

Preferences for Physical and Virtual Retail Formats Choice: The Case of Polish Consumers

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Paper discusses Polish consumers' behaviour and preferences for retail channel and format choice on the background of relevant literature. Results include perception maps created using multidimensional scaling (MDS) on data from two studies: in 2008 and 2012, giving possibility to assess changes at the economic slowdown. Two-dimensional solutions are fitting the data very well and allow to describe compared formats in terms of perceived level of personal interactions with the sales personnel, and perceived total cost for consumer. During analysed period perception of discount stores substantially changed – previously perceived as similar to marketplace, now they are closer convenience stores. Virtual channel formats are still perceived as separate cluster in comparison to physical ones. Declared shopping frequency for 15 formats from both channels is compared with emotional attitudes toward them. In addition, UNIANOVA procedure has been used to find connections with shopping frequency and demographic variables as well as decision-making styles.

Key Words: retail format choice; consumer preferences; economic slowdown; demographics; decision-making styles

JEL Classification: M30; O33

Introduction

Preferences for retail channel and format choice within particular channel depend on factors external to the consumer and internal ones. Those preferences are subject to adaptive change when important factors as changes in economy and retail industry become visible for consumers.

External factors on macro level are influencing general consumer preferences, sometimes with prolonged lag. For instance, cycles in economy,

including crises or slowdowns are resulting in changes in consumers' income, to which consumers should adapt their structure of consumption. Other important factors are trends in retail industry, e. g. development of new sales channels and/or store formats. In last 20 years, influence of technological change, mostly through information and communication technologies (ICTs), substantially increased. ICT is treated nowadays as general-purpose technology (GPT) and its impact on economy for both supply and demand sides is overwhelming (Basu and Fernald 2007). For consumers this means the need to adopt ICT related devices/tools and to get skills to operate them, for instance to buy over the Internet or cope with self-service cash registers. Brick-and-mortar retailers need to follow technology change to be in touch with consumer needs and competitors actions – this can lead to broader usage of virtual sales channel and become multi-channel retailer.

External factors on micro-level include among others: perceived price level (for the format, and particular retail outlet), physical effort to buy (including commuting), amount of time needed to fulfil shopping task (Peter and Olson 2002). Most of micro-level external factors create perceived total cost of buying for the consumer. This 'cost' is considered currently by growing numbers of consumers during their decision processes, decreasing importance of price level.

Among internal factors, influencing consumer decisions are i. e.: consumer demographics, and consumer personality manifesting in decision-making styles and perceived level of cognitive and/or emotional effort connected with shopping. Consumer personality issues are considered in this paper indirectly through a scope of decision-making styles (Sproles and Kendall 1986) extended by authors. Mentioned styles are leading to beliefs and attitudes toward shopping. All those factors create emotional and rational perception of retail channels and formats creating attitudes toward them, including perceived risk and trust for retail channel, format or particular outlet.

PREFERENCES FOR RETAIL CHANNEL AND FORMAT CHOICE

Studying store choice issues has in literature long tradition, starting mainly in the 70's of the 20th century. In earlier studies (Monroe and Gultinan 1975; Arnold, Ma and Tigert 1978; Arnold, Oum and Tigert 1983; Mason, Durand and Taylor 1983; Keng and Ehrenberg 1984; Louviere and Gaeth 1987; Spiggle and Sewall 1987; Dawson, Bloch and Ridgway 1990; Burke et al. 1992; Arnold, Handelman and Tigert 1996) store

choice task has been rationalized using various approaches regarding external and internal factors to the consumer. For instance the store attributes and situational factors were studied, shoppers' and their household demographics, shopping patterns as well as attitudes toward different stores. In addition, implied importance weights of factors like price level, store attractiveness or commuting distance etc. has been researched in mentioned studies.

More recently, the impact of task definition on store choice (Kenhove, Wulf and Waterschoot 1999) has been studied, but most studies have been restricted to the same format, i. e., supermarkets or discount stores. There also exist some researches examining the influence of retail pricing formats on shopping behaviour (Bell, Ho and Tang 1998), often assuming that one store format has generally higher prices than the other one. Similarly the fixed and variable costs of shopping were explored (Bhatnagar and Ratchford 2004), where conditions of optimal store format choice has been found, under assumptions that consumer prefers to shop at minimum total cost, and differences between store format price level exist.

Although non-store retail has long tradition in some countries, this sales channel has been used by consumers as complementary to the sales through typical retail outlets, usually not replacing directly store visits. However, situation changed since e-commerce began play important role in retail industry. Now consumers are choosing not only store format but also channel of buying. Recent studies about channel choice and change (Gensler, Verhoef and Böhm 2012; Joo and Park 2008; Mokhtarian and Tang 2011; Schoenbachler and Gordon 2002) are focused on the influence of consumer perception of channel characteristics on channel choice at different stages of consumer decision-making process, mainly at information search and transaction (Maçik, Mazurek and Maçik 2012).

This paper focuses on perception of retail formats from both physical and virtual channel, on the base of declarations about shopping frequency and emotional attitudes toward them, including influence of simple demographic variables and consumer decision-making styles. This approach, with direct comparison of retail formats, seems to be interesting and valid under circumstances of multichannel shopping behaviour being very common practice. Therefore, we do not assume that channel is chosen first, and choice of store format is the next step in buying process. Both choices are dynamic for us. Qualitative investigation by authors proved that channel choice is often situation driven, especially when there are no strong preferences to use particular channel. In addi-

tion, when seeking information is treated separately from actual buying, channel changes in both ways are occurring very often (Mokhtarian and Tang 2009; Mokhtarian and Tang 2011).

Looking for factors influencing choices of retail channel (physical or virtual one) and store format within it, we assumed that consumer mental characteristics should explain attitudes to particular store formats and chains/outlets.

CONSUMER DECISION-MAKING STYLES

A consumer decision-making style concept is defined as ‘a mental orientation characterizing a consumer’s approach to making choices’ (Sproles and Kendall 1986, 268). Consumer decision-making styles can be perceived as ‘basic buying-decision making attitudes that consumers adhere to, even when they are applied to different goods, services or purchasing decisions’ (Walsh et al. 2001, 121). They are relatively stable constructs, connected to consumer personality (Sproles and Kendall 1986; Lysonsky, Durvasula and Zotos 1995), and particular shopping activities and attitudes toward shopping are direct outcomes of consumer’s decision-making style (Tai 2005). Mentioned concept used in several more contemporary studies (Walsh et al. 2002; Tai 2005) proved to be useful to explain outcomes of particular shopping activities and attitudes toward shopping, including usage of online channel (Maćcik and Maćcik 2009).

Consumer decision-making styles were measured using instrument developed by authors from PCS (Profile of Consumer Style) questionnaire (Sproles and Kendall 1986) by translation into Polish and later paraphrase of scale items with adding two new styles on the base of previous authors’ research. In result, 10 styles (instead of original 8) were measured by 30 items scaled in the Likert-type way with five variants of answers. Those styles are described as follows (with shortcuts of their names used in table 2):

- PERF – Perfectionist Consumer – sensitive to high quality products prone to spend money and/or time to get the expected quality, customer care, comparing the available options;
- BC – Brand-Conscious Consumer – believing that price of branded products is appropriate to their quality, buying well-known and heavily advertised brands, often in shopping malls and specialty stores;
- NFC – Novelty Fashion Conscious Consumer – willing to put extra

effort to obtain a trendy, new products sooner than others; follower of fashion, always in line with current trends, often looking for variety in the products they purchase;

- RSC – Recreational Shopping Conscious Consumer – hedonistic, perceiving shopping environment as pleasant and desirable;
- PVC – Price-Value Conscious Consumer – prone for getting highest possible ‘value for money’ – sensitive to price reductions, looking for low prices, often carefully comparing products before purchase;
- IMP – Impulsive Consumer – not paying much attention to how much is spending, does not plan purchases, usually not looking for opportunities to buy cheaper;
- CO – Confused by Over choice Consumer – feels the fatigue of to many products, brands and shopping options, often has trouble in deciding;
- HBL – Habitual Brand-Loyal Consumer – has strong habits for buying specific brands and/or at the same places;
- COMP – Compulsive Consumer – having tendency to uncontrolled spending, and addiction for shopping (style added by authors);
- ECO – Ecologically Aware Consumer – prone to choose products that are ecologically safe for him/her and for environment (style added by authors).

Listed styles are not independent – particular person possesses an individual combination of them, creating personal profile of all styles, manifesting itself on different levels, with some styles more intense or prominent (Sproles and Kendall 1986).

BRIEF DESCRIPTION OF RETAIL SECTOR IN POLAND

Economic transition in Poland starting at 1989 involved substantial changes in Polish retail sector. It is worth to note, that even before 1989 in Poland private-owned shops existed in noticeable numbers, but economic system changes led to very quick growth of the number of retail outlets, mostly independent and family owned. Foreign capital store chains entered the market right after, introducing hypermarket and supermarket formats into larger Polish cities first. About year, 2000 there was also discount store format introduced. Since 2005 there is visible concentration of sales volumes in mentioned store formats, and after 2009 systematic decrease of number of independent, small stores (by about 25% in last 8 years, to the level of about 300 000 outlets in the country).

During the time hypermarket format lost their leadership in driving changes of retail sector in Poland – its share in total sales according to Nielsen data decreased from 15% to about 13% (between 2006 and 2011), when number of hypermarkets increased by ca. 38%. Limited number of larger cities in Poland and aversion to drive longer for shopping, led to growth of supermarket format first and discount format later, as possible to locate closer to consumer places of residence. Such stores were localized in smaller towns, and were successfully competing on local markets with more traditional FMCG stores, despite their entering to store-chains and remodelling into convenience format. Between 2006 and 2011 share in total retail sales through supermarkets increased by about 2 p. p. up to 17%. For discounts growth was more dynamic – 7 p. p. (to 20% share in 2011). Main discount chains in Poland (Biedronka, Lidl and Netto brands) are using soft discounter strategies after 2010, and are growing very quickly in terms of store numbers. Biedronka brand ('ladybug' in Polish) is market leader for this format with about 2000 stores. The still growing format is so called category killer – consumer electronics markets like MediaMarkt or Saturn, as well as home-improvement/gardening/do-it-yourself oriented retailers like IKEA, Leroy Merlin or Praktiker, is opened in larger numbers than not specialized hypermarkets.

Virtual channel in Poland is dominated since many years by one auction platform – Allegro.pl. Despite this, number of active internet shops increases rather quickly with growth of e-commerce sector (between 2006 and 2011 number of internet stores increased from 2800 to about 12100, and its share in total retail grown from about 1% to circa 3–4% according to various sources (Chodak et al. 2012). Most of internet shops are small firms, typically employing no more than two persons. Allegro.pl still generates about half of total Polish B2C e-commerce turnover. Also about of 20% of internet stores sales in Poland is generated through this platform because of easy access to potential clients. It should be noted that about half of internet stores are multi-channel sellers, having at least one physical store, often opened later than virtual one (Chodak et al. 2012). Newer formats of internet sales including group purchases (launched in Poland during Spring 2010 – like Groupon and Gruper.pl), and on-line private shopping clubs (like Zlotewyprzedaze.pl or Stilago.pl) are increasing their reach nowadays.

Samples and Measures

Data presented in this paper are coming from two large nationwide samples, collected by computer assisted web-based interview (CAWI) at the

end of 2008 for first sample and at the end of 2012 respectively. First sample size is 1100 subjects, the second – 1701. Because of collection method, data are representative for population of Internet users in Poland regarding gender and age (between 18–65yo). Some background data from statistics of retail sector in Poland and explanation from 4 focus groups performed in January 2013 were utilized.

Used measures include declared frequency of shopping at particular formats within both channels (15 formats for 2012 and 12 for 2009, as some virtual retail formats were not used in Poland at this time) as well as emotional attitudes toward them. For 2012 sample consumer decision-making styles in the form extended by authors were additional measurements.

Data analysis in the paper relies on descriptive statistics and graphs. Multidimensional scaling procedures (MDS) to produce perception maps were used. UNIANOVA procedure gave additional results in terms of factors influencing particular format usage. Presented analysis has an exploratory character. No exact hypotheses have been settled and tested in this case.

Results

PERCEPTION OF STORE FORMATS BY POLISH CONSUMERS

For visual interpretation of perceived attributes of analyzed retail formats, ALSICAL procedure – one from typical algorithms for multidimensional scaling – has been performed. Figure 1 contains graphical representation of 2 main dimensions revealed from 2008 sample. Figure 2 presents results from 2012 sample.

Dimension 1 – horizontal one on figures 1 and 2 – can be interpreted as perceived level of personal interactions with the salespersons in particular retail format – (with alternative explanation of representing consumer familiarity with particular format). While dimension 2 – vertical one on figures 1 and 2 – represents perceived total cost for consumer (Peter and Olson 2002, 459–61). Provided interpretation is clearer for 2008 data, and for new data set should be used more carefully, although there are no direct suggestions indicating that such approach is not appropriate. Two-dimensional solution for both cases fits the data very well. Also Stress value is better or close than acceptable minimum of 0,1, and R^2 statistic is very high, exceeding minimum of 0,6 (Borg and Groenen 2005, 48).

In both cases virtual channel formats are forming group on the left side of dimension 1 – signaling discernible depersonalization of contacts with customer, relying mostly on automated solutions. Standard forms of

internet shopping (online stores and online auctions) are similarly perceived as whole mentioned group – still having high perceived total cost to the customer, despite lower than in physical retail perceived price level – this suggest that time of delivery, possible need to return (i. e. clothing) or sent to repair (i. e. consumer electronics), are seen as important drawbacks of such purchasing. For other formats of internet sales included in 2012 study, perception of substantially lower price creates climate of ‘good deal’ (in accompanied qualitative study utilizing focus groups, this has been explained by younger participants in the context of group purchasing via Groupon or similar places as ‘real’ price to the value, or ‘affordable’ price – in most cases persons using such offers declared not buying things or services different way, very good example of such approach is expensive SPA package bought via Groupon by young student – catalogue price was in this case far beyond her payment possibilities). Group purchasing and private online shopping clubs by creating limited time offers are successfully exploiting hedonic motives of consumption and tendency for impulsive buying – this was not seen by consumers.

Comparing map from 2008 research with new one, very visible is substantial change in discount stores perception among consumers – during the time between both measurements they become accessible by most consumers even in small towns, and because of location policy, within or close to residential areas, they are substituting larger independent convenience stores. It is worth to note, that stores described as discounts became between two measurements rather soft discounters – two main chains (Biedronka and Lidl) are not focused only on low prices (but still communicating them in ads despite introducing many premium products to assortment). Both chains are relying mostly on private labels, although consumers perceive them as not worse quality comparing national brands.

The second important change is differentiation between classical specialist stores and so called ‘category killers’ – mass merchandisers with deep product assortment within specialized product categories (like consumer electronics, home and garden ect.). Accompanied focus groups gave light on this difference in perception: classical specialist stores are perceived as trustworthy, so consumers often are using them to get more specific information about products, than to buy – they want to buy in such stores (have positive attitudes toward them – figure 3), but at the same time higher prices are driving them out of this format. In ‘category killer’ stores consumers are instead more prone to perform ‘show

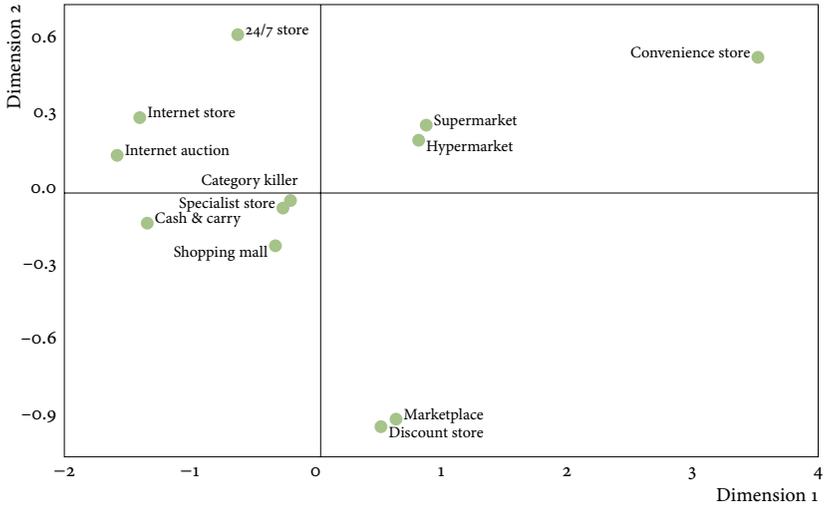


FIGURE 1 Perception Map of Retail Formats on the Base of Declared Shopping Frequency, 2008 (stress = 0.082, $R^2 = 0.981$)

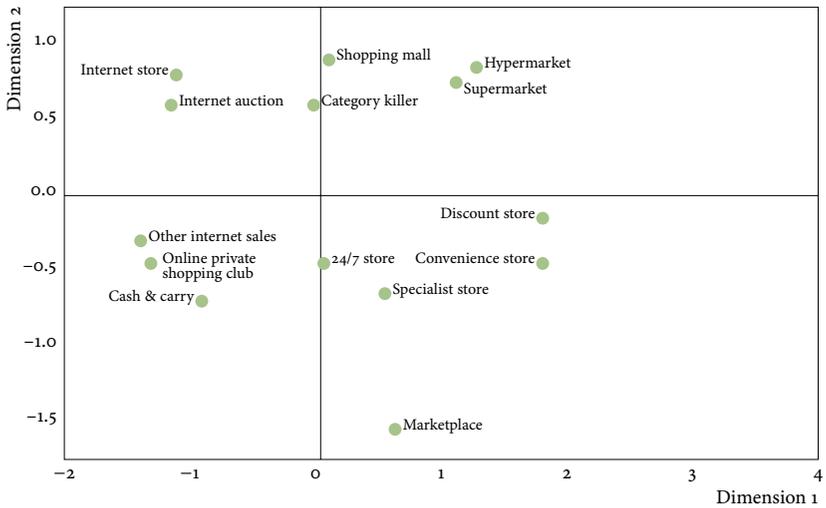


FIGURE 2 Perception Map of Retail Formats on the Base of Declared Shopping Frequency, 2012 (stress = 0.098, $R^2 = 0.946$)

rooming⁷ – looking at/experiencing product with clear intention to buy it cheaper online.

Perception of stores open 24/7 also changed significantly – previously they were referred mostly as small shops existing in little numbers selling

mainly alcoholic beverages (having prices including surcharge for ‘availability’). Now they are perceived as similar to smaller convenience stores with very limited assortment of FMCG merchandise – mostly snacks and beverages – as well as simple bistro-type gastronomy. This format nowadays is connected with petrol stations facilities, and total cost to the customer is perceived as lower than earlier, as they are more easily available, and shopping is typically rewarded by mass loyalty program points.

Most isolated format in 2008 study was convenience store – differing significantly from other formats in both dimensions, in 2012 research isolated is marketplace – perceived as a sales format with lowest cost to the consumer. Similarities in perception between hypermarkets and supermarkets still persist, and today more often than previously, the same store brands are operating simultaneously in both formats – like Tesco chain, having hypermarkets in large cities, and supermarkets in smaller towns. In addition, shopping malls and ‘category killers’ are still similarly perceived.

SHOPPING FREQUENCY AND EMOTIONAL ATTITUDE TOWARD RETAIL FORMAT

Declared shopping frequency is plotted versus emotional attitude toward particular format on figure 3. Those dimensions are highly correlated – Pearson correlation coefficient $r = +0,845$ ($p = 0,000$), suggesting very strong positive relationship. This is reasonable because consumers are buying more frequently at places they like – on the level of format as a whole and particular store location. Buying at places not preferred emotionally involves perception of taking greater risk – which should be rewarded by substantially lower price or other bonus valuable for the consumer.

Regression line plotted on figure 3 allows easily find formats for which declared shopping frequency differs much from emotional attitude. Highest positive difference is for internet stores and specialist stores (both perceived better emotionally than used frequently), and greatest negative distance (suggesting disliking) is for 24/7 stores.

Most positive attitudes are connected with discount stores – people feel ‘smart’ buying at discounts – it saves money and time, gives access to interesting products perceived as having good value. Most negative attitudes (disliking) are for two relatively new internet sales formats: online private shopping clubs and informal internet sales (mostly C2C using social media tools). This comes from little knowledge about those forms –

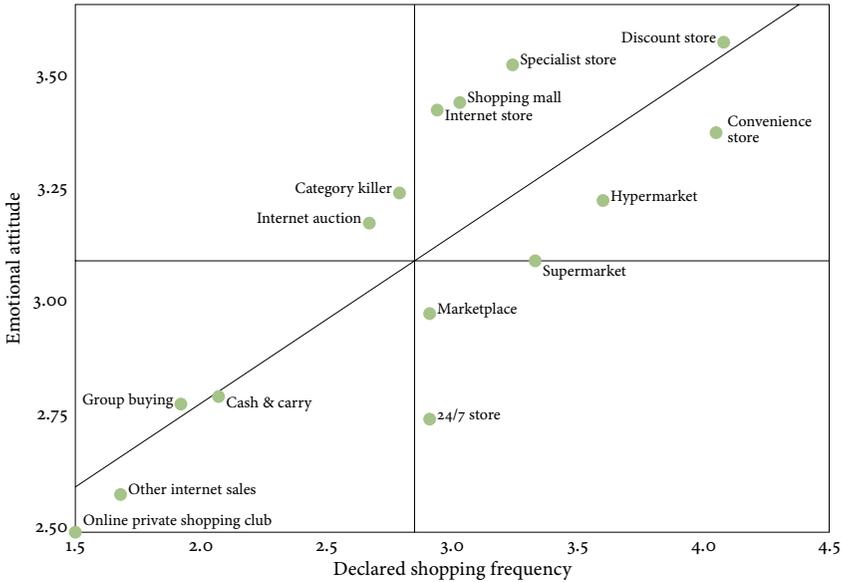


FIGURE 3 Declared Shopping Frequency vs. Emotional Attitude toward Retail Format (2012; regression line: $R^2 = 0.714$)

from cognitive perspective it is hard to like the unknown. More often used group buying is connected with more positive attitudes.

Positive attitude toward internet stores leads to conclusion that consumers want to buy more often in them, than do this in reality. Positive attitude comes in this case from availability of products not easily accessible in physical retail, and from ease to perform comparison shopping – as expressed by focus group participants, while main force prohibiting them to buy at internet stores is still a risk, perceived mainly as possible delay with shipping and logistics, hidden costs or future problems after purchase. Consumers also like specialist stores – they trust the salespersons, appreciate their professional knowledge and advice, but think that price level is too high for them to made transaction. As common market practice in Polish specialist stores is having many products available on order, which consumers dislike (immediate availability is perceived as one from main advantages of physical retail), in effect many purchases are done outside this format, mainly over the Internet or through large store chains.

Not liking, but quite often buying in 24/7 stores, is obviously connected by respondents with shopping by the way of fuel purchasing – this

is sometimes perceived as overspending or with necessity to buy some FMCG products (including alcoholic beverages) beyond typical hours. It is worth to note that in Poland there are very little restrictions of open days/hours for retail (most of shops must be closed only on 12 holidays in a year), but limited demand causes that only in large cities exist larger stores open 24/7 (for instance in city of Lublin having circa 350000 inhabitants only Tesco hypermarket is open this way).

SHOPPING FREQUENCY AT PARTICULAR FORMATS AND SELECTED DEMOGRAPHIC VARIABLES

To assess influence of demographic background of the consumer – in terms of such variables as gender, age group (6 groups) and income (in 4 quartile groups) – the univariate analysis of variance (UNIANOVA procedure) has been performed (table 1). This procedure provides regression analysis and analysis of variance for one dependent variable by one or more factors and allows finding possible interactions of factors.

UNIANOVA model was significant for 14 of the 15 investigated retail formats – excluding the supermarkets. In all models the intercept is significant, suggesting that the frequency of shopping is certainly influenced by factors other than specified in the model – probably psychographic and/or situational in nature.

The effect of gender is significant in all physical channel formats, and for virtual channel only for buying at online auctions (for online stores achieved significance level of statistical tendency, $p < 0,1$). The direction of the impact of gender is consistent with the culturally established stereotypes of roles – women are more likely to buy in formats allowing purchases of non-durable goods, and men – durable ones or linked to the technology, as well as in the shops open 24/7, where frequent purchases by men are consistent with the stereotype.

The effect of age is significant for the vast majority of formats, regardless the channel – age does not explain the frequency of buying for the most commonly used formats such as convenience stores and discounters. However, a significant association of age with the declared frequency of purchase in the virtual channel formats seems in this case to mask individual level of acceptance of information technology.

Income per capita in a household does not differentiate the frequency of purchase in convenience stores and newer virtual channel formats like group buying, online private shopping clubs and other internet sales. It reaches the level of significance of statistical tendency for shopping in

TABLE 1 Influence of Simple Demographic Factors on Declared Frequency of Shopping: UNIANOVA Results

Formats	Significance of between-subjects effects (probability from <i>F</i> -tests)										
	Main effects					Interactions					
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Hypermarket	0.000	0.000	0.000	0.000	0.015	0.002	0.862	0.303	0.303	0.081	0.051
Supermarket	0.199	0.000	0.037	0.178	0.144	0.024	0.530	0.892	0.817	0.038	0.006
Category killer	0.000	0.000	0.045	0.000	0.042	0.213	0.567	0.171	0.493	0.107	0.077
Shopping mall	0.000	0.000	0.042	0.000	0.026	0.774	0.758	0.128	0.069	0.174	0.146
Convenience store	0.007	0.000	0.000	0.840	0.601	0.124	0.601	0.452	0.057	0.050	0.019
Discount store	0.001	0.000	0.000	0.666	0.022	0.040	0.771	0.612	0.307	0.056	0.021
Specialist store	0.000	0.000	0.000	0.011	0.061	0.015	0.615	0.985	0.550	0.082	0.051
Store open 24h	0.000	0.000	0.001	0.000	0.367	0.465	0.470	0.567	0.813	0.147	0.118
Marketplace	0.000	0.000	0.000	0.000	0.001	0.192	0.211	0.001	0.010	0.101	0.071
Cash and carry	0.000	0.000	0.001	0.000	0.124	0.753	0.220	0.337	0.544	0.075	0.045
Internet store	0.000	0.000	0.052	0.000	0.001	0.009	0.267	0.767	0.586	0.215	0.189
Internet auction	0.000	0.000	0.020	0.000	0.004	0.213	0.747	0.350	0.876	0.203	0.176
Group buying	0.000	0.000	0.238	0.000	0.151	0.172	0.514	0.138	0.802	0.120	0.091
Online private shopping club	0.005	0.000	0.224	0.000	0.504	0.880	0.977	0.677	0.844	0.052	0.020
Other internet sales	0.000	0.000	0.085	0.000	0.481	0.295	0.603	0.693	0.778	0.066	0.035

NOTES Dependent variable: declared frequency of shopping at particular format. Column headings are as follows: (1) corrected model, (2) intercept, (3) gender, (4) age, (5) income per capita, (6) 3 × 4, (7) 3 × 5, (8) 4 × 5, (9) 3 × 4 × 5, (10) *R*², (11) corrected *R*².

specialty stores. Declared frequency of buying becomes higher with the increase in income for shopping in supermarkets, specialty stores, shopping malls and stores and auction sites, but decreases for shopping at discount stores and marketplaces.

The interaction effect of gender and age is significant for shopping in hypermarkets, discount stores, specialty stores and online shops. Buying more frequently is domain of younger persons and women in the first two formats, and of older women in discount stores. For online stores this interaction is strong – they are often used by young women and older men.

SHOPPING FREQUENCY AT PARTICULAR FORMATS AND CONSUMER DECISION-MAKING STYLES

Table 2 presents in concise way UNIANOVA results when consumer decision-making styles were factors (in 4 quartile groups). All models are significant, although explained part of variance is in most cases low, and intercept is significant, suggesting that the frequency of shopping is influenced by factors other than specified in the models.

In general frequency of shopping in virtual channel is easier to explain by consumer decision-making styles than in physical one, particularly for most typical formats like supermarkets, hypermarkets and convenience stores.

Compulsive style (COMP) significantly increases frequency of shopping in 12 from 15 investigated formats (all in virtual channel and beside supermarket, convenience store and marketplace for physical channel). Perfectionist consumers (PERF style) are shopping more often in hypermarkets, category killer stores, shopping malls, 24/7 stores, cash and carry places, and all virtual channel formats beside online private shopping clubs. They avoid buying at marketplace.

Consumers confused by over choice (CO) are buying less often in virtual channel and cash and carry chains, but more often at discount stores – their limited product lines are perceived as easy to choose by them, and also at marketplaces. Price-value conscious consumers (PVC) prefer to choose marketplaces, discount stores and hypermarkets for low prices, and convenience stores as well as specialist ones for giving value without unnecessary effort and costs. They avoid buying in virtual channel (particularly at internet stores and group buying sites) in fear of additional costs increasing advertised price, including delivery and returns/exchanges. They also rather not buy at cash and carry format be-

TABLE 2 Influence of Consumer Decision-Making Styles on Declared Frequency of Shopping: UNIANOVA Results

Formats	Significance of between-subjects effects (probability from <i>F</i> -tests)														Model fit	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)		
Hypermarket	0.000	0.000	0.035	0.612	0.231	0.209	0.026	0.288	0.484	0.015	0.023	0.951	0.043	0.026		
Supermarket	0.022	0.000	0.452	0.355	0.546	0.376	0.169	0.119	0.544	0.027	0.124	0.863	0.029	0.011		
Category killer	0.000	0.000	0.000	0.720	0.019	0.055	0.096	0.280	0.007	0.169	0.020	0.317	0.073	0.056		
Shopping mall	0.000	0.000	0.000	0.372	0.000	0.528	0.428	0.184	0.391	0.001	0.216	0.005	0.127	0.111		
Convenience store	0.000	0.000	0.685	0.236	0.064	0.361	0.000	0.043	0.125	0.267	0.001	0.430	0.052	0.034		
Discount store	0.000	0.000	0.847	0.761	0.048	0.899	0.000	0.023	0.008	0.028	0.008	0.361	0.089	0.072		
Specialist store	0.000	0.000	0.415	0.247	0.000	0.153	0.004	0.080	0.740	0.676	0.001	0.679	0.110	0.094		
Store open 24h	0.000	0.000	0.001	0.040	0.001	0.001	0.170	0.045	0.143	0.056	0.003	0.001	0.093	0.076		
Marketplace	0.000	0.000	0.001	0.753	0.266	0.810	0.001	0.162	0.011	0.427	0.192	0.000	0.062	0.045		
Cash and carry	0.000	0.000	0.005	0.665	0.510	0.732	0.010	0.455	0.000	0.059	0.000	0.367	0.085	0.068		
Internet store	0.000	0.000	0.000	0.298	0.001	0.114	0.000	0.166	0.066	0.013	0.000	0.004	0.147	0.131		
Internet auction	0.000	0.000	0.000	0.326	0.008	0.224	0.132	0.189	0.004	0.010	0.000	0.058	0.122	0.105		
Group buying	0.000	0.000	0.004	0.898	0.001	0.100	0.011	0.234	0.001	0.979	0.000	0.873	0.097	0.080		
Online private shopping club	0.000	0.000	0.076	0.306	0.000	0.467	0.054	0.482	0.004	0.075	0.000	0.511	0.132	0.116		
Other internet sales	0.000	0.000	0.000	0.784	0.039	0.727	0.180	0.433	0.004	0.138	0.000	0.021	0.125	0.108		

NOTES Dependent variable: declared frequency of shopping at particular format. Column headings are as follows: (1) corrected model, (2) intercept, (3) PERF, (4) BC, (5) NFC, (6) RSC, (7) PVC, (8) IMP, (9) CO, (10) HBL, (11) COMP, (12) ECO, (13) R^2 , (14) corrected R^2 .

cause of need to pay larger amounts at once. Pronounced habitual brand-loyal style (HBL) is connected with more often purchases at shopping malls, discount stores as well as hyper- and supermarkets, also they like buying in internet stores and auctions.

Novelty-fashion conscious style (NFC) is positively connected with purchases using virtual channel, and such formats like shopping malls, category killers, specialist stores and 24/7 outlets from physical channel. Tendency for impulsive buying (IMP style) leads to more often purchases at discount and convenience stores as well as 24/7 places, suggesting that small FMCG products are often bought on impulse, but there is not such situation visible in the data for durable goods.

Ecologically aware consumers (pronounced ECO style) are buying more often at marketplace in internet stores and are using other internet sales (also informal), but they avoiding purchasing at shopping malls and 24/7 stores. This comes from their values: appreciating slow life and local products. Their demand also often is so specific (for example vegan food) that buying over the internet is often the only way to get demanded goods.

For 2 last styles: brand conscious (BC) and recreational shopping conscious (RSC) there are no significant connections with frequency of purchasing at particular channel (beside rather unexpected influence on buying at 24/7 stores, being rather an effect of purchases of young people enjoying night city life). Such persons have more pronounced BC and RSC styles as this research confirms.

Conclusions and Limitations

Both performed studies shown relative similarities and differences in perception of investigated retail formats from both channels used by consumers: traditional – physical and more advanced – virtual one. Perceived differences between formats inside virtual channel are typically less pronounced, than between formats of physical retail. In addition, changes over time are greater in perception of physical retail formats than for virtual ones. This leads to conclusion, that physical channel changes itself more than virtual one, possibly because of feeling competition of virtual one.

Biggest change in perception of discount stores shows that format as winning one today in Poland. This suggests that in close future growth of market power of discount chains will force other FMCG retailers to copy some of strategies used currently by discounters, for instance advertising

prices heavily, promote private labels, and introduce one-time offers of not food products. For consumers firstly this probably will lead to some savings, but also to narrowing of choice alternatives, as number of assortment positions will fall. Possible is also higher differentiation of price level according of local competition. Because most Polish consumers are still not interested in grocery shopping over the internet, sales volume of FMCG goods sold in virtual channel will rise rather slowly.

At the same time internet retail increased its share in total sales but not changed its perception, still facing some problems like perceived risk of fraud and logistics failures. Increasing total share of retail sales via virtual channel, mostly for durable goods, signalizes that importance of such failures for consumers' falls, and at the same time this tendency increases competition between physical channel retailers and virtual ones. From one side this leads to opening internet stores by some of category killer retailers (like MediaMarkt and Saturn recently in Poland), and from other side leads to equalization of price levels between both mentioned channels, not only for multichannel sellers. This equalization sometimes is connected with increasing prices in internet sales.

Declared shopping frequency is highly positively correlated with emotions toward particular format. Channel to which particular format belongs does not play in this relationship important role. Generally positive emotions toward Internet stores are leading to conclusion that this format – when well managed – has great potential to growth, particularly when today's consumer objections toward it will be overcome.

Both demographic variables and consumer decision-making styles are more influencing frequency of purchasing through virtual channel than physical one (this purchases are perceived as normal, typical and boring – they are also more situation driven – especially when urgent need reveals. Age and gender as well as such consumer decision-making styles as COMP, PERF and NFC are connected with particular format choice most often.

Presented analysis has several limitations. First - all data used were analyzed using exploratory techniques, so no exact hypotheses have been tested. This limitation is partly overcome by usage of large nationwide representative samples. Second – used measures are mostly consumer declarations, so it will be interesting to compare real behaviour traces in example by analyzing bank account or payment/discount cards data over time in longitudinal study. And last – third limitation is to present results gathered through CAWI questionnaire – not accessible for persons not

using the Internet in any form, so their opinions and behaviours are not included in this paper.

Results from different approaches are convergent each other and graphical way of their presentation is easy and useful. Repeating measurements over time allow also to examine changes in perception (when treated as longitudinal data from consumer panel). Lack of strong cultural cues in used questions and allows for easy international comparisons in future research.

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