey data and secondary institutional data.

Scanner Data. The global market research agencies GfK and Kantar Worldpanel operate household panels around the world.⁴ Based on these household panels, they provided aggregate data covering three to five years for, on average, 54 CPG categories per country in 23 countries around the world, resulting in 5,054 category observations. For each category, GfK and Kantar provided time-series data on total volume sales, SB volume sales, the price gap between NBs and SBs, market shares of the largest NBs, market shares of the largest retailers, household penetration, and purchase frequency. For some

⁴ More information about the household panels operated by GfK and Kantar Worldpanel can be found at <http://www.gfkcs.com/household-panel.html> and <http://www.kantarworldpanel.com/global/countries>, respectively.

measures and for some countries, data were provided per quarter, in other cases per year. Countries included are the United States (North America), Argentina, Brazil, and Chile (Latin America), Austria, Belgium, Denmark, France, Germany, Ireland, Italy, the Netherlands, Norway, Portugal, Spain, Sweden, and the United Kingdom (western Europe), the Czech Republic, Hungary, Poland, and Slovakia (eastern Europe), and Japan and Thailand (Asia). The product categories cover a wide range of food and beverages, household care products, and personal care products.

Survey Data. For each of the product categories included in the scanner data, survey data were collected in close collaboration with GfK and Kantar. For countries with a high penetration of the Internet, a Web survey was used. In other countries, we used mall intercepts, using the same questionnaire layout. The questionnaire was developed in English and translated into Czech, Danish, Dutch, French, German, Hungarian, Japanese, Italian, Norwegian, Polish, Portuguese, Slovak, Spanish, Swedish, and Thai as well as country-specific variations (e.g., Argentinean Spanish) using back translation. Modifications were made based on discussions between back translators, authors, and headquarters of the market research agencies to maintain consistency across all countries. Respondents were people primarily responsible for grocery purchases in their household. Each person evaluated up to four product categories that were randomly drawn from a subset of categories in which the respondents bought at least once every six months.

We provided the respondents with definitions and examples of leading NBs and (standard-tier) SBs to ensure consistency among respondents about what these terms mean (see Ailawadi et al. 2001). These examples were provided by the local subsidiaries of GfK and Kantar and were checked by their headquarters. In the survey, we collected data on NB innovation, advertising, price-promotion activity, copycatting of NB packaging, the perceived quality gap between NBs and SBs, and SB distribution, as well as on the demand factors share of budget, functional risk, and sign value. The samples in each country were drawn so as to be broadly representative of the total population in terms of region, age, education, and gender.

Questionnaires were completed by 20,987 respondents. On average, 64 respondents supplied data on each product category in each country, resulting in 71,083 observations.⁵ Since this study uses categories

rather than consumers as the unit of observation, we aggregated across consumers to arrive at scores for categories (see Narasimhan et al. 1996 for similar practice).

Secondary Institutional Data. Country scores on the institutional characteristics were obtained from various secondary sources (see Table 4).

Measurement

For the time-varying variables that are derived from the scanner data, we created yearly aggregates for each measure resulting in three to five data points per category per country.⁶ We aggregate to the annual level for stability purposes and because data for a number of our countries are only available at the annual level (see Dhar and Hoch 1997 for similar practice).

SB market share is defined as the ratio of total volume sales for SBs to total volume sales for the entire category, expressed in percentages. We use volume rather than value share to avoid endogeneity with the price gap measure. Our dependent measure is bounded by 0 and 100. To ensure logical consistency for all values of SB share, we logit-transform our dependent measure (see Ailawadi et al. 2008 for similar practice). Table 4 provides the measures and sources for all our measures and the mean reliability (wherever applicable).

Model Specification

Our data give rise to a three-level structure. Variables that vary with time are included in the level 1 equation as predictors. Included in level 2 are predictors that vary with the CPG category but not with time (at least not in our data), and level 3 contains the predictors that vary by country but not by CPG category. For expositional clarity and following standard reporting practice in multilevel modeling (Raudenbush and Bryk 2002), we develop the model step-by-step by presenting separate equations for each level before using substitution to arrive at our *estimation equation*.

Level 1. Equation (1) includes all the time-varying predictors (subscripted for the i th year ($i = 1, \dots, n_{jk}$), the j th category ($j = 1, \dots, J_k$), and the k th country ($k = 1, \dots, 23$)) and a random error term r_{ijk} , which is assumed to be normally distributed with zero mean and variance σ_i^2 . Because of the time-series nature of the data, we specify a first-order autoregressive residual structure to account for autocorrelation (Hanssens et al. 2001). For notational convenience, we label the (three) time-varying market factors *TVMF*, the (two)

⁵ The average number of observations per category compares favorably with other research. For example, Chaudhuri and Holbrook (2001), Hoch and Banerji (1993), and Narasimhan et al. (1996) had an average of 21, 30, and 25 respondents per product category, respectively.

⁶ The exception is Japan, for which only two years of data were available. For the majority of countries (16 out of 23), we had four or five years of data.

Table 4 Variables and Data Sources

Construct	Operationalization	Reference	Data source
<i>SB share</i>	Percentage of total volume sales for category j , country k , and year i that is accounted for by SBs, logit-transformed.	Dhar and Hoch (1997)	Household panels
Manufacturer factors			
<i>Innovation</i> ($\bar{\alpha} = 0.84$)	—In category j , new products are frequently introduced. —There are many new product introductions in category j .	Steenkamp et al. (2010)	Consumer surveys
<i>Advertising</i> ($\bar{\alpha} = 0.86$)	—Brands in category j are heavily advertised in magazines, radio, or TV. —There is a lot of advertising for brands in category j .	Steenkamp et al. (2010)	Consumer surveys
<i>Price-promotion activity</i> ($\bar{\alpha} = 0.74$)	—There is always a special offer in category j . —It is easy to find a special offer in category j .	Steenkamp et al. (2010)	Consumer surveys
<i>NB concentration</i>	Sum of volume sales of the top three NBs divided by the <i>total NB sales</i> for category j , country k , and year i , expressed in percentages.	Lipczynski et al. (2005)	Household panels
Retailer factors			
<i>Copycatting of NB packaging</i> ($\bar{\alpha} = 0.60$)	—In category j , shops' own labels and brands look very similar. —On the shelf of the category j , I cannot tell a shop's own label from a brand as the packages are very similar.	Steenkamp et al. (2010)	Consumer surveys
<i>Quality gap with NBs</i>	—In category j , the quality of brands is very high. —In category j , the quality of shops' own labels is very high. Quality gap scores were obtained by subtracting the SBs' quality score from the NBs' quality score.	Erdem et al. (2006)	Consumer surveys
<i>Price gap with NBs</i>	Ratio of the market share-weighted average NB price minus the market share-weighted average SB price divided by the market share-weighted average NB price for category j , country k , and year i , expressed in percentages.	Dhar and Hoch (1997)	Household panels
<i>SB distribution</i>	The percentage of respondents who reported that their store carried a store brand in category j .	Hoch and Banerji (1993)	Consumer surveys
<i>Retail concentration</i>	Cumulative market share of the top three retailers for category j , country k , and year i , expressed in percentages.	Lipczynski et al. (2005)	Household panels
Institutional factors			
<i>Market size</i>	Gross domestic product in US\$ billions at purchasing power parity, log-transformed.		IMD World Competitiveness Yearbook
<i>Market efficiency</i>	Composite indicator that measures the extent to which a country is characterized by healthy market competition, both domestic and foreign, and by a minimum of impediments to business activity through government intervention. Country scores are derived by combining hard data with survey responses from executives. Scores can range from -1 to $+1$, with higher scores corresponding to more efficient markets		Global Competitiveness Report
<i>Infrastructure</i>	Composite indicator that measures the extent to which a country's basic infrastructure, technological infrastructure, scientific infrastructure, and human resources meet the needs of businesses. Country scores are derived by combining hard data with survey responses from expert managers. Scores can range from 0 to 100, with higher scores corresponding to a better-developed infrastructure.		IMD World Competitiveness Yearbook
<i>Rule of law</i>	Composite indicator that measures the extent to which agents have confidence in and abide by the rules of society. Country scores are derived by combining expert polls with cross-country surveys of residents. Scores range from -2.5 to 2.5 , with higher scores corresponding to a stronger rule of law.	Kaufmann et al. (2002)	World Bank
<i>Secular-rational culture</i>	Country scores derived from survey responses on multiple items, collected among large representative samples of people living in a country. Scores range from -2.5 to 2.5 , with higher scores corresponding to a stronger secular-rational culture.	Inglehart and Welzel (2005)	World Values Survey website
<i>Self-expression culture</i>	Country scores derived from survey responses on multiple items, collected among large representative samples of people living in a country. Scores range from -2.5 to 2.5 , with higher scores corresponding to a stronger self-expression culture.	Inglehart and Welzel (2005)	World Values Survey website

Table 4 (Cont'd.)

Construct	Operationalization	Reference	Data source
Demand factors			
<i>Household penetration</i>	Percentage of households in country k purchasing category j at least once per year i .	Sethuraman (1992)	Household panels
<i>Purchase frequency</i>	Average number of occasions per year i that category j in country k is bought by a household.	Sethuraman (1992)	Household panels
<i>Share of budget</i>	Buying the category j constitutes a substantial share of my total budget.	Own development	Consumer surveys
<i>Functional risk</i> ($\bar{\alpha} = 0.76$)	—There is much to lose if you make the wrong choice in category j . —It matters a lot when you make the wrong choice in category j .	Laurent and Kapferer (1985)	Consumer surveys
<i>Sign value</i> ($\bar{\alpha} = 0.92$)	—You can tell a lot about a person from the brand in category j he or she buys. —The brand in category j a person buys says something about who they are. —The brand in category j I buy reflects the sort of person I am.	Laurent and Kapferer (1985)	Consumer surveys

Notes. All survey items were scored on a five-point scale where 1 = “strongly disagree,” 2 = “disagree,” 3 = “neither agree nor disagree,” 4 = “agree,” and 5 = “strongly agree.” Items were averaged unless otherwise indicated. The survey and the secondary country data are synchronous with the first year of the scanner data.

time-varying demand factors $TVDF$, and the (four) time-varying control variables $TVCONTROL$; y_{ijk} is the logit-transformed SB share in year i , category j , and country k .

Level 1: Across time within a CPG category:

$$y_{ijk} = \alpha_{0jk} + \sum_{q=1}^3 (\alpha_{qjk} \times TVMF_{qijk}) + \sum_{q=4}^5 (\alpha_{qjk} \times TVDF_{qijk}) + \sum_{q=6}^9 (\alpha_{qjk} \times TVCONTROL_{qijk}) + r_{ijk}. \quad (1)$$

Level 2. Level 2 includes all the parameters from level 1 as dependent variables. The predictors are subscripted for the j th category and the k th country. Equation (2a) shows that the SB share in category j in country k is a function of a country-specific intercept (β_{00k}), seven non-time-varying market factors ($NTVMF$), three non-time-varying demand factors ($NTVDF$), two non-time-varying control variables ($NTVCONTROL$), and a random error term u_{0jk} , which is assumed to be normally distributed with zero mean and variance τ^2 . Equation (2b) specifies the slopes of all level 1 predictors as being fixed across time within country.⁷

Level 2: Across CPG categories within a country:

$$\alpha_{0jk} = \beta_{00k} + \sum_{r=1}^7 (\beta_{0rk} \times NTVMF_{rjk}) + \sum_{r=8}^{10} (\beta_{0rk} \times NTVDF_{rjk})$$

⁷ Raudenbush and Bryk (2002) cautioned against specifying all coefficients as random effects because it negatively affects model convergence and stability of the parameter estimates. With a small number of groups (fewer than 10, according to Snijders and Bosker 1999), the fixed-effects approach is recommended. Since we have a maximum of five years of data per category, we constrain the effects of the level 1 predictors to be fixed within countries.

$$+ \sum_{r=11}^{12} (\beta_{0rk} \times NTVCONTROL_{rjk}) + u_{0jk}, \quad (2a)$$

$$\alpha_{qjk} = \beta_{q0k} \quad \text{for } q = 1, \dots, 9. \quad (2b)$$

Level 3. Level 3 incorporates predictors subscripted for the k th country. Equation (3a) specifies the SB share in each country (β_{00k}) as a function of an intercept, six country institutional characteristics ($CINST$), five region dummies as control variables ($CCONTROL$), and an error term. Equations (3b) and (3c) allow for a random specification of the time-varying and non-time-varying market factors, respectively, and model this cross-national variation (if any) as a function of the institutional characteristics. Finally, Equations (3d) and (3e) specify the time-varying and non-time-varying demand factors and control variables as fixed effects (Steenkamp and Geyskens 2006). The error terms in Equations (3a)–(3c) are assumed to be multivariate normally distributed over countries with zero mean and variance-covariance matrix \mathbf{T} .

Level 3: Across countries:

$$\beta_{00k} = \gamma_{000} + \sum_{s=1}^6 (\gamma_{00s} \times CINST_{sk}) + \sum_{s=7}^{11} (\gamma_{00s} \times CCONTROL_{sk}) + e_{00k}. \quad (3a)$$

For three time-varying market factors ($TVMF$),

$$\beta_{q0k} = \gamma_{q00} + \sum_{s=1}^6 (\gamma_{q0s} \times CINST_{sk}) + e_{q0k} \quad \text{for } q = 1, \dots, 3. \quad (3b)$$

For seven non-time-varying market factors (NTVMF),

$$\beta_{0rk} = \gamma_{0r0} + \sum_{s=1}^6 (\gamma_{0rs} \times CINST_{sk}) + e_{0rk} \quad \text{for } r = 1, \dots, 7. \quad (3c)$$

For two time-varying demand factors (TVDF) and four time-varying control variables (TVCONTROL),

$$\beta_{q0k} = \gamma_{q00} \quad \text{for } q = 4, \dots, 9. \quad (3d)$$

For three non-time-varying demand factors (NTVDF) and two non-time-varying control variables (NTVCONTROL),

$$\beta_{0rk} = \gamma_{0r0} \quad \text{for } r = 8, \dots, 12. \quad (3e)$$

More specifically, we incorporate the following variables:

—TVMF: NB concentration, price gap with NBs, and retail concentration

—TVDF: household penetration and purchase frequency

—TVCONTROL: four year dummies (with the first year as the baseline) to control for unobserved time effects (Greene 2003)

—NTVMF: NB innovation, advertising, price-promotion activity, copycatting of NB packaging (linear and squared term), quality gap with NBs, and SB distribution

—NTVDF: share of budget, functional risk, and sign value

—NTVCONTROL: household care and personal care dummies (with food and beverages as the baseline) to control for unobserved product-class effects⁸

—CINST: market size, market efficiency, infrastructure, rule of law, secular-rational culture, and self-expression culture

—CCONTROL: dummies for western Europe, eastern Europe, Latin America, southeastern Asia, and Japan (with North America as the baseline) to control for unobserved region effects

We further assume that error terms are not correlated across levels (e.g., level 2 residuals are not correlated with level 1 residuals) and that all residuals are independent of the model's predictors (Singer and Willett 2003).

Note that since Equation (2) is a model for the parameters of level 1 and Equation (3) is a model

for the parameters of level 2, by successive substitution we arrive at a single composite formulation that includes variables for all three levels, which is given by

$$\begin{aligned} y_{ijk} = & \gamma_{000} + \sum_{q=1}^3 (\gamma_{q00} \times TVMF_{qijk}) + \sum_{r=1}^7 (\gamma_{0r0} \times NTVMF_{rjk}) \\ & + \sum_{s=1}^6 (\gamma_{00s} \times CINST_{sk}) \\ & + \sum_{s=1}^6 \sum_{q=1}^3 (\gamma_{q0s} \times TVMF_{qijk} \times CINST_{sk}) \\ & + \sum_{s=1}^6 \sum_{r=1}^7 (\gamma_{0rs} \times NTVMF_{rjk} \times CINST_{sk}) \\ & + \sum_{q=4}^5 (\gamma_{q00} \times TVDF_{qijk}) + \sum_{q=6}^9 (\gamma_{q00} \times TVCONTROL_{qijk}) \\ & + \sum_{r=8}^{10} (\gamma_{0r0} \times NTVDF_{rjk}) \\ & + \sum_{r=11}^{12} (\gamma_{0r0} \times NTVCONTROL_{rjk}) \\ & + \sum_{s=7}^{11} (\gamma_{00s} \times CCONTROL_{sk}) + r_{ijk} + u_{0jk} + e_{00k} \\ & + \sum_{q=1}^3 (e_{q0k} \times TVMF_{qijk}) + \sum_{r=1}^7 (e_{0rk} \times NTVMF_{rjk}). \quad (4) \end{aligned}$$

After the intercept, the first three terms give the main effects of the market and institutional factors, terms 4 and 5 specify the interactions between all market factors and all institutional characteristics, and terms 6–10 give the main effects of the demand factors and other control variables. Finally, the last five terms specify the stochastic component of the composite model. Equation (4) is the model that is actually estimated.

Estimation

Before we can proceed with estimation, we need to address possible nonstationarity and endogeneity.

Stationarity. If our panel data are nonstationary, this may produce spurious results, and inferences based on *t*-values can be misleading (Hanssens et al. 2001). We conduct the Levin-Lin-Chu panel unit root test on the SB-share data for the subset of countries for which we had quarterly data available. We found no evidence of unit roots.

Endogeneity. For all market factors, we establish whether endogeneity is an issue using the Durbin-Wu-Hausman test. We regress the potentially endogenous market factor on all other market factors and on

⁸ We use effects coding since the number of food and beverages, household care, and personal care categories differs across countries. The parameters for the two product-class variables thus reflect how the SB share in each product class differs from the average SB share for the entire sample in which each of the product classes is counted equally (Cohen et al. 2003).

the demand factors and control variables that occur at the same or a higher level, for every country in our data set. Following Hausman and Taylor (1981), we obtain meaningful instrumentation by using the average values of the potentially endogenous variable *across the other product categories* as an exclusion instrument. From this first-stage regression, we compute the residual $\hat{\eta}$ and use this residual as an additional regressor in an SB-share equation that includes fixed main effects of the retailer, manufacturer, and institutional factors. Evidence for endogeneity is found for price-promotion activity, copycatting of NB packaging, the quality gap with NBs, and the price gap with NBs. We create instruments for these variables by regressing their current values on their average values across the other product categories, the demand factors, and the control variables and calculating the predicted values (see Lamey et al. 2012 for similar practice).

Model Building Approach. Following Raudenbush and Bryk's (2002) recommendations, we mean-center the continuous level 1 predictors within categories and countries, we mean-center the continuous level 2 predictors within countries, and we grand-mean-center the level 3 predictors.⁹ Because of the model's complex structure, ordinary least squares is not appropriate. Rather, we used maximum likelihood to estimate Equation (4) using SAS Proc Mixed.¹⁰ Following Kreft and de Leeuw (1998), we build our model by successively adding blocks of predictors (see Palmatier et al. 2006 for a similar practice), where we replace the endogenous variables with their predicted values. We formally test whether there is significant cross-national variation in the SB-share response parameters. Following Raudenbush and Bryk (2002), market factors that do not exhibit significant random variation across countries ($p > 0.10$) are constrained to be fixed. For the random parameters, we assess whether institutional characteristics can explain a significant portion of the cross-national variation in the SB-share response parameters by estimating Equation (4). Instead of retaining all possible interactions between the market factors and the institutional characteristics, which would lead to unstable results and multicollinearity, we estimate a trimmed model in which only interactions that are significant at $p < 0.10$ are retained (see Bijmolt et al. 2005 and Steenkamp and de Jong 2010 for similar practice).

⁹ Within-country mean-centering also has the advantage of controlling for cross-national differences in scale usage (Baumgartner and Steenkamp 2001).

¹⁰ For a discussion of the details of estimation, please see, e.g., Cheong et al. (2001), Raudenbush and Bryk (2002), and Snijders and Bosker (1999).

Results

Model Fit

Table 5 provides the results of the incremental model testing approach. Because the models are nested, we can assess whether model fit improves significantly by comparing the deviance statistic ($-2 \log$ likelihood) between models. Adding a random intercept at the category level (Model 2) significantly improves model fit ($\Delta dev_{(1)} = 6,416.6$, $p < 0.01$), as does adding a random intercept at the country level ($\Delta dev_{(1)} = 825.3$, $p < 0.01$). These results reinforce the need to explore the effects of category-level and country-level variables on SB share. Model 4, which adds year, product class, and region dummies to Model 3, also represents a significant improvement ($\Delta dev_{(11)} = 1,034.8$, $p < 0.01$), as does Model 5, which adds the demand factors ($\Delta dev_{(5)} = 83.0$, $p < 0.01$). In Model 6, we include the main effects of the market (manufacturer, retailer) and institutional factors. The significant difference in deviance statistic ($\Delta dev_{(21)} = 1,605.8$, $p < 0.01$) suggests that our selected set of drivers does a better job of predicting SB share than a model with only demand factors and control variables. Model 7 adds the interaction terms to test whether institutional factors can explain a significant portion of the cross-national variation

Table 5 Model Fit

	Deviance ($-2LL$)	Δdev	df	AIC	BIC
Model 1 (M1) = Intercept-only model without random effects	18,977.5			18,981.5	18,994.6
Model 2 (M2) = M1 + Random intercept at category level	12,560.9	6,416.6*	1	12,566.9	12,582.4
Model 3 (M3) = M2 + Random intercept at country level	11,735.6	825.3*	1	11,743.6	11,748.2
Model 4 (M4) = M3 + Year, product class, and region dummies	10,700.8	1,034.8*	11	10,730.8	10,747.9
Model 5 (M5) = M4 + Demand factors	10,617.8	83.0*	5	10,657.8	10,680.5
Model 6 (M6) = M5 + Market and institutional factors	9,012.0	1,605.8*	21	9,094.0	9,140.6
Model 7 (M7) = M6 + Interaction effects	8,938.9	73.1*	12	9,042.9	9,102.0
Model 8 (M8) = M7 + ARH(1) error structure	8,246.8	692.1*	5	8,360.8	8,425.5

* $p < 0.01$.

in the SB-share response parameters; these interactions significantly improve the model ($\Delta dev_{(12)} = 73.1$, $p < 0.01$). Finally, Model 8, which postulates a heterogeneous autoregressive error covariance structure, fits better than the “standard” multilevel model for change ($\Delta dev_{(5)} = 692.1$, $p < 0.01$). Evaluation of the model using the Akaike information criterion (AIC) and Bayesian information criterion (BIC) leads to the same conclusion that all blocks of variables contribute to its explanatory power.

Main Effects

The parameter estimates for the final model (Model 8) are reported in Table 6. Note that we report

Table 6 Drivers of Store Brand Share

Driver	Expected sign	γ	t -value
Intercept (γ_{000})		−5.057***	−5.06
Manufacturer factors			
Innovation (γ_{010})	−	−0.512***	−4.33
Advertising (γ_{020})	−	−0.317***	−2.88
Price-promotion activity (γ_{030})	−	−0.154	−1.14
NB concentration (γ_{100})	−	0.000	0.09
Retailer factors			
Copycatting of NB packaging (γ_{040})	∩	3.029	1.26
Copycatting of NB packaging ² (γ_{050})		−0.621*	−1.36
Quality gap with NBs (γ_{060})	−	−0.400***	−2.78
Price gap with NBs (γ_{200})	+	0.035***	6.30
SB distribution (γ_{070})	+	0.044***	13.35
Retail concentration (γ_{300})	+	0.017***	4.54
Institutional factors			
Market size (Size) (γ_{001})	+	0.305**	2.19
Market efficiency (ME) (γ_{002})	+	0.748**	1.66
Infrastructure (Infra) (γ_{003})	+	0.029*	1.37
Rule of law (RoL) (γ_{004})	+	0.712**	1.70
Secular-rational culture (Sec-rat) (γ_{005})	−	−0.768***	−2.95
Self-expression culture (Self-exp) (γ_{006})	+	0.006	0.02
Market factors × Institutional factors			
Advertising × Size (γ_{021})		−0.264***	−4.52
Advertising × Sec-rat (γ_{025})		0.278***	3.20
NB concentration × Size (γ_{101})		0.002**	2.12
NB concentration × ME (γ_{102})		0.016***	3.78
NB concentration × Sec-rat (γ_{105})		−0.004**	−2.25
Price gap × ME (γ_{202})		−0.032**	−2.25
SB distribution × ME (γ_{072})		−0.017*	−1.87
SB distribution × Infra (γ_{073})		0.001***	2.76
Retail concentration × ME (γ_{302})		−0.026**	−2.12
Retail concentration × RoL (γ_{304})		−0.026**	−2.50
Retail concentration × Sec-rat (γ_{305})		0.026***	4.48
Retail concentration × Self-exp (γ_{306})		−0.019***	−2.98
Demand factors			
Household penetration (γ_{400})	+	0.008***	3.10
Purchase frequency (γ_{500})	+	−0.009	−0.86
Share of budget (γ_{080})	+	0.127*	1.31
Functional risk (γ_{090})	−	−0.212**	−1.74
Sign value (γ_{0100})	−	−0.246*	−1.63
Year, product class, and region dummies			

Note. Parameters for which the variance of the random component is significant are portrayed in bold; p -values for hypothesized effects are one-sided, other p -values are two-sided.

* $p < 0.10$; ** $p < 0.05$; *** $p < 0.01$.

unstandardized coefficients. In multilevel models, standardized coefficients are problematic because the variance is partitioned across different levels.

As for the manufacturer factors, SB success in a category can be reduced by heavy NB innovation ($\gamma_{010} = -0.512$, $p < 0.01$) and by heavy NB advertising ($\gamma_{020} = -0.317$, $p < 0.01$). However, we find no globally generalized effects on SB share of price-promotion activity ($\gamma_{030} = -0.154$, n.s.) and NB concentration ($\gamma_{100} = 0.000$, n.s.).

We find evidence of an inverted-U relationship between SBs' copycatting of NB packaging and SB share ($\gamma_{040} = 3.029$, n.s.; $\gamma_{050} = -0.621$, $p < 0.10$). Copycatting of NB packaging pays off for SBs, at least to a point. Extreme similarity can backfire—SB share declines in categories with severe similarity. The smaller the perceived quality gap ($\gamma_{060} = -0.400$, $p < 0.01$) and the larger the price gap ($\gamma_{200} = 0.035$, $p < 0.01$) with NBs, the more successful SBs are. We also find evidence of a positive effect of SB distribution on SB share ($\gamma_{070} = 0.044$, $p < 0.01$). Finally, SB share is higher in categories characterized by higher retail concentration ($\gamma_{300} = 0.017$, $p < 0.01$).

As for the role of a country's institutional context, SB share is on average higher in larger markets ($\gamma_{001} = 0.305$, $p < 0.05$), in countries with a higher degree of market efficiency ($\gamma_{002} = 0.748$, $p < 0.05$), in countries with a better-developed infrastructure ($\gamma_{003} = 0.029$, $p < 0.10$), and in countries with a stronger rule of law ($\gamma_{004} = 0.712$, $p < 0.05$). Although SB share is lower in secular-rational countries ($\gamma_{005} = -0.768$, $p < 0.01$), we do not find support for a generalized effect of cultural self-expression on SB share ($\gamma_{006} = 0.006$, n.s.).

Finally, in terms of demand factors, we find that SB share is higher in categories that have achieved higher household penetration ($\gamma_{400} = 0.008$, $p < 0.01$), that account for a greater share of budget ($\gamma_{080} = 0.127$, $p < 0.10$), that are characterized by lower functional risk ($\gamma_{090} = -0.212$, $p < 0.05$), and that are lower in sign value ($\gamma_{0100} = -0.246$, $p < 0.10$).

Contingency Effects: Explaining Cross-National Variation in SB-Share Response Parameters

We find that the effects of innovation, price-promotion activity, copycatting of NB packaging, and quality gap with NBs do not differ significantly between countries. In contrast, the response parameters of advertising, NB concentration, price gap with NBs, SB distribution, and retail concentration exhibit significant cross-national variation and differ predictably across institutional contexts, as evidenced by significant interaction effects between these market factors and the countries' institutional characteristics. Further diagnosis of the nature of these interactions

is done with simple slope tests (Cohen et al. 2003, pp. 267–282). Following Cohen et al. (2003), we calculate the slope and associated significance level of the market factor in question for three levels of the institutional moderator: low (one standard deviation below the mean), medium (mean), and high (one standard deviation above the mean). Table 7 reports the results of the simple slope tests.

We find that NB advertising is more effective in fighting SBs in large markets than in small markets: $\gamma_{020, \text{LOW}} = 0.022$ (n.s.), $\gamma_{020, \text{MED}} = -0.317$ ($p < 0.01$), and $\gamma_{020, \text{HIGH}} = -0.656$ ($p < 0.01$). This can be explained from the perspective that in large markets, advertising attains economies of scale that are more difficult to achieve in small markets (Hoch 1996). Furthermore, the higher a country scores on cultural secular-rational values, the smaller the effect of advertising ($\gamma_{020, \text{LOW}} = -0.571$, $p < 0.01$; $\gamma_{020, \text{MED}} = -0.317$, $p < 0.01$; and $\gamma_{020, \text{HIGH}} = -0.063$, n.s.). According to Inglehart and Welzel (2005), (ex-)Communist countries are disproportionately high on secular-rational values, and these societies also have a long history of mass media being used for propaganda and indoctrination. This can explain why in countries high on secular-rational values, the effect of advertising, although negative, is no longer significant.

NB concentration in the category affects SB share positively in large economies ($\gamma_{100, \text{HIGH}} = 0.003$, $p < 0.10$), but it has no effect in smaller markets ($\gamma_{100, \text{LOW}} = -0.003$, n.s.; $\gamma_{100, \text{MED}} = 0.000$, n.s.). High NB concentration may leave the needs of groups of consumers unmet as their tastes may not align with the benefits offered by the few dominant brands. This offers an opportunity for SBs to gain a foothold in the marketplace by pursuing a focused positioning strategy. However, it appears that this niche strategy is only effective in larger countries where even niche sales volumes are sufficient to achieve economies of scale. Furthermore, NB market power hurts SBs in countries high on secular-rational values ($\gamma_{100, \text{HIGH}} = -0.004$, $p < 0.10$) but helps them in countries low on secular-rational values ($\gamma_{100, \text{LOW}} = 0.004$, $p < 0.10$). Whereas traditional societies tend to favor traditional, small-scale economic entities (e.g., small NB companies, retailers), secular-rational societies tend to favor larger economic entities that are seen as instrumental to a secular country's economic development (Inglehart and Welzel 2005).

When market efficiency is low, NB market power decreases SB share ($\gamma_{100, \text{LOW}} = -0.006$, $p < 0.01$), but it increases SB share when a country's institutional environment fosters market efficiency ($\gamma_{100, \text{HIGH}} = 0.006$,

Table 7 Simple Slope Analyses of Interaction Effects

	Market factor									
	Advertising		NB concentration		Price gap with NBs		SB distribution		Retail concentration	
	γ	t -value	γ	t -value	γ	t -value	γ	t -value	γ	t -value
<i>Institutional factor</i>										
<i>Market size</i>										
Low	0.022	0.17	-0.003	-1.49						
Medium	-0.317	-2.88***	0.000	0.09						
High	-0.656	-4.71***	0.003	1.66*						
<i>Market efficiency</i>										
Low			-0.006	-3.04***	0.047	6.47***	0.050	10.50***	0.027	4.62***
Medium			0.000	0.09	0.035	6.27***	0.044	13.29***	0.017	4.51***
High			0.006	2.80***	0.024	2.90***	0.038	8.08***	0.008	1.31
<i>Infrastructure</i>										
Low							0.035	8.23***		
Medium							0.044	13.29***		
High							0.053	11.03***		
<i>Rule of law</i>										
Low									0.033	4.77***
Medium									0.017	4.51***
High									0.002	0.26
<i>Secular-rational culture</i>										
Low	-0.571	-4.11***	0.004	1.75*					-0.006	-0.88
Medium	-0.317	-2.88***	0.000	0.09					0.017	4.51***
High	-0.063	-0.47	-0.004	-1.83*					0.041	6.46***
<i>Self-expression culture</i>										
Low									0.033	5.12***
Medium									0.017	4.51***
High									0.002	0.27

* $p < 0.10$; *** $p < 0.01$ (two-sided).

$p < 0.01$). Efficient markets have low entry barriers and fewer protective mechanisms, which stimulates competition and dampens the competition-reducing effect of market power (Lipczynski et al. 2005).

A larger price gap between NBs and SBs always increases SB share, but the effect is smaller in more efficient markets ($\gamma_{200, \text{LOW}} = 0.047, p < 0.01$; $\gamma_{200, \text{MED}} = 0.035, p < 0.01$; $\gamma_{200, \text{HIGH}} = 0.024, p < 0.01$). In efficient markets, the most efficient firms producing the goods demanded by the market are those that survive. Because consumers in less efficient markets have to expend more search and transaction costs to secure an acceptable SB, they will require a larger price gap to compensate for the higher transaction costs (Stigler 1961). In a similar vein, higher SB distribution always increases SB share, but the effect is smaller in more efficient markets ($\gamma_{070, \text{LOW}} = 0.050, p < 0.01$; $\gamma_{070, \text{MED}} = 0.044, p < 0.01$; $\gamma_{070, \text{HIGH}} = 0.038, p < 0.01$). Conversely, SB distribution is more important in driving SB share in countries with a better infrastructure ($\gamma_{070, \text{HIGH}} = 0.053, p < 0.01$ versus $\gamma_{070, \text{LOW}} = 0.035, p < 0.01$).

The effect of retail concentration is moderated by four institutional characteristics. The sign of the moderating effect of market efficiency on retail concentration is the flip side of the sign of its moderating effect on NB concentration. Higher market efficiency promotes competition and reduces the effect of market power, which we find also for retail concentration ($\gamma_{300, \text{LOW}} = 0.027, p < 0.01$ versus $\gamma_{300, \text{HIGH}} = 0.008, \text{n.s.}$). Furthermore, the effect of retail concentration increases with the strength of the secular-rational culture ($\gamma_{300, \text{LOW}} = -0.006, \text{n.s.}$; $\gamma_{300, \text{MED}} = 0.017, p < 0.01$; $\gamma_{300, \text{HIGH}} = 0.041, p < 0.01$), which also parallels the effect of NB concentration. That is, in secular-rational societies, market power plays a bigger role in holding back (NB concentration) or stimulating (retail concentration) SBs than in traditional societies. In contrast, the effect of retail concentration declines with cultural self-expression ($\gamma_{300, \text{LOW}} = 0.033, p < 0.01$; $\gamma_{300, \text{MED}} = 0.017, p < 0.01$; and $\gamma_{300, \text{HIGH}} = 0.002, \text{n.s.}$). In societies low on this dimension, there is a stronger innate preference for brands as carriers of a materialistic consumer culture (Holt 2002, Steenkamp and de Jong 2010). The market power bestowed by high retail concentration appears necessary to push these consumers to purchase SBs. In postmaterialistic societies, such push is not necessary; the pull from consumer demand is sufficient. Finally, the positive effect of retail concentration on SB share declines with rule of law ($\gamma_{300, \text{LOW}} = 0.033, p < 0.01$; $\gamma_{300, \text{MED}} = 0.017, p < 0.01$; and $\gamma_{300, \text{HIGH}} = 0.002, \text{n.s.}$). In countries with a weak rule of law, SB suppliers may not fulfill product specifications as contractually spelled out. Then, the market power offered by high retail concentration may be needed to “discipline” these suppliers into delivering what was agreed upon.

Validation Analyses

Perceptual Measures

Several of our market factors are measured using surveys. In some cases (quality gap with NBs, copy-cattling of NB packaging), consumer perceptions are indeed the relevant measure as the construct is defined in terms of perceptions. However, we also use survey measures for innovation, advertising, and price-promotion activity. Ideally, these measures should be based on secondary data, but it was simply not possible to obtain such data on a global scale. Nevertheless, to validate our survey measures for these marketing instruments, we obtained market data from GfK and Kantar Worldpanel for the year prior to the survey on (1) the number of new stock-keeping units (SKUs) introduced into a category relative to the total number of SKUs in that category, (2) advertising expenditures in the category, and (3) the proportion of volume sold on promotion in the category for approximately 50 categories in France, Germany, Spain, and the United Kingdom each. We correlated our aggregate perceptual measures with these objective measures. Our survey-based measure of innovation has correlations of 0.55 (France), 0.34 (Germany), 0.47 (Spain), and 0.31 (United Kingdom) with the actual number of SKUs introduced in the country. The correlation between advertising expenditures and our survey measure is 0.59 (France), 0.55 (Germany), 0.53 (Spain), and 0.46 (United Kingdom). Finally, for price-promotion activity, the correlation between our survey measure and the proportion of volume sold on promotion is 0.43 (France), 0.59 (Germany), 0.47 (Spain), and 0.74 (United Kingdom). All correlations are significant ($p < 0.05$) and nearly all are substantial (> 0.40), attesting to the convergent validity of our survey-based measures (Nunnally and Bernstein 1994).

Heterogeneity in Perceptions

Following Narasimhan et al. (1996), among others, we treat respondents within categories as replicates and use the average scores across respondents as a perceptual measure. This is consistent with our focus on the category, not on the individual. However, this operationalization does not consider heterogeneity in consumer perceptions. If respondents vary widely in their perceptions, an average is less meaningful. To examine this issue, we calculate the within-category standard deviation in survey responses for each of the five perceptual market factors. We reestimate the model with these five standard deviations added as separate variables. The substantive conclusions remain unchanged, and none of the standard deviations is significant.

Robustness of Results

We assess the robustness of the results by randomly removing categories and countries. First, we randomly eliminate one category from each country and reestimate our parameters. We correlate the resulting set of parameters with the parameters reported in Table 6, calculate the mean absolute deviation (MAD) between the two sets of parameters, and evaluate whether the parameters in question have the same sign. We repeat this 100 times. The results are reported in Table 8 (columns 3–5). We find that the average correlation between the two sets of parameters is 0.999. The average MAD across the parameters that are overall significant (see Table 6) is 0.037, for a low mean absolute percent deviation (MAPD) of 10.3%. The parameters always have the same sign,

the two exceptions being parameters that were not significant in the first place.

Second, we eliminate one country at a time and reestimate the parameters. We repeat this 23 times (for 23 countries). The results are reported in Table 8 (columns 6–8). The average correlation between the two sets of parameters is 0.980. MAD (0.019) and MAPD (8.5%) are low and nearly always the parameters have the same sign (with the same exceptions as for the category validation analysis). These findings attest to the robustness of our results.

Aggregation Bias

We aggregate across all SBs and all NBs within a category. Although this is unavoidable, given the lack

Table 8 Robustness Analyses

Driver	Focal analysis	Category validation analysis (100 replications)			Country validation analysis (23 replications)		
	γ	Mean	MAD	% same sign	Mean	MAD	% same sign
Intercept	−5.057	−5.053	0.034	100	−5.010	0.327	100
Manufacturer factors							
<i>Innovation</i>	−0.512	−0.514	0.012	100	−0.514	0.030	100
<i>Advertising</i>	−0.317	−0.314	0.014	100	−0.316	0.023	100
<i>Price-promotion activity</i>	−0.154	−0.150	0.017	100	−0.154	0.029	100
<i>NB concentration</i>	0.000	0.000	0.000	69	0.000	0.000	61
Retailer factors							
<i>Copycatting of NB packaging</i>	3.029	3.011	0.338	100	3.075	0.649	96
<i>Copycatting of NB packaging²</i>	−0.621	−0.618	0.065	100	−0.630	0.124	96
<i>Quality gap with NBs</i>	−0.400	−0.399	0.016	100	−0.398	0.027	100
<i>Price gap with NBs</i>	0.035	0.035	0.001	100	0.035	0.001	100
<i>SB distribution</i>	0.044	0.044	0.000	100	0.044	0.001	100
<i>Retail concentration</i>	0.017	0.017	0.000	100	0.018	0.001	100
Institutional factors							
<i>Market size (Size)</i>	0.305	0.305	0.004	100	0.302	0.027	100
<i>Market efficiency (ME)</i>	0.748	0.748	0.014	100	0.770	0.155	100
<i>Infrastructure (Infra)</i>	0.029	0.028	0.001	100	0.029	0.006	100
<i>Rule of law (RoFL)</i>	0.712	0.715	0.019	100	0.720	0.135	96
<i>Secular-rational culture (Sec-rat)</i>	−0.768	−0.767	0.008	100	−0.772	0.073	100
<i>Self-expression culture (Self-exp)</i>	0.006	0.006	0.008	74	0.006	0.061	74
Market factors × Institutional factors							
<i>Advertising × Size</i>	−0.264	−0.264	0.006	100	−0.265	0.011	100
<i>Advertising × Sec-rat</i>	0.278	0.280	0.009	100	0.277	0.021	100
<i>NB concentration × Size</i>	0.002	0.002	0.000	100	0.002	0.000	100
<i>NB concentration × ME</i>	0.016	0.016	0.001	100	0.016	0.001	100
<i>NB concentration × Sec-rat</i>	−0.004	−0.004	0.000	100	−0.004	0.000	100
<i>Price gap × ME</i>	−0.032	−0.032	0.001	100	−0.032	0.003	100
<i>SB distribution × ME</i>	−0.017	−0.018	0.001	100	−0.017	0.003	100
<i>SB distribution × Infra</i>	0.001	0.001	0.000	100	0.001	0.000	100
<i>Retail concentration × ME</i>	−0.026	−0.026	0.002	100	−0.026	0.003	100
<i>Retail concentration × RoFL</i>	−0.026	−0.026	0.001	100	−0.026	0.003	100
<i>Retail concentration × Sec-rat</i>	0.026	0.025	0.001	100	0.025	0.001	100
<i>Retail concentration × Self-exp</i>	−0.019	−0.019	0.001	100	−0.019	0.002	100
Demand factors							
<i>Household penetration</i>	0.008	0.008	0.000	100	0.008	0.001	100
<i>Purchase frequency</i>	−0.009	−0.009	0.001	100	−0.008	0.002	96
<i>Share of budget</i>	0.127	0.129	0.012	100	0.127	0.022	100
<i>Functional risk</i>	−0.212	−0.214	0.013	100	−0.213	0.027	100
<i>Sign value</i>	−0.246	−0.246	0.018	100	−0.247	0.035	100

of detailed information for drivers of SB share at the brand level across so many categories and countries, the results may be subject to aggregation bias.¹¹ The robustness analyses already suggest that aggregation bias may not be a serious issue. Furthermore, Christen et al. (1997) showed that logarithmic models are more prone to aggregation bias than linear models. Thus, if the model results are robust across (1) our specification and (2) a model where we take logs of all the predictors (market factors, institutional factors, and demand factors),¹² this provides confidence that aggregation bias is not a serious issue (see Nijs et al. 2001 for similar reasoning). With two exceptions (the interaction effect of retail concentration and self-expression and the interaction effect of SB distribution and market efficiency became insignificant), results remain substantively the same. Thus, aggregation bias is not likely to be a serious problem.

Discussion

For nine market factors that can be used by either NB manufacturers or retailers to influence SB share, we examine whether they can be part of a global integration, local adaptation, or worldwide learning strategy. We employ a consistent measurement scheme, which combines scanner data with consumer survey data and secondary country data, covering a wide range of CPG categories from 23 countries around the world. We start with a model that incorporates previous findings obtained in three large-scale U.S. studies into drivers of SB share in the CPG industry. We test for random variation around the global response parameter estimate and, if significant, examine whether characteristics of the institutional environment moderate cross-national differences in SB-share response parameters.

Our approach maps into the three global strategies identified by Grewal et al. (2008): global integration, local adaptation, and worldwide learning. We find that NB innovation, copycatting of NB packaging, and the quality gap between NBs and SBs are prime candidates for globally integrated strategies (i.e., “the earth is flat”), whereas price-promotion activity should be locally adapted (i.e., “everything is different”). We further find that NB advertising, NB concentration, the price gap between NBs and SBs, SB distribution, and retail concentration call for a more nuanced view (i.e., “it depends”). For these market factors, the

response parameter differs significantly across countries, but the variation in the magnitude and direction of effects is predictable, which offers potential for worldwide learning. By understanding the role of the institutional context, managers can learn from experiences in other countries when designing their marketing strategies. Table 9 summarizes our findings along these lines.

Managerial Implications

SB success differs dramatically between categories and between countries. We provide insights on how these differences in SB success originate, and therefore how managers can exploit them to fight (NB manager) or boost (retail manager) SBs in their category and country. Our insights are relevant to internationally operating NB manufacturers and retailers in developing their global strategies. Our findings also are relevant to local non-U.S. players who are currently unsure to what extent existing U.S. findings can inform their strategies.

Implications for NB Manufacturers. What can NB manufacturers do to counter SB success? One key component that can be part of a *globally integrated strategy* is the regular introduction of major innovations, with minor innovative line extensions in between (Gielens and Steenkamp 2007). Unfortunately, that is not what NBs have been doing in the last decade. An industry study conducted by Deloitte shows that only 4 out of 10 CPG companies are investing more in product research than they were 10 years ago (Store Brands Decisions 2010). Even P&G’s vaunted innovation machine has been criticized as not keeping up the innovation effort (Neff 2012).

Two marketing weapons manufacturers can use as part of a *worldwide learning strategy* are advertising and NB concentration. Advertising should be part of a worldwide learning strategy, since its effect differs dramatically and predictably across countries. NB advertising is a highly effective weapon against SBs in larger countries—which is consistent with existing U.S. findings—and in countries that score lower on secular-rational values. However, advertising is ineffective in small countries and in highly secular-rational countries. In these countries, the marketing budgets are better spent on innovation and (in case of secular-rational countries) on putting all marketing resources behind a small number of brands.

This leads us to the effect of NB concentration. Increasing NB concentration is an effective weapon against SBs, but only in countries that are low on efficiency and in markets that are high on secular-rational values. In these markets, NB manufacturers can reduce SB success by influencing NB concentration through brand delisting or merging (Kumar 2003).

¹¹ We also aggregate across countries. Aggregation bias at the country level is eliminated through our multilevel approach, where we also use within-country mean-centering to control for cross-national differences in scale usage.

¹² For variables that can take positive and negative values (e.g., quality gap with NBs, market efficiency), we added a constant to the negative scores to ensure nonnegativity.

Table 9 Summary of Findings

Market factors	Direction of overall effect	Random or fixed?	Can cross-national variation be explained?	Strategy recommendation
Manufacturer factors				
<i>Innovation</i>	Negative	Fixed	n.a.	Candidate for a <i>globally integrated strategy</i> : NB innovation is effective around the globe in fighting SBs.
<i>Advertising</i>	Negative	Random	Yes	Candidate for <i>worldwide learning</i> : the magnitude of the effect of advertising increases with market size and decreases with a country's espousal of secular-rational culture.
<i>Price-promotion activity</i>	Null	Fixed	n.a.	Candidate for extreme <i>local adaptation</i> : the effect of price promotions is contingent on local conditions within each category and country.
<i>NB concentration</i>	Null	Random	Yes	Candidate for <i>worldwide learning</i> : NB concentration is effective in fighting SBs in markets that are low on efficiency and high on secular-rational values. NB concentration helps SBs in markets that are large, high on efficiency, and low on secular-rational values.
Retailer factors				
<i>Copycatting of NB packaging</i>	Inverse U	Fixed	n.a.	Candidate for <i>globally integrated strategy</i> : copying of the packaging of a leading NB works around the world—up to a point. Extreme copycatting backfires.
<i>Quality gap with NBs</i>	Negative	Fixed	n.a.	Candidate for <i>globally integrated strategy</i> : narrowing the quality gap with NBs works around the world.
<i>Price gap with NBs</i>	Positive	Random	Yes	Candidate for <i>worldwide learning</i> : a large price gap with NBs helps SBs everywhere, but its importance declines in more efficient markets.
<i>SB distribution</i>	Positive	Random	Yes	Candidate for <i>worldwide learning</i> : the magnitude of the effect of SB distribution increases with the infrastructure of the country and decreases with the country's market efficiency.
<i>Retail concentration</i>	Positive	Random	Yes	Candidate for <i>worldwide learning</i> : the magnitude of the effect of retail concentration increases with a country's espousal of secular-rational culture and decreases with the country's market efficiency, the strength of its rule of law, and the extent to which it espouses a self-expression culture.

In contrast, NB concentration bolsters SB success in large markets, in efficient markets, and in markets that are low on secular-rational values. In these markets, NB manufacturers should follow the opposite strategy and reduce SB success through NB proliferation. These findings show that brand proliferation versus delisting should be a nuanced strategy, rather than across the board cutting of brands, as Unilever did in its “Path to Growth” plan (*Economist* 2004).

Another emerging strategy, pursued by companies such as P&G, is to sell NBs through alternative channels, which has the effect of reducing *retail* concentration in the category. According to its CEO Bob McDonald, P&G “has been balancing its exposure to chains with store brands by expanding distribution in other channels like dollar stores, which don’t sell private labels that compete against P&G products” (Karp 2012, p. B2). Internet selling through websites such as Alice.com and PFSweb or the company’s own e-stores (e.g., P&G’s pgestore.com) are other avenues. Reducing retail concentration is an effective strategy to fight SBs in less efficient countries that do not have a strong rule of law and in countries high on secular-rational and low on self-expression values.

Finally, the promotional strategy is best left at the discretion of local managers; it should be part of a *local adaptation strategy*. This finding is consistent

with international marketing, which has consistently argued that promotions are among the most local of all instruments (Kotabe and Helsen 2010, Yip and Hult 2012).

Implications for Retailers. Two levers retailers can use as part of a *globally integrated strategy* to increase SB success are copycatting NB packaging and closing the quality gap with NBs. The copycatting of NB packaging is a widespread practice, which pays off for SBs, but only up to a certain point. Copycatting backfires if it becomes too blatant. Moreover, the effect is not as large as perhaps expected (using *t*-value as an effect size metric; see Nijs et al. 2001). This may have led some retailers to pursue a bolder packaging strategy, where they no longer copy the packaging of a leading NB in each category. Rather, they set out to bring unity to their SB assortment by developing a consistent packaging across categories. For example, Walmart recently redesigned its Great Value range to give it the same look and feel across a broad range of foods and beverages, and Target did the same for its Up & Up brand in personal and household care.

To reduce the quality gap, a necessary step is to improve objective quality. Retailers have made significant strides in this respect. Apelbaum et al. (2003) reported that in 22 out of 78 CPG categories included

in their (U.S.) study, the average SB was actually *higher* in objective quality than the average manufacturer brand, and a German study (GfK 2007) found that the objective quality (as determined by the Stiftung Warentest) of 74% of the SBs is rated as excellent or good (versus 75% of the NBs). The next step is to convince consumers that SB quality is at par with NBs. Retailers attempt to do this with in-store signs such as “Compare active ingredients to XXX.” A more aggressive approach was pioneered by the U.S. chain Publix (2011 sales: \$27.2 billion), with its “Publix Brand Challenge,” a buy-one, get-one-free promotion pitting Publix’s SB products against their NB counterparts. Shoppers who buy the NB (such as Kellogg’s Raisin Bran or Welch’s grape juice) get the SB counterpart for free. This allows for a head-on comparison of quality. According to one industry analyst, “It will appeal to people who buy particular national brands. But even consumers who don’t take advantage of the promotion will get the message that Publix is willing to put their brands side by side with others” (Jim Wisner, as quoted in Gates 2007). Foreign retailers have taken notice. Recently, Austria’s SPAR (2011 sales: €4.8 billion) launched a similar promotion, “Ganz Österreich testet jetzt ausgewählte SPAR-Qualitätsmarken: Machen Sie den GRATIS-Test!” (“All of Austria is now testing selected SPAR-quality brands: Do the free test yourself!”).

Three marketing weapons retailers can use as part of a *worldwide learning strategy* are managing the price gap with NBs, SB distribution, and retail concentration. Although their overall (global) effect is significant, the response parameters differ predictably across countries. Although the importance of the price gap varies across countries, larger price gaps always increase SB share. To stimulate SB purchases, retailers need to set the price contrast with NBs in function of the market efficiency of the country, with larger price gaps in less efficient countries. In this context, it is interesting to note that Ailawadi and Keller (2004) concluded that perceived quality is more important than price in driving SB share. We qualify this conclusion. In inefficient markets, the price advantage continues to be the single most important driver of SB success (apart from “mere” availability). In efficient markets, price and quality are about equally important. Only in very efficient markets will quality start to outweigh price in importance.

SB share is further strongly affected by retail concentration in the category. The most direct way in which retailers can affect retail concentration is through mergers and acquisitions, such as the acquisition of Safeway by Wm. Morrison in the United Kingdom, Promodès by Carrefour in France, and C1000 by Jumbo in the Netherlands. Another

approach is to make specific categories a strategic priority. For example, some time ago, Walmart decided to make infant formula a priority, and it has significantly increased its presence in this category. Again, managers can learn from knowledge accumulated in different countries. The positive effects of increasing retail market power are especially evident in less efficient countries with a weak rule of law and in countries high on secular-rational and low on self-expression values. This offers potential for worldwide learning strategies. Last, but not least, mere availability of SBs matters. Although this finding is not particularly surprising, it is interesting to see that the effect of SB distribution—albeit always large—is much larger in countries with a well-developed infrastructure and in less efficient markets.

In sum, one strategic fit across all marketing weapons does not work. The most effective approach to fight or grow SBs is a mixture of global integration, local adaptation, and worldwide learning strategies.

Limitations and Future Research

Although our study provides a number of interesting insights, it also suffers from several limitations that offer avenues for future research. Our survey measures are time invariant. It would be preferable that these constructs are measured on a longitudinal basis. Furthermore, estimates of SB shares in small chains in small countries (where household panels are typically smaller) in particular might be less precise. This is less a problem in our study because we are analyzing the overall SB share in a category, but this might be an issue when analyzing SB share at the level of small chains. It is useful to establish convergent validity with retail scanner data.¹³

Our results only inform managers about the effectiveness of using various marketing instruments more versus less intensely, not about the *content* of specific strategies. Future research should examine to what extent advertising, innovation, and price promotions should be approached differently in countries across the world to boost or fight SB share. Recent work by Zarantonello et al. (2013) highlights the potential for such work. Analyzing 256 television commercials for five global brands of household cleaners, they found

¹³ It should be noted that retail scanner data are not without limitations either. First, retail panels often do not include all retailers (e.g., Walmart in the United States or Aldi in Europe). Second, in smaller and less highly developed countries, retail scanner data are often based on a sample of stores, which creates issues for smaller banners. Third, retail scanner data require that a sophisticated retail infrastructure (including scanner technology) covers the entire country, which is not always the case in emerging markets (Burgess and Steenkamp 2006). In these markets, household panels (which can still use the diary method) have greater penetration and market coverage.

that experiential claims mostly drive persuasion in developed markets, whereas functional claims are relatively more effective in emerging markets.

Our study focuses on standard SBs. They are the mainstay in the SB offerings. For example, even in the highly sophisticated UK market, standard SBs have a market share of 40.5% versus 2.4% for premium SBs. Standard SBs are expected to continue to dominate the market (Sethuraman and Raju 2012); future research could examine whether some of the retailer strategies to capture a larger SB share are more effective for premium SBs than for standard SBs.

A strength of this study is that it encompasses many categories and countries. However, its broad scope makes it impossible to collect data at the level of individual brands within categories or individual retail chains and geographical regions within countries. Thus, our analyses are conducted at the category level. Within a category, individual NBs may differ in their ability to fight SBs from specific retailers. Future research should broaden the lens by examining brand- and retailer-specific effects in an international context, and it should include within-country regional factors. Future research could also deepen our understanding of additional country drivers of SB share, such as income distribution or price sensitivity. Finally, SB market share in a category is not the only performance metric for NB manufacturers and retailers. Future research could consider brand-level performance metrics such as brand sales, profitability, loyalty, and price sensitivity.

In sum, we call for a deeper understanding of commonalities and differences in the SB phenomenon across countries in the world. We hope that our paper provides an impetus to other marketing researchers to pursue this line of research.

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