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DISCOUNT FRAMING: EFFECTIVE PRESENTATION OF PROMOTIONS ON HOUSEHOLD CONTRACTS OF THE DUTCH CABLE MARKET

by

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MANAGEMENT SUMMARY

This thesis investigates the effect of discount framing on household contracts of the Dutch cable market. It explores the current available information about discounts and the situation on the Dutch cable market.

The manner in which prices are presented is one of the most important factors related to customer decision making. Since there are many different ways in which to present a discount of similar value, it is not entirely clear what is the most efficient format. In particular, this research aims to find out what is the most attractive discount frame. The main research question "what discount format is the most effective in increasing consumer purchase intention in the Dutch household cable contracts market?" is answered.

There have been various investigations into the effectiveness of discount frames under different circumstances. A research performed by Heath et al. in 1995 suggested that the effectivity of discount formats changes depending on the price of the product. According to the results of their research, percentage discounts are most effective for low-price products while absolute amounts are more effective for high-price products. Various researches have since been able to find more evidence for this conclusion.

Comparisons between Dutch cable providers revealed common prices and product bundles as well as the most used discount formats. In general, the most popular format used is a 'new price' format for a 3- or 6-month period.

For this research several product bundles were constructed. Test subjects initially indicated their preferred bundle and were then offered an alternative bundle with a discount consisting of one of four discount formats as well as variations in value and period.

Using OLS regressions it was possible to see the individual effect of the discount values, formats and periods on the amount of times an alternative bundle with a discount was accepted as well as the total effect in a final model.

Significant relationships were found in all three cases. This research found statistically significant evidence that higher discounts lead to more accepted discounts. Furthermore, there was statistically significant evidence that the 'new price' format is the leads to more accepted

discounts. Finally, evidence was found which confirmed that a 6-month discount period leads to the highest amount of accepted offers.

This paper demonstrates that there are statistically significant differences between discount formats. This provides an argument for companies to think carefully about which type of discount format will be used. Furthermore, it demonstrates that the Dutch cable providers are mostly using the most effective discount format.

Although the measured results were statistically significant, it is suggested that more research will be performed with regards to this subject. Lager sample sizes and more variety in the discount formats may reveal more information about customer decision making. Furthermore, the research could be replicated under more realistic circumstances and for different markets.

LIST OF TABLES AND FIGURES

1. Introduction
1.1 Pricing in the Age of Austerity

In the "Age of Austerity" (The Economist, 2013), consumers are mainly motivated by price, especially now that much of retail sales have moved online. For businesses it has become more important than ever to present the prices of their products in the most attractive way for the customers.

In the contracts market for energy, gas, water, mobile data and cable services, companies continuously fight to gain new customers. In return for a one- or two-year contract, service providers offer new customers anything from steep discount periods to free products or combination deals. A well-known statistic is that it costs seven times more money to attract a new customer compared to retaining an existing one. Yet there is little conclusive evidence from research to demonstrate which discount formats are best used for this purpose.

A quick search for a new internet provider will cause an overwhelming amount of offers to appear in front of you. Ziggo offers new customers a 6-month discount period, while KPN allows new customers to add television to their package free of charge or choose to receive a set of WiFi-boosters free of charge. Several of Ziggo's departments shifted from a promotional price-format (e.g. 6 months for €39,95) to an absolute discount-format (e.g. a 6 month, €20,- monthly discount). And finally, this company's research has concluded that customers prefer a 6 month, €10,- monthly discount over a 3 month, €20,- monthly discount. Perhaps the most surprising conclusion from research by a marketing firm is that customers seemed to prefer €2000,- in cash over a 15% discount worth €3000,- (Glosemeyer & Westeneng, 2018). This raises many questions: do customers prefer to get physical products instead of cash, even when the values do not match? Are customers more eager to accept a promotional price or an absolute value discount? Will customers choose longer discount periods even if the total discount is lower? All these questions boil down to a single research question which this thesis will aim to answer:

> **RQ:** What discount format is the most effective in increasing consumer purchase intention in the Dutch household cable contracts market?

1.2 Thesis Objective and Structure

This thesis aims to uncover the effectivity of different types of discounts on the buying decisions of consumers. The thesis has a wide scope so that conclusions may be drawn for lower-priced contracts as well as higher-priced ones, low-value as well as high-value discounts and the various ways to present these promotions. Therefore the results of this research may be useful for a wide variety of service providers. To do this, it will be necessary to find definitive statistical proof that certain types of discount presentation are more effective than others by demonstrating that test subjects are more likely to accept these respective promotions compared to others. To achieve the aim set for this thesis, several sub-questions will need to be answered.

There are three sub-questions which will be answered using existing theory:

SQ1: What is the effect of discounts on consumer purchase intention?

SQ2: What are the differences between discount formats?

SQ3: How does purchase intention change when contracts are involved?

The following three sub-questions will be answered using empirical evidence:

SQ4: What does the Dutch cable market look like?

SQ5: What are common product bundles in the household cable contracts market?

SQ6: What discount formats are commonly used in the cable contracts market?

It should be noted that this paper aims to help companies deliver their promotions in the most effective way. Although it may be argued that this could lead to ethical issues such as 'tricking' customers, it is not expected that the results will allow for this. The goal is simply to find which way of presenting identical-value discounts is most effective. This may even turn out to be helpful to customers, as it can lead to simplicity and uniformity when comparing discounts offers.

This research is limited to the Dutch cable market and although results may be similar across other markets this paper will not focus on these implications. Furthermore a limited amount of variety in formats and product bundles will be used. This does not simulate a completely realistic environment, as it would be very complicated to draw conclusions when too many factors are influencing the results.

This paper starts with discussion of the existing theory related to discounts, discount formats and consumer contracts. After this, the Dutch cable market is investigated and common product bundles and discount formats are identified. In the third chapter the data source and analytical techniques are described. In the next chapter the results for each hypothesis are analysed and preliminary conclusions are drawn up. Finally, a conclusion is drawn up and the results of the research are discussed.

2. Literature Review and Theoretical framework
2.1 Effect of Discounts on Consumer Purchase Intention

This thesis researches the effect of differences in discount formatting. Before this can be investigated, it is necessary to answer the following sub-question:

SQ1: What is the effect of discounts on consumer purchase intention?

Discounts provide an extra incentive for consumers to purchase a product as they reduce the cost of purchase. Because "price cue is present in all purchase situations and, at a minimum, represents to all consumers the amount of economic outlay that must be sacrificed" (Lichtenstein et al., 1993), a discount provides an opportunity to sacrifice a smaller amount of money.

According to research by Faryabi et al. (2012), price discount has a significant positive effect on perceived brand image and purchase intention. However, the researchers note that discounts can work counterproductively as well. "Retailers typically want customers to perceive their products to have high reference prices so perceived savings are greater when a discount is offered" (Faryadi et al., 2012). Consequently it is recommended that words such as 'special' or 'sale' are used to demonstrate that the new price is not permanent and does not become a new reference price.

Another problem with discounts is that consumers typically perceive discounts as less valuable than the advertised amount (Blair & Landon, 1981). Gupta & Cooper (1992) noted that "consumers discount the price discounts". In their paper, a promotion threshold and saturation point were found of 15% and 30% respectively, suggesting that "it may not be useful to offer discounts below the threshold or above the saturation level".

Overall it is clear that discounts have a positive effect on purchase intention. When companies offer a discount, sales generally increase if the aforementioned promotion threshold and saturation point are kept in mind. The manner a promotion is presented and the value of said promotion is also of significant importance.

2.2 Differences Between Discount Formats

Discount framing is the manner in which a price promotion is presented in an offer. Differences in the manner of presentation could cause a variation in assessment and actions of customers. Therefore it is necessary to investigate previous research into this topic to answer the following sub-question:

SQ2: What are the differences between discount formats?

Discount formats can differ in various ways. The format can focus on the amount of money that is saved (€10,- off the original price) or on the price that is still left to pay (e.g. from €45,- for just €35,-). Furthermore it is possible to clearly state the amount that is saved, as in the first examples, as well as 'hiding' the absolute value of the discount by showing a new price or only presenting a percentage off the original price.

A research performed by Heath et al. in 1995 suggested that the effectivity of discount formats changes depending on the price of the product. According to the results of their research, percentage discounts are most effective for low-price products while absolute amounts are more effective for high-price products. A possible explanation for this is that a €0,20 discount on a €1,- product places more emphasis on the small absolute value of the discount while '20% off' emphasises that, in fact, the amount saved is relatively large when compared to the original price.

Aforementioned examples are partially caused by cognitive bias and in particular the framing effect. In a famous experiment by Tversky and Kahneman (1983) it was shown that people respond stronger to losses than to gains. If a discount is placed in a 'positive frame' as opposed to a 'negative frame' this would be beneficial. An absolute discount such as €10,- off puts emphasis on the money that is saved (positive), while mentioning the new price will put emphasis on the amount that still has to be paid (negative).

Other empirical studies have found different conclusions to this sub-question. Chen, Monrou and Lou concluded "framing promotion messages … did not significantly change subjects' purchase intentions" (Chen et al., 1998), although evidence was found that the subjects evaluated the price reductions differently. Furthermore, evidence was found for the earlier conclusions found by Heath et al. (1995).

Gendall et al. (2006) could not show a significant difference between discount formats to verify aforementioned conclusions for low-priced products. However, it was found that "for both high-priced products tested, the price discount was significantly more attractive when expressed as a dollar amount off than as a percentage amount off", reaffirming the notion that absolute discounts are effective on high-priced products. McKechnie et al. (2012) found even more evidence to back this up. Another interesting research found that presenting a discount in a manner which is unfamiliar to test subjects had a positive impact on purchase intention (Kim & Kramer, 2006).

Overall, the majority of research suggests there are differences between discount formats. Although some papers could not identify a significant difference for particular product groups, most research shows significant differences between formats which can be partially explained by cognitive bias. This paper will further examine these differences.

2.3 Purchase Intention on Contracts

This paper will investigate discounts on contracts with internet providers. This allows for more variation in the discount formats, as it is possible to give discounts on the monthly payments as well as opposed to an instant discount on the purchase price of a product.

In order to draw conclusions based on this specific topic, it is necessary to gain a better understanding of purchase intention for long-term services:

SQ3: How does purchase intention change when contracts are involved?

An important characteristic of consumer contracts with service providers is switching costs. Switching costs create market power (Nakamura, 2010) and therefore are a tool for service providers to 'lock in' customers. In the cable market this is done through company-exclusive equipment, one-time installation fees and mandatory technicians for installation of certain components. Klemperer (1995) demonstrated that switching costs result in higher prices for existing customers and lower prices for new customers. The reason for this is that service providers attempt to gain new customers (and a larger market share) by offering discounts which are higher than the switching costs. Unless customers are looking to switch because of displeasure with their current service provider, rival companies will have to make an offer that is attractive enough for customers to cancel their contract.

Besides switching costs, contracts also encourage trust (Malhotra & Murnighan, 2002). Before a potential customer will be willing to sign a contract it must be clear what the customer will receive and a certain level of trust in the provider must already be present. Customers will be aware that once a contract is signed, it will not be possible to cancel the agreement. Therefore it is necessary to provide clear information on what services the customer will receive. Where purchasing a product may only be a one-time occurrence, signing a contract with an internet provider will have an impact on the customers every day the services are used. Even if the monthly costs are low, significantly more consideration is required before signing a contract. In this paper, it will be necessary to clearly demonstrate what product options are being offered and what the exact costs are to receive realistic data on purchase intention. It may be difficult to simulate the gravity of the impact of such contract decisions in this research, as the decisions will not have a real impact on the test subjects.

2.4 The Dutch Cable Market

In order to perform this research it will be necessary to analyse the Dutch cable market and gain a better understanding of it by answering the following sub-question:

    SQ4: What does the Dutch cable market look like?

The Dutch cable market has an estimated yearly revenue of around €7 billion according to the Dutch Authority Consumer & Market (ACM, 2020). The cable market consists of three main services: landline telephone, internet (Wi-Fi) and cable television. Most cable market companies, commonly referred to as 'internet providers', offer these services independently of each other as well as in combined bundles. In general it is much cheaper to purchase a product bundle with one internet provider compared to individual services with different providers.

There are two main cable companies which own nearly half of the Dutch cable market share respectively; KPN and Ziggo. The third largest competitor, T-Mobile, owns a minor market share. There are several smaller, local companies which own independent networks in certain areas. Furthermore there are smaller providers which rent KPN's copper cable network via a government-enforced open-access construction (ACM, 2020). This allows minor providers to offer services at a reduced cost, as they only pay for renting the network and thus avoid any maintenance costs.

Traditionally, the Ziggo network is mostly associated with television, while the KPN network is associated with landline telephone. Consequently, Ziggo's market share for television is significantly larger than that of KPN, while KPN's share for landline telephone is larger. Their market share for internet is almost equal as both networks can deliver internet. There is a difference in the internet speed over each network. This speed is denominated in megabit per second or mBit/s. The Ziggo network is able to deliver download speeds of up to 1000 mBit/s to nearly all customers in the Netherlands, while the upload speed is significantly lower (50 mBit/s at most locations). KPN's copper cable network only supports a lower download speed of up to 200 mBit/s and upload up to 20 mBit/s. KPN is investing in a new nationwide fibreglass network which supports download and upload speeds of up to 1000 mBit/s. Close to a third of Dutch households has access to this network (KPN, 2020).

2.5 Common Product Bundles

One of the aims of this research is to compare differences between discounts in relation to cheaper as well as more expensive. Therefore, several product bundles will need to be compared and the following sub-question needs to be answered:

SQ5: What are common product bundles in the Dutch cable contracts market?

In order to construct a research environment similar to the Dutch cable market it is necessary to establish what kind of product bundles are offered by the main telecom providers. Specifically, the product bundles of the three large competitors will be analysed. In tables 2.5.1 – 2.5.3 the main product bundles of Ziggo, KPN and T-Mobile are shown.

Table 2.5.1   *Main product bundles of Ziggo*

Product Bundle	Start	Complete	Max
Download speed	75 mBit/s	300 mBit/s	600 mBit/s
Upload speed	10 mBit/s	30 mBit/s	40 mBit/s
Price	**€42,50**	**€53,-**	**€60,50**
Television (additional options)	**€10,-** extra, recording and 4k for **€10,50**, extra channels for **€12,-**, extra TV for **€4,-** per TV		
Landline (additional option)	**€2,50** extra (fixed tariff), unlimited calling for an additional **€13,-**		

*only available on fibreglass cables

Data taken from www.ziggo.nl

Table 2.5.2   *Main product bundles of KPN*

Product Bundle	Fast	Faster	Super-fast	Ultra-fast
Download speed	50 mBit/s	100 mBit/s	200 mBit/s	1000* mBit/s
Upload speed	5 / 50* mBit/s	10 / 100* mBit/s	20 / 200* mBit/s	1000* mBit/s
Price	**€42,50**	**€47,50**	**€50,-**	**€57,50**
Television (additional options)	**€10,-** extra, recording for **€5,-**, 4k for **€2,50**, extra channels for **€7,-**, extra TV for **€5,-** per TV			
Landline (additional option)	**€2,-** extra (fixed tariff), unlimited calling for an additional **€12,-**			

*only available on fibreglass cables

Data taken from www.kpn.nl

Table 2.5.3 *Main product bundles of T-Mobile*

Product Bundle	Basic	Fast	Premium
Download speed	50 mBit/s	100 mBit/s	1000* mBit/s
Upload speed	5 / 50* mBit/s	10 / 100* mBit/s	1000* mBit/s
Price	**€30,-**	**€35,-**	**€40,-**
Television (additional options)	**€15,-** extra (includes 4k), recording **€5,-**, extra channels for **€7,50**, extra TV for **€5,-** per TV		
Landline (additional option)	**€2,50** extra (fixed tariff), unlimited calling for an additional **€15,-**		

*only available on fibreglass cables

Data taken from www.t-mobile.nl

A common feature is the differentiation between three or four variations in internet speed. T-Mobile is significantly cheaper with their 'internet only' subscription with a download speed of 50 mBit/s at €30,-. Ziggo and KPN offer their lowest bundle at €42,50.

Ziggo and KPN offer a television connection for €10,50 and €10,- respectively and T-Mobile charges €15,- extra. On top of this, additional options are available for smaller extra fees. The landline telephone comes at a low charge with a fixed tariff per minute. Customers of all three providers can choose a bundle that allows them to make unlimited phone calls in exchange for a fixed fee varying between €10,- and €15,-.

In general, the prices of these three providers are similar. T-Mobile is significantly cheaper with their internet connection. However, T-Mobile charges a larger fee for the TV connection and is also the most expensive when it comes to the landline telephone. Three product bundles with different specifications are compared in table 2.5.4 – 2.5.6.

Table 2.5.4 *Budget product bundles of Ziggo, KPN and T-Mobile*

Provider	Ziggo	KPN	T-Mobile
Internet	75 / 10	50 / 5 (50*)	50 / 5 (50*)
Television	1 TV, no extras	1 TV, no extras	1 TV, no extras
Landline Telephone	Fixed tariff	Fixed tariff	Fixed tariff
Price	**€55.50**	**€54.50**	**€47.50**

*only available on fibreglass cables

Data taken from www.ziggo.nl, www.kpn.nl and www.t-mobile.nl

Table 2.5.5 *Average product bundles of Ziggo, KPN and T-Mobile*

Provider	Ziggo	KPN	T-Mobile
Internet	300 / 30	200 / 20 (200*)	100 / 10 (100*)
Television	2 TVs (with recording and 4k)	2 TVs (with recording and 4k)	2 TVs (with recording and 4k)
Landline Telephone	Fixed tariff	Fixed tariff	Fixed tariff
Price	**€80.50**	**€74.50**	**€62.50**

*only available on fibreglass cables

Data taken from www.ziggo.nl, www.kpn.nl and www.t-mobile.nl

Table 2.5.6 *Premium product bundles of Ziggo, KPN and T-Mobile*

Provider	Ziggo	KPN	T-Mobile
Internet	600 / 40	1000 / 1000	1000 / 1000
Television	2 TVs (with recording, 4k and extra channels)	2 TVs (with recording, 4k and extra channels)	2 TVs (with recording, 4k and extra channels)
Landline Telephone	Unlimited	Unlimited	Unlimited
Price	€113,-	€99,-	€90,-

*only available on fibreglass cables

Data taken from www.ziggo.nl, www.kpn.nl and www.t-mobile.nl

The budget, average and premium product bundles in table 2.5.4 – 2.5.6 give an indication of average prices and common combinations with the three major internet providers in the Netherlands. Overall the product option and prices are relatively similar for all three providers. The constructed bundles will be used as an inspiration for the research of this thesis.

2.6 Common Discount Formats

In order to measure which discount format is the most effective, it is necessary to answer the following sub-question:

    SQ6: What discount formats are commonly used in the cable contracts market?

Out of the various discount formats that exist, the most common discount format used by telecom providers is a 'new price' format. Throughout the last year Ziggo, KPN and T-Mobile have used a temporary new price to attract new customers.

Table 2.6.1   *Available discounts on the Ziggo website*

Product	Period	Old price	New price	Absolute discount*	Percentage*
Discount package	3 months	€43,50	€34,95	€8,55	19,7%
Start	6 months	€55,50	€39,95	€15,55	25,0%
Complete	6 months	€70,50	€39,95	€30,55	43,3%
Max	6 months	€91,-	€39,95	€51,05	56,1%
Wifi boosters	-	€149,-	Free	€149,-	100%

    *per month
    Data taken from www.ziggo.nl

Table 2.6.2   *Available discounts on the KPN website*

Product	Period	Old price	New price	Absolute discount*	Percentage*
Fast	6 months	€42,50	€35,-	€7,50	17,6%
Faster	6 months	€47,50	€35,-	€12,50	26,3%
Super-fast	6 months	€50,-	€35,-	€15,-	30%
Ultra-fast	6 months	€57,50	€35,-	€22,50	39,1%
TV	6 months	€10,-	Free	€10,-	100%
Wifi boosters	-	€199,-	Free	€199,-	100%

    *per month
    Data taken from www.kpn.nl

Table 2.6.3   *Available discounts on the T-Mobile website*

Product	Period	Old price	New price	Absolute discount*	Percentage*
Basic	3 months	€45,-	€30,-	€15,-	33,3%
Fast	3 months	€50,-	€35,-	€15,-	30%
Premium	3 months	€55,-	€40,-	€15,-	27,3%
TV	3 months	€15,-	Free	€15,-	100%

    *per month

    Data taken from www.t-mobile.nl

As demonstrated in table 2.6.1 – 2.6.3, a very common discount format is the 6-month new price offer. Deeper discounts are offered by Ziggo and KPN on the more expensive product bundles. The discounts on the cheapest packages are just below 20%, whereas the discounts offered on the highest packages range from almost 40% to 56,1%. In contrast, T-Mobile opted to offer the same, €15,- discount on all packages which results in a lower relative discount on higher packages. In absolute amounts, the lowest discount saves the customer just €45,-. The highest discount on offer, Ziggo's discount on the Max package, saves the customer just over €300,-. Another recurring format is the 'free extra'. KPN and T-Mobile offer a free TV connection for several months and Ziggo and KPN offer their new customers a free set of Wi-Fi-boosters. Additionally, there are several other types of discounts offered by different departments of Ziggo, KPN and T-Mobile, which are shown in table 2.6.4.

Table 2.6.4 *Other discount types offered by Ziggo, KPN and T-Mobile*

Discount type	Ziggo	KPN	T-Mobile
Free trial	One month free trial of additional TV channels	One month free trial of additional TV channels	One month free trial of additional TV channels
Free extra	12 month unlimited landline or additional TV channels	6- or 12-month free additional TV channels	6 month free additional TV channels
Free upgrade	6 month free upgrade to a higher internet package	6 month free upgrade to a higher internet package	-
Absolute discount	3-, 6- or 9-month discounts of €10,-, €20,- or €35,-	3-, 6-, 9- or 12-month discounts of €10,- or €20,-	3-month discounts of €5,- , €10,- or €20,-
Welcome gift	-	Free LG flatscreen TV or free Sonos sound system	-
Cashback	€200,- cashback at MediaMarkt	-	-

Data gathered from phone calls with employees of Ziggo, KPN and T-Mobile

Ziggo offers a cashback of €200,- on any purchase at affiliated company MediaMarkt, as well as a very extreme 9-month discount of €66,- on their most expensive Giga-package for local marketing campaigns. KPN recently offered new customers the choice between a free TV or a free sound system during a marketing promotion for the European football championship. All three telecom providers offer discounts in the format of free trials. Temporary free extras are also offered in the shape of additional services. Finally, the customer retention departments of all three providers have chosen to offer an absolute discount on retention offers instead of the regular 'new price' format. This is a deliberate choice, as this shifts the attention to the amount of money that still has to be paid to the amount of money that is saved by the customer.

2.7 Hypotheses

This research aims to find what discounts are the most effective under certain circumstances. In order to arrive at a definitive conclusion, several hypotheses will have to be tested.

First of all it will be useful to check whether the monetary value of the discount has a significant impact on the decisions. Therefore the first hypothesis is formulated as follows:

H_01: mean amount of accepted discounts is not influenced by discount value
H_a1: mean amount of accepted discounts is positively influenced by discount value

Second of all, it is necessary to find out if there is a significant difference in decision-making between budget, average and premium test subjects. The second hypothesis is:

H_02: mean amount of accepted discounts is not influenced by customer type
H_a2: mean amount of accepted discounts is influenced by customer type

Finally, it will be possible to check which discount type (absolute, percentage, new price or cashback) and which discount period (12 months, 6 months, 3 months or immediate) is most effective. The third and fourth hypotheses are:

H_03: mean amount of accepted discounts is not influenced by discount format
H_a3: mean amount of accepted discounts is influenced by discount format

H_04: mean amount of accepted discounts is not influenced by discount period
H_a4: mean amount of accepted discounts is influenced by discount period

Rejecting the null hypotheses and finding evidence for the alternative hypotheses may result in a definitive answer to the question which discount format is the most effective, as well as showing under which respective circumstances a discount format may be more or less effective.

Figure 2.7.1   *Conceptual Model*

Figure 2.7.1 demonstrates the conceptual model related to the aforementioned hypotheses. On the left hand side, the circles contain the three discount variables that will be investigated. The arrows denote the possible effect on the mean amount of accepted discounts, as well as the possible interaction effect that may exist.

In the top right corner the sociodemographic control variables are included, as well as the customer type. An arrow is traced from these control variables to customer type, as this may be linked to gender, country of residence and age. The second hypothesis will investigate whether customer type has an influence on the mean amount of accepted discounts while discount value, discount format and discount period relate to first, third and fourth hypothesis respectively.

3. Data and Methodology
3.1 Description of the Data Source

For the purpose of researching the effectivity of different types of discount a survey will be constructed. The first part of the survey aims to collect general population data. The answers to these questions will be used to conclude whether certain characteristics of consumers influence the results.

This is followed by one question that will identify the subject as either a 'budget consumer', an 'average consumer' or a 'premium consumer'. Finally, each type of consumer will answer eleven randomized questions suited to their customer type.

For this part of the survey, three product bundles have been constructed, based on these criteria:

- The product bundles and corresponding prices have to be comparable to the common product bundles found in section 2.5.
- There has to be a 'budget', 'average' and 'premium' bundle
- Each subsequent bundle has to be objectively better with all product specifications
- The prices of the bundles (also in combination with discounts) should be reasonably easy to compare and calculate with

The constructed product bundles are displayed in table 3.1.1. The bundles are named 'Bundle A', 'Bundle B' and 'Bundle C', where A will be referred to as budget, B as average and C as premium in this thesis (not in the survey itself).

Table 3.1.1   *Constructed Product Bundles*

Product Bundle	Bundle A	Bundle B	Bundle C
Internet speed	50 mBit/s	200 mBit/s	500 mBit/s
TV Connection	1 TV connection	2 TV connections	Unlimited TV connections
Additional options	No additional TV options	Multiple HD channels	All HD channels
		Live TV (pause option)	Live TV (pause option)
		Re-watching	Re-watching and recording
			Sports + Series channels
Landline	No landline	Fixed-tariff landline	Unlimited use of landline
Monthly price	€50,-	€62,50	€75,-
Yearly price	€600,-	€750,-	€900,-

The survey provides an explanation for every product option in case test subjects are not familiar enough with the product bundle specifications to make a well-informed choice. The customers are asked to choose which bundle they would buy under the following circumstances:

- The subject lives in the Netherlands
- The subject does not have a contract for internet, television or landline phone
- The subject will sign this contract for exactly 12 months
- The bundles do not belong to any specific provider

The test subjects' preferred bundle labels the subjects as 'budget', 'average' or 'premium'. From there on, subjects will follow the survey path belonging to their respective customer type.

For the final part of the survey, eleven discount types with three variations in discount value were generated. The discount types are based on the most common types of discounts found in section 2.6. The discount values were chosen based on the discounts found in the same chapter, taking into consideration that it should be easy for the subjects to read and understand the discounts as well as for the researcher to compare the different bundles and discounts with each other. The chosen discounts are displayed in table 3.1.2 on the next page.

Table 3.1.2   *Available Discounts on Product Bundles*

	Type	€90,-			€120,-			€150,-		
1	cashback	€90,- cashback			€120,- cashback			€150,- cashback		
2	12-month absolute	€7,50 discount			€10,- discount			€12,50 discount		
3	3-month absolute	€30,- discount			€40,- discount			€50,- discount		
4	6-month absolute	€15,- discount			€20,- discount			€25,- discount		
Product bundle		A	B	C	A	B	C	A	B	C
5	12-month percentage	15%	12%	10%	20%	16%	13,33%	25%	20%	16,67%
6	3-month percentage	60%	48%	40%	80%	64%	53,33%	100%	80%	66,67%
7	6-month percentage	30%	24%	20%	40%	32%	26,67%	50%	40%	33,33%
8	12-month new price	~~€50,-~~ €42,50	~~€62,50~~ €55,-	~~€75,-~~ €67,50	~~€50,-~~ €42,50	~~€62,50~~ €55,-	~~€75,-~~ €67,50	~~€50,-~~ €42,50	~~€62,50~~ €55,-	~~€75,-~~ €67,50
9	3-month new price	~~€50,-~~ €42,50	~~€62,50~~ €55,-	~~€75,-~~ €67,50	~~€50,-~~ €42,50	~~€62,50~~ €55,-	~~€75,-~~ €67,50	~~€50,-~~ €42,50	~~€62,50~~ €55,-	~~€75,-~~ €67,50
10	6-month new price	~~€50,-~~ €42,50	~~€62,50~~ €55,-	~~€75,-~~ €67,50	~~€50,-~~ €42,50	~~€62,50~~ €55,-	~~€75,-~~ €67,50	~~€50,-~~ €42,50	~~€62,50~~ €55,-	~~€75,-~~ €67,50
11	Welcome gift	€90,- gift card for Spotify, Netflix or Amazon			€120,- gift card for Spotify, Netflix or Amazon			€150,- gift card for Spotify, Netflix or Amazon		

Every subject then answers eleven questions of the following format:

Which product would you be most likely to choose?

- o   (Initial choice)
- o   (Random other bundle): You will receive a (random discount type) of (random discount value)

The order is randomized to ensure fatigue does not influence the overall answers. The alternative bundle, discount type and discount value are randomized as well so subjects will never get the same question twice and are less likely to overthink their answers on similar questions.

A transcript of the survey questions can be found in Appendix A. Once the survey has been completed by enough subjects, it will become apparent what fraction of each type of customers will switch from their preferred bundle when offered one of two alternative bundles in combination with one of eleven discount types and one of three discount values.

3.2 Sample Statistics

The survey was spread within the personal network of the researcher and completed by a total of 222 respondents. The first three questions provide an insight in the build-up of the sample.

91 of the respondents are male and 131 are female. It is not expected that gender will have an impact on the findings of the survey, although this does have to be verified with a control variable for gender.

The age of the respondents may have a larger impact on the conclusion, as older people may have the necessary experience to think more critically about the actual result of a discount while younger respondents may be more prone to jumping to a conclusion (too) quickly. This suggestion will be tested as well using a control variable for age. The age build-up of the respondents is displayed in table 3.2.1.

Table 3.2.1   *Age build-up of respondents*

Age group	<19	20-29	30-39	40-49	50-59	>60
Amount	4	39	22	48	87	21
Percentage	1.81%	17.65%	9.95%	22.17%	39.37%	9.50%

Finally, most test subjects (76.92%) live in the Netherlands. It may be necessary to filter the data based on nationality, as it is to be expected that test subjects from other countries are unfamiliar with the cable market in the Netherlands and their answers might thus be biased. For example, it may be that respondents from countries where the incomes and prices are lower are put off by the relatively high Dutch price. Consequently, it may be that these respondents choose the cheapest bundle more often and are less likely to be swayed by a discount. This suggestion will be tested as well by adding a control variable for country of residence.

3.3 Analytical Techniques

For every hypothesis of this research an ordinary least squares (OLS) regression will be used to analyse the impact of each hypothesis' relevant variable. The dependent variable for the regressions will be the mean amount of accepted discount offers, hereafter referred to as Accept-Reject.

For each of the four hypotheses one variable will be added to the equations.. The variable DiscountValue accounts for the variation in discount value (€90,-, €120,- or €150,-). The variable CustomerType accounts for the variation between customer types (budget, average or premium). The variable DiscountFormat accounts for the variation between the different discount types (absolute, percentage, new price or welcome gift) and DiscountPeriod accounts for the different discount periods (immediate, 3 months, 6 months or 12 months). The discounts and their corresponding formats and periods can be found in table 3.3.1.

Additionally, three control variables as well as the aforementioned variables will be added to a final OLS regression to account for the possible differences between age, gender and country of residence. These variables are referred to as Age, Gender and CountryOfResidence.

Table 3.3.1 *Description of Used Discounts and Corresponding Variable Names*

Number	Type	DiscountFormat	DiscountPeriod
1	Direct cashback	AbsoluteDiscount	Immediate
2	12-month absolute discount	AbsoluteDiscount	12 months
3	3-month absolute discount	AbsoluteDiscount	3 months
4	6-month absolute discount	AbsoluteDiscount	6 months
5	12-month percentage discount	PercentageDiscount	12 months
6	3-month percentage discount	PercentageDiscount	3 months
7	6-month percentage discount	PercentageDiscount	6 months
8	12-month new price	NewPriceDiscount	12 months
9	3-month new price	NewPriceDiscount	3 months
10	6-month new price	NewPriceDiscount	6 months
11	Welcome gift	WelcomeGift	-

For the first hypothesis

H₀1: likeliness to accept a discount is not influenced by discount size

The following equation is formulated:

$LikelinessAlt = constant + b_1 * DiscountValue$

For the second hypothesis:

H₀2: likeliness to accept a discount is not influenced by customer type

The following equation is formulated:

$LikelinessAlt = constant + b_1 * CustomerType$

For the third and fourth hypothesis:

H₀3: likeliness to accept a discount is not influenced by discount format

H₀4: likeliness to accept a discount is not influenced by discount period

The following equations are formulated:

$LikelinessAlt = constant + b_1 * DiscountFormat$

$LikelinessAlt = constant + b_1 * DiscountPeriod$

Finally, a complete model will be constructed which accounts for all variation caused by aforementioned variables. The following equation is formulated:

$LikelinessAlt = constant + b_1 * DiscountValue + b_2 * CustomerType + b_3 * DiscountFormat + b_4 * DiscountPeriod + b_5 * Age + b_6 * Gender + b_7 * CountryOfResidence$

The resulting values will demonstrate whether the discount value, format and period have a significant effect on the likelihood a subject will choose an alternative product with a discount, and if so, what the magnitude of this effect is.

3.4 Descriptive Statistics

Table 3.4.1 demonstrates the survey results. Every row includes a different variable, separated in three groups: the discount value variables, discount format variables and discount period variables. The 'observations' column provides the total number of offers that were given to test subjects. The 'offers accepted' and 'offers rejected' columns demonstrate how many times test subjects chose to accept the alternative discount offer and how many times test subjects chose to reject the discount offer and remain with their original product bundle without a discount.

Table 3.4.1   *Descriptive Statistics of the Survey Results*

Variable	Observations	Offers accepted	Offers rejected	Percentage accepted
Discount value 90	801	139	662	17.35%
Discount value 120	812	193	619	23.77%
Discount value 150	817	234	583	28.64%
Absolute discount	885	208	677	23.50%
Percentage discount	660	145	515	21.97%
New price discount	663	181	482	27.30%
Welcome gift	222	32	190	14.41%
Immediate	443	78	365	17.61%
3 months	662	145	517	21.90%
6 months	662	180	482	27.19%
12 months	663	163	500	24.59%
New price, 6 months	221	69	152	31.22%
All observations	2429	566	1863	23,30%

Although no definitive conclusions can be drawn from these results without further analysing the data, it is interesting to note there are some clear differences between variables when it comes to the percentage of accepted offers.

It is almost without a doubt that the discount value has an effect on the amount of times a discount offer is accepted. Discounts of €150,- were accepted almost twice as much as discounts of €90,-. Furthermore, the new price discount and 6 month discount format have resulted in a higher percentage of acceptance compared to the other formats and periods.

To allow a first look at the possible effect of a new price-format, 6-month period discount, the observations for this type of offer were also added to the table. With a percentage of 31.22%, this type of discount was accepted far more often when compared to the average of all observations at 23.30%.

4. Results
4.1 Discount Value

The first part of the analysis consists of an OLS regression model with the purpose of finding enough evidence to reject the first null hypothesis:

$H_0 1$: mean amount of accepted discounts is not influenced by discount size

The model regresses the independent variable DiscountValue on the dependent variable Accept-Reject. The outcome is demonstrated in Table 4.1.1.

Table 4.1.1   *Regression of Discount Value on Accept-Reject*

Linear regression				Number of obs	=	2,429
				F(2, 2426)	=	15.24
				Prob > F	=	0.0000
				R-squared	=	0.0119
				Root MSE =	0.84046	

Accept-Reject	Coef.	Robust Std. Err.	t	P > |t|	[95% Conf. Interval]	
DiscountValue						
€120	0.1276598	0.0402205	3.17	0.002*	0.0487897	0.2065299
€150	0.2244167	0.0412882	5.44	0.000*	0.1434529	0.3053804
_cons	-0.6515892	0.026511	-24.58	0.000*	-0.7035759	-0.5996026

*significant at the 5% significance level

The model demonstrates that the difference in discount value has a statistically significant impact on the average amount of times a discount is accepted.

The signs of DiscountValue €120,- and DiscountValue €150,- are positive, meaning that a higher discount has a positive influence on the average amount of accepted discounts.

If all other variables are held equal, a discount of €120,- will increase the mean amount of accepted discount offers by roughly 0.127 on average. A discount of €150,- will increase the mean amount of accepted discount offers by roughly 0.224 on average.

In this model the constant is equal to the coefficient of DiscountValue €90,-. The constant is statistically significant at the 5% significance level and has a negative sign. When one extra discount is offered with a value of €90,-, the mean amount of accepted discount offers decreases by roughly -0.652 on average.

4.2 Customer Type

The second part of the analysis consists of an OLS regression model with the purpose of finding evidence to reject the second null hypothesis:

H_02: mean amount of accepted discounts is not influenced by customer type

This model regresses the independent variable CustomerType on the dependent variable Accept-Reject. The outcome is demonstrated in Table 4.2.1

Table 4.2.1   *Regression of Customer Type on Accept-Reject*

Linear regression				Number of obs	=	2,429
				F(2, 2426)	=	85.73
				Prob > F	=	0.0000
				R-squared	=	0.0555
				Root MSE =	0.82174	

Accept-Reject	Coef.	Robust Std. Err.	t	P > |t|	[95% Conf. Interval]	
CustomerType						
B	0.1080763	0.0469813	2.30	0.022*	0.0159486	0.2002040
C	-0.3423003	0.0404012	-8.47	0.000*	-0.4215246	-0.2630759
_cons	-0.4493192	0.0347696	-12.92	0.000*	-0.5175004	-0.3811380

*significant at the 5% significance level

The model demonstrates that the different customer types have a statistically significant impact on the average amount of times a discount is accepted as well.

The sign of CustomerType B (average) is positive, whilst the sign of CustomerType C is negative. This implies that customer type B is more likely to accept a discount compared to C.

If all other variables are held equal, one additional choice made by an average customer, will on average result in a 0.108 increase of the mean amount of accepted discount offers. A premium customer will decrease the mean amount of accepted discount offers by -0.342 on average.

In this model the constant is equal to the coefficient of CustomerType A. The constant is statistically significant at the 5% significance level and has a negative sign. If one customer has a preference for a budget product bundle, the mean amount of accepted discount offers decreases by roughly -0.449 on average.

4.3 Discount Format

The third part of the analysis consists of an OLS regression model with the purpose of finding evidence to reject the third null hypothesis:

H₀3: mean amount of accepted discounts is not influenced by discount format

This model regresses the independent variable CustomerType on the dependent variable Accept-Reject. The outcome is demonstrated in Table 4.3.1

Table 4.3.1   *Regression of Discount Format on Accept-Reject*

Linear regression				Number of obs	=	2,429
				F(2, 2426)	=	6.64
				Prob > F	=	0.0002
				R-squared	=	0.0068
				Root MSE =	0.84283	

Accept-Reject	Coef.	Robust Std. Err.	t	P > |t|	[95% Conf. Interval]	
DiscountFormat						
AbsoluteDiscount	0.1817682	0.0551402	3.30	0.001*	0.0736415	0.2898949
PercentageDiscount	0.1502550	0.0571401	2.63	0.009*	0.0382064	0.2623035
NewPriceDiscount	0.2577147	0.0585310	4.40	0.000*	0.1429388	0.3724907
_cons	-0.7117117	0.0471857	-15.08	0.000*	-0.8042401	-0.6191833

*significant at the 5% significance level

The model demonstrates that the different discount formats have a statistically significant impact on the average amount of times a discount is accepted.

The signs of AbsoluteDiscount, PercentageDiscount and NewPriceDiscount are positive. These discount formats positively influence the mean amount of times a discount offer is accepted.

All other variables are held equal, if one extra absolute discount is offered, the mean amount of accepted offers increases by roughly 0.182 on average. One additional percentage discount will cause a 0.150 increase on average, while one additional new price discount will increase the mean amount of times a discount offer is accepted by roughly 0.258 on average.

In this model the constant is equal to the coefficient of WelcomeGift. The constant is statistically significant at the 5% significance level and has a negative sign. If one additional welcome gift is offered, the mean amount of times a discount offer is accepted will decrease by roughly 0.712 on average.

4.4 Discount Period

The fourth part of the analysis consists of an OLS regression model with the purpose of finding evidence to reject the fourth null hypothesis:

H$_0$4: likeliness to accept a discount is not influenced by discount period

This model regresses the independent variable DiscountPeriod on the dependent variable Accept-Reject. The outcome is demonstrated in Table 4.4.1

Table 4.4.1 *Regression of Discount Period on Accept-Reject*

Linear regression				Number of obs	=	2,429
				F(2, 2426)	=	5.12
				Prob > F	=	0.0016
				R-squared	=	0.0058
				Root MSE =	0.84325	

Accept-Reject	Coef.	Robust Std. Err.	t	P > |t|	[95% Conf. Interval]	
DiscountPeriod						
3-Months	0.0850719	0.0484269	1.76	0.079	0.0098905	0.1800343
6-Months	0.1780470	0.0496149	3.59	0.000*	0.0807551	0.2753389
12-Months	0.1524995	0.0498210	3.06	0.002*	0.0548034	0.2501955
_cons	-0.6478555	0.0362223	-17.89	0.002*	-0.7188854	-0.5768257

*significant at the 5% significance level

This model demonstrates that the 6-Months and 12-Months DiscountPeriod have a statistically significant impact while the 3-Months DiscountPeriod does not.

The signs of the 6-Months and 12-Months are positive, implying that a lengthy discount period has a positive impact on the mean amount of accepted discount offers.

If all other variables are held equal, if one extra 6-month discount is offered, the mean amount of times a discount offer is accepted increases by 0.178 on average. One additional 12-month discount will increase the mean amount of times a discount offer is accepted by 0.152 on average.

In this model the constant is equal to the coefficient of Immediate DiscountPeriod. The constant is statistically significant at the 5% significance level and has a negative sign. If one additional discount is offered which the customer receives immediately, the mean amount of times a discount offer is accepted will decrease by roughly 0.648 on average.

4.5 Complete Model

For the final part of the analysis, a complete model was constructed with all independent variables as well as the control variables Gender, Age, and CountryRes. The results are demonstrated in Table 4.5.1.

Table 4.5.1   *Regression of Discount Value, Customer Type, Discount Format, Discount Period and Control Variables on Accept-Reject*

Linear regression

Number of obs	=	2,429
F(2, 2426)	=	16.74
Prob > F	=	0.0000
R-squared	=	0.1093
Root MSE =	0.80061

Accept-Reject	Coef.	Robust Std. Err.	t	P > |t|	[95% Conf. Interval]	
Female	-0.0214338	0.0346761	-0.62	0.537	-0.0894318	0.0465643
Age						
20-29	0.2144141	0.1441817	1.49	0.137	-0.0683189	0.4971471
30-39	-0.1405703	0.1465964	-0.96	0.338	-0.4280382	0.1468977
40-49	-0.0329847	0.1414713	-0.23	0.816	-0.3104027	0.2444333
50-59	-0.0662961	0.1403562	-0.47	0.637	-0.3415275	0.2089353
60+	-0.0395524	0.1488834	-0.27	0.791	-0.3315052	0.2524004
CountryRes						
Europe	0.2310405	0.0472397	4.89	0.000*	0.1384059	0.3236751
Elsewhere	0.1206772	0.0947218	1.27	0.203	-0.0650674	0.3064219
CustomerType						
Average	0.1270217	0.0454083	2.80	0.005*	0.0379784	0.2160651
Premium	-0.2932285	0.0405417	-7.23	0.000*	-0.3727287	-0.2137283
DiscountValue						
€120	0.1200485	0.0382936	3.13	0.002*	0.0449566	0.1951403
€150	0.2176026	0.0398544	5.46	0.000*	0.1394501	0.3957551
DiscountFormat						
AbsoluteDiscount	0.1217480	0.0706828	1.72	0.085	-0.0168573	0.2603533
PercentageDiscount	0.0682513	0.0833472	0.82	0.413	-0.0951884	0.2316909
NewPriceDiscount	0.1746745	0.0838045	2.08	0.037*	0.0103382	0.3390108
DiscountPeriod						
3 Months	.0254454	0.0664095	0.38	0.702	-0.1047802	0.1556710
6 Months	.1303887	0.0670724	1.94	0.042*	-0.0011368	0.2619142
12 Months	.0911887	0.0667835	1.37	0.172	-0.0397705	0.2221478
_cons	-0.7884307	0.1496131	-5.27	0.000*	-1.081814	-0.4950470

*significant at the 5% significance level

As can be deduced from model 4.5.1, the control variables for Gender and Age are not statistically significant at the 5% significance level.

Whether a customer is from Europe has a statistically significant impact on the mean amount of times a discount offer is accepted, while there is insufficient evidence to conclude that subjects living outside of Europe have a significant impact.

The differences in customer types and discount value are still statistically significant at the 5% significance level. However, the only discount format which still has a statistically significant impact in this model is the new price discount. A similar situation occurs for the DiscountPeriod variable. The only statistically significant impact measured in this model is related to a discount period of 6 months.

The coefficients of the statistically significant variables are summarized in table 4.5.2.

Table 4.5.2   *Coefficients of Statistically Significant Variables*

Variable	Coefficient	P > |t|
CountryRes		
Europe	0.2310405	0.000*
CustomerType		
Average	0.1270217	0.005*
Premium	-0.2932285	0.000*
DiscountValue		
€120	0.1200485	0.002*
€150	0.2176026	0.000*
DiscountFormat		
NewPriceDiscount	0.1746745	0.037*
DiscounPeriod		
6 Months	.1303887	0.042*

*significant at the 5% significance level

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5. Conclusion and Discussion
5.1 Conclusion

Table 5.1.1 shows the final results drawn from the regressions made in chapter 4.1 and 4.5. The initial regression provides coefficients for the different discount values as the only variables in the model, while the final regression provides coefficients for the discount values when control variables and other discount variables are included.

Table 5.1.1   *Results for DiscountValue in the Initial and Final Regressions*

Accept-Reject	Coefficient	Robust Std. Err.	t	P > |t|	[95% Conf. Interval]	
Initial regression						
€120	0.1276598	0.0402205	3.17	0.002*	0.0487897	0.2065299
€150	0.2244167	0.0412882	5.44	0.000*	0.1434529	0.3053804
_cons (€90)	-0.6515892	0.026511	-24.58	0.000*	-0.7035759	-0.5996026
Final regression						
€120	0.1200485	0.0382936	3.13	0.002*	0.0449566	0.1951403
€150	0.2176026	0.0398544	5.46	0.000*	0.1394501	0.3957551

*significant at the 5% significance level

In both models the discount values are statistically significant. The coefficient increases alongside the discount value. Therefore the alternative hypothesis, "mean amount of accepted discounts is positively influenced by discount value", is accepted as there is enough evidence to reject the null hypothesis and accept the alternative hypothesis. The conclusion here is not very surprising, as it makes sense that more customers would be willing to switch product bundles in exchange for a higher discount. This conclusion is still important for the rest of this research, as it helps to explain the total variation in willingness to accept a discount.

Table 5.1.2 shows the final results drawn from the regressions made in chapter 4.2 and 4.5. The initial regression provides coefficients for the different customer types as the only variables in the model, while the final regression provides coefficients for the customer types when control variables and other discount variables are included.

Table 5.1.2   *Results for CustomerType in the Initial and Final Regressions*

Accept-Reject	Coefficient	Robust Std. Err.	t	P > |t|	[95% Conf. Interval]	
Initial regression						
B	0.1080763	0.0469813	2.30	0.022*	0.0159486	0.2002040
C	-0.3423003	0.0404012	-8.47	0.000*	-0.4215246	-0.2630759
_cons (A)	-0.4493192	0.0347696	-12.92	0.000*	-0.5175004	-0.3811380
Final regression						
Average	0.1270217	0.0454083	2.80	0.005*	0.0379784	0.2160651
Premium	-0.2932285	0.0405417	-7.23	0.000*	-0.3727287	-0.2137283

*significant at the 5% significance level

In the initial as well as the final regression, CustomerType has a statistically significant impact on the mean amount of accepted discount offers. For this reason, the second alternative hypothesis, "mean amount of accepted discounts is influenced by customer type", is accepted as there is enough evidence to reject the null-hypothesis. It is interesting to note that only customer type B has a positive impact on the amount of accepted discount offers. There may be a logical explanation for this which has nothing to do with the presented discount itself. Because customer type B has an average preference, customers of this type have two alternative bundles which are relatively close in price and specifications to their original preference, which makes these alternatives more attractive. Budget customers may be attracted to offers on the average bundle, but the premium bundle is likely to be too expensive regardless of the discount. Premium customers may be willing to forego some of their preferences in exchange for a discount on the average bundle, but the budget bundle will likely not be satisfactory for these customers regardless of the discount offered.

Table 5.1.3 shows the final results drawn from the regressions made in chapter 4.3 and 4.5. The initial regression provides coefficients for the different discount formats as the only variables in the model, while the final regression provides coefficients for the discount formats when control variables and other discount variables are included.

Table 5.1.3 *Results for DiscountFormat in the Initial and Final Regressions*

Accept-Reject	Coefficient	Robust Std. Err.	t	P > |t|	[95% Conf. Interval]	
Initial regression						
AbsoluteDiscount	0.1817682	0.0551402	3.30	0.001*	0.0736415	0.2898949
PercentageDiscount	0.1502550	0.0571401	2.63	0.009*	0.0382064	0.2623035
NewPriceDiscount	0.2577147	0.0585310	4.40	0.000*	0.1429388	0.3724907
_cons (WelcomeGift)	-0.7117117	0.0471857	-15.08	0.000*	-0.8042401	-0.6191833
Final regression						
AbsoluteDiscount	0.1217480	0.0706828	1.72	0.085	-0.0168573	0.2603533
PercentageDiscount	0.0682513	0.0833472	0.82	0.413	-0.0951884	0.2316909
NewPriceDiscount	0.1746745	0.0838045	2.08	0.037*	0.0103382	0.3390108

*significant at the 5% significance level

In the initial regression, all variations in DiscountFormat have a statistically significant impact on the mean amount of accepted discount offers. In the final regression, the only format which has a statistically significant influence is the new price discount.

As at least one of the discount formats has a significant impact, the third alternative hypothesis, "mean amount of accepted discounts is influenced by discount format", is accepted as there is enough evidence to reject the null-hypothesis. Furthermore, the new price discount format has the largest coefficient in both regressions. This means it is possible to conclude that the new price format is the most attractive discount format overall.

Table 5.1.4 shows the final results drawn from the regressions made in chapter 4.4 and 4.5. The initial regression provides coefficients for the different discount periods as the only variables in the model, while the final regression provides coefficients for the discount periods when control variables and other discount variables are included.

Table 5.1.4 *Results for DiscountPeriod in the Initial and Final Regressions*

Accept-Reject	Coef.	Robust Std. Err.	t	P > |t|	[95% Conf. Interval]	
Initial regression						
3-Months	0.0850719	0.0484269	1.76	0.079	0.0098905	0.1800343
6-Months	0.1780470	0.0496149	3.59	0.000*	0.0807551	0.2753389
12-Months	0.1524995	0.0498210	3.06	0.002*	0.0548034	0.2501955
_cons (immediate)	-0.6478555	0.0362223	-17.89	0.002*	-0.7188854	-0.5768257
Final regression						
3 Months	.0254454	0.0664095	0.38	0.702	-0.1047802	0.1556710
6 Months	.1303887	0.0670724	1.94	0.042*	-0.0011368	0.2619142
12 Months	.0911887	0.0667835	1.37	0.172	-0.0397705	0.2221478

*significant at the 5% significance level

In the initial regression all discount periods are statistically significant with the exception of the 3-month period. In the final format, only the 6-month period is statistically significant.

As the complete model demonstrates that the 6-month period has a significant impact on the amount of accepted offers, the fourth alternative hypothesis, "mean amount of accepted discounts is influenced by discount period" is accepted. As the 6-month period has the largest coefficient in both models as well, it is possible to conclude that the 6-month discounts are preferred by customers as well. Although the absolute discount format did have a large positive coefficient as well, it was not highly significant in the complete model. This shows that the new price discount format is strong enough to withstand the cognitive bias of the framing effect.

Overall, a 6-month new-price discount has the largest positive impact on accepted offers as well as a statistically significant one. In table 4.2.1 (chapter 4.2) it could already be noted that the 6-month, new price discount was accepted almost 1,5 times more often compared to the average. The 6-month, new price frame is the most common one used by the Dutch internet providers as well, showing that their decision to use this discount most likely has been influenced by experience or prior internal research.

It is interesting to note that these significant differences in willingness to accept a discount based on formats and periods are not entirely rational. In economic theory, one should prefer to receive money immediately as opposed to spread over a 3-, 6- or 12-month period, as interest can be accrued over this time period. Yet, the direct cashback was one of the less effective discount formats in this research.

5.2 Discussion

The primary limitation of this research is the relatively low number of respondents and overall observations. Although some results were shown to be statistically significant, a larger group of respondents will likely result in a more accurate model.

A second limitation is the research environment of this study. Because decisions made during a survey have no real impact on the well-being of the test subject, the answers given during a survey may not accurately reflect the decisions a test subject would have made in an authentic situation.

Thirdly, the Dutch cable market has many competitors that offer different quality products as well as different bundle combinations and prices. The influence of this important aspect has deliberately been left out of this research due to its complexity. However, this also limits the applicability of the results.

This research only used data gathered using a survey. Although this data accurately demonstrates which option respondents would choose under a hypothetical situation, it may not accurately reflect what options would be chosen under realistic circumstances. Data from the involved Dutch cable providers could not be used but could provide a very valuable insight.

5.3 Research suggestions

Following the aforementioned limitations, a suggestion for future research is to gather a larger number of test subjects to determine the effect of different discount formats with more certainty and accuracy. Furthermore, field research or research in a more realistic research environment could be a valuable scientific contribution to the subject. Finally, a more expansive model with more variation in discount values, product bundles and competition may lead to more accurate conclusions and reflect the situation on the Dutch cable market better. Overall, a larger investigation performed using data from the Dutch cable companies would most likely deliver more accurate results.

5.4 Implications and Recommendations

The conclusions on effectivity of discount formats in this research correspond with the current discounts that are often offered by major internet providers in the Netherlands. The most effective format according to this research is also one of the most common discounts offered. Therefore this research provides an argument to continue using this discount format. This research may help people who work with discounts understand how customers view particular offers as well. If employees have the option to frame the discounts in a different way, this might be useful to convince a customer to take a deal. It is recommended that the Dutch cable providers continue offering the 6-month new price discount format to potential customers.

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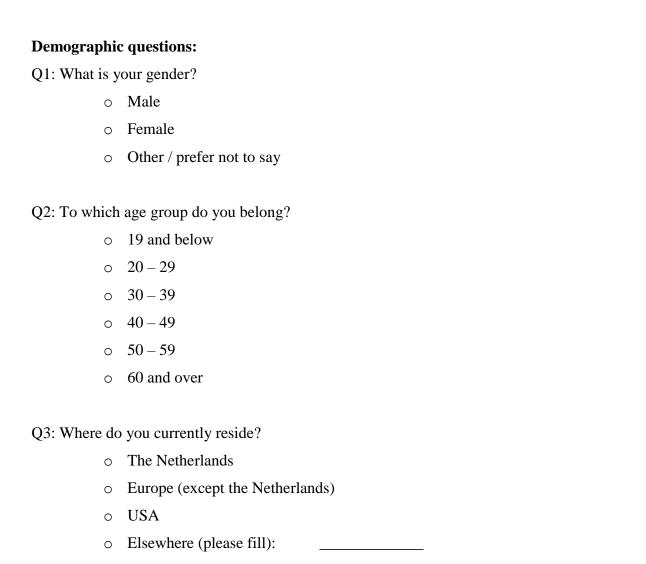
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Appendix A: Survey Transcript

This appendix shows the questions a test subject may receive. The questions will be different for each subject because several variables are randomized and the final part of the survey is partially dependent on the product bundle the customer initially chooses.

Demographic questions:

Q1: What is your gender?

- o Male
- o Female
- o Other / prefer not to say

Q2: To which age group do you belong?

- o 19 and below
- o 20 – 29
- o 30 – 39
- o 40 – 49
- o 50 – 59
- o 60 and over

Q3: Where do you currently reside?

- o The Netherlands
- o Europe (except the Netherlands)
- o USA
- o Elsewhere (please fill): _____

Segmentation:

Before starting the second part of the survey, please imagine the following situation:

- You live in the Netherlands and you have to decide on a new contract for internet, television and landline phone at home. You do not have a contract for any of these products at the moment.
- You will have this contract for exactly 12 months, after which the contract will be cancelled effective immediately.

- There is only one service provider at this location. The provider offers three packages.

Q5: Which product bundle* would you be most likely to choose?

- o Product bundle A
- o Product bundle B
- o Product bundle C

*The product bundles are displayed before every question in the survey so customers can compare the bundles when evaluating alternatives

Data questions:

Each subject answers one question for each discount type in random order (1-11).

Each question the subject can choose their preferred bundle (e.g. A) or a random alternative (in this case either B or C).

Each question the subject is offered a discount of either €90,-, €120,- or €150,-.

The possible questions are named according to the following format:

(subject type)-(discount type)-(alternative bundle)(discount height)

For example, question A-7-C120 would be:

QA-7-C120: Which product would you be most likely to choose?

- o Product A
- o Product C: you will receive a 6-month discount of 20% per month.

One example of the questions that a subject who chose 'bundle A' as their preferred bundle could get:

Question order	Initial choice (based on Q5)	Discount type (random order)	Alternative bundle (random, cannot be equal to initial choice)	Discount height (random)
1	A	4	C	120
2	A	2	B	90
3	A	11	C	90
4	A	8	C	150
5	A	1	C	120
6	A	9	B	90
7	A	6	C	90
8	A	10	B	150

9	A	3	B	90
10	A	7	C	90
11	A	5	C	120