

Master Thesis

Get your brand in line!

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ABSTRACT

The purpose of this paper is to address the effects of vendor and product congruency within the Bol.com e-commerce platform. The central assumption of this study is that a congruent state will positively influence consumers' responses.

The main finding of this thesis indicated the moderation interaction effect of product congruency * vendor. The result showed that high vendor trust positively influences consumers' perception towards brand trust (platform).

The study also suggests a strong probability of ease of fluency having a mediating effect; however, this was not found.

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1. INTRODUCTION

Technology is increasingly taking over our lives and is steadily reshaping the relationships between customers and businesses. Top-performing digital companies are embracing the new era of technology by redefining their business model. We've seen authoritative webshops within the retail industry, such as Bol.com and Amazon, slowly offering more product categories and are transforming into well-established e-commerce platforms. In the early years of the internet, the main challenge for these companies was how they could sell their products online. As a result, they created a website and started to offer their product online. The transformation into an e-commerce platform happened later. It was mainly driven by the maturity of internet technologies, which made it easier to create and maintain a webshops but also to offer a broader range of products. The main difference between a webshop and an e-commerce platform is that a webshop has two agreements, the buyer and the webshop. An e-commerce platform has three agreements: the buyer, the seller, and the external supplier, who helps provide products. The new product categories that were now available on these e-commerce platforms were mainly provided with the help of the external partner vendors, which are known as partner vendors.

For e-commerce platforms like Amazon, an American book company is known for selling mainly books and DVDs, began its transformation from a webshop to an e-commerce platform 20 years ago. Nowadays, their assortment is so broad; that you can even buy auto parts. From an end-user perspective, this might not be the company website you would typically go to back then if you wanted to buy auto parts. Thus, in the early years, consumers were surprised that they could purchase a product that is not customary to buy at Amazon's product category. Therefore, before consumers found it normal to buy auto parts at Amazon, it may have taken a while before consumers got accustomed to this option or found it natural.

In the Netherlands, companies like Coolblue and Bol.com have adopted somewhat the same approach as Amazon did a few years back. In 2012, Ahold acquired leading online retailer Bol.com (2012), opening the door to new opportunities for both companies. Even though the approach has its financial benefits, it was not taken lightly by customers. On Radar, a website that writes about consumer affairs in the Dutch market showed that some customers are still having difficulties with the transformation Bol.com commenced ten years back.

Below a summary of a complaint on the Radar website:

"The article stated: a customer was purchasing a product within the Bol.com e-commerce environment, from a partner vendor. However, he was not aware. To make things more inconvenient, the product did not meet the customer's expectations. As a result, Bol.com was contacted by the customer regarding the complaint. However, Bol.com referred the customer to send the complaint to the partner vendor. With no reaction from the partner vendor for several days, the customer went to the Dutch Consumer Association to file a complaint. Yet, the customer had no luck because the partner vendor was not accredited by the Consumer Association, which meant that the Dutch Consumer Association could not be of help because they only help members."

The above-mentioned article on Radar is an example of how the consumer may encounter inconsistency and produce an overall negative attitude towards a brand.

For this thesis, we will further investigate the importance of consistency within an e-commerce platform.

2. THEORETICAL FRAMEWORK

This chapter will present the most important findings of the role of congruency within e-commerce platforms. After that, an outline will be given of the pre-summed effect of congruency on the dependent variables. Lastly, the moderators and possible mediator are outlined.

2.1.1 Vendor types within e-commerce platforms

With the rise of e-commerce less and less consumers are going to physical stores, and with the last development of covid-19, a persistent rise was seen in e-commerce sales, which reached a new high, which was only achieved during the holiday seasons (Abramovich, 2020). When consumers shop via e-commerce platforms, there are several vendors nowadays of which a consumer can buy a product from. Within the e-commerce platform environment, it is possible to purchase products directly via the e-commerce platform and partner vendors. This may be an inconsistent new option if consumers are not aware of this possibility. Within this study, the e-commerce as a vendor (EV) option is categorized as the congruent option; since this is also the website or company consumers explicitly went to and is also expected to be the vendor of the product they would like to purchase. The other option is to buy a product from a partner vendor, which is the incongruent option. The (incongruent) partner vendors are also divided, into familiar and unfamiliar partner vendors, to understand if brand familiarity affects consumer responses. The reason for two separate groupings is because Heckler and Childers (1992), illustrated that the level of familiarity indicates how much time a consumer has already spent processing information, which may enhance brand remembrance (Heckler and Childers, 1992). Research by Low and Lamb (2000) also demonstrated that consumers familiar with a brand keep multiple brand associations, which can then boost information retrieval.

Therefore within this study, three vendor types will be introduced as independent variables. A congruent vendor type: e-commerce as a vendor (EV) and two incongruent vendor types: external partner vendors, of which one is familiar (FPV) and one is unfamiliar (UPV).

Based on these findings the following research question is formed.

Research question 1

Does congruency between the e-commerce platform and the type of vendor impact consumer responses favorably, and in particular if the vendor type is incongruent, does the familiarity with the vendor effect consumer responses?

2.1.2 Product categories within e-commerce platforms

E-commerce platforms offer consumers a more expansive product assortment than a habitual webshop. However, sometimes, these newly available products are not common product categories, or in other words, they are outside of the product schema of the e-commerce platform. McDaniel (1999) coined the term product schema, which he defined as the expected embodied characteristics within a brand's product category, which plays an essential role in how consumers perceive and cope with brand and product extension strategy changes. Griffith (1999) explained that, per definition, a new product or a simple new feature in an existing environment could exhibit some degree of misfit or incongruity. And depending on the cognitive challenges, the degree of contradiction or negative sentiment can vary on several levels for consumers. Research by Mandler (1982) also illustrated that the fit between a brand and a product is used for interpretation and any changes in this relation can generate a difference in perception. Chung-Yu Wang et al. (2017) also coined about several risks increased incongruity can elicit when companies sell products outside of the company's product schema. McDaniel (1999) even suggested that companies only sell product categories congruent with the perceived product schema since the degree of congruence can have various emotional and cognitive consequences. Keller and Sood's (2003) study on brand extensions and their effects on congruency showed that introducing an extension product can be beneficial only if consistent with the parent brand's product schema.

As a result, for this study, a congruent and incongruent product category will be introduced as independent variables.

Based on these findings the following research question is formed.

Research question 2

Does congruency between the e-commerce platform and the product category impact consumer responses favorably?

2.1.3 Vendor and product congruency

Past studies have demonstrated that we are susceptible to congruent stimuli that we have previously learned and prefer for matching features and consistency (Schwarz, 2014). Spence, Puccinelli, Grewal, and Roggeveen (2014) did research on congruency in a multisensory environment. The study showed that consistency between sense of smell and vision creates a more positive store perception than stores that use incongruent multisensory senses. The study showed that matching consumer-perceived variables can improve store evaluation and perception, leading to an increase in spending. The congruency phenomenon is also seen in several marketing areas, such as sports endorsements. In general, companies need to consider the attributes and qualities for sports endorsements and see how consistent these are with the brand, to not elicit an incongruent state. Based on the literature mentioned above on congruency and its central role in this study, the term congruency is essential to describe. Mandler (1982) described congruity as a cognitive challenge that, if failed, may interfere with consumer's ability to process information but also assess potential consequences.

Within this study, an e-commerce platform can either have a congruent or incongruent product category. For vendor type, this is also the two options. Based on this observation, the following research question is formed.

Research questions 3

Does the specific combination of a congruent product category with congruent vendor type result in the most favorable consumers responses?.

2.2 Dependent Variables

The above mentioned findings illustrate how product category and type of vendor can influence the consumers congruency level within an e-commerce environment. In this chapter, we will take a look in the literature to see what the possible effects of the level of congruency can have on consumers responses.

2.2.1 Product Evaluation

The term evaluation can be derived from the extent to which a person feels informed about product or service features and capabilities. Being informed can be seen as the primary process for product evaluation, and consumers need information frequently to evaluate products. Research on the reasons for returned products sold via e-commerce platforms shows that the online environment offers a specific limitation in consumers' ability to properly assess a particular product, which is highly needed before purchase. Grohmann (2009) showed how congruency could affect product evaluation. He illustrated that one of the essential components for significant celebrity endorsements is that the product has a certain fit with the person who is used for the endorsement, which as a result, elicits a complimentary evaluation. And in contrast, Kamins & Gupta (1994) indicated that low congruence leads to an unfavorable product evaluation since consumers need more effort to comprehend the inconsistency.

Based on the challenges of being informed about a product within an e-commerce environment and the impact congruency can have on product evaluation. The following hypothesis are formulated.

***H1-a)** Product evaluation of vendors that are congruent with the e-commerce platform will result in more favorable product evaluation as compared to vendors that are incongruent with the e-commerce platform.*

***H2-a)** Product evaluation of product categories that are congruent with the e-commerce platform will result in more favorable product evaluation as compared to the product categories that are incongruent with the e-commerce platform.*

***H3-a)** The combination of a product category and a vendor type that are congruent with the e-commerce platform will results in the most favorable response on product evaluation.*

2.2.2 Purchase Intention

Purchase intention is one of the most frequently used measures in the field of marketing and consumer behavior. Purchase intention is often used due to its high correlation with actual behavior. Thus, investigating the influence of such predictors is crucial (Dedeke, 2016). An intention is seen as a conscious plan to carry out a specific behavior based on someone's belief and attitude.

Consumers' intention also functions as the commitment and effort a consumer is willing to show a particular behavior, such as purchasing a product (Sayed Ahmad M. Sarwary & Iffat S. Chaudhry, 2015). Till & Busler (2000) illustrated that the lack of fit between endorser and product, thus incongruity, will affect purchase intention. Batra and Homer (2004) also suggested that brand image and product schemas significantly impact brand preference when a product schema is consistent with the product category. The effect of this congruency was reflected on the purchase intention, however only if this was congruent. McDaniel (1999) also claimed that a low level of congruency within product schemas might negatively associate with consumers perceived value and purchase intentions. Based on these findings, the following hypotheses are formulated

***H1-b)** Purchase intention of vendors that are congruent with the e-commerce platform will result in more favorable purchase intention as compared to vendors that are incongruent with the e-commerce platform.*

***H2-b)** Purchase intention of product categories that are congruent with the e-commerce platform will result in more favorable purchase intention as compared to the product categories that are incongruent with the e-commerce platform.*

***H3-b)** The combination of a product category and a vendor type that are congruent with the e-commerce platform will result in the most favorable response on purchase intention.*

2.2.3 Brand Trust (platform)

Trust, in general, is an essential antecedent for businesses to enhance business relationships. For business, an often-used variable to determine trust is brand trust. Brand trust is an intangible company asset that an entity evokes and can also use its intrinsic credibility. It can be used to affect the behavior of business stakeholders but also create a perception of quality. Knowg et al. (2016) defined brand trust as a consumer's ability and willingness to rely on a brand to perform the promised and stated function.

Building from the findings on congruence, Wang et al. (2009) explored the effects of congruence among consumers, brand, and company personality. The research found that congruence, in general, influences how consumers evaluate and respond to a brand. Brand trust has also been explored in an e-commerce context; however, this is a complex and complicated phenomenon between individuals and technological agents. Brand trust lowers consumer ambiguity when making a purchase, which often is a concern for consumers when shopping online (Knowg et al., 2016). Based on this literature, the following hypothesis has been formulated.

***H1-c)** Brand trust (platform) of vendors that are congruent with the e-commerce platform will result in more favorable brand trust (platform) as compared to vendors that are incongruent with the e-commerce platform.*

***H2-c)** Brand trust (platform) of product categories that are congruent with the e-commerce platform will result in more favorable brand trust (platform) as compared to the product categories that are incongruent with the e-commerce platform.*

***H3-c)** The combination of a product category and a vendor type that are congruent with the e-commerce platform will results in the most favorable response on brand trust (platform).*

2.3 Moderators

Next will research the proposed three moderators. These moderators can affect how consumer perceive congruency, which can moderate the influence towards product attitude and brand trusts (platform).

2.3.1 Privacy Concern

Nowadays, consumers are easy to identify, and technology limits customers' ability to protect their privacy. Digital footprints are left online and due to the number of search keywords online shopping records. These footprints are converted in to interest and are either shared or sold, or used for personalized content (Wu, Huang, Yen & Popova, 2012). Malhotra et al. (2004) claimed that within an e-commerce context, there were more specific concerns when it comes to privacy. It is essential for consumers that there is a control mechanism over personal information, payment methods, and privacy practices that ensure that the gathering of personal data is used adequately and securely. Ratnasingam (2005) illustrated that there must be a control mechanism over personal use for consumers and that there are privacy practices that ensure that the gathering of personal information is used adequately and securely. Solove (2006) argued that if a merchant prompts privacy inconsistency, the trust may be lost in the company since consumers perceived the proper treatment of privacy as an implied social agreement with the buyer.

For consumers, the dilemma when making an online purchase is that before buying a product online, consumers need to provide personal information to the vendor since they have little information to complete the transaction (Tsai, Egelma, Cranor, and Acquisti, 2011). Purchasing a product on an e-commerce platform could raise concerns if an incongruent state is present, such as an unfamiliar partner vendor or an increase in inconsistency elicits due to the availability and purchase of a product outside of the product schema.

Based on these findings, privacy concerns will act as a moderator within this study to understand and explore the possible effects on the dependent variables. Low privacy concerns should have a favorable influence on how we process information. It can be presumed that a customer who has low regard for its privacy would care less if a product is incongruent with the e-commerce platform being sold by an incongruent vendor. This thesis argues that the level of privacy will negatively influence consumers' responses. Based on these findings, the following hypothesis are formulated.

***H4-a)** The level of privacy concern will negatively moderate the effect of product category congruence on product evaluation.*

***H4-b)** The level of privacy concern will negatively moderate the effect of product category congruence on purchase intention.*

***H4-c)** The level of privacy concern will negatively moderate the effect of product category congruence on brand trust (platform).*

***H5-a)** The level of privacy concern will negatively moderate the effect of vendor type congruence on product evaluation.*

***H5-b)** The level of privacy concern will negatively moderate the effect of vendor type congruence on purchase intention.*

***H5-c)** The level of privacy concern will negatively moderate the effect of vendor type congruence on brand trust (platform).*

2.3.2 Product Involvement

The concept of product involvement has been widely used in theory and is considered an important factor for consumer behavior researchers since it was coined by Krugman (1965). Research within an e-commerce context is still limited. Product involvement is defined by a consumer's level of interest or commitment towards a product and the state of motivation induced by diverse stimuli. A consumer's involvement in a product illustrates how a consumer perceives the importance of a particular product Hong (2015). When consumers make decisions, there are quite some differences between how involved they are with a specific product. Consumers that are highly involved with a product tend to spend more time searching about the product attributes than when they are low involved, thus acquiring more understanding with a certain product category. (Nijssen, Bucklin, and Uji, 1995). Warrington and Shim (2000) found out that highly involved consumers will process product information more than consumers with low involvement towards a product category. Coining that high product involvement can influence purchase intentions and orientation since it relates to consumers' inherent needs and motivation and are thus more prone to process a message (Petty, 2007). Meaning that consumers not only focus on different variables, but they also process information entirely differently. Therefore for this research, product involvement will act as a moderator. Based on these findings the following hypotheses are formulated

***H6-a)** The level of product involvement will positively moderate the effect of product category congruence on product evaluation.*

***H6-b)** The level of product involvement will positively moderate the effect of product category congruence on purchase intention.*

***H6-c)** The level of product involvement will positively moderate the effect of product category congruence on brand trust (platform).*

***H7-a)** The level of product involvement will positively moderate the effect of vendor type congruence on product evaluation.*

***H7-b)** The level of product involvement will positively moderate the effect of vendor type congruence on purchase intention.*

H7-c) The level of product involvement will positively moderate the effect of vendor type congruence on brand trust (platform).

2.3.3 Vendor Trust

The study of Ratnasingam (2005) showed that trust is related to relationship competencies, predictability, and reliability between e-commerce trading partners. Within this study, the possibility of selling a product from three types of vendors could lead to consumers feeling insecure or surprised since they are not aware of to the possibility of purchasing a product from an external vendor. Low and Lamb (2000) demonstrated that consumers who are familiar with a brand keep multiple brand associations, which enhances congruency and boosts information retrieval and enhances trust. Also the level of belief towards a brand or how much time a consumer has already spent with a certain brand, will lower consumer uncertainty, which often is a concern for consumers when shopping online (Knowg et al, 2016)

In this study, vendor trust will act as a moderator and it can be presumed that a high vendor trust will have a positive moderating role on the dependent variables, since it prompts congruency. Based on these findings the following hypotheses are formulated

H8-a) The level of vendor trust will positively moderate the effect of product category congruence on product evaluation.

H8-b) The level of vendor trust will positively moderate the effect of product category congruence on purchase intention.

H8-c) The level of vendor trust will positively moderate the effect of product category congruence on brand trust (platform).

H9-a) The level of vendor trust will positively moderate the effect of vendor type congruence on product evaluation.

H9-b) The level of vendor trust will positively moderate the effect of vendor type congruence on purchase intention.

H9-c) The level of vendor trust will positively moderate the effect of vendor type congruence on brand trust (platform).

2.4 Mediator

Traditional beliefs assume that we are coherent human beings and that our decisions are well-thought-through processes. In *Thinking Fast and Slow*, Daniel Kahneman explained how heuristics work and how we make decisions. In the book, he explains that we actually are very irrational human beings and mostly rely on mental shortcuts to make decisions. With these mental shortcuts, we often prefer to use or rely on cognitive ease for decision-making. Schwarz (2004) explained how this mental easing is formed. He claimed that our thoughts are influenced by the estimates, judgment, and feelings related to the features when specific tasks are experienced and learned, which means that a set of past experiences forms our cognitive process. These experiences influence the ease with which future information is administered, and decisions are then made.

A set of other studies have also researched the impact of processing fluency. Alter & Oppenheimer (2009), explored the difference in processing efforts; they described that this is based on how much the metacognitive experience is in agreement with each other. Labroo & Lee (2006) stated that process fluency could be described as to the perceived effort of ease of identifying meaning or a stimulus.

The result of multiple studies has shown and agreed upon the impact of processing fluency. A great way to summarize this is by using Reber, Winkielman, and Schwarz's (1998) explanation. They stated that the fewer effort consumers put on processing a presented stimulus, the easier it would be to process the information. As a result, a cognitive task can be categorized into being perceived as low or high effortful. Following the concept of processing fluency, research Van Rompay, de Vries & Van Venrooij (2007) studied the relationship between ease of fluency and congruency. They found an interesting insight, which assumes that congruency within a relationship increases processing fluency. Thus, a congruent state positively influences how we process information which elicits a helpful biased attitude towards behavior. Based on the literature and taking everything into consideration, ease of fluency, will act as a mediator within this study. Hereby assuming that the how information is processes will mediate the effect of congruency on the dependent variables.

As a result, we've formulated three main hypotheses regarding the effect of congruency level on ease of fluency, and its impact on the dependent variables in this study:

***H10-a)** Processing fluency will mediate the effect of (product category) congruency on product evaluation.*

***H10-b)** Processing fluency will mediate the effect of (product category) congruency on purchase intention.*

***H10-c)** Processing fluency will mediate the effect of (product category) congruency on brand trust (platform).*

***H11-a)** Processing fluency will mediate the effect of (vendor type) congruency on product evaluation.*

***H11-b)** Processing fluency will mediate the effect of (vendor type) congruency on purchase intention*

***H11-c)** Processing fluency will mediate the effect of (vendor type) congruency on brand trust (platform).*

2.5 Conceptual Model

Based on the literature findings, a conceptual model is created. The model in figure 2, shows the relationships between the variables and the main hypothesis that will be examined in the study.

v

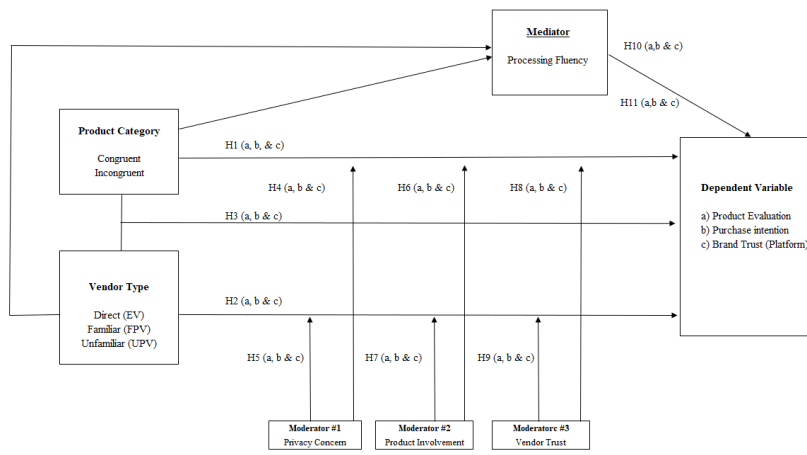


Figure 1. Conceptual research model

Table 1. Hypotheses overview

Hypotheses	
H1-a	<i>Product evaluation of vendors that are congruent with the e-commerce platform will result in more favorable product evaluation as compared to vendors that are incongruent with the e-commerce platform.</i>
H2-a	<i>Product evaluation of product categories that are congruent with the e-commerce platform will result in more favorable product evaluation as compared to the product categories that are incongruent with the e-commerce platform.</i>
H1-b	<i>The combination of a product category and a vendor type that are congruent with the e-commerce platform will result in the most favorable response on product evaluation.</i>
H1-b	<i>Purchase intention of vendors that are congruent with the e-commerce platform will result in more favorable purchase intention as compared to vendors that are incongruent with the e-commerce platform.</i>
H2-b	<i>Purchase intention of product categories that are congruent with the e-commerce platform will result in more favorable purchase intention as compared to the product categories that are incongruent with the e-commerce platform.</i>
H3-b	<i>The combination of a product category and a vendor type that are congruent with the e-commerce platform will result in the most favorable response on purchase intention.</i>
H1-c	<i>Brand trust (platform) of vendors that are congruent with the e-commerce platform will result in more favorable brand trust (platform) as compared to vendors that are incongruent with the e-commerce platform.</i>
H2-c	<i>Brand trust (platform) of product categories that are congruent with the e-commerce platform will result in more favorable brand trust (platform) as compared to the product categories that are incongruent with the e-commerce platform.</i>
H3-c	<i>The combination of a product category and a vendor type that are congruent with the e-commerce platform will result in the most favorable response on brand trust (platform).</i>
H4-a	<i>The level of privacy concern will negatively moderate the effect of product category congruence on product evaluation.</i>
H4-b	<i>The level of privacy concern will negatively moderate the effect of product category congruence on purchase intention.</i>
H4-c	<i>The level of privacy concern will negatively moderate the effect of product category congruence on brand trust (platform).</i>
H5-a	<i>The level of privacy concern will negatively moderate the effect of vendor type congruence on product evaluation.</i>
H5-b	<i>The level of privacy concern will negatively moderate the effect of vendor type congruence on purchase intention.</i>
H5-c	<i>The level of privacy concern will negatively moderate the effect of vendor type congruence on brand trust (platform).</i>
H6-a	<i>The level of product involvement will positively moderate the effect of product category congruence on product evaluation.</i>
H6-b	<i>The level of product involvement will positively moderate the effect of product category congruence on purchase intention.</i>
H6-c	<i>The level of product involvement will positively moderate the effect of product category congruence on brand trust (platform).</i>
H7-a	<i>The level of product involvement will positively moderate the effect of vendor type congruence on product evaluation.</i>
H7-b	<i>The level of product involvement will positively moderate the effect of vendor type congruence on purchase intention.</i>
H7-c	<i>The level of product involvement will positively moderate the effect of vendor type congruence on brand trust (platform).</i>
H8-a	<i>The level of vendor trust will positively moderate the effect of product category congruence on product evaluation.</i>
H8-b	<i>The level of vendor trust will positively moderate the effect of product category congruence on purchase intention.</i>
H8-c	<i>The level of vendor trust will positively moderate the effect of product category congruence on brand trust (platform).</i>
H9-a	<i>The level of vendor trust will positively moderate the effect of vendor type congruence on product evaluation.</i>
H9-b	<i>The level of vendor trust will positively moderate the effect of vendor type congruence on purchase intention.</i>
H9-c	<i>The level of vendor trust will positively moderate the effect of vendor type congruence on brand trust (platform).</i>
H10-a	<i>Processing fluency will mediate the effect of (product category) congruency on product evaluation.</i>
H10-b	<i>Processing fluency will mediate the effect of (product category) congruency on purchase intention.</i>
H10-c	<i>Processing fluency will mediate the effect of (product category) congruency on brand trust (platform).</i>
H11-a	<i>Processing fluency will mediate the effect of (vendor type) congruency on product evaluation.</i>
H11-b	<i>Processing fluency will mediate the effect of (vendor type) congruency on purchase intention.</i>
H11-c	<i>Processing fluency will mediate the effect of (vendor type) congruency on brand trust (platform).</i>

3. METHOD

3.1 Research Design

An experimental study was conducted to examine the effect of congruency on processing fluency. The study has a mediator, which is suspected of having an association with the dependent variables. The study also has moderating variables, which could influence the relationship between the dependent and the independent variable. The research model is based on a 3 x 2 design with a congruent and incongruent product categories EV as congruent vendor type and FPV and UPV as incongruent vendor types. These three compared. Figure 3 presents the experimental design.

Experimental Design 3 x 2

		<u>Congruent</u>	<u>Incongruent</u>
<div style="border: 1px solid black; padding: 2px; display: inline-block; writing-mode: vertical-rl; transform: rotate(180deg);">Congruent</div>	EV	Books Bol.com	Underwear Bol.com
	FPV	Books Bruna	Underwear H&M
	UPV	Books Van Stuckum	Underwear Into U

EV: E-commerce as a vendor, FPV: Familiar Partner as a Vendor, UPV: Unfamiliar Partner as a Vendor

Figure 2 Experimental research design 3 x 2

The study will focus mainly on examining the effect of these six treatments on the three dependent variables, product evaluation, purchase intention, and brand trust (platform).

3.2 Design of stimulus materials

Before the main study, 28 participants took part in a pre-test to identify proper treatment stimulus and a proper e-commerce platform. The pre-study's objective was to identify an e-commerce platform that can act as a direct vendor (EV) for the main study and find two clear product categories, one congruent and one incongruent.

The three e-commerce platforms that were studied were Bol.com, Amazon, and Coolblue. First, we wanted to understand which e-commerce platforms are familiar. To establish this, the following question was asked: "Please rate how well you know the companies mentioned below". This question was measured on a 5-point Likert scale, ranging from very unknown (1) to very known (5).

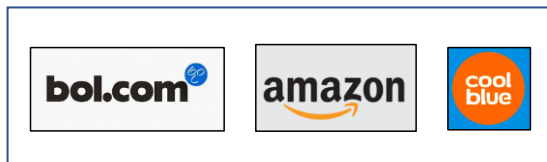


Figure 3. Possible e-commerce platforms for the main study

Afterward, we wanted to understand which product groups are perceived as congruent or incongruent product categories within the three e-commerce platforms. This was determined with help of the two following questions "Please indicate the degree to which you think the product below fits the product assortment of Bol.com" and "to what extent do you associate Bol.com with the product category books". This was questioned for all three e-commerce platforms, and both questions were measured on a 5-point Likert scale, which ranged from not at all (1) to a great deal (5).

In table 2, an overview of the results are given. Based on these findings, a one-sample test was conducted to understand the best possible e-commerce platform and product categories for the main study. The results showed that Coolblue does not have a product category that can act as a congruent product category. The product category computer, which could've served as a congruent product category, did not have a significant p-value, based on a test value = 3; therefore, Coolblue was not further investigated.

Table 2. Evaluation of product congruency per e-commerce platform

	CoolBlue	Bol.com	Amazon
Books ^{a,b & c)}	M = 1.77 / SD = 1.22	M = 4.66 / SD = 0.72	M = 4.29 / SD = 1.06
Music ^{a,b,c)}	M = 2.32 / SD = 1.29	M = 2.80 / SD = 1.26	M = 3.14 / SD = 1.20
Computer ^{a,b & c)}	M = 3.45 / SD = 1.36	M = 3.66 / SD = 1.23	M = 3.86 / SD = 1.07
Underwear ^{a,b & c)}	M = 1.23 / SD = 0.62	M = 1.61 / SD = 0.91	M = 2.14 / SD = 1.37

a) 5-point likert scale (1=strongly disagree / 5=strongly agree)

b) N = 28

c) Test Value = 3

For the Bol.com e-commerce platform (Books, t = 12.19, p = 0.00 | Underwear, t = -2.19, p = 0.00) and Amazon (Books, t = 6.43, p = 0.00 | Underwear, t = -3.30, p = 0.00), books and underwear were revealed as significant product categories, with a p-value < 0.05 for both product categories. The most extreme difference was present within the product category books (M= 4.66, SD= 0.72) and underwear (M= 1.61, SD= 0.91) for the Bol.com e-commerce platform. However to decide which e-commerce platform will be selected for the main study, it was important to not only make sure to have clear congruent and incongruent product categories, but also that they are known companies.

To determine this, the following questions was used to determine the e-commerce platforms familiarity “Please rate how well you know the companies mentioned below”. This questions was measured on 5-point Likert scale , which ranged from very unknown (1) to very known (5). The result showed that Bol.com (M= 4.64, SD=0.83), and Amazon (M= 4.46, SD= 0.88, thus Bol.com was slightly more familiar then Amazon. Based on these results and also that the questionnaire was sent mostly to the Dutch participants, Bol.com was selected as e-commerce platform for the main study.

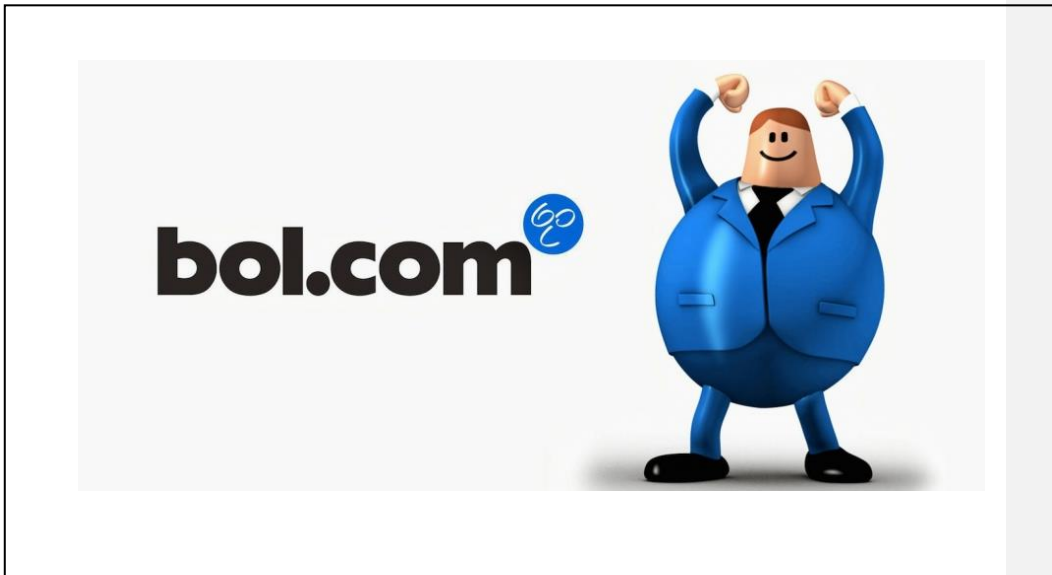


Figure 4. Chosen e-commerce platform for the main study

Next, it was important to have familiar companies for the congruent and incongruent product category, which was determined with the following two questions, “Please rate how well you know the companies mentioned below” and “Please indicate the degree to which you think the product below fits the product assortment of Bruna”. Both questions were measured on a 5-point Likert scale, ranging from not at all (1) to a great deal (5). The average of the two-item was used to determine how familiar do the participants know the vendor. Below in figure 7, an overview of the results is given.

Table 3. Evaluation of possible product category brands for main study

		Vendors Knowledge
Books	Bruna ^{a & b)}	M = 3.82 / SD = 0.86
	Paagman ^{a & b)}	M = 2.04 / SD = 1.20
Underwear	Wehkamp ^{a & b)}	M = 3.82 / SD = 1.28
	H&M ^{a & b)}	M = 4.61 / SD = 0.88

a) 5-point likert scale (1=strongly disagree / 5=strongly agree)

b) N = 28

c) Test Value = 3

With the help of a one-sample test, with a test value 3, the results showed that H&M ($t = 9.72, p = 0.00$) is the best option for the incongruent stimulus and Bruna ($t = 5.04, p = 0.00$) for the congruent stimulus since they are perceived as more familiar by the participants.

Lastly, it is also essential to have two unfamiliar vendors. This was necessary due to the pre-summed positive impact of a familiar brand. After a quick online search, two random local Dutch vendors were assigned as unfamiliar vendors for both product types.

The pre-test results showed a significant difference between books and underwear within the bol.com e-commerce platform. The product category book is perceived as a congruent product category and underwear as an incongruent product category (fig.3). Hereby, H&M was assigned to the underwear, as an incongruent variable and Bruna to the book, as a congruent variable. The pre-test also defined the incongruent vendor types, familiar and unfamiliar partner vendors that will be used for the main study. For the incongruent product category, the vendor 'Into U' was assigned to the unfamiliar partner vendor and 'Van Stockum' for the congruent product category.

Below an overview of the treatment groups that will be used for the main study. All treatment materials have the same price, website design on both pages. The only difference was the product being sold and the vendor's brand that is selling the product.

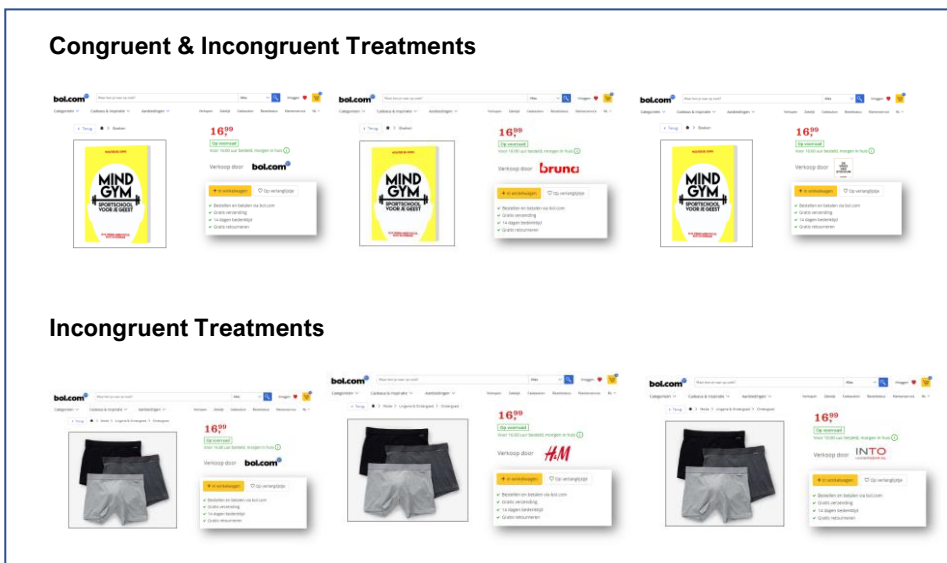


Figure 5. Overview of the six treatment stimuli

3.3 Procedure

The online experiment with questionnaire was distributed via facebook, email, and LinkedIn, and the survey tool Qualtrics was used to create, distribute and collect data. The participants were asked to give consent on data processing, thus how the data would be treated. After that, the participants were instructed to fill in their demographic information and their online shopping behavior. Next, the participants were shown the homepage of Bol.com to create context and imagine the scenario.

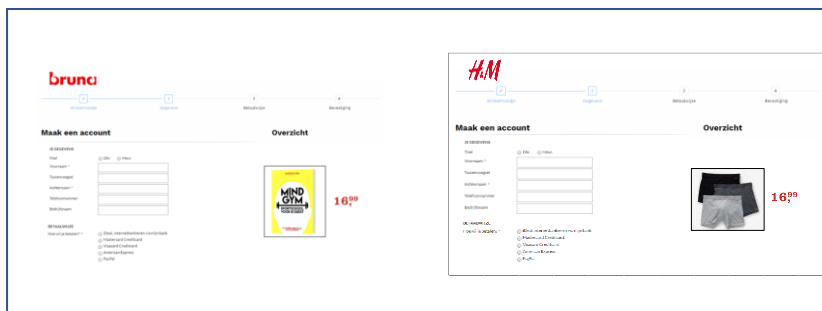


Figure 6. Overview of the payment page of treatment stimuli

After that, the buying experience was introduced by illustrating one of the six treatments (see figure 4), which were all randomly assigned. A second website page (figure 8) was then introduced, the payment page, to elicit more cues to where the product is being bought from. The purpose of the second page was also to make the online shopping experience more realistic for the participants.

3.4 Measures

This section will describe how the measures were created for the moderators, mediator, and dependent variables. In this study, the ease of fluency served as a mediator to understand the possible mediation effect it could elicit on consumers responses.

Below in table 4, an overview of the factor analysis shows the items' reliability within a construct and how the items correlate with assessing a specific construct.

Table 4. Factor Analysis

Factor Analysis - Rotated Componenten Matrix	Factor					
	1	2	3	4	5	6
<i>Scale items</i>						
Purchase_intention 2	0.79					
Product_evaluation 3	0.78					
Purchase_intention 1	0.77					
Purchase_intention 3	0.77					
Product_evaluation 2	0.75					
Product_evaluation 1	0.72					
Brand_trust 1		0.83				
Brand_trust 2		0.81				
Brand_trust 3		0.67				
Vendor_trust 1		0.58				
Privacy_concern 2			0.90			
Privacy_concern 3			0.87			
Privacy_concern 1			0.65			
Easy_of_Fluency 1				0.80		
Easy_of_Fluency 2				0.79		
Easy_of_Fluency 3				0.72		
Vendor_trust 2					0.84	
Vendor_trust 3					0.77	
Product_involvement 2						0.87
Product_involvement 1						0.87
Explained variance:	22.40%	12.40%	9.4%	8.80%	7.60%	5.30%
Eigenvalues:	4.7	2.6	1.9	1.9	1.6	1.2

The rotated component matrix results show that product evaluation and the purchase intention items are measuring a similar construct. A possible cause is that the questions in product evaluation items that are somewhat the same questions used in the purchase intention items. To create a reliable and discriminant construct, the new construct product attitude was devised.

Product attitude

The product evaluation and purchase intention items have been combined to create a new construct, product attitude. An attitude is a summary of assessments done before the intention phase (Nancy Spears & Surendra N. Singh, 2004). The construct measures participants' willingness towards the purchase and the value of a product category. This was measured with a self-developed construct, using six items on a 5-point Likert scale. The six items formed a reliable Cronbach's Alpha of $\alpha = 0.85$. An example item of the item is "I would consider buying the product ". The measurement scale was based on a 5-point Likert scale from strongly disagree (1) to strongly agree (5). For the hypothesis, all product evaluation and purchase intention hypothesis will be merged to the letter d ($a + b = d$).

Brand trust (platform)

A self-constructed scale was used, with three items on a 5-point Likert scale, to measure the trust towards the bol.com e-commerce platform. The three items formed a reliable Cronbach's Alpha of $\alpha = 0.77$. An example item of the item is "Bol.com seems like a safe e-commerce platform". The measurement scale was based on a 5-point Likert scale from strongly disagree (1) to strongly agree (5).

Product involvement

A self-constructed measure was created to understand participants' interest in a certain product category, using three items on a 5-point Likert scale. A Cronbach's Alpha test showed that 1 item was not consistent with the other items. With this, the following item was deleted "I like to buy the latest style of underwear", to form a reliable two-item scale, with a Cronbach's Alpha of $\alpha = 0.77$. An example of the item is "I am selective regarding the type of underwear I buy ". The measurement scale was based on a 5-point Likert scale from strongly disagree (1) to strongly agree (5).

Vendor Trust

Vendor trust was measured to understand the role of unfamiliarity. Vendor trust was also measured with three items derived from. The three items used were based on a 5-point Likert scale, with a reliable Cronbach's Alpha of $\alpha = 0.79$. An example of an item is "The vendor seems like a safe company ". The measurement scale was based on a 5-point Likert scale from strongly disagree (1) to strongly agree (5).

Privacy concern

Privacy concern was measured in order to understand participants' general privacy concerns towards online shopping. A self-constructed scale was used for the privacy concern construct, with three items on a 5-point Likert scale. Three items were used, which formed a reliable Cronbach's Alpha of $\alpha = 0.78$. An example item of the item is "In general I am concerned about paying online ". The measurement scale was based on a 5-point Likert scale from strongly disagree (1) to strongly agree (5).

Ease of Fluency

Ease of fluency was measured to understand how fluent participants process the stimuli. This question was asked directly after the first treatment stimuli. Hereby the three items formed a reliable scale $\alpha = 0.70$. An example of one of the items is "I found the buying process clear". The measurement scale was based on a 5-point Likert scale from strongly disagree (1) to strongly agree (5).

Due to the development of a new construct, a new research model and hypothesis was formed. The product evaluation and purchase intention items were merged to create a new construct, product attitude. Hereby the research model and hypothesis have been altered. In appendix A the new research model can be found.

3.5 Participants

From the 294 participants that participated in the questionnaire, 67 were excluded, because they did not finish the questionnaire. Thus, the study's and the analysis is based on the output of 227 participants, which were randomly divided into the six treatment groups.

For the remainder of the participants, multiple analysis where done in order to understand their characteristics. First, we analyzed the age group, which was well distributed between the six groups.

Table 5. Age group distribution per stimuli

Distribution of Age

	Age	
	Mean	SD
Underwear - Into U	32.12	8.73
Underwear - H&M	31.43	8.44
Underwear - Bol.com	31.02	6.41
Books - Van Stockum	31.35	5.24
Books - Bol.com	31.92	6.84
Books - Bruna	31.78	5.49

N = 227

This was determined by a One-Way ANOVA test, which showed that the average age ($m = 32$, $SD = 7$) did not significantly differ with a p -value > 0.05 between the six treatment groups ($F = 0.85$, $p = 0.995$).

The distribution among gender was also investigated with the help of a Chi-square test. In table 6, the results are shown. The test resulted in (Pearson Chi-Square = 10.300, $p = 0.07$) a p-value greater than ($\alpha = 0.05$), which means that there is not enough evidence to suggest an association between gender and the six treatment groups.

Table 6. Gender distribution per stimuli

Distribution of Gender

	Gender	
	Male	Female
<i>Statistical evidence</i>		
Underwear - Into U	27%	73%
Underwear - H&M	38%	62%
Underwear - Bol.com	18%	82%
Books - Van Stockum	39%	61%
Books - Bol.com	51%	49%
Books - Bruna	36%	64%

N = 227

The impact of how active participants are online was also examined. Hereby a One-Way ANOVA test was conducted. The results showed that the average online activity (Average Online Activity= 3.60, SD= 0.89) had no significant difference between the six treatment groups, with a p-value greater than ($\alpha = 0.05$). Therefore there is no evidence to suggest an association ($F = 1.128$, $p = 0.346$).

4. RESULTS

This chapter elaborates on the most important finds of the research. First off we a manipulation check was done to see if the pre-study stimuli's worked in the main study. After that, the main effects and the impact of congruency were explored with the help of a MANOVA analysis. The Wilks' Lambda was used to measure the variance of the dependent variables not explained by the differences in the independent variables. To understand the difference between the related groups, an ANOVA was performed. The ANOVA results will provide more detailed information about the effects of the single dependent variables.

4.1 Manipulation Check

The results of table 7 shows if the manipulation have the intended effect within the main study. This is important in order to understand the reasons why a manipulation may have failed to influence the dependent variable.

Table 7. Manipulation Check per stimuli

Manipulation Check		
	False	True
Books - Bol.com	4	31
Books - Bruna	4	32
Book - Van Stuckum	11	29
Underwear - Into U	7	37
Underwear - H&M	3	35
Underwear - Bol.com	2	32
Total	31	196

The result shows that not all manipulation worked. This means, that even though the stimuli showed that the vendor of a product was for example Bruna, they selected another vendor as the seller of the product.

Next, a few questions were presented in the main studies questionnaire as manipulation checks to check the manipulation that were determined in the pre-study. The following two (example) questions were asked: “Please indicate the degree to which you think the product category book fits the product assortment of Bol.com,” and “Please indicate the degree to which you think the product category underwear fits the product assortment of Bol.com”. This question was asked for Bol.com, Bruna & H&M to see how consumers respond towards how these brands fit within the given product categories.

Table 8. Product congruency level per brand

	<i>Bol.com</i>	<i>Bruna</i>	<i>H&M</i>
Books ^{a,b & c)}	M = 3.97 SD = 0.92	M = 4.17 SD = 0.96	M = 1.91 SD = 0.86
Underwear ^{a,b & c)}	M = 2.12 SD = 1.01	M = 1.96 SD = 0.89	M = 4.05 SD = 0.63

a) 5-point likert scale (1=strongly disagree / 5=strongly agree)

b) N = 227

c) Test Value = 3

Table 8 shows that the product category books can act as a congruent product category for Bol.com and Bruna. Product category underwear as suspected, can act as a incongruent product category for Bol.com and a congruent product category for H&M. With help of a one-sample test, based on a test value = 3, the results confirm that for Bol.com (books, $t = 5.73$, $p = 0.00$ | underwear, $t = -1.78$, $p = 0.00$) and for Bruna (books, $t = 6.41$, $p = 0.00$ | underwear, $t = -2.42$, $p = 0.00$) that product category books can act as the congruent option..

For the H&M (books, $t = -2.50$, $p = 0.00$ | underwear, $t = 6.72$, $p = 0.00$) there is also a significant difference between the two product categories. The result shows that for H&M, underwear can act as the congruent option.

Next, we wanted to test the consumer's familiarity level with the vendors.

Table 9. Familiarity of vendors

Vendors Knowledge	
Bol.com ^{a,b & c)}	M = 4.11 SD = 0.96
H&M ^{a,b & c)}	M = 4.24 SD = 0.81
Van Stockum ^{a,b & c)}	M = 1.58 SD = 1.20
Bruna ^{a,b & c)}	M = 3.98 SD = 0.71
Into U ^{a,b & c)}	M = 1.82 SD = 1.28

- a) 5-point likert scale (1=strongly disagree / 5=strongly agree)
- b) N = 227
- c) Test Value = 3

The result shows that the vendors for the EV and FPV are known with the respondents. With the help of a one-sample test, with a test value 3, the results showed that Bol.com (t = 5.93, p = 0.00), H&M (t = 6.72, p = 0.00) and Bruna (t = 5.64, p = 0.00)

The two unfamiliar vendors that were randomly selected, appear to be relatively unknown. With the help of a one-sample test, with a test value 3, the results showed that Van Stockum (t = -5.72, p = 0.00), Into U (t = -4.45, p = 0.00),

Based on these findings, we can conclude that the manipulation acted the sought stimulus within the main study.

4.2 Main effects

For the manipulation check, the results in table 9 show no visible differences for product attitude and brand trust (platform) between the three types of vendors.

Table 10. Results of the dependent variables per stimuli groups

Descriptive statistics of the dependent variables

		Congruent		Incongruent		Total
		Mean	SD	Mean	SD	
EV	Product Attitude ^{a)}	3.24	(0.60)	3.25	(0.69)	3.25
	Brand Trust (Platform) ^{a)}	3.80	(0.72)	4.01	(0.55)	3.91
FPV	Product Attitude ^{a)}	3.38	(0.49)	3.15	(0.69)	3.27
	Brand Trust (Platform) ^{a)}	3.69	(0.50)	3.98	(0.55)	3.84
UPV	Product Attitude ^{a)}	3.32	(0.66)	3.22	(0.73)	3.27
	Brand Trust (Platform) ^{a)}	3.93	(0.50)	3.79	(0.54)	3.86
Total	Product Attitude ^{a)}	3.32	(0.57)	3.22	(0.73)	
	Brand Trust (Platform) ^{a)}	3.81	(0.59)	3.94	(0.54)	

a) 5-point likert scale (1=strongly disagree / 5=strongly agree)

Looking at table 10, with help of the mean scores, it is noticeable there are not many differences between the means scores. It is noticeable that there is no extreme scores between the three vendors types and the two product categories. Consumers' product attitude from an incongruent (FPV & UPV) vendor type seems to be slightly more beneficial from a congruent product category (book) than an incongruent product category (underwear).

The total rows for the congruent and incongruent product categories show some difference, specifically brand trust (platform). It seems higher for the incongruent product category (underwear) than for the congruent category (book). This is a surprise and opposed to our expectations because we expected that a congruent product category would positively impact Bol.com's e-commerce brand.

For product attitude, a congruent product category (book) has a more beneficial response; however, the differences are minimal. Oddly, for product attitude and brand trust (platform), the combination of a congruent vendor type (EV) and congruent (book) product category does not have a positive impact on consumer responses.

The next step is to see if there is any effect based on analysis of variance. To analyze the independent variables' main effects on the dependent variables, a MANOVA was performed to determine if the response variables are altered by the observer's manipulation of the independent variables. The results in table 8 will provide a general indication of the main and interaction effects and possible moderating effects.

Table 11. GLM / MANOVA

Multivariate test for variance (GLM / MANOVA)

Multivariate Tests	F-value	Sig.
<i>Wilks' Lambda</i>		
Vendor type	0.98	0.49
Product category	0.90	0.00
Vendor type * Product category	0.92	0.04
Privacy concern	0.96	0.02
Product involvement	0.99	0.89
Vendor trust	0.88	0.00

Table 11 shows that type of vendor ($f = 0.98$ $p = 0.49$) does not have a significant effect on consumer responses. For the independent variable product category ($f = 0.90$ $p = 0.00$) this was however significant.

Table 11 also demonstrates that the moderator privacy concern ($f = 0.96$ $p = 0.02$) and vendor trust ($f = 0.88$ $p = 0.00$) are significant, however, this is not the case for the moderator product involvement ($f = 0.99$ $p = 0.89$). Based on these findings, we can refute hypothesis H2-D, H3-C, H6-c, H6-d, H7-c, H7-d

To better understand the effect of both independent variables towards the single dependent variable, an ANOVA was performed.

Table 12. ANOVA – Vendor type and product category

ANOVA

Test of between subjects design effects		F-value	Sig.
<i>Vendor type</i>			
	Product Attitude ^{a)}	0.60	0.46
	Brand Trust (Platform) ^{a)}	0.49	0.33
<i>Product category</i>			
	Product Attitude ^{a)}	0.99	0.11
	Brand Trust (Platform) ^{a)}	2.76	0.00

a) 5-point likert scale (1=strongly disagree / 5=strongly agree)

The results of the MANOVA in table 12 shows that the type of vendor does not significantly impact on product attitude (f= 0.60 Sig= 0.46) and neither on brand trust (f= 0.49 Sig= 0.33).

The result of the ANOVA analysis in table 1 shows that the product category does not have a direct effect on product attitude (f= 0.99 Sig= 0.11), but for brand trust (platform) (f= 2.76 Sig= 0.00), this is significant. The directionality of the effect can be seen in table 10, which is a negative direction. The congruent product category has a lower mean than the incongruent product category. This means that the level of product category congruency negatively influences brand trust (platform), which is contradictory to what we would have expected. It was expected that congruency between bol.com e-commerce platform and a congruent (book) product category would positively impacted consumers responses towards the bol.com e-commerce brand.

4.2 Interaction Effect

The interaction effect between the two independent variables was tested to see if the six stimuli manipulate them. The MANOVA in table 10 showed that the interaction effect type of vendor*product category is significant. This suggests that the combination of the two independent variables within the Bol.com e-commerce platform can significantly impact the dependent variables.

In table 13, the results of interaction effects on the single dependent variables are given with the help of an ANOVA analysis.

The interaction between the vendor type * product category ($f= 0.92$ $p= 0.04$) is also significant. Based on these findings, we can refute hypotheses H1-c, H1-d, and H3-d.

Table 13. ANOVA – Interaction vendor type * product category

ANOVA			
Test of between subjects design effects		F-value	Sig.
Vendor type * Product category			
	Product Attitude ^{a)}	1.57	0.13
	Brand Trust (Platform) ^{a)}	1.88	0.02

a) 5-point likert scale (1=strongly disagree / 5=strongly agree)

The ANOVA result indicates that the interaction effect between vendor type * product category does not have a significant impact on product attitude ($f= 2.04$ $Sig= 0.13$). However, for brand trust (platform) ($f= 4.26$ $Sig= 0.02$), this is significant. To see the directionality of the effect of both dependent variables, two interaction plots was created.

In figure 7, an interaction plot was created to show the impact of the interaction between vendor and product congruency on product attitude.

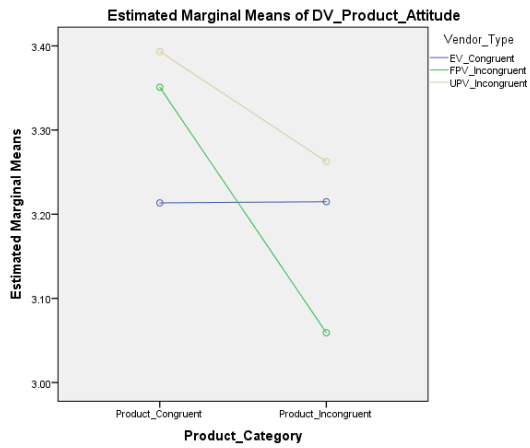


Figure 7. Product attitude means based on the interaction of product and vendor congruency

The result showed that consumers respond slight favorably towards product attitude for both incongruent vendor types if a congruent (book) product category is being sold. For the congruent vendor type (EV), there is no apparent difference in consumer responses towards product attitude between a congruent (book) and incongruent (underwear) product category. The directionally of product attitude towards the product category congruency level is positive. However, as mentioned before, not significant.

In figure 8, an interaction plot was created to understand the directionality of the effect of the interaction between vendor and product congruency on brand trust (platform).

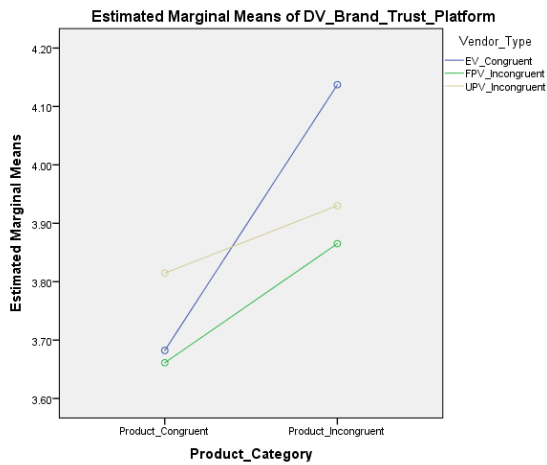


Figure 8 Brand trust (platform) means based on the interaction of product and vendor congruency

Figure 8, reveals that brand trust (platform) for all vendor types score slight higher on incongruent (underwear) product category in comparison with the congruent (book) product category. These results indicate that the directionally of the effect of a congruent (book) product category does not produce a favorable impact on consumer responses on brand trust (platform). Based on these findings, we can reject hypothesis H2-c.

4.3 Effects of Moderators

Next, we would like to understand if there any moderator interactions. Table 13 will reveal the possible moderator interactions between product category and the two potential moderators privacy concern and vendor trust.

Table 14. Overview of moderator interactions

Multivariate test for variance (GLM / MANOVA)

Multivariate Tests	F-value	Sig.
Wilks' Lambda		
Product category * Privacy concern	0.98	0.15
Product category * Vendor trust	0.95	0.01

The results in table 14 demonstrate that the moderator interaction product category * privacy concern ($f= 0.98$ $p= 0.18$), is not significant. For the moderator interaction product category * vendor trust ($f= 0.95$ $p= 0.01$), this is significant, which means that product category * vendor trust can moderate the effect on the dependent variables. Hypotheses H4-c, H4-c, H6-c. H6-d, H7-c and H7-d are rejected based on these findings.

In subsequent table 15 an overview is given about the possible moderator interactions on the single dependent variables.

Table 15. Moderator interaction on the dependent variables

ANOVA

Test of between subjects design effects		F-value	Sig.
<i>Product category * Privacy concern</i>			
	Product Attitude ^{a)}	0.01	0.86
	Brand Trust (Platform) ^{a)}	0.67	0.09
<i>Product category * Vendor trust</i>			
	Product Attitude ^{a)}	0.70	0.18
	Brand Trust (Platform) ^{a)}	1.34	0.02

a) 5-point likert scale (1=strongly disagree / 5=strongly agree)

Table 14, shows that product category * privacy concern that there is on product attitude ($f= 0.01$ $p= 0.86$), however some trending effect toward brand trust (platform) ($f= 0.67$ $p= 0.09$) however, as mentioned before not significant. An interaction plot was created to understand the moderating interaction effects.

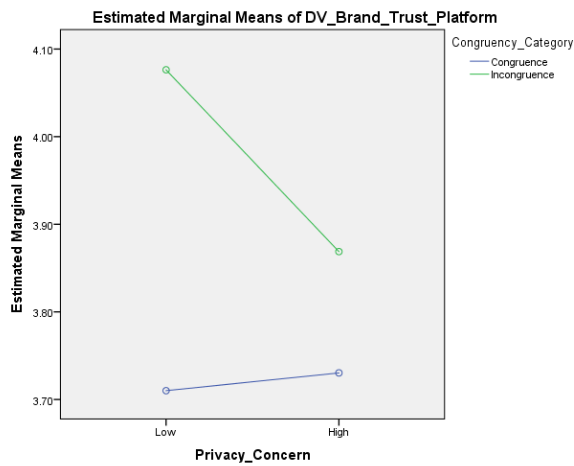


Figure 11. Brand trust (platform) mean on the interaction of privacy concern and product congruency.

The result demonstrates that the level of privacy concern has a negative effect on brand trust (platform), when an incongruent (underwear) product category is being purchased, however marginally.

For the product category * vendor trust moderation interaction, there was no significant effect towards product attitude ($f= 0.70$ $p= 0.18$), however for brand trust (platform) ($f= 1.34$ $p= 0.02$), this was significant. As a result of this hypothesis, H8-d and H9-d can be rejected.

To understand the moderating interaction effect on brand trust (platform) an interaction plot was created.

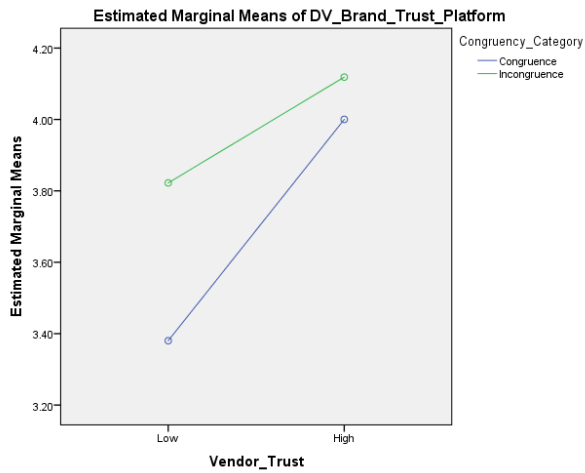


Figure 12. Brand trust (platform) mean on the interaction of vendor trust and product congruency.

The result shows that the level of vendor trust will positively impact consumers' responses towards brand trust (platforms). This is the case for the congruent (book) and incongruent (underwear) product categories. For the congruent (book) product category, the effect is slightly stronger than for an incongruent (underwear) product category; however, a high vendor trust is beneficial for both product categories. Hypotheses H8-c can be accepted, and H8-d refuted.

4.4 Mediation Effects

Next, we would like to understand if there is a possible mediation effect. Based on the MANAVO results in table 10, we can assume that there is a possibility since the independent variable product category ($f= 4.26$ $p= 0.00$ and the dependent variable brand trust (platform) ($f= 4.26$ $p= 0.00$) are significant. As a result of this, we can reject hypotheses H10-d, H11-c, and H11-d.

For the mediation analysis, there are three assumptions to be explored. Assumption one, that there is a direct effect of the independent variable product category on brand trust (platform). Assumption two, is that there is a direct effect between product category and ease of fluency. Assumptions three, presumes that there is a direct effect of ease of fluency on brand trust (platform).

With help of the Hayes process, the SPSS plug-in was used to help explore if ease of fluency mediates the effect of product category on brand trust (platform).

Table 16. Overview of the effect of the moderator interactions on the dependent variables

Correlations		Product category	Brand trust (platform)	Ease of fluency
Product category	<i>Pierson corr.</i>	1	0.12	-0.28
	<i>Sig.</i>		0.08	0.00
Brand trust (platform)	<i>Pierson corr.</i>	-0.12	1	0.20
	<i>Sig.</i>	0.08		0.00
Ease of fluency	<i>Pierson corr.</i>	-0.28	0.20	1
	<i>Sig.</i>	0.00	0.00	

The results indicate that there is a direct effect of product category and ease of fluency ($f=-0.28$, $p= 0.00$) and direct effect of ease of fluency on brand trust (platform) ($f=0.20$, $p= 0.00$). Thus, assumption two and three are hereby met. However this is not the case for assumption one ($f=0.12$, $p= 0.08$).

This is not what we would have expected since in the MANOVA (table 11) product category had a significant effect on brand trust (platform). We need to however take into consideration that the MANOVA model takes into consideration multiple independent variables and moderators to indicate the effects on the dependent variables.

To have a better understanding, a regression analysis was conducted to understand if independent variable product category and ease of fluency can act as a predictor on brand trust (platforms).

Table 17. The mediating effect of ease of fluency based on a regression analysis

Model Summary	<i>R</i>	<i>R square</i>	
<i>Model</i>	1	0.27 ^{a)}	0.07

a. Predictors: (Constant), Ease_of_Fluency, Congruency_Category

COEFFICIENTS^{a)}			
	<i>Beta</i>	<i>t</i>	<i>Sig.</i>
Constant		7.75	0.00
Product category	0.19	2.81	0.01
Ease of fluency	0.26	3.82	0.00

a. Dependent variable: DV_Brand_Trust_Platform

Based on the analysis in table 17, we can say that there is no evidence that ease of fluency has a mediating role. The beta value for product category (b= 0.19, p= 0.01) and ease of fluency (b=0.26, p=0.00) shows that both are significant predictors. This suggests that the consumer's responses towards the brand trust (platform) are not influenced when ease of fluency is added within the model as a predictor. We cannot conclude that ease of fluency has a mediating role towards brand trust (platform). Based on these findings, hypotheses H10-c can be rejected.

In table below, there is an overview of the results of the hypothesis

Table 18. Result of hypothesis

Hypothesis result		
H1-d	<i>Product attitude of vendors that are congruent with the e-commerce platform will result in more favorable product evaluation as compared to vendors that are incongruent with the e-commerce platform.</i>	Reject
H2-d	<i>Product attitude of product categories that are congruent with the e-commerce platform will result in more favorable product attitude as compared to the product categories that are incongruent with the e-commerce platform.</i>	Reject
H3-d	<i>The combination of a product category and a vendor type that are congruent with the e-commerce platform will result in the most favorable response on product attitude</i>	Reject
H1-c	<i>Brand trust (platform) of vendors that are congruent with the e-commerce platform will result in more favorable brand trust (platform) as compared to vendors that are incongruent with the e-commerce platform.</i>	Reject
H2-c	<i>Brand trust (platform) of product categories that are congruent with the e-commerce platform will result in more favorable brand trust (platform) as compared to the product categories that are incongruent with the e-commerce platform.</i>	Reject
H3-c	<i>The combination of a product category and a vendor type that is congruent with the e-commerce platform will result in the most favorable response on brand trust (platform).</i>	Reject
H6-d	<i>The level of product involvement will positively moderate the effect of product category congruence on product attitude</i>	Reject
H6-c	<i>The level of product involvement will positively moderate the effect of product category congruence on brand trust (platform).</i>	Reject
H7-d	<i>The level of product involvement will positively moderate the effect of vendor type congruence on product attitude</i>	Reject
H7-c	<i>The level of product involvement will positively moderate the effect of vendor type congruence on brand trust (platform).</i>	Reject
H8-d	<i>The level of vendor trust will positively moderate the effect of product category congruence on product attitude</i>	Reject
H8-c	<i>The level of vendor trust will positively moderate the effect of product category congruence on brand trust (platform).</i>	Accept
H9-d	<i>The level of vendor trust will positively moderate the effect of vendor type congruence on product attitude</i>	Reject
H9-c	<i>The level of vendor trust will positively moderate the effect of vendor type congruence on brand trust (platform).</i>	Reject
H10-d	<i>Processing fluency will mediate the effect of (product category) congruency on product attitude</i>	Reject
H10-c	<i>Processing fluency will mediate the effect of (product category) congruency on brand trust (platform).</i>	Reject
H11-d	<i>Processing fluency will mediate the effect of (vendor type) congruency on product attitude</i>	Reject
H11-c	<i>Processing fluency will mediate the effect of (vendor type) congruency on brand trust (platform).</i>	Reject

5. DISCUSSION

In this section the results of the study will be further elaborated. Consequently the main findings and the theoretical contribution and recommendations, after that the limitation and suggestions for future research. The chapter ends with the conclusion of the thesis.

5.1 Main Findings

The main purpose of this research was to answer the three research questions. For research questions 1, does congruency between the e-commerce platform and the type of vendor impact consumer responses favorably? And if the vendor type is incongruent, does familiarity with the vendor affect consumer responses? The results have shown no difference in influence between the three types of vendors on the dependent variables. Noteworthy is that consumers' responses on product attitude for the partner vendors (FPV & UPV) were higher than for EV.

For research question two, it was important to understand if congruency between the e-commerce platform and the product category impact consumer responses favorably? The results showed that this is not the case. Even though the congruent (book) product category has a more positive impact on product attitude than an incongruent (underwear) product category, this was not significant. For the effects of product category on brand trust (platform), we can conclude that the perceived match of a product category with the Bol.com e-commerce platform influences consumers' trust towards the bol.com brand. However, contrary to our expectation, a congruent product category affects brand trust (platform) negatively. It was expected that a congruent product category would have a more beneficial impact on Bol.com's e-commerce brand. McDaniel (1999) illustrated that companies should only sell product categories congruent with the perceived product schema due to the various emotional and cognitive consequences that can be triggered, thus the above mentioned findings are not supported in literature. However, it can be the case that consumers perceive the offering of extra product categories as a valuable service that bol.com e-commerce platforms offer.

For research question three, it was essential to determine if the specific combination of a congruent product category with congruent vendor type results in the most favorable consumer responses. Interestingly the combination of a congruent vendor type (EV) with a congruent (book) product category did not have the most favorable responses on either of the dependent variable. This was not expected since, based on literature, the most congruent state should elicit favorable consumer responses. This is also not supported in the literature, Keller and Sood's (2003) study on the effects on congruency showed that we are susceptible to congruent stimuli that we have previously learned and that we prefer congruent options. The interaction effects showed that an interaction between the vendor type * product category was significant. This was the case for the independent variables brand trust (platform). With the help of an interaction plot, it was demonstrated that the directionality of the interaction effect was, however, negative. Thus the combination of a congruent (book) product category, with any vendor type, would decrease consumers' responses towards brand trust (platform). This is also contrary to our expectation since it was expected that a congruent state would positively impact the dependent variables.

Next, the results indicated that the moderation interaction effect product category * privacy concern had some slight influence on the brand trust (platform), however not significant. The result however did show a negative trending effect on brand trust (platform), when the level of privacy concern is high. This is observable when an incongruent (underwear) product category is being purchased, however marginally. For the moderation interaction product congruency * vendor trust, a significant effect was found towards brand trust (platform). With the help of an interaction plot, we have determined a positive directivity for both product categories (book and underwear). Thus, hereby can be concluded that the level of vendor trust has an overall beneficial effect on Bol.com's brand trust. Lastly, the study also suggests a strong probability of ease of fluency acting as a mediator. With the help of regression analysis, it was established that there is no evidence that ease of fluency mediates the effect of congruency on brand trust (platform). Since the results cannot conclude that a direct effect of product category is reduced, when ease of fluency is added to the analysis to predict brand trust (platform).

5.2 Theoretical contribution

Previously, studies about congruency showed the consequences when the lack of congruency is present, which may interfere with consumer's ability to process information (Mandler, 1982). This study expands its literature of congruency within a e-commerce domain, which is more complex, since it a complicated phenomenon between individuals and technological agents (Wang et al. , 2009). The findings of this study are a contribution to the current literature in the area of congruency and role of having trustworthy partner vendors within e-commerce domain. The study showed that vendor trust has an overall positive effect on the independent variables, regardless of the product category's congruency level. Acknowledging Knowg et al (2016), who demonstrated that the level of trusts, will increase consumers willingness to rely on a brand, which lowers consumer uncertainty, which often is an concern for consumers when shopping online. The results also indicated the importance of privacy concern, even though this was not significant within this study, it shows that a high privacy concern, leads to less favorable consumer response towards brand trust (platform) when purchasing a incongruent product category. This is in line with Solove (2006), he argued that inconsistency can trigger privacy concern, to which could lead to losing trust in a company.

5.3 Practical recommendation

While the results of the current study can contribute to the scientific and research field, the outcome of the study can also be used as possible recommendations for e-commerce platforms. First of all, the main practical implication of this study is importance of having partner vendors that have a certain degree of trust. The result of this study suggest vendor that have a high vendor trust, have a beneficial impact on Bol.com's brand trust. Privacy concern also is noteworthy to add. When selling incongruent product category, it is might be beneficial to know if a consumer level of privacy concern, since it would have an impact on how consumers perceive the bol.com brand. Besides the positive effects, this study failed to address the overall effect of congruency on the dependent variables. The most congruent state, a congruent product category with congruent vendor type did not result in most favorable consumer responses.

This is contradictory towards our expectation, since we expected that a congruent state would positively influence and elicit a helpful biased consumer response (Van Rompay, de Vries & Van Venrooij, 2007).

5.4 Limitation and suggestion for future research

There are a few limitations within this study. An example limitation is that respondents were not asked about how familiar they are with e-commerce platforms or have knowledge that bol.com now operates as an e-commerce platform. Thus the availability of multiple types of vendors and the awareness of the possibility of incongruent product categories being sold. This leads to another limitation: within the bol.com e-commerce platform, it is not always apparent who the vendor is. It is not very evident during a purchase. Hereby extra effort was put to elicit the vendor's brand, with the help of the second purchase page. The extra payment page aimed to enhance the vendor's logo to clarify where the product is being purchased from. Some respondents did not recognize the actual vendor of the product that is bought from, which was determined by the manipulation check. However, we cannot underestimate the respondents' lack of detailed attention or motivation not to recognize the product's actual vendor.

The study highlights the positive effect of having a partner vendor with a high vendor trust. It would be interesting to know the impact on the bol.com brand if the vendor had negative traits, such as negative vendor trust. In literature, past research has coined the term image transfer. Glogger (1999) explained that image transfer is the creation of new associations that have not been linked yet. Or the act of reinforcing existing associations with the help of transferable traits. Companies often use famous athletes to leverage the popularity and positive attributes, which can then be transferred to the company's brand (Van Rompay, De Vries & Van Venrooij, 2007). It might be interesting to know if negative vendor traits can be transferred to the bol.com brand. Such as the negative experience posted on the Radar website. This will make the selection of partner vendors, for e-commerce platform more vital.

5.5 Conclusion

The aim of this study is to examine the role of congruency within an e-commerce context. The assumption of this study is that a congruent state will be overall beneficial for consumers and for the e-commerce platform. The study also explores the effects of the transformation from a webshop to a e-commerce platform, and the possible incongruity it may bring.

The study also showed that the combination of the most congruent state (congruent vendor type with a congruent product category) did not have the expected impact on the dependent variables. Product category, had a slight impact on product attitude, however not significant. The study also suggests a strong probability of ease of fluency having a mediating effect; however, this was not found.

The result of the study highlight the positive effect that the moderator vendor trust can elicit within the the-commerce platform of Bol.com. With the help of the moderation interaction effect of product category*vendor trust, a positive impact was found towards brand trust (platform). This was also the only accepted hypothesis of this thesis. It shows that a high vendor trust, has beneficial impact on how consumer perceive the bol.com brand.

Commented [TM(1): Repetition of discussion of the findings... What is the limitation you want to bring forward..?

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