Inzinerine Ekonomika-Engineering Economics, 2022, 33(5), 486–495

An Examination of New Product Innovativeness and Performance: the Moderating Role of Commercial Environment

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crossref http://dx.doi.org/10.5755/j01.ee.33.5.21694

The paper explores the link between new product innovativeness and performance, as well as its moderation by commercial environment in retail. It analyzes the linkage and context built on marketplace, company's characteristics and retail category management decisions as an integral commercial environment. The research employs a unique data set - new product introductions with their actual sales results as a performance indicator. The research concludes that the innovativeness – performance link cannot be evaluated unilaterally, confirming the role of the commercial environment as a moderator of the link. The commercial environment is associated with a favorable and non-favorable economic climate that leads to performance-related opportunities or barriers in the marketplace for product innovations. Findings add value to the theoretical development of innovativeness-performance linkage studies, and also are valid pratically. It provides practical guidance to the integral understanding of commercial environment to which companies might be able to adapt during the new product launch.

Keywords: *Product Innovation; New Product Performance; Commercial Environment.*

Introduction

It has been acknowledged that the long-term survival of a business enterprise hinges upon its ability to successfully launch new products in the marketplace and is considered a competitive advantage that delivers sustainable business growth (Le Bas & Scellato, 2014). Research (Calantone & Montoya-Weiss, 1993) notes that a new product launch is considered to be the most demanding, expensive, and risky process out of all phases of new product development; it needs to be adequately understood in ever-changing business environments. This paper aims to advance knowledge in new product performance studies by revealing the role of the commercial environment in new product performance. It provides a synthesis of new knowledge and novel methodological approach.

Relevance of this research can be defined from both theoretical and practical perspectives. First, despite the extant research in the area of product innovation and its performance, it has been indicated that the concept of innovativeness and its relation to performance is not yet fully understood (Ding & Ding, 2022; Stanko *et al.,* 2015). Products that represent different levels of newness face different commercialization paths in diverse commercial environments, which has been little explored to date (Michael, Rochford & Wortruba, 2003). Also, understanding towards the moderating role of commercial environment to innovativeness-performance link is limited and was encouraged to be explored by previous studies (Lamey, Deleersnyder, Steenkamp & Dekimpe, 2018; Tsai, Huang & Tsai, 2013; Garcia-Zamora, Gonzalez-Benito & Munoz-Gallego, 2013). For many companies, from the practical perspective, product innovation is a source of business growth, also a competitive advantage, yet many new products fail. Success rate of new products is only around 50 % (Barczak, Griffin & Kahn, 2009), while industry studies reveal that only one of four new products are able to achieve commercial success (Nielsen, 2014). This clearly illustrates the need for business to prepare and adapt for different circumstances during new product launch.

A study by Garcia- Zamora et al. (2013) concludes that research on innovation has increased as innovation management has become an essential requirement for companies. Likewise, new product success studies is part of a growing body of knowledge due to its practical and theoretical relevance. This paper explores the elements of commercial environment that lead to the success or failure of a new product. It aims to reveal how the link between product innovativeness and its performance is influenced by the context of the commercial environment.

Theoretical and Conceptual Framework

Product Innovativeness and its Linkage to Performance

The essence of innovation, despite its type, is subject to the scale of novelty. This paper uses the typology of innovativeness, conceptualized by Garcia & Calantone (2002), which characterizes five levels of newness. A study by Damanpour (1996) concludes that different levels of innovativeness follow different performance patterns. While the authors mentioned above have emphasized the importance of proper innovation classification, other researchers (Kleinknecht & Van Der Panne, 2012) argue that, despite classification, there are insufficient evidence and consistency in the literature regarding the link between product innovativeness and performance. Although previous studies have already explored the linkage, results remain contradictory. This has been acknowledged by meta-analyses that outline innovativeness – performance research (Stanko, Molina-Castilo & Harmancioglu, 2015; Rubera & Kirca, 2012; Szymanski, Kroff & Troy, 2007; Henard & Szymanski, 2002). Findings on the linkage differ from negative positive to no effects at all. This represents an obvious research gap and the need for further elucidation, and the fact that the link between innovativeness and performance cannot be investigated in isolation. Due to conflicting findings, this study intends to investigate the function of moderators in the link between innovativeness and performance. Based on Baron & Kenny (1986), moderators are used in research to explain existing inconsistent relations between variables. The paper suggests that contradictory findings may exist in the field because the innovativeness – performance linkage cannot be evaluated unilaterally and employs a moderation analysis to explain the inconsistency, suggesting that the linkage is influenced by contextual situations that are expected to predetermine a relationship towards performance, defined as the commercial environment.

Determinants of new Product performance and Role of Commercial Environment as a Performance Predictor

As one of the phases of new product development, commercialization is essential for achieving an economic impact. Several classical meta-analytical studies (Cooper et al, 1994; Montoya-Weiss & Calantone, 1994; Henard & Szymanski, 2001; Evanschitzky et al, 2012) summarize factors that contribute to the success of a new product. A commercial environment is defined as a dynamic external system in which a new product serves as a commercial performance predictor (Gotteland & Boule, 2006). Studies that conceptualized the area define the commercial environment based on the following logic – i) studies related to marketplace effects on new product performance, ii) studies focusing on company-related characteristics and their link to performance, iii) studies focusing on external relations (retail and distribution channels) and their effect on performance. This paper aims to remain consistent with previous research highlighting the importance of understanding the commercial environment as integrity. A major body of studies in the field relate marketplace conditions with a positive or negative economic climate that is found to have a positive or negative effect on performance. Previous research has linked increased market potential and growth concerning improvements in new product or business performance (Cooper & Kleinschmidt, 1993; Gatington, Weitz & Bansal, 1990; Cooper *et al.,* 1994; Green, Barclay & Ryans, 1995; Carbonell & Rodriguez, 2006). It is defined as a favorable business climate. However, the same body of research, and other studies (e.g., Steenkamp & Gielens, 2002, Augusto & Coehlo, 2009), have linked a negative impact on new product or business performance to the competitive situation. Its intensity, and turbulence can be defined as a non-favorable economic climate; and is perceived as a potential business threat. Previous studies conclude that a successful launch that leads to effective commercialization is a significant driver for new product success, yet it demands specific capabilities.

Superior new product performance is associated with the company's strength in terms of market power, superior reputation, and more significant resources and capabilities that enable a company to gain a competitive advantage and achieve commercial success. Regarding external relations, new products are often launched in cooperation with retailers, which creates additional challenges. There have been attempts by Gatington & Xuareb (1997), Augusto & Coehlo (2009), Garcia-Zamora et al. (2013) to consider the role of company characteristics as a moderator. Yet, the area has not been fully explored. In regards to external relations, new products are often launched in cooperation with retailers, which creates additional challenges and barriers. Based on Calantone & Griffith (2007), new product performance is highly dependable on the ability to exploit external counterparts, such as retailers. According to Fornari, Grandi, and Fornari (2009), the impact of assortment choice on product owners' strategies and performance has grown significantly. The success or failure of newly launched innovations has become more critical in distribution issues, as retailers have gained a positional advantage as "gatekeepers" to consumers (based on Calantone & Griffith, 2007). However, the role of retail category variables, based on Everdingen et al. (2011) and Lamey et al. (2018), has received limited attention from scholars and hence lacks a theoretical conceptualization. A prior study by Dhar, Hoch & Kumar (2001) explored factors that predetermine strong category performance, which is associated with category assortment, feature advertising, and the presence of a robust private label.

Research Model, Research Hypotheses and Literature Support

In this research, two types of linkages are explored - the effect between different levels of product innovativeness and its performance and the moderating role of the commercial environment on the linkage between innovativeness and performance.

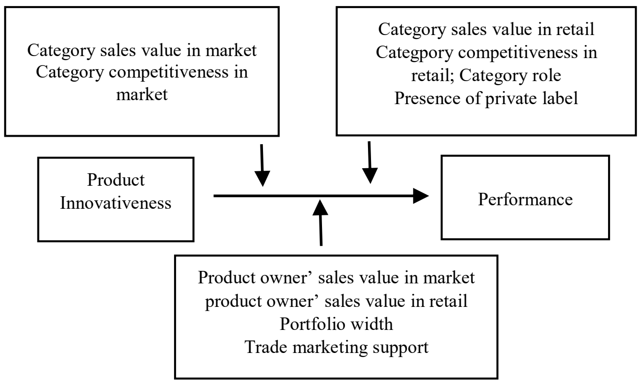

Figure 1. Conceptual Framework

This paper hypothesizes that contextual factors (defined as the commercial environment) moderate the link between product innovativeness and its performance, as outlined in Figure 1. First, this research addresses the link between innovativeness and performance. Next, three groups of commercial environment factors are distinguished as moderators – marketplace and company's characteristics, and retailer category management decisions. The paper associates higher innovativeness with improved performance outcomes due to several reasons – i) innovativeness is considered a key feature of a new offering that represents product advantage. Product advantage is subsequently associated with higher perceived value for the customer; thus, the higher the perceived value, the better the anticipated performance results; ii) innovativeness plays a central role in differentiation compared to existing offerings in the marketplace. Suggested *H 1: Innovativeness is a direct predictor of performance*. The more innovative the product, the better the anticipated performance.

In this study, category sales value in the market and retail channel reflects a category of substitutable products that meet similar customer needs and is treated as a single unit and used to define market potential. The theoretical proposition related to the moderating role of category sales value in the market and in retail sales channels follows previous conceptualizations. This explains that: i) higher sales value in the market is a direct as well as moderating predictor of performance, associated with higher demand and positive economic climate; ii) with increasing sales value in the market, performance is also expected to improve; iii) sales value in the market has the potential to strengthen the link between innovativeness and performance, which is related to possible new product differentiation that allows a competitive advantage to be formed among the competition. Thus, *H 2a: Higher category sales value in a market should reinforce the link between new product innovativeness and its performance, and H 4a: Higher category sales value in retail should reinforce the link between new product innovativeness and its performance*.

Category competitiveness is used as another important characteristic to define marketplace conditions. Contrary to market potential conceptualizations, studies (Tsai, Huang & Tsai, 2013; Steenkamp & Gielens, 2002) have acknowledged that competitive intensity is a considerable barrier to successful performance. Prior studies have mainly focused on the direct linkage between competitive intensity and performance. Only a few attempts (Kohli & Jarowski, 1990; Garcia-Zamora, Gonzalez-Benito & Munoz-Gallego, 2013) have aimed to conceptualize it as a moderator. Studies relate more intense competition with more difficulties for innovation to make a breakthrough. Hence, a worse performance is anticipated due to high competition. Given the evidence that competitive intensity is shown to be a direct negative predictor of performance, it is treated as a performance barrier. However, in intense competition, a higher innovativeness – performance linkage is more important for commercial success due to product advantage, which originates from higher innovativeness and allows more successful competition; thus, the study suggests *H 2b: Higher category competitiveness in a market should enhance the link between new product innovativeness and its performance and H 4b: Higher category competitiveness in retail should enhance the link between new product innovativeness and its performance*.

A company's characteristics are recognized as a new direct product success predictor (Herrmann, Tomczak & LaBahn, 2006; Garido-Rubio & Polo-Redondo, 2005; Cooper, 1998; Hultink & Robben, 1999), with a conceptually established direct link between company characteristics and performance. This research suggests that higher company sales value and portfolio width are indirect predictors of new product performance based on previous research findings. A company's characteristics, such as sales value in the market and retail channel, and company portfolio width, reflect a company's strength and its competitive position in the marketplace. The stronger the company's competitive position, the more it is associated with a superior reputation and greater resources and capabilities, which enable it to achieve commercial success more easily. Thus, higher innovativeness – improved performance linkage is suppressed, as the role of innovativeness becomes less important due to overall good market acceptance of new products, which is conditioned by the company's superior reputation. A company's characteristics are expected to have a negative moderating effect on the innovativeness – performance linkage. Thus, *H 3a: Higher company sales value in the market should suppress the link between innovativeness and performance, H3b: Higher company sales value in the retail channel should suppress the link between innovativeness and performance, H 3c: A wider company portfolio should suppress the link between innovativeness and performance*.

Paper also discusses the role of company's capabilities in terms of marketing investment in new products in the retail channel (Garrido-Rubio & Polo-Redondo, 2005; Cooper, 1998; Urban & Hauser, 1993). Bloom, Gudlach & Cannon (2002) indicated that companies that cooperate with retailers as potential outlets for their products are expected to pay various trade marketing fees. Trade marketing support for products on the shelves is recognized as an important part of retail business revenues (Wilkie, Desrochers & Gundlach, 2002). A study by Everdingen et al. (2011) suggests that higher trade marketing support increases the chances of launching a new product more successfully, which results in anticipation of commercial success. Suggested *H 3d: Trade marketing support, invested in the retail channel, should enhance the link between innovativeness and performance*.

This research also acknowledges the importance of retailers' assortment decisions regarding successful new product commercialization. Dhar, Hoch & Kumar (2001) explores factors that predetermine strong category performance as part of category management decisions and indicates that assortment, feature advertising, and a strong private label contribute to successful category performance in retail. This research suggests that retail category management decisions, such as assignation to categories with specific roles and strategies (based on industry studies by Nielsen, 2006), and the presence of private labels, can affect new product performance in diverse patterns.

Regarding category management decisions, this research associates the destination category role with strategic importance for the retailer due to its definition of reflecting the retailer's strategy and becoming a primary category provider to consumers. Therefore, products assigned to this category are expected to experience a direct "lift" effect, defined as a positive economic climate. The destination category role is expected to strengthen the link between innovativeness and performance, as innovativeness is more important for commercial success in this category role due to the competitive advantage of a new product. Thus*, H 4c: Product assignation to the destination category should enhance the link between new product innovativeness and performance*.

Routine categories are usually used for transaction building, as well as cash and profit generation, and typically the retailer aims to become one of the preferred category providers for this category with a rather limited assortment inside the category, which induces rivalry and the need to differentiate. This research associates routine categories with high potential and high consumption rate categories that usually include intense competition due to narrowed assortments. Thus, higher innovativeness becomes more important due to the competitive advantage it can create and helps to differentiate from the competition. Routine categories are expected to have a twofold effect on new product performance. First, the high potential of these categories generates a stable demand, which benefits the performance of new products. Secondly, limited assortment coverage induces rivalry inside the category, making innovativeness more important for differentiation. Suggested *H 4d: Product assignation to the routine category should enhance the link between new product innovativeness and performance*.

The seasonal category role represents categories with varying yet high peak demands due to their seasonal importance. Retailers use this category role to create excitement, build traffic, and generate profit during the peaks. The seasonal category role is suggested to enhance the link to the performance of more innovative new products due to its importance to retailers. Thus, products assigned to seasonal categories are expected to experience a "lift" effect that impacts their performance. A higher level of innovativeness is expected to facilitate successful performance in this category role due to the ability to create a competitive advantage and differentiate a company from the competition. Suggested *H 4e: Product assignation to the seasonal category should enhance the link between new product innovativeness and performance*.

Retailers mainly use convenience categories to build transactions and generate profit. This category role represents retailers' willingness to have a full assortment so the customer can find all necessities in one place. This category usually represents a limited assortment of commodity products but with higher prices and a higher profit margin for retailers and is also related to impulse buying behavior. The negative effect is possibly related to consumers' ability to purchase specific items elsewhere and impulse buying. Higher innovativeness thus becomes less important to achieve commercial success in convenience categories. Suggested *H 4f: Product assignation to the convenience category should suppress the link between new product innovativeness and performance*.

Given the importance of private labels to the retailer, it has also been acknowledged (Karry & Zaccour, 2006; Ailawadi & Keller, 2004) that these products pose a competitive threat to branded products and weaken their performance in the category due to rivalry moving from retail shelves to the overall marketplace. Thus, it is more complicated for new branded products to achieve commercial success in categories where a private label is present. This research associates the presence of private labels with a negative effect on new product performance for several reasons. First, retailers adopt private labels in more attractive categories, which stimulates a more intense competitive threat in the category. Secondly, private labels impose copy-cat strategies over branded products which reflects in pricing, design and merchandising tactics to motivate consumers to substitute branded products with private labels. However, if the new product is innovative enough, it is more likely to achieve commercial success due to the additional value it can create, which leads to a competitive advantage compared to a less innovative product. This research suggests that it is easier for more innovative products to compete with commoditized private labels and higher innovativeness becomes more important in categories where a private label exists to reach commercial success. Suggested *H 4g: The presence of a private label in the category should enhance the link between new product innovativeness and its performance*.

Research Methodology

One of the aims and differentiation angles of this research was the creation of a unique data sample to reflect the real-life market situation. The data sample was created using two data sources – primary and secondary data. Expert opinion evaluation (purposive sampling) was used as a primary data source to measure the level of innovativeness for a new product, based on the scale by Garcia & Calantone (2002). Purposive sampling was chosen because of the heterogeneous knowledge that experts could provide. Participants were considered field experts as they had been working in a pharmaceutical retail company for more than 5 years in the position of category group manager, were responsible for new product listings, category analysis, performance tracking and assortment management. Secondary data was used to quantify commercial environment elements and track product innovations' performance in the sample. Secondary data were also obtained from documented historical information of the retailer, using point of sales data in retail and market data reports. The Lithuanian pharmaceutical retail industry was chosen as the field for this study. The research was conducted with 1238 new assortment items; a six-month period was used to evaluate performance outcomes, based on Everdingen et al. (2011). The research model was tested by performing diagnostics, followed by a regression analysis. Ordinary least squares regression modeling was chosen for several reasons (based on Wooldridge, 2002) – it is highly appropriate for explanatory variables of a fixed nature and stochasticity of explanatory variables. The equation is used for the measure of performance, defined as gain: Y=sum of value in period 2 (4–6 months)/sum of value in period 1 (1–3 months), expressed in percentage. Variables, their operationalization and data sources are provided in *Table 1.*

Table 1

Description of Variables, Used in the Study

Data source	Operationalization	Reference	Definition
Primary data, expert evaluation	New product innovativeness matrix	Garcia & Calantone, 2002	Product innovativeness classification
Retail panel sales data, sell out to customer	Financial performance gain	Brenner (1994)	Financial performance measured in quantity during observed period
Secondary data, internal documentati on analysis	Category sales value	Gruen & Shah (2000) Dupre & Gruen, (2004), Hultink & Robben (1999)	Monetary value of category in retail
	Competitive situation		Number of products in retail category
	Portfolio width		Number of products in supplier' portfolio
	Category role	Nielsen (1996)	Name of category role assigned by retailer
	Presence of private label		If private label is present in the category
	Trade marketing support	Hultink & Robben (1999)	Monetary investment into marketing services to retail channel

The initial data sample consisted of 3015 new products (stock keeping units, abbr. SKU) that were listed in the retailer's assortment during observed period. Initial data reduction was performed for a set of analysis SKUs to meet the following criteria: 1) only "consumer products" were taken for analysis to avoid the impact of medicines sold under prescription; 2) products had to represent non-reimbursed categories where the consumer made the choice with no influence from a specialist; 3) products were merchandized in pharmacy self-service among its competitors in the assigned category. After data reduction was performed, some items were withdrawn from the sample. Consequently, the sample consisted of 1360 items. Afterwards, a second stage of data reduction was performed followed by list wise deletion to eliminate items that contained missing values. Finally, 1290 items were left for complete case analysis. The dependent variable, new product sales performance, was withdrawn from the retail point of sale system. Launch period was chosen as dependent variable due to its acknowledged importance to future commercial success, outlined by Tsai, Huang and Tsai (2013) who indicate that launch proficiency is a dominant predictor of new product performance. Six month launch period was observed for each item, based on methodological suggestions by Everdingen et al. (2011).

In *Table 1*, detailed information on variables that are observed in the study is provided, operationalized and defined. Initially, model testing was performed, followed by regression analysis using the statistical package "Gretl", and then standardized β coefficients were compared Statistical significance was observed on levels: $*p < 0.10$; $**p < 0.05$; $***p < 0.001$. Prior the regression analysis, regression diagnostics was performed, normality of residuals, heteroscedasticity (Breusch-Pagan test), RESET and collinearity tests were performed, model diagnostics outlined in the *Table 2*.

Empirical Research Results

Table 2 outlines and summarizes the main findings of Model 1 (adjusted R-squared of the model = 0.09). The regression analysis findings do not support a significant direct positive linkage between innovativeness and performance, although it is found that innovativeness is positively associated with new product performance. OLS analysis revealed several significant direct predictors of performance. Category turnover in the market was found to deliver a direct positive effect on new product performance. Category competitiveness in the market was found to deliver a direct negative moderating effect on new product performance. Supplier turnover was also found to be a direct, twofold predictor of performance. Supplier turnover in the market was found to negatively affect new product performance, but supplier turnover in retail was found to have an adverse effect, as it induces a direct positive effect on new product performance. Category turnover in retail was found to deliver a direct negative effect on new product performance. Category competitiveness in retail was found to deliver a direct positive effect on performance. Category role convenience was found to be a direct negative performance predictor. Several moderators were found to have significant and positive effects on performance. Category turnover in retail enhances the linkage with performance which does not align with direct effects delivered by category turnover as a predictor, where a significant and negative direct effect was observed. Retail category role convenience was also found to strengthen the linkage with the dependent variable, which has an opposite effect and is also a direct predictor. Contrarily, several significant adverse moderating effects were outlined. Category turnover in the market was found to suppress the link with performance yet, as a direct predictor, it delivers a positive effect. Category competitiveness in the market was also found to weaken the linkage with performance which is the same direction of effect in comparison to the direct effect of this variable. Supplier turnover in retail also delivers a negative moderating effect, while a positive effect was observed if analyzed as a direct predictor.

Table 2

Regression Analysis, Relationship between Variables and Performance Estimation, Model 1

Model 1, relationship towards performance	β coefficient	p-value
Main effects		
Const.	0.0194926	0.01637**
Innovativeness	0.00220154	0.76729
Category sales value in market	0.00002824	0.00001***
Category sales value in retail	-0.0004664	0.00002***
Category competitiveness in market	-0.0001482	0.00426***
Category competitiveness in retail	0.00056058	0.00466***
Company sales value in market	-0.0000046	0.01207**
Company sales value in retail	0.00009421	0.00005***
Company's portfolio width	0.00004205	0.63615
Trade marketing support	-0.0000008	0.27306
Presence of private label	-0.0177438	0.43128
Destination category role	-0.024623	0.17444
Seasonal category role	0.0047426	0.85827
Convenience category role	-0.204255	0.00001***
Moderating effects		
Category sales value in market × Innovativeness	-0.000012505	0.03899**
Category sales value in retail× Innovativeness	0.000190475	0.05091*
Category competitiveness in market × Innovativeness	-0.000110116	0.05516*
Category competitiveness in retail× Innovativeness	-0.00000791	0.97054
Company sales value in market× Innovativeness	0.0000003084	0.86129
Company sales value in retail× Innovativeness	-0.000062477	0.00095***
Company's portfolio width× Innovativeness	0.000126502	0.19367
Trade marketing support× Innovativeness	-0.000000191	0.79902
Presence of private label × Innovativeness	-0.0148921	0.41198
Destination category role × Innovativeness	-0.00235482	0.89545
Seasonal category role × Innovativeness	0.0151514	0.46375
Convenience category role × Innovativeness	0.0740103	0.00619***

R^2 (adjusted) = 0.09, F-value = 3.31, p=0.037 (*p<0.10, **p<0.05, ***p<0.01)

Conclusions and Discussion

The research revealed several findings, summarized in *Table 3*. First, there is a direct positive but not significant linkage between innovativeness and performance, which only outlines a positive trend. Empirical research revealed several significant direct and moderating effects on the innovativeness – performance link: several direct and significant positive as well as direct adverse effects towards performance; a moderation analysis revealed that some variables delivered opposite effects as moderators in comparison with direct effects; some predictors were observed to have no significant effect as moderators, yet were found to have a significant direct effect. This research thus concludes that the innovativeness – performance linkage cannot be evaluated unilaterally, and a more complex evaluation of the linkage is needed to bring clarity to this area of research. This finding also supports inconsistency in innovativeness, as one of the research gaps, addressed by this paper. Similarly to previous research (Chang *et al.,* 2014; Garcia & Calantone, 2002; Henard & Szymanski, 2001), our research reported no clear significant direction to the innovativeness-performance linkage which places findings to the area of inconsistency. Performance factors linkage studies, similar to previous research in the area, have shown that the commercial environment plays a role in the innovativeness – performance linkage.

Findings of research allow the conclusion that, in general, a competitive situation serves as a barrier for the performance of a new product, but the role of a competitive situation differs in diverse commercial settings. For example, in categories with more intense competition, innovativeness is less important for performance. Companies' characteristics were proven to have a significant moderating effect on the innovativeness – performance link, yet differences in moderation direction exist and depend on companies' size. This research concluded that higher innovativeness is less important for new products, represented by larger companies which can be related to easier market acceptance of new products, represented by companies that have a large sales share in retail channel. Findings can be related with previous research (Augusto & Coehlo, 2009; Wang, 2008; Atuahene-Gima, 2005) that associate superior new product performance with company characteristics, such as its size, age, competitive orientation and strength. Retail category management decisions were found to have a significant moderating effect on the innovativeness – performance linkage which is related with category sales value and a seasonal category role. Lamey et al (2018), Dhar, Hoch & Kumar (2011) and Everdingen et al (2011), similarly to this research, acknowledges category management as important driver of performance, relates it with growing importance of retailers in the market and encourages this area to be further explored. Our findings also proved that retail category management decisions play a role in new product performance outcome.

This research has presented a holistic view of new product performance predictors and distinguished four influential groups, such as product characteristics and other external predictor groups, such as marketplace, as well as the company's, and retailers' activities. The findings provide a scientific justification for the moderating role of the commercial environment in the linkage between product innovativeness and its performance and the importance of the commercial environment as a moderator for the innovativeness – performance linkage.

Table 3

Summary of Hypotheses for Model 1

Hypothesis linkage	Proposed direction	Result
H1: Innovativeness => Performance	Positive direct	Rejected
H2a: Category sales value in market =>Linkage between Innovativeness and Performance	Positive moderating	Rejected
H2b: Category competitiveness in market => Linkage between Innovativeness and Performance	Positive moderating	Rejected* (opposite direction)
H3a: Supplier sales value in market => Linkage between Innovativeness and Performance	Negative moderating	Rejected
H3b: Supplier sales value in retail => Linkage between Innovativeness and Performance	Negative moderating	Supported*
H3c: Portfolio width => Linkage between Innovativeness and Performance	Negative moderating	Rejected
H3d: Trade marketing support => Linkage between Innovativeness and Performance	Positive moderating	Rejected
H4a: Category sales value in retail=> Linkage between Innovativeness and Performance	Positive moderating	Supported*
H4b: Category competitiveness in retail => Linkage between Innovativeness and Performance	Positive moderating	Rejected
H4c: Category role destination => Linkage between Innovativeness and Performance	Positive moderating	Rejected
H4e: Category role seasonal => Linkage between Innovativeness and Performance	Positive moderating	Rejected
H4f: Category role convenience => Linkage between Innovativeness and Performance	Negative moderating	Rejected* (opposite direction)
H4g: Presence of private label => Linkage between Innovativeness and Performance	Positive moderating	Rejected

* *Statistically significant result*

Implications

Theoretical implications suggest that that the innovativeness – performance linkage cannot be evaluated unilaterally and a more complex evaluation of the linkage is needed. Inconsistency can be conditioned by several factors that ultimately lead to intricacy, related to incomparability of previous results, namely differences in methodological approach, diverse contexts of previous studies, lack of more complex evaluation of the linkage, related to the needed consideration of other external factors. This research was able to provide scientific justification on the moderating role of the commercial environment to the innovativeness – performance linkage that was suggested as relevant area of research by previous studies (Ding & Ding, 2022; Lamey *et al.,* 2018; Stanko *et al.,* 2015; Tsai *et al.,* 2013; Michael *et al.,* 2003; Garcia-Zamora *et al.,* 2013). Managerial implications follow the empirical part – first, new product manufacturers may exploit "lift" effects through retail strategies and mitigate "pull" effects by developing products for specific commercial environments, as well as adjusting strategies to possible opportunities and threats which was suggested by identification of direct performance predictors. Likewise, product manufacturers may oversee the potential negative effects and address them when forming strategies and communication for new products.

The study also provides limitations and directions for further research. This research was conducted in the commercial environment of only one pharmaceutical retailer and based on real life data, which is both a limitation, and a direction for further research. As a limitation, our results are hardly generalizable as the study was conducted in only one pharmacy retail chain. We recommend the study to be replicated in several ways: first, it can be replicated with several pharmaceutical retailers, so data can be generalizable. Secondly, we would also encourage the study to be repeated in grocery stores, so the findings between different types of retailers can be compared and analyzed, and also aspects of consumers' reaction to new product innovations, identified.

This research is/was funded by the European Social Fund under the No 09.3.3-LMT-K-712 "Development of Competences of Scientists, other Researchers and Students through Practical Research Activities" measure.

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The article has been reviewed.
Received in September 2018; accepted in November 2022.