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Increasing product variety: Conflicts in shelf space allocation

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Abstract

The increasing product variety trend prevalent in most industries today does not stop at retailers. Unfortunately, this trend is a mounting task due to limited shelf space. Based on a survey of 376 people, this research provides an insightful picture of the connection between product variety and impulse buying decisions. One of the study's main findings is that product variety offered by retailers is one of the main in-store factors driving impulse purchases. Since the survey results show the importance of product variety for retailers, the paper also presents some concepts as to how retailers can deal with the numerous product varieties under the condition of limited shelf spaces, e.g., by allowing manufacturers to compete for shelf space.

Keywords: Impulse buying, shelf space, product variety

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Introduction

Consumers might prefer shopping online due to two reasons. One of them is that online retailers offer much greater variety than stationary retailers. Another reason is that stationary retailers often have limited shelf space that hinders them from stocking and offering too many product varieties. Shelf space allocation is a fundamental factor that influences product sales volume. A study by Slickdeals found that the average person spends $314 a month on impulse purchases, and an average person is willing to pay up to $310 for a single item (Slickdeals).

This study focuses on exploring the concepts and issues that stationary retailers face based on the fact that the topic has not gained enough attention among researchers. In consequence, there are not adequate concepts and solutions developed for resolving relevant issues. It focuses on stationary retail by drawing a connection between product variety and impulse purchase based on the limited shelf space variable. The study employed a survey of 376 participants questioning their impulse buying behavior and decisions and how product varieties may influence such decisions.

Product varieties boosting impulse purchases

In-store factors heavily influence consumers' purchasing decisions. Consumers often make unplanned, impulse purchases when entering stores, particularly when they only have vague ideas about what they want to purchase. Therefore, they are receptive to in-store marketing (Bianchi de Aguiar, 2015). Impulse purchasing, i.e. unplanned purchases, is triggered by in-store impulses. Several factors influence impulse buying, including store environment, sales promotions, store employees, and product variety (Husnain et al., 2019; Octavia, 2016). Brohan (1999) and Chen-Yu et al. (2002) confirmed that product variety is an essential factor for consumers' impulse purchases in online retail.

This study focuses only on stationary retailers. In this regard, shelf space becomes a determining factor for consumers' impulse purchasing decisions. In total, 376 people took part in the survey. They were asked questions concerning their impulse purchasing behavior through a questionnaire that was accessible via a link. The questionnaire examined whether the participants in the study were prone to impulse purchases. The surveyor told respondents that the survey was only about stationary retailers. 32% of respondents did not buy products unplanned as they answered either strongly disagree or disagree to the question “I buy things spontaneously and therefore unplanned", whereas 46 % purchased things spontaneously as they answered either agree or strongly agree to the question. Thus, there were more participants making impulse purchases than planned ones.

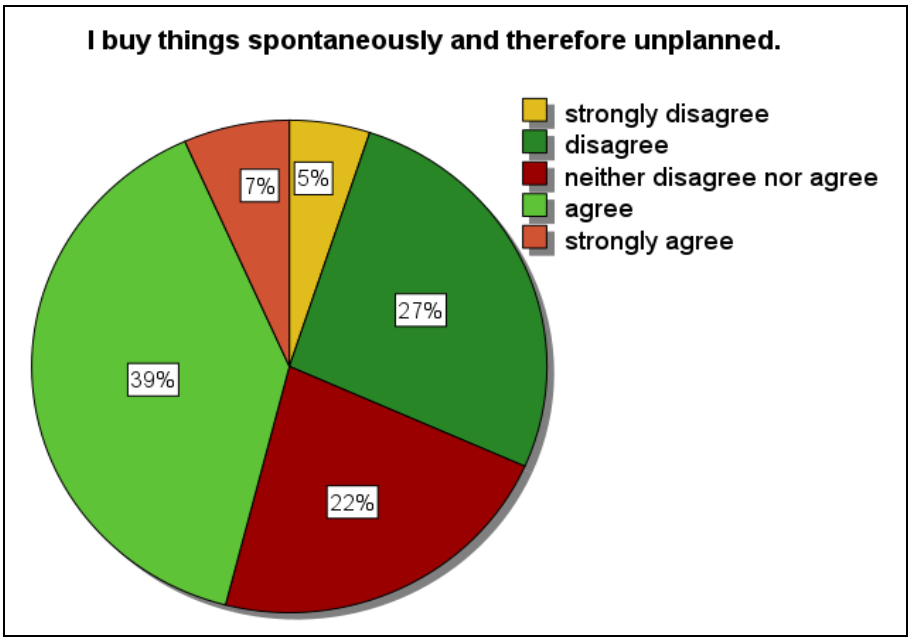

Figure 1: Impulse buying

Source: own figure

Two questions clarified the frequency of impulse purchases that respondents had done. These questions were:

- How often do you buy things spontaneously and, therefore, unplanned?
- How often do you buy things without thinking?

The order of these questions could always change, and the two questions were not subsequent.

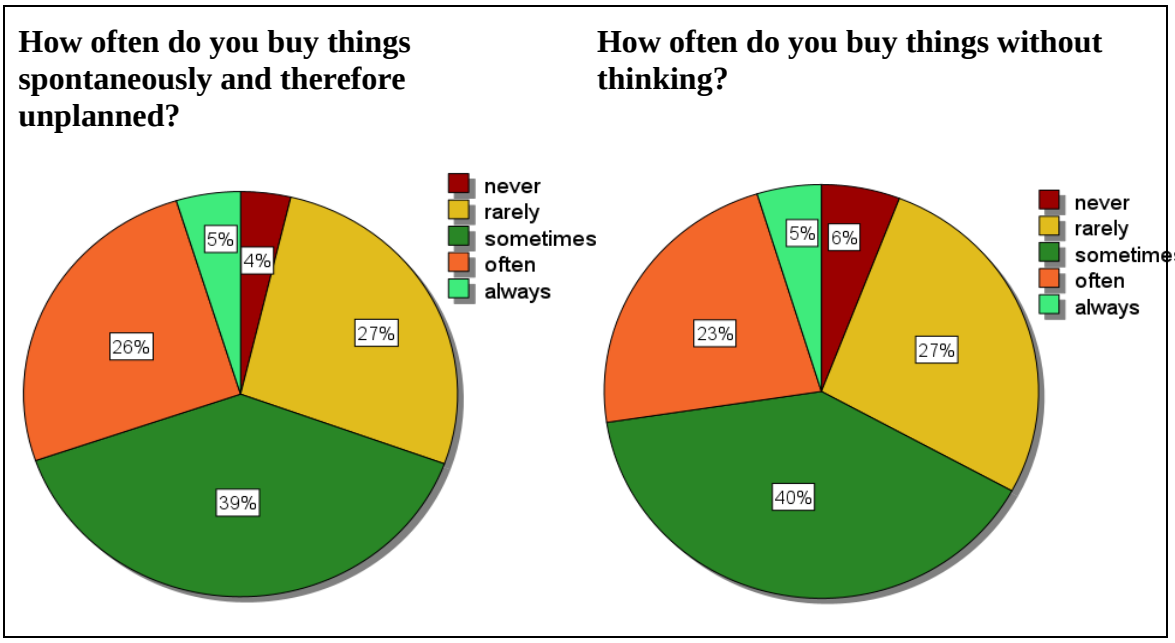

Figure 2: Impulse buying frequency

Source: own figure

The number of participants who made impulse purchases occasionally was 39% for the first question and 40% for the second question. Meanwhile, participants who made such purchases frequently were 26% for the first question and 23% for the second question (see figure 2).

The literature review outlined that a trend toward increasing product variety in most industries is identifiable (Cachon et al., 2005; Scavarda et al., 2008). ElMaraghy et al. (2013) and Thonemann et al. (2002) confirmed the significance of product variety increase. Aichner et al. (2013) went one step further and described that product variety increase is one of the essential features of modern economic systems. There is a trend for supermarkets to increase the variety of products to meet the highly-diversified customer needs and the growing number of candidate products to maintain their market shares (Hekimoğlu et al., 2019).

Karim et al. (2021) recognized a positive and significant relationship between product variety and impulse purchases in online retail stores. Sharma et al. (2010) stated an association between customers´ variety-seeking behavior and impulse buying. Hawkins et al. (2010) described that people prefer having more product varieties. This variety-seeking behavior can lead to brand-switching and boost impulse purchasing. Thus, it was necessary to ask whether participants preferred more product varieties. As shown in figure 3, respondents preferred wide range of product varieties. This result applied to all age groups. For instance, within the group of 18–24-year-olds, 42% agreed with the statement “I appreciate a large selection of different products in the store” and 34%

strongly agreed with that statement. Surprisingly, the group of 55–64-year-olds answered this question only with agree (67%) or strongly agree (33%).

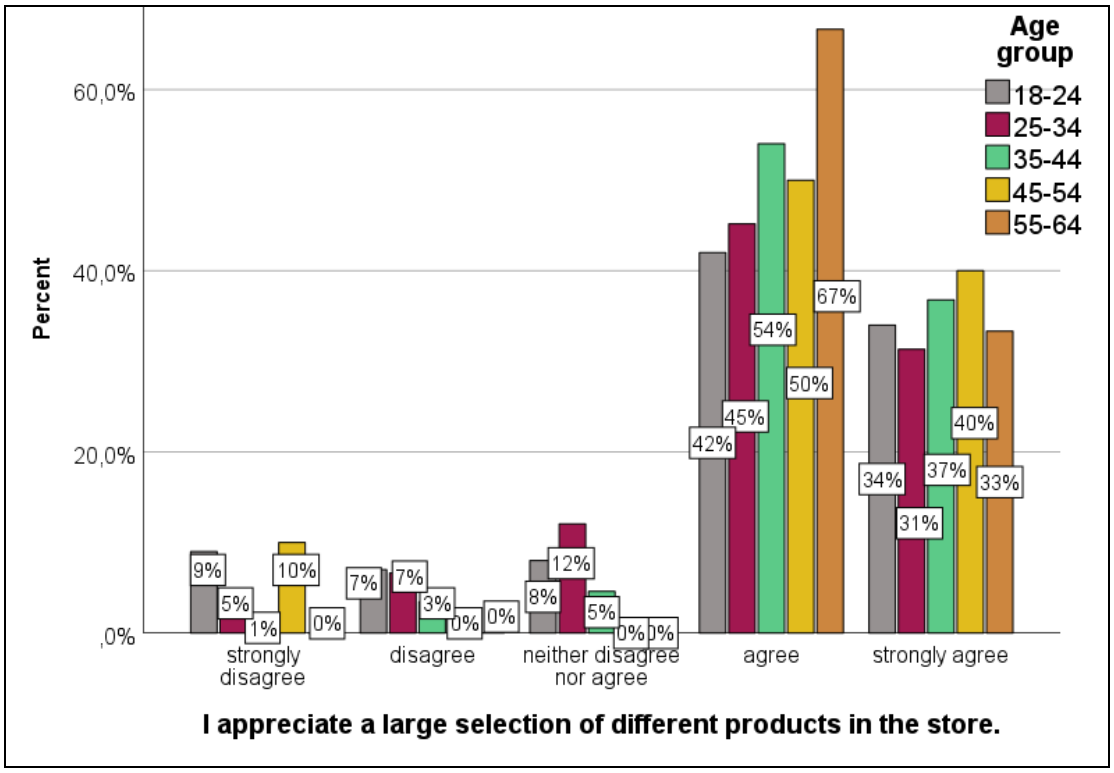

Figure 3: Large product variety in store

Source: own figure

33% of respondents aged 55-64 answered the question, “If the store offers a variety of products, I tend to buy spontaneously” with “strongly disagree”, while 67% answered with "agree" (see figure 4). In the 45-54 age category, 10% answered strongly disagree, 20% disagree, 30% neither disagree nor agree, 15% agree, and 25% strongly agree. The group of 18–24-year-olds and 25–34-year-olds showed a similar trend. The group of 25-34 years olds responded to the assertion that a variety of products in the store leads to a spontaneous purchase in the following manner: 2% strongly disagree, 20% disagree, 25% neither disagree nor agree, 42% agree, and 11% strongly agree. In the 18–24-year-olds group, the answers were as follows: 5% strongly disagree, 14% disagree, 30% neither disagree nor agree, 41% agree, and 10% strongly agree (see figure 4). In summary, more than half of the respondents in all age groups (except those aged 45-54) either agreed or strongly agreed that they made spontaneous purchases when the store offered a wide range of product varieties.

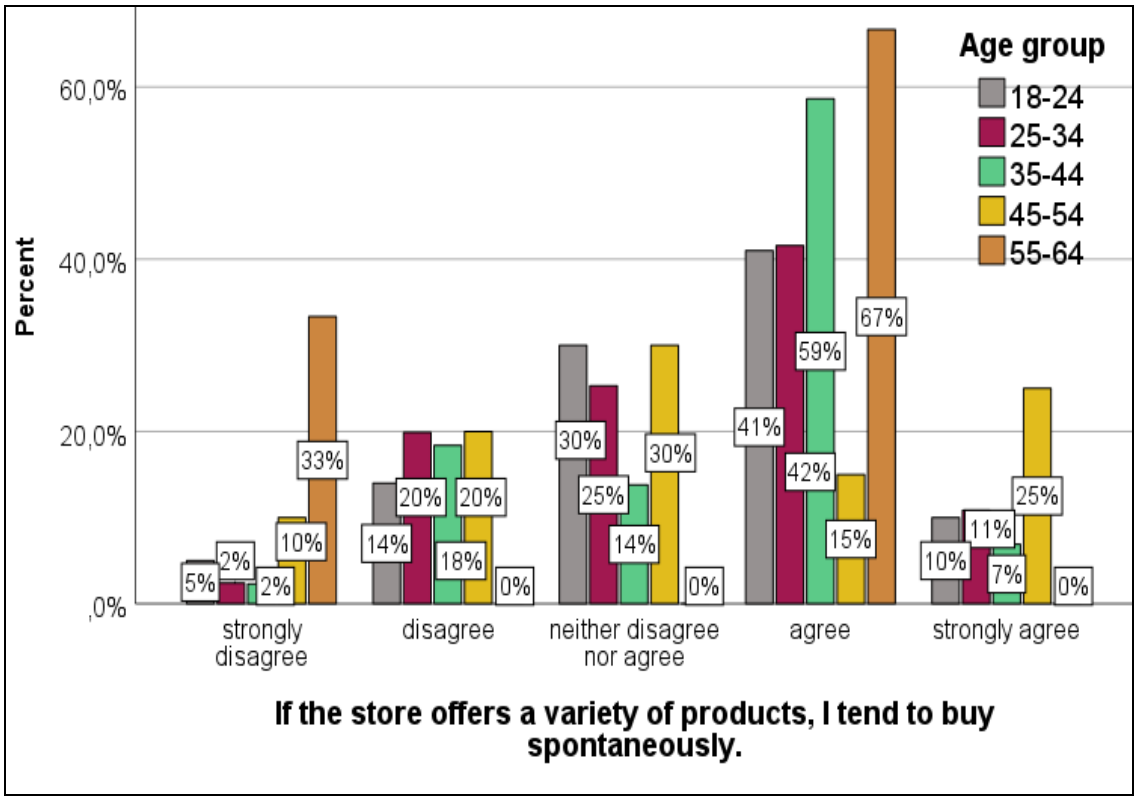

Figure 4: Product variety and impulse buying

Source: own figure

Figure 5 provides information on how respondents answered the question "If I see new products in the store, I tend to buy spontaneously". A five-point Likert scale with five values: strongly disagree, disagree, neither disagree nor agree, agree, and strongly agree. Each age group answered either "agree" or "strongly agree" in the following manner: 52% for the 18–24-year-olds, 30% for the 25-34-year-olds, for the 35-44-year-olds 47%, 45-54-year-olds 45% and 55-64-year-olds 67% (see figure 5).

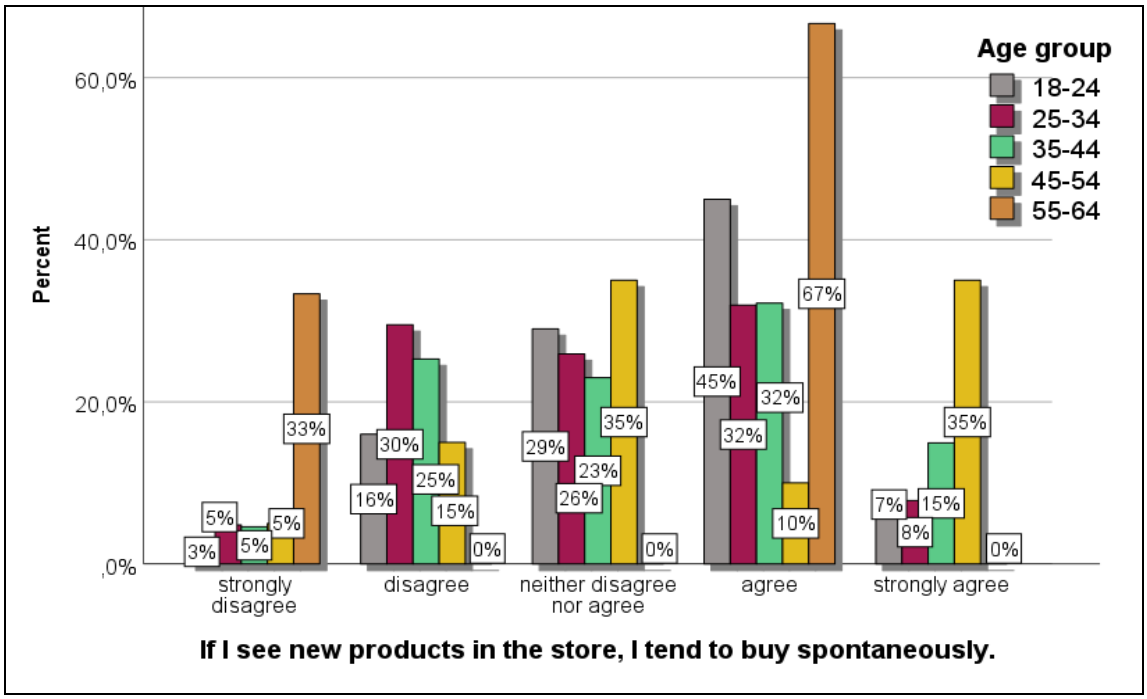

Figure 5: New products and impulse buying

Source: own figure

The literature also provides evidence that product variety positively affects variety-seeking. Variety seeking refers to a consumer's tendency to vary their product choices within the product class over time as they seek to change (Mohan et al., 2012). A chi-square independence test with the following variables: "I appreciate a large selection of different products in the store" and " I buy things spontaneously and therefore unplanned" was carried out (see table 1) to determine if a person looking for change or variety is taking impulse purchases. The null hypothesis is: "There is no statistically significant association between "variety seeking preference" and "impulse buying". The Pearson Chi-Square Asymp. Sig. (2-sided) shows that the p-value (<0,001) of the test was less than 0.05 (see table 2). Therefore, there was a strong statistical significance for the product variety-variety-seeking relationship, refuting the null hypothesis. This study discovered there was a strong association between variety-seeking preference and impulse buying.

Table 1: Crosstabulation table: variety seeking preference and impulse buying

% of Total

		I appreciate a large selection of different products in the store.					
		strongly disagree	disagree	neither disagree nor agree	agree	strongly agree	Total
I buy things spontaneously and therefore unplanned.	strongly disagree	1,1%	0,3%	0,3%	2,1%	1,3%	5,1%
	disagree	1,9%	2,1%	2,7%	13,0%	6,9%	26,6%
	neither disagree nor agree	1,6%	1,6%	2,7%	10,1%	6,4%	22,3%
	agree	0,8%	1,6%	2,9%	19,9%	14,1%	39,4%
	strongly agree				1,6%	5,1%	6,6%
Total		5,3%	5,6%	8,5%	46,8%	33,8%	100,0%

Source. Own table

Table 2: Chi-Square Tests: variety seeking preference and impulse buying

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	41,279[a]	16	<,001
Likelihood Ratio	40,300	16	<,001
Linear-by-Linear Association	21,879	1	<,001
N of Valid Cases	376		

a. 8 cells (32,0%) have expected count less than 5. The minimum expected count is 1,01.

Source. Own table

The illustrations and explanations showed that:

- approximately 46% of the 376 respondents made impulse purchases.
- at least about 40% of those surveyed made impulse purchases occasionally.
- the majority of respondents in all age groups appreciated a large variety of products in the store.
- 67% of 55–64-year-olds made spontaneous purchases when the store offered a wide range of product varieties.
- 51% of 18–24-year-olds made spontaneous purchases when the store offered a wide range of product varieties.

- 52% of 18–24-year-olds make impulse purchases when they found new products in the store.
- 47% of 35–44-year-olds make spontaneous purchases when they found new products in the store.
- there was a strong association between variety-seeking preference and impulse buying.

Since it is now clear that product variety in stores has an influential role in consumers' purchasing behavior, the trend towards greater product variety is understandable, and so is the desire of retailers to offer a high product variety. But how does it all fit together with limited shelf spaces?

Product variety and shelf space limitations

Shelf space scarcity is challenging for retailers since shelf space is one of their most important resources. It contradicts the trend towards increasing product variety is predominant in most industries nowadays. Shelf space allocation has a demand-generating function: the more shelf space there is for a product, the higher the demand will be (Hübner et al., 2011). Typical U.S. grocery stores have been offering significantly more product varieties from approximately 5,000 products in the 1950s to approximately 30,000 products in the 1990s and 100,000 products today (Burke, 2005).

The increase in product varieties has led to an increase in complexity and a struggle for shelf space (Martinez de Albéniz et al., 2007). Since retail business is highly competitive, business owners must carefully make decisions on how to address limited shelf space. Shelf space is becoming a critical success factor for retailers because consumers often have limited time and their attention is heavily influenced by shelf space arrangement (Narulidea et al., 2021).

What can manufacturers do here?

- They could offer financial incentives to retailers to safeguard shelf space for their products. Retailers could be offered higher profit margins, e.g. by lowering supplier´s wholesale prices (Martinez de Albéniz et al., 2007).
- They could introduce mechanisms such as slotting allowances (Narulidea et al., 2021). These allowances are fees manufacturers pay to retailers to obtain shelf space (Marx et al., 2010). A legitimate concern is that the larger dominant companies will buy the shelf space because they can pay more for the shelf space. Smaller companies, which may even offer better products, fell by the wayside. One reason for the increase in slotting allowances may be an imbalance in the variety of products a retailer has to choose casually versus the number of products they can carry given limited shelf space (Marx et al., 2010).

- Conversely, retailers are confronted with so many choices from a wide variety of products that they also have to choose carefully considering the limited shelf space. Therefore, they allow manufacturers to compete for shelf space by offering at least part of their shelf space up for bid (Marx et al., 2010).

To meet consumers' heterogeneous needs, retailers often have to offer an extensive product range to convey a picture of variety. It is thus imperative to arrange products and present them in a way that simplifies consumers' purchasing decisions. When organizing products on shelves, retailers should consider consumers' mental categories in grouping products and making purchasing decisions. When consumers select a product's brands before its size and color, then it is advisable for retailers to group products by major brands and uses size and color grouping within brands. The Paris wine store Lavinia, which offers a wide range of wines, sorts the assortment so that the wines are grouped by type and consumer needs. Meanwhile, Waitrose Food & Home (UK) stacked their bread selections on open shelves to accommodate the wide variety of products. That way, customers can easily compare all products. The Amsterdam pharmacy Lairesse Apotheek tries to support the buyer with the product arrangement that helps them select the right medicine. Conventional and alternative medicines are displayed next to each other in 522 green-fronted see-through drawers (Burke 2005).

Conclusion

This study initially attempted to determine the connection between product variety and impulse purchasing by interviewing 376 people using an online questionnaire. The study discovered that approximately 40% of participants made impulse purchases at least occasionally and that there is a strong statistical connection between variety-seeking preference and impulse buying. Stationary retailers face self-space limitations, meaning that these retailers need to be very careful about the trend towards increasing product variety while recognizing that product variety might drive sales. The analysis of how retailers can deal with product variety shows that retailers provide at least a part of their shelf space up for bid.

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