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THE STOPPING AND SHOPPING POWER OF ADVERTISING

*A study on the effects of visual complexity in fashion
display advertisements on consumers' purchase intention*

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Acknowledgements

As a teenager of sixteen, it was difficult to decide what kind of job I wanted later in life. I wanted to be able to express my creativity and thereby always experience pleasure in my work. With a little help from my parents, the choice was made: Marketing. An education that is so broad that you can go in almost any direction. I was faced with the choice of studying close by in Leiden or going out of my comfort zone by studying in a city that was unfamiliar to me. Eventually, I decided to do the latter and went to The Hague University for its diversity and the opportunity to do the Erasmus pre-master as a minor. Little did I know that this was one of the best decisions I have ever made. Since the first day of school, I have never regretted my choice. Marketing is the direction for me. It's dynamic, fascinating, creative, and different every single day.

At the end of year two, I had to make the decision whether I wanted to do the Erasmus minor. It seemed like a big challenge, but one I was willing to take on. The minor was certainly not easy, but it was totally worth it. After I got my bachelor's degree, I went straight to The Erasmus University. A great opportunity to get my master's degree within a year. Because of the pandemic, this year looked a little different than expected, but I learned a lot, met wonderful people and the year flew by. During my studies, I discovered a passion for advertising, media, and events. I was very pleased that for my master's thesis I could combine this passion with my personal love for fashion.

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Enjoy reading!

Milou Ataliede

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Executive summary

Simplicity or complexity? When it comes to the use of visual complexity in advertising, this is a common question to which the answer still varies to this day. This study contributes to this conundrum looking at the effects of design and brand identification complexity in fashion display advertisements, examining three different components of visual complexity: the product depiction, the location of the brand name and the size of the ad. The influence of these three components of visual complexity on consumers' purchase intention was investigated, with perceptual fluency as a possible mediator and consumers' experience with shopping fashion online as a moderator. As the pandemic has had a negative impact on the fashion industry and the number of ad blockers increases every year, finding the optimal ad is currently of great importance. The research question of this thesis is:

“What are the effects of visual complexity in fashion display advertisements on consumers' purchase intention?”

The results of the study showed that the design complexity component, the product depiction, has positive significant effects on the purchase intention when the complexity is high. When the product is depicted on a model, consumers experience more perceptual fluency compared to when only the product is shown, resulting in a higher purchase intention. The brand identification components of complexity, the location of the brand name and the size of the ad, have positive effects on the purchase intention when the complexity is low. When the brand name is positioned in the upper right corner, the ad generates a significantly higher purchase intention compared to when the brand name is positioned in the upper left corner. This is because information on the right side is better perceived by the brain and therefore brings consumers more perceptual fluency. The larger ad generated a slightly higher purchase intention than the smaller ad, but this effect was not significant. Lastly, experience with shopping fashion online moderated the relationship between the product depiction and the purchase intention.

Literature research, desk research and an experiment were conducted to answer the research question. To find out how visual complexity worked most effectively, 507 subjects participated in an online survey experiment. Sixteen advertisements were created and based on gender a respondent saw one of the eight ads different in product depiction, location of the brand name and size. The results from these various forms of research have led to valuable insights to advise on the optimal use of visual complexity in fashion display advertisements.

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Abbreviations

PD	= Product depiction
LB	= Location brand name
SZ	= Size
PF	= Perceptual fluency
EX	= Experience (with shopping fashion online)
PI	= Purchase intention

Chapter 1: Introduction

The display advertisement market was worth around 100 billion U.S. dollars worldwide in 2017 (Guttmann, 2019). Unfortunately, around 40 percent of this amount (41.4 billion dollars) was believed to be lost because of adblocking. Every year more internet users choose to actively block ads (Goldfarb & Tucker, 2011). Consumers do not appreciate being bombarded by irrelevant advertising and thanks to the advent of mobile and desktop adblockers, they no longer have to go through that either. However, three-quarters of all users indicate that they would rather filter ads selectively than block them all (Guttmann, 2019). This shows the importance of finding the optimal ad, since there are ads that consumers might want and like to see.

Moreover, the COVID-19 pandemic has wrought enormous change to the global economy that will certainly have long-term implications for consumers' behaviour (Sheth, 2020). The fashion industry is undoubtedly among those most affected by the pandemic, since the lockdown and social distance requirements have altered consumer buying and shopping behaviours. Some consumers have been forced to switch to online shopping, home deliveries or cashless payment as a result of the extraordinary preventive measures (Eger, Komárková, Egerová, & Mičík, 2021). In addition to the pandemic, adblockers are also an issue for fashion companies that depend on advertising revenue, but likewise for companies that use advertising as a way to generate traffic. Now that consumers are at home, it goes without saying that the current digital marketing activities such as advertising, will be maintained or even intensified. Since visiting the physical stores is impossible or less appealing due to safety, the store must come to the consumer which makes the digital environment extremely important for businesses in fashion (McIntosh, 2020).

Therefore, the digital environment needs to be optimized. By improving digital marketing, businesses in fashion can be more successful in pursuing both engagement and awareness with their advertising, which could translate into higher sales. Advertising must captivate the attention of consumers in likable ways, and the use of visual complexity in advertisements plays a key part in this (Pieters, Wedel, & Batra, 2010). On a daily basis consumers process a vast amount of visual information, such as when browsing through websites or on social media (Pieters, Wedel, & Batra, 2010). The visual complexity of the ads on these platforms could determine the extent to which consumers like the ad and are attracted to it. With so much money spent on unsuccessful campaigns, businesses must consider how advertising affects consumers in order to develop effective advertising strategies (Vakratsas & Ambler, 1999). Thus, the visual complexity in fashion advertising needs to be enhanced so that it suits the consumer's needs, such that consumers want to look at advertisements again.

“Where the eye stops, the sale begins.” (Chang & Chen, 2017)

1.1 Problem statement

The use of visuals in advertising has been progressively increasing throughout time and more weight is given to visual elements compared to verbal elements (Philips & McQuarrie, 2004). However, the effect of visual complexity is still unclear and objective measures of complexity are rare (Pieters, Wedel, & Batra, 2010). To date, researchers still lack a clear understanding of what the best use of visual complexity is for ad performance as the discussion about whether to utilize complex or simple design in advertising continues (Wu, et al., 2016). According to researchers who advocate a simple design, consumers have restricted processing abilities and therefore desire to decrease the cognitive effort required to process visual objects. Meanwhile the use of complex design is justified because rich information cues help in the evaluation of visual objects (Wu, et al., 2016). Existing literature reveals that the outcomes are mixed, as some studies imply that simple advertisements are preferable (Anderson & Jolson, 1980), while others promote complex advertisements (Lowrey, 1998). In either case, the increasing number of adblockers and the change in consumers' behaviour due to the pandemic show that exploring visual complexity to find the optimal ad is now more crucial than ever.

1.2 Research question

Based on the problem statement, the research question of this thesis is:

“What are the effects of visual complexity in fashion display advertisements on consumers' purchase intention?”

The aim of this research is to find how visual complexity in fashion display advertisements affects consumers and their purchase intention. This knowledge will provide insights into the effects on consumers' behaviour and what elements could optimize the visual complexity in fashion display advertising. However, it is not yet clear whether optimizing visual complexity is achieved by reducing or increasing visual complexity given the mixed results in existing literature. Either way, the purpose of this research is to find the optimal advertisement. The dependent variable is the purchase intention since the aim of businesses is for the consumer to buy the product. The optimal ad is defined as an advertisement with the right proportion of visual complexity that will lead to a high willingness to buy the product. Independent variables are components of visual complexity, which are the depiction of the product, the location of the brand name and the size of the ad. Perceptual fluency is a possible mediator and experience with shopping fashion online a possible moderator. The reasons for choosing these variables are described in paragraph 2.1: Theory.

1.2.1 Sub-questions

Multiple sub-questions are formulated below to answer the research question of this thesis. The sub-questions are related to the independent, dependent, moderator and mediator variables.

- 1. What effect does the depiction of the product in fashion display advertisements have on consumers' purchase intention?*
- 2. What effect does the location of the brand name in fashion display advertisements have on consumers' purchase intention?*
- 3. What effect does the size of fashion display advertisements have on consumers' purchase intention?*
- 4. Does perceptual fluency mediate the effect between the components of visual complexity and consumers' purchase intention?*
- 5. Does experience with shopping fashion online moderate (the mediation) effect between the components of visual complexity and consumers' purchase intention?*

1.3 Managerial relevance

This study is relevant for fashion advertisers and managers of businesses in fashion because advertising plays a very important role in today's age of competition. There is no tool more powerful and efficient than creative advertising on websites (Robinson, Wysocka, & Hand, 2007). Advertising is the best way for companies to communicate with customers, since businesses in fashion can use online advertising to generate positive associations with their target group and build a good reputation for their brand (Reinartz & Saffert, 2013). Therefore, receiving new insights about the optimal ad is highly relevant for fashion businesses. This research measures the purchase intention of consumers by finding this optimal ad. A high purchase intention leads to increasing sales, which is the objective of general managers.

1.4 Academic relevance

The laws of media buying and consumer analytics continue to expand and alter as a result of media convergence, information consumption across numerous platforms and devices, enhanced viewer information, targeting capabilities and quick changes in the advertising world. *The Marketing Science Institute* (MSI) helps academic researchers make a beneficial influence on marketing practice by providing guidance and support (MSI Research priorities, 2020). In their report of the 2020-2022 Research Priorities, one of the topics is 'defining brand value and the communication message'. A tier-1 question for this theme is: "What is the ideal creative in a digital world? – Can we do research to find the 'optimal' ad?" (MSI Research priorities, 2020). This research priority suits the problem statement and served as the basis for the research question of this thesis.

Moreover, a popular study about the measures and effects of visual complexity mentions in their future directions that other communication stimuli and mediums, such as websites, can benefit from the visual complexity framework and metrics (Pieters, Wedel, & Batra, 2010). Websites often contain multiple messages, each with their own design and content. The authors of the article believe that the levels of visual complexity are likely to be much higher for website advertisements than for magazine advertisements, which were considered in their study (Pieters, Wedel, & Batra, 2010). Display advertisements, which are primarily used on websites, will be investigated in this thesis. The outcome of this research, the effect of visual complexity on fashion display advertisements, will contribute to the future directions of the study from Pieters, Wedel and Batra (2010).

In addition, a research about the effect of visual advertising complexity on consumers' attention shows that the complexity of the layout of an advertisement has an impact on the cognitive processing, customer recall, recognition and the willingness to buy (Grigaliūnaitė & Pilelienė, 2016). The authors from the study recommend that in future research other advertising layouts, colour spectrums and different product categories should be tested. In this thesis other advertising layouts namely the product depiction, the location of the brand name and the size of the ad will be investigated. Furthermore, the fashion product category will be explored.

Concluding, this thesis will contribute in several ways. This thesis will help solve the conundrum of whether simple or complex use of visual complexity is best for ad performance. This study looks at a less commonly researched ad type and product category, namely display advertisements regarding fashion. A unique combination of three components of visual complexity will be examined, which are the product depiction, the location of the brand name and the size of the ad. This will all be beneficial in finding the optimal advertisement, which is currently a research priority.

Chapter 2: Theoretical background

In this chapter, the underlying theory for answering the problem statement is discussed. Relevant concepts and theories for the main question will be mentioned. All the independent, moderator, mediator and dependent variables will be explained. Lastly, a conceptual framework is developed that is coherent with these variables and the main research question.

2.1 Theory

Advertisement

An advertisement is traditionally a publication designed to entice its readers to perform a specific action, such as purchasing a product or participating in a promotion (Dahlen & Rosengren, 2016). This usually involves the promotion of commercial products and/or services. Dahlen and Rosengren worked towards a new definition of advertising, which is “brand-related/brand-initiated/incentivized communication targeted at consumers designed to affect the consumer to take some action” (Dahlen & Rosengren, 2016). In this thesis the focus will be on display advertisements. Display advertising is a form of digital advertising on websites, which includes banner ads, text ads, media-rich ads, video ads, and the typical image ads that are shown on social media platforms such as Facebook and Instagram (Manchanda, Dubé, Goh, & Chintagunta, 2006). In this study, the components of visual complexity will be tested for display advertisements in the form of images.

Visual complexity

The visual complexity theory is developed from the idea that most images contain redundancy and that images are more complex when they contain more redundancy (Donderi, 2006). Complexity is a visual characteristic of the ad image that differs from the comprehensibility of the ad message. Visual complexity is described as the amount of detail or intricacy in an image (Pieters, Wedel, & Batra, 2010). Wertheimer suggested that dissimilarity between objects in shape and colour increases complexity (Wertheimer, 1923). Emotionally arousing stimuli are widely known for attracting selective attention, altering sensory processing, and being perceived as having increased vividness, which could translate into consumers experiencing more visual complexity (Marin & Leder, 2013). As mentioned before, there is still ambiguity about whether visual complexity in ads is good or bad (Wu, et al., 2016). Thus, how to optimally use visual complexity in fashion advertisements will be explored in this thesis.

Pieters, Wedel and Batra, the authors of the study about the measures and effects of visual complexity, distinguish feature and design complexity (Pieters, Wedel, & Batra, 2010). Advertisements are more complex when they contain more detail and variation in their basic visual features, colours, luminance, and edges. Feature complexity examines the visual attributes of image pixels, whereas design complexity measures the structured variety in terms of specific objects, shapes, and their position in the

advertisement. Moreover, the authors looked at brand identification complexity. Consumers must be able to recognize the advertised brand and digest the message correctly in order to comprehend the advertisement. Pieters, Wedel and Batra conclude that brand identification complexity has negative effects on the attention to the brand in the advertisement, the attention to the advertisement as a whole and ad comprehensibility. Feature complexity has a negative effect on attention to the brand, attention to the advertisement as a whole and attitude towards the ad, whereas design complexity has a positive effect on these three factors (Pieters, Wedel, & Batra, 2010).

There are multiple components of visual complexity. In this thesis the focus will be on the depiction of the product, the location of the brand name, and the size of the ad. The three components of visual complexity are briefly discussed here and will be explained in further detail later. The first component, the depiction of the product, is related to design complexity. Past research indicates that simple designs stimulate consumers' habitual object and pattern perception processes, whereas complex designs are perceived by consumers as more engaging and likable (Palmer, 1999). The design complexity of an advertisement mostly resides in the pictorial rather than in the brand or text, ensuring that consumers pay more attention to the pictorial which will draw attention to the entire advertisement (Pieters, Wedel, & Batra, 2010). Therefore, one could expect that when the product is shown on a model, consumers like the ad more compared to when only the product is displayed. The location of the brand name and the size of the ad increase complexity specifically in terms of brand identification. Under low levels of motivation, such as during ad exposure, the difficulty in recognizing the brand is expected to diminish attention to the brand, and hence to the whole advertisement (Pieters, Wedel, & Batra, 2010). Brand identification complexity impedes the information acquisition and processing of the brand, which has a detrimental impact on ad comprehensibility.

Based on the findings regarding the impact of visual complexity in the study of Pieters, Wedel and Batra, it is expected that the three components studied in this thesis will have different effects on the purchase intention. The design complexity component, the product depiction, is assumed to have a positive effect when the product is shown on a model. Even though this is more complex, it is expected that the product in use will have a positive effect on attention to the brand, attention to the advertisement as a whole and attitude towards the ad. One could expect that these positive effects carry over into a high purchase intention. The two components related to brand identification complexity studied in this research, the location of the brand name and the size of the ad, are expected to have a negative effect on attention to the brand in the advertisement, attention to the advertisement as a whole and attitude towards the ad when the brand identification complexity is high. Thus, for these components it is expected that the complexity needs to be low in order to create positive effects resulting in a high purchase intention. This is achieved by having a large ad and positioning the brand name in the upper right corner. The components of visual complexity will be individually explained more in detail on the following pages.

The depiction of the product in the advertisement

Looking at ad examples from multiple studies about visual complexity, it raises the question whether the way the product is presented in the ad could possibly be a factor that influences consumers' willingness to buy the product. For example, when searching for a jacket, some brands only show the jacket in the ad and other brands show how the jacket looks on a model. When you click through, most of the time both images are available. However, this first impression of the ad could make or break the consumers' interest in the product. When only the product is shown, it makes it less visually complex for the consumer to decide if the product is appealing. When the product is shown on a model (product in use), it is more visually complex since the model and the environment (such as other clothing he or she is wearing) also play a role. An example of the difference is given in figure 1.



Figure 1: Example different depiction of the product

Elder and Krishna studied the visual depiction effect in advertising (Elder & Krishna, 2012). This study shows that slight manipulations of visual product portrayals in advertisements, such as pointing a product towards a subject's dominant hand, promote mental simulations and elicit motor responses. Because our minds mentally recreate the experience, the authors believe that observing an object can have identical behavioural implications such as interacting with it. According to the visual depiction effect, some visual portrayals are better than others at allowing the observer to mentally interact with a product, which in turn increases the willingness to buy that product (Elder & Krishna, 2012). Thus, the depiction of the product in fashion advertisements could influence the purchase intention and is therefore an interesting independent variable.

The product depiction is related to design complexity. As mentioned before, the pictorial is commonly seen as complexity of design in an advertisement, rather than the advertised brand or the use of text (Pieters, Wedel, & Batra, 2010). The pictorial receives more attention from consumers, which will raise attention to the advertisement as a whole. Thus, consumers are anticipated to like the advertisement better since the complex pictorial is more engaging (Pieters, Wedel, & Batra, 2010). It is expected that these positive effects will carry over into a high purchase intention, even though the depiction of the product on the model is visually more complex. This leads to the following hypothesis:

H₁: The depiction of the product in use in fashion display advertisements has a positive significant effect on consumers' purchase intention, such that when the product is shown on a model the ad generates a higher purchase intention compared to when only the product is shown.

The location of the brand name in the advertisement

Applying logos in advertising is essential to improve the awareness of a company or brand (Why Logos Plays A Significant Role For Advertising, sd). A brand's reach and visibility will be increased to potential customers when a brand name or logo is incorporated into an advertisement (Abdi & Irandoust, 2013). This could result in more profits, especially for businesses that already carry a respected brand name. Many businesses place their brand name in advertisements, but the location and the size of the brand name in the ad varies. Pieters, Wedel and Batra investigated the size of the logo in their research about the measures and effects of visual complexity in magazine advertisements (Pieters, Wedel, & Batra, 2010). The authors showed respondents multiple ads in which the size of the logo differed. However, the location of the logo also differed in these ads, but this effect was not investigated in their study. The location of the brand name could possibly influence how consumers perceive ads and will therefore be explored in this thesis.

There could be an effect depending on which side of the ad the brand name is positioned, because both hemispheres of the brain process information differently. The right hemisphere is directly affected by material in the left visual field, whereas material in the right visual field directly makes a connection with the left hemisphere (Left and Right Hemisphere of the Brain, 2020). The hemispheres require each other to efficiently process information, however the left hemisphere processes information predominantly through language whereas the right hemisphere primarily processes information through images. Janiszewski investigated the influence of the organization of a print advertisement on affect towards a brand name (Janiszewski, 1990). The author explains that when a brand name is positioned to the right of pictorial information, it will be delivered to the less activated left hemisphere, which results in more subconscious processing than if delivered to the right hemisphere. The conclusion was that a brand name in print advertisement should be liked more when placed to the right of pictorial information (Janiszewski, 1990). If this effect is still valid and whether this effect is binding for online fashion ads will be tested in this thesis.

Positioning the brand name on the left side of the advertisement is seen as visually complex and therefore more difficult to identify the brand. When the brand name is positioned on the right side, it is seen as less visually complex. According to Pieters, Wedel and Batra, brand identification complexity has a negative effect on attention to the brand in the advertisement, attention to the advertisement as a whole and general ad comprehensibility. As mentioned before, it is expected that these negative effects will carry over into a low purchase intention. A brief observation of fashion ads online suggested that the

common practice is that the brand name is placed in the upper left or upper right corner of the ad. There does not seem to be a belief about which corner is better. Thus, it will be tested in this thesis if there is an effect of the location of the brand name on the purchase intention, leading to the following hypothesis:

H₂: The right location of the brand name in fashion display advertisements has a positive significant effect on consumers' purchase intention, such that when the brand name is positioned in the upper right corner the ad generates a higher purchase intention compared to when the brand name is positioned in the upper left corner.

The size of the advertisement

In multiple studies about visual complexity, size is an important component. Some studies look at the size of the advertisement itself and others for example at the size of logos or text in advertisements. In past research about the sales effects of attention to feature advertisements, the size of the ad was considered an important variable (Zhang, Wedel, & Pieters, 2009). The size of the ad was measured in centimetres. In this thesis only the effect of visual complexity in a fashion advertisement will be measured, meaning that there will be no context around the ad. Therefore, the size of the ad will be measured in pixels. The size of the advertisement could either be large or small. Larger advertisements are seen as less complex than smaller ads, because they are easier to understand due to the size. Advertisements that are smaller are therefore more difficult to process. It is expected that visual complexity in terms of the size of the ad has a negative effect, such that a smaller and thus more complex ad provides a lower purchase intention than a larger ad.

Prior research investigated the relationship between advertisement variables and consumers' responses (Kaplan, Aamodt, & Wilk, 1991). The authors of the study discovered that larger advertisements attract a greater number of readers compared to smaller advertisements. In addition, larger coloured advertisements are noticed more quickly than smaller black and white ads. Furthermore, as the size of the advertisement increases the permanency of the product impression increases as well. The larger advertisement benefits not only from its relative size, but also has the likelihood of appearing in places where there are fewer competing ads (Kaplan, Aamodt, & Wilk, 1991). A study about the influence of (smartphone) advertising on consumers' purchase intention confirmed that factors such as the size of the advertisement are related to how effective the advertisement is (Martins, Costa, Oliveira, Gonçalves, & Branco, 2019). A conclusion of the study was that the design of an ad affects the online purchase intention. Thus, the size of a fashion display advertisement could be a component of visual complexity that influences the consumers' purchase intention. This leads to the following hypothesis:

H₃: The size of fashion display advertisements has a positive significant effect on consumers' purchase intention, such that the larger the advertisement the higher the purchase intention.

Perceptual fluency

A subjective feeling of ease or difficulty connected with any form of mental processing is referred to as processing fluency (Graf, Mayer, & Landwehr, 2018). There are several different types of processing fluency that can trigger an experience or feeling of fluency that reflects to how difficult or easy mental operation feels. A version of processing fluency that could be a mediator in this thesis is perceptual fluency. The visual clarity of stimuli that can be processed is described as perceptual fluency. Perceptual fluency entails identifying the perceptual features of a stimulus such as the shape, size, and visual details of an advertisement (Graf, Mayer, & Landwehr, 2018). Exposure to advertising makes it easier for consumers to recognize and process a brand. As a result of enhanced perceptual fluency, consumers have more favourable attitudes towards a brand (Lee & Labroo, 2004). Extant research studied the effect of perceptual fluency in an online apparel shopping context (Im & Ha, 2001). The conclusion of the study was that perceptual fluency elicited enjoyment, which in turn positively affected situational involvement, cognitive effort, and consumers' purchase intention.

The three components of visual complexity studied in this research (product depiction, location of the brand name and size of the ad) are related to perceptual features of an advertisement. Multiple studies showed that perceptual fluency increases liking and trustworthiness (Lee & Labroo, 2004). In this thesis it is expected that high design complexity and low brand identification complexity increase perceptual fluency. First, concerning the product depiction, prior research has shown that perceptual fluency has a purely positive effect on a stimulus (Elder & Krishna, 2012). Purchase intentions are higher for visual depictions that facilitate more mental simulation than those that allow for less mental simulation (Elder & Krishna, 2012). This effect is expected for the depiction of the product, such that even though the product on a model makes the design complexity of the ad higher, it is more fluent due to positive mental simulations. Next, as described before, it is expected that when the brand identification complexity is low, consumers will experience more perceptual fluency. In other words, when the size of the ad is larger and the logo is positioned in the upper right corner, the ad will most likely be perceived as less complex and therefore more fluent. This leads to the following hypothesis:

H₄: Perceptual fluency mediates the effect between visual complexity and consumers' purchase intention, such that high design complexity and low brand identification complexity increase perceptual fluency and perceived perceptual fluency increases consumers' purchase intention.

Experience with shopping fashion online

Prior research investigated the effect of visual complexity and consumers' experience on visual attention and purchase behaviour through eye tracking (Ishibashi, Xiao, & Yada, 2019). An effect that was investigated in this study was the participants' years of experience with catalogue shopping. The authors concluded that experience is a factor that strongly impacts purchase behaviour. Putrevu, Tan and Lord

investigated the responses of consumers to complex advertisements (Putrevu, Tan, & Lord, 2004). The authors describe that knowledgeable consumers can more successfully encode the number of visual cues offered in complex advertisement. Conversely, consumers with less knowledge might find the rich multitude of cues in complex advertisements to be overwhelming and confusing. The results of the study showed that consumers with a high level of knowledge tended to create more favourable attitudes and purchase intentions when exposed to complex ads compared to their low-knowledge counterparts (Putrevu, Tan, & Lord, 2004).

This indicates that less experienced consumers are more influenced by the use of visual complexity in advertisements compared to experienced consumers. Thus, the experience of consumers with shopping fashion online could moderate the effect between visual complexity and consumers' purchase intention. This leads to the first hypothesis for this variable:

H_{5a}: Consumers' experience with shopping fashion online moderates the effect between visual complexity and consumers' purchase intention, such that high visual complexity is perceived as more complex by less experienced consumers, resulting in a lower purchase intention for less experienced consumers compared to experienced consumers.

It is expected that this effect carries through to that less experienced consumers perceive complex ads as less fluent compared to the more experienced consumers, because less experienced consumers find the ad more complex which could lead them to needing more time to process. Less experienced consumers could therefore perceive less perceptual fluency processing visually complex ads compared to experienced consumers processing visually complex ads. The expectation is that the more experience a consumer has with shopping fashion online, the easier it is for a consumer to process the less fluent advertisement, making the difference between the disfluent and fluent advertisement smaller. In other words, visual complexity reduces perceptual fluency whereas experience increases fluency and thus decreases the effect of complexity for experienced consumers. Thus, the consumers' level of experience could influence how much perceptual fluency a consumer experiences while processing an ad. Therefore, the second hypothesis associated with this variable is:

H_{5b}: Consumers' experience with shopping fashion online moderates the mediation effect described in H₄, such that experienced consumers process visually complex ads easier than less experienced consumers, which results in a smaller difference in purchase intentions for experienced consumers between the disfluent and fluent fashion display advertisements.

Purchase intention

The likelihood of consumers purchasing a product or particular brand is referred to as the purchase intention, which has to do with how consumers make buying decisions in the future. The focus of considerable direct marketing research has been on constructs of the purchase intention and consumer attitudes, and their effect on consumer behaviour. (Bouhlel, Mzoughi, Hadiji, & Slimane, 2011). Advertising is frequently considered as the most important marketing tool for influencing consumers' buying behaviour (Shaouf, Lü, & Li, 2016). Since visual complexity plays a big role in advertising, this likewise has a large influence on the purchase intention.

Past research has demonstrated that an increase in the purchase intention reflects an increase in the chance of purchasing (Martins, Costa, Oliveira, Gonçalves, & Branco, 2019). If consumers have a positive purchase intention, then favourable brand engagement will encourage consumers to make an actual purchase. Consumers prefer a brand at a higher level of commitment, and this preference is reflected in a brand purchase (Martins, Costa, Oliveira, Gonçalves, & Branco, 2019). Research in which the purchase intention has been investigated, show a significant relationship between the purchase intention and actual purchasing (Morwitz, Steckel, & Gupta, 2007). Thus, the purchase intention is the dependent variable in this thesis as is proven to be a valid predictor of an actual purchase.

Gender

In this study the effect of visual complexity in advertisements will be tested on both male and female consumers. In order to create a realistic scenario and be relevant to both genders, the ad will differ for males and females. The product category is equal for both sexes and the product will be as identical as possible. Female subjects will see a feminine fashion item or the item on a female model and male subjects will see an identical masculine item or the item on a male model. The appearance of the ads will be further discussed in paragraph 3.1: Research design. It is not expected that the three components of visual complexity are experienced differently by males and females. Therefore, gender will serve only as a control variable. If any gender differences do occur after the data collection, it is still possible to draw a conclusion about these effects. This is further discussed in paragraph 3.3: Data collection.

2.2 Hypotheses

For all the independent, moderator and mediator variables a hypothesis has been drawn up. The hypotheses have been mentioned before and are listed below and on the following page.

- *Hypothesis 1: The depiction of the product in use in fashion display advertisements has a positive significant effect on consumers' purchase intention, such that when the product is shown on a model the ad generates a higher purchase intention compared to when only the product is shown.*

- *Hypothesis 2: The right location of the brand name in fashion display advertisements has a positive significant effect on consumers' purchase intention, such that when the brand name is positioned in the upper right corner the ad generates a higher purchase intention compared to when the brand name is positioned in the upper left corner.*
- *Hypothesis 3: The size of fashion display advertisements has a positive significant effect on consumers' purchase intention, such that the larger the advertisement the higher the purchase intention.*
- *Hypothesis 4: Perceptual fluency mediates the effect between visual complexity and consumers' purchase intention, such that high design complexity and low brand identification complexity increase perceptual fluency and perceived perceptual fluency increases consumers' purchase intention.*
- *Hypothesis 5a: Consumers' experience with shopping fashion online moderates the effect between visual complexity and consumers' purchase intention, such that high visual complexity is perceived as more complex by less experienced consumers, resulting in a lower purchase intention for less experienced consumers compared to experienced consumers.*
- *Hypothesis 5b: Consumers' experience with shopping fashion online moderates the mediation effect described in H₄, such that experienced consumers process visually complex ads easier than less experienced consumers, which results in a smaller difference in purchase intentions for experienced consumers between the disfluent and fluent fashion display advertisements.*

2.3 Conceptual framework

This study examines how three components of visual complexity influence consumers' purchase intention. The conceptual framework can be seen in figure 2 on the next page. The framework consists of independent variables (components of visual complexity), one dependent variable (the purchase intention), a mediator variable (perceptual fluency) and a moderator variable (experience with shopping fashion online). The levels of the independent variables where there is a positive expectation on the purchase intention are coded as 1 (product on model, brand name in the upper right corner and the larger ad). Moreover, the effect of the moderator experience on the relationship between the components of visual complexity and the mediator perceptual fluency will be investigated. In other words, a moderated mediation. The conceptual framework created for this study corresponds to Model 8 from Hayes models, which can be seen in Appendix I: Moderated mediation model (8) (Hayes, 2013).

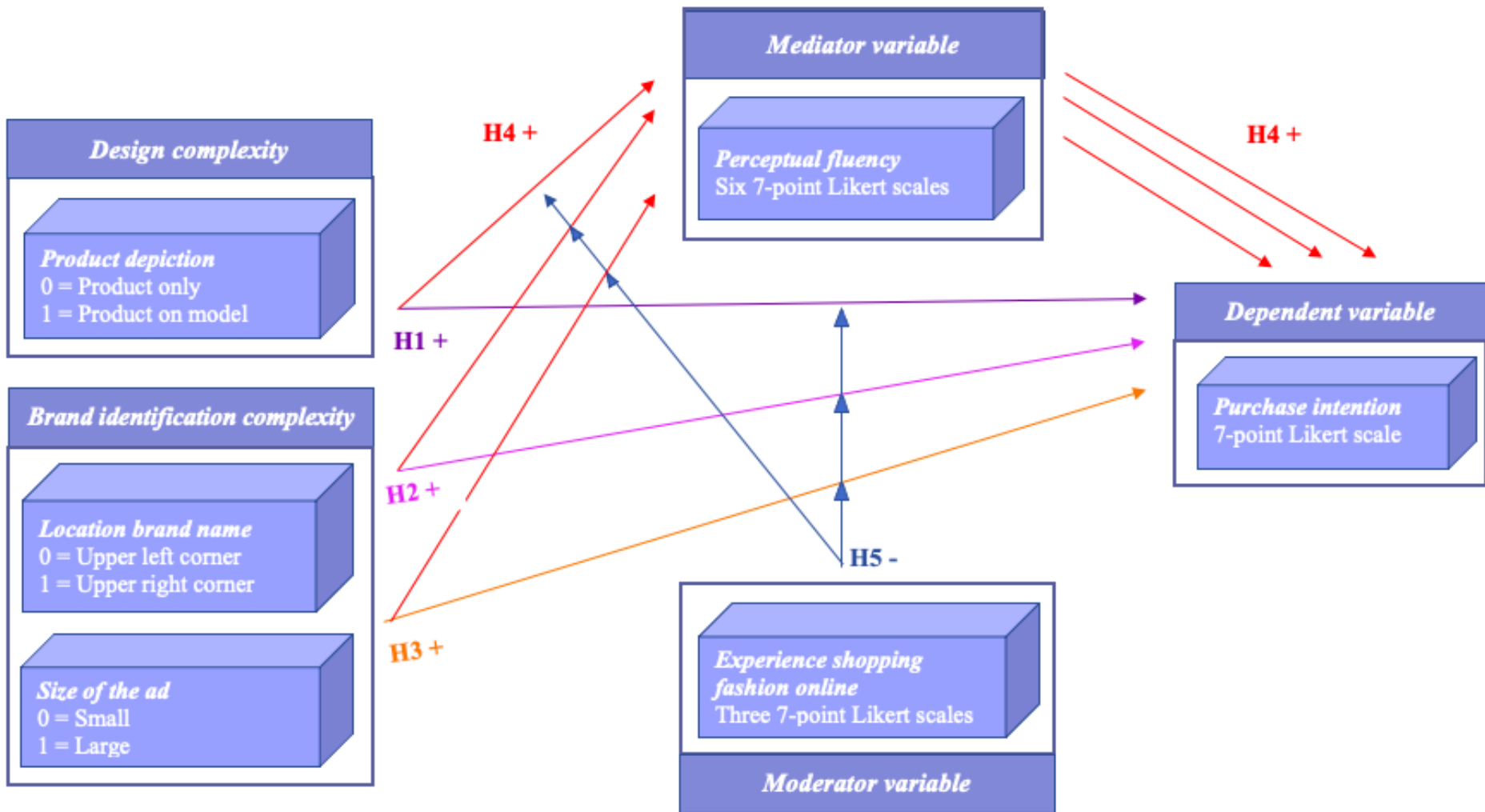


Figure 2: Conceptual framework

Chapter 3: Methodology

This chapter contains the methods for gathering and analysing research material and data. The research design, measurements of the variables and data collection will be explained.

3.1 Research design

The method used for this thesis is primary quantitative data. For the simplicity of design and ease of data collection, the survey software *Qualtrics* was used to gather data and test the hypotheses. Therefore, a survey was created in Qualtrics, which can be seen in Appendix II: Survey. This research will show how multiple components of visual complexity influence consumers' purchase intention in order to find the optimal advertisement. There are three components of visual complexity that will be tested in this research: the product depiction, the location of the brand name and the size of the ad. Each component of visual complexity has two levels. First, for the product depiction, the two levels are 'product only' and 'product on model'. Secondly, the levels for the location of the brand name are 'upper left corner' and 'upper right corner'. Lastly, the two levels for the component size are 'small' and 'large'.

The effects of the three components of visual complexity were tested with a between-subject design in which the subjects were assigned to different conditions, with each subject experiencing only one of the experimental conditions. The three independent variables with two levels per variable make a '2x2x2' design. Therefore, this experiment had eight conditions. To be relevant to both genders, the variable product depiction differed for men and women. As a result, there were sixteen conditions as will be explained further below.

3.1.1 The advertisements

With sixteen conditions, sixteen advertisements had to be created for this research: eight ads for men and eight ads for women. The sixteen different ads can be seen in Appendix III: Survey advertisements. The advertisements are identical for both genders in terms of the location of the brand name and the size of the ad, whereas the product depiction differs for male and female subjects. For the depiction of the product, it was important to select a product that was relevant to both genders. A denim jacket is a common fashion item worn by both men and women and was therefore chosen. In terms of denim jackets the brand Levi's is a popular fashion brand. In 2018, Levi's was the most 'attractive' casual wear brand (Apparel Resources, 2018). For these reasons, products from Levi's and the brand itself were selected. The sizes of the ads were based on Google's most common formats for static display advertisements (About common formats for display ads, 2021). The smaller ad is 250x250 pixels, a popular small sized ad for mobile devices and desktop computers. The larger ad is 300x600 pixels, which is larger in width and length compared to the smaller ad.

3.1.2 Survey flow

As mentioned before, the survey can be seen in Appendix II: Survey. The survey was made in English and Dutch. The survey began with an introduction asking for consent and whether the subject was eighteen years or older. After consent was given, the age of the subject was asked followed by a question about the gender in order to show the correct ad to the subject. Based on gender, one of eight ads was randomly shown with the right depiction of the product for that gender. When the subject finished looking at the ad, the purchase intention was asked. This was followed by questions measuring perceptual fluency and the subject's experience with shopping fashion online. Further, questions were asked about the occupation and nationality of the subject. Lastly, since the stimuli were images that could look differently in terms of size on various devices, it was measured if subjects filled in the survey on their mobile or desktop device.

3.2 Measurements

The independent variables investigated in this thesis, *the product depiction*, *the location of the brand name* and the *size of the ad*, are all categorical variables. The level of each independent variable that was expected to have a positive effect on the purchase intention was coded as 1, which were the product on a model, the location of the brand name in the upper right corner and the larger sized ad. The *purchase intention* was measured by a Likert scale and is therefore a continuous dependent variable. The most common Likert scales have five or seven points (Dawes, 2008). A 7-point Likert scale was chosen, since a rating scale with more response categories transmits more information and is thus intrinsically more accurate in the measurement (Dawes, 2008). With categorical independent variables and a continuous dependent variable, a linear regression is the method to test the hypotheses.

The mediator *perceptual fluency* was measured with six 7-point Likert scales. The Likert scales used in this survey experiment were based on the study of Graf, Mayer and Landwehr about measuring perceptual fluency (Graf, Mayer, & Landwehr, 2018). Respondents were asked the following: "Looking at the ad was..." anchored at difficult to easy, unclear to clear, disfluent to fluent, effortful to effortless and incomprehensible to comprehensible. One Likert scale was added to measure how much respondents enjoyed looking at the ad, since the expectation was that in this thesis design complexity leads to a higher purchase intention due to engagement and liking. This Likert scale was anchored at boring to fun. To avoid order effects, the ranking of the six Likert scales was randomized for each subject. If perceptual fluency was measured successfully will be based on the reliability index Cronbach's Alpha, which is reliable if the value for the six questions combined is above 0.70 (Peterson, 1994). This will be discussed in Chapter 4: Results.

The moderator *experience with shopping fashion online* was measured with three 7-point Likert scales. Two of the three Likert scales were based on the study of Mitchell and Dacin about the assessment of alternative measures of consumer expertise (Mitchell & Dacin, 1996). The first Likert scale measures the general knowledge of online shopping, which was asked in the following manner: “To what extent do you agree with the following statement: I know a lot about online shopping”, anchored at strongly disagree to strongly agree. The second Likert scale was: “Rate your knowledge of shopping fashion online, as compared to the rest of the population”, anchored at one of the least knowledgeable consumers to one of the most knowledgeable consumers. The third Likert scale was: “How often do you shop fashion online?”, anchored at never to daily. These three Likert scales combined measure the experience of the subjects. If these three questions measured expertise correctly will again be based on Cronbach’s Alpha. Based on the mean expertise, subjects will be split in non-experts and experts.

Finally, if there is a moderated mediation will be tested through *PROCESS*. The moderated mediation analysis, also known as Conditional Process Analysis, is the integration of the moderator and mediation analyses (Hayes, 2013). As mentioned before, the conceptual framework created for this thesis corresponds to Model 8 from Hayes models, which can be seen in Appendix I: Moderated mediation model (8).

3.3 Data collection

The sample size was based on the minimum number of subjects per condition, the population size and margin of error. In this study, we speak of an infinite population since males and females above eighteen were considered possible subjects. When the margin of error is at 5% with a 95% confidence level, the minimum sample size should contain 385 subjects (Optimal sample size, 2019). This number was rounded to 400 subjects. With eight conditions this would be fifty subjects per condition. Every condition should have a proper balance of men and women, indicating that one condition should ideally have 25 men and 25 women. As a result, it is possible to draw conclusions about the potentially different outcomes between men and women processing visual complexity.

The survey from Qualtrics was distributed via different social media networks of my own. These platforms were *LinkedIn*, *Facebook*, *Instagram*, and *WhatsApp*. The results of the survey were analysed in the statistical software platform *SPSS*, which will show what the effects are of multiple components of visual complexity on the purchase intention of consumers. Furthermore, a possible moderator, mediator and moderated mediation were investigated while analysing these results.

Chapter 4: Results

The goal for this research was to obtain a minimum of 400 subjects. In total, 608 people started the survey. The completion rate was 83.4%, leading to 507 subjects that finished the survey in ten days' time. The survey was filled in by 300 females (59.2%), 204 males (40.2%) and 3 non-binaries¹ (0.6%). The subjects were aged between 18 and 74, with a large group being 21, 22 or 23 years old (44.3%). Thus, the mean age of the subjects is relatively young (27.60) with a standard deviation of 10.85 years. Further, most of the subject were full-time employed (41.6%) or students (39.3%). In addition, a large majority of the subjects were of Dutch nationality (95.1%). Lastly, 90.1% of the subjects filled in the survey on their mobile device. In Appendix IV: Demographics, all the demographic data can be seen.

In this research a result is considered significant if the *p-value* is below 0.05 ($p < 0.05$). Significant results in the tables are marked green. Abbreviations are used for the variables and some terms in the tables. The abbreviations can be seen in table 1.

<i>Terms</i>	<i>Abbreviation</i>
<i>Product depiction</i>	PD
<i>Location of the brand name</i>	LB
<i>Size</i>	SZ
<i>Perceptual fluency</i>	PF
<i>Experience shopping fashion online</i>	EX
<i>Purchase intention</i>	PI
<i>Mean</i>	M
<i>Beta</i>	β
<i>Standard deviation</i>	SD
<i>Standard error</i>	SE
<i>Confidence interval</i>	CI

Table 1: Abbreviations result tables

Reliability

A crucial first step towards assuring construct validity is establishing that the moderator and mediator are properly measured and therefore reliable (Cronbach, 1951). The most frequently reported reliability index is Cronbach's Alpha, which should have a minimum value of 0.70 to be concluded reliable (Peterson, 1994). The mediator perceptual fluency and the moderator experience were both measured by multiple questions. Six questions measured perceptual fluency ($M= 5.44$, $SD= 1.01$) and the Cronbach's Alpha for these six items is 0.81. Experience with shopping fashion online ($M= 4.54$, $SD= 1.29$) was measured by three questions and has a Cronbach's Alpha of 0.83. Thus, Cronbach's Alpha for both variables is well above the minimum of 0.70, indicating that perceptual fluency and experience are measured successfully and for this reason reliable statements can be made about these mediator and moderator variables.

¹ Non-binary subjects were randomly shown one of the sixteen ads.

4.1 Linear regression

As mentioned before, the hypotheses are tested through linear regression. Linear regression has four key assumptions, namely linearity, normality, homogeneity of error variance and independence of errors (Allen, 1939). The outcomes of the assumptions test can be seen in Appendix V: Assumptions linear regression. The regression model significantly predicts the purchase intention ($p < 0.001$). The assumption of linearity has been met, since with all categorical independent variables there automatically is a linear relationship. In addition, the histogram looks reasonably normally distributed, indicating that the normality of errors assumption has most likely been met. The P-P Plot verifies this since the dashed line does not deviate much from the straight line. Moreover, the data is homoscedastic. The scatterplot looks a bit odd with categorical predictors, but it is essential that the height of the lines are similar and below 3, which is the case. Lastly, all variables in the model have VIF values of 1 and thus below 10, indicating that there is no multicollinearity (Yao & Li, 2014). Concluding, the assumptions of linear regression have been met. This means that the analyses can be performed as usual.

The mean purchase intentions

In table 2 the mean purchase intentions can be seen for each level of the three independent variables: the product depiction (PD), the location of the brand name (LB) and the size of the ad (SZ).

<i>PD (Outcome: PI)</i>	<i>M</i>	<i>SD</i>	<i>SE</i>
<i>Product only</i>	3.17	1.59	0.10
<i>Product on model</i>	4.14	1.69	0.11
<i>LB (Outcome: PI)</i>	<i>M</i>	<i>SD</i>	<i>SE</i>
<i>Upper left corner</i>	3.49	1.69	0.11
<i>Upper right corner</i>	3.83	1.72	0.11
<i>SZ (Outcome: PI)</i>	<i>M</i>	<i>SD</i>	<i>SE</i>
<i>Small</i>	3.57	1.61	0.10
<i>Large</i>	3.74	1.81	0.11

Table 2: Mean purchase intentions product depiction, location of the brand name and size

These results show that as expected, the product on the model, the brand name in the upper right corner and the larger ad, all generate a higher purchase intention compared to their less engaging (product only) and more complex (upper left corner and small size) counterparts. Especially for the product depiction there is a large difference in the purchase intention. When the product is displayed on a model ($M=4.14$, $SD=1.69$), the purchase intention is almost one point higher compared to when only the product is shown ($M=3.17$, $SD=1.59$). The brand name in the upper right corner ($M= 3.83$, $SD= 1.72$) generates a 0.34 higher purchase intention compared to when the brand name is positioned in the upper left corner ($M= 3.49$, $SD= 1.69$). For the size of the ad the difference is the smallest, namely 0.17. If these differences are significant and thus if the three components of visual complexity are significant predictors of the purchase intention, will be tested in the following paragraph.

4.1.1 Univariate analysis

The univariate analysis can be seen in table 3. Here the test of between-subject effects is done for the product depiction, the location of the brand name and the size of the ad, with as the dependent variable the purchase intention. The full analysis from SPSS can be seen in Appendix VI: Univariate analyses.

<i>Source (Outcome: PI)</i>	<i>Mean Square</i>	<i>F</i>	<i>p</i>
<i>PD</i>	115.39	43.14	<0.001
<i>LB</i>	11.09	4.15	0.042
<i>SZ</i>	4.05	1.51	0.219
<i>PD * LB</i>	4.83	1.81	0.180
<i>PD * SZ</i>	1.19	0.44	0.506
<i>LB * SZ</i>	0.11	0.04	0.843
<i>PD * LB * SZ</i>	5.10	1.91	0.168

Table 3: Univariate analysis product depiction, location of the brand name and size

The results from the univariate analysis in table 3 show that the effect of the product depiction ($F= 43.14, p= <0.001$) and the location of the brand name ($F= 4.15, p= 0.042$) on the purchase intention are significant. This indicates that when the product is depicted on a model and the brand name is positioned in the upper right corner, the ad generates a significantly higher purchase intention compared to when only the product is shown and the brand name is positioned in the upper left corner. The independent variable size is not significant ($F= 1.51, p= 0.219$), indicating that the size of the ad has no significant influence on the purchase intention. There are no significant interactions between any of the three independent variables. Another univariate analysis was done with the three independent variables and gender to see if male and female subjects reacted differently. In the bottom table of Appendix VI: Univariate analyses can be seen that gender is not significant ($F= 1.61, p= 0.201$) and that there are as expected no significant interactions between gender and the three components of visual complexity. Thus, gender differences will not be further investigated.

4.2 Mediation analyses

In this paragraph mediation analyses will be done for the product depiction and the location of the brand name. Since the independent variable size has been found insignificant, a mediating effect is not possible. For the mediation analysis, all the standard assumptions of the general linear model have been accepted. As mentioned before in paragraph 4.1, the assumptions of linearity, normality, homogeneity of error variance and independence of errors have been met. The mediation is supported when the visual complexity component significantly influences the purchase intention, when the visual complexity component significantly influences the mediator perceptual fluency and when perceptual fluency significantly influences the purchase intention.

Methods

The mediation analyses will be done via the Baron and Kenny method and Bootstrapping. The approach devised by Baron and Kenny for establishing whether an independent variable influences a dependent variable through a mediator is very well known and thus almost automatically utilized by authors and requested by reviewers (Zhao, Lynch, & Chen, 2010). This method consists of four steps that examine whether the c , a , b and c' path are significant. The first step involves path c , which shows if the components of visual complexity are correlated with the purchase intention. If the components of visual complexity are correlated with the mediator perceptual fluency, will become clear in the second step that examines path a . The third step looks at path b , which will show if the mediator affects the purchase intention. Lastly, the fourth step explores path c' , which will show if the mediator perceptual fluency completely mediates the relationship between the components of visual complexity and the purchase intention.

To ensure that the results of the Baron and Kenny method are correct, the popular technique of testing the indirect effect, bootstrapping, is also applied. Bootstrapping is a non-parametric method that resamples with replacements around 5000 times to look at the direct, indirect and total effect (Shrout & Bolger, 2002). The bootstrapping method used for the mediation analyses corresponds to Model 4 from Hayes models, which is a simple mediation analysis that examines the relationship between the independent, mediator and dependent variable (Hayes, 2013).

4.2.1 Product depiction

The full mediation analyses can be seen in Appendix VII: Mediation analyses product depiction. A summary of the analysis via the Baron and Kenny method for the product depiction is shown in table 4.

<i>Step</i>	<i>Path</i>	<i>Effect</i>	β	<i>SE</i>	<i>t</i>	<i>p</i>
1	c	PD \rightarrow PI	0.97	0.15	6.67	<0.001
2	a	PD \rightarrow PF	0.52	0.09	6.01	<0.001
3	b	PF \rightarrow PI	0.64	0.07	9.04	<0.001
4	c'	PD \rightarrow PF \rightarrow PI	0.69	0.14	4.82	<0.001
		PD \rightarrow PF \rightarrow PI	0.55	0.07	7.67	<0.001

Table 4: Mediation analysis Baron and Kenny product depiction

Baron and Kenny analysis

The first step in table 4 shows, as seen in the univariate analysis, that the product depiction is a significant predictor of the purchase intention ($\beta = 0.97, p = <0.001$). In other words, path c is statistically significant. The beta is positive, indicating that when the product is depicted on a model, the ad generated a significantly higher purchase intention compared to when only the product was shown. In the second step becomes clear that the product depiction is a significant predictor of the mediating variable perceptual fluency (PF) ($\beta = 0.52, p = <0.001$), indicating that path a is statistically significant.

Moreover, the third step (path *b*) shows that perceptual fluency is a significant predictor of the purchase intention ($\beta= 0.64, p= <0.001$). Finally, when controlling for the product depiction, the mediator variable perceptual fluency is a significant predictor of the purchase intention ($\beta= 0.55, p= <0.001$), making path *c'* statistically significant. The beta of the product depiction reduced from 0.97 to 0.69 when the mediator was added but remained significant, indicating that there is partial mediation.

Bootstrapping analysis

In addition to the Baron and Kenny method, the bootstrapping method is now applied. This mediation analysis can be seen in table 5 below.

<i>Effect</i>	β	<i>SE</i>	<i>t</i>	<i>p</i>	<i>95% Confidence Interval</i>
<i>Direct</i>	0.69	0.14	4.82	<0.001	0.41 – 0.97
<i>Indirect</i>	0.28	0.06	-	-	0.18 – 0.41
<i>Total</i>	0.97	0.15	6.67	<0.001	0.69 – 1.26

Table 5: Mediation analysis bootstrapping product depiction

The total effect shows the effect produced by the entire model, indirect and direct effect. The total effect is, as seen in the previous mediator analysis, statistically significant ($\beta= 0.97, p < 0.001$). The direct effect examines if the relationship between the product depiction and the purchase intention is direct and not mediated by a third variable. The results in table 5 show that the direct effect is positive and significant ($\beta= 0.69, p= <0.001$). Additionally, ‘zero’ does not fall within the 95% confidence interval (CI: 0.41 - 0.97), indicating that path *c'* is statistically significant. Moreover, the table shows that the indirect effect is significant ($\beta= 0.28, CI: 0.18–0.41$). Because ‘zero’ does not fall within the confidence interval, it can be concluded that perceptual fluency mediates the relationship between the product depiction and the purchase intention. Thus, ‘*a*b*’ is statistically significant. Since the indirect and direct effect exist and are positive, there is complementary (partial) mediation. Figure 3 below is a clear overview of the mediation effect for the product depiction. The indirect, direct and total effect are displayed, likewise are the *a*, *b* and *c'* path.

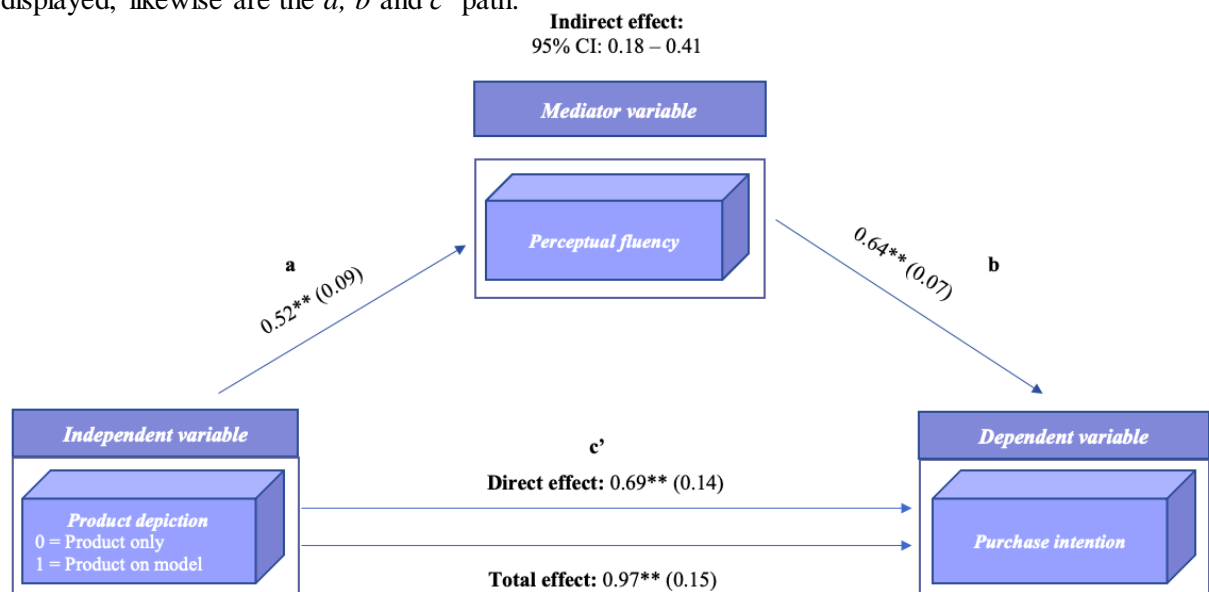


Figure 3: Mediation effect product depiction
* = $p < 0.05$, ** = $p < 0.001$

Conclusion

Results of the linear regression show that the product depiction is a statistically significant predictor of the purchase intention ($p = <0.001$). When the mediator perceptual fluency was entered in the regression analysis, the beta of the product depiction reduced, but remained significant. This indicates partial mediation, meaning that there are other processes besides perceptual fluency that influence the relationship between the product depiction and the purchase intention. This partial mediation and other processes will be discussed later in paragraph 4.4.1 when the moderated mediation effect for the product depiction is addressed. The results of the indirect effect based on 5000 bootstrap samples show a significant indirect positive relationship between the product depiction and the purchase intention. Thus, perceptual fluency partially mediates the effect between the product depiction and the purchase intention, such that when the product is depicted on a model, a consumer experiences more perceptual fluency resulting in a higher purchase intention. The mediator, perceptual fluency, accounted for approximately 29.1% of the total effect on the purchase intention ($P_M = 0.2834 / 0.9730$).

4.2.2 Location brand name

The full mediation analyses for the location of the brand name can be seen in Appendix VIII: Mediation analyses location of the brand name. For the location of the brand name, a summary of the mediation analysis via the Baron and Kenny method is given in table 6.

Step	Path	Effect	β	SE	t	p
1	c	LB \rightarrow PI	0.34	0.15	2.27	0.023
2	a	LB \rightarrow PF	0.23	0.09	2.61	0.009
3	b	PF \rightarrow PI	0.63	0.07	9.04	<0.001
4	c'	LB \rightarrow PF \rightarrow PI	0.20	0.14	1.41	0.160
		LB \rightarrow PF \rightarrow PI	0.62	0.07	8.82	<0.001

Table 6: Mediation analysis Baron and Kenny location of the brand name

Baron and Kenny analysis

As can be seen in table 6, the location of the brand name (LB) is as mentioned before a significant predictor of the purchase intention (PI) ($\beta = 0.34, p = 0.023$), indicating that path c is statistically significant. The beta is positive, meaning that positioning the brand name in the upper right corner increases the purchase intention of consumers. The second step shows that the location of the brand name is likewise a significant predictor of the mediating variable perceptual fluency (PF), which means path a is significant ($\beta = 0.23, p = 0.009$). Moreover, perceptual fluency is a significant predictor of the purchase intention as can be seen in the third step ($\beta = 0.63, p = <0.001$), indicating as mentioned before that path b is significant. In the fourth step becomes clear that when controlling for the location of the brand name, the mediator variable perceptual fluency is a significant predictor of the purchase intention ($\beta = 0.62, p = <0.001$). Therefore, path c' is statistically significant. The location of the brand name has become insignificant ($\beta = 0.20, p = 0.160$), indicating that in this case there is complete mediation.

Bootstrapping analysis

Likewise for the location of the brand name the bootstrapping method was applied in addition to the Baron and Kenny method. The mediation analysis via the bootstrapping method can be seen in table 7. As discussed, the complete mediation analyses can be found in Appendix VIII: Mediation analyses location of the brand name.

<i>Effect</i>	β	<i>SE</i>	<i>t</i>	<i>p</i>	<i>95% Confidence Interval</i>
<i>Direct</i>	0.20	0.14	1.41	0.160	-0.08 – 0.48
<i>Indirect</i>	0.14	0.06	-	-	0.04 – 0.26
<i>Total</i>	0.34	0.15	2.27	0.024	0.05 – 0.64

Table 7: Mediation analysis bootstrapping location of the brand name

The results in table 7 show, just like the past mediator analysis for the location of the brand name, that the total effect is positive and significant ($\beta= 0.34, p= 0.024$). The direct effect is positive yet not significant ($\beta= 0.20, p= 0.160$), which is confirmed by ‘zero’ falling within the 95% confidence interval (*CI*: $-0.08 - 0.48$). In other words, path *c* is not statistically significant. Furthermore, the table shows that the indirect effect is positive and significant ($\beta= 0.14, CI= 0.04 - 0.26$). In this case, ‘zero’ does not fall within the 95% confidence interval, meaning that perceptual fluency completely mediates the relationship between the location of the brand name and the purchase intention. Thus, the ‘*a*b*’-path is statistically significant. This shows, just like the analysis via the Baron and Kenny method, that there is full mediation. A clear overview of the mediation effect for the location of the brand name is given in figure 4. The indirect, direct and total effect are displayed, just like the *a*, *b* and *c*’ path.

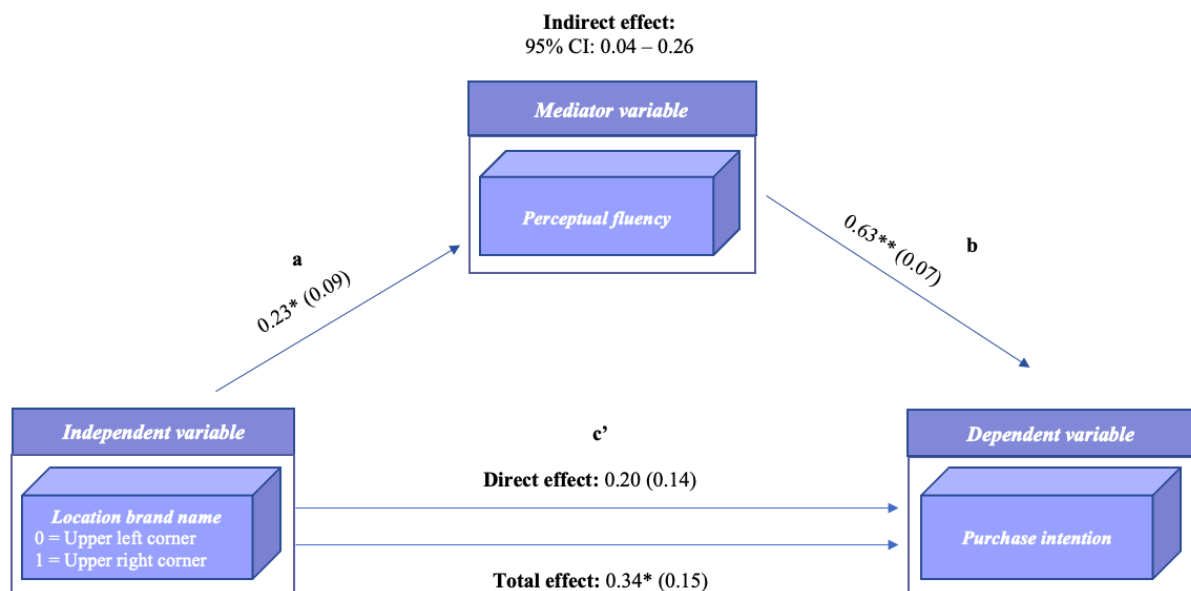


Figure 4: Mediation effect location of the brand name

* = $p < 0.05$, ** = $p < 0.001$

Conclusion

The effect of the location of the brand name on the purchase intention is significant ($p = 0.023$), likewise is the effect of the location of the brand name on the mediator perceptual fluency ($p = 0.009$). The effect of perceptual fluency on the purchase intention is also significant ($p = <0.001$). When the mediator perceptual fluency was entered in the regression analysis, the location of the brand name became insignificant. Only the mediator perceptual fluency stayed significant, meaning that the location of the brand name has no additive value on predicting the dependent variable purchase intention. In this case, one speaks of complete mediation. This effect is confirmed by the bootstrapping method, where the total effect and the indirect effect are significant. The direct effect is not significant ($p = 0.160$), which is logical since there is complete mediation. Concluding, perceptual fluency completely mediates the effect between the location of the brand name and the purchase intention, such that positioning the brand name in the upper right corner increases perceptual fluency resulting in a higher purchase intention for consumers. The mediator, perceptual fluency, accounted for approximately 41.9% of the total effect on the purchase intention ($P_M = 0.1443 / 0.3442$).

4.3 Moderator analyses

To perform the moderator analyses, the moderator variable experience with shopping fashion online (EX) had to be centred and turned into a new variable. Extra variables are made with the product depiction (PD), the location of the brand name (LB) and the size of the ad (SZ), multiplied by the centred moderator variable experience. The latter variables will show if there is a moderating effect. Since there are no interactions between the components of visual complexity, the moderator analysis is done separately for each component. The assumptions for the moderator analysis are met, which are similar to the assumptions of the general linear model discussed in paragraph 4.1: Linear regression. The complete moderation analyses for the three components of visual complexity can be seen in Appendix IX: Moderator analyses.

4.3.1 Product depiction

Model (Outcome: PI)	β	SE	t	p
<i>PD</i>	0.94	0.14	6.59	<0.001
<i>EX Centred</i>	0.28	0.06	5.06	<0.001
<i>PD * EX Centred</i>	0.32	0.11	2.89	0.004

Table 8: Moderation analysis product depiction

As expected, given the previous results, table 8 shows that the product depiction is a significant predictor of the purchase intention ($\beta = 0.94$, $p = <0.001$). The beta is positive, indicating that the product depiction with the jacket on the model generates a higher purchase intention compared to when just the jacket is shown. Moreover, there is a positive significant regression with the moderator experience ($\beta = 0.28$, $p = <0.001$), meaning that the more experience a subject has, the higher the purchase intention.

Finally, there is a positive regression interaction for the product depiction and experience, leading to the conclusion that experience with shopping fashion online moderates the relationship between the product depiction and the purchase intention. This result is significant with a positive beta ($\beta = 0.32, p = 0.004$), indicating that the purchase intention of a consumer evaluating an ad where the product is depicted on a model becomes more positive with a higher level of expertise. This moderating effect of experience is clearly visualized in figure 5 below, which shows that the difference in purchase intentions (PI) of the two product depictions (PD) becomes greater as the experience (EX)² increases.

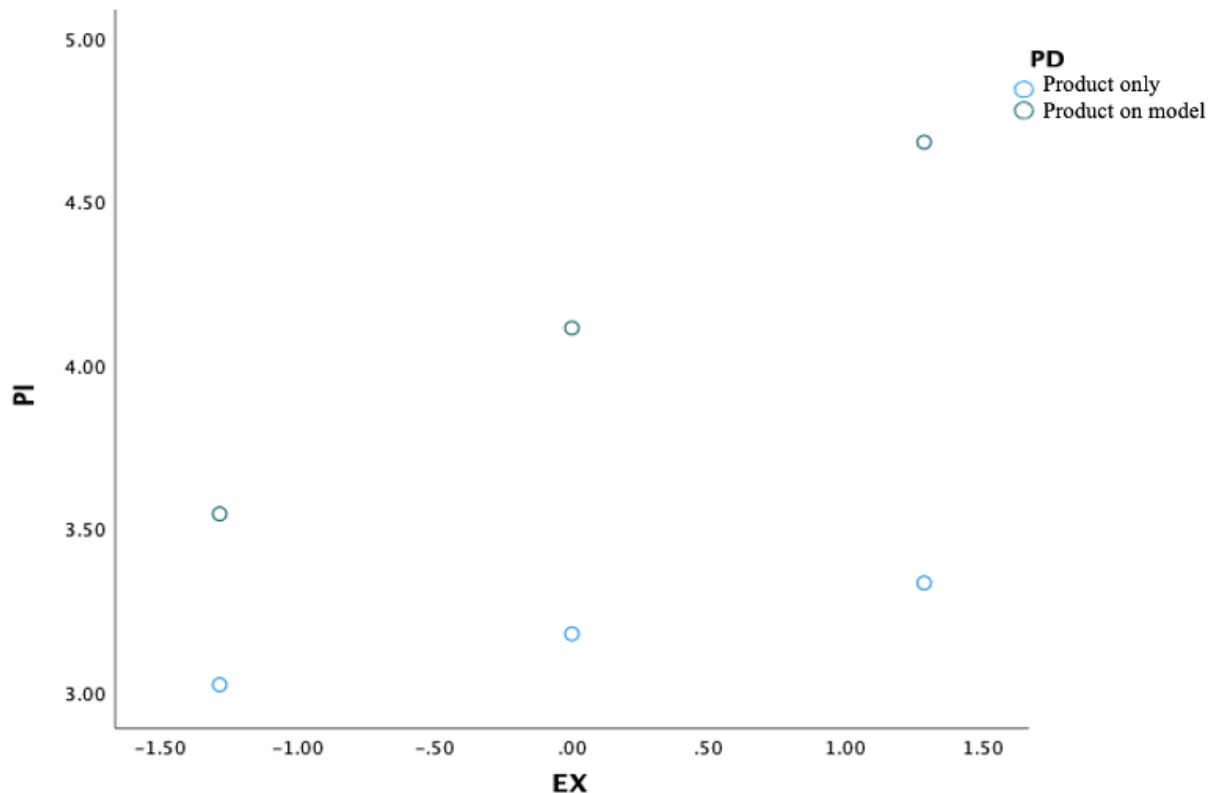


Figure 5: Moderation effect product depiction

Interestingly, this result is not in line with the hypothesis since a negative effect was assumed. The expectation was that experienced consumers would perceive a smaller difference between the disfluent and fluent advertisements due to experience with seeing many different advertisements. However, the opposite has been proven to be true. An explanation one might think of is that because these consumers have a lot of experience with seeing ads where the product is depicted on a model and ads where only the product is shown, they know what they like in terms of the product depiction and therefore actually experience a greater difference than inexperienced consumers who have seen fewer ads.

² The variable experience (EX) has been centred based on the mean expertise (0), with non-experts at mean minus one standard deviation and experts at mean plus one standard deviation.

4.3.2 Location of the brand name

Model (Outcome: PI)	β	SE	t	p
<i>LB</i>	0.34	0.15	2.29	0.023
<i>EX Centred</i>	0.28	0.06	4.91	<0.001
<i>LB * EX Centred</i>	0.10	0.12	0.83	0.406

Table 9: Moderation analysis location of the brand name

Table 9 confirms, as in past analyses, that there is a positive significant regression with the location of the brand name ($\beta= 0.34, p= 0.023$). As mentioned before, this means that when the brand name is positioned in the upper right corner, the ad generates a higher purchase intention compared to when the brand name is positioned in the upper left corner. Furthermore, like the past moderation analysis showed, there is a positive significant regression with experience ($\beta= 0.28, p= <0.001$), indicating that the more experience a subject has, the higher the purchase intention. Lastly, there is a positive yet insignificant regression interaction ($\beta= 0.10, p= 0.406$). Thus, experience with shopping fashion online does not moderate the relationship between the location of the brand name and the purchase intention.

4.3.3 Size

Model (Outcome: PI)	β	SE	t	p
<i>SZ</i>	0.17	0.15	1.12	0.264
<i>EX Centred</i>	0.28	0.06	4.88	<0.001
<i>SZ * EX Centred</i>	0.08	0.12	0.69	0.488

Table 10: Moderation analysis size

Table 10 shows the moderation analysis for the size of the ad and the moderator experience. There is a positive regression with size, meaning that when the size of the ad is larger it generates a higher purchase intention compared to when the ad size is smaller. However, as shown in the univariate analysis, this result is not significant ($\beta= 0.17, p= 0.264$). As mentioned before, there is a positive significant regression with experience ($\beta= 0.28, p= <0.001$). A subject with more experience has a higher purchase intention than a subject with less experience. Finally, there is a positive regression with size and experience, but this effect is not significant ($\beta= 0.08, p= 0.488$). This reveals that experience with shopping fashion online does not moderate the effect of the size of the ad on the purchase intention.

Conclusion

The analyses revealed that the moderator experience with shopping fashion online only moderates the relationship between the product depiction and the purchase intention. This indicates that the purchase intention when the product is depicted on a model becomes higher when the experience increases compared to not having a model present in the ad. Experience with shopping fashion online has no moderating effect on the relationship between the location of the brand name and the size of the ad with the purchase intention.

4.4 Moderated mediation analyses

In this paragraph the moderated mediation analyses for the product depiction and the location of the brand name will be performed. For the size of the ad there were no significant effects, indicating that there is no moderated mediation. The moderator variable experience with shopping fashion online has been centred, resulting in three categories which are non-experts, mean experts, and experts. The expert types are based on the mean expertise, with non-experts at mean minus one standard deviation and the experts at mean plus one standard deviation. In the tables the non-experts are marked with ‘low’, mean experts are marked with ‘mean’, and the experts are marked with ‘high’.

4.4.1 Product depiction

The moderated mediation analysis for the product depiction is summarized in table 11. The complete analysis can be found in Appendix X: Moderated mediation analysis product depiction.

Outcome: PF	β	SE	t	p	95% Confidence Interval
PD	0.50	0.85	5.90	<0.001	0.33 – 0.67
EX (centred)	0.20	0.04	4.42	<0.001	0.11 – 0.28
Interaction	-0.10	0.07	-1.51	0.131	-0.23 – 0.03
Outcome: PI	β	SE	t	p	95% Confidence Interval
PD	0.68	0.14	4.85	<0.001	0.41 – 0.95
PF	0.51	0.07	7.20	<0.001	0.37 – 0.65
EX (centred)	0.02	0.07	0.28	0.777	-0.12 – 0.16
Interaction	0.37	0.11	3.51	<0.001	0.16 – 0.58
Direct effect	β	SE	t	p	95% Confidence Interval
EX (low): -1.285	0.20	0.20	1.01	0.312	-0.18 – 0.59
EX (mean): 0	0.68	0.14	4.85	<0.001	0.40 – 0.95
EX (high): 1.285	1.16	0.19	5.99	<0.001	0.78 – 1.54
Indirect effect	β	SE	t	p	95% Confidence Interval
EX (low): -1.285	0.32	0.08	-	-	0.17 – 0.49
EX (mean): 0	0.26	0.06	-	-	0.15 – 0.37
EX (high): 1.285	0.19	0.06	-	-	0.07 – 0.31
Moderated mediation	β	SE	t	p	95% Confidence Interval
EX (centred)	-0.05	0.04	-	-	-0.13 – 0.01

Table 11: Moderated mediation analysis product depiction

With the mediator perceptual fluency as the outcome variable, the product depiction ($\beta= 0.50$, $p= <0.001$) and the experience with shopping fashion online ($\beta= 0.20$, $p= <0.001$) are significant. There is however no interaction between the variables ($\beta= -0.10$, $p= 0.131$). With the purchase intention as the outcome variable, the moderator variable experience becomes insignificant ($\beta= 0.02$, $p= 0.777$). The product depiction remains significant ($\beta= 0.68$, $p= <0.001$) and the mediator perceptual fluency is significant as well ($\beta= 0.51$, $p= <0.001$). What stands out is that there is an interaction between the product depiction and the experience with shopping fashion online ($\beta= 0.37$, $p= <0.001$), meaning that there is a moderation of the direct effect.

In addition, the direct effect is insignificant for the non-experts ($\beta= 0.20, p= 0.312$), yet significant for the mean experts ($\beta= 0.68, p= <0.001$) and the experts ($\beta= 1.16, p= <0.001$). What can be observed from these betas is that there is a positive effect as shown before in the moderation analysis of the product depiction. As the expertise of a consumer increases, the effect of the product depiction with the model on the purchase intention increases. As seen before, there is mediation, since the indirect effects are significant for the low experts, mean experts, and the high experts. This can be noticed in the three 95% confidence intervals in which none contain ‘zero’. This shows that for non-experts the relationship between the product depiction and the purchase intention is fully mediated by perceptual fluency as for them the direct effect is not significant.

For mean experts and experts there is partial mediation since the direct effect remains significant, indicating there is another process besides perceptual fluency that is activated by the presence of a model in the ad that in turn increases the purchase intention. One of these other processes could be the extent to which the needs of the consumer are fulfilled when it comes to a good reflection of the product. As mentioned before, an explanation one might think of is that consumers with a lot of experience seeing ads know more what they like in terms of the product depiction and therefore actually experience a greater difference between the product depictions compared to inexperienced consumers who have seen fewer ads. It could be that non-experts look at the advertisement as a whole and thus generally at the product on the model, while experienced consumers have higher expectations and therefore look at the same ad more closely. As a result, experienced consumers appreciate the clear depiction of the product on the model which allows them to determine whether the product meets their needs, such as the fit of the product.

Moreover, the increase in perceptual fluency that causes a higher purchase intention decreases the more experience a consumer has. This can be seen in the betas of the indirect effect that decrease from the non-experts ($\beta=0.32$), to the mean experts ($\beta=0.26$), to the experts ($\beta=0.19$). This corresponds to the negative moderated mediation effect that was hypothesized. However, this effect is marginally not significant ($\beta= -0.05, CI: -0.13 - 0.01$), indicating one cannot speak of moderated mediation.

4.4.2 Location of the brand name

The moderated mediation analysis for the location of the brand name can be seen in table 12 below and on the following page. The complete analysis is shown in Appendix XI: Moderated mediation analysis location of the brand name.

<i>Outcome: PF</i>	β	<i>SE</i>	<i>t</i>	<i>p</i>	<i>95% Confidence Interval</i>
<i>LB</i>	0.23	0.09	2.63	0.009	0.06 – 0.40
<i>EX (centred)</i>	0.20	0.05	4.16	<0.001	0.10 – 0.29
<i>Interaction</i>	-0.07	0.07	-1.08	0.279	-0.21 – 0.06

Outcome: PI	β	SE	t	p	95% Confidence Interval
<i>LB</i>	0.21	0.14	1.47	0.141	-0.07 – 0.48
<i>PF</i>	0.58	0.07	8.06	<0.001	0.44 – 0.72
<i>EX (centred)</i>	0.12	0.08	1.59	0.112	-0.03 – 0.27
<i>Interaction</i>	0.14	0.11	1.27	0.204	-0.08 – 0.35
Direct effect	β	SE	t	p	95% Confidence Interval
<i>EX (low): -1.285</i>	0.03	0.20	0.15	0.883	-0.36 – 0.42
<i>EX (mean): 0</i>	0.21	0.14	1.47	0.141	-0.07 – 0.48
<i>EX (high): 1.285</i>	0.38	0.20	1.95	0.052	-0.00 – 0.77
Indirect effect	β	SE	t	p	95% Confidence Interval
<i>EX (low): -1.285</i>	0.19	0.08	-	-	0.04 – 0.36
<i>EX (mean): 0</i>	0.13	0.05	-	-	0.03 – 0.24
<i>EX (high): 1.285</i>	0.08	0.07	-	-	-0.06 – 0.21
Moderated mediation	β	SE	t	p	95% Confidence Interval
<i>EX (centred)</i>	-0.04	0.04	-	-	-0.13 – 0.04

Table 12: Moderated mediation analysis location of the brand name

As can be seen on the previous page, when the outcome variable is the mediator perceptual fluency, the location of the brand name ($\beta= 0.23, p= 0.009$) and the experience with shopping fashion online are significant ($\beta= 0.20, p= <0.001$). However, the interaction between these variables is not significant ($\beta= -0.07, p= 0.279$). When the outcome variable is the purchase intention, the location of the brand name becomes insignificant ($\beta= 0.21, p= 0.141$). This is caused by the fact that the mediator perceptual fluency ($\beta= 0.58, p= <0.001$) takes over the effect, because as mentioned earlier there is complete mediation. The moderator experience ($\beta= 0.12, p= 0.112$) and the interaction ($\beta= 0.14, p= 0.204$) are not significant. The direct effect is not significant at any level, which is logical due to the full mediation. However, for the experts the direct effect is almost significant ($\beta= 0.38, p= 0.052, CI: -0.00 – 0.77$).

The indirect effect is significant at two levels, because ‘zero’ does not fall within the confidence intervals of the low experts and the mean experts. As expected, there is full mediation, but this complete mediation is only applicable for non-experts and mean experts. There is no mediation effect for experts between the location of the brand name and the purchase intention. Thus, for non-experts (and mean experts) the brand name in the upper right corner increases perceptual fluency resulting in a higher purchase intention compared to the brand name in the upper left corner. With the increase in expertise, the mediation effect of brand identification complexity through fluency is reduced. This can be seen in the betas of the indirect effect that decrease from the non-experts ($\beta=0.19$), to the mean experts ($\beta=0.13$), to the experts ($\beta=0.08$). This is directional evidence that corresponds to the negative moderated mediation effect that was hypothesized. However, this effect lacks significance ($\beta= -0.04, CI: -0.13 – 0.04$) and thus does not provide conclusive results about the moderated mediation effect.

4.4.3 Size

As mentioned earlier, the effect of the size of the ad on the purchase intention turned out to be insignificant, which made it impossible that perceptual fluency mediated the relationship. In addition, it became clear that there is no interaction between the size of the ad and the moderator experience with shopping fashion online. For these reasons, it is not possible to have a moderated mediation and therefore the moderated mediation analysis was not performed for the size of the ad.

Conclusion

Previous analyses have shown that perceptual fluency partially mediates the relationship between the product depiction and the purchase intention, and that perceptual fluency completely mediates the relationship between the location of the brand name and the purchase intention. In the moderated mediation analysis for the product depiction, it became clear that for non-experts the high purchase intention when the product is depicted on a model is completely due to an increase in perceptual fluency. For experts there is another process besides perceptual fluency that influences the relationship between the product depiction and the purchase intention. The moderated mediation analysis for the location of the brand name showed that for non-experts the high purchase intention when the brand name is positioned is completely due to perceived perceptual fluency. For experts there is no mediation effect between the location of the brand name and the purchase intention. Moreover, the experience a consumer has with shopping fashion online influences how much perceptual fluency a consumer experiences, such that the increase in perceptual fluency that causes a higher purchase intention decreases the more experience a consumer has. However, the level of expertise does not influence how the product depiction, the location of the brand name and the size of the ad influence perceptual fluency. In other words, there are no significant moderated mediation effects, yet there was directional evidence in line with the hypothesized effects.

Chapter 5: General discussion

5.1 The effect of the study

Finding the optimal ad was of great importance due to a lack of clear understanding of what the best use of visual complexity is for ad performance, the COVID-19 pandemic, and the increasing number of adblockers. In this study three components of visual complexity were investigated that contribute to finding this ideal creative. The first component, the product depiction, was related to design complexity. The two other components were related to brand identification complexity, which were the location of the brand name and the size of the ad. The effect of these three components on the purchase intention was measured, with the expectation that high design complexity and low brand identification complexity would lead to a high purchase intention. Perceptual fluency was explored as a mediator and experience with shopping fashion online as a moderator.

This research made clear that the *depiction of the product* in an ad has a significant influence on the purchase intention. As expected, when the product is shown on a model, the ad generates a higher purchase intention compared to when only the product is shown. Because the pictorial is more engaging, people like the advertisement more. Perceptual fluency mediates the effect between the product depiction and the purchase intention. The product displayed on a model causes non-experts to experience more perceptual fluency, resulting in a higher purchase intention. For experts this higher purchase intention when the product is depicted on a model is caused by another process besides perceptual fluency. Experience with shopping fashion online moderates the effect between the product depiction and the purchase intention, indicating that the purchase intention when the product is depicted on a model becomes higher when the expertise increases. Experience with shopping fashion online does not moderate the mediation effect. Concluding, the product depiction is an important design complexity component of a display advertisement. The difference in purchase intentions between the ad where the product is shown on a model is relatively large compared to an ad in which only the product is shown. Thus, it is recommended to create ads in which a model shows the product. This will cause consumers to experience more perceptual fluency, resulting in a greater likelihood of a purchase.

The *location of the brand name* in an ad is likewise a significant predictor of the purchase intention. When the brand name is positioned in the upper right corner, the ad generates a higher purchase intention compared to when the brand name is positioned in the upper left corner. This could be caused, as mentioned earlier in the theory, by the fact that the information in the right visual field directly engages with the left hemisphere that processes information primarily with language. In support of this theory, perceptual fluency completely mediates the relationship between the location of the brand name and the purchase intention for non-experts. When the brand name was positioned in the upper right corner, the experienced perceptual fluency was higher compared to when the brand name was positioned in the

upper left corner which in turn increased consumers' purchase intention. Experience with shopping fashion online does not influence the relationship between the location of the brand name and the purchase intention and there is also no moderated mediation effect. Thus, it is recommended that the brand name is positioned in the upper right corner in display ads. This is easier for consumers to process, which will lead to a higher purchase intention.

The results from this thesis show that the *size of the ad* is not a significant predictor of the purchase intention. However, the purchase intention was slightly higher for larger ads compared to smaller ads. There are no moderator, mediator, or moderated mediation effects.

5.1.1 Hypotheses

The effect of the study has been discussed. Below in table 13 an overview is given in which can be seen what hypotheses are (partially) accepted or rejected.

<i>H₁: The depiction of the product in use in fashion display advertisements has a positive significant effect on consumers' purchase intention, such that when the product is shown on a model the ad generates a higher purchase intention compared to when only the product is shown.</i>	Accepted
<i>H₂: The right location of the brand name in fashion display advertisements has a positive significant effect on consumers' purchase intention, such that when the brand name is positioned in the upper right corner the ad generates a higher purchase intention compared to when the brand name is positioned in the upper left corner.</i>	Accepted
<i>H₃: The size of fashion display advertisements has a positive significant effect on consumers' purchase intention, such that the larger the advertisement the higher the purchase intention.</i>	Rejected
<i>H₄: Perceptual fluency mediates the effect between visual complexity and consumers' purchase intention, such that high design complexity and low brand identification complexity increase perceptual fluency and perceived perceptual fluency increases consumers' purchase intention.</i>	Partially accepted
<i>Product depiction</i>	Accepted
<i>Location of the brand name</i>	Accepted
<i>Size</i>	Rejected
<i>H_{5a}: Consumers' experience with shopping fashion online moderates the effect between visual complexity and consumers' purchase intention, such that high visual complexity is perceived as more complex by less experienced consumers, resulting in a lower purchase intention for less experienced consumers compared to experienced consumers.</i>	Partially accepted
<i>Product depiction</i>	Accepted
<i>Location of the brand name</i>	Rejected
<i>Size</i>	Rejected
<i>H_{5b}: Consumers' experience with shopping fashion online moderates the mediation effect described in H₄, such that experienced consumers process visually complex ads easier than less experienced consumers, which results in a smaller difference in purchase intentions for experienced consumers between the disfluent and fluent fashion display advertisements.</i>	Rejected

Table 13: Summary of findings

Conclusion

This study showed that the effects of visual complexity in fashion display advertisements on consumers' purchase intention differ. This research shows that design complexity has positive effects, such that when the product is displayed on a model, the ad generates a higher purchase intention compared to when only the product is shown, which is partially due to an increase in perceptual fluency. Experience with shopping fashion online moderates the effect between the product depiction and the purchase intention. In addition, this research showed that brand identification complexity has negative effects on the purchase intention. The brand name should be positioned in the upper right corner to make an ad visually less complex and more fluent for consumers. Moreover, perceptual fluency completely mediates the effect for non-experts processing the product depiction and the location of the brand name. For experts, there is another process besides perceptual fluency that mediates the effect of the product depiction on the purchase intention. The aim of this thesis was to do research about finding the optimal ad, and this study contributes to finding this ideal creative with valuable recommendations about the product depiction and the location of the brand name.

5.2 Managerial implications

This thesis shows that the depiction of the product and the location of the brand name have a significant influence on the purchase intention, making it relevant for fashion advertisers and managers of businesses in fashion. When the product is depicted on a model and the brand name is positioned in the upper right corner, an ad generates a significantly higher purchase intention compared to when only the product is shown and the brand name is positioned in the upper left corner. A high purchase intention leads to increasing sales, which is the goal of general managers. Thus, while creating an advertisement, it is recommended that a model shows the product and not only the product is displayed. When a model showed the denim jacket, the purchase intention was considerably higher than when only the denim jacket was shown. This could create a big change for businesses, since in many online ads still only the product is shown. Showing the product initially on a model could positively change the first impression of consumers.

Furthermore, a brief study of online ads showed that there did not seem to be a belief about in what corner the brand name is better located, since some brands position their brand name on the left and some on the right. This thesis shows that positioning the brand name in the upper right corner generates a higher purchase intention compared to placing the brand name in the upper left corner. The product depiction with the model and placing the brand name in the upper right corner are two useful features of ads that advertisers and businesses in fashion can apply to create more effective advertisements.

5.3 Academic implications

This research contributes to the uncertainty about the effects of visual complexity that persists to this day. The outcome of this research fits the expectations of the study of Pieters, Wedel and Batra about the measures and effects of visual complexity (Pieters, Wedel, & Batra, 2010). In their study statements were made about design complexity having positive effects on consumers' behaviour, and brand identification complexity having negative effects. The design complexity component in this thesis, the depiction of the product, has a positive impact when the complexity is high (product on model). The brand identification complexity component, the location of the brand name, has as expected a positive impact when the complexity is low (brand name in the upper right corner). Thus, this study demonstrates that design complexity has a positive effect on the purchase intention, whereas brand identification complexity components have negative effects.

In addition, this research contributes to a research priority of *The Marketing Science Institute*, which was finding the ideal creative in a digital world (MSI Research priorities, 2020). In other words, finding the optimal ad. This thesis shows that an ad generates a higher purchase intention when a model shows the product and the brand name is in the upper right corner, compared to ads where just the product is shown and the brand name is located in the upper left corner. These are two components of visual complexity that contribute to composing the optimal advertisement.

Furthermore, this study tested mediator and moderator effects between two components of visual complexity and the purchase intention. For the product depiction, perceptual fluency was the reason that for non-experts the purchase intention was considerably higher when the product was depicted on a model. For experts there is another process besides perceptual fluency that resulted in the high purchase intention of an ad with the model present. Additionally, experience with shopping fashion online moderated the relationship between the product depiction and the purchase intention. This is new knowledge since the product depiction in terms of the presence or absence of a model is a nearly unexplored component of visual complexity and thus these mediating and moderating effects are also new. Perceptual fluency also completely mediated the effect between the location of the brand name and the purchase intention, resulting in a high purchase intention when the brand name was positioned in the upper right corner. Extant research had already addressed the location of the brand name, but that this process is influenced by perceptual fluency is new knowledge. These are all useful mediating and moderating effects that contribute to the current knowledge of visual complexity in advertisements.

5.4 Limitations

While providing interesting insights, this study has a series of limitations that will now be discussed. First, when analysing the difference in purchase intention based on the size of the ad, it became clear that the larger ad generated a slightly higher purchase intention than the smaller ad. However, this effect was not significant. This could be due to 90.1% of the subjects filling in the survey on their mobile device, making the difference between the large and small ad minor compared to when the survey would have been filled in on a computer. Besides, normally an advertisement is seen on a website or on social media with context around the ad. It could be that the size of the ad would have been a significant predictor of the purchase intention if there was context around the ad, making the difference in of the ad sizes clearer.

Moreover, a brief observation of some fashion display ads showed that the common practice is that the brand name is positioned in the upper right or upper left corner of the ad. Thus, this effect was explored in this thesis. However, there are brands that position their brand name in the lower right corner, lower left corner or in the middle. These locations were not investigated since most of the fashion ads observed had positioned their brand name in the upper right or left corner. In case the other locations of the brand name were investigated, there would be more conditions resulting in the need to collect a larger sample.

In addition, for the variable product depiction a neutral and likeable product had to be chosen. The selected product for this survey experiment was a denim jacket. Subsequently, a brand had to be chosen to test the effect of the location of the brand name on the purchase intention. The selected brand was the popular seller of denim jackets Levi's. Since this is a well-known brand, there could have been a bias effect of the attitude towards the brand. As a result, subjects who like or dislike the brand may have (un)consciously adjusted their purchase intention. However, this could have happened as well if a non-popular/existing brand had been chosen, because then people may not like the brand because they do not know it, resulting in a lower purchase intention.

Lastly, a lack of clear moderation results prevents from having conclusive evidence about the effect of experience with shopping fashion online on the relationship between the visual complexity components and the purchase intention. It was expected that high visual complexity was perceived as less complex by experienced consumers, leading to a smaller effect of reduced complexity for experts compared to non-experts. However, the effect was surprisingly positive instead of negative, indicating that experienced consumers perceived a greater difference between more and less complex advertisements while this effect was expected for non-experts.

5.5 Future research

As discussed in the limitations, there was no context around the ad which would be the case in realistic scenarios where advertisements are displayed. Future research could therefore investigate the effect of context around the ad. This could make the difference between the smaller and larger ad clearer, since the results showed that the larger ad generated a slightly higher purchase intention than the smaller ad. Adding context to the ad could result in the size of the ad being a significant predictor of the purchase intention. Context around the ad could be about where the ad is positioned best in relation to text or other advertisements.

Secondly, it became clear in this study that the product depiction with the model works significantly better than when only the product is displayed. Perceptual fluency partially mediated the effect for experts between the product depiction and the purchase intention. Thus, there are other processes that influence this relationship which future research could investigate. A suggestion for this other process could be the extent to which the needs of the consumer are fulfilled. As mentioned before, it could be that experienced consumers appreciated the clear depiction of the product on the model which allowed them to determine whether the product meets their needs, such as the fit of the product. Other factors regarding the fulfilment of consumers' needs might be related to the way the model presents the product (forwards or sideways) and identification (size, skin colour and/or hair colour of the model).

Thirdly, as mentioned before, there are many possible locations where the brand name can be positioned. There are businesses that position their brand name in the lower right corner, lower left corner or in the middle instead of the upper left or right corner. Therefore, a future direction is to look at all the possible locations of the brand name and examine if positioning the brand name in the upper right corner still generates the highest purchase intention.

Lastly, there are numerous components of visual complexity that could be investigated that contribute to finding the optimal advertisement. Examples of these visual complexity components are the use of text and colour in advertisements. Regarding the use of text in advertisements, one could look at the font, size, and location of the text. During a brief observation of fashion advertisements online, it became clear that the background of an advertisement is usually neutral grey or white. In this study, neutral grey was chosen, but perhaps a colour in the background could also have a certain effect on the purchase intention. One could look at the difference in purchase intentions comparing advertisements with neutral background colours, striking background colours or even multiple colours in the background of an ad. Taking this further, one could also look at the difference in purchase intentions of an advertisement where a model shows the product on a neutral background compared to a background where the model is in a natural setting.

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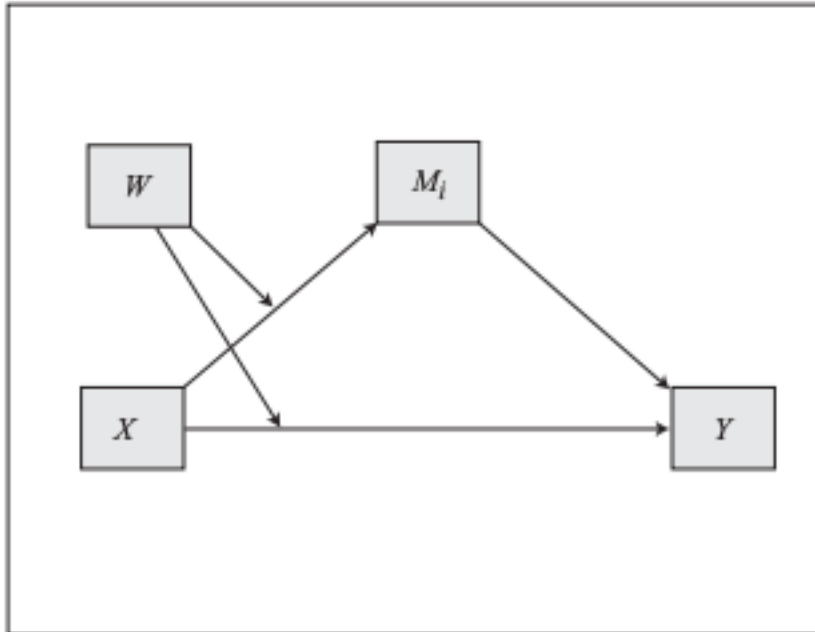
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Appendix I: Moderated mediation model (8)

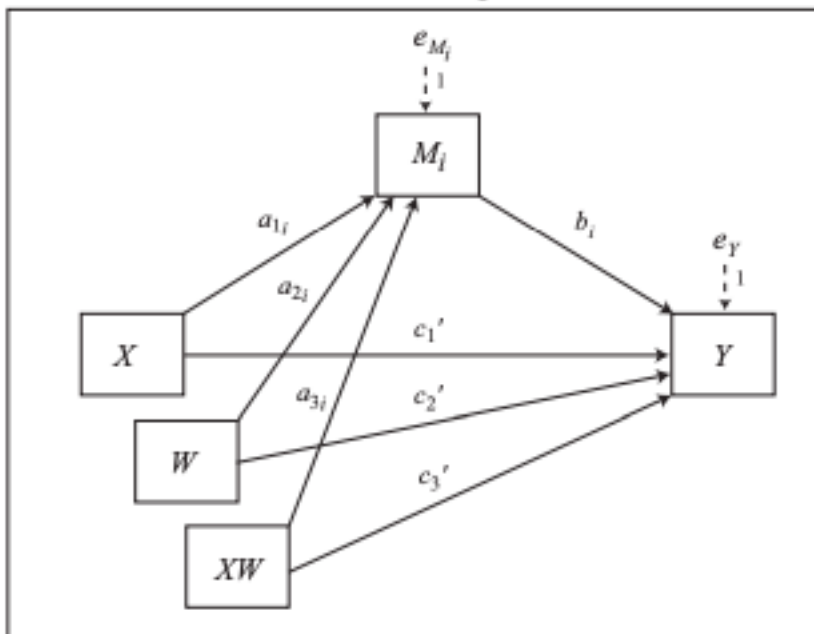
Model 8

Conceptual Diagram



Conceptual diagram Model 8 (Hayes, 2013)

Statistical Diagram



Conditional indirect effect of X on Y through $M_j = (a_{1j} + a_{3j}W)b_j$

Conditional direct effect of X on $Y = c_1' + c_3'W$

Statistical diagram Model 8 (Hayes, 2013)

Appendix II: Survey



English 

Dear participant,

Thank you very much for participating in this survey. This research is about finding the optimal online ad for fashion. My name is Milou Ataliede and I am doing this research for my master thesis Marketing at Erasmus University Rotterdam. Completing the questionnaire takes about 5 minutes and is **completely anonymous**.

For questions or comments, please contact 582133ma@eur.nl.

The minimum age for this research is 18 years. Please click on 'I agree' if you are 18 years or older and agree to participate. All data is completely confidential and you may terminate participation at any time during the survey.

Permission

- I agree
 I do not agree



What is your age?

What is your gender?

- Male
 Female
 Other, namely



Imagine you are interested in buying a denim jacket and you are browsing the internet looking for one. On the next page you will see an advertisement of a denim jacket. Look at the ad for as long as you like. When you are done, you will be asked some questions about the ad.



(one of sixteen ads is randomly shown based on gender)

Based on the ad you just saw, a few questions now follow.

After seeing the ad, how likely is it that you would want to buy this denim jacket?

Very unlikely

Very likely



The next question is about processing the ad. (In case the full question is not visible, please rotate your phone's screen)

Looking at the ad was...

Difficult	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Easy
Disfluent	<input checked="" type="radio"/> <input checked="" type="radio"/> <input checked="" type="radio"/> <input checked="" type="radio"/> <input checked="" type="radio"/> <input checked="" type="radio"/> <input checked="" type="radio"/> <input checked="" type="radio"/>	Fluent
Effortful	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Effortless
Unclear	<input checked="" type="radio"/> <input checked="" type="radio"/> <input checked="" type="radio"/> <input checked="" type="radio"/> <input checked="" type="radio"/> <input checked="" type="radio"/> <input checked="" type="radio"/> <input checked="" type="radio"/>	Clear
Incomprehensible	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Comprehensible
Boring	<input checked="" type="radio"/> <input checked="" type="radio"/> <input checked="" type="radio"/> <input checked="" type="radio"/> <input checked="" type="radio"/> <input checked="" type="radio"/> <input checked="" type="radio"/> <input checked="" type="radio"/>	Fun



The following questions are about your experience of buying fashion online. With fashion you can think of clothing, shoes, jewelry and accessories. **Please note** that this only refers to *online* purchases, not offline purchases in stores. (In case the full questions are not visible, please rotate your phone's screen)

To what extent do you agree with the following statement: "I know a lot about online shopping"

Strongly disagree | | Strongly agree

Rate your knowledge of shopping fashion online, as compared to the rest of the population. "I am..."

One of the least knowledgeable consumers | | One of the most knowledgeable consumers

How often do you shop fashion online?

Never | | Daily



What is your current work situation?





- Full-time employment
- Part-time employment
- Self-employed
- Unemployed
- Student
- Retired
- Other, namely
- Prefer not to say

What is your nationality?

- Dutch
- Another country in Europe
- Another country outside of Europe
- Prefer not to say



Appendix III: Survey advertisements

AD Females: PD: 1 – LB: 0 – SZ: 0	AD Females: PD: 1 – LB: 1 – SZ: 0
 A woman with long brown hair is sitting and wearing a light blue denim jacket and jeans. She is touching her hair with her right hand. A red Levi's logo is in the top-left corner.	 A woman with long brown hair is sitting and wearing a light blue denim jacket and jeans. She is touching her hair with her right hand. A red Levi's logo is in the top-right corner.
AD Females: PD: 1 – LB: 0 – SZ: 1	AD Females: PD: 1 – LB: 1 – SZ: 1
 A woman with long brown hair is sitting and wearing a light blue denim jacket and jeans. She is touching her hair with her right hand. A red Levi's logo is in the top-left corner.	 A woman with long brown hair is sitting and wearing a light blue denim jacket and jeans. She is touching her hair with her right hand. A red Levi's logo is in the top-right corner.

AD Females: PD: 0 – LB: 0 – SZ: 0



AD Females: PD: 0 – LB: 1 – SZ: 0



AD Females: PD: 0 – LB: 0 – SZ: 1



AD Females: PD: 0 – LB: 1 – SZ: 1



AD Male: PD: 1 – LB: 0 – SZ: 0	AD Male: PD: 1 – LB: 1 – SZ: 0
	
AD Male: PD: 1 – LB: 0 – SZ: 1	AD Male: PD: 1 – LB: 1 – SZ: 1
 	

AD Male: PD: 0 – LB: 0 – SZ: 0



AD Male: PD: 0 – LB: 1 – SZ: 0



AD Male: PD: 0 – LB: 0 – SZ: 1



AD Male: PD: 0 – LB: 1 – SZ: 1



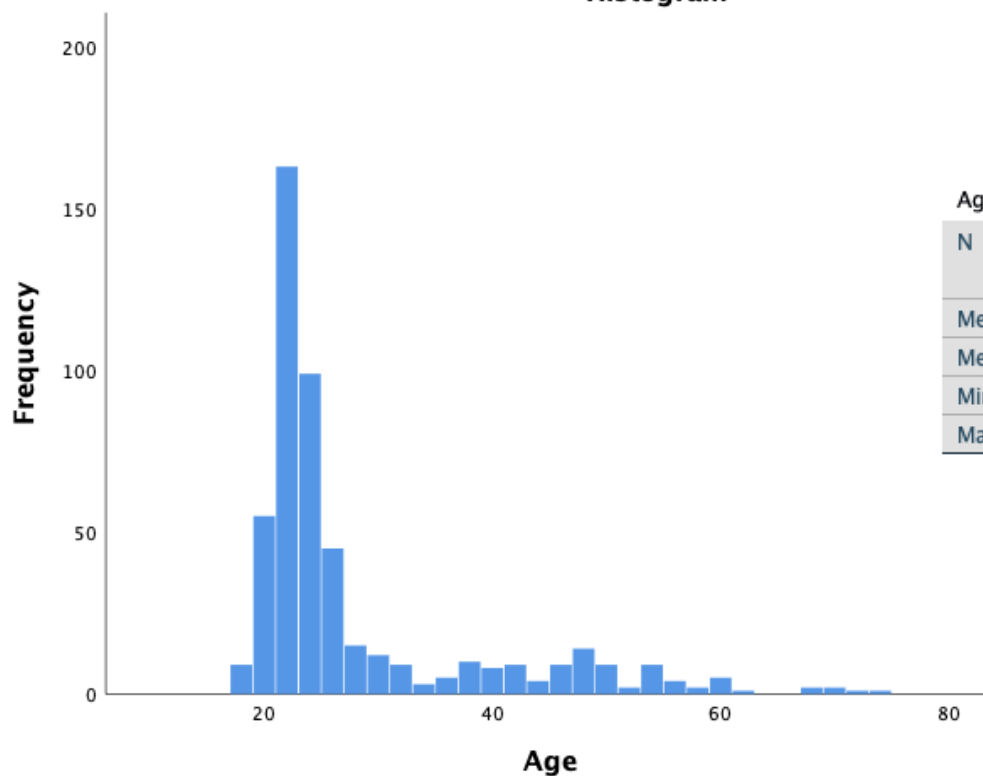
Appendix IV: Demographics

Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	204	40.2	40.2	40.2
	Female	300	59.2	59.2	99.4
	Other, namely	3	.6	.6	100.0
	Total	507	100.0	100.0	

Frequencies gender

Histogram



Statistics

Age		
N	Valid	507
	Missing	0
Mean		27.5976
Median		23.0000
Minimum		18.00
Maximum		74.00

Frequencies age

Occupation

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Full-time employment	211	41.6	41.6	41.6
	Part-time employment	45	8.9	8.9	50.5
	Self-employed	27	5.3	5.3	55.8
	Unemployed	2	.4	.4	56.2
	Student	199	39.3	39.3	95.5
	Retired	7	1.4	1.4	96.8
	Other, namely	9	1.8	1.8	98.6
	Prefer not to say	7	1.4	1.4	100.0
	Total	507	100.0	100.0	

Frequencies occupation

Nationality

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Dutch	482	95.1	95.1	95.1
	Another country in Europe	18	3.6	3.6	98.6
	Another country outside of Europe	5	1.0	1.0	99.6
	Prefer not to say	2	.4	.4	100.0
	Total	507	100.0	100.0	

Frequencies nationality

Device

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		46	9.1	9.1	9.1
	Mobile	461	90.9	90.9	100.0
	Total	507	100.0	100.0	

Frequencies device

Appendix V: Assumptions linear regression

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.302 ^a	.091	.086	1.636	1.846

a. Predictors: (Constant), Size, ProdDep, LocBName

b. Dependent Variable: PurInt

Model summary

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	134.796	3	44.932	16.794	<.001 ^b
	Residual	1345.800	503	2.676		
	Total	1480.596	506			

a. Dependent Variable: PurInt

b. Predictors: (Constant), Size, ProdDep, LocBName

ANOVA PD, LB, SZ

Coefficients^a

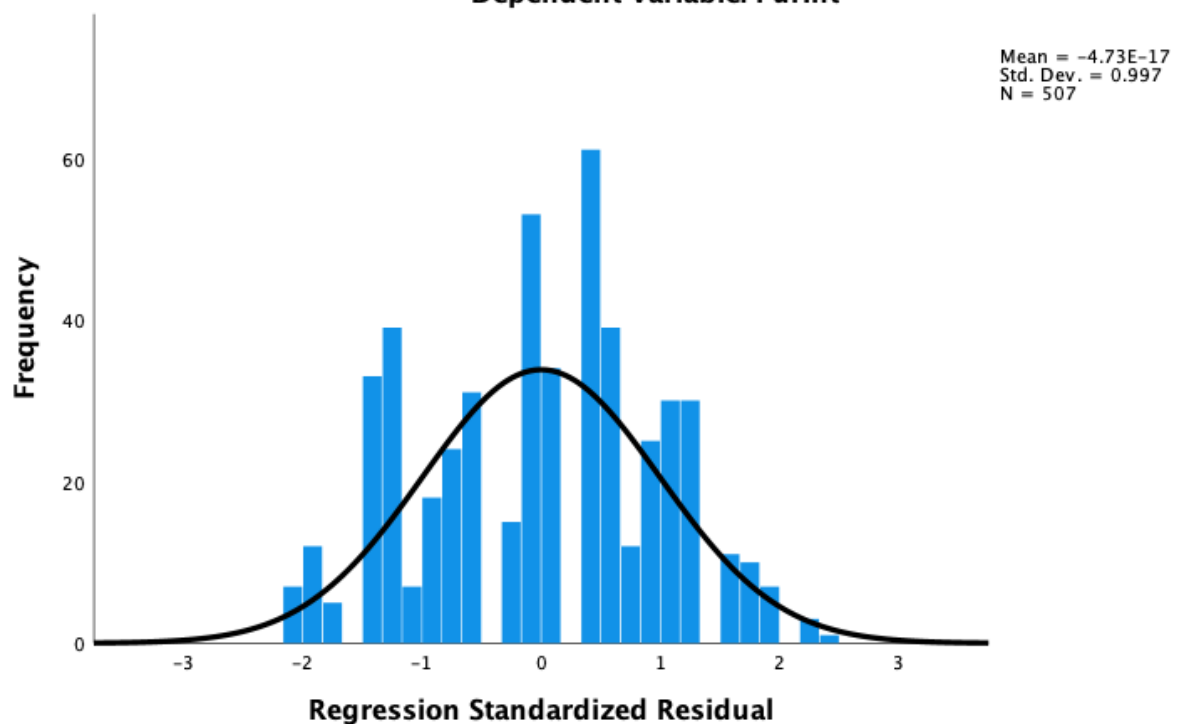
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	2.948	.142		20.717	<.001		
	ProdDep	.958	.145	.280	6.586	<.001	.998	1.002
	LocBName	.296	.146	.087	2.034	.042	.998	1.002
	Size	.170	.145	.050	1.169	.243	1.000	1.000

a. Dependent Variable: PurInt

VIF values

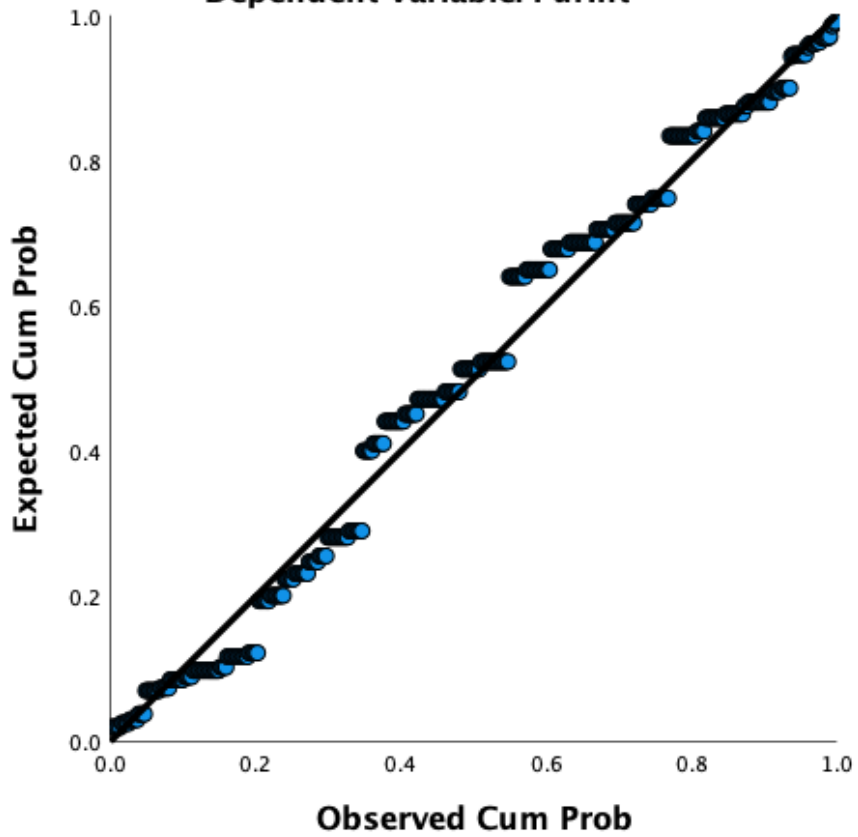
Histogram

Dependent Variable: PurInt



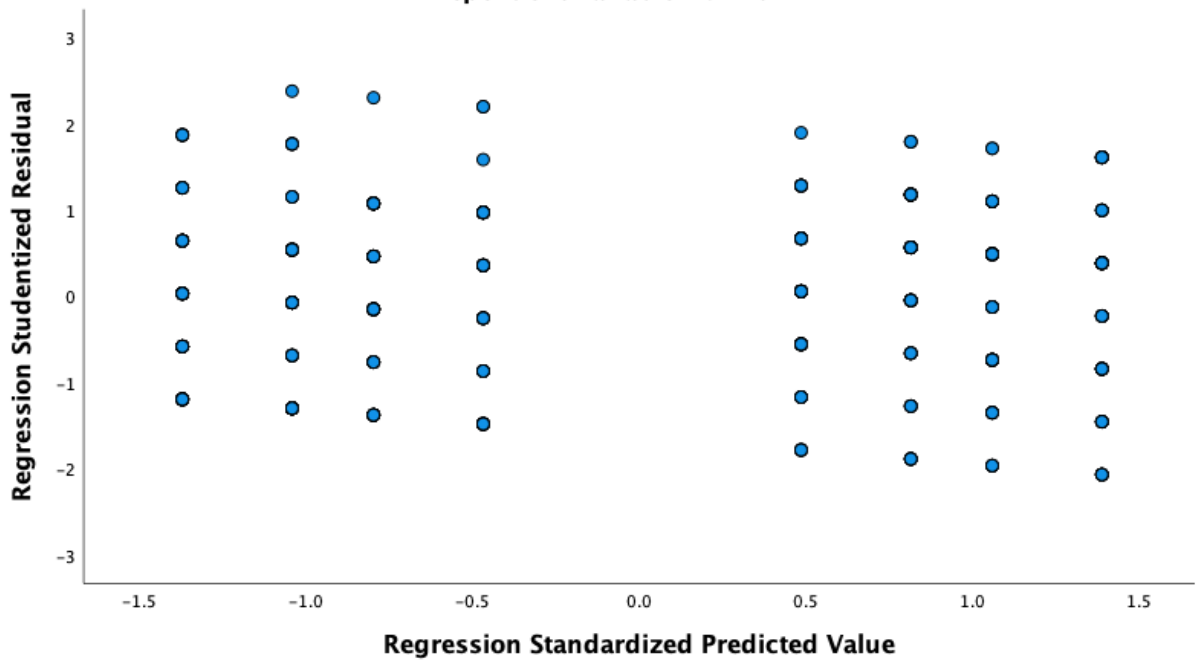
Histogram

Normal P-P Plot of Regression Standardized Residual
Dependent Variable: PurInt



P-P Plot

Scatterplot
Dependent Variable: PurInt



Scatterplot

Appendix VI: Univariate analyses

Tests of Between-Subjects Effects

Dependent Variable: PurInt

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	146.010 ^a	7	20.859	7.799	<.001
Intercept	6786.715	1	6786.715	2537.545	<.001
ProdDep	115.386	1	115.386	43.143	<.001
LocBName	11.091	1	11.091	4.147	.042
Size	4.049	1	4.049	1.514	.219
ProdDep * LocBName	4.827	1	4.827	1.805	.180
ProdDep * Size	1.186	1	1.186	.443	.506
LocBName * Size	.105	1	.105	.039	.843
ProdDep * LocBName * Size	5.101	1	5.101	1.907	.168
Error	1334.586	499	2.675		
Total	8253.000	507			
Corrected Total	1480.596	506			

a. R Squared = .099 (Adjusted R Squared = .086)

Univariate analysis product depiction, location of the brand name and size

Tests of Between-Subjects Effects

Dependent Variable: PurInt

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	163.789 ^a	16	10.237	3.809	<.001
Intercept	1244.914	1	1244.914	463.248	<.001
ProdDep	112.796	1	112.796	41.973	<.001
LocBName	10.455	1	10.455	3.890	.049
Size	3.029	1	3.029	1.127	.289
Gender	8.662	2	4.331	1.612	.201
ProdDep * LocBName	2.872	1	2.872	1.069	.302
ProdDep * Size	1.634	1	1.634	.608	.436
ProdDep * Gender	3.071	1	3.071	1.143	.286
LocBName * Size	.047	1	.047	.017	.895
LocBName * Gender	.909	1	.909	.338	.561
Size * Gender	.001	1	.001	.000	.989
ProdDep * LocBName * Size	5.894	1	5.894	2.193	.139
ProdDep * LocBName * Gender	1.769	1	1.769	.658	.418
ProdDep * Size * Gender	.012	1	.012	.005	.946
LocBName * Size * Gender	3.253	1	3.253	1.210	.272
ProdDep * LocBName * Size * Gender	3.162E-6	1	3.162E-6	.000	.999
Error	1316.807	490	2.687		
Total	8253.000	507			
Corrected Total	1480.596	506			

a. R Squared = .111 (Adjusted R Squared = .082)

Univariate analysis product depiction, location of the brand name, size and gender

Appendix VII: Mediation analyses product depiction

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.169	.103		30.772	<.001
	Product Depiction	.973	.146	.285	6.674	<.001

a. Dependent Variable: Purchase Intention

Regression analysis of product depiction on purchase intention

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	5.181	.061		84.911	<.001
	ProdDep	.519	.086	.258	6.010	<.001

a. Dependent Variable: Fluency

Regression analysis of product depiction on perceptual fluency

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.203	.389		.523	.601
	Perceptual Fluency	.634	.070	.373	9.035	<.001

a. Dependent Variable: Purchase Intention

Regression analysis of perceptual fluency on purchase intention

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.341	.381		.895	.371
	Product Depiction	.690	.143	.202	4.824	<.001
	Perceptual Fluency	.546	.071	.321	7.672	<.001

a. Dependent Variable: Purchase Intention

Regression analysis of product depiction and perceptual fluency on purchase intention

Total effect of X on Y

Effect	se	t	p	LLCI	ULCI
.9730	.1458	6.6737	.0000	.6866	1.2594

Direct effect of X on Y

Effect	se	t	p	LLCI	ULCI
.6896	.1430	4.8242	.0000	.4088	.9705

Indirect effect(s) of X on Y:

Effect	BootSE	BootLLCI	BootULCI
Fluency .2834	.0583	.1775	.4084

Bootstrap estimates of direct, indirect, and total effect of product depiction on purchase intention

Appendix VIII: Mediation analyses location of the brand name

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.486	.106		32.936	<.001
	Location Brand Name	.344	.151	.101	2.274	.023

a. Dependent Variable: Purchase Intention

Regression analysis of location of the brand name on purchase intention

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	5.327	.062		85.733	<.001
	LocBName	.232	.089	.115	2.607	.009

a. Dependent Variable: Fluency

Regression analysis of location of the brand name on perceptual fluency

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.203	.389		.523	.601
	Perceptual Fluency	.634	.070	.373	9.035	<.001

a. Dependent Variable: Purchase Intention

Regression analysis of perceptual fluency on purchase intention

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.168	.389		.431	.667
	Location Brand Name	.200	.142	.058	1.408	.160
	Perceptual Fluency	.623	.071	.366	8.821	<.001

a. Dependent Variable: Purchase Intention

Regression analysis of product depiction and perceptual fluency on purchase intention

***** TOTAL, DIRECT, AND INDIRECT EFFECTS OF X ON Y *****

Total effect of X on Y

Effect	se	t	p	LLCI	ULCI
.3442	.1514	2.2739	.0234	.0468	.6415

Direct effect of X on Y

Effect	se	t	p	LLCI	ULCI
.1999	.1420	1.4081	.1597	-.0790	.4788

Indirect effect(s) of X on Y:

Effect	BootSE	BootLLCI	BootULCI
Fluency .1443	.0566	.0371	.2577

Bootstrap estimates of direct, indirect, and total effect of location brand name on purchase intention

Appendix IX: Moderator analyses

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.214	.101		31.899	<.001
	ProdDep	.935	.142	.274	6.587	<.001
	Exp_Cent	.281	.056	.211	5.063	<.001
	ProductDepictionExperience	.321	.111	.120	2.888	.004

a. Dependent Variable: PurInt

Moderation analysis product depiction

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.525	.104		33.945	<.001
	LocBName	.339	.148	.099	2.287	.023
	Exp_Cent	.283	.058	.213	4.912	<.001
	LocationBrandNameExperience	.096	.115	.036	.831	.406

a. Dependent Variable: PurInt

Moderation analysis location of the brand name

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.608	.105		34.328	<.001
	Size	.166	.149	.049	1.117	.264
	Exp_Cent	.283	.058	.212	4.882	<.001
	SizeExperience	.080	.116	.030	.694	.488

a. Dependent Variable: PurInt

Moderation analysis size

Appendix X: Moderated mediation analysis product depiction

***** PROCESS Procedure for SPSS Version 3.5.3 *****

Written by Andrew F. Hayes, Ph.D. www.afhayes.com
 Documentation available in Hayes (2018). www.guilford.com/p/hayes3

Model : 8
 Y : PurcInt
 X : ProdDep
 M : Fluency
 W : ExpCent

Sample
 Size: 507

OUTCOME VARIABLE:

Fluency

Model Summary

	R	R-sq	MSE	F	df1	df2	p
	.3289	.1082	.9073	20.3339	3.0000	503.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	5.1943	.0598	86.7998	.0000	5.0767	5.3119
ProdDep	.4995	.0847	5.8950	.0000	.3330	.6659
ExpCent	.1964	.0444	4.4242	.0000	.1092	.2836
Int_1	-.1005	.0664	-1.5146	.1305	-.2309	.0299

Product terms key:

Int_1 : ProdDep x ExpCent

Test(s) of highest order unconditional interaction(s):

	R2-chng	F	df1	df2	p
X*W	.0041	2.2939	1.0000	503.0000	.1305

OUTCOME VARIABLE:
PurcInt

Model Summary

R	R-sq	MSE	F	df1	df2	p
.4646	.2158	2.3128	34.5409	4.0000	502.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	.5153	.3819	1.3492	.1779	-.2351	1.2656
ProdDep	.6790	.1399	4.8543	.0000	.4042	.9538
Fluency	.5125	.0712	7.1995	.0000	.3726	.6524
ExpCent	.0205	.0722	.2839	.7766	-.1214	.1624
Int_1	.3725	.1062	3.5085	.0005	.1639	.5812

Product terms key:

Int_1 : ProdDep x ExpCent

Test(s) of highest order unconditional interaction(s):

	R2-chng	F	df1	df2	p
X*W	.0192	12.3098	1.0000	502.0000	.0005

Focal predict: ProdDep (X)
Mod var: ExpCent (W)

Conditional effects of the focal predictor at values of the moderator(s):

ExpCent	Effect	se	t	p	LLCI	ULCI
-1.2852	.2002	.1976	1.0130	.3116	-.1881	.5884
.0000	.6790	.1399	4.8545	.0000	.4042	.9538
1.2853	1.1578	.1932	5.9928	.0000	.7782	1.5373

***** DIRECT AND INDIRECT EFFECTS OF X ON Y *****

Conditional direct effect(s) of X on Y:

ExpCent	Effect	se	t	p	LLCI	ULCI
-1.2852	.2002	.1976	1.0130	.3116	-.1881	.5884
.0000	.6790	.1399	4.8545	.0000	.4042	.9538
1.2853	1.1578	.1932	5.9928	.0000	.7782	1.5373

Conditional indirect effects of X on Y:

INDIRECT EFFECT:

ProdDep -> Fluency -> PurcInt

ExpCent	Effect	BootSE	BootLLCI	BootULCI
-1.2852	.3222	.0812	.1753	.4922
.0000	.2560	.0556	.1545	.3697
1.2853	.1898	.0625	.0725	.3133

Index of moderated mediation:

	Index	BootSE	BootLLCI	BootULCI
ExpCent	-.0515	.0362	-.1261	.0144

***** ANALYSIS NOTES AND ERRORS *****

Level of confidence for all confidence intervals in output:
95.0000

Number of bootstrap samples for percentile bootstrap confidence intervals:
5000

W values in conditional tables are the mean and +/- SD from the mean.

----- END MATRIX -----

Appendix XI: Moderated mediation analysis location of the brand name

***** PROCESS Procedure for SPSS Version 3.5.3 *****

Written by Andrew F. Hayes, Ph.D. www.afhayes.com
 Documentation available in Hayes (2018). www.guilford.com/p/hayes3

Model : 8
 Y : PurcInt
 X : LocBName
 M : Fluency
 W : ExpCent

Sample
 Size: 507

OUTCOME VARIABLE:
 Fluency

Model Summary

	R	R-sq	MSE	F	df1	df2	p
	.2404	.0578	.9586	10.2809	3.0000	503.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	5.3288	.0608	87.5882	.0000	5.2092	5.4483
LocBName	.2285	.0870	2.6267	.0089	.0576	.3994
ExpCent	.1967	.0473	4.1587	.0000	.1038	.2897
Int_1	-.0734	.0678	-1.0840	.2789	-.2066	.0597

Product terms key:

Int_1 : LocBName x ExpCent

Test(s) of highest order unconditional interaction(s):

	R2-chng	F	df1	df2	p
X*W	.0022	1.1751	1.0000	503.0000	.2789

OUTCOME VARIABLE:

PurcInt

Model Summary

	R	R-sq	MSE	F	df1	df2	p
	.4061	.1649	2.4631	24.7797	4.0000	502.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	.4163	.3931	1.0588	.2902	-.3561	1.1887
LocBName	.2069	.1404	1.4737	.1412	-.0689	.4827
Fluency	.5766	.0715	8.0672	.0000	.4362	.7170
ExpCent	.1228	.0771	1.5921	.1120	-.0287	.2743
Int_1	.1382	.1087	1.2711	.2043	-.0754	.3518

Product terms key:

Int_1 : LocBName x ExpCent

Test(s) of highest order unconditional interaction(s):

	R2-chng	F	df1	df2	p
X*W	.0027	1.6158	1.0000	502.0000	.2043

***** DIRECT AND INDIRECT EFFECTS OF X ON Y *****

Conditional direct effect(s) of X on Y:

ExpCent	Effect	se	t	p	LLCI	ULCI
-1.2852	.0293	.1987	.1473	.8830	-.3611	.4196
.0000	.2069	.1404	1.4737	.1412	-.0689	.4827
1.2853	.3845	.1975	1.9470	.0521	-.0035	.7726

Conditional indirect effects of X on Y:

INDIRECT EFFECT:

LocBName -> Fluency -> PurcInt

ExpCent	Effect	BootSE	BootLLCI	BootULCI
-1.2852	.1862	.0832	.0353	.3649
.0000	.1317	.0523	.0319	.2434
1.2853	.0773	.0681	-.0572	.2125

Index of moderated mediation:

	Index	BootSE	BootLLCI	BootULCI
ExpCent	-.0423	.0429	-.1324	.0372

***** ANALYSIS NOTES AND ERRORS *****

Level of confidence for all confidence intervals in output:

95.0000

Number of bootstrap samples for percentile bootstrap confidence intervals:

5000

W values in conditional tables are the mean and +/- SD from the mean.

----- END MATRIX -----