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ONLINE, OFFLINE OR NOT AT ALL? CONSUMER CHOICE OF PURCHASE CHANNEL AND DELIVERY SCHEME, GIVEN PRICE DISCRIMINATION ACROSS CHANNELS

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Purpose: The purpose of this research was to understand how multi-channel pricing strategies influence consumer purchasing behavior, namely, their purchase intention, choice of channel, and delivery scheme, in face of today's fast changing consumer online vs. offline shopping habits, and retail transformation toward using many channels.
Design/Methodology/Approach: An experimental method was employed, using the between-subjects research design, where discount, price, and purchase urgency were manipulated across 10 scenarios. Purchase decision included purchase offline, online with different delivery schemes, or no purchase option. To accomplish the research objective, 553 respondents sourced from online panel were interviewed using CAWI, after which, regression and moderation analysis was performed.
Findings: This research asserts that the levels of discount and price are significant determinants of consumer purchase scheme choice. Additionally, the price level appears to be a moderating factor for the discount → purchase scheme relationship, while purchase urgency does not. Further, urban inhabitancy appears to have significant impact on purchase scheme choice, while gender, age, and Internet usage do not.
Research Limitations/implications: In future studies, more focus on frequent purchase product categories, such as foods or cosmetics, should be undertaken, along with lower price levels. Alternative purchase paths should also be taken into consideration, to examine the impact of the lower transparency of cross-channel price discrimination at the precise moment of purchase.
Practical Implications: As much as the high discount online vs. offline massively redirects consumer purchase decisions to online, even for urgent purchases, that high discount generally does not discourage customers from closing the deal, except for large city inhabitants, who have declared a relatively higher intention to abandon the transaction when faced with the price discrimination.
Originality/Value: This paper extends multichannel customer management theory, specifically in the area of discriminatory pricing. It also delves into the consumer purchase decision, introducing online purchase delivery time and costs, as well as the purchase urgency angle and its impact. It should help multi-channel retailers better formulate their cross-channel pricing strategies.

Keywords: Purchase decision, delivery scheme, multi-channel retail, price discrimination.
Category of the paper: Research paper.

1. Introduction

The percentage of consumers who purchase online increased considerably between 2018 and 2022, from 56% to 77% of Internet users in Poland (Gemius Polska, 2018, 2022). This phenomenon could possibly be explained by the COVID-19 pandemic and its related restrictions, which had an overwhelming impact on purchase behaviors (Gemius Polska, 2022). According to Strategy&-PwC (2022), the value of the e-commerce market in Poland grew between 2018 and 2021 from 48bn PLN to 92bn PLN, and is estimated to get to 187bn PLN by 2027 (Strategy&-PwC, 2022). Additionally, e-commerce grew its share in the retail market from 8% in 2018 to 12.9% in 2021, and is now estimated to account for 17% by 2027.

Price remains the most important factor when shopping online and more important than when shopping offline. Depending on product category, 56% to 63% of the respondents treated price as the most critical factor when shopping online, while 43% to 55% of respondents mentioned price as the most important factor when shopping offline (YourCX, 2021).

Over time, offline retailers, when faced with the competition from online retailers realized that to respond to this threat, they should add their own online channels, and exploit the potential synergies between the two types of channels. This ongoing transformation of retailers from pure-play (i.e., offline-, or online-only) to selling multi-channel, produced many strategic questions (Ratchford et al., 2022).

An important advantage of the online over the offline channel is lower distribution costs. This advantage stems from the possibility to store products available online in just a few remote warehouses vs. the necessity to store products in multiple physical stores. Physical stores are limited in terms of shelf and storage space, and they must be situated in places in reasonable proximity to their customers, so that choice is associated with higher real estate costs vs. the remote warehouses of online retailers (Ratchford et al., 2022). On the other hand, offline stores have an advantage in being able to offer additional services, store personnel attention, and immediate product availability, while online channels limit the travel time, and are usually able to offer considerably broader assortments at a lower cost to the retailer (Betancourt et al., 2016).

Taking into consideration the fast changes occurring in online vs. offline consumer shopping habits, the fact that price remains the most crucial criterion when shopping online, and the channels' value vs. cost characteristics, the applicability of price discrimination has become one of the priorities for retailers and for researchers (Kannan, Li, 2017). Despite the fact that the price discrimination strategy might seem tempting, doubts have been expressed

about whether retailers can "actually charge different prices for the same item in different channels" (Neslin, Shankar, 2009, p. 79) because "consumers may perceive inconsistent prices offline and online (…) [as] unfair" (Li et al., 2018, p. 828). The issue of consumers' perception of multichannel pricing strategies still remains open.

In view of the latest changes in consumer shopping patterns and the growing market share of online shopping, there is a growing need to understand consumer attitudes toward multi-channel pricing strategies, and how they affect consumer behavior. Thus, the main objective of this study is to understand how multi-channel pricing strategies influence consumer purchasing behavior, namely, their purchase intention, choice of the channel and the delivery scheme.

As such, the research questions for this study were set as follows:

RQ1: In a situation of price discrimination between online and offline channels, is the consumer choice of purchase channel and delivery scheme related to the depth of between-channel price discount? If so, a second research questions is:

RQ2: Is this relationship moderated by the absolute price level and the urgency of making the purchase?

Our study makes a number of contributions to the literature on discriminatory pricing. First, following the framework for multichannel customer management (Neslin et al., 2006), we aim to enhance the research in the field of coordinating channel strategies, specifically on the issue of coordinating prices between the channels. The latest seminal work from Neslin (2022) published in *Journal of Retailing*, extends this framework into the omnichannel, and recommends a set of future research priorities. Our research project addresses at least two of these research directions: Harmonizing Prices (more research on price sensitivity needed, the role of shipping costs); and Task Sharing (the role of the buy-online-pick-up-in-store scheme).

Second, the importance of this research project is emphasized by the fact that it refers to one of the research priorities formulated by the Marketing Science Institute (MSI, 2022) for years 2022-2024 (released Oct, 2022). MSI is a platform used for generating and disseminating research that drives best practices in marketing with a mission of benefiting both business and society. Our project refers to the third priority set by MSI, i.e., 3. Long-term changes in how customers and firms interact, specifically, 3.1. Effects of changing patterns of living and working on customer demand. The effort seeks to answer the key question: How will remote work and technology-mediated consumption affect optimal channel structures? Based on that focus, this research project complies with the current trends of theoretical studies in marketing.

Third, as far as social impact of this project is concerned, price differentiation strategies are regarded as vehicles that will increase overall consumer welfare (Fassnacht, Unterhuber, 2016), as they allow for lower online prices, thereby extending product availability to a broader spectrum of consumers. Further, finding solutions to some of the problems involved when implementing discriminatory pricing across a wider range of categories may be welfare-

improving for the retail economy as a whole (Richards et al., 2016). As such, our project will contribute to improving the welfare of consumer, as well as the total retail economy.

2. Literature Review

The literature available on online and offline channels interactions at multichannel retailers have mainly focused on the effects of adding a new channel to an already existing other channel. The important conclusion to come from this research stream is that the new channel is not necessarily significantly cannibalizing or threatening the existing channel (Ratchford et al., 2022). According to Fassnacht and Unterhuber (2015), cross-channel price discrimination has been researched from three perspectives: (a) theoretical research asserting optimal retailer behavior, (b) observational research illustrating current retailers' practices, and (c) empirical research exploring consumer attitudes toward price discrimination practices, and their behaviors when faced with such practices.

The latest research on multichannel pricing strategies addresses the cross-channel effects of price promotions on purchase decisions for multi-channel grocery retailers (Breugelmans, Campo, 2016); the role of competition in geographic price discrimination (Li et al., 2018); price differentiation in relation to shipping options online (delivery from stock vs. drop-shipping) (Hammami, et al., 2022); or retailers' adoption of a self-matching strategy across a range of competitive scenarios (Kireyev et al., 2017).

Customers' perception of fairness in channel-based price differentiation still remains an important research topic. Bondos (2016) analyzed image consequences that might lead to unfavorable consumer purchasing behavior changes. The research concentrated on purchase intentions in personalized pricing (Hufnagel et al., 2022; Richards et al., 2016); or examined pay-what-you-want (PWYW) induced price discrimination between channels (Narwal, Nayak, 2020). Research has shown that consumers respond to a pricing practice that is perceived to be unfair with negative behavioral reactions (Haws, Bearden, 2006; Huang et al., 2005; Maxwell, Garbarino, 2010). Perceived unfairness diminishes purchase intentions, both offline and online (Campbell, 1999; Huang et al., 2005; Kahneman et al., 1986; Lii, Sy, 2009).

Surprisingly, part of the research also shows that in certain circumstances, the price discrimination might not necessarily evoke negative consumer perceptions, and that explaining the rationale for online vs. offline price difference (information on the costs difference between these channels), could have a positive impact on the perception of price fairness (Fassnacht, Unterhuber, 2016; Homburg et al., 2019). Indeed, consumers are more willing to purchase if the perceived inequity in pricing is in their favor, and less likely to purchase if it is not (Richards et al., 2016).

On the other hand, historically the research shows that the majority of retailers were setting their prices at parity between the channels, and if a price difference occurred, it was discounted online with diverse magnitude (Wolk, Ebling, 2010; Cavallo, 2017; Ancarani et al., 2009; Reinartz et al., 2017; Kannan, Li, 2017; Hitsch et al., 2021). The latest review of current retailers' practices in Poland (Kiczmachowska et al., 2023) confirmed these findings, however, for the retailers that were involved in price discrimination practices, the depth of discount appeared to be significantly higher than previously reported. Therefore, the need to understand consumers' reactions to deeper online discounts (up to 40%) appears to be clearly advisable.

In summary, the issue of whether to apply a price differentiation strategy or not remains unresolved for retailers who are offering multichannel experience (e.g. Kannan, Li, 2017), and requires further research to investigate the consumer perceptions in different consumer clusters and for different product groups.

In online purchase, the delivery scheme appears as the price building factor. Online order delivery is usually delayed (2-5 working days), and multi-channel retailers usually offer two delivery schemes, namely, additionally paid delivery by courier/ to a pick-up point or free delivery to one of the retailer's stores. The multi-channel pricing strategy may influence consumer purchase decision-making, leading to switching between the channels and the delivery options. Delivery scheme has been usually omitted in the research done so far. Namely, in the case of online shopping, the next day delivery at zero costs was claimed, the research scenarios assumed no additional charges, such as shipping or handling (Fassnacht, Unterhuber, 2016; Narwal, Nayak, 2020), or just the purchase intention offline was measured (Homburg et al., 2019). In our research, we made the scenarios as realistic as possible, including the delay in product delivery when purchased online, and options offered for the delivery scheme, i.e., by courier/delivery point with an additional fee, or pick-up at the retailer's store free of charge. As a result, the following hypothesis was proposed:

H1: In a situation of price discrimination between online and offline channels, the depth of the between-channel price discount impacts the consumer choice of purchase channel and the delivery scheme.

The circumstances in which consumers do their purchases might play an important role in their purchase decisions as well (Homburg et al., 2019). While some purchase conditions were tested, such as impulse vs. planned purchase (Homburg et al., 2019), the issue of purchase urgency has not been researched, yet. On the contrary, the researches usually assumed product need and online delivery for the next day (Fassnacht, Unterhuber, 2016; Narwal, Nayak, 2020). Combining this focus with the absolute price level of the product to be purchased, and the delivery scheme playing a price-building role in the transaction, the following hypotheses were set:

H2a: In a situation of price discrimination between online and offline channels, the relation between the between-channel depth of discount and the consumer channel and delivery scheme choice is moderated by the absolute price level.

H2b: In a situation of price discrimination between online and offline channels, the relation between the between-channel depth of discount and the consumer channel and delivery scheme choice is moderated by the urgency of purchase.

The research model is depicted in Figure 1.

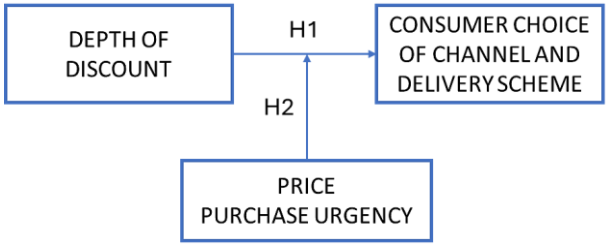

Figure 1. Research model.

Source: Authors' elaboration.

Of the product categories researched so far, we could find touch-and-feel items (apparel) (Malc et al., 2016; Fassnacht, Unterhuber, 2016; Richards et al., 2016; Narwal, Nayak, 2020), electronics (Homburg et al., 2019; Hufnagel et al., 2022), or furniture (Fassnacht, Unterhuber, 2016), where the purchase intention was 'for myself', or not specified. With the objective of expanding the product base researched in the context of cross-channel price discrimination (Neslin, 2022), we o tested a product meant 'for others', and that has not been researched so far. The toys category was our choice, as this product category is almost exclusively purchased for kids or teenagers, so testing the adults would serve the purpose of purchasing 'for others'. Additionally, to increase the respondents' engagement in the purchase, it was described as a birthday gift for a close person. The toys category was also an easy category to manipulate the prices, so it was possible to test the different price levels for the same product category. Finally, this product category also overcame the gender, age, or urban inhabitancy barriers, since people of all characteristics, do make purchase decisions in the toy category.

Our study makes several contributions to the multi-channel retail management literature stream. First, it delves into the purchase intention area by not only answering the question of completing or resigning from the purchase, but also getting information on the intention to purchase online vs. offline and also the intention to use different online purchase delivery options. It assumes additional conditions of the online purchase, such as delivery waiting time, and additional delivery fees, issues that have not been researched thus far. Secondly, our study extends the scope of the currently available research into a product category that is infrequent, hedonic, and purchased 'for others'. Third, it makes an attempt to research other purchase conditions, thereby extending the online vs. offline price discount depth, and comparing different absolute price levels. Fourth, it employs purchase urgency as a possible moderating factor of price difference → purchase scheme choice relationship.

Our study offers significant practical contributions, such as outlining consumer purchase behaviors in a situation of cross-channel price discrimination. For retailers, it is important what portion of customers choose to drop the purchase because of price discrimination practices,

as this would result in losing the turnover. Equally, the choice of online vs. offline purchase has its revenue effects: purchase offline delivers the highest revenue (provided there is a price discount online). Consumer behavior modelling would also allow retailers to effectively manage their customers' flows, redirect them between the channels, and avoid transaction loss.

3. Methodology

3.1. Research method

To deliver research objectives, an experimental method was employed, using scenario approach. Experimental studies became the predominant form of data collection in management research (Czakon, 2016), as they are suitable for researching relations between pre-defined factors and they allow controlling for interferences. The between-subjects research design covered eight cells, with discount, price and purchase urgency being manipulated across the scenarios: 2 online vs. offline discount levels (-10%; -40%) x 2 price levels (70PLN; 300PLN) x 2 purchase urgency level (for tonight; in 2 weeks). Additionally, two reference cells were carried out (online vs. offline parity; 2 price levels; non urgent), getting to final number of ten cells. After being exposed to a given scenario, the respondents were to take the decision on their most probable purchase scheme choice (only one), provided they found themselves in such a situation. The available purchase schemes were as follows: [1] purchase offline; [2] purchase online delivered by courier / to a pick-up point (additional charge of 10.99PLN); [3] purchase online delivered to retailer's store of consumer choice (free of charge); [4] not purchase at all.

The data were analyzed using descriptive statistics, independent group comparisons (Kruskal-Wallis Test and Mann-Whitney U Test), correlation analysis, and finally, regression analysis, where moderating roles of price and purchase urgency were tested employing Hayes SPSS PROCESS macro (Hayes, 2012).

3.2. Sample

Online Panels have recently gained popularity in management research, and their use in experimental studies is prevalent (Porter, 2019). Our research employed Ariadna Panel, which allows to reflect a real social structure in terms of gender, age, and urban inhabitancy in Poland (Ariadna, 2024). The Panel consists of 300,000 respondents that are constantly verified, and full anonymity is guarantied.

A total sample of 642 respondents were interviewed, who bought a product category at least once in the last 12 months. 557 respondents declared correctly the price difference (or parity), of which 4 turned out to be non-binary and, assessed as too small group for analysis, were deducted from the sample, leaving us with 553 valid responses. The groups did not

perform significant differences in terms of gender, age and urban inhabitancy, as well as Internet usage intensity (Table 1).

Table 1.
Demographics and Internet usage across scenarios

Kruskal-Wallis Test Summary	**Gender**	**Age**	**Urban**	**Internet**
Total N	553	553	553	553
Test Statistic	8.644[a]	2.538[a]	1.812[a]	9.684[a]
Degree Of Freedom	9	9	9	9
Asymptotic Sig.(2-sided test)	0.471	0.980	0.994	0.377
Decision on the null hypothesis[b]	Retain	Retain	Retain	Retain
a. The test statistic is adjusted for ties.				
b. The significance level is .050.				

Source: Authors' elaboration.

3.3. Research scenarios

The research employed scenario approach, where respondents were asked to imagine they intended to purchase a toy as a birthday gift for a close person. They were also asked to imagine they started with browsing the Internet for the best offer, found one at the retailer that also run offline stores, and then they went to the offline store to find out that the price offline was higher (or at parity) vs. online. Online purchase was available with 48-hours delivery scheme, with 2 options: [1] by courier or to the pick up point with 10.99 PLN fee, and [2] free of charge to the retailer's store. The discount online vs. offline, the absolute price level and purchase urgency were manipulated in line with Table 2.

Table 2.
Research scenarios: variables manipulation

#	**Scenario**	**N**	**Discount online vs. offline**	**Absolute price (PLN)**	**Purchase urgency**
1	LD-LP-U	58	10%	69.99	tonight
2	LD-LP-NU	50	10%	69.99	2 weeks
3	LD-HP-U	54	10%	299.99	tonight
4	LD-HP-NU	60	10%	299.99	2 weeks
5	HD-LP-U	50	40%	69.99	tonight
6	HD-LP-NU	59	40%	69.99	2 weeks
7	HD-HP-U	61	40%	299.99	tonight
8	HD-HP-NU	61	40%	299.99	2 weeks
9	PAR-LP-NU	47	0%	69.99	2 weeks
10	PAR-HP-NU	53	0%	299.99	2 weeks

L = low; H = high; D = discount; P = price; U = urgent; NU = non-urgent; PAR = parity.

Source: Authors' elaboration.

3.4. Variables

Nine variables (Table 3) were used to analyze the purchase scheme choice of customers in a situation of price differentiation between online and offline channels at the same retailer. Gender variable was operationalized as dichotomic variable taking values of 1 for female and 2 for male (non-binary respondents, as too small group, were removed from the analysis). Age variable was operationalized as age ranges from 18-24 years (coded 2), 25-34 years (coded 3), 35-44 years (coded 4), 45-54 (coded 5), and 55 or more (coded 6). Urban inhabitancy was operationalized as rural (coded 1), urban up to 20K inhabitants (coded 2), urban between 20K and 99K inhabitants (coded 3), urban between 100K and 500K inhabitants (coded 4), and urban above 500K inhabitants (coded 5). Internet usage was operationalized as daily usage of the Internet, declared by respondents by number of hours: 1h or less (coded 1), more than 1h up to 2h (coded 2), more than 2h up to 3h (coded 3), more than 3h up to 4h (coded 4), more than 4h up to 6h (coded 5), and more than 6h daily (coded 6). Three discount levels were tested, parity (coded 0), 10% discount online vs. offline (coded 1) and 40% discount (coded 2). Two price levels (70PLN and 300PLN) were coded 1 and 2 respectively, while purchase urgency was coded 0 as non-urgent (in 2 weeks), and 1 as urgent (for tonight). In terms of purchase scheme, 2 variables were introduced: purchase scheme and purchase yes/no. Purchase scheme was coded according to the retailer revenue, from the highest to the lowest: (1) offline (OFF), (2) online delivered by courier (ON-C), (3) online delivered to the store (ON-S), and (4) no purchase (NO). The purchase yes/no variable was created from the previous variable as a binary variable, where all three options of purchase (OFF, ON-C, ON-S) were grouped together to form purchase-yes (coded 1), while no purchase option was coded 0.

Table 3.
Variables

#	Variable	Coding
1	Gender	Female = 1; Male = 2
2	Age	18-24 = 2; 25-34 = 3; 35-44 = 4; 45-54 = 5; 55 or more = 6
3	Urban inhabitancy	rural = 1; city up to 20K = 2; 20K-99K = 3; 100K-500K = 4; more than 500K = 5
4	Internet Usage [IU]	IU<=1h = 1; 1h<IU<=2h = 2; 2h<IU<=3h = 3; 3h<IU<=4h = 4; 4h<IU<=6h = 5; IU>6h = 6
5	Discount online vs. offline	parity = 0; -10% = 1; -40% = 2
6	Price	70PLN = 1; 300PLN = 2
7	Purchase Urgency	non-urgent = 0; urgent = 1
8	Purchase scheme	purchase offline = 1; purchase online delivered by courier or to pickup point (additional charge) = 2; purchase online delivered to the store = 3; no purchase = 4
9	Purchase Yes/No	no purchase = 0; purchase (any scheme) = 1

Source: Authors' elaboration.

4. Results

4.1. Scenarios

The scenarios were assessed as being easy to understand (M = 6.44; SD = 1.094) and realistic (M = 6.10; SD = 1.219) (Table 4). Further, Kruskal-Wallis Test confirmed that there were no significant differences in distribution across the scenarios (easy to understand: p = .429; realistic: p = .327) (see Table 5).

Table 4.
Scenarios' assessment of being easy to understand and realistic

	N	Min	Max	Mean	Std. Dev.
Easy to understand	553	1	7	6.44	1.094
Realistic	553	1	7	6.10	1.219

Source: Authors' elaboration.

Table 5.
Easy to understand and realistic scenario assessment across the scenarios

Independent-Samples Kruskal-Wallis Test Summary		
Total N	**553**	**553**
Test Statistic	8.050[a]	9.537[a]
Degree Of Freedom	9	9
Asymptotic Sig.(2-sided test)	0.529	0.389
Decision on the Null hypothesis [b]	Retain	Retain
a. The test statistic is adjusted for ties.		
b. The significance level is .050.		

Source: Authors' elaboration.

4.2. Purchase decisions across the scenarios

The purchase decisions differed across the scenarios (Table 6). The highest intention to buy offline was expressed when the prices were equal across the channels (66% and 60,4%), second highest was the LP-LD-U scenario (50%), followed by LP-LD-NU scenario (34%) and LP-HD_U scenario (27,8%).

Table 6.
Purchase intention and delivery scheme choice across scenarios

Group/ Purchase		LD-LP-U	LD-LP-NU	LD-HP-U	LD-HP-NU	HD-LP-U	HD-LP-NU	HD-HP-U	HD-HP-NU	PAR-LP-NU	PAR-HP-NU	Total
OFF	#	29	17	15	1	6	4	3	2	31	32	140
	%	50.0%	34.0%	27.8%	1.7%	12.0%	6.8%	4.9%	3.3%	66.0%	60.4%	25.3%
ON-C	#	15	14	19	26	23	25	39	34	10	10	215
	%	25.9%	28.0%	35.2%	43.3%	46.0%	42.4%	63.9%	55.7%	21.3%	18.9%	38.9%
ON-S	#	11	17	15	27	15	26	12	19	6	7	155
	%	19.0%	34.0%	27.8%	45.0%	30.0%	44.1%	19.7%	31.1%	12.8%	13.2%	28.0%
NO	#	3	2	5	6	6	4	7	6	0	4	43
	%	5.2%	4.0	9.30%	10.0%	12.0%	6.8%	11.5%	9.8%	0.0%	7.5%	7.8%
Total	#	58	50	54	60	50	59	61	61	47	53	553
	%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Source: Authors' elaboration.

The remaining scenarios favored online purchases, either with or without additional delivery costs. The interesting point was that for urgent purchases, the percentage of online purchases (delivered after 48 hours) remained considerable, from 44,8% for LD-LP-U scenario, to 83,6% for HD-HP-U scenario! It means that if the price bargain was high enough, the consumers allowed delays in handing the birthday gifts to the close persons. It is a very valuable finding, as it implies that if the saving for the consumer was considered by him/her high, the price differentiation strategy led to redirecting the purchases from offline to online, even for the urgent purchases.

For the retailer, the most important factor would be to prevent from abandoning the transaction, namely to set the prices in a way that would not discourage the customers from actual purchase (either online or offline). To verify this, a dichotomic dummy variable was created, coded 0 = no purchase, and 1 = purchase, regardless the channel. The Kruskal-Wallis test performed for this variable across the scenarios revealed that none of the scenarios was significantly different (see Table 7), even pairwise comparisons did not show any significant differences. It means that regardless of the discount, price or purchase urgency, the consumers do not declare different purchase behavior as far as 'I will not purchase at all' behavior is concerned. It is a positive news for the retailers, as it induces that for this product category (hedonic/infrequent/for others), the threat to lose a transaction is quite low, even for HD-HP transactions.

Table 7.
Purchase schemes intention across the scenarios

Independent-Samples Kruskal-Wallis Test Summary	
Total N	553
Test Statistic	8.923[a]
Degree Of Freedom	9
Asymptotic Sig.(2-sided test)	0.444
Decision on the Null hypothesis[b]	Retain
a. The test statistic is adjusted for ties.	
b. The significance level is .050.	

Source: Authors' elaboration.

4.3. Demographics

Analysis for demographic characteristics (gender, age, and urban inhabitancy) revealed significant, but not particularly strong relation of purchase behaviors to urban inhabitancy (.101; p = .017), but did not show any relations to either gender (.001; p = .974), or age (.006; p = .893). Also, it did not reveal any relation to the Internet usage (.009; p = .829) (Table 8).

Table 8.
Correlation analysis of purchase schemes and gender, age, urban inhabitancy, Internet usage

Correlations			**Gender**	**Age**	**Urban**	**Internet**
Spearman's rho	purchase	Correlation Coefficient	.001	.006	.101*	.009
		Sig. (2-tailed)	.974	.893	.017	.829
		N	553	553	553	553

Source: Authors' elaboration.

Significant differences in purchase behavior across urban inhabitancy were confirmed by Kruskal-Wallis Test (12.303; p = .015) (Table 9). Looking at Figure 2, it seems that respondents in each segment had their preferred purchase/delivery scheme. For rural and small city inhabitants this would be online order delivered by courier (46.1% and 44.4% respectively), who most probably want to use every opportunity to buy at the discount, but because of the distant location, the courier delivery seems to be the most convenient option. For medium and big city inhabitants, the structure of declared behaviors was pretty similar for both groups, with dominant online purchase (combined results for courier and store delivery were 67.6% and 69.1% respectively), but the highest share of online order picked up at the store (33.3% and 37.2% respectively). Online order picked up at the store is the cheapest option (online discount and no delivery charges incurred), and medium and big city inhabitants might assume it would be relatively easy for them to visit the store again, as the store would be most probably located in their city. On the contrary to other groups, the large city inhabitants declared the highest portion of 'no purchase' behavior (21.7% vs. 4.2%-7.4% results for other groups). This is a very interesting finding, as these customers, being the most affluent and having the broadest range of alternatives at hand, seem to be also the most moody and reactive when faced with inequality transaction.

Table 9.
Purchase schemes across urban inhabitancy

Independent-Samples Kruskal-Wallis Test Summary	
Total N	553
Test Statistic	12.303[a]
Degree Of Freedom	4
Asymptotic Sig.(2-sided test)	0.015
Decision on the Null hypothesis[b]	Reject
a. The test statistic is adjusted for ties.	
b. The significance level is .050.	

Source: Authors' elaboration.

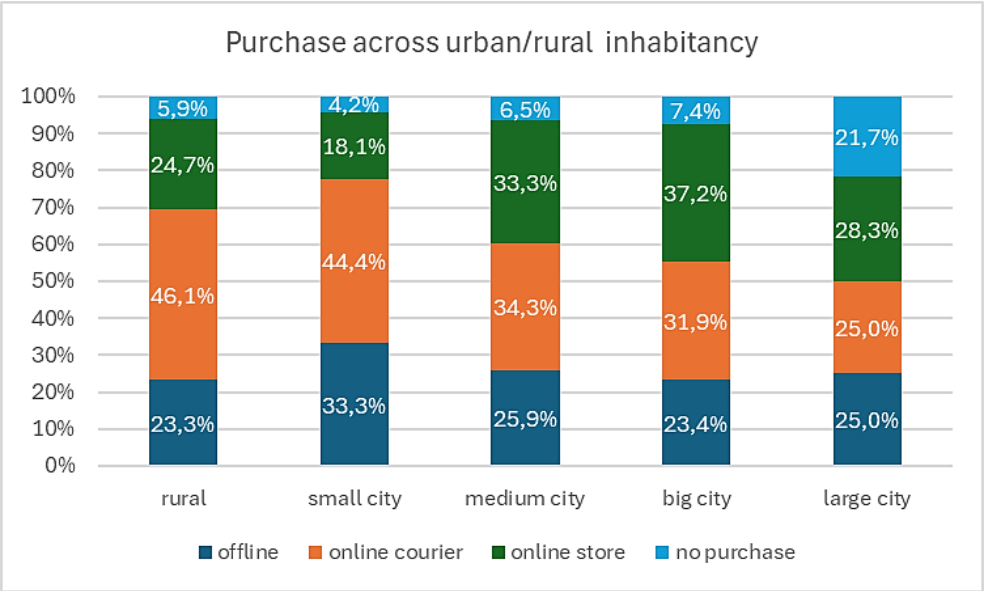

Figure 2. Purchase decisions across urban inhabitancy.

Source: Authors' elaboration.

4.4. Discount, price, and purchase urgency

Further, we looked at the variables of discount, price and purchase urgency. As visible in Table 10, both discount and price displayed positive and significant relations to purchase and delivery scheme choice: discount (.329; $p < .001$); price (.118; $p = .005$). In this context it means that the higher the discount and price, the more savvy or 'blow the transaction' behaviors were declared by the respondents. At the same time, the purchase urgency did not display any relation to purchase scheme choice (-.003; $p = .952$), showing that even for urgent purchases consumers do not feel obliged to do 'here and now' purchases, if they feel the price bargain would be enough to justify that.

Table 10.

Correlation between purchase schemes and discount, price, and purchase urgency

	Spearman's rho			**Purchase**	**Discount**	**Price**	**Urgency**
	purchase		Correlation Coefficient	1.000	.329**	.118**	-.003
			Sig. (2-tailed)	--	<.001	.005	.952
			N	553	553	553	553
**. Correlation is significant at the 0.01 level (2-tailed).							

Source: Authors' elaboration.

Independent samples tests (Table 11) confirmed the correlation findings, revealing that the distribution of purchase scheme choice differed across discount (68.904; $p < .001$) and price (43111.5; $p = .005$), but did not significantly differ across purchase urgency (36689.5; $p = .952$).

Table 11.
Independent samples tests for discount, price and purchase urgency across purchase schemes

Test Summary	**K-W Test[c]**	**M-W U Test[b]**	**M-W U Test[b]**
	discount	**price**	**urgency**
Total N	553	553	553
Test Statistic	68.904[a]	43111.5	36689.5
Standard Error	--	1782.967	1751.063
Degree Of Freedom	2	--	--
Asymptotic Sig.(2-sided test)	<.001	0.005	0.9520
Decision on the null hypothesis[d]	Reject	Reject	Retain
a. The test statistic is adjusted for ties.			
b. M-W U Test: Mann-Whitney U Test; c. K-W Test: Kruskal-Wallis Test.			
d. The significance level is .050.			

Source: Authors' elaboration.

4.5. Regression analysis: moderating effects

Based on previous findings, different regression models using SPSS's PROCESS macro (Hayes, 2012) were tested, and interpreted (Clement, Bradley-Garcia, 2022; Lorah, 2020).

First, moderating role of price in discount → purchase scheme relation was tested (Table 12). The model turned out to be statistically significant ($p < .001$), with R-sq = .1300, meaning that it explained 13% of purchase scheme variability. The interaction term was statistically significant ($b = -.1972$, $se = .0947$, $p < .05$), indicating that the relationship between discount level and purchase scheme choice was conditional on the level of price. The slopes for discount and price were positive and significant (discount: $b = .4044$; $se = .0476$; $p < .001$; price: $b = .2174$; $se = .0715$, $p < .005$). The R-sq improvement of price moderating role was calculated at R-sq chng = .0065. This confirmed H1, stating that the depth of between-channel price discount impacts the consumer choice of purchase channel and delivery scheme. Also, it confirmed H2a, stating that the relation between the between-channel depth of discount and the consumer channel and delivery scheme choice is moderated by the absolute price level.

Table 12.
Moderating role of price in the discount → purchase scheme relationship

Model Summary						
R	R-sq	MSE	F (HC0)	df1	df2	p
.3605	0.1300	0.7108	32.5416	3.00	549.00	0.00
Model						
	coeff	se (HC0)	t	p	LLCI	ULCI
constant	2.1828	0.0357	61.0856	0.0000	2.1126	2.2530
discount	0.4044	0.0476	8.4970	0.0000	0.3109	0.4979
price	0.2174	0.0715	3.0403	0.0025	0.0769	0.3579
Int_1	-0.1972	0.0947	-2.0831	0.0377	-0.3831	-0.0112
Test(s) of highest order unconditional interaction(s):						
	R-sq-chng	F(HC0)	df1	df2	p	
discount*price	0.0065	4.3394	1.0000	549.0000	0.0377	

Source: Authors' elaboration.

Second, the moderating role of purchase urgency in discount → purchase scheme choice relation was tested (Table 13). The model turned out to be statistically significant ($p < .001$), with R-sq = .1181, meaning that it explained 11.81% of purchase scheme choice variability. However, the interaction term was not statistically significant (b = -.0310, se = .1297, p = .8109), indicating that the relationship between discount level and purchase scheme choice was not conditional on the level of purchase urgency.

Table 13.
Moderating role of purchase urgency in the discount → purchase scheme relation

Model Summary						
R	R-sq	MSE	F (HC0)	df1	df2	p
,3436	0.1181	0.7206	26.4703	3.00	549.00	0.0000
Model						
	coeff	se (HC0)	t	p	LLCI	ULCI
constant	2.1859	0.0392	55.7254	0.0000	2.1089	2.2630
discount	0.4328	0.0575	7.5260	0.0000	0.3198	0.5457
urgency	-0.1770	0.0841	-2.1055	0.0357	-0.3421	-0.0119
Int_1	-0.0310	0.1297	-0.2394	0.8109	-0.2857	0.2237
Test(s) of highest order unconditional interaction(s):						
	R-sq-chng	F(HC0)	df1	df2	p	
discount*urgency	0.0001	0.0573	1.0000	549.0000	0.8109	

Source: Authors' elaboration.

The slopes for discount and purchase urgency were significant, positive for discount (b = .4328; se = .0575; $p < .001$), and negative for purchase urgency (b = .1770; se = .0841, $p < .05$). As such, this did not confirm the H2b, stating that the relation between the between-channel depth of discount and the consumer channel and delivery scheme choice was moderated by the urgency of purchase.

Third, moderating roles of price and purchase urgency in discount → purchase scheme choice relation were tested (Table 14). The model turned out to be statistically significant ($p < .001$), with R-sq = .1385, meaning that it explained 13.85% of purchase scheme variability. The interaction term for price was statistically significant (b = -.1903; se = .0949; $p < .05$), indicating that the relationship between discount level and purchase scheme choice was conditional on the level of price. The interaction term for urgency was not statistically significant (b = -.0459; se = .1289; p = .7220), indicating that the relationship between discount level and purchase scheme choice was not conditional on the level of purchase urgency. The slopes for discount, price and purchase urgency were significant, positive for discount and price (discount: b = .4291; se = .0573; $p < .001$; price: b = .2165; se = .0827; $p < .005$), and negative for purchase urgency (b = -.1672; se = .0827; $p < .05$). The R-sq improvement of price moderating role was calculated at R-sq chng = .0060.

Table 14.
Moderating role of price and purchase urgency in discount → purchase scheme reltionship

Model Summary						
R	R-sq	MSE	F (HC0)	df1	df2	p
.3721	0.1385	0.7065	21.1783	5.00	574.00	0.0000
Model						
	coeff	se (HC0)	t	p	LLCI	ULCI
constant	2.1877	0.0386	56.6175	0.0000	2.1118	2.2635
discount	0.4291	0.0573	7.4935	0.0000	0.3166	0.5416
price	0.2165	0.0712	3.0405	0.0025	0.0766	0.3563
Int_1	-0.1903	0.0949	-2.0056	0.0454	-0.3767	-0.0039
urgency	-0.1672	0.0827	-2.0218	0.0437	-0.3296	-0.0048
Int_2	-0.0459	0.1289	-0.3559	0.7220	-0.2990	0.2073
Test(s) of highest order unconditional interaction(s):						
	R-sq-chng	F(HC0)	df1	df2	p	
discount*price	0.0060	4.0224	1.0000	547.0000	0.0454	
discount*urgency	0.0002	0.1267	1.0000	547.0000	0.7220	
BOTH	0.0063	2.1869	2.0000	547.0000	0.1132	

Source: Authors' elaboration.

Finally, the most complex model was calculated, that included discount as focal predict, price and purchase urgency as moderators, and urban inhabitancy as covariate (see Table 15). The model turned out to be statistically significant ($p < .001$), with R-sq = .1572, meaning that it explained nearly 16% of purchase scheme choice variability. The interaction term for price was statistically significant (b = -.1916; se = .0941; $p < .05$), indicating that the relationship between discount level and purchase scheme choice was conditional on the level of price. The interaction term for urgency was not statistically significant (b = -.0442; se = .1281; p = .7304), indicating that the relationship between discount level and purchase scheme choice was not conditional on the level of purchase urgency. The slopes for discount, price and purchase urgency were significant, positive for discount and price (discount: b = .4386; se = .0568; $p < .001$; price: b = .2166; se = .0705; $p < .005$), and negative for purchase urgency (b = -.1717; se = .0819; $p < .05$). The slope for urban inhabitancy as covariate was positive and significant (b = .0866; se = .0264; p = .0011). The R-sq improvement of price moderating role was calculated at R-sq chng = .0061. This model turned out to have the highest predictive power in comparison to other models.

Table 15.
Model for discount → purchase scheme relationship, incl. price, purchase urgency, and urban inhabitancy

Model Summary						
R	R-sq	MSE	F (HC0)	df1	df2	p
0.3965	0.1572	0.6924	20.3782	6.00	546.00	0.00
Model						
	coeff	se (HC0)	t	p	LLCI	ULCI
constant	1.9741	0.0704	28.0286	0.0000	1.8357	2.1124
discount	0.4386	0.0568	7.7283	0.0000	0.3271	0.5501
price	0.2166	0.0705	3.0716	0.0022	0.0781	0.3550
Int_1	-0.1916	0.0941	-2.0360	0.0422	-0.3765	-0.0067
urgency	-0.1717	0.0819	-2.0970	0.0365	-0.3325	-0.0109
Int_2	-0.0442	0.1281	-0.3448	0.7304	-0.2958	0.2075
urban	0.0866	0.0264	3.2802	0.0011	0.0347	0.1384
Test(s) of highest order unconditional interaction(s):						
	R-sq-chng	F(HC0)	df1	df2	p	
discount*price	0.0061	4.1454	1.0000	546.0000	0.0422	
discount*urgency	0.0002	0.1189	1.0000	546.0000	0.7304	
BOTH	0.0063	2.2460	2.0000	546.0000	0.1068	

Source: Authors' elaboration.

A summary of the hypotheses verifications is covered in Table 16. Hypothesis H1, stating that the depth of discount impacts consumer choice of purchase channel and delivery scheme, as well as Hypothesis H2a, stating that this relationship is moderated by the absolute price level, were both confirmed. However, Hypothesis H2b, stating that this relationship was moderated by purchase urgency, was not confirmed.

Table 16.
Hypotheses verification summary

Hypothesis		Result
H1	the depth of between-channel price discount impacts the consumer choice of purchase channel and delivery scheme	confirmed
H2a	the relation between the between-channel depth of discount and the consumer channel and delivery scheme choice is moderated by the absolute price level	confirmed
H2b	the relation between the between-channel depth of discount and the consumer channel and delivery scheme choice is moderated by urgency of purchase	not confirmed

Source: Authors' elaboration.

5. Discussion

Our research carries important implications for theory, as well as for practice. Along with the multichannel management framework (Neslin et al., 2006), we shed light on the consumer purchase scheme choice in the situation of price differentiation between the online and offline channels at the same retailer. First, we addressed the delivery scheme choice, which has been omitted so far (Fassnacht, Unterhuber, 2016; Richards et al., 2016). Second, we used the product category that has not been researched so far (hedonic/infrequent, for others) (Fassnacht,

Unterhuber, 2016; Richards et al., 2016; Narwal, Nayak, 2020). Third, we extended the online vs. offline price discount span, applying a 10% and 40% price difference vs. 2%-3%-5%-10%-15% discounts that have been researched up to this date (Fassnacht, Unterhuber, 2016; Richards et al., 2016; Narwal, Nayak, 2020). Fourth, we employed purchase urgency as a possible moderating factor of the price difference → purchase scheme choice, in contrast to impulse/non-impulse purchase typology that had been tested in the past (Narwal, Nayak, 2020).

Obviously, the highest intention to buy offline was exhibited for price parity scenarios, followed by the low price and low discount scenarios. The more substantial was getting the price bargain, the more online purchases were favored, even for the urgent purchase scenarios (despite the 48-hour delivery scheme, causing late handing of the birthday gift to the close person). This finding implies that high price difference strategy largely redirects purchases from offline to online, even in a situation when the consumer is already present at the store, and a birthday party is carried out on the same day.

The demographic variables of gender and age did not appear to have a statistically significant relationship to purchase scheme choice. On the contrary, urban inhabitancy turned out to be related to purchase scheme choice in such a way that large city inhabitants declared higher intention to abandon the transaction, while rural and small city inhabitants favored online purchases delivered by courier. In terms of behavioral characteristics, Internet usage patterns surprisingly did not appear to have a significant relationship to purchase scheme choice. That means that the high intensity Internet users did not favor online purchases more than did low intensity Internet users, which was our expectation.

The regression modelling with moderating effects turned out to deliver the best predictive power in the configuration where depth of discount impacted purchase scheme choice, along with price level and purchase urgency; however, only price proved to have any significant moderating effect on the main relationship. Additionally, urban inhabitancy tested as a significant covariate to the discount → purchase scheme choice relationship.

As for practical implications, from the perspective of the retailer's revenue, it is important if consumers buy offline (higher price), online (lower price), or don't buy at all (no revenue). In view of the results achieved, it seems that low online price (high discount online vs. offline), apart from increasing retailer's price competitiveness vs. other online retailers, leads to massive purchase redirection from offline to online, even for urgent purchases. Once the price difference online vs. offline exceeds the delivery costs (a net benefit for consumers), then the intention to purchase offline falls dramatically, mostly to low single digit percentages. Therefore, for a multichannel retailer, the implementation of such a strategy would be positive in terms of competitive advantage and gaining customers, but detrimental to the revenue (having a vast majority of the stock sold at the high discount price). On the other hand, this strategy does not seem to be harmful in terms of losing purchases – the 'not purchase at all' option does not appear to be at all related to any of the price – discount – purchase urgency combination. This finding means that, in a situation with information transparency (consumers are aware of

the price difference prior to the purchase), the consumers are rather more willing to utilize the bargain and purchase online, than to blow a deal and abandon the transaction completely.

However, there is one group of customers who are significantly more eager to blow a deal, regardless of the scenario. Large city (>500K inhabitants) customers declared almost a 22% rejection rate in the case of price differentiation compared to the low single digit results for other urban or rural inhabitants. This affluent group of customers seem to be more upset with the price differentiation strategy than other groups are by declaring they would step away from the table when faced with the price difference. The reasons for such behavior might be twofold. One would be that they have considerably more alternatives to follow, compared to those found in smaller cities and rural areas, so they are confident they can just switch to something else easily, just to teach the lesson to the retailer. Another possible explanation would be that they are upset with the retailer wasting their time. In these scenarios, the respondents were supposed to imagine traveling to the offline store and there realizing the price was higher vs. online. In a large city such a trip would be probably more time consuming vs. in smaller cities (but not vs. rural areas), and big city inhabitants are presumed to be more rushed around always and thus more time conscious. Whatever the explanation, the retailers should pay attention to their client base structure, as given the high share of large city urban customers, a high difference price strategy could be more detrimental to the revenue of retailers.

6. Summary

To our knowledge, this research is the first to study the purchase intention in conditions of cross-channel price differentiation that splits the purchase schemes into: [1] offline, [2] online delivered by courier or to pick-up point (with additional fee), [3] online delivered to the retailer's store of consumer choice (free of charge), and [4] refusal to purchase. As such, this research indicates the consequences of cross-channel price differentiation strategy for multichannel retailers that are offering online and offline purchase options and makes an important contribution to the theory of multi-channel retail management and the practice of cross-channel price setting. The findings assert that both discount and price level are significant determinants of purchase scheme choice by consumers. Additionally, price level appears to be a moderating factor for the discount → purchase scheme relationship. Urban inhabitancy also appears to have a significant impact on purchase scheme choice, while gender, age, and Internet usage are not significant determinants of the final purchase scheme choice.

This research does have several limitations. First, it focused on just one product category, namely, infrequent/hedonic/'for others', so more focus on frequent purchase product categories, such as foods or cosmetics, should be recommended for future research. Also, to cover a broader range of product categories, the purchase of 'for myself' products could be an interesting future

research avenue. Second, three levels of discount were involved in this research: parity (0%), low (10%) and high (40%). However, more detailed analysis similar to price elasticity could be recommended for future research. Third, this research assumed that the information about price difference between the channels was available to the consumer before the purchase decision was made. Therefore, alternative purchase paths should be taken into consideration to research lower transparency of cross-channel price discrimination at the moment of purchase. Finally, two price levels were tested (70PLN and 300PLN), so lower price levels comparisons should be recommended for future research, especially important for frequent purchase products.

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