Income's moderating effect on the 4P's influence on purchase intention: The Garnier cosmetics case

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SUMMARY
The paper presents how the marketing mix elements influence the customers' purchase intention in the context of Garnier cosmetic products and looks at the moderating role of customer income. The marketing mix or 4P can be a way to create profitable marketing strategies and motivate customers to purchase a product. A sample of 230 respondents was included in a survey analysis. The data were analyzed with partial least squares structural equation modeling (PLS–SEM). The results showed only the product element of marketing mix had significant effect on purchase intention. Regarding the moderating effect of income, the lower–income respondents showed higher price sensitivity while promotion had influence on higher–income respondents. The study contributes to certain extent to beauty industry marketing strategies on example of a well–known global brand.

1. Introduction

The beauty industry is growing as customers' perception of their physical appearance and attractiveness have increased demand for beauty and cosmetic products. Purchasing beauty products can be a complex task as the purchase affects an individual's overall physical appearance, and the most significant determinants when buying cosmetics and beauty products are product functionality, pricing, product appearance or packaging, and usage information (Kim and Seock, 2009). As customers prioritize self–care and wellness, the cosmetics and beauty industry has grown almost continuously since 2004 (except for a small setback during the 2020 COVID–19 pandemic) and it is expected to reach revenue of approximately 129 billion USD by 2028. The Garnier beauty brand is part of the Consumer Products division as part of the L'Oréal group and has four categories of products: haircare, hair color, skincare, and sun care. It was one of the first brands that promoted the use of natural origin ingredients and currently markets itself as a sustainable brand while working on becoming more environmentally friendly. The L'Oréal group is a leading cosmetics brand in the world which generated global sales revenue of 41.18 billion euros in 2023, with Consumer Products taking

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36.85% of the total sales while achieving growth in sales of 12.60% and Garnier surpassing 1 billion revenues in sales. This all makes Garnier one of the most popular cosmetic brands in the beauty industry. The utilization of the term "natural" on product labels is increasingly recognized as an important factor in boosting sales, as individuals hold the belief that including natural ingredients enhances the quality and health benefits of beauty goods (Kim and Seock, 2009). Nowadays customers are adopting a sustainable lifestyle, and this motivates the beauty industry to invest more in environmentally friendly products, services, package design, and adjusting their marketing strategy (Čut and Pandža Baja, 2016). Global brands can influence customer behavior and attitudes and use centralized marketing techniques to maintain the consistency of the brand and influence customer identity by sharing their values (Bartsch et al., 2016).

Marketing is the process of creating, communicating, delivering, and exchanging value products or services for customers, clients, partners, and society at large, as stated by the American Marketing Association. It involves various activities, institutions, and procedures. The concept of the four Ps of marketing (4P's) contains the fundamental elements that constitute an effective marketing strategy. The 4P's, also known as marketing mix, includes product, price, place and promotion and the use of marketing mix strategy enables marketers to allocate resources to meet the expectations of customers (Singh et al., 2014). A product comprises its attributes, country of origin, and familiarity. The price comprises the list price, deductions, allowances, and credit terms. The place comprises channels, places, and transportation. Promotion includes advertising, personal sales, and sales promotion (Khemchotigoon and Kaenmanee, 2022). It is important to look into the customer perception of the 4P's for consumer products (Jiménez–Parra et al., 2014; Singhal et al., 2019), as the 4P's affect purchase intention and decision–making while choosing a product (Singh et al., 2014). The comprehension of how consumers perceive the 4P's is important since these perceptions can impact their behavior and perceived value (Shashi et al., 2023; Singhal et al., 2019).

In the paper, the relevant literature regarding purchase intention and 4P's is presented and followed by data sampling and methodology, connected to a survey regarding the purchase intention of Garnier cosmetic products. Partial least squares structural equation modeling (PLS–SEM) is used to analyze the data. The results and discussion are followed by a conclusion and implications for future research.

2. Literature review

To meet customer demands, marketers need to make sure the 4P's have following features: the product must have proper features, the price must be appropriate, the products should be available at the right time and suitable place and information about products should be available and presented to specific target groups (Weerasiri et l., 2016). According to Ho et al. (2022), the objective of the product or service is to be successfully marketed and sold to customers. A product is a service or physical item that people purchase, including its design, assortment, packaging, characteristics, and quality (Al–Dmour et al., 2022).The price has an impact on customers' decision–making process and most customers are willing to pay a higher price if they think the product offers added value (Dropulić and Krupka, 2020; Mahmoud et al., 2017; Tang et al., 2014). Promotion consists of communicating the benefits of a product or service to consumers and includes activities such as PR, advertising, push and draw promotion, and sales development (Ho et al., 2022). Place supports the delivery of

products to clients and ensures a straightforward purchasing process while including partnerships with distribution channels, logistics, inventory control, management of inventory, modalities of transportation, cost reduction in distribution, shelf arrangement, and location (Ho et al., 2022). The 4P's can affect consumer purchasing decisions through the modification of company activities (Al–Dmour et al., 2022).

According to a study by Al–Dmour et al. (2022), customer perception and 4P's have an impact on perceived value, and they found customer behavior can be affected by perceived value and attitude. At the same time, customer behavior can affect purchase intention while 4P's can influence both purchase intention and customer behavior (Walia et al., 2019). Purchase intention stands for customer behavior towards product service and their willingness to purchase a service or a product (Al–Dmour et al., 2022) or their anticipated purchases (Zeithaml et al., 1996) and it can help accurately anticipate future purchases (Khemchotigoon and Kaenmanee, 2022). However, sometimes customer willingness can cause discrepancy between intention and behavior (Hassan, 2014; Trivedi et al., 2015). Purchase intention is influenced by 4P's, and it presents how much a customer is satisfied with a specific product or service, leading to the product sale (Al–Dmour et al., 2022). Enhancing consumers' perceptions of products, price, promotion, and place can increase brand loyalty and purchase intention and 4P's can have a large impact on brand loyalty and customer intention to purchase (Yuliasih et al., 2021). The purchase intention helps understand the purchasing behavior in the future and presents individuals' motivation to decide between buying a product or service (RifaNingtyas et al., 2022).

Companies make decisions on product quality, pricing, promotion, and placement to reach the target audience. Customers buy products that have the right marketing mix, which answers the needs of customers and provides lasting value (Mittal et al., 2021; Kumar and Reinartz, 2016). The customer's perception of the 4P's and readiness to try the product or service offered is directly influenced by the perceived quality (Chou et al., 2020). During the process of making purchase decisions, consumers assess and compare multiple options, and the level of customer trust in the products can influence the purchase intention (Lee and Lee, 2021; Martina et al., 2015). Purchase intention is the perception of what shoppers intend to purchase and it has an important role in forming marketing decisions related to the 4P's as they give feedback on how many products are needed depending on demand (Singh et al., 2014). Current research confirms the effectiveness of 4P's in influencing customers' purchase intentions, with an emphasis on the pricing element. Previous research showed marketing mix elements positively impact purchase intention (Al–Dmour et al., 2022; Kusumawati et al., 2014). The positive impact of the 4P's is shown when purchase intention is affected by perceived value (Shashi et al., 2023).

The companies should incorporate all components of marketing strategy, particularly the 4P's, into an integrated strategic plan that is backed up by an understanding of consumer behaviors (Kumar and Pandey, 2017). Purchase intention is an important component in the beauty industry, as it influences purchases, preferences, and demand, and can strengthen the brand's market position (Macheka et al., 2023). When purchasing cosmetic products marketing mix has influence on purchase intention and can help target specific customers (Al–Dmour et al., 2022; Nugroho and Irena, 2017). Customer price sensitivity affects marketing strategies and pricing, while income–consumption theory states that income quantity influences the possibility to pay for a product or service (Qiuqin et al., 2023). Income affects the purchasing intention of potential customers where individuals with higher income levels

are likely to be less sensitive to prices and more interested in product details than in the price itself (Tiruwa et al., 2018). Out of all the demographics of an individual, income is an aspect that can influence consumption patterns and presents a crucial purchasing asset (Ramya and Ali, 2016). Household income, marital status, ethnicity, consumer lifestyle, and life cycle are important elements in market segmentation. Together with age and gender, income is a crucial demographic aspect in purchase decision-making processes (Abdel et al., 2023).

3. Research hypotheses, data and methodology

Considering the literature review, 4P's have a large impact on the purchase intention and behavior of current and future customers. Therefore, the following research hypotheses are proposed:

H1. 4P's have a significant positive effect on Garnier products purchase intention

H1.a Product has a significant positive effect on the Garnier products purchase intention

H1.b Price has a significant positive effect on the Garnier products purchase intention

H1.c Promotion has a significant positive effect on the Garnier products purchase intention

H1.d Place has a significant positive effect on the Garnier products purchase intention

Additionally, as income is the most significant aspect influencing consumers' purchase decisions, another hypothesis is established:

H2. Income has a significant moderating role on the relationships between the 4P's and the purchase intention of Garnier products

Data for conducting the research and testing the hypotheses were collected with a survey questionnaire. Survey analysis was chosen as the most suitable approach for data collection since the research focuses on psychological constructs, such as attitudes, perceptions, and intentions, which are central to the field of consumer behavior in the broader behavioral economics context. Random sampling method was used to select participants from the general Croatian population. The survey was distributed online in the period from March to September 2023 to a randomly selected group of individuals who met the criteria of the target population, which included adults aged 18 or more. The random selection process was chosen in order to minimize biases and ensure that the sample would be representative of the population. The survey was based on the research of Nugroho and Irena (2017). In addition to basic questions about the consumers' socio–demographic characteristics, the survey included questions regarding the usage of cosmetic products, both in terms of time and money. Additionally, the respondents were asked to indicate how strongly they agree with certain statements about the four elements of the 4P's (1 = strongly disagree, 5 = strongly agree). The measurement items, adapted from Nugroho and Irena (2017), were selected as a validated scale for assessing key constructs within the marketing mix and purchase intention. Their research demonstrated that these items effectively measure various components of the marketing mix, including product attributes (e.g., product variety, quality, design, features), pricing factors (e.g., price competitiveness, affordability, price–to–quality ratio), promotion elements (e.g., advertising, sales promotion, public relations, social media marketing, and

direct marketing), and place factors (e.g., location and accessibility). Garnier was chosen as a representative brand since it has been present on the cosmetics scene for a significant period. Although the cosmetics scene has been shaped and adapted as different generations have come and gone, it remains on the market as one of the most known brands, familiar to a wide range of consumers. The final sample includes 230 respondents.

Table 1. *Survey respondents description (N=230)*

Variable	Category	Frequency	Percent
Gender	Male	89	38.70%
	Female	141	61.30%
Generation	Baby boomers	10	4.35%
	Generation X	22	9.57%
	Generation Y	70	30.43%
	Generation Z	128	55.65%
Monthly income	≤ 600 EUR	117	50.87%
	601–1000 EUR	46	20.00%
	1001–1500 EUR	38	16.52%
	1501–2400 EUR	38	16.52%
	≥ 2401 EUR	14	6.09%
Cosmetics usage duration	< 1 year	28	12.17%
	1–2 years	24	10.43%
	3–6 years	60	26.09%
	≥ 7 years	118	51.30%
Monthly expenditure on skincare products	≤ 30 EUR	115	50.00%
	31–60 EUR	79	34.35%
	61–100 EUR	28	12.17%
	≥ 100 EUR	8	3.48%
Daily usage of cosmetics	< 4 products	130	56.52%
	4–7 products	77	33.48%
	8–11 products	18	7.83%
	12–15 products	2	0.87%
	≥ 16 products	3	1.30%

Source: authors' construction

Table 1 presents the descriptive statistics of the sample. There is a larger share of women (61.30%) in the sample, compared to men (38.70%). This is expected since women are interested in cosmetics and skincare more than men. Most of the respondents belong to Generation Z, followed by Generation Y. The monthly income of the respondents is relatively low since half of them (50.87%) have only 600 euros of income or less. This might also be because most of the respondents belong to Generation Z, the youngest generation, so it is assumed that not all of them are employed yet. The lowest number of respondents have an income of 2401 euros or more (6.09%). Although most of the people belong to the youngest age group, half of them use cosmetic products for 7 years or longer (51.30%), and 26.09% of the respondents use cosmetic products for 3–6 years. This indicates that most of the people from the sample can be considered experienced users of skincare products. However, monthly expenditure on skincare products is mostly (50.00%) up to 30 euros. A very low number of

respondents are willing to spend 100 euros or more on cosmetic products monthly. Most of the respondents use less than 4 products daily (56.52%), followed by those who use 4–7 products a day (33.48%). An extremely high number of cosmetic products usage is very rare among the respondents in the observed sample, showing that only 2.17% use 12 or more products.

Research hypotheses are focused on the impact of the 4P's: product, price, promotion, and place on the intention to purchase Garnier products. A moderating effect of income on these relationships is observed. Partial least squares structural equation modeling (PLS–SEM) was used to test the hypotheses since a composite model with latent variables was tested. Additionally, all of the relationships, including the moderating effect of income, are tested simultaneously. PLS–SEM is also adequate since the assumption of multivariate normality was not met, which was confirmed by Mardia's multivariate skewness and kurtosis tests ($p < 0.001$). Finally, measured variables are given in the form of a quasi–metric scale (Likert scale), and the research aims not only to explain but also to predict the purchase intention of consumers with their attitudes about 4P's. Causal–predictive research goals imply that the use of PLS–SEM is convenient (Hair et al., 2017; Sarstedt at al., 2023; Vuković, 2024). SmartPLS 4 was used to test the research model.

Table 2 shows the constructs with their corresponding items. These items represent the indicators for each construct in the model. According to the mean and standard deviation of the constructs, conclusions about general attitudes can be made.

Table 2. *Items in the model with respect to constructs*

Construct	Code	Measurement item	Mean	SD
Product	PROD1	Garnier has many varieties in each product category		
	PROD2	Garnier products can perform their designated function		
	PROD3	Garnier products have a practical design	0.69	0.22
	PROD4	Garnier is a well–known brand		
	PROD5	Garnier has attractive packaging		
Price	PRICE1	Garnier has a competitive price compared to its competitors		
	PRICE2	Garnier products are affordable	0.63	0.25
	PRICE3	Garnier price is appropriate for its quality		
Promotion	PROM1	Garnier's TV advertisement is interesting		
	PROM2	Garnier magazine advertisement is interesting		
	PROM3	Garnier often gives discounts		
	PROM4	Garnier involvement in donations improves it's image	0.57	0.23
	PROM5	Garnier social media accounts are informative		
	PROM6	Garnier online catalog summarizes the whole product		
Place	PLACE1	Garnier store locations are not far for me		
	PLACE2	Garnier store locations are easy to access	0.76	0.26
Purchase intentioin	INT1	I intend to buy Garnier products in the future		
	INT2	I intend to buy Garnier products again in the future		
	INT3	I prefer Garnier over any other cosmetic brand	0.56	0.27
	INT4	I will recommend Garnier products to others		

Source: author's construction according to Nugroho and Irena (2017)

When considering the dimensions of the product, the consumers tend to have slightly positive perceptions toward Garnier products, considering their variety, quality, design, brand, and packaging. Similarly, the respondents are neutral to slightly positive when it comes to price competitiveness, affordability, and price to quality of Garnier products. When it comes to promotion, the general attitude of the respondents is relatively neutral and lower compared to the opinions of product and price elements. In contrast, there are generally positive attitudes about the place, i.e. the location of Garnier stores. Garnier products are available in many different stores; thus their locations are near many potential consumers, especially since they are available in all shopping malls in Croatia. With respect to purchase intention, people are mostly neutral as to whether they will buy and recommend Garnier to others. However, there is a low level of preference for Garnier products for other cosmetic brands. Although the respondents recognize Garnier as a famous and well–known brand, considering the rise of skincare popularity, followed by numerous products by many brands, the respondents have become pickier and more studious when it comes to skincare. Taking all the above into account, it is clear that the most positive aspect of the 4P's for Garnier skincare products is the aspect of place. Garnier must focus on other elements of the 4P's to improve people's perception of their products.

Since data were collected with a self–administered questionnaire, common method bias (CMB) was addressed by employing a full collinearity test with a random variable, as recommended by Kock (2015). CMB is a phenomenon caused by the measurement method instead of the studied relationships in the model (Kock, 2015). While variance inflation factor (VIF) traditionally assesses multicollinearity between independent variables, in the context of CMB assessment, it helps identify if measurement method biases are artificially inflating relationships between variables (Conway and Lance , 2010). The full collinearity test with a random variable examines whether all constructs (including a random variable) are excessively collinear (Table 3). Since all VIFs are lower than 3.3, it indicates low multicollinearity, suggesting that there is no CMB issue in the model (Kock and Lynn, 2012; Kock, 2015).

Table 3. *Full collinearity VIFs for testing CMB*

Construct	INT	PLACE	PRICE	PROD	PROM
VIF	1.309	1.550	2.046	2.370	2.141

Source: author's construction

4. Results and discussion

The model includes four exogenous constructs, which include 4P's: product (PROD), price, promotion (PROM), and place. Purchase intention (INT) represents the endogenous construct explained and predicted by these factors. Additionally, income represents the moderating variable, used to control for the effect of consumers' income on the relationship between their perception of each 4P's element and purchase intention. The outer (measurement) model was tested for its validity and reliability of the constructs. The results in Table 4 indicate that all loadings are very high and statistically significant. Additionally, average variance extracted (AVE) values are above the cutoff value of 0.5, showing that each construct explains above 50% of its indicators' variance (Hair et al., 2017). These findings confirm the existence of good convergent validity of the constructs. As for the reliability, the indicators of Composite

reliability and Cronbach's alpha were used in the analysis. All the values for both indicators exceed the threshold of 0.7, implying excellent internal consistency reliability of the constructs (Hair et al., 2017; Vuković, 2024). Therefore, it is concluded that all items in the model represent their corresponding construct very well.

Table 4. *Convergent validity and reliability*

Construct	Item	Outer loading	Average variance extracted	Composite reliability	Cronbach's alpha
Product	PROD1	0.838***	0.682	0.914	0.885
	PROD2	0.849***			
	PROD3	0.872***			
	PROD4	0.767***			
	PROD5	0.797***			
Price	PRICE1	0.889***	0.805	0.925	0.880
	PRICE2	0.893***			
	PRICE3	0.910***			
Promotion	PROM1	0.790***	0.640	0.914	0.886
	PROM2	0.869***			
	PROM3	0.769***			
	PROM4	0.707***			
	PROM5	0.842***			
	PROM6	0.812***			
Place	PLACE1	0.949***	0.922	0.960	0.917
	PLACE2	0.971***			
Purchase intention	INT1	0.940***	0.778	0.933	0.902
	INT2	0.943***			
	INT3	0.715***			
	INT4	0.909***			

Note: *** indicates significance level at $p < 0.001$

To find out if the constructs are truly different from each other, a discriminant validity test through heterotrait-monotrait ratio (HTMT) was used (Table 5).

Table 5. *Discriminant validity – HTMT ratio*

Construct	INT	PLACE	PRICE	PROD
PLACE	0.263			
PRICE	0.498	0.667		
PROD	0.518	0.735	0.871	
PROM	0.455	0.585	0.819	0.789

Source: author's construction

HTMT measures the ratio of the correlations of the items measuring different constructs to the correlations between the indicators of the same construct. Thus, lower values are desirable to show that the items that are modeled to measure a certain construct are better at explaining that certain construct compared to any other construct in the model (Henseler et

al., 2017; Hair et al., 2017; Sarstedt at al., 2023). All HTMT values are lower than 0.9, thus there is no discriminant validity problem in the model. The highest HTMT ratio is between PROD and PRICE (0.871), so HTMT inference was calculated. Namely, bootstrap 95% confidence intervals were calculated, and it was further confirmed that discriminant validity issues do not exist since the confidence interval does not span the value of 1 (lower bound = 0.800; upper bound = 0.931).

Inner model relationships were analyzed to test the research hypotheses. Path coefficients with the results of their significance testing are given in Table 6. Place has a negative impact on the purchase intention. However, this influence is not significant at the 0.05 significance level ($\beta = -0.172$, $p = 0.069$). It indicates that the respondents who are more likely to consider that Garnier store locations are not far from them and are easy to access in malls and big streets will consequently have lower purchase intention towards their products. The cause of this might be the increase in online shopping, where place is no longer a significant factor. Nevertheless, further research is needed to assess the effect of place on purchase intention and its role in shaping purchase intention.

Price has a positive, but insignificant influence on the purchase intention of Garnier products ($\beta = 0.190$, $p = 0.112$). This indicates that the price of cosmetic products is not the key factor in purchase decision-making. People are more focused on the quality of the desired product.

Product has a positive significant impact on the purchase intention ($\beta = 0.407$, $p = 0.001$). This shows that people are more likely to recognize Garnier as a well–known brand with many product varieties and are more likely to consider that their products can perform their function, have practical design and attractive packaging, and consequently have higher purchase intention. This is expected, since all these elements of the product show their quality from the viewpoint of consumers. Higher perceived quality of Garnier products inevitably leads to a higher purchase intention. Finally, promotion has no significant influence on the purchase intention of Garnier products ($\beta = 0.071$, $p = 0.406$).

Table 6. *Structural model results*

		Path coefficient	t-value	p-value
Main effects	PLACE → INT	−0.172	1.817	0.069
	PRICE → INT	0.190	1.591	0.112
	PROD → INT	0.407	3.361	0.001
	PROM → INT	0.071	0.832	0.406
Moderating effects	Income × PROD → INT	0.092	0.695	0.487
	Income × PLACE → INT	−0.043	0.474	0.635
	Income × PROM → INT	0.073	0.748	0.455
	Income × PRICE → INT	−0.062	0.522	0.602

Source: author's construction

Furthermore, the moderating effect of income on all the above–mentioned relationships was examined through both significance testing (Table 6) and simple slopes analysis (Figure 1). Although the moderating effects were not statistically significant, simple slopes were analyzed. Recent methodological literature (Park and Yi, 2023) recommends reporting and discussing differences between simple slopes even in the absence of significant interaction effects, as this may uncover potentially meaningful patterns in the data. Nevertheless, these

findings are interpreted as descriptive patterns derived from an exploratory analysis and should be considered with caution. In Figure 2, it is visible that there is a negative effect of place on purchase intention between all groups of people with different income levels. However, the negative effect slightly increases for the people with higher income, as represented by the green line (income at +1 standard deviation) with a steeper slope. When it comes to price, the effect is always positive, no matter which group of consumers is in question, but the positive effect is stronger for the group of people with lower income, as represented by the red line (income at −1 standard deviation). This implies that the positive relationship between price and purchase intention is higher for people with low income. The result is logical, since people with lower income will always consider the price in their purchase decision–making because they are more sensitive to the price itself, as well as the price changes, which is all directly connected to their income. Considering the effect of product elements on purchase intention, it is positive for all consumers, but the effect becomes a bit stronger for consumers with higher income. Lastly, when it comes to the general impact of promotion on purchase intention, it is slightly positive. There is a significant difference when income is included as the moderator. Namely, for the people with higher levels of income, this positive effect is stronger, but for the people with lower income, this effect is practically nonexistent and close to zero. This is the most important finding of the moderating effects. Clearly, promotion as a part of the 4P's is an important aspect of purchase decision-making of Garnier products for people with higher income. However, people with lower income generally do not care much for promotion activities since their focus is more likely on the price. Therefore, no amount of promotion can motivate people with lower income to make a purchase.
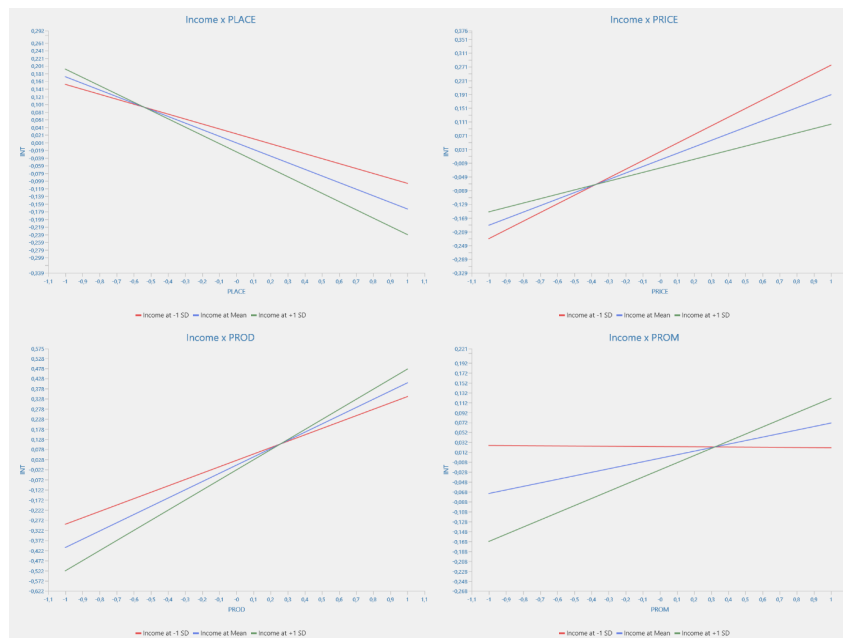

Figure 1. *Structural equation model paths*

Figure 2 represents the path diagram with path coefficients and outer loadings estimates. Moreover, the coefficient of determination for the key endogenous construct INT is visible in the figure and its value is 0.293. This implies a high in-sample predictive power of the model

([Ringle et al., 2014](#)). More specifically, the combination of the 4P's (product, price, place, and promotion) explains 29.3% of the variance in the purchase intention of consumers.
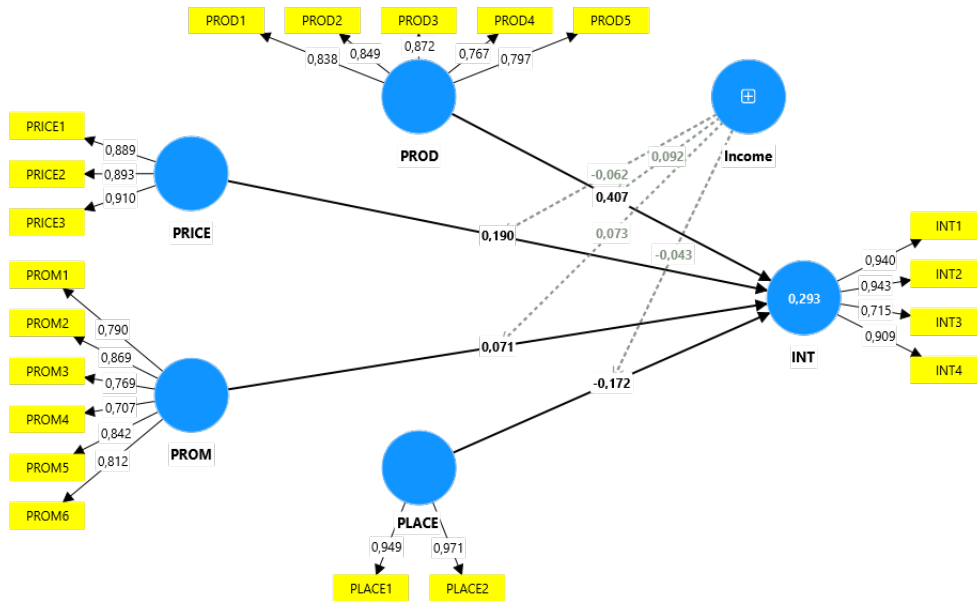

Figure 2. *Structural equation model paths*

Results indicate that while the overall marketing mix significantly influences the purchase intention of Garnier products (H1 accepted), only the product element (H1.a) shows a significant positive effect individually. The other components – price (H1.b), promotion (H1.c), and place (H1.d) – were all rejected, suggesting they do not significantly affect consumers' purchase intentions. Additionally, income was found not to play a significant moderating role in the relationship between the marketing mix and purchase intention (H2 rejected). These findings highlight the central importance of the product itself in shaping consumer behavior toward Garnier products.

Table 7. *PLS predict results*

Item	Q^2 predict	PLS–SEM_RMSE	PLS–SEM_MAE	LM_RMSE	LM_MAE
INT1	0.222	1.097	0.883	1.094	0.861
INT2	0.177	1.091	0.859	1.104	0.869
INT3	0.062	1.200	0.989	1.132	0.902
INT4	0.187	1.058	0.823	1.044	0.823

Source: author's construction

The test is carried out with the PLS Predict procedure, which helps in assessing the accuracy of a model in predicting the outcome value of new cases ([Hair et al., 2017](#); [Shmueli et l., 2019](#); [Vuković, 2024](#)). The results in [Table 7](#) show that all values of Q^2 predict are positive, indicating that the PLS model's prediction errors are lower compared to the linear regression model (LM), which represents the naïve benchmark. Further analysis shows that the root mean squared error (RMSE) values in the PLS–SEM model are lower for the minority of the indicators compared to the LM model, which indicates the low predictive power of the model.

For the mean absolute error (MAE) values, the same number of the values for PLS–SEM are lower compared to the LM model. This indicates the model's medium predictive power (Shmueli et l., 2019). The findings show that the model captures some of the underlying relationships between the variables to make it reliable for replication and generalization with new data, but there is still room for improvement in the model's predictive power.

5. Conclusion, limitations and implications for future research

The research used PLS–SEM to investigate the connection between the purchase intention of Garnier cosmetic products and the elemnts of the 4P's – product, price, promotion, and place, with moderating influence of the income on their relationship. The analysis of the outer model demonstrated strong validity and reliability, hence confirming the robustness of the measuring model. The inner model revealed a significant and positive connection between the product and purchase intention. This highlights the significance of factors such as brand familiarity, product diversity, and perceived quality. The influence of place on purchase intention was found to be negative, but insignificant, indicating that the significance of Garnier store proximity and accessibility may be irrelevant considering the prevalence of online shopping. The impact of price on purchase intention was shown to be positive but statistically insignificant, indicating that although price may not be the primary determinant in purchasing choices, it does contribute to the decision–making process in conjunction with product quality. The influence of promotion on purchase intention was not statistically significant, indicating that Garnier product promotions may not yield considerable benefits.

The study investigated the moderating influence of income on these relationships, revealing intricate impacts across various income levels. The relationships were not significantly affected by income, however, a simple slopes analysis revealed slight variations. For instance, lower–income consumers and their purchase intention were influenced by price. While looking at the influence of income, promotion became an unimportant factor in the purchase intention and the decision–making process for lower–income consumers. This means they cannot be influenced by the promotion of the Garnier cosmetic products as they are mostly just price sensitive and react positively on a pricing strategy that brings them the best value for money. The research outcomes provide valuable insights for marketers seeking to comprehend the impact of 4P's, income levels, and purchase intention of Garnier cosmetic products. The results can help marketers analyze current marketing decisions regarding 4P's and create effective marketing strategies aimed at engaging customers and boosting sales

Although the paper showed that 4P's can influence purchase intention, there are certain limitations to the research. The respondents are only from Croatia and there might be differences in other European or international markets connected to beauty and cosmetic products. The sample includes mostly low–income group, since most of the respondents belong to Generation Z, which implies they aren't fully employed and are mostly students. Other elements of integrated marketing business processes should be included, such as market segmentation. Additionally, more aspects of micro and macro environment for Garnier cosmetic products should be considered as well as additional aspects of customer behavior. Future research could deal with mediating role of eWOM in context of cosmetic products. Additionally, similar analyses can be made for different demographic groups based on gender, generation and other characteristics of the respondents, and income could be treated as a continuous variable to provide a deeper understanding of behavior patterns.

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Moderirajući učinak dohotka na utjecaj elemenata 4P na namjeru kupnje: slučaj Garnier kozmetike

SAŽETAK
U ovom se radu istražuje utjecaj elemenata marketinškog miksa na namjeru kupnje potrošača u kontekstu Garnier kozmetičkih proizvoda, uz analizu moderirajuće uloge dohotka potrošača. Marketinški miks (4P) predstavlja potencijalni alat za oblikovanje profitabilnih marketinških strategija i poticanje kupovine. U istraživanju je sudjelovalo 230 ispitanika, a podaci su analizirani modeliranjem strukturalnim jednadžbama metodom parcijalnih najmanjih kvadrata (PLS–SEM). Rezultati pokazuju da jedino element proizvoda statistički značajno utječe na namjeru kupnje. U pogledu moderirajuće uloge dohotka, ispitanici s nižim dohotkom pokazali su veću osjetljivost na cijenu, dok je promotivna aktivnost imala utjecaj kod ispitanika s višim dohotkom. Istraživanje doprinosi razumijevanju učinkovitih marketinških strategija u industriji ljepote na primjeru poznatog globalnog brenda.

KLJUČNE RIJEČI
Garnier, dohodak, marketinški miks, PLS–SEM, namjera kupnje