Wageningen University – Department of Social Sciences

MSc Thesis Chair Group Marketing and Consumer Behaviour

Can you see the message?

**Package communication strategies
and their influence
on consumer's product evaluation
and product line evaluation**

COOLBEST?

MANGO

Written by	**Willemijn Beelen**
Reg.nr.	**870916042100**
MSc program	**MME:**
	Management, Economics and Consumer Studies
Supervisor	**dr. H.W.I. van Herpen**
2nd Supervisor	**dr. D.J.B. Hofenk**

WAGENINGEN UR
For quality of life

Preface

So here it is.. my Master Thesis. I experienced writing a Maser Thesis is one of the most interesting and exiting elements of the Master programme.
The thesis is part of the Master programme Management, Economics and Consumer Behaviour at Wageningen University. I wrote the thesis at the Marketing and Consumer Behaviour department.

How to communicate a product to the consumer by choosing a certain package communication strategy is a question companies are struggling with. This thesis was developed to find out whether different ways of communicating the brand name, picture of product content, package colour and familiarity with the brand influence consumer's evaluation of products and of a product line.
When I chose my study program, I had an idea in my mind about what concrete research I would like to be able to conduct when finishing my study programme. The idea was to be able to research different ways of marketing a product and to find out whether one would fit consumer expectations the best. My idea turned out to be reality.

I want to thank my family and friends. Together we celebrated my finalisation of different stages of my thesis and supported me when I sometimes was frustrated.

My supervisor Erica van Herpen, I want to thank you for your support and interesting ideas about how to conduct research and deal with certain problems during the research process.
I also want to thank Dianne Hofenk for being my second supervisor.

Enjoy reading!

Willemijn.

Summary

Choosing a package communication strategy for food product lines that does not fit consumer's expectations, can result in a financial disaster for companies. Though, the influence of visibility of package attributes, i.e. package communication, on product evaluation and product line evaluation is very little researched.

Current literature on package communication was suitable to determine package attributes that are *expected* to be important in influencing consumer's product evaluation and product line evaluation: informational attributes and visual attributes. The informational attributes that are chosen to research are *content identification* (for instance a picture of oranges representing orange juice) and *common brand name*, visual attribute that is chosen is package *colour*.

Factors that may influence product and product line evaluation are determined based on brand extension research and package communication research: factors concerning the brand, concerning the consumer, concerning the company, concerning competing products and concerning atmospherics. *Brand familiarity* (a factor concerning the brand) is chosen to research.

The aim of this research is to identify how different ways of communicating the *common brand name* and *content identification* on packages and package *colour*, affect consumer's product evaluation and product line evaluation and how moderator *brand familiarity* affects consumer's product evaluation and product line evaluation. Product category chosen is packaged food products.

No significant results are found with respect to expected effects.

Unexpected effects of brand familiarity indicate high importance of the common brand name for consumer's product line evaluation. Identification of the different products of the product line and identification of the product line are more easy for consumers if the consumers know the brand presented on the package than if consumers are not familiar with the brand. Companies are advised to invest in familiarity of their brand based on these effects found.

A relation between brand familiarity and common brand name and content identification is found. If consumers are familiar with the brand name, consumers can identify the product line more easily. If brand familiarity is low, respondents can identify the product line more easily if the common brand name is focused on.

No expected effects are found as stated above. It may be possible that other product attributes that are determined in the literature review do influence product and product line evaluation, for instance description of product content (informational attribute), positive brand information (informational attribute) and graphic forms (visual attribute). Further research must be conducted to find out whether and in what way those attributes influence package communication. In addition, factors influencing product and product line evaluation, such as competing products, should be researched too. Further research is advised to conduct with the Virtual Supermarket.

Whether respondents know which attributes and/or factors are manipulated must be tested too when conducting further research.

Maybe the product line was too small to get significant effects. Testing how many products a product line must consist of in product and product line research is advised and when executing research on product and product line evaluation, it is advised to use different sizes of product lines.

Searching for the most suitable visualisation of the message on a package has been started and this thesis can guide future research which way to go.

Table of contents

1.   Introduction

When walking through a supermarket you come across products of different product categories (for example fruit juices). Companies often present more than one product within the same product category, i.e. product lines. Companies use product packages to communicate with you about their products. Companies are struggling which product package communication strategy to choose.

Some companies emphasize the brand name on all their product packages within the product line. Riedel Drinks (market share on fruit juices of 45%) tries to increase the demand for less known fruit juice variants of the brand Appelsientje by emphasising the logo of the well-known Dutch brand Appelsientje on different fruit juice variants of the brand Appelsientje, namely: Goudappeltje, Fruitdruifje en Dubbeldrank. Marketing research showed that after changing the package, one third of the respondents had a hard time identifying the difference in Appelsientje products. Riedel Drinks state that packages are adjusted and state that consumers show more variety in choice than before (marketing-online, 2004).

Another example of a company struggling with package design is Tropicana. Tropicana changed their package design of their product line by changing the product picture and brand name presentation.

Consumers were dissatisfied with the package design, they couldn't identify their familiar brand by the packaging and consumers had more difficulties in identifying the different varieties. The 'old' package design was introduced again (Brandchannel, 2009; NY Times, 2009). This disaster cost Tropicana 35 million US dollars (Brandchannel, 2009).

Other companies focus on aesthetic design. Hero introduced the fruit juice 'Krachtfruit' ('Power fruit') in June 2012, by creating a designer package. So, the company Hero did not emphasise the brand, but the aesthetic design of the package (marketingtribune, 2012).

Figure 1. Krachtfruit (Levensmiddelenkrant, 2013).

The influence of visibility of brands and other package attributes, i.e. package communication, on product evaluation and product line evaluation is little researched (Venter et al, 2011).

The research that is done in this research area, is not clear about which elements are the most influential in influencing product and product line evaluation. For example, some research states that the presence of a well-known brand, but also positive product information influences the consumer's product preference (Kristensen et al, 2012). Other research states that aesthetic design is may be of even more importance to consumers in evaluating a product or product line than a (strong) brand name (Reimann et al, 2010). Other research suggests that both appearance attributes and information attributes must be focused upon in package communication (Venter et al, 2011).

Because of the different results in research, it seems that it depends on the situation whether the brand should be focused upon on the package or another product attribute.

Moderators influencing the effect of product attributes on consumer's product and product line evaluation, can be identified based on brand extension literature and other consumer research fields, as package communication literature.

In conclusion, the influence of visibility of brands and other package attributes, i.e. package communication, on product evaluation and product line evaluation is very little researched and more research is needed. It is important to research this topic for consumer research, because in forming purchase intentions, consumers rely on packages (Limon et al, 2009) and there is a gap in literature

on package communication. This gap must be identified and researched to get a more complete view on what determines consumer's product evaluation and product line evaluation.

Choosing a package design that does not fit consumer's expectations, can result in a disaster for the company, as Tropicana did experience. Therefore it is very relevant for marketers to get insight in the effects of different ways of package communication on consumer's product and product line evaluation.

The aim is to identify how different ways of communicating the *common brand name and content identification* on packages and *colour* of packages, affect consumer's product evaluation and product line evaluation and how moderator *brand familiarity* affects consumer's product evaluation and product line evaluation of packaged food products.

The common brand name is the brand that is the same for all products within the product line. A picture showing the product content is meant with content identification. Whether a brand is well-known or not reflects brand familiarity.

To research suggested effects and moderating effect, packaged food products are chosen. If the product package is seen as part of the product and not as separate from the product, the highest impact on product evaluation is expected. In the case of packaged food products, sales packaging is seen as part of the product by consumers (Ahmed et al, 2005) and therefore packaged food products will be used.

To try to achieve the aim, first a literature review is conducted. In chapter 2, literature about possible package attributes that are expected to be important to determine consumer's product and product line evaluation is analysed. In the following chapter, factors that may act as moderators in package communication are derived from brand extension literature and other consumer research fields. Hypotheses are identified based on the literature review.

In the method section it is explained how these hypotheses are going to be tested. Results are described in chapter 5. The results are discussed, conclusions and further research is suggested in chapter 6 .

2.   Influential attributes in package communication

The influence of visibility of brands and other package attributes, i.e. package communication, on product evaluation and product line evaluation is little researched (Venter et al, 2011), as was stated in the introduction. But current literature can be used to determine possible package attributes that are expected to be important to influence consumer's product and product line evaluation.
In this chapter, attributes that are expected to be influential in package communication are identified based on current research. Two factors are expected and selected to be the most influential on consumer's product and product line evaluation. Hypotheses are set up to be able to test the effect these two factors on consumer's product and product line evaluation.

In package communication, package attributes can be divided in two groups: informational and visual attributes (Silayoi & Speece, 2007; Venter et al, 2011). First, informational attributes are discussed.
It must be mentioned that next to informational and visual attributes, other attributes can be important in product evaluation, in particular price. In this research only package attributes are included. Price is often not communicated by packaging and price is seen as one of the four P's in the marketing mix and is seen as different from the product (Venter et al, 2011). So, price is not part of the product (including also packaging) itself and therefore not seen as part of product packaging.

2.1   Informational attributes

Informational attributes in packaging contain product information and technology image (Silayoi & Speece, 2007).

2.1.1   *Product information*

Product information contains in this research the elements content identification, product content, and the brand.
First, Venter et al (2011) found in their exploratory research that *content identification* by presenting pictures or making the package transparent, are often asked by the respondents as attributes that need to be present in order to be able to make a choice.

Second, information attributes as a list of all ingredients that represent *product content* are mentioned often too by the respondents as a needed attribute to make their choice. The arguments for product content being a very important product attribute in making a food product choice are discussable, because 51 % of inhabitants of the country where the research was conducted do rarely or never read food labels (Venter et al, 2011).
It has to be noted that the research of Venter et al (2011) is exploratory and results cannot be generalized. But again these findings can be used as a suggestion for further research like this research is.

The third element of product information is the *brand*. The brand is in this research seen as an element of product information, because the brand name activates many associations in the consumers mind about for instance product quality, so that the brand becomes an information attribute (Kristensen et al, 2012; Hoeffler & Keller, 2003). In this research, the element named brand contains the *brand name* and *positive brand information*.
It seems that the *brand name* is a very important factor in package communication. Research shows that consumer's preferences for a specific product will increase largely if a well-known brand is visible on the product (Kristensen et al, 2012).
In their review on marketing advantages of strong brands, Hoeffler & Keller (2003) show that the brand name is important for product evaluation.
Dawar & Parker (1994) even state that the brand name is the main universal signal to choose a product in cigarette industry.

In literature it is even suggested that consumers do not learn of quality attributes because the brand name blocks the learning process (Van Osselaer & Alba, 2000). 'The visual elements of the product may become the background, and the brand name may now be the focus of the attention or the foreground' (Kristensen et al, 2012: 45). A possible reason for the little attention given to other package attributes if noticing a well-known brand on the package, is that the brand name and all the associations that are made with the brand name may do take so much attention of the person, that little attention is given to other attributes (Kristensen et al, 2012). 'When the relationship between brand name and product quality is learned prior to the relationship between product attributes and quality, inhibition of the latter may occur' (Van Osselaer & Alba, 2000: 1).

Providing *positive brand information* is in this research seen as another part of the element brand. Kristensen and colleagues (2012) found that only priming consumers with positive information about the well-known brand, without presenting the brand name itself, results in increased preference for that product. Positive information presenting to consumers leads to attraction of high taste and design to the process of product evaluation, almost as much as if the brand name is presented. It might be possible that presenting positive information ánd the brand name leads to even more increasing of preference (Kristensen et al, 2012).

2.1.2   Technology image
Besides product information, *technology image* is an informational attribute for consumers. Technology image is seen as the specific message that is communicated by package technology. Research shows that convenience, part of packaging technology, influences the consumer's likelihood to buy the most. It has to be noted that all respondents were office workers, who are more likely to see convenience as an important attribute. Next to that, whether informational or visual attributes are seen as most important depends much on whether the consumer is convenience oriented, information seeking or image seeking (Silayoi & Speece, 2007). But the research of Silayoi & Speece (2007) proves that technology image is an important attribute in choosing a food product.

2.2   Visual attributes
Another factor that seems to be influential in consumer's product evaluation is aesthetics. Aesthetics is based on the Greek word *aisthēsis*, which means 'perception form the senses, feeling, hearing and seeing' (Reimann et al, 2010: 432). For example beauty, unity and prototypicality are important visual aspects of visual aesthetic design (Reimann et al, 2010). But also perception novelty is a design element that influences product evaluation (Mugge & Schoormans, 2012).
Aesthetics can influence the consumer's attention paid to a product (Venter et al, 2011; Silayoi & Speece, 2007; Herrington & Capella, 1995), perceived quality of a product, functional and ergonomic value of a product (Creusen et al, 2010) and preference. Research even found that aesthetic packages are preferred over a package containing a well-known brand. Aesthetics seem to be as important as a well-known brand on a package or as even more important than a well-known brand (Reimann et al, 2010).

In this research, visual attributes are grouped in one general package attribute: *visual aesthetics*. Visual aesthetics contains the visual attributes graphics (including colour) and packaging size and shape, based on visual attribute identifications by Silayoi & Speece (2007) and Ampuero & Vila (2006).
Other research found the appearance attributes modernity, simplicity, playfulness (Blijlevens et al, 2009). Maybe these attributes could also represent appearance for packaged food products, but the focus is on the most important and influential elements of visual aesthetics for packaged food products.

2.2.1 Graphics

The visual element *graphics* represents the images that are created on the package. Colour, typography, graphic forms and illustrations are the ingredients that communicate an image (Silayoi & Speece, 2007; Ampuero & Vila, 2006). Whether a product or product line will be identified or missed, may depend on the graphic elements on the package (Silayoi & Speece, 2007; Herrington & Capella, 1995).

Illustrations as visual element do not contain illustrations of product content. Content identification is seen as an informational element and thus will be excluded from being a visual element.

Colour can strongly activate associations, in particular if the colour is associated uniquely with a particular brand (Silayoi & Speece, 2007). Labrecque & Milne (2012) also found that when forming consumer brand perceptions, the great influence of colour must be taken into account.

Colour can be a diagnostic element depending on what the consumer is searching for. For example, if a consumer searches for ketchup, the colour red becomes a diagnostic element to the consumer and product packages that contain the colour red become more salient (Van der Lans et al, 2008).

These findings would suggest that colour is a very strong visual element to use in product packaging to influence product and product line evaluation. But it is more complicated. The associations that consumers have with particular colours, is dependent on the culture, because of exposure to different colour associations (Silayoi & Speece, 2007). So, in deciding which colour and colour combinations to use, cultural context must be carefully considered.

2.2.2 Packaging size and shape

Packaging size and shape are important for consumers to make volume judgements (Silayoi & Speece, 2007). Different packaging shape compared with competitors' packaging shape is an important distinguishing factor in packaging (Reimann et al, 2010). Changing size and shape can lead to more attention of the consumer to the product and product line and thus may influence product and product line evaluation.

Changing packaging size and/or shape may influence the functionality of the product and thus may influence preference. In this research no intrinsic cues (for instance functionality) are aimed to get manipulated, but extrinsic cues (for example colour).

It has to be said that changing the package too much in the consumer's view, results in a categorization of the product in the consumer's mind that is not desired by the marketer. For instance, the product will not be seen as a representative of the product category or even putted in another product category in the consumer's mind (Schoormans & Robben, 1997). Unity and prototypicality positively affect aesthetic response (Veryzer & Hutchinson, 1998; Reimann et al, 2010). In case of novelty, changing novel appearance very extremely, leads to less aesthetically attractive perception of the product by consumers than if just small changes are used in novelty appearance of the product (Mugge & Schoormans, 2012; Blijlevens et al, 2009). Perceptual differences of packages thus must not be too big in the view of the consumer.

2.3   Expected influence of product attributes on effort and evaluation

In this chapter, package attributes that are expected to influence consumer's product evaluation and product line evaluation are identified. There are many possible manipulations to measure package communication. The manipulations that are expected to be the most influential are going to be manipulated, because the research design is too complex if researching all possible manipulations.

The attributes that are expected to be the most influential in package communication, must be eye catching attributes that do not ask much cognitive effort.

To research product ánd product line evaluation, it is interesting to manipulate an attribute that emphasises the differences between the product variants within the product line and one attribute that emphasises the communality between the products within the product line.

The informational attributes *content identification* and *brand name* are chosen to get researched, because these attributes contain all elements that are discussed above. The brand name is the same for all products within the product line, whereas the content of the products is different for the product variants within the product line. If the common brand is focused on the package, it is emphasised that the products have something in common. If the (different) content of the products is emphasised on the packages, it is emphasised that the products contain something different.

It is expected that if focusing on one informational attribute on the product package, other informational attributes are getting less attention because of limited attention capacity of the consumer. It is assumed that the bigger the presentation of the common brand name(illustration of content), the more attention is paid to the common brand (content identification). Salient attributes may determine the consumer's purchase decision (Areni et al, 1999), so emphasising a specific attribute is expected to have impact on product evaluation. To research the effect of focusing on particular informational attributes on consumer's product and product line evaluation, the size of informational attributes will be adapted.

The visual attribute *graphics* is chosen to research, because this attribute is an extrinsic cue and packaging size and shape is an intrinsic cue. Extrinsic cues are focused on, because this research focuses on communication strategies without changing product properties.

Very little research is done on which graphics attribute is expected to be the most influential in product evaluation and product line evaluation. Based on the little research that is done, is it expected that colour is a very strong attribute in influencing product evaluation and product line evaluation as is stated in this chapter.

The strength of colour is that it is expected that it can emphasis what products within a product line have in common and it is expected that it can emphasis the individual differences between products within a product line. If all packages within a product line have the same colour, it is emphasised that the products have something in common and if all packages within a product line have different colours, it is emphasised that the products contain something different.

If the manipulations of informational attributes and colour are taken together, the effects of focusing on content identification or common brand and of emphasising the product differences or similarities by colour changes, on product and product line evaluation can be measured.

Figure 2 shows a visual example of manipulations of emphasising brand name or content identification and colour.

Figure 2. Visual examples of manipulations that are suggested

2.3.1 Product line identification

As stated earlier, emphasising the common brand name stresses the commonality between the products within the product line. It is thus expected that emphasising the common brand name makes it more easy for the consumer to identify the product line than if the differences between products are emphasised by emphasising content identification.

The following hypothesis is set up to test the expectation:

Hypothesis 1a: If the common brand name is emphasised on the product packages of the product line, consumers can identify the product line more easily than if content identification is focused on.

Using the same colour for all product packages stresses the commonality between the products within the product line too, as is stated before. It is thus expected that using the same colour for all product packages makes it more easy for the consumer to identify the product line than if the differences between products are emphasised by using different colours for all product packages.

This results in the following hypothesis:

Hypothesis 1b: If the colour of the product packages of the product line is the same for all product packages of the product line, consumers can identify the product line more easily than if the colour of the product packages is different for all products.

It is expected that if common brand name is emphasised AND same colour is used for all product packages, consumers can identify the product line more easily than if in the other three conditions.

This is expected because both stressing the common brand name and using the same colour for all product packages emphasise the commonality between the products.

It is expected that the effects of emphasising the common brand name and using the same colour for all packages are additive.

2.3.2 Product identification

If the product packages each contain big pictures of the product content (which is different for all products), the difference between the products is emphasised.

It is expected that emphasising content identification makes it more easy to identify the differences between products than if the commonality between the products is emphasised by emphasising the common brand name.

The following hypothesis are set up to test this expectation:

Hypothesis 2a: *If content identification is emphasised on the product packages of the product line, consumers can identify the different products of the product line more easily than if the common brand name is focused on.*

The difference between the products is also emphasised if different colours for all product packages within the product line. It is thus expected that emphasising using different colours for all product packages, makes it more easy for consumers to identify the differences between products than if the commonality between the products is emphasised by using the same colour for all product packages. The following hypothesis is set up to test this expectation:

Hypothesis 2b: *If the colour of the product packages of the product line is different for all product packages of the product line, consumers can identify the different products of the product line more easily than if the colour of the product packages is the same for all products.*

2.3.3 Total decision effort

Differences between products within a product line and commonalities between products within a product line are expected to be both of importance for a consumer in product and product line evaluation.

It is expected that if either the brand is emphasised or the same colour is used for the product packages, the total decision effort for the consumer is the lowest than in all other three conditions.

The package communication strategy that focuses only on the commonalities between the products within the product line and the strategy that focuses only on the differences between the products within the product line, are expected to get consumers being frustrated about the difficulty in finding both the commonality and the difference between the products within the product line.

This results in the following hypotheses:

Hypothesis 3a: *If the common brand name is emphasised, using different colours for packages within the product line will result in lower total decision effort than using the same colour for packages within the product line.*

Hypothesis 3b: *If content identification is emphasised, using the same colour for packages within the product line will result in lower total decision effort than using different colours for packages within the product line.*

2.3.4 Willingness To Buy & Product line evaluation

It is interesting to know which communication strategy leads to the highest product and product line evaluations, so that marketers know which strategy is the best to choose.

To be able to measure these effects, the Willingness To Buy (WTB) and product line evaluation are used. WTB is a construct that makes it possible to get to know how consumers evaluate the individual products within the product line. Product line evaluation is a construct that measures the evaluation of the overall product line.

The following expectations are set up concerning the willingness to buy the products and product line evaluation.

If both the common brand name is emphasized AND the same colour is used for all products within the product line, it is expected that there is too much focus on the commonality between the products. It is expected that consumers are getting frustrated that they cannot find the different product variants and thus the willingness to buy the products is low.

If there is too much focus on the difference between the products within the product line, i.e. emphasising content identification AND using different colours for all products within the product line, it is expected that consumers are getting frustrated that they cannot find the commonality between the products and thus the willingness to buy the products is low.

If both the differences and commonality are emphasised on the packages of the products within the product line, it is expected that consumers feel satisfied about finding the differences between the products and things that the products have in common, so that the willingness to buy the products is high.

These expectations result in the following hypotheses:

Hypothesis 4a: *If the common brand name is emphasised, using different colours for packages within the product line will result in a higher willingness to buy the products within the product line, than using the same colour for packages within the product line.*

Hypothesis 4b: *If content identification is emphasised, using the same colour for packages within the product line will result in a higher willingness to buy the products within the product line, than using different colours for packages within the product line.*

The same effects are expected for the construct product line evaluation:

Hypothesis 5a: *If the common brand name is emphasised, using different colours for packages within the product line will result in a higher product line evaluation, than using the same colour for packages within the product line.*

Hypothesis 5b: *If content identification is emphasised, using the same colour for packages within the product line will result in a higher product line evaluation, than using different colours for packages within the product line.*

No main effects are expected, but the effect of emphasising the common brand name or content identification and the effect of package colour will be tested.

3.   Factors influencing product and product line evaluation

In chapter 2, attributes that influence consumer's product evaluation and product line evaluation are identified. In this chapter, possible influential factors in package communication are identified and analysed, based on brand extension and package communication literature.
One factor is expected to be an influential moderator in package communication and hypotheses are set up to test the effect of this moderator on package communication.

3.1   Factors influencing product and product line evaluation
Five groups of factors influencing product and product line evaluation are identified: factors concerning the brand, consumer, company, competing products and atmospherics.

3.1.1   Factors concerning the brand
As stated in chapter 2, research shows that consumer's preferences for a specific product will increase largely if a well-known brand is visible on the product (Kristensen et al, 2012). Factors concerning the brand that may influence product evaluation are fit between the brand and product/product line associations, brand familiarity, quality of the brand and brand attachment may influence product evaluation (Völckner & Sattler, 2007; Fedorikhin et al, 2008).
First, whether the brand on the packages has a high fit with product/product line associations (for example *Heinz* and ketchup) or not (for example *Heinz* and ice cream), influences the effect of the brand on product evaluation. If the fit is high, the associations towards the brand are transferred to the product and thus product evaluation is influenced (Kapoor & Heslop, 2009; Keller & Lehmann, 2006; Völckner & Sattler, 2006, 2007; Broniarczyk & Alba, 1994; Aaker & Keller, 1990; Boush et al, 1987). The importance of a high level fit for product evaluation is emphasised by Buil et al (2009).
Secondly, brand familiarity and quality of the brand are expected to be influential factors in package communication. It may be possible that a strong, well-known brand influences the effect of the common brand name on the WTB the product different than a weak brand. A strong, well-known brand activates different mental schemas than a weak brand and therefore a different effect of the common brand name is expected.
A third factor is brand attachment, i.e. the degree in which a consumer is attached to a brand. In their research on researching behavioural reactions of consumers to brand extensions, Fedorikhin and colleagues (2008) found that brand attachment could positively influence the effect of brand name on willingness to buy the products.

3.1.2   Factors concerning the consumer
Uncertainty, involvement, knowledge (Völckner & Sattler, 2007), experience (Kristensen et al, 2012; Ratliff et al, 2012), affect (Adaval, 2003), the goal of the consumer and consumer orientation (Silayoi & Speece, 2007) are expected to be factors in package communication concerning consumer characteristics.

For instance, positive experience with a brand results in liking another product of that brand. 'If people like a product, they will automatically like another product from the same brand even if they do not know anything about it' (Ratliff et al, 2012: 531).
Positive affect influences the evaluation of a brand name to be more extreme and thus influences the effect of brand name on product evaluation.
How the four different situations presented in figure 1 will be evaluated by the consumer, depends on whether the consumer is looking for a particular brand or for a particular product variant. If a consumer is looking for a particular brand, the importance of the brand name and the importance of using one colour for all packages will increase and if a consumer is looking for a specific product variant, the importance of pictures and different coloured packages will increase.

The orientation of the consumer is also an expected factor influencing product evaluation. Consumers can be divided into convenience oriented, information seeking and image seeking consumers. Depending on the orientation of the consumer, the importance of the product elements *colour & graphic design, shape, product information* and *technology convenience* varies (Silayoi & Speece, 2007). The importance of these elements influence the relation between brand and WTB, content identification and WTB and colour and WTB.

3.1.3 Factor concerning the company

Marketing power of the company is expected to be an influential factor in package communication. The size of the company and marketing competence of the company are elements of marketing power of the company. If the marketing power of a company is great, the attitude transfer of the (parent) brand attitude towards the product is greater than if the marketing power of a company is smaller (Völckner & Sattler, 2007).

3.1.4 Factors concerning competing products

Inclusion of competitor's products creates a situation in which consumers can compare the product packages of product line products with packages of competing products and thus make different valuations of the products than if no competitor's products are presented (Kristensen et al, 2012).

Using a brand name, picture and/or package colour that is like product packages surrounding the product line, influences the effects of brand name, picture and/or package colour. For instance, using package colour red, as well as another company does explicitly, results in colour associations that influence the manipulation of package colour.

Inclusion of competing products in testing the effect of brand name (content identification) and colour on product and product line evaluation thus must be done with caution.

3.1.5 Factors concerning atmospherics

Atmospherics is also seen as an expected factor. Atmospherics are expected to influence sales and consumer purchasing behaviour (Turley & Milliman, 2000). For instance, if the product shelves have the same colour as the product line packages, atmospherics (product shelves) may influence the effect of package colour on product evaluation.

3.2 Moderator choice and expected moderating effects

In section 3.1, factors that are expected to be influential in package communication are identified.

In this research, package attributes common brand name (content identification) and colour are going to be researched. The influence of emphasising common brand name on product evaluation is expected to be greatly influenced by *brand familiarity*.

The moderator *brand familiarity* is going to be researched, because this moderator determines whether brand associations are strong or not and what to do with package communication if consumer's are familiar with the brand or not, is a fundamental issue for companies.

It is expected that if brand familiarity is high, so the common brand name is well-known by the consumer, the brand is more important to emphasise because of the positive brand associations than content identification. It is expected that both the evaluation of individual products of the product line and the product line are more positive if the high familiar common brand name is emphasised on the products.

This results in the following hypotheses:

Hypothesis 6a: If brand familiarity is high, emphasising the common brand name will result in a higher willingness to buy the products within the product line, than emphasising content identification.

Hypothesis 6b: *If brand familiarity is high, emphasising the common brand name will result in a higher product line evaluation, than emphasising content identification.*

If consumers do not know the common brand name, so brand familiarity is low, it is expected that emphasising the content of the product results in higher product and product line evaluation.
If brand familiarity is low, the common brand name does not activate brand associations and thus the brand has no informational value for the consumer, while focusing on a picture of the content contains more informational value for the consumer. Focusing on content identification thus is expected to result in higher product and product line evaluations.
These expectations are represented in the following hypotheses:

Hypothesis 6c: *If brand familiarity is low, emphasising content identification will result in a higher willingness to buy the products within the product line, than emphasising the brand.*

Hypothesis 6d: *If brand familiarity is low, emphasising content identification will result in a higher product line evaluation, than emphasising the brand.*

It is expected that if brand familiarity is high, the condition that emphasises the common brand name AND in which different package colours are used for all products within the product line, results in the consumer's highest willingness to buy.
This is expected because the common brand name tells the consumer more about the products than a picture of the product content in the high brand familiarity condition. The differences between the products within the product line also have to be emphasised, by using different package colours for all products within the product line, otherwise consumers possibly get frustrated that they could not find the differences between the product variants.
The following hypotheses are set up:

Hypothesis 7a: *If brand familiarity is high, emphasising the common brand name AND using different package colours for all products within the product line, will result in a higher consumer's willingness to buy the products than in the other three conditions.*

Hypothesis 7b: *If brand familiarity is high, emphasising the common brand name AND using different package colours for all products within the product line, will result in a higher product line evaluation than in the other three conditions.*

If brand familiarity is low, it is expected that emphasising content identification is preferred over emphasising the common brand name, because in this condition content identification tells the consumer more about the product than the common brand name. The same package colour for all products within the product line is assumed to be needed to be able to easily identify the commonality between the products (the common brand name) to prevent consumer's frustrations.
This results in the following hypotheses:

Hypothesis 7c: *If brand familiarity is low, emphasising content identification AND using the same package colour for all products within the product line, will result in a higher consumer's willingness to buy the products than in the other three conditions.*

Hypothesis 7d: *If brand familiarity is low, emphasising content identification AND using the same package colour for all products within the product line, will result in a higher product line evaluation than in the other three conditions.*

Hypotheses are set up to be able to achieve the aim of this research. To be able to test the hypotheses, first constructs have to be operationalized and research has to be set up.

4.   Methodology

In this chapter it is described how the hypotheses are operationalized. First, participants and research design are described. Second, stimuli are selected and furthermore the procedure is described. At last it is described how constructs are measured.

4.1   Design

A two (common brand name focus vs. content identification focus) by two (same package colour vs. different package colours) by two (low brand familiarity vs. high brand familiarity) between subjects design is used to conduct the experiment. Eight conditions are thus identified to research the effect of the package elements common brand name(content identification) and package colour and the moderating effect of brand familiarity.
Table 1 shows an overview of the eight conditions that are used to test the hypotheses.

Table 1. Eight experiment conditions.

Condition number	Colour of packages of product line	Focus common brand name (CB)or content identification (CI)	Brand familiarity
1	Same colour	Focus CB	High
2	Same colour	Focus CB	Low
3	Same colour	Focus CI	High
4	Same colour	Focus CI	Low
5	Different colours	Focus CB	High
6	Different colours	Focus CB	Low
7	Different colours	Focus CI	High
8	Different colours	Focus CI	Low

To be able to test the different conditions, a product category had to be chosen and product attributes had to be concretised.
The experiment is conducted with the Virtual Supermarket, which is a very new tool to simulate shopping in a supermarket, designed by the company Green Dino and dr. H.W.I. van Herpen. The benefit of conducting the experiment with the Virtual Supermarket is that the shopping task of the respondent becomes very realistic, without the costs of creating a real supermarket to test the hypotheses.

4.2   Stimuli

4.2.1   Product category

As stated in the introduction, packaged food products are chosen to be researched. The highest impact of package communication strategies is expected if product packaging is seen by the consumer as part of the product, which is the case for packaged food products (Ahmed et al, 2005).
Students need to have somehow experience with buying a product of the product category. The product category must consist of product lines that contain different variants of the product. There must be competitors present in the product category too and the product category must consist of a well-known brand. The product category must be suitable for researching with the Virtual Supermarket. The product category that fulfils all these criteria is *chilled fruit juices.*

4.2.2   Product attributes and moderator

Focus on the common brand name or content identification is manipulated, colour of the packages is manipulated and brand familiarity is manipulated.

4.2.2.1 Moderator

The moderator brand familiarity is manipulated. A brand that is highly familiar to the consumer and a brand that is unknown to the consumer, are used to manipulate brand familiarity. *CoolBest* and *Xtreme Cold Juice* (figure 3) are chosen respectively as high and low familiar brand. *Xtreme Cold Juice* is a fictional brand, which is unknown by respondents (checked in a qualitative pre-test, six respondents). Respondents were asked whether they associate the brand *Xtreme Cold Juice* with another brand. Three respondents answered *CoolBest*, one answered *Extran* and two respondents mentioned that they do not associate the brand *Xtreme Cold Juice* with another brand, which is no problem for conducting the experiment.

4.2.2.2 Informational attributes

Emphasising the informational element *content identification* or not, is manipulated in this research. Content identification is operationalized by presenting a picture on the front of the product package on the left-hand side. Whether content identification is focused on the package or not, is operationalized by changing the size of the picture on the package. The red box in figure 4 presents the pictures used to represent content identification of the different products within the product line.

Differences between the pictures are clear (is tested in a qualitative pre-test, six respondents), which is very important, because the element content identification is used to emphasis the difference between the products within the product line.

Emphasising the common brand name or not, is manipulated too. Whether the common brand name is emphasized or not, is operationalized by presenting the common brand name in big or small size on the package (figure 5). Differences between sizes of the brand are very clear to respondents (tested in a qualitative pre-test, six respondents).

Figure 3. Logo CoolBest & logo Xtreme Cold Juice.   **Figure 4. Pictures representing content identification.**   **Figure 5. Big and small & logo.**

4.2.2.3 Visual attributes

The element package colour is chosen to be manipulated in this research.

The colours used in package communication strategies using different colours of product packages, must not pop up associations with the common brand. The colours can be used as diagnostic elements.

If all packages have the same colour, it is all right if the colour pops up associations with the common brand. Qualitative pre-test (six respondents) results show that five respondents have blue and/or white colour associations when seeing the logo of the brand *Xtreme Cold Juice*. One respondent also mentioned the colour orange and one respondent mentioned the colour red, but associations with blue seems to be much more strong.

An existing product package is manipulated to test the hypotheses. Visual elements typography, graphic forms and illustrations are not aimed to be manipulated and thus remain unchanged.

Appendix A shows an overview of all eight manipulated product lines that are used in the experiment.

Concerning the packaging size and shape, the products must be the same for all eight conditions. These elements are not researched, so manipulation of these elements would have influenced the research possibly.

The packaging size and shape do not differ much from competitors and from the already existing packages.

4.2.2.4 Competitors

Three other brands than *CoolBest/Xtreme Cold Juice* are presented together with the four *CoolBest/Xtreme Cold Juice* packages to the respondent in the Virtual Supermarket. In all eight conditions the position of the *CoolBest/Xtreme Cold Juice* packages and competing products is the same. Competing brands that are used: *Innocent, Healthy People* and *Tropicana*. Just three competitors are chosen because in a real-life supermarket in the Netherlands there are just a few competitors and a situation must be created in which respondents do look at the *CoolBest/Xtreme Cold Juice* product line naturally.

Around the chilled fruit juices shelf, there are several other shelves situated. Those shelves do not contain juices, to avoid confusion of respondents about which products to choose from.

4.3 Procedure

Before the respondent is exposed to the product assortment, the respondent is asked to read an introduction text in which for instance he/she is told the answers will remain anonymous (See Appendix B).

The respondent is asked by a piece of text to imagine that he/she is going to the supermarket to buy a *chilled fruit juice* for himself/herself. All products have the same price, so the respondent does not have to take price of the product into consideration while buying a product. Price per liter is different for Innocent, because this package contains 750ml and all other packages contain 1L. But these prices are the same for all conditions, so price effects are not considered influencing hypotheses testing.

Then, the respondent is asked to use the Virtual Supermarket. To get used to the way the Virtual Supermarket works, the respondent is told how to use the system. The respondent is exposed to one supermarket track that ends up with the product assortment the experiment is aimed at (*chilled fruit juices*). After being exposed to the product assortment and bought one product, the respondent is asked to answer a questionnaire in Qualtrics.

4.4 Measures

In Qualtrics, constructs *ease of identifying the different products, ease of identifying the product line, total decision effort, product line evaluation, brand familiarity, realistic choice* and *experience with*

product category are measured. At the end of the questionnaire, questions about gender, age, study program, aim of the experiment and comments are asked.

In this section, it is described how these constructs are measured.

4.4.1   Ease of identifying the different products

The   construct ease of identifying the different products is measured by asking the following questions:

- *Finding the differences between the CoolBest/Xtreme Cold Juice drinks, is...*
  (1 = very hard, 7=very easy)
- *The effort that I need to put into determining the differences between the CoolBest/Xtreme Cold Juice drinks, is...*
  (1= very little, 7 = very much)

These two questions are based on research of Van Herpen & Pieters (2007). The scale used is again a seven point Likert scale.

4.4.2   Ease of identifying the product line

The construct ease of identifying the product line is measured by asking the following questions:

- *How salient was it that there were more than one CoolBest/ Xtreme Cold Juice packages?*
  (1 = not salient at all, 7 = very salient)
- *To notice that several products were of the same brand CoolBest/Xtreme Cold Juice, is...*
  (1 = very hard, 7 = very easy)

The scale used is again a seven point Likert scale.

4.4.3   Product line evaluation

The construct product line evaluation is measured by asking the following questions:

- I think the packages of the brand CoolBest/Xtreme Cold Juice are…
- (1= very bad, 7 = very good)
- My opinion concerning the packages of Coolbest/Xtreme Cold Juice is…
  (1 = very negative, 7 = very positive)

The scale used is again a seven point Likert scale.

4.4.4.   Total decision effort

The construct total decision effort is measured by asking the following questions:

- The effort needed to make a product choice, was...
  (1= very low, 7= very high)
- Making a decision which product to choose, was...
  (1= very hard, 7= very easy)
- To choose the product that I wanted the most, was...
  (1= very hard, 7= very easy)

These questions are based on research of Van Herpen & Pieters (2007). A seven point Likert scale is used.

4.4.5   Experience with product category

This construct is measured by the following questions:

- *I buy chilled fruit juice…*
  (1= never, 7 = very often)
- *I drink chilled fruit juice…*
  (1= never, 7= very often)

These two questions are based on research of Chocarro et al (2009). A seven point Likert scale is used.

4.4.6 Brand familiarity
This construct is measured by the following question:
- *I am familiar with the brand CoolBest/Xtreme Cold Juice.*
  (1= no, 2= heard about it, 3= yes)

4.4.7 Realistic choice
Realistic choice is measured by the following question:
- The product I bought in the virtual supermarket, would be the same if I were in a supermarket which I visit in my daily life, assuming the same assortment being present.
  (1 = totally disagree, 7 = totally agree)

The scale used is a seven point Likert scale.

4.4.8 Willingness to buy
Willingness to buy the product is operationalized by asking the respondent the following three questions:
- *If I want to buy a chilled fruit juice, the likelihood of purchasing this product is...*
  (1= very low, 7= very high)
- *If I want to buy a chilled fruit juice, my willingness to buy this product is...*
  (1= very low, 7= very high)
- *If I want to buy a chilled fruit juice, I would purchase this product.*
  (1= strongly disagree, 7= strongly agree)

These questions are based on research of Dodds et al (1991), Grewal et al (1998) and Grewal et al (1998, 2) that is presented in Marketing Scales Handbook (Bruner et al, 2005).
The scale used is a seven point Likert scale. A five point scale is too short, because respondents often do not choose the extremes. A nine point scale is too big, because people get frustrated and confused about all the possible options to answer the question.

The complete questionnaire of condition 1 (focus on brand name, same colour of packages of product line and low brand familiarity) can be found in Appendix C.
Constructs *ease of identifying the different products* and *ease of identifying the product line* were in random order presented to the respondent. The product evaluation questions with corresponding picture were in random order presented too.

5.   Results

In this section, descriptive data are presented first, than hypotheses are tested and at last product choice of respondents is analysed.

5.1   Participants & dataset description

5.1.1   Questionnaire data
196 respondents participated in the experiment. Concerning the *Qualtrics* questionnaire, 39 respondents are excluded from analysis, because of a defect in the questionnaire (N=22), foreknowledge of some people about the aim of the research (N=11), misunderstanding of the questionnaire (N=1), of answering that they totally did not made a realistic choice and thus being an outlier (N=3) or because of being an extreme on the question how much products they viewed (N=2). One respondent viewed 13 and one respondent viewed 14 products, whereas on average respondents viewed 3.27 products.
Respondents are Dutch speaking students of Wageningen UR. Table 2 shows how respondents are distributed along the eight conditions.
The dataset consists of no missing data.

Age
Average age is 21.19 (SD = 2.343). Age does not differ significantly among eight conditions (F(7,149) = .498, p = .835).

Gender
Table 3 shows the distribution of respondents along the eight conditions. The sample consists of 112 female students (71.3%) and 45 male students (28.7%) Chi-square test shows a significant relation between gender ratio and conditions (χ^2(7, N = 157) = 15.635, p(2-sided) = .029, p < .05).
A One-Way ANOVA is conducted to test whether there are significant differences between men and women on dependent variables *ease of identifying the different products, ease of identifying the product line, product line evaluation, total decision effort, experience with product category, brand familiarity realistic choice, willingness to buy Mango, willingness to buy Orange, willingness to buy Strawberry* and *willingness to buy Pink Grapefruit* (see Appendix D). Lots of tests are done and only one significant difference is found, concerning dependent variable ease of identifying the product line (F(1,155)=3.974, p=.48). If three outliers and two extremes that are mentioned above are included in analysis, no significant results are found. In conclusion, it is assumed that overall there are no gender effects.

Table 2. Respondents per condition.

Condition number	Number of respondents in Virtual Supermarket	Number of respondents in Questionnaire
1	21	21
2	26	21
3	20	20
4	24	19
5	22	19
6	25	20
7	20	20
8	22	17

Table 3. M/W ratio.

Condition	Men	Women
1	6	15
2	10	11
3	9	11
4	5	14
5	3	16
6	8	12
7	1	19
8	3	14

Concerning study program of respondents, 49 % studies *Beta studies* and 51 % studies *Alfa studies*. To test whether study program is equally distributed along the eight conditions, a Chi-square test is conducted. Results show no significant relation between study program and conditions (χ^2 (7, N = 157) = 8.183, p(2-sided) = .317.), meaning randomisation of study program is successful.

Realistic choice
Respondents do on average think they will make the same product choice if they were in a real-life supermarket with the same product assortment (MEAN = 5.69; SD = 1.390).

Construct reliability
In this section, construct reliability of constructs *ease of identifying the different products, ease of identifying the product line, product line evaluation, total decision effort, experience with product category* and *willingness to buy* is measured.
All constructs score Cronbach's Alpha >.7 (general accepted value is .7-.8 (Field, 2005)), so the items are acceptably reliable (table 4).

Table 4. Construct reliability

Construct	Number of items	Cronbach's Alpha
Ease of identifying the different products	2	.745*
Ease of identifying the product line	2	.817*
Product line evaluation	2	.907*
Total decision effort	3	.894*
Experience with product category	2	.947*
Willingness to buy Mango	3	.968*
Willingness to buy Orange	3	.970*
Willingness to buy Strawberry	3	.973*
Willingness to buy Pink Grapefruit	3	.969*

* Cronbach's Alpha must be above 0.7 if small amount of items is used

To check whether the items belonging to *Product line evaluation, Willingness to buy Mango, Willingness to buy Orange, Willingness to buy Strawberry* and *Willingness to buy Pink Grapefruit* are five different factors or less/more factors, a factor analysis with *Oblimin* rotation is conducted. *Scree plot* shows five factors can be defined and SPSS tables *Structure Matrix* and *Component Matrix* show five factors corresponding with the five constructs P*roduct evaluation, WTB Mango, WTB Orange, WTB Strawberry* and *WTB Pink Grapefruit* (see Appendix E for scree plot and matrices). *Component Correlation Matrix* (see Appendix E) shows correlations between those five constructs. It can be concluded that the constructs are correlating with each other. WTB Strawberry and WTB Pink Grapefruit are negatively correlating with the other constructs.
To check whether the items belonging to *Ease of identifying different products* and *Ease of identifying product line* are 2 different factors, factor analysis with *Oblimin* rotation is conducted. *Scree plot* shows two factors can be defined. SPSS tables *Structure Matrix* and *Component Matrix* show two factors that correspond with the constructs *Ease of identifying product different products* and *Ease of identifying product line* that are described above (see Appendix F for scree plot and matrices). *Component Correlation Matrix* (see Appendix F) shows correlations between those two constructs. It can be concluded that the constructs are correlated.

Manipulation check brand familiarity
Manipulating brand familiarity seems to work. Concerning the brand *CoolBest*, respondents are overall familiar with the brand (see table 5). Concerning the fictional brand *Xtreme Cold Juice*, respondents are overall not familiar with the brand (see table 5).

Respondents show brand familiarity being significantly different among the brands *CoolBest* and *Xtreme Cold Juice* (χ^2 (2, N = 157) = 122.957, p(2-sided) < .001).

Table 5. Frequencies brand familiarity

	Brand			
	CoolBest		Xtreme Cold Juice	
	Number of respondents	%	Number of respondents	%
Unfamiliar with the brand	1	1.3	65	84.4
Heard about the brand	7	8.8	8	10.4
Familiar with the brand	72	90.0	4	5.2

Experience
Experience among respondents with product category *chilled fruit juices* is quite scattered (MEAN = 3.60; SD = 1.693). To test whether experience does significantly differ between the eight conditions, a one-way ANOVA is conducted. Results show no significant difference of experience between conditions, so randomisation of experience is done successfully (F(7,149)=.825, p=0.568).

5.1.2   *Virtual Supermarket data*
All respondents who did participate the Virtual Supermarket task too. 22 respondents who are excluded from analysis the questionnaire data because of a defect in the questionnaire, are included in analysing Virtual Supermarket data, because no defect was occurring when executing the Virtual Supermarket task. So, 180 respondents are included in analysing the Virtual Supermarket data.
The dataset consists of no missing data.

Products viewed and product choice
All respondents chose one product. Respondents could double click on a chilled fruit juice to view product descriptions. Respondents viewed on average 3.27 products (SD=1.777).
Concerning product choice, the brand which is focus of this research (CoolBest/Xtreme Cold Juice) is chosen the most (35.5%).
Table 6 shows a frequency table of the brands chosen and Appendix G shows a frequency table of the products chosen by respondents.

Table 6. Brands chosen by respondents.

Brand	N	%
CoolBest/Xtreme Cold Juice	33/31	18.3/17.2
Healthy People	45	25.0
Innocent	59	32.8
Tropicana	12	6.7

Stop duration
Stop duration is measured in the *Virtual Supermarket*. Stop duration contains the number of seconds the respondent stood still in the *Virtual Supermarket.* This measurement is not reliable, because majority of respondents asked for information about how to use the *Virtual Supermarket*. So, stop duration is not analysed.

5.2 Testing hypotheses

5.2.1 Product line identification

Concerning the construct p*roduct line identification*, two hypotheses were set up:

If the common brand name is emphasised on the product packages of the product line, consumers can identify the product line more easily than if content identification is focused on.

If the colour of the product packages of the product line is the same for all product packages of the product line, consumers can identify the product line more easily than if the colour of the product packages is different for all products.

These hypotheses are tested using a three-way between groups ANOVA. Results show an unexpected significant main effect for brand familiarity ($F(1, 149)= 6.446$ $p=.012$) and an unexpected significant interaction effect between focus and brand familiarity ($F(1,149)=29.299$, $p<.001$)(see table 7).

Table 7 shows no significant results for the two hypotheses, so the hypotheses described above are not supported by the data.

The significant main effect of *brand familiarity* on *ease of identifying the product line* concerns the fact that a product line of a high familiar brand leads to identifying the product line more easily by respondents than a product line of a low familiar brand ($MEAN_{coolbest}=5.691$, $MEAN_{xtreme\ cold\ juice}=5.105$). High familiar brands make it thus more easy to identify the product line. This main effect was not expected.

SPSS is asked to present contrast effects, to be able to have a closer look at the interaction effect. Results show a significant effect of focus for both brands (CoolBest: $p=.028$; Xtreme Cold Juice: $p=.003$). When presenting CoolBest (high brand familiarity), respondents can identify the product line more easily if content identification is emphasised on the product packages, than if the common brand name is emphasised ($MEAN_{content\ focus}=6.050$, $MEAN_{common\ brand\ focus}=5.332$).

When presenting Xtreme Cold Juice (low brand familiarity), respondents can identify the product line more easily if the common brand name is focused on, than if content identification is focused on ($MEAN_{content\ focus}=4.598$, $MEAN_{common\ brand\ focus}=5.612$).

So, to make identifying the product line more easily, content identification should be focused on if brand familiarity is high and common brand name should be focused on if brand familiarity is low.

It is striking that high familiar brands make it more easy to identify the product line, but content identification should be focused on instead of the common brand name, to make it more easy to identify the product line in case of a high familiar brand (see figure 6).

Table 7. Main effects & interaction effects

Effect	df	F	p
Colour	1	.240	.625
Focus	1	.410	.523
Brand familiarity	1	6.446	.012
Colour * Focus	1	.465	.496
Colour * Brand familiarity	1	.912	.341
Focus * Brand familiarity	1	29.299	<0.001
Colour * Focus * Brand familiarity	1	.960	.329
Error	149		
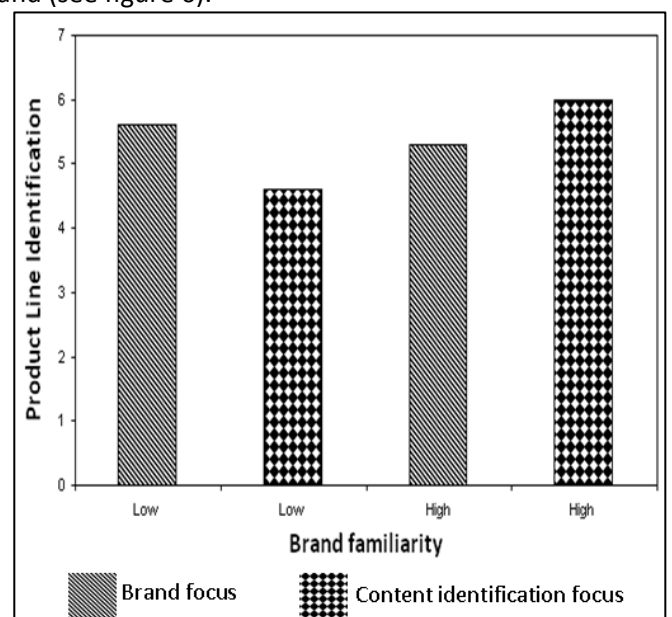
Figure 6. Interaction effect

5.2.2 Product identification

Effects concerning construct *product identification* are tested in the following hypotheses:

If content identification is emphasised on the product packages of the product line, consumers can identify the different products of the product line more easily than if the common brand name is focused on.

If the colour of the product packages of the product line is different for all product packages of the product line, consumers can identify the different products of the product line more easily than if the colour of the product packages is the same for all products.

These hypotheses are tested using a three-way between groups ANOVA. Results (see table 8) show an unexpected significant main effect for brand familiarity ($F(1, 149)= 7.975$, $p=.005$). If brand familiarity is high, respondents can identify the different products more easily than if brand familiarity is low. ($MEAN_{CoolBest}= 5.639$, $MEAN_{Xtreme\ Cold\ Juice}= 5.064$).

Table 8 shows no significant results for the two hypotheses, so the hypotheses described above are not supported by the data.

Table 8. Main effects & interaction effects

Effect	df	F	p
Colour	1	3.341	.070
Focus	1	2.366	.126
Brand familiarity	1	7.975	.005
Colour * Focus	1	.119	.731
Colour * Brand familiarity	1	.005	.941
Focus * Brand familiarity	1	2.659	.105
Colour * Focus * Brand familiarity	1	.620	.432
Error	149		

5.2.3 Total decision effort

Expected effects concerning construct total decision effort are:

If the common brand name is emphasised, using different colours for packages within the product line will result in lower total decision effort than using the same colour for packages within the product line.

If content identification is emphasised, using the same colour for packages within the product line will result in lower total decision effort than using different colours for packages within the product line.

To test these hypotheses, a three-way between groups ANOVA is conducted. Results show no significant main effects or interaction effects (see table 9).

So, the hypotheses cannot be accepted.

Table 9. Main effects & interaction effects

Effect	df	F	p
Colour	1	.577	.449
Focus	1	.873	.352
Brand familiarity	1	.121	.728
Colour * Focus	1	.015	.902
Colour * Brand familiarity	1	.022	.881
Focus * Brand familiarity	1	.442	.507
Colour * Focus * Brand familiarity	1	.004	.947
Error	149		

5.2.4   Willingness to buy

Expected effects concerning construct WTB are:

If the common brand name is emphasised, using different colours for packages within the product line will result in a higher willingness to buy the products within the product line, than using the same colour for packages within the product line.

If content identification is emphasised, using the same colour for packages within the product line will result in a higher willingness to buy the products within the product line, than using different colours for packages within the product line.

If brand familiarity is high, emphasising the common brand name will result in a higher willingness to buy the products within the product line, than emphasising content identification.

If brand familiarity is low, emphasising content identification will result in a higher willingness to buy the products within the product line, than emphasising the brand.

If brand familiarity is high, emphasising the common brand name AND using different package colours for all products within the product line, will result in a higher consumer's willingness to buy the products than in the other three conditions.

If brand familiarity is low, emphasising content identification AND using the same package colour for all products within the product line, will result in a higher consumer's willingness to buy the products than in the other three conditions.

Willingness to buy the products is measured by computing the mean score on *willingness to buy mango, willingness to buy orange, willingness to buy strawberry* and *willingness to buy pink grapefruit*.

All six hypotheses are tested using a three-way between groups ANOVA. Results show no significant main effects or interaction effects (see table 10).

In conclusion, the hypotheses are not supported by the data.

Table 10. Main effects & interaction effects

Effect	df	F	p
Colour	1	1.465	.228
Focus	1	.538	.464
Brand familiarity	1	.107	.744
Colour * Focus	1	.198	.657
Colour * Brand familiarity	1	.189	.664
Focus * Brand familiarity	1	1.412	.237
Colour * Focus * Brand familiarity	1	.255	.614
Error	149		

Factor analysis (reported in section 5.1.1) showed *WTB Mango, WTB Orange, WTB Strawberry* and *WTB Grape Fruit* are measuring different factors, so the same analysis as above is conducted four times with a different dependent variable WTB *Mango, WTB Orange, WTB Strawberry* and *WTB Pink Grapefruit*. Results show a significant interaction effect between focus and brand familiarity for *WTB Orange* ($F(1,149)= 5.005$, $p= .027$) and a significant main effect for colour for *WTB Strawberry* ($F(1,149)= 4.336$, $p= .039$).

When taking a look at the significant interaction effect between focus and brand familiarity, it can be seen that the effect of focus is not significant for both brands ($p_{CoolBest}=.121$ & $p_{Xtreme Cold Juice}=.111$). The interaction effect is the opposite of what was expected in the hypotheses (see table 11). This

interaction effect is not used to draw any conclusions about the relation between brand familiarity and focus. No overall no interaction is found, only for WTB Orange and this effect is even a very weak effect.

Table 11. Interaction effect brand familiarity and focus

Brand familiarity	Focus	Mean	Std. Error	Sig.[a]
Low	Content identification	3.221	.285	.111
	Common brand name	3.848	.267	.111
High	Content identification	3.758	.270	.121
	Common brand name	3.162	.271	.121

Based on estimated marginal means
a. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

When looking at the significant main effect for colour for *WTB Strawberry*, it can be seen that if the product line is presented with the same colour for all product packages, the willingness to buy Strawberry is higher than if different colours are used (MEAN$_{same\ colour}$=4.232, MEAN$_{different\ colours}$=3.635). Still, the willingness to buy the product is quite low in both situations. This main effect is unexpected.

5.2.5 Product line evaluation

Concerning product line evaluation, six hypotheses were set up:

If the common brand name is emphasised, using different colours for packages within the product line will result in a higher product line evaluation, than using the same colour for packages within the product line.

If content identification is emphasised, using the same colour for packages within the product line will result in a higher product line evaluation, than using different colours for packages within the product line.

If brand familiarity is high, emphasising the common brand name will result in a higher product line evaluation, than emphasising content identification.

If brand familiarity is low, emphasising content identification will result in a higher product line evaluation, than emphasising the brand.

If brand familiarity is high, emphasising the common brand name AND using different package colours for all products within the product line, will result in a higher product line evaluation than in the other three conditions.

If brand familiarity is low, emphasising content identification AND using the same package colour for all products within the product line, will result in a higher product line evaluation than in the other three conditions.

These hypotheses are tested using a three-way between groups ANOVA. Results show a significant main effect of brand familiarity (see table 12).

The main effect concerns the effect that if products are presented with a high familiar brand, product line evaluation is higher than if products are presented with a low familiar brand (MEAN=$_{coolbest}$=4.944, MEAN$_{xtreme cold juice}$=4.136). This effect is an unexpected effect.

No evidence is found for the hypotheses, so all six hypotheses cannot be supported by the data.

Effect	df	F	p
Colour	1	2.942	.088
Focus	1	.085	.771
Brand familiarity	1	21.668	<0.001
Colour * Focus	1	.422	.517
Colour * Brand familiarity	1	.100	.752
Focus * Brand familiarity	1	.046	.831
Colour * Focus * Brand familiarity	1	.478	.491
Error	149		

5.3 Product choice

Table 13 shows the numbers of respondents that chose for a product of the manipulated brand (CoolBest or Xtreme Cold Juice) and the numbers of respondents that chose for a product other than the manipulated brand.

Condition	Product choice			
	CoolBest or Xtreme Cold Juice		Innocent, Healthy People or Tropicana	
	N	%	N	%
1	8	38.1	13	61.9
2	7	26.9	19	73.1
3	11	55.0	9	45.0
4	7	29.2	17	70.8
5	9	40.9	13	59.1
6	9	36.0	16	64.0
7	5	25.0	15	75.0
8	8	36.4	14	63.6

To test whether there are significant main effects and/or interaction effects of *brand familiarity*, *focus* and *colour* on *product choice* (CoolBest/Xtreme Cold Juice or Innocent/Healthy People/Tropicana), a binary logistic regression is computed in SPSS.

Logistic regression

To test whether product choice for CoolBest/Xteme Cold Juice is significantly influenced by the (manipulated) attributes brand familiarity, focus (common brand name or content identification) and/or colour (same colour of packages or different colours of packages of product line), a *binary logistic regression analysis* is computed.

No significant results are found, see table 14 (Nagelkerke R Square = .044). So, product choice for the manipulated product is not significantly influenced by brand familiarity, focus and/or colour.

Covariates	B	S.E.	Wald	df	Sig.	Exp(B)
Brand	-,.317	.319	.991	1	.319	.728
Focus	.021	.319	.004	1	.949	1.021
Colour	-.108	.319	.114	1	.736	.898
Brand * focus	.086	.638	.018	1	.893	1.090
Brand * colour	.966	.638	2.297	1	.130	2.628
Focus * colour	-.756	.638	1.407	1	.236	.469
Brand * focus * colour	1.322	1.275	1.074	1	.300	3.749
Constant	-.596	.159	14.006	1	.000	.551

6.   Conclusions & discussion

6.1   Conclusions & discussion

The aim was to identify how different ways of communicating the *common brand name and picture to identify content* on packages and package *colour*, affect consumer's product evaluation and product line evaluation and how moderator *brand familiarity* affects consumer's product evaluation and product line evaluation.

Effects that were expected of emphasising the common brand name/ picture to identify content on packages, of package colour and of brand familiarity on product and product line evaluation, were not found.

Unexpected results are found. For instance, results show that brand name had important effects. If consumers know the brand name presented on the product packages of the product line, consumers evaluate the product line more positively than if consumers do not know the brand. Identification of the different products of the product line and identification of the product line are more easy for consumers if the consumers know the brand presented on the package than if consumers are not familiar with the brand.

The effects found for brand familiarity show that the familiarity of the brand name is important in product line evaluation and makes it more easy to identify the different products of the product line and the product line itself. High brand familiarity effecting product line evaluation positively is quite straightforward: respondents know the brand and familiarity thus probably adds value to the evaluation of the product line.

The question raises why product line evaluation significantly increases with high brand familiarity, whereas product evaluation does not. If individual products are evaluated, it might be possible that brand familiarity is not that important as in case of product line evaluation. Maybe other product attributes are more important in evaluating individual products as will be explained later.

Concerning identification of the product line, respondents may know that a product line exists of this well-known brand and therefore it may be more easy for respondents to identify the product line. Or respondents might immediately recognize the well-known brand when looking to the assortment and therefore have less difficulties in identifying the product line, which can also be the reason for more easy product identification if brand familiarity is high.

An interaction is found between brand familiarity and brand name and picture to identify content (for example a picture of oranges representing orange juice). If consumers know the brand, respondents can identify the product line more easily if a picture to identify content is focused on. If consumers do not know the brand, respondents can identify the product line more easily if the common brand name is focused on.

It can be concluded that if consumers know the brand, the picture to identify content must be focused on the package. Consumers then easily see that the products presented are not the same products and just a little representation of the brand logo probably makes it easy enough to identify the fact that the products are of the same brand (both are needed to identify a product line).

If brand familiarity is low, maybe the brand name must be focused on because it might be possible the brand logo is hard to identify because of low familiarity.

For one specific product of the product line, it is found that package colour influences the consumer's willingness to buy the product. If products of the product line are in the same colour, respondents show a higher willingness to buy for that specific variant of the products than if products of the product line are in different colours.

The specific product variant represents the taste of strawberry. It might be possible that the red colour of strawberry is enough to notice the product variant and respondents might (unconsciously) give high importance to a product package that is concerning package colour comparable with an

existing product line they probably know. This effect is found for only one product variant, so conclusions cannot be generalised for package colour in general.

The research was developed to generalize the results to all packaged food products. Concerning product category: if another packaged food product category was chosen than chilled fruit juices to conduct the research with, same results were expected. Concerning the product choice *CoolBest,* the same results were expected if another high familiar chilled fruit juice was chosen to research.

6.2 Practical implications

Companies in packaged food products are advised to invest in the consumers' familiarity with the brand, to get higher product line evaluations. To make it for consumers more easy to identify the different products of the product line and to make it more easy to identify the product line, companies must invest in brand familiarity too. Which way is the best way to increase brand familiarity was no topic in this research, so only general conclusions about practical implications can be made.

Whether the brand name or picture to identify content must be focused on, depends on whether consumers are familiar with the brand or not. If consumers are familiar with the brand, identifying the product line is more easy for consumers if the picture representing product content is focused on. If consumers are not familiar with the brand, the brand name must be focused on.

6.3 Theoretical implications

As stated in the introduction, the influence of visibility of package attributes is very little researched yet. This research can be seen as a start-up for further research in package communication. A relation between product attributes brand name, content identification and moderator brand familiarity influencing product line identification is found, which is the beginning of trying to understand package communication. Brand familiarity effects on product evaluation, product line evaluation and product line identification are found too, which underlines past research about the importance of brand name on products.

6.4 Limitations & future research

The fact that no effects were found that were expected to be there, might implicate the manipulation of focus on brand, manipulation of focus on picture to identify content and manipulation of package colour did not work. This suggestion is not likely to be true, because size differences of brand logo and of pictures of content are clearly visible and colour manipulation is very clear. Pre-test results also show that respondents see difference in focus on common brand name and on content identification very clear.

Another explanation for finding no significant expected effects can be that product attributes brand name, picture to identify content and package colour do not influence product and product line evaluation. Maybe other product attributes do influence product and product line evaluation and thus other product attributes should be used in new research to research the effect of package communication on product and product line evaluation. Other product attributes that are determined in section 2 based on literature research, might be used as an indicator of emphasising the product line/different products of the product line. Two types of product attributes can be distinguished: informational and visual attributes.

It is advised to conduct future research in which product attributes *product content description, positive brand information* and *graphic forms* are manipulated instead of *brand name, picture of product content* and *package colour.* A pre-test must then be conducted to check whether manipulations work. If manipulations do work, an experiment can be conducted to research the effect of product content description, positive brand information and graphic forms on product and product line evaluation. *Description of product content* is an informational attribute. It is advised to

describe shortly the main ingredients on the front of the package (for instance, 100% orange juice on a orange variant, 50% orange juice and 50% strawberry juice on a strawberry variant) to emphasize the difference between product variants of the product line. Concerning emphasising the product line, *positive brand information* can be used. Other informational attributes are brand name, picture of product content and technology image. The latter is not suitable for emphasising difference between products or the product line and the other two attributes are researched in this research.

Manipulating visual attribute *graphic forms* can be used to emphasise difference between products (different graphic forms on packages) ánd can be used to emphasise the product line (same graphic forms on packages). Other visual attributes are expected to be no strong indicators of identifying difference between products or the product line, except from changing package size and shape. Packaging size and shape can be used as an indicator, but this attribute can change the functionality of the product. Functionality is not a package communication element anymore, so it is advised to not use this attribute to emphasise difference between products or the product line.

To get to know whether brand familiarity interacts with those product attributes, an experiment can be conducted in which product content description, positive brand information, graphic forms ánd brand familiarity are tested. Other factors concerning the brand that are expected to influence product and product line evaluation such as competing products are advised to be tested too. For instance whether the content of the product is described in big size or not on packages of competing products, may influence consumer's evaluation of the products of the product line that are tested in the experiment. Consumers might see the competing products as more like the product line that is tested if the packages show the same description of product content and thus may influence product and product line evaluation.

Concerning limitations of the experiment in this thesis, respondents might know which attributes and/or factors are manipulated and maybe they acted upon that. Respondents were only presented to one manipulation of the attributes and factors. Therefore, it seems to be likely that respondents did not know which attributes are manipulated. On the other side, it of course still might be possible that respondents saw that some attributes/factor are manipulated. To get to know whether respondents know which attributes/factors are manipulated, a pre-test can be conducted in which manipulated product packages are presented and respondents are asked which package attribute is changed in that presentation of the product. Or a manipulation check must be incorporated in the research questionnaire.

Maybe the product line was too small for people to notice the product line. If the product line is emphasised, but respondents do not notice the fact that a product line is present in any condition, no effects on product line evaluation can be measured. Although, results show 35.5% choose a product of the manipulated product line. So, it seems to be likely that people did see the product line. To be sure that consumers see the product line, further research is needed to test how many variants of the same brand must be present in a product assortment so that respondents notice the product line. Another possibility to overcome this problem is to use different sizes of product lines while researching effects of package attributes on product and product line evaluation.

Respondents do on average think their product choice in the Virtual Supermarket is comparable with their product choice if they were in a real-life supermarket. For further research that is suggested in this section, is recommended to be conducted with the Virtual Supermarket.

Constructs ease of identifying product line and ease of identifying different products of product line are new developed constructs that were not researched before. Results show that the operationalization that is used in the experiment is reliable for both constructs (Cronbach's Alpha is > .8). Factor analysis shows that ease of identifying product line and ease of identifying different products of product line are different constructs. It is thus recommended to use these constructs and operationalization in future research about product and product line evaluation.

Package communication strategies are very little researched. It is tried to find product attributes that affect product and product line evaluation. A start has been made in extending knowledge about package communication and this research can guide which way to go to search for the most suitable message on a package.

References

Aaker, D.A. & Keller, K.L. (1990). Consumer Evaluations of Brand Extensions. *Journal of Marketing*, 54(1): 27-41.

Adaval, R. (2003). How Good Gets Better and Bad Gets Worse: Understanding the Impact of Affect on Evaluations of Known Brands. *Journal of Consumer Research*, 30(3): 352-367.

Ahmed, A, Ahmed, N. & Selman, A. (2005). Critical issues in packaged food business. *British Food Journal*, 107(10-11): 760-780.

Ampuero, O. & Vila, N. (2006). Consumer perceptions of product packaging. *Journal of Consumer Marketing*, 23(2): 102-114.

Areni, C.S., Duhan, D.F., Kiecker, P. (1999). Point-of-purchase displays, product organization, and brand purchase likelihoods. *Journal of the Academy of Marketing Science*, 27(4): 428-441.

Blijlevens, J, Creusen, M.E.H., Schoormans, J.P.L. (2009). How Consumers Perceive Product Appearance: The Identification of Three Product Appearance Attributes. *International Journal of Design*, 3(3): 27-35.

Boush, D.M., Shipp, S., Loken, B., Geneturk, E., Crockett, S., Kennedy, E., et al. (1987). Affect generalization to similar and dissimilar brand extensions. *Psychology & Marketing*, 4(3): 225–237.

Broniarczyk, S.M., & Alba, J.W. (1994). The importance of the brand in brand extension. *Journal of Marketing Research*, 31(2): 214-228.

Buil, I., Chernatony, L. de, Hem, L.E. (2009). Brand extension strategies: perceived fit, brand type, and culture influences. *European Journal of Marketing*, 43(11): 1300 – 1324.

Bruner II, G.C., Hensel, P.J., James, K.E. (2005). *Marketing Scales Handbook, Volume IV. A Compilation of Multi-Item Measures for Consumer Behavior & Advertising 1998-2001*. ISBN 15879920.

Chocarro, R., Cortinas, M., Margarita, E. (2009). The impact of product category knowledge on consumer use of extrinsic cues – A study involving agrifood products. *Food Quality and Preference*, 20(3): 176-186.

Creusen, M.E.H., Veryzer, R.W., Schoormans, J.P.L. (2010). Product value importance and conusmer preference for visual complexity and symmetry. *European Journal of Marketing*, 44(9-10): 1437-1452.

Dawar, N. & Parker, P. (1994). Marketing Universals: Consumers' Use of Brand Name, Price, Physical Appearances, and Retailer Reputation as Signals of Product Quality. *Journal of Marketing*, 58(2): 81-98.

Dodds, W.B., Monroe, K.B., Grewal, D. (1991). The Effects of Price, Brand and Store Information on Buyers' Product Evaluations. *Journal of Marketing Research*, 28(3): 307-319.

Fedorikhin A., Park, C.W., Thomson, M. (2008). Beyond fit and attitude: The effect of emotional attachment on consumer responses to brand extensions. *Journal of Consumer Psychology*, 18(4): 281-291.

Field, A. (2005*). Discovering Statistics Using SPSS, Second edition.* London: SAGE Publications. ISBN: 978-0-7619-4452-2.

Grewal, D., Krishnan, R, Baker, J., Borin, N. (1998). The Effect of Store Name, Brand Name and Price Discounts on Consumers' Evaluations and Purchase Intentions. *Journal of Retailing*, 74(30): 331-352.

Grewal, D., Monroe, K.B., Krishnan, R. (1998). The Effects of Price-Comparison Advertising on Buyer's Perceptions of Acquisition Value, Transactions Value, and Behavioral Intentions. *Journal of Marketing*, 62(2): 46-59.

Herrington, J.D. & Capella, L.M. (1995). Shopping reactions to perceived time pressure. *International Journal of Retail & Distribution Management*, 23(12): 13-20.

Hoeffler, S. & Keller, K.L. (2003). The Marketing Advantages of Strong Brands. *Brand Management*, 10(6): 421-445.

Kapoor , H. & Heslop, L.A. (2009). Brand positivity and competitive effects on the evaluation of brand extensions. *International Journal of Research in Marketing*, 26(3): 228-237.

Keller, K.L. & Lehmann, D.R. (2006). Brands and Branding: Research Findings and Future Priorities. *Marketing Science*, 25(6): 740-759.

Kristensen, T., Gabrielsen, G., Zaichkowsky, J.L. (2012). How valuable is a well-crafted design and name brand?: Recognition and willingness to pay. *Journal of Consumer Behaviour*, 11(1): 44-55.

Labrecque, L.I. & Milne, G.R. (2012). Exciting red and competent blue: the importance of color in marketing. *Journal of the Academy of Marketing Science*, 40(5): 711-727.

Limon, Y., Kahle, L.R., Orth, U.R. (2009). Package Design as a Communications Vehicle in Cross-Cultural Values Shopping. *Journal of International Marketing*, 17(1): 30–57.

Mugge, R. & Schoormans, J.P.L. (2012). Newer is better! The influence of a novel appearance on the perceived performance quality of products. *Journal of Engineering Design*, 23(6), 469-484.

Ratliff, K.A., Swinkels, B. A.P.; Klerx, K., Nosek, B.A. (2012). Does One Bad Apple(Juice) Spoil the Bunch? Implicit Attitudes Toward One Product Transfer to Other Products by the Same Brand. *Psychology and Marketing*, 29(8): 531-540.

Reimann, M., Zaichkowsky, J., Neuhaus, C., Bender, T., Weber, B. (2010). Aesthetic package design: A behavioral, neural, and psychological investigation. *Journal of Consumer Psychology*, 20(4): 431-441.

Roehm, M.L. (2001). Instrumental Vs. Vocal Versions of Popular Music in Advertising. *Journal of Advertising Research*, 41(3): 49-58.

Schoormans, J.P.L. & Robben, H.S.J. (1997). The effect of new package design on product attention, categorization and evaluation*. Journal of Economic Psychology*, 18(2-3): 271-287.

Silayoi, P. & Speece, M. (2007). The importance of packaging attributes: a conjoint analysis approach. *European Journal of Marketing*, 41(11-12): 1495-1517.

Turley, L.W. & Milliman, R.E. (2000). Atmospheric effects on shopping behavior: A review of the experimental evidence*. Journal of Business Research*, 49(2): 193-211.

Van der Lans, R., Pieters, R., Wedel, M. (2008). Competitive Brand Salience. *Marketing Science*, 27(5): 922-931.

Van Herpen, E. & Pieters, R. (2007). Anticipated identification costs: Improving assortment evaluation by diagnostic attributes. *International Journal of Research in Marketing*, 24(1): 77-88.

Van Osselaer, S.M.J. & Alba, J.W. (2000). Consumer Learning and Brand equity. *Journal of Consumer Research*, 27(1): 1-16.

Venter, K., van der Merwe, D., de Beer, H., Kempen, E., Bosman, M. (2011). Consumers' perceptions of food packaging: an exploratory investigation in Potchefstroom, South Africa. *International Journal of Consumer Studies*, 35(3): 273-281.

Veryzer, R.W. Jr. & Hutchinson, J.W. (1998). The Influence of Unity and Prototypicality on Aesthetic Responses to New Product Designs*. Journal of Consumer Research*, 24(4): 374-385.

Völckner, F. & Sattler, H. (2006). Drivers of brand extension success*. Journal of Marketing*, 70(2): 18-34.

Völckner, F. & Sattler, H. (2007). Empirical generalizability of consumer evaluation of brand extensions*. International Journal of Research in Marketing*, 24(2): 149–162.

Websites:

Brandchannel, 2009.
http://www.brandchannel.com/features_effect.asp?pf_id=469, March, 2009, visited on October 11th, 2012, at 15:18.

Marketing-online, 2004.
(http://www.marketingonline.nl/nieuws/bericht/dubbeldrank-wordt-nu-ook-appelsientje-dubbeldrank, April 2004, visited on August 27th, 2012 at 10:33.

Marketingtribune, 2012.
http://www.marketingtribune.nl/nieuws/hero-schaalt-op-en-trapt-af-met-designerverpakking/
September 2012, visited on September 19th, 2012 at 14:40.

NY Times, 2009.
http://www.nytimes.com/2009/02/23/business/media/23adcol.html?_r=4&pagewanted=1&
February 2009, visited on October 5th, 2012 at 14:15.

Levensmiddelenkrant, 2013.
http://www.levensmiddelenkrant.nl/advertorial/12/hero-krachtfruit-uniek-concept-binnen-koelverse-sappen
Juni 2009, visited on June 11th, 2013 at 12:39.

Appendix A   Overview of manipulated product lines

Appendix B   Introduction and situation

Informatie over het onderzoek

Fijn dat je mee wilt werken aan dit onderzoek. Je gaat zo meteen twee keer een product keuze maken en daar twee aparte vragenlijsten over invullen. Voor iedere productkeuze krijg je een aparte opdracht. Beide productkeuzes zullen gemaakt worden met gebruik van de virtuele supermarkt. Voor je start moet je het volgende weten:

Anonimiteit
Je krijgt voor dit onderzoek een willekeurig nummer toegewezen. De gegevens zullen uitsluitend onder dit nummer worden opgeslagen om je anonimiteit te garanderen. De gegevens worden op de servers van de universiteit opgeslagen en het beeldmateriaal zal na de analyse verwijdert worden.
Tijdens één van de twee keuzes word je gefilmd. Het beeldmateriaal wordt achteraf geanalyseerd door een computer programma en voor beperkte tijd opgeslagen.

Gebruik data
Na het anonimiseren van de gegevens zal de data uit het onderzoek uitsluitend gebruikt worden voor onderzoeksdoeleinden. Dit onderzoek word mede mogelijk gemaakt door een consortium van onderzoeksinstituten en bedrijven. Meer informatie over dit consortium is te vinden op: www.noldus.com/news/focom
Mocht je nog verdere vragen hebben over het onderzoek, vraag dit dan na het onderzoek aan de onderzoeksleiding.

Deelname onderzoek
Het hele onderzoek duurt ongeveer 20 minuten en bestaat uit twee aparte onderzoeken. Ieder onderzoek bestaat uit het maken van een productkeuze en het invullen van een vragenlijst. Voor elk onderzoek krijg je een aparte instructie.
Je kunt je op elk moment uit het onderzoek terug trekken zonder verdere gevolgen. Het afronden van het onderzoek en ondertekenen van de deelnamelijst wordt beschouwd als deelname aan het onderzoek en goedkeuring voor het gebruik van de data.

Verder
Als je klaar bent met het onderzoek mag je een product uitkiezen als bedankje.
Nu kun je beginnen met het eerste onderzoek. Vraag aan de onderzoeksleider om je de instructies te geven.

Situatie

Sinds enkele jaren worden er in supermarkten pakken met fruitsap verkocht in een gekoeld schap.
Ik wil je vragen je voor te stellen dat je van plan bent een gekoeld fruitsap te kopen. Je koopt een gekoelde fruitsap voor jezelf.

Je wordt zo meteen in de supermarkt door het gangpad naar het schap met gekoelde fruitsappen gebracht.

Kijk rustig en met aandacht naar het assortiment gekoelde fruitsappen en kies er één uit (zie instructies hieronder).

Instructies Virtuele Supermarkt:

1.   Druk op de pijltjestoets naar boven om naar het schap te lopen (1 keer kort drukken volstaat).

2.   Dubbelklik met de linkermuisknop op een product dat je wilt bekijken.

U kunt nu kiezen om het product in je winkelmandje te leggen (door op "in winkelmandje" te klikken), of om het terug te leggen in het schap (door op "terugleggen" te klikken). U mag zoveel producten bekijken als je wilt.

3.   Kies één product uit door op "in winkelmandje" te klikken.

4.   Druk op de pijltjestoets naar boven om de kiosk uit te lopen.

Appendix C   Questionnaire Condition 1 in Dutch

Wat is je participant nummer?

De vragenlijst bestaat uit vragen over producten uit het assortiment waaruit je net een keuze hebt gemaakt en er worden wat algemene vragen gesteld.

Vul bij het beantwoorden van de vragen je eerste ingeving in.
Kleur één bolletje van je keuze in.
Het gaat om jouw mening, er is dus geen fout antwoord.

Ik wil je vragen de volgende 2 stellingen te beantwoorden over de fruitsappen van het merk CoolBest.

Het vinden van de verschillen tussen de CoolBest fruitsappen, is...

Erg moeilijk   Erg gemakkelijk
  ○   ○   ○   ○   ○   ○   ○

De moeite die het me kost om de verschillen tussen de CoolBest fruitsappen te vinden, is...

Erg weinig   Erg veel
  ○   ○   ○   ○   ○   ○   ○

Ik wil je vragen de volgende 2 stellingen te beantwoorden over de fruitsappen van het merk CoolBest.

In hoeverre viel het op dat er meerdere pakken van CoolBest in het schap staan?

Viel helemaal niet
        op   Viel heel erg op
  ○   ○   ○   ○   ○   ○   ○

Het opmerken dat er meerdere CoolBest fruitsappen zijn, is..

Erg moeilijk   Erg gemakkelijk
  ○   ○   ○   ○   ○   ○   ○

Ik wil je vragen de volgende 2 stellingen te beantwoorden. De stellingen vragen naar jouw mening over de pakken van het merk CoolBest.

Ik vind de pakken van het merk CoolBest...

Erg slecht   Erg goed
　○　　　　　○　　　　　○　　　　　○　　　　　○　　　　　○　　　　　○

Mijn mening ten aanzien van de pakken van het merk CoolBest is...

Erg negatief   Erg positief
　○　　　　　○　　　　　○　　　　　○　　　　　○　　　　　○　　　　　○

Nu wil ik je vragen de volgende 3 stellingen te beantwoorden die over je productaankoop gaan.

De moeite die het me kostte om een productkeuze te maken, was...

Erg weinig   Erg veel
　○　　　　　○　　　　　○　　　　　○　　　　　○　　　　　○　　　　　○

Het nemen van het besluit welk product te kopen, was...

Erg moeilijk   Erg gemakkelijk
　○　　　　　○　　　　　○　　　　　○　　　　　○　　　　　○　　　　　○

Het kiezen van het product dat ik het liefste wilde hebben, was...

Erg moeilijk   Erg gemakkelijk
　○　　　　　○　　　　　○　　　　　○　　　　　○　　　　　○　　　　　○

Ik wil je vragen de volgende 2 stellingen te beantwoorden die over je fruitsap gebruik gaan.

Fruitsappen die in het koelvak van de supermarkt staan, koop ik...

Nooit   Heel vaak
　○　　　　　○　　　　　○　　　　　○　　　　　○　　　　　○　　　　　○

Fruitsappen die in het koelvak van de supermarkt staan, drink ik...

Nooit   Heel vaak
　○　　　　　○　　　　　○　　　　　○　　　　　○　　　　　○　　　　　○

De volgende vraag gaat over of je bekend bent met een bepaald merk fruitsappen.

Ik ken het merk CoolBest.

Nee	Ooit van gehoord	Ja
○	○	○

De volgende stelling gaat over de overeenkomsten tussen je gedrag in de virtuele supermarkt en je gedrag in een supermarkt waar je weleens komt in het dagelijks leven.

De productaankoop die ik gedaan heb in de virtuele supermarkt, zou ik ook maken in de supermarkt waar ik weleens kom in mijn dagelijks leven, als deze hetzelfde assortiment zou hebben.

Helemaal mee oneens						Helemaal mee eens
○	○	○	○	○	○	○

Er volgen nu plaatjes van enkele producten die in de virtuele supermarkt te zien waren. Per product wordt gevraagd drie stellingen te beantwoorden.

Als ik een gekoeld fruitsap wil kopen, is de waarschijnlijkheid dat ik bovenstaand product koop...

Erg laag   Erg hoog

○   ○   ○   ○   ○   ○   ○

Als ik een gekoeld fruitsap wil kopen, is mijn bereidheid bovenstaand product te kopen...

Erg laag   Erg hoog

○   ○   ○   ○   ○   ○   ○

Als ik een gekoeld fruitsap wil kopen, zou ik bovenstaand product kopen.

Helemaal mee   Helemaal mee
oneens   eens

○   ○   ○   ○   ○   ○   ○

Als ik een gekoeld fruitsap wil kopen, is de waarschijnlijkheid dat ik bovenstaand product koop...

Erg laag   Erg hoog

○   ○   ○   ○   ○   ○   ○

Als ik een gekoeld fruitsap wil kopen, is mijn bereidheid bovenstaand product te kopen...

Erg laag   Erg hoog

○   ○   ○   ○   ○   ○   ○

Als ik een gekoeld fruitsap wil kopen, zou ik bovenstaand product kopen.

Helemaal mee oneens   Helemaal mee eens

○   ○   ○   ○   ○   ○   ○

Als ik een gekoeld fruitsap wil kopen, is de waarschijnlijkheid dat ik bovenstaand product koop...

Erg laag   Erg hoog
⊙   ⊙   ⊙   ⊙   ⊙   ⊙   ⊙

Als ik een gekoeld fruitsap wil kopen, is mijn bereidheid bovenstaand product te kopen...

Erg laag   Erg hoog
⊙   ⊙   ⊙   ⊙   ⊙   ⊙   ⊙

Als ik een gekoeld fruitsap wil kopen, zou ik bovenstaand product kopen.

Helemaal mee   Helemaal mee
oneens   eens
⊙   ⊙   ⊙   ⊙   ⊙   ⊙   ⊙

Als ik een gekoeld fruitsap wil kopen, is de waarschijnlijkheid dat ik bovenstaand product koop...

Erg laag   Erg hoog

○   ○   ○   ○   ○   ○   ○

Als ik een gekoeld fruitsap wil kopen, is mijn bereidheid bovenstaand product te kopen...

Erg laag   Erg hoog

○   ○   ○   ○   ○   ○   ○

Als ik een gekoeld fruitsap wil kopen, zou ik bovenstaand product kopen.

Helemaal mee oneens   Helemaal mee eens

○   ○   ○   ○   ○   ○   ○

Ik wil je vragen de volgende algemene vragen in te vullen.

Wat is je geslacht?
- ○ Man
- ○ Vrouw

Wat is je leeftijd (in cijfers en hele jaren invullen)?

[   ]

Welke studierichting volg je?
- ○ Agrotechnologie
- ○ Voedingswetenschappen
- ○ Dierwetenschappen
- ○ Omgevingswetenschappen
- ○ Plantenwetenschappen
- ○ Maatschappijwetenschappen
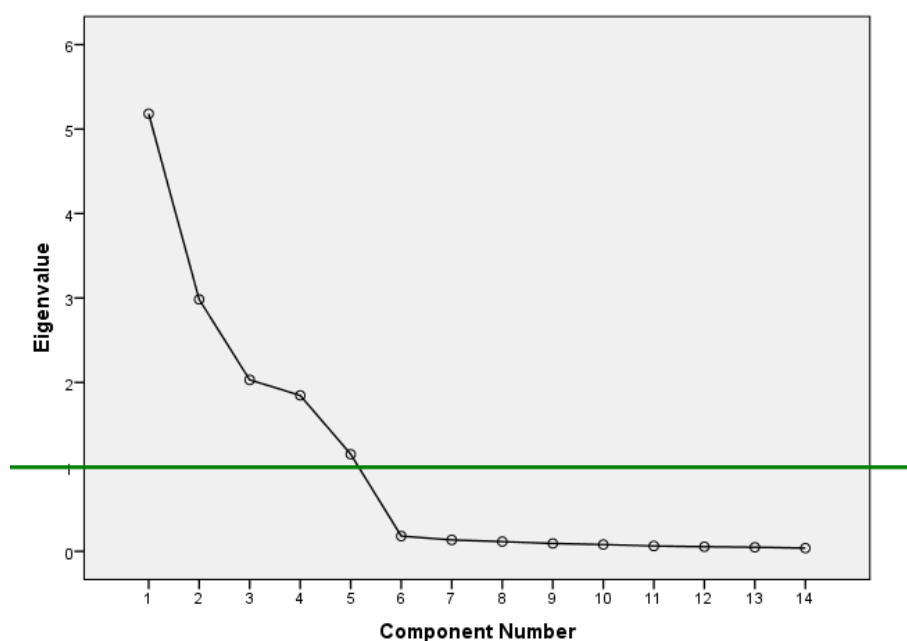
Wat denk je dat het doel van dit onderzoek is?

[   ]

Heb je overige opmerkingen over dit onderzoek?

[   ]

Appendix D   One-way ANOVA gender & dependent variables

Construct	Item	Sum of Squares	df	Mean Square	F	Sig.
Ease of identifying the different products	Between Groups Within Groups Total	1.156 267.974 269.131	1 155 156	1.156 1.729	.669	.415
Ease of identifying the product line	Between Groups Within Groups Total	8.939 348.644 357.583	1 155 156	8.939 2.249	3.974	.048
Product line evaluation	Between Groups Within Groups Total	1.618 203.474 205.092	1 155 156	1.618 1.313	1.233	.269
Total decision effort	Between Groups Within Groups Total	2.073 254.253 256.326	1 155 156	2.073 1.640	1.264	.263
Experience	Between Groups Within Groups Total	.000 447.369 447.369	1 155 156	.000 2.886	.000	.993
WTB Mango	Between Groups Within Groups Total	.148 396.053 396.201	1 155 156	.148 2.555	.058	.810
WTB Orange	Between Groups Within Groups Total	1.495 452.862 454.357	1 155 156	1.495 2.922	.512	.475
WTB Strawberry	Between Groups Within Groups Total	.114 498.592 498.706	1 155 156	.114 3.217	.035	.851
WTB Pink grapefruit	Between Groups Within Groups Total	2.549 393.777 396.327	1 155 156	2.549 2.540	1.004	.318

Appendix E   Scree plot & Matrices

Scree plot

Pattern Matrix[a]

Construct	Item	Component				
		1	**2**	**3**	**4**	**5**
Product line evaluation	I think the packages of the brand CoolBest/Xtreme Cold Juice are…	.006	-.009	-.013	.013	-.969
	My opinion concerning the packages of Coolbest/Xtreme Cold Juice is…	.005	.012	.023	-.021	-.935
WTB Mango	If I want to buy a chilled fruit juice, the likelihood of purchasing this product is…	-.037	.015	.963	-.012	-.043
	If I want to buy a chilled fruit juice, my willingness to buy this product is…	.002	.006	.963	.022	-.023
	If I want to buy a chilled fruit juice, I would purchase this product.	.034	-.021	.980	-.010	.054
WTB Orange	If I want to buy a chilled fruit juice, the likelihood of purchasing this product is…	-.032	.005	-.010	-.982	-.004
	If I want to buy a chilled fruit juice, my willingness to buy this product is…	.047	.008	.013	-.971	.025
	If I want to buy a chilled fruit juice, I would purchase this product.	-.014	-.009	-.005	-.959	-.026
WTB Strawberry	If I want to buy a chilled fruit juice, the likelihood of purchasing this product is…	.969	.022	.040	.002	.020
	If I want to buy a chilled fruit juice, my willingness to buy this product is…	.966	.022	-.008	.013	-.032
	If I want to buy a chilled fruit juice, I would purchase this product.	.982	-.040	-.031	-.014	-.002
WTB Pink grapefruit	If I want to buy a chilled fruit juice, the likelihood of purchasing this product is…	-.002	.980	.002	.006	.018
	If I want to buy a chilled fruit juice, my willingness to buy this product is…	.044	.957	.043	-.044	.018
	If I want to buy a chilled fruit juice, I would purchase this product.	-.037	.971	-.043	.030	-.037

Extraction Method: Principal Component Analysis.
 Rotation Method: Oblimin with Kaiser Normalization.
a. Rotation converged in 6 iterations.

Structure Matrix

Construct	Item	Component				
		1	2	3	4	5
Product line evaluation	I think the packages of the brand CoolBest/Xtreme Cold Juice are…	.333	.227	.327	-.317	-.960
	My opinion concerning the packages of Coolbest/Xtreme Cold Juice is…	.340	.252	.358	-.352	-.955
WTB Mango	If I want to buy a chilled fruit juice, the likelihood of purchasing this product is…	.262	.098	.970	-.192	-.376
	If I want to buy a chilled fruit juice, my willingness to buy this product is…	.286	.076	.968	-.157	-.356
	If I want to buy a chilled fruit juice, I would purchase this product.	.303	.044	.972	-.165	-.301
WTB Orange	If I want to buy a chilled fruit juice, the likelihood of purchasing this product is…	.179	.303	.155	-.976	-.329
	If I want to buy a chilled fruit juice, my willingness to buy this product is…	.253	.303	.190	-.977	-.332
	If I want to buy a chilled fruit juice, I would purchase this product.	.200	.289	.168	-.961	-.347
WTB Strawberry	If I want to buy a chilled fruit juice, the likelihood of purchasing this product is…	.975	.086	.317	-.215	-.332
	If I want to buy a chilled fruit juice, my willingness to buy this product is…	.973	.092	.285	-.212	-.363
	If I want to buy a chilled fruit juice, I would purchase this product.	.974	.030	.256	-.210	-.325
WTB Pink grapefruit	If I want to buy a chilled fruit juice, the likelihood of purchasing this product is…	.059	.974	.067	-.287	-.223
	If I want to buy a chilled fruit juice, my willingness to buy this product is…	.125	.972	.128	-.347	-.265
	If I want to buy a chilled fruit juice, I would purchase this product.	.024	.966	.026	-.265	-.241

Extraction Method: Principal Component Analysis.
Rotation Method: Oblimin with Kaiser Normalization.
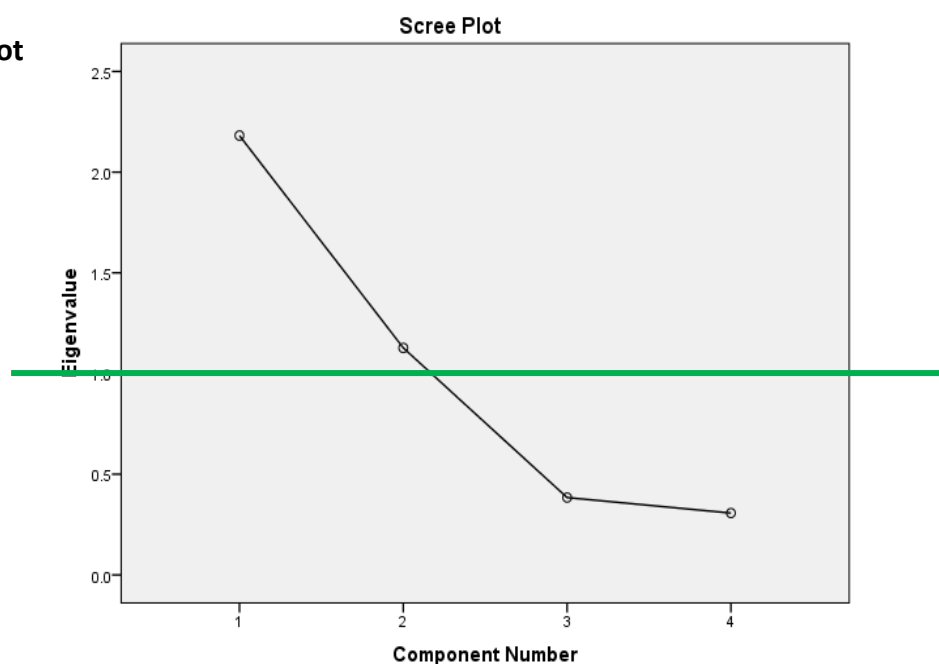

Component Correlation Matrix

Component	1	2	3	4	5
1	1.000	.069	.292	-.216	-.345
2	.069	1.000	.074	-.305	-.249
3	.292	.074	1.000	-.176	-.352
4	-.216	-.305	-.176	1.000	.344
5	-.345	-.249	-.352	.344	1.000

Extraction Method: Principal Component Analysis.
Rotation Method: Oblimin with Kaiser Normalization.

Appendix F   Scree plot & Matrices

Scree plot

Scree Plot

Pattern Matrix[a]

Construct	Question	Component	
Ease of identifying different products	Finding the differences between the CoolBest/Xtreme Cold Juice drinks, is...	.153	.830
	The effort that I need to put into determining the differences between the CoolBest/Xtreme Cold Juice drinks, is...	-.107	.940
Ease of identifying product line	How salient was it that there were more than one CoolBest/ Xtreme Cold Juice packages?	.900	.047
	To notice that several products were of the same brand CoolBest/Xtreme Cold Juice, is...	.931	-.035

Extraction Method: Principal Component Analysis.
Rotation Method: Oblimin with Kaiser Normalization.
a. Rotation converged in 5 iterations.

Structure Matrix

Construct	Question	Component	
Ease of identifying different products	Finding the differences between the CoolBest/Xtreme Cold Juice drinks, is...	.399	.876
	The effort that I need to put into determining the differences between the CoolBest/Xtreme Cold Juice drinks, is...	.171	.908
Ease of identifying product line	How salient was it that there were more than one CoolBest/ Xtreme Cold Juice packages?	.914	.314
	To notice that several products were of the same brand CoolBest/Xtreme Cold Juice, is...	.921	.241

Extraction Method: Principal Component Analysis.
Rotation Method: Oblimin with Kaiser Normalization.

Component Correlation Matrix

Component	1	2
1	1,000	,296
2	,296	1,000

Extraction Method: Principal Component Analysis.
Rotation Method: Oblimin with Kaiser Normalization.

Appendix G   Products chosen in Virtual Supermarket

Product	N	%
CoolBest Mango	9	5.0
CoolBest Orange	6	3.3
CoolBest Strawberry	15	8.3
CoolBest Pink Grapefruit	3	1.7
Xtreme Cold Juice Mango	9	5.0
Xtreme Cold Juice Orange	6	3.3
Xtreme Cold Juice Strawberry	14	7.8
Xtreme Cold Juice Pink Grapefruit	2	1.1
HP Aardbei Braam	9	5.0
HP Acai Rode vruchten	17	9.4
HP Cranberry	12	6.7
HP Granaatappel	7	3.9
INNOCENT Mangoes Passion fruits	21	11.7
INNOCENT Blackberry Strawberry Blackcurrant	21	11.7
INNOCENT Strawberry Banana	17	9.4
TROPICANA Bloodorange	12	6.7
Total	**180**	**100.0**