HARD ECONOMIC TIMES: A DREAM FOR DISCOUNTERS

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July 26, 2012

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1. Introduction

In the fast moving consumer goods (FMCG) sector, discount retail chains have experienced tremendous growth over the last two decades and remain one of the fastest growing segments in grocery retailing. The basic idea of discount retailing is to offer products at significantly lower prices than those offered by competing formats (Denstadli *et al.*, 2005), while economizing on store layout and customer service in order to keep product prices down (Gijsbrechts *et al.*, 2008). From 1990 until 2008, 26,000 stores adopting the discount format were opened in Western Europe, resulting in a market-share increase from 11.1% in 1991 to 19.5% in 2008 (Voedingsuniversum, 2009). This growing success poses serious challenges for both traditional retail formats and national-brand manufacturers. Naturally, the growing popularity of discounters threatens the market share of traditional retailers, and puts pressure on them to increase operational efficiency and/or decrease prices (Cleeren *et al.*, 2010; van Heerde *et al.*, 2008). Moreover, given that discounters primarily rely on their own store brands and de-emphasize national brands, their popularity does not bode well for national brands (Deleersnyder *et al.*, 2007). The attractiveness of discounters is mainly fuelled by the major differences in prices they offer compared to traditional retailers, for products of comparable quality (i.e. from 15% to up to 40%) (Colla, 1994), together with a cumulative, continuous increase in the number of stores in operation. For example, Lidl, which pioneered the discount store concept together with Aldi, has opened stores at a rate of one per day over the last 15 years (Consumer Insight, 2007).

In the popular press, the performance of discounters has also been linked to economic conditions: "Spooked by the gravest economic crisis in decades [i.e. the 2008 recession], Americans are curtailing their spending. They're making fewer trips to supermarkets and

migrating from grocers like Albertson's and Whole Foods to deep-discounters like Aldi and Save-a-Lot" (Time, 2008). As stated in Forbes (2009), during harsh economic times, discounters come to be in a better position than many of the conventional retailers, because they offer value merchandise at a time when customers are watching their pennies. For example, in recession-stricken Spain, Carrefour's discount arm Dia only registered a sales drop of 1.6% in 2009, whereas the total grocery market decreased by 3.3% (IGD, 2010). Although discounters are likely to gain (relative) popularity when the economy winds down, however, one may wonder whether consumers will switch back to traditional store formats when the economy recovers, or whether the occurrence of a recession results in permanent gains for the discount format. In addition, it is possible to distinguish two types of discounters: hard versus soft. In brief, hard discounters (e.g. the German chains Aldi and Lidl) differ from soft discounters (e.g. Colruyt in Belgium and the French chain Dia) in that they offer a more limited assortment, are even more price-aggressive, and primarily carry own brands (Denstadli *et al.*, 2005). Hence, one might wonder whether these two discounter types (i.e. hard and soft) gain equally, both when the economy turns sour, and afterwards.

In sum, the purpose of this article is to shed light on these issues by formally investigating how the aggregate business cycle (i.e. the sequence of contractions and expansions in the economy) influences discounters' success in contractions and beyond. Specifically, this study addresses the following research questions: (i) Does the success of discounters behave counter-cyclically, going up during economic contractions and going down during economic expansions (i.e. temporary effect)?; (ii) Does the occurrence of an economic contraction contribute to long-term growth in discounters' market share (i.e. permanent effect)?; (iii) Does

this temporary and permanent effect due to a contraction differ between hard versus soft discounters?

2. Consumers, discounters and the business cycle

Psychologically and financially, crisis-hit consumers behave differently from those enjoying economic prosperity (Ang *et al.*, 2000; Dutt and Padmanabhan, 2011). Changes in the economic environment affect consumer behaviour. More concretely, consumers' ability to buy goods decreases during economic contractions, as household income developments move in the same direction as developments in the aggregate economy (Stock and Watson, 1999). Besides this drop in consumers' ability to buy goods, their willingness to do so also decreases during economic contractions (Katona, 1975). An economic downturn strongly influences purchase decisions: "When consumers anticipate continued economic problems, it seems human instinct leads to two actions: reduce spending altogether or change buying behaviour" (Chief Marketer, 2009). Deleersnyder *et al.* (2004) have shown that the acquisition of durables, such as colour TVs and kitchen appliances, is postponed when consumers are confronted with unfavourable economic times. However, economizing on quantity is less of an option for FMCGs, because of their more necessary nature: people need to wash their clothes, drink sufficient fluids, and so on. To save on grocery purchases, consumers are more likely to *economize on price*. Shama (1981), for instance, has shown that 35% of all consumers have reported that they look for cheaper products during economic slowdowns as a way to cut back on their total expenses. Based on annual private-label share figures, Lamey *et al.* (2007) concluded that lower-priced private labels gain in popularity during harsh economic times. In addition, recession-hit consumers more conscientiously weigh up the pros and cons of buying a product (Ang *et al.*, 2000). Whereas

much purchase behaviour in FMCG categories is based on habit (Hoyer, 1984), and therefore

characterized by little or no evaluation of alternatives (Hoyer and MacInnis, 2001), contractions

have the effect of shaking consumers out of their habitual decision making. Empirical evidence

provided by Gijsenberg *et al.* (2009) has identified a *reduced inertia* in consumer purchases (i.e.

lower levels of brand loyalty) during contractions. This means that consumers will search for

more information, and evaluate alternatives more carefully.

In brief, bad economic times shake consumers out of their habitual decision making and

increase consumers' focus on price. Price becomes a more critical consideration in their

decision-making (Ang *et al.*, 2000) in order to reduce spending. Given that discounters' wares

are priced at between 15% and 40% less than those sold in traditional stores, discounters become

a more attractive format for grocery shopping during economic downturns. Switching from

traditional retail formats to a discount retail format can considerably reduce the total cost of a

similar shopping basket [1]. Hence, it can be expected that the market share held by discounters

increases as the economy winds down.

2.1 The long-lasting impact of a contraction on discounters' success

As discussed above, consumers faced with economic hard times are expected to have

clear incentives to do at least part of their grocery shopping at discount retailers. The question

still remains as to whether consumers are willing to fully switch back to traditional retail formats

when the economy recovers. The majority of grocery shoppers are multi-store shoppers

(Gijsbrechts *et al.*, 2008; Keng and Ehrenberg, 1984), with stable and regular multi-store

shopping patterns (Gijsbrechts *et al.*, 2008; Galata *et al.*, 1999). However, during harsh

economic times, a re-evaluation of current preferred stores occurs, motivating consumers to shop

more at price-aggressive outlets. When the economy recovers again, this incentive to search for lower-priced products fades out. Nonetheless, consumers become used to doing part of their grocery shopping at discount-format stores during recessionary times, and are likely to keep visiting these stores. Indeed, shoppers prefer the status quo (Rhee and Bell, 2002), and thus are more likely to retain their recession-induced shopping patterns even when the economic contraction is long over. In addition, the actual experience with the discount stores may teach consumers that shopping at discounters comes with a clear price advantage (almost) without giving in on the quality of the products bought.

2.2 Hard versus soft discounters and the business cycle

Discount food retailers are classified as either hard or soft discounters (Denstadli *et al.*, 2005). This classification is based on several factors (Colla, 2003): the amplitude and breadth of the products carried (fewer than 1,000 stock keeping units in hard discounters and three times more in soft discounters), operating costs (much lower at hard discounters), pricing level (hard discounters more competitive than soft discounters), and the role of private labels (in hard discounters the percentage of exclusive private labels may exceed 90%, whereas in soft discounters it may account for less than 50%) (see also Denstadli *et al.,* 2005).

Given that consumers become more price sensitive in harsh economic times (Estelami *et al.*, 2001), hard discounters will probably win more consumers in those times as they offer even deeper discounts than soft discounters (Gonzalez-Benito, 2001). Based on this argument regarding economizing-on-price, consumers have a stronger incentive to switch from traditional stores to hard, rather than soft, discounters. On the other side, hard discounters primarily carry their own labels, demanding more drastic changes in consumer buying preferences. This would

make consumers more reluctant to switch to hard discounters. Soft discounters offer, above and beyond their own labels, a broad assortment of national brands, allowing consumers to keep buying their preferred national brands in most categories. Although soft discounters' store atmospheres are less exciting (e.g. Schmitz, 2009), their assortment more strongly resembles that of traditional retailers, but with more attractive prices. Given the assortment argument, consumers are more likely to switch to soft discounters than hard discounters. Hence, whether hard versus soft discounters are relatively more popular during economic contractions is an empirical question.

Aside from the question of whether consumers tend to switch to hard versus soft discounters during the economic contraction itself, one might wonder whether consumers are more likely to keep buying from hard versus soft discount formats when the contraction is long over. A study by Gijsbrechts *et al.* (2008) has shown that a large percentage of consumers seem to multiple-store shop at both traditional retailers and hard discounters. In fact, category-preference complementarity (i.e. each store is preferred for at least one of the product categories) predominantly prevails for the combination of hard discounters and traditional supermarkets. The authors show that hard discounters have a clear advantage for convenience products, while supermarkets score better on the other categories. These may encourage consumers to selectively buy different categories in these different stores, either on separate or combined trips. As such, once consumers have tried the hard discount format during bad economic times, consumers may decide not to *fully* switch back to the traditional stores, but to keep going to the hard discounters for part of their grocery shopping even when the contraction is long over. The above argument is less likely to hold for soft discounters, however, as they mostly do not exhibit category-preference complementarity (Gijsbrechts *et al.*, 2008). Indeed, large discounters have the lowest

net variable costs for all categories: they manage to keep their prices low, while at the same time offering an appealing product assortment. Moreover, Schmitz (2009) found that consumers do not take into account the relative disadvantages of a discount store in comparison to other retail formats. Disadvantages (such as the less exciting store atmosphere and limited consumer service) of soft-discount stores will not weigh heavily in the decision to switch back to traditional retailers, whereas advantages (such as a wide assortment including the preferred national brands and low costs for all categories) will convince consumers to stay at this retail format when the contraction is over. In sum, both discount formats, hard and soft, are expected to permanently gain market share due to the occurrence of a contraction in the economy. Whether this permanent effect is stronger for hard or soft discounters is still an empirical question.

3. Methodology

To formally assess whether the business cycle influences discounters' market share, two metrics are derived to disentangle the temporary from the permanent effect of an economic contraction on discounters' success (see Lamey *et al.,* 2012 for a similar procedure). The *temporary effect* determines how much discounters' share goes up during economic downswings but also goes down again during economic upswings. The *permanent effect* measures how discounters' long-term share is amplified by economic downswings, resulting in permanent share gains that do not dissipate when the contraction is over.

When quantifying the temporary effect, the interest is on fluctuations at business-cycle periodicities. Accordingly, business-cycle filtering is first used to extract the cyclical component in each of the discounters' share series, and this cyclical component in the series is subsequently related to the corresponding cyclical component in the state of the economy. This relationship is

expressed through the discounters' cyclical comovement elasticity, which quantifies how discounters' share changes with cyclical up- and downswings in the economy. A negative relationship indicates counter-cyclical behaviour, where discounters' share goes up during economic contractions and down during economic expansions. As such, it measures the temporary effect of a contraction on discounters' share, which dissipates when the economy recovers.

To obtain a measure of the permanent impact of a contraction on discounters' share, the focus is on the underlying long-term trend in the discounters' series. To keep fluctuations at lower periodicities that correspond to longer-term movements, business-cycle filtering is again used to filter out movements at business-cycle periodicities. Next, the permanent impact of business cycles on discounters' share measures whether the long-term growth rate is strengthened during an economic contraction, resulting in permanent share gains.

In sum, the research methodology consists of three steps. First, the Hodrick and Prescott (1997) filter is applied to isolate the cyclical component from the long-term component in the various time series of interest. Next, the temporary effect of a contraction on discounters' success is quantified through the cyclical comovement elasticity. Finally, to assess whether recessionary shocks affect discounters' long-term success (i.e. permanent effect of a contraction), the incremental long-term growth in discounters' share due to contractions is quantified.

Decomposing a series into a long-term and cyclical component. As we are interested in the relationship between discounters' success and the business cycle, one should first extract those fluctuations in the discounters' series that correspond to business-cycle periodicities. According to the literature on structural time series models (Harvey, 2006), an observed

economic series, y_t, can be decomposed into a cyclical component, y_t^c, and a trend or long-term

component y_t^{LT}:

(1) $$y_t = y_t^{LT} + y_t^c.$$

In line with economic studies (e.g. Cook, 1999; Holly and Stannett, 1995), the Hodrick and

Prescott (1997) (HP) filter is adopted. This HP filter decomposes a time series, y_t, into a trend

component, y_t^{LT}, which varies *smoothly* over time; and a cyclical component, y_t^c, which

fluctuates at business-cycle periodicities, by fitting a smooth curve through a set of data points

(see Figure 1 for an illustrative example). To identify both components, the variance of the

cyclical component is minimized subject to a penalty for variation in the second difference of the

trend component. The cyclical component, which fluctuates around that trend, is then obtained

by subtracting the long-term trend from y_t, i.e. $y_t^c = y_t - y_t^{LT}$. More formally, the HP filter

obtains y_t^{LT} by minimizing:

(2) $$\sum_{t=1}^{T}(y_t - y_t^{LT})^2 + \lambda\sum_{t=2}^{T-1}((y_{t+1}^{LT} - y_t^{LT}) - (y_t^{LT} - y_{t-1}^{LT}))^2,$$

where λ is a penalty parameter that determines the degree of smoothing; the larger its value, the

smoother the resulting long-term component. In line with current practice, the smoothing

parameter λ is set equal to 10 for annual data (Baxter and King, 1999; see also Deleersnyder *et

al.*, 2009, Lamey *et al.*, 2007) [2].

Figure 1 An illustrative example of the HP filter

Raw series

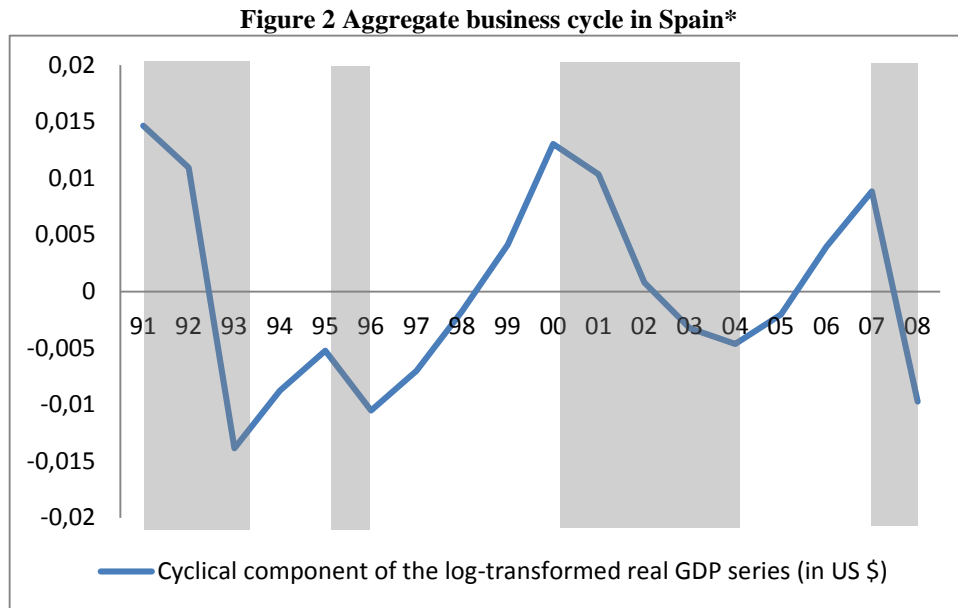**Cyclical component**   **Long-term component**
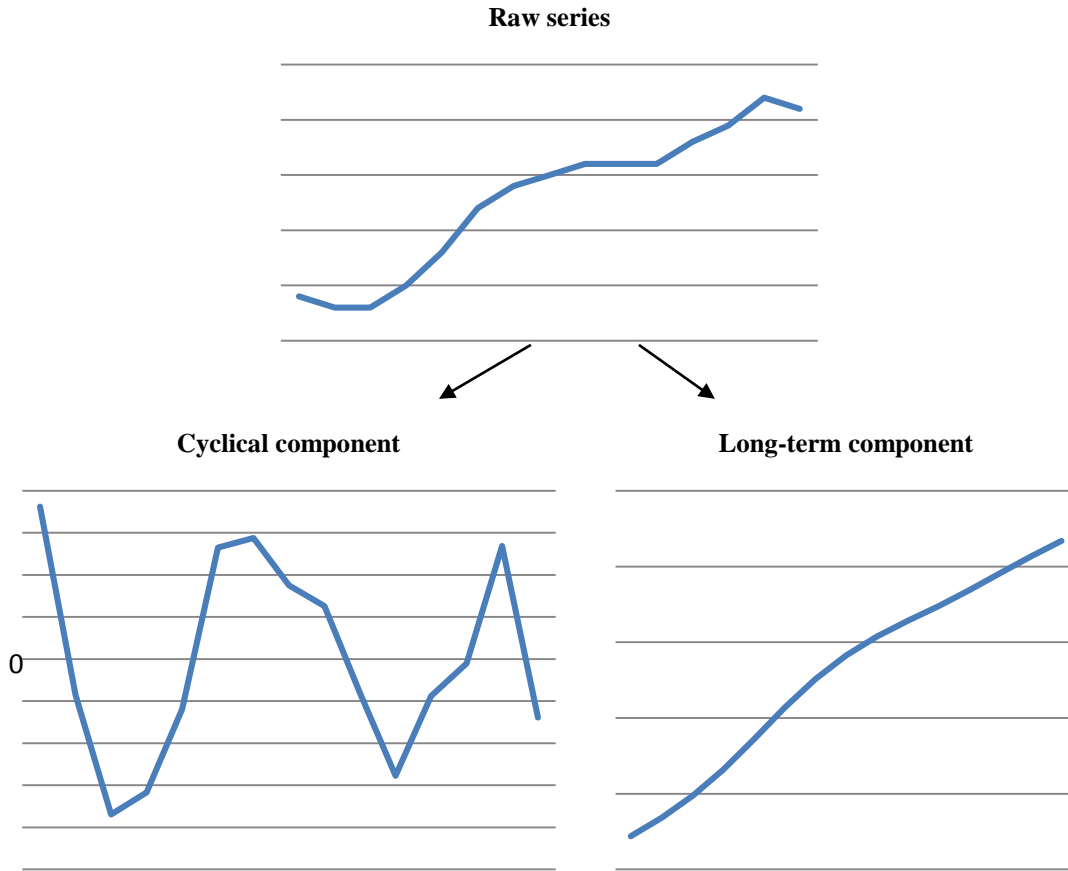
Quantifying the temporary effect of a contraction. A cyclical comovement elasticity is derived to measure the extent to which business-cycle fluctuations in the economy as a whole translate into cyclical fluctuations in a country's discounters' share. In line with Deleersnyder *et al.* (2004) and Lamey *et al.* (2007), the cyclical component extracted from the discounters' share series, $dis\_share_t^c$, is regressed on the corresponding cyclical component filtered from a country's real GDP, gdp_t^c. Fluctuations in real GDP are found to be at the core of the business cycle, making it a good proxy for a country's economic activity as whole (Stock and Watson, 1999). Figure 2 illustrates the business-cycle fluctuations in Spain, obtained through extracting the cyclical component out of the real GDP series of Spain using the HP filter. The grey bars in the graph represent contractions in the economy, where the cyclical component in real GDP is

decreasing [3]. Hence, the cyclical comovement elasticity of discounters' share is obtained
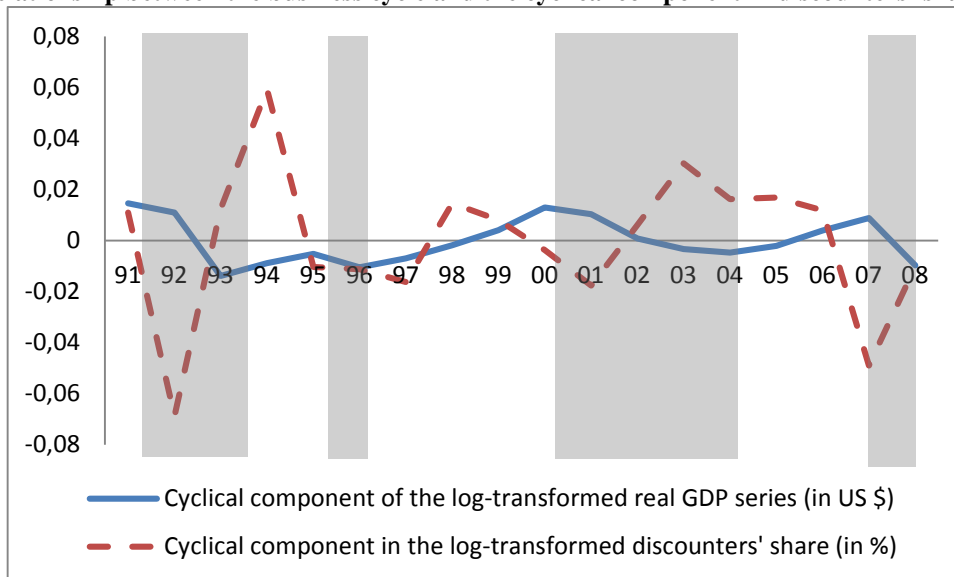
through the following test equation [4]:

(3) $$dis\_share_t^c = \beta \, gdp_t^c + \varepsilon_t.$$

As discounters' share, dis_share_t, and real GDP, gdp_t, are log-transformed prior to filtering,

both cyclical components express the percentage deviations from the respective underlying

growth paths, and the resulting parameter β becomes an elasticity. The sign and significance of

β indicate whether discounters' share evolves pro- ($\beta > 0$, i.e. going up during expansions and

down during contractions), counter- ($\beta < 0$, i.e. going down during expansions and up during

contractions), or a-cyclical ($\beta^y = 0$). Figure 3 illustrates the counter-cyclical relationship between

business cycle fluctuations in Spain and cyclical fluctuations in its discounters' share over time.

Figure 2 Aggregate business cycle in Spain*

Cyclical component of the log-transformed real GDP series (in US $)

* The grey bars represent contraction periods in the economy, where the cyclical component in GDP is decreasing.

Figure 3 Relationship between the business cycle and the cyclical component in discounters' share in Spain*

Legend:
——— Cyclical component of the log-transformed real GDP series (in US $)
– – – Cyclical component in the log-transformed discounters' share (in %)

* The grey bars represent contraction periods in the economy, where the cyclical component in GDP is decreasing.

Quantifying the permanent effect of a contraction. The cyclical comovement elasticity of discounters' share does not yet answer the question of whether the severity of the cyclical fluctuations in the aggregate economy influences the underlying trend or growth pattern in the series. In fact, the comovement elasticity, β, quantifies the relationship between *temporary* (cyclical) fluctuations in, respectively, discounters' share and economic activity, after the long-term trend has been removed from the series. To formally assess whether cyclical shocks, and more specifically recessionary shocks, affect discounters *permanently*, one should consider the growth rate of the underlying long-term component, and see whether this growth is amplified when an economic contraction occurs (see Lamey *et al.,* 2012, for a similar approach):

(4) $$\Delta dis\_share_t^{LT} = \delta + \phi dum\_contraction_t + \mu_t,$$

where $dis\_share_t^{LT}$ is the non-cyclical/long-term part obtained by filtering (see Equation 1 and Figure 1), and $\Delta dis\_share_t^{LT}$ is the long-term growth in the discounters' share series. The contraction dummy, $dum\_contraction_t$, is set to one when the economy is in downturn

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($\Delta gdpc_t^c \leq 0$, illustrated by the grey bars in Figure 2), and zero when the economy is expanding

($\Delta gdpc_t^c > 0$). The parameter δ reflects the average long-term growth in discounters' share

when the economy is booming, whereas $\delta + \phi$ measures the average long-term growth in

discounters' share when the economy is in downturn. Hence, the parameter ϕ quantifies the

average incremental long-term growth in discounters' share in a contraction *that is not cancelled*

out by the subsequent expansion period. When $\phi > 0$, this implies that, on average, increases in

discounters' share during contractions are not entirely compensated for in the subsequent

expansions, resulting in the long-lasting impact of a contraction on discounters' success (i.e. a

permanent effect of a contraction). Through the intercept δ, the model controls for all other

factors that are not explicitly included in it (see Franses 2001 for a technical discussion), but may

contribute to the long-term growth in discounters' share, $\Delta dis\_share_t^{LT}$, such as expansion of

the discounters' distribution network.

4. Data

Annual data on the aggregate value share of discounters in total grocery expenditures are

provided by Nielsen for 15 Western European countries, aggregating the share of both hard and

soft discounters in that specific country. In addition, the Nielsen Voedingsuniversum (2009)

reports annual aggregated share figures for each discount type (i.e. hard versus soft) separately

for Western Europe as a whole. All data span almost 20 years, ranging from 1991 to 2008. This

time span is sufficiently long to capture multiple economic cycles, and is comparable in length to

other studies on business-cycle activity in both economics (e.g. Cook, 1999; Mills, 2001) and

marketing (Deleersnyder *et al.*, 2009; Lamey *et al.*, 2007). In all countries in the sample (except

for Switzerland), a steady growth of discounters' share is observed together with an acceleration of the number of discount outlets over time (see Table 1). The highest market share in Western Europe is obtained in Norway (49% in 2008), followed by Germany (43.7% in 2008) and Belgium (38.4% in 2008). Those with the lowest market share are the UK (5.7% in 2008), Ireland (6.9% in 2008) and Switzerland (8.9% in 2008). Growth in the discount formats is mainly fuelled by the growing success of the hard-discount format, as hard discounters grow faster than soft discounters. Across Western Europe, the hard discounters' share has more than doubled over recent decades, going from 5.1% in 1991 to 13.3% in 2008; whereas the soft discounters' share has remained more stable over time, going from 5.0% in 1991 to 6.2% in 2008.

Data on real GDP are used as a proxy for the general economic activity. Business cycle fluctuations across many sectors are reflected in aggregate output, making the cyclical component of GDP a good indicator for the overall economic cycle (Stock and Watson, 1999). GDP, expressed in constant 1990 prices, is obtained from the United Nations Statistics Division. For each country in the sample, cyclical fluctuations in the aggregate economy (i.e. business cycle) are derived by filtering out the cyclical component from the raw real GDP series of a particular country. When exploring discounters' share aggregated over the Western European region, the general economic activity is approximated by the sum of the real GDP figures of all countries included in that region.

Table 1 Overview of market share and number of outlets of the discount format in Western European countries

Countries	Discounters' share		Number of discount outlets	
	1991	2008	1991	2008
Austria	14.0%	32.3%	530	1,200
Belgium	18.1%	38.4%	587	1,051
Denmark	16.0%	29.2%	544	1,238
Finland	9.8%	15.7%	760	974
France	1.3%	10.8%	436	4,255
Germany	24.0%	43.7%	8,290	15,468
Greece	0.0%	11.5%	0	612
Italy	0.0%	8.6%	30	3,619
Netherlands	9.9%	18.4%	445	856
Norway	29.5%	49.0%	730	1,641
Portugal	1.5%	17.2%	30	714
Spain	3.5%	11.1%	1,120	3,583
Sweden	5.7%	14.4%	166	355
Switzerland	9.0%	8.9%	539	795
United Kingdom	6.0%	5.7%	1,129	978
Total Europe	10.13%	19.54%	15,336	39,589

5. Results

In correspondence with the research questions, the results discuss the temporary and permanent effect of a contraction on discounters' share in several Western European countries, and explore whether these effects differ between hard and soft discounters.

First, the temporary effect of a contraction on discounters' success is quantified by the cyclical comovement elasticity. Table 2 summarizes the comovement elasticity results for the discounters' share (both hard and soft discounters) across the 15 Western European countries, along with the meta-analytic results combining evidence across all countries (based on the method of adding weighted Zs, see Rosenthal, 1991). On average, a country's discounters' share behaves counter-cyclically (meta-analytic Z-value = -2.38; $p < .01$), implying that when the economy turns sour discounters' share increases, but that it decreases again when the economy

picks back up. Every (temporary) 1% decrease in the economic activity results, on average, in a

temporary 2.37% increase in a country's discounters' share. Or, in other words, each time the

economic activity falls 1% below its long-term average, the discounters' share will temporarily

be 2.37% above its expected long-term growth pattern.

Table 2 Overview of empirical results across the 15 Western-European countries

	Expected sign	Weighted mean*	Meta-analysis**
Temporary effect			
Cyclical comovement elasticity	-	-2.37	-2.38 (<.01)
Permanent effect			
Incremental long-term growth in contraction	+	3.00	2.25 (<.01)

* The average is weighted by the precision of the parameter estimates, using the inverse of the standard errors (Lipsey and Wilson, 2001).

**The meta-analysis reports Z-values and two-sided p-values between brackets, obtained by the method of adding weighted Zs (Rosenthal, 1991).

Next, the incremental growth in discounters' share due to a contraction is estimated through

Equation 4, to explore whether cyclical downs can evoke permanent effects on the long-term

evolution of discounters' share. The results indicate that the occurrence of a contraction in the

economy can positively shift the long-term growth pattern in discounters' share, as reported in

Table 2. First of all, a positive growth in discounters' share is found during expansions, as well

as contractions, across our 15 countries. On average, a country's discounters' share grows yearly

by 12.61%, as derived from the intercept in Equation 4. A meta-analytic test reports a strong

positive effect for this common average long-term growth (meta-analytic Z-value = 13.01, p

<.01). Moreover, there is combined evidence that contractions have an incremental positive

effect on the long-term growth in discounters' share (meta-analytic Z-value = 2.25, p <.01). In

fact, in 93% of the countries (14 out of the 15), a positive incremental long-term growth is

detected. This implies that a contraction has a long-lasting effect on discounters. On average,

discounters' share grows by 12.61% in expansion years and by 15.61% (i.e. 12.61% + 3.00%) in

contraction years [5].

The question still remains as to which discounter type (i.e. hard versus soft) is more popular during contractions and/or beyond. Although, market-share figures for each type at the country level were not accessible for a sufficient long time-span, information on the aggregate annual figures for Western Europe as a whole ranging from 1991 to 2008, reported by the Nielsen Voedingsuniversum (2009), are available. To determine the temporary and permanent effect due to a contraction, Equation 3 and Equation 4 respectively are again used. However, as the success between hard and soft discounters might be interrelated, Equation 3 (Equation 4) for hard and soft discounters are estimated simultaneously, allowing for correlations between the errors of both equations by using SUR estimation. When comparing the temporary and permanent effect of a contraction on market share, these effects appear to be equal for hard and soft discounters (temporary effect: Wald test $\chi^2(1) = 1.52$; p =.217; permanent effect: Wald test $\chi^2(1) = 0.001$; p =.934). Accordingly, common slopes are used to increase power. In line with the above findings, both hard discounters' share and soft discounters' share behaves counter-cyclically (*common β*=-2.84; *one-sided p*<.01), going up during contractions and going down during expansions. With regard to the long-term growth pattern, the results indicate that hard discounters' share grows yearly by 4.68% in expansion periods, as derived from the intercept in Equation 4 (δ^{Hard}=4.68, *p*<.01). Soft discounters' share remains stable in expansions (δ^{Soft}=0.82, *p*=.363). Nonetheless, both discounter types witness a permanent effect on their share due to contractions (*common φ*=1.43, *one-sided p*<.05), indicating that the sequences of contractions and expansions in the general economy have a long-lasting positive impact on both hard and soft discounters' popularity.

6. Discussion

This article addresses the question of whether discounters are becoming more popular during and beyond economic contractions. The country-level findings indicate that discounters are indeed gaining ground when the economy turns sour. A country's discounters' share behaves counter-cyclically, as the aggregate business cycle induces temporary upward and downward swings in discounters' share. Moreover, a portion of the increase in discounters' share during an economic contraction remains after the contraction, resulting in a permanent boost in the popularity of discounters. When distinguishing hard from soft discounters, the same results hold. Both hard and soft discounters' shares encounter temporary and permanent effects from the occurrence of a contraction.

6.1 Managerial implications

The discount channel is one of the most dynamic retail formats in modern grocery distribution, and has been outperforming this sector as a whole. For example, total global sales in modern grocery distribution increased by 52% from 2004 to 2009, whereas global sales in discount stores increased by 60% in the same time span (Planet Retail, 2010). Due to their accelerated growth and increasing market importance, discounters can no longer "fly under the radar", as traditional retailers can no longer afford to ignore them (Planet Retail, 2010). That the magnitude of loss in market share to discounters should be of paramount concern to traditional retailers is further highlighted by these findings. In economic expansion years, hard discounters' market share grows steadily, whereas soft discounters' share remains particularly stable. However, in contraction years the growth rate accelerates for both discounter types, leaving permanent scars on the market share of conventional retailers.

A key consequence of economic contractions is that consumers increasingly switch to discount stores to do their grocery shopping. During economic downturns, consumers become less inert, and are thus more likely to change their shopping behaviour. Moreover, recession-hit consumers are more price-focused. These are both incentives to switch to the discount format. Besides these *demand*-driven factors, the recession-induced popularity of discounters can be driven by *supply-side* adjustments. Indeed, this popularity can arise partly from how discounters behave in relation to the business cycle. For instance, Aldi is using the recent economic downturn to gain further momentum. In the US, Aldi launched its first TV ad campaign in 15 years, and plans to open 75 more US stores in one year, including its first location in New York City (Wall Street Journal, 2009). In Belgium, Aldi increased its promotion rate from once a week to twice a week (Voedingsuniversum, 2009). Likewise, soft-discounter Colruyt in Belgium launched its "Everyday" private-label value line during the economic downturn (Voedingsuniversum, 2009). However, based on annual data on the number of discounter outlets in each country from 1991 to 2008 for the same 15 countries, the distribution network of discounters seems to behave pro-cyclically (meta-analytic Z-value = 1.71; $p<.05$). On average, discounters open fewer stores during contractions compared to expansions, which is actually likely to mitigate the recession-induced popularity of discounters. Moreover, economic downswings have no permanent impact on the number of outlets in a country (meta-analytic Z-value = 0.75; $p>.10$) [6].

On the other side, a few traditional retailers have recently acknowledged the threat posed by discounters during economic downswings and beyond, and have started to develop (successful) counter-strategies. Although the occurrence of contractions and expansions is beyond their control, retailers can try to prevent price-focused consumers from switching to their

discount competitors. For instance, in September 2008 (i.e. in the middle of the global recession) Tesco launched its Discount Brands range (Financial Times, 2008). These products do not include Tesco branding, but carry sub-brand names like Trattoria, Oatland Oaties and All About Shine. They are designed to offer better quality than Tesco's Value range (i.e. its budget/economy private label line) at prices that are cheaper than the leading brands, and more on a par with the prices offered by discounters. According to Tesco, this strategy helped them to retain their customers (Planet Retail, 2010). Similarly, Delhaize in Belgium launched a campaign where the prices of their own brands were compared with the prices of hard-discounter brands (Voedingsuniversum, 2009).

Hence, while the impact of the aggregate business cycle may seem to be uncontrollable, both discounters and conventional retailers may either accentuate or mitigate the observed dependency of discounters' share on general economic conditions.

6.2 Limitations and directions for future research

This study has several limitations that offer interesting avenues for further research. Future research needs to explore how consumers' (demand side) and discounters' and traditional retailers' (supply side) responses to cyclical fluctuations in the aggregate economy result in this observed effect of economic contractions on discounters' popularity. Do (marketing) actions during economic downturns by discount and non-discount formats reinforce or mitigate the relationship between discounters' share and the aggregate business cycle, and to what extent? Are discounters partly responsible for their observed popularity during the bad times and beyond? And, more interestingly, are traditional retailers able to reverse this pattern? For instance, should they focus more on their economy private-label lines? Or, is offering a discount-

brand line, such as that offered by Tesco, a successful counter-strategy? Alternatively, should traditional retailers rather emphasize their added value, such as store atmosphere and store service, when the economy turns sour?

In addition, within Aldi's stores, the assortment is predominantly local with an extremely limited presence of branded goods, whereas Lidl offers a more global assortment and a growing variety of national brands (Consumer Insight, 2007). Prior recession literature shows that consumers prefer local/regional products during recessionary times (e.g. Ang *et al.*, 2001). Accordingly, one might wonder whether Aldi is gaining relatively more ground during economic contractions than Lidl? Or, more generally, future research could study which discounter chains become even more popular during the bad times, and why. In a similar line of reasoning, future research could explore which type of traditional retailer (i.e. EDLP vs. HILO; small/large supermarkets vs. hypermarkets) is losing more than its fair share to the discounters during and beyond economic contractions.

Finally, Gijsbrechts *et al.* (2008) show that hard discounters have a clear advantage for convenience products, while supermarkets score better on the other categories (i.e. specialties and fresh products). Alternatively, soft discounters exhibit the lowest net variable costs for all categories, as they manage to keep their prices low while at the same time offering an appealing product assortment (Gijsbrechts *et al.*, 2008). These findings suggest that hard discounters' market share gain might come from crisis-hit consumers that partly switch for a selection of categories, whereas soft discounters' gain comes from consumers that now shop for all categories. To get a better insight on this issue, market share data are needed at the category level for the different retailer formats.

In sum, this study formally examines how the popularity of discounters is related to cyclical downswings in the economy, concluding that discounters' share is both temporary and permanently affected by contractions in the economy, irrespective of whether one looks at hard and soft discounters separately.

Notes

[1] The increased popularity of discounters during economic contractions can come from two sources: (i) more consumers visiting discount formats and/or (ii) consumers buying more in these discount formats (i.e. redistributing their baskets in favour of the discounters).

[2] As business cycles exhibit cycles of varying length that last between two and eight years (Christiano and Fitzgerald, 1998), and as the Nyquist "frequency" (i.e. the highest frequency about which one has direct information) for annual data corresponds to a component of two years (Granger and Hatanaka, 1964), the smoothing constant is chosen to generate a trend accounting for all fluctuations longer than eight years.

[3] Depending on the country, around 3 to 5 up- and down-movements in the aggregate economy (i.e. business cycles) are captured in the analyzed time span.

[4] Business cycle filters (e.g. HP filter) may induce serial correlation in the data (Engle, 1974). To account for this, one can add an autoregressive error term to Equation 3. Whether or not such a term is included can be determined on the basis of information criteria (Judge *et al.,* 1988). Extending the comovement equation 3 with an AR error term also accounts for potential delayed effects of the business cycle.

[5] The reported growth figures are expressed in relative terms. For example, if the current share of discounters is 15%, a growth rate of 12.61% in expansions implies an absolute increase of 1.89% to

16.89%; whereas a growth rate of 15.61% (i.e. 12.61% + 3%) in contractions implies an absolute increase of 2.34 % to 17.34%.

[6] The author thanks an anonymous reviewer for this suggestion.

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