University of Muenster

Bachelor Thesis

Website Design In Affiliate Marketing

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Executive Summary

In this thesis, it was researched whether it was possible to see a positive significant effect in user activity with a change of the homepage of a website for the affiliate marketing company linkmaker. The change was instigated due to unclarities in what linkmaker does among users, and the website was edited accordingly.

During the literature research, it became apparent there were three main components in designing the new website for linkmaker: understandability, trust, and functionality. Understandability was implemented by showing a step-by-step guide on how to use linkmaker using a short video. Trust was created by including avatars on the website along with brand ambassadors from several countries. Next to this, the contact options were placed higher up in the website. Features were added by including pop-up screens within the website to decrease text and increase functionality.

To measure a possible difference in user activity, it was necessary to define activity in two different ways, with the first one being whether a newly signed up user had already created a link, and the second one whether the user had generated at least one sale through the links, both relative to the number of signups.

The difference in the proportion of the dataset before and after the website change was ~10% for the users who created a link, and ~50% in active users who had at least one provision generated. As the change in means was not enough to reject the null hypotheses, the conclusion could not be drawn that the website had in fact become more effective in activating users.

Even though the result of the statistical tests were insignificant, some key takeaways for the marketing policy of linkmaker can still be taken away. Understandability of linkmaker is still to be increased due to the concept still being relatively unknown, and trust for the users to become more active.

A special mention goes out to Svetlana Rother BSc., who is the Web Developer of Stylink Social Media GmbH, and has helped tremendously in switching the website to the current state.

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List of Abbreviations

UTM	Urchin Tracking Module
URL	Uniform Resource Locator
DCM	Digital Content Marketing

1 Literature Table

Study	Interactivity	Multimedia	Website	Features	Visual design	Trust creation	Language	Customer	User activity	Authenticity	Effectivity	Functionality	Understandability	Theoretical perspective	Key findings
Bashirzadeh, Mai & Faure (2022)		x	x	x	x			x			x		x	Unspecified	Combining animations and pictographs decreases digital marketing communication's
Bleier, Harmeling & Palmatier (2018)	x	x	x	x	x			x	x		x			Multidimensional consumer experience	Gives an overview of measures that can be taken to increase user activity
Currim, Mintz & Siddarth (2015)			x	x	x				x		x		x	Information processing & choice	Incorporate information accessed rather than information available on a website
Heitmann, Landwehr, Schreiner & Van Heerde (20	x	x	x	x	x				x		x	x	x	Information processing	More interactive functions on a website do not guarantee higher levels of interactivity
Herhausen et al. (2020)			x	x		x		x						Unspecified	Digital presence of employees increases perceived service quality and trust in the
Hollebeek & Macky (2019)	x	x		x	x				x		x	x	x	Information processing	Increasing website understandability increases activity among users. Increasing understandability is done by triggering all three tiers of Digital Content Marketing (DCM)
Homburg, Schwemmle & Kuehnl (2015)		x			x							x		Social presence (Gestalt theory)	Design dimensions increase willingness to pay and word of mouth
Inditex (2022)									x		x			Unspecified	External and internal impact on sales of Inditex over the period February 2021 - January 2022
Kozlenkova et al. (2017)			x	x		x		x			x			Unspecified	Online sales make the consumer feel distanced from the seller. To decrease perceived distance, design elements need to
Liu & Shrum (2009)	x		x						x		x			Social presence (intera	Under the low-involvement condition, higher interactivity makes for an increased user
Montgomery, Srinivasan & Liechty (2004)			x	x	x				x		x	x		Information processing	Path analysis on a website is necessary to develop a better website and increase user activity significantly
Nunes, Ordanini & Giambastiani (2021)						x				x	x			Multidimensional consumer experience	Authenticity on a website increases its effectiveness
Packard, Moore & McFerran (2018)							x	x			x			Unspecified	Using personal pronouns can have a negative effect on customer satisfaction
Schlosser, White & Lloyd (2006)			x			x			x					Unspecified	High levels of trust make for the user to be more likely to become active
Spears & Yazdanparast (2014)				x	x				x		x	x	x	Information processing	A lower product ambiguity makes for a higher chance of the user using a product
Voorveld, Neijens & Smit (2011)	x		x	x	x		x							Interactivity	There is a great incongruence between actual and perceived interactivity on websites. Six characteristics of websites are described to make websites more interactive
This study	x	x	x	x	x	x	x	x	x	x	x	x	x	Information processing	

2 Introduction

2.1 Problem statement

linkmaker is a platform in the Netherlands, Belgium, and Luxembourg where users can make money by creating affiliate links. These affiliate links can be generated from a large number of partner shops, where every product can be linked. It becomes possible to copy the URL from a specific product from the shop and paste it into linkmaker, where the affiliate link is created. The user can then post the generated link online, where it generates money per click. linkmaker makes the money back by earning a percentage of the sales revenue generated, tracked by cookies placed on the device of the person clicking the link. Almost all of linkmaker's users share their links on Instagram, as can be seen below.

Table 1: Percentage of linkmaker Provisions via Instagram and YouTube in the Netherlands

February 2022	
Total provision Instagram	€ 79.333,97
Total provision YouTube	€ 282,85
% provision Instagram	99,64%
% provision YouTube	0,36%

Source: Stylink Social Media GmbH (2022)

Currently, there are many sign-ups to the platform, but a relatively small amount of users shows activity in the form of creating a link. The goal of linkmaker is therefore to improve overall user activity.

Table 2: Percentage of linkmaker Provisions via Instagram and YouTube in the Netherlands

Signups February	
Total signups UTM = null	127
Total signups UTM = null & minimum 1 link created	62
% users with link created	48,82%

Source: Stylink Social Media GmbH (2022)

During the process of users interacting with our system, there are multiple stages where the user interacts with the system. First of all, the user starts by visiting the website. On the website, the user might choose to sign up, filling out all the important information on the registration page. After registration, the user receives an e-mail with all necessary information to start using linkmaker. If the user is important to linkmaker, they will receive a phone call with all necessary information

on how linkmaker works. User importance is assessed through the number of followers a user has on Instagram, together with a subjective assessment by an employee from linkmaker. If the user has more than 6,000 followers, they will usually be called.

Figure 1: User Interaction Illustration

Source: Author's own illustration

During the phone calls, it has become apparent that a significant part of the registered users does not know what linkmaker does when signing up. They are currently activated through the phone calls, where the concept of linkmaker is explained and the user is activated.

Table 3: understanding of concept linkmaker

Understands concept	Does not understand concept
53	30

Source: Stylink Social Media GmbH (2022)

2.2 Study aim

The aim of the thesis is to make the users more aware of what linkmaker does – and therefore activating them (Hollebeek and Macky, 2019) – by changing the website design. In this way, users will be activated more easily even before they were reached by phone. The following research question is established:

Can a new website design at linkmaker increase activity among new users?

The research question is answered by first conducting a literature review, where the current website design is analyzed. After the analysis of literature, the most effective and practicable measures for the website are implemented to increase user activity, with understandability (Hollebeek and Macky, 2019), trust (Schlosser, White, and Lloyd, 2006), and website functionality (Spears and Yazdanparast, 2014) as the main drivers of the research. As linkmaker has certain 'musts', they have to be incorporated into the website as well. The finished website is then analyzed by a two

different variables on user activity over a different time period – one from the business perspective and one from the user perspective. As the website is accessed for almost 85% by mobile users, the focus will be on the mobile website (appendix A).

3 Definitions

Active user:
An active user is a user that has generated at least one sale through one or more affiliate links from linkmaker.

Campaign: where the user receives clothes of a certain value, that they have to promote with affiliate links from linkmaker. Usually meant to attract new users to linkmaker.

Commission: the money that is paid out to the users by linkmaker

Instrumental services:
Services that provide supporting activities for the customer

Provision: the money that linkmaker receives from the partner shops through affiliate networks. Usually a percentage of the sales from the brand that took place through one of the affiliate links of linkmaker.

Stylink: short for Stylink Social Media GmbH

stylink: the brand Stylink Social Media GmbH is known as in countries outside of the Netherlands, Belgium, and Luxembourg

linkmaker: what stylink is called in the Netherlands, Belgium, and Luxembourg

UTM: Urchin Tracking Module. Gives extra information to the website host about the origin of the user.

4 Literature

4.1 Literature review

4.1.1 General note

Before starting with changing the website and collecting data, the correct literature to help build effectivity needs to be sought out. As there is close to no literature on platforms giving away money, it is hard to provide sources that are completely relevant to the case of linkmaker. However, user activity can also be measured by looking at effectiveness in website design on sales. If more sales have commenced with certain website changes, there is a higher activity from users as well. Also, marketing at linkmaker and generic e-commerce retailers are done mainly towards the website users, with the focus being on private persons using or buying specific products or services.

Next to this, some of the literature used concerns the design of products instead of websites. As the product from linkmaker is the production of affiliate links on the website itself, the design of the website will show similarities to physical product design. However, offline customer relationships cannot be duplicated completely to an online environment (Kozlenkova et al., 2017, p. 34). Online customer experiences can be divided in four types: informativeness, entertainment, social presence, and sensory appeal (Bleier, Harmeling, and Palmatier, 2018, p. 101). As the entertainment factor and sensory appeal both have to do with the functionality of the website, they are included in the same subchapter.

4.1.2 Trust creation

The most important aspect in generating user effectiveness in the website is trust. It is not possible to have users become effective without the user first trusting the website (Schlosser, White and Lloyd, 2006, p. 145). In online sales, a potential customer can be distanced from the seller, making it more likely for the customer to assume the seller will engage in opportunism. This is also described in the article from Kozlenkova et al. (2017, pp. 34-35), where the online relationship between the website visitor and the website host is described and differentiated from a physical relationship between buyer and seller. The probability for the seller to show opportunistic behavior might be modest, but the perceived risk for the customer can

be regarded differently. Online risk-reducing signals are most effective for new customers. this is also logical due to the online signals being the one of the few indicators of service quality.

To gain trust from the user on a website and improve the perceived customer relationships, certain website elements can be improved and prioritized. One of these trust components is included in the study from Herhausen et al. (2020, p. 932), describing how presence from employees on websites can improve the perceived service quality. The study explains how websites with generic, stock images are less effective than ones showing employees.

Including authenticity in trust creation reveals how this increases website effectiveness, especially in instrumental services (Nunes, Ordanini and Giambastiani, 2021, p. 15). If authenticity is to be achieved, the six pillars of authenticity – accuracy, connectedness, integrity, legitimacy, originality, and proficiency have to be assessed to strategize the business layout. Accuracy is described as perceived transparency of a company, where self-representation is the key in building authenticity and trust in website design. It is also important to convey truthfulness to achieve customer retention.

4.1.3 Understandability

Before starting with anything in website design, the attainable customer benefits should be communicated with the customer. If the customer does not understand what the website does, they will not show any activity on the website.

Several studies show how understandability improves sales activity on websites. Understandability can be improved using a profound Digital Content Marketing (DCM) strategy (Hollebeek and Macky, 2019). Hollebeek and Macky researched how DCM can help in relationship management with existing customers, but also increase sales activity on e-commerce websites for new customers by triggering customer engagement in the first tier of DCM. From this first tier, they move on to the second tier – brand trust – which moves them to the third tier of increased customer activity and brand equity. Possible methods to improve DCM described by Hollebeek and Macky for websites include infographics, guides, and quizzes. This study also confirms the findings from Nunes, Ordanini, and Giambistiani (2021),

who find that the accuracy in which a brand shows itself increases trust and therefore, customer activity.

Another study by Currim, Mintz, and Siddarth (2015) researched the information necessary on the website for the purchase of a product. They made it possible for the users to choose themselves what information was available to them when looking at a product. They concluded that for people to buy the product, it was not necessary to access all available information. Too much information could harm buying activity. To prevent clutter, research should be conducted to assess which information to display and what the optimal amount of information is. The table below presents the data from their paper.

Table 4: Percentage of Customers Accessing Total Amount of Information

Table 1 *(continued)*

Panel E. Percent of consumers accessing total amount of information

Number of cells accessed	Number of shoppers	%	Customize and buy	%	Do not customize and buy	%
<5	97	17%	36	12%	61	22%
6–10	103	18%	49	16%	54	19%
11–15	233	40%	137	46%	96	34%
16–20	36	6%	15	5%	21	7%
21–25	33	6%	21	7%	12	4%
26–30	21	4%	14	5%	7	2%
>30	59	10%	29	10%	30	11%
Total	582	–	301	52%	281	48%

Source: Currim et al. (2015), p. 17.

Additional research on clutter in digital marketing communications was conducted by Bashirzade, Mai, and Faure (2022), finding the impact of using both pictograms and animations to be negative on communication effectiveness in e-mail marketing. When used separately, the effect is positive when used in moderation, as these methods of digital communication at least partially replace the missing social cues present in physical person-to-person conversation. Even though the study does not directly mention website design, it once again highlights the need for the reduction of unnecessary information in marketing communication.

Where the overwhelming capability of too much information or features is highlighted once more is in the paper of Voorveld, Neijens, and Smit (2011), who find actual interactivity on websites is incongruent with the perceived interactivity on websites. The incongruity is displayed on the table below.

Figure 2: Incongruity Between Actual and Perceived Interactivity

Source: Voorveld et al. (2015), p. 17.

This perceived interactivity is important, as it increases the website's ability to persuade (Liu and Shrum, 2009). Liu and Shrum found that due to the effectivity of interactive advertisements, as well as a website being a large advertisement for a brand or company, interactivity on a website results in larger consumer activity.

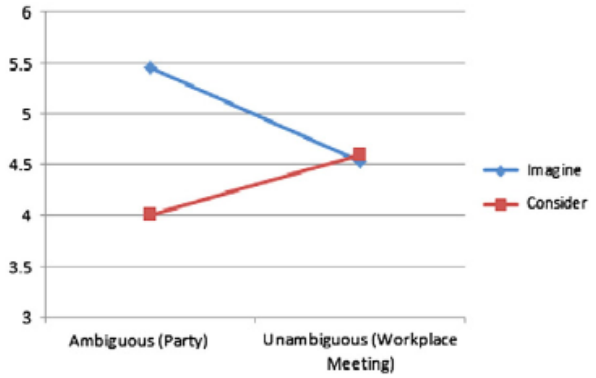
4.1.4 Website functionality

With the knowledge that clutter needs to be avoided and unnecessary information taken off, the necessary functions to achieve a high functionality have to be put forth. For high functionality in a website, elements from product design can also be used on existing theories in website design. The website functionality as one of the base factors in the creation of customer-based brand equity (Hollebeek and Macky, 2019). The study of Hollebeek and Macky reveils how before customers enter the Digital Marketing Communications (DCM) system, they will have functional desires that have to be fulfilled.

Another study by Homburg, Schwemmle, and Kuehnl (1998) researches the effect of physical product functionality, aesthetics, and symbolism on sales. They conclude that the standardized total effect of product functionality on purchase intention is 0.18, and 0.27 on Word-Of-Mouth with both dependent variables significant ($p < 0.05$).

The following table shows a study by Spears and Yazdanparast (2014, p. 368) how a higher functionality, or lower ambiguity, increases the levels of consideration when purchasing a product.

Figure 3: Effect of Level of Ambiguity on Purchase Intentions



Source: Spears and Yazdanparast (2014), p. 368.

Spears & Yazdanparast show that particularly in an online environment, potential customers will be more willing to buy when imagination is suppressed. Suppressing imagination is done by increasing information on the product or service. If there is more information on how a product or service works, the imagination levels go down and the customer buying intention increases.

4.1.5 Optimal website design

Optimizing the website design means checking what features described in the literary sources were deemed most effective to reach certain aspects. As the goal of the website to be designed is to activate users, results that view the maximal buying intention and other indicators of activity are prioritized.

Creating trust via website design can come into effect through different measures. Kozlenkova et al. (2017) found three critical aspects that have an effect on sales in e-commerce: risk-reducing signals, the level of the buyer's experience, and whether a relationship is unilateral or reciprocal. Possible risk-reducing signals can be com-

munication, reputation, and relational observation, with relational observation being the opportunity for the customer to see what other people thought of the buying process (i.e. by customer reviews). The perceived communication or service quality can be increased by increasing the employee presence on the website using avatars and including various communication channels in a more centralized area (Herhausen et al., 2020; Nunes, Ordanini, and Giambastiani, 2021).

Understandability is generated by adding elements explaining what a certain brand, company, or website does. Nunes Ordanini, and Giambastiani (2021) see how accurate information indirectly has a positive effect on user activity, with trust linking them. To incorporate accuracy, Digital Content Marketing (DCM) such as infographics, guides, and quizzes can be used to accurately convey information (Hollebeek and Macky, 2019). As clutter needs to be avoided (Bashirzadeh, Mai, and Faure, 2022; Currim, Mintz, and Siddarth, 2015; Voorveld, Neijens, and Smit, 2011), large parts of text should be avoided. When text is used, personal pronouns like “you” or “your” should be avoided (Packard, Moore, and McFerran, 2018) unless the goal is to increase the social experience (Bleier, Harmeling, and Palmatier, 2018, p. 111).

Functionality is included in the understanding of the product or service. As an easier understanding of the website decreases ambiguity and increases customer consideration, the functionality levels are increased as well (Spears and Yazdanparast, 2014). As certain product design elements can be used in website design such as similarities between different products for the same brands (Heitmann et al., 2020). The implications for creating a new website design are that they have to be similar to the old design. It can be achieved by, for instance, using similar text fonts, colors, button styles, or button placement. The functionality can be measured most effectively by conducting path analysis. In this way, a website can be optimized more effectively (Montgomery et al., 2004)

To increase perceived interactivity levels for increased consumer persuasion, certain measures can be taken. Voorveld, Neijens, and Smit (2011) show the effective tools not only for productive, but also counterproductive to perceived interactivity. They describe the positive effect of dropdown menus, but mostly the positive effect of interactive features uncommon on websites in general. Measures counterproduc-

tive to interactivity are hotlinks and functions that are protected by login. To research further effects in interactivity for a specific website, website tracking is required.

4.2 Results for linkmaker

4.2.1 Old website analysis

When looking at the old linkmaker website, there was no employee presence on the homepage. Just like many websites, there was a high presence of stock photo's (Herhausen et al., p. 921). The differentiation in means of contact was very high, and the users could contact linkmaker through WhatsApp, iMessage, email, phone calls, and Instagram. However, only about 12% of the people visiting the homepage have actually seen the contact options at the bottom of the page, as seen below:

Figure 4: Percentage of Users Reaching Contact Options

Source: Hotjar Heatmap linkmaker.eu (March 2 – March 31 2022)

The percentage of website users viewing the contact page may still be slightly skewed, since the contact page can also be accessed from the menu. Therefore, the relative number of people viewing ways to contact linkmaker would have been higher than seen here.

As part of the website trust is truthfulness (Nunes, Ordanini, and Giambastiani, 2021, p. 5), this is where linkmaker also scored low. On the homepage, the text only said that people can make money with linkmaker. Even though this is true, the information was still not accurate and very open to interpretation.

Leaving the interpretation open to imagination as described above is harmful to the website effectivity (Spears and Yazdanparast, 2014, p. 368). The website from linkmaker only explained what the website does on a part which less than 30% of visitors viewed, decreasing website understandability:

Figure 5: Percentage of Users Reaching Explanation

Source: Hotjar Heatmap linkmaker.eu (March 2 – March 31 2022)

In clutter, there was a lot of unnecessary information present. This information could still be included, but should be below the necessary information about linkmaker. The interactivity on the website was also not very good, with users only spending 11 seconds on average on the homepage (appendix A).

4.2.2 New website design

The different design elements used for the generic optimal website described in the subchapter above could not all be included on the website of linkmaker, as it does not directly relate to e-commerce like many of the literary sources used.

Features that could have been used on the website are including the presence of employees on the website. Because of privacy reasons, Stylink had opted in favor of the usage of avatars on the website. These avatars were meant for the reduction of perceived distance between linkmaker and the customer. Another way to decrease this was by including the different support channels - which includes WhatsApp, phone number, e-mail, iMessage - in a more central way. Trust should be created by decreasing this distance (Herhausen et al., 2020, p. 933).

To further increase the accuracy to obtain trust (Nunes, Ordanini, and Giambastiani, 2021), dropdown menus with the advantages of linkmaker were included. For instance, the advantages of using linkmaker were included on the homepage, with a larger explanation present in a pop-up menu. These pop-up menus will also increase the interactivity on the website, increasing user activity (Currim, Mintz, and Siddarth, 2015; Voorveld, Neijens, and Smit, 2011). Also, the pop-up menu can be viewed by clicking on the avatar above the subsequent advantage to increase the trust (Herhausen et al., 2020, p. 20). Understandability is achieved through the use of an infographic video explaining what linkmaker does (Hollebeek and Macky, 2019). The proportion of people understanding linkmaker should increase by this simplified picture instead of using text. It is also displayed on top of the website instead of a stock photo, meaning a higher proportion of website visitors will see the explanation.

Figure 6: Pop-up Menu with Additional Information (New Website)

Source: www.linkmaker.eu (May 19th, 2022)

Features that were not included are emoji's to avoid clutter (Currim, Mintz, and Siddarth, 2015), as well as the usage of too many hotlinks (Voorveld, Neijens, and Smit, 2011). However, animations such as videos have been included to increase the understandability of the website. At the top of the website, a guide with three steps has been included to explain how to create a link with linkmaker. These steps include:

-How to → This is how linkmaker works
1. Copy a product link…
2. …create a linkmaker link…
3. …paste the link in your Story and make money per click!

All of the steps include a picture to show how to show how linkmaker exactly works, with the video designed by the website designer of Stylink.

Creative features to include interactivity that are less common websites should work better, but their effect on user activity cannot be measured by itself. As new original features have not been tested yet, the effect can also turn out to be strongly negative. This means very original features are not included on the website. Only dropdown or help-menus that can pop up have therefore been used.

5 Practical website design

5.1 Data collection

5.1.1 General note

Only users from the Netherlands are taken into account for the linkmaker markets, as Belgium and Luxembourg have experienced many technical issues and do not have enough active users to correctly draw results.

As there was one shop active for linkmaker for all users in March and April responsible for more than 90% of the total provisions which was not active in February, the results from February will be assumed to be much more negative than in March or April because of this shop.

5.1.2 New user percentage activated

The variables to be chosen to monitor website effectivity is by looking at the percentage of users that is activated, meaning there has been at least one sale generated by the user. Since the campaigns could skew the results of the website due to other influences in the acquisition email or the chosen shop for the campaign, it is necessary to account for this. User signups can be tracked through the use of UTMs, meaning it is easy to find the users who signed up by first visiting the homepage, as there is no UTM is present in their signup and the UTM parameter indicates "null".

The null hypothesis (H0) can be viewed below, with x1 being the percentage of activated users before the website change, and x2 after the website change. The alternative hypothesis (Ha) is that the website change has affected the percentage of active users positively:

H0: $x1 \geq x2$
Ha: $x1 < x2$

This is because the data is only collected at the end of two weeks, and users who have signed up longer ago will have had a higher chance to become active. The activation rate between user signups through UTM and user signups with the UTM parameter null differs significantly (Appendix B), meaning the hypothesized proportion in the chi-square test needs to be calculated beforehand on the percentage of user signups coming in with a non-null UTM as follows:

$$Phyp = \frac{PexpectedUTM * ObservedUTM + PexpectedNULL * ObservedNULL}{ObservedUTM + ObservedNULL}$$

where:
Phyp = Hypothesized proportion
PexpectedUTM = proportion activated before the website change with a non-null UTM parameter
ObservedUTM = observations done of signups with a non-null UTM parameter after the website change
PexpectedNULL = proportion activated before the website change with UTM parameter "null"

ObservedNULL = observations done of signups with UTM parameter “null” after the website change

5.1.3 New user link generation

The second variable to be measured in the study is the links generated amongst users. As taking the average might skew results if one user generated many links, the variable is aggregated to a Boolean (yes/no) and included in the generation of a percentage of users who created their first link. Again, the hypothesized proportion Phyp is calculated according to the formula in section 4.1.2., as the link generation by users also differs significantly between users with and without a UTM parameter (Appendix B).

The following results for a chi-square test exist, with y1 being the percentage of users creating a link before the website change and y2 after:

H0: $y1 \geq y2$
Ha: $y1 < y2$

If H0 is rejected and Ha is adopted, the study is still significant, like described in section 4.1.2..

5.2 Data analysis

As the data in the research is quantitative, the chi-square method was used. This was because the variables were analyzed before and after the change of the website with data in the form of a Boolean. To gather the data, it was possible to download it from the systems from linkmaker, Tableau and Backend. The data could be connected through the use of a User ID, which is a unique identifying code for all the signed up users. This was mainly important for variable New User Link Creation, as the number of links created could only be found in Backend, and the UTM parameter could only be gathered from Tableau. The data from both systems was pasted in Excel. When the data from both Tableau and Backend were formatted separately as tables, it was possible to sort on User ID in both tables and copy the data from the table generated by Tableau. A check was made by manually entering the data in another column to avoid mistakes.

The data was summarized in multiple tables. For the active users, the table is the following before and after the thesis:

Table 5: Proportion active users before website change

	Null	UTM	Total
Active	9	7	16
Inactive	52	168	220
Proportion	0,147541	0,04	0,0678

Source: Author's own illustration

Table 6: Proportion active users after website change

	Null	UTM	Total
Active	8	2	10
Inactive	32	19	51
Proportion	0,2	0,095238	0,163934

Source: Author's own illustration

Table 7: Proportion users who created a link before website change

	Null	UTM	Total
Created link	30	37	67
Did not create link	31	138	169
Proportion	0,491803	0,2114286	0,2839

Source: Author's own illustration

Table 8: Proportion users who created a link after website change

	Null	UTM	Total
Created link	21	6	27
Did not create link	19	15	34
Proportion	0,525	0,285714	0,442623

Source: Author's own illustration

The proportion of active users and in user link creation has increased in both categories after the change of the website. However, the number of signups overall has decreased. As there was no campaign in the weeks the data was collected after the website change, it is logical the signups were lower than before the website change.

According to the formula to calculate the hypothesized proportion for the chi-square test, the following hypothesized proportions exist, where Phyp(a) is the hypothesized proportion for the active users, and Phyp(b) is the hypothesized proportion for the users who created a link:

$$Phyp(a) = \frac{0.04 * 21 + 0.1476 * 40}{21 + 40} = 0.1105$$

$$Phyp(b) = \frac{0.2114 * 21 + 0.4918 * 40}{21 + 40} = 0.3953$$

These numbers where then used in calculating the test statistic and returning a p-value for both variables using Excel:

Table 9: Chi-square test active users

	Category	Hypothesized proportion	Observed	Expected
	Active	0,1105	10	6,742
	Not active	0,8895	51	54,258
	Total	1	61	61
p value	0,183			
Test statistic	1,771			

Source: Author's own illustration

The chi-square test of the number of active users shows yields a test statistic of 1.771 and a p-value of 0,183. As the threshold value for p is 0.05, the null hypothesis cannot be rejected, and a statistical difference cannot be proven.

Table 10: Chi-square test link creation

	Category	Hypothesized proportion	Observed	Expected
	Created link	0,3953	27	24,112
	Did not create link	0,6047	34	36,888
	Total	1	61	61
p value	0,449481141			
Test statistic	0,571959932			

Source: Author's own illustration

In link creation change before and after the website change, the chi-square test statistic is 0.572 and the p-value is 0.449. This also does not yield a significant difference, as 0.449 < 0.05.

A non-significant result means it cannot be proven a relationship between a website change and user activity exists. Therefore, it is not logical to calculate Cramer's V in assessing the strength of the relationship.

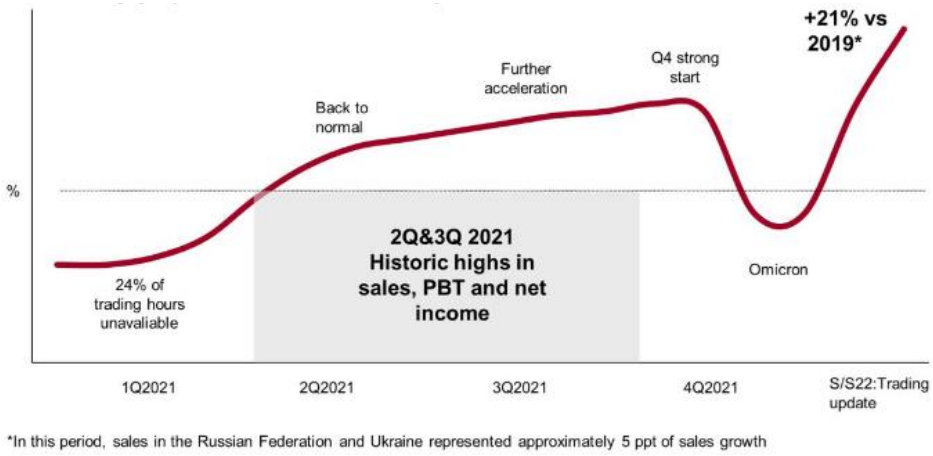
6 Limitations and future research

The thesis was limited in several ways. Since Stylink Social Media GmbH is still a very young company, processes and design elements are changed continuously. This means even a significant result with a confidence interval of 95% would not suffice in drawing hard conclusions. As the scope of the research was relatively

limited, it was not possible to include all possible influences from other variables into the research. It was only possible to look at the joint effort of all influences.

For instance, the effect of other variables in user activation could not be taken into account. In the two weeks after the website change, there were no welcoming phone calls made due to employee absence. As the effect of phone calls on user activation is only known to be positive, but the strength of the effect remains unknown, it is impossible to determine whether a significant result could be achieved if phone calls had taken place after the website change. Another influence is the time of the year and seasonal influences on online sales. Future research can show how seasonal or market trends have an impact on affiliate marketing and the activity of influencers. As linkmaker only exists for one year and is the only affiliate platform on a per-click basis, the direct impact cannot be assessed correctly. However, the sales figures from Inditex show the following trend from 1 February 2021 to 31 January 2022:

Figure 7: Sales Growth Inditex February 2021 - January 2022



Source: Inditex, 2022

The sales figures of Inditex show the impact of external factors on the sales in the market in regard to 2019. Partial negation of the trend uncertainties on active users was achieved by storing the data for active users as a Boolean, meaning smaller sale amounts would still result in a “true” value of the Boolean. It could only have impacted users who did not generate larger numbers of sales so that the “true” value of the Boolean would turn into “false”.

Shortcomings in data collection could also influence the outcome of the study. As the data was only collected over a period of two weeks, most additional variable

influences could not be taken into account. Limited time in conducting the research has made for insufficient data, mainly in the activation of users, where there was an increase of about 50% in activity, which still was not significant. To obtain more data for the research, the website change should also be adopted in the larger markets and analyzed there.

It was also not possible to calculate the number of signups that have been generated because of the website change. As most users sign up for the website via a non-null UTM parameter (table 7, 8), the exact signups because of the change in website could not be calculated.

7 Conclusion

As it was not possible to reject the null hypothesis in both cases, it is not possible to conclude the change of the homepage has had a significant impact on user activity. This makes for an increase in the means for both variables in both the categories with a UTM parameter and without to be accredited to chance, and not the change in website.

The research question "*Can a new website design at linkmaker increase activity among new users*" therefore still has to remain unanswered. The proportion of new active users has not increased significantly, but there was an increase in the means in the weeks data was collected. The absolute numbers of active users have decreased after the change in website, which can mainly be accredited to linkmaker not having an organized campaign after the website change.

However, it can also not be concluded the null hypothesis holds, giving ground for further research and adaptations of the website to possibly obtain a significant difference in the future. Also, data from weeks where phone calls were made can be collected to rule out the possible difference in activity by phone calls. Taking into account the positive difference when phone calls are conducted against when they are not conducted could account for the result to turn significant. The number of phone calls should then be similar to the number before the website change, as to rule out interference of that variable.

To account for the larger set of limitations, all of them would need to be researched individually or kept stable to negate the effects during the study. As this is not possible to do within a startup company, the results will always obtain the annotation

that it might not be a significant result because of the large amount of variables with an unknown impact. When a significant result would be obtained, it is always necessary to therefore always calculate Cramer's V to test the strength of the correlation.

However, the literature research still gives some important insights for change in the aspects of understandability and trust in process management and marketing of linkmaker. Insights such as using employees of the company or brand ambassadors more in advertising and the acquisition of new users should still be used from statistically significant research to increase trust in linkmaker (Herhausen et al., 2020). Understandability can also still be improved in other aspects of the website or in the newsletters sent out to the users. As infographics remain almost unused in the marketing of linkmaker, it is a good takeaway to invest in infographic development for other website pages and in newsletter marketing (Hollebeek and Macky, 2019).

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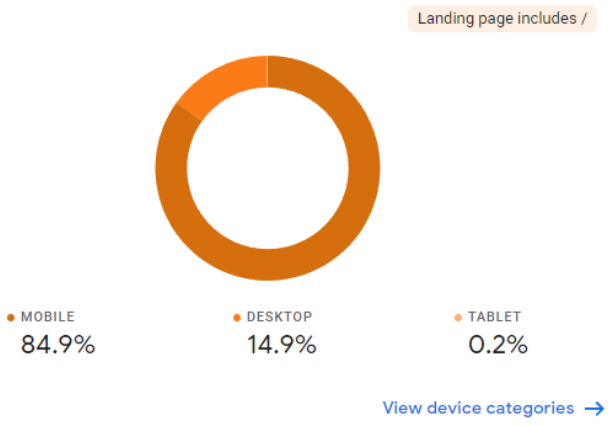
Appendix A: Analytics

1. screenshot of Google Analytics showing homepage website visits



Source: Google Analytics statistics on homepage linkmaker.eu, timeslot 01/03/2022 – 31/03/2022

2. Website statistics homepage linkmaker

	Page title and screen class	Views	Users	New users	Views per user	Average engagement time	Unique user scrolls	Event count All events
	Totals	6,641 2.17% of total	2,557 1.67% of total	1,641 1.24% of total	2.60 Avg +30.26%	0m 13s Avg +1,842.93%	140 0.4% of total	17,695 2.42% of total
1	Verdien geld als Influencer met social media | linkmaker	6,342	2,464	1,549	2.57	0m 11s	105	16,831

Source: Google Analytics statistics on homepage linkmaker.eu, timeslot 01/03/2022 – 31/03/2022

Appendix B: Data analysis

In both cases, the hypothesized proportion was based on signups without a UTM parameter.

1. Difference in link creation with and without UTM parameter

H0: x1=x2

Ha: x1≠x2

	Category	Hypothesized proportion	Observed	Expected
	Created link	0,491803279	37	86,06557
	Did not create link	0,508196721	138	88,93443
	Total	1	175	175
p value	1,17995E-13			
Test statistic	55,04141452			

p<0.001 (test statistic = 55.04), reject H0 in favor of Ha → significant difference with and without UTM parameter

2. Difference in user activation with and without UTM parameter

H0: y1=y2

Ha: y1≠y2

	Category	Hypothesized proportion	Observed	Expected
	Active	0,147540984	7	25,81967
	Not active	0,852459016	168	149,1803
	Total	1	175	175
p value	6,03504E-05			
Test statistic	16,09162393			

p<0.001 (test statistic = 16.09), reject H0 in favor of Ha → significant difference

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