How to grow a tech start-up

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How to grow a tech start-up:

Facebook marketing vs Trade growth hacker marketing

Abstract
In recent years, the tech start-up scene in Sweden and in the world at large, has gained massive attention as the number of start-ups has increased at a faster rate than ever before. There is a consensus among marketers and academics that *growth* is essential for tech start-ups in order to survive and to ensure long term success and profitability. Yet, marketers and academics diverge on *how* this growth shall be achieved and, more specifically, which marketing channels and strategies to put in practice to actually achieve growth. In short, there are three major channels for tech start-ups to employ: traditional marketing (TV ads, radio ads, prints, etc.), social media marketing (e.g. Facebook marketing), and growth hacker marketing. Since its arrival, social media marketing has dominated the field and has been considered the most prominent and effective marketing channel for tech start-ups' growth due to its cost effectiveness and large reach, but in 2010 this perception was put to question when DropBox's former marketer Sean Ellis coined the term *growth hacker marketing*. Growth hacker marketing is a fairly new marketing strategy in which the objective for a so-called "growth hacker" is to scale a tech start-up, fast, by incentivising users to acquire more users and thus create virality from within the product itself.

In this thesis, we wanted to investigate which of *social media marketing* versus *growth hacker marketing* that constitutes the most effective path to growth for tech start-ups. Being tech entrepreneurs ourselves having founded the social media app **Shoutaway**, we conducted a field experiment in which identical ad campaigns ran on Facebook and as a growth hack in the Shoutaway app, and thereafter we measured the effectiveness of the two channels respectively. We defined effectiveness as the reach, number of downloads and CPI generated by each channel. To analyse the results from a theoretical lens, we used the renowned AIDA-model with specific orientation on sender effect, virality effects, divergence originality, signalling theory, Hayley's benefit segmentation and Damasio's theory of psychological buying. The results showed greater reach with social media marketing, but a significantly higher rate of acquired users as well as lower CPI with growth hacker marketing. Our hope is that this thesis shall serve as guidance for tech start-ups in the pursuit of growth.

Keywords
Facebook marketing, growth hacker marketing, trade virality, tech start-up, mobile advertising, effective growth, cost per install (CPI)

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Definitions

CLV = customer lifetime value.

CPI = cost per install.

Conversion rate = (number of clicks to Appstore)/(number of people reached).

Download conversion = ((number of clicks to Appstore)*(1-drop-off rate))/(number of people reached).

CPC = cost per click.

Drop-off rate = (number of downloads)/(number of clicks to landing page).

eWOM = electronic word-of-mouth marketing, any positive or negative statement made by potential, actual or a former customer which is available to a multitude of people via the internet.

Funnel = the set of steps a visitor needs to go through before they can reach the conversion.

Hyper-targeting = the ability to deliver advertising content to specific interest-based segments in a network.

Impressions (on Facebook) = the number of times a Facebook ad is viewed. This may include multiple views of the ad by the same people.

PMF = product market fit, i.e. being in a attractive market with a product that can satisfy that market.

Reach (on Facebook) = the number of people who saw the Facebook ad at least once.

Retention = the percentage of a user segment who used a product in period A who also used the product in period B, where period B comes after period A. Also defined as the inverse of user churn rate.

Smartphone = an iPhone (models: 5, 5S, 5C, 6, 6S, 6 Plus, 6S Plus, SE, 7) running on iOS8, iOS9 or iOS10.

Somatic markers = emotion-based biasing signals arising from the body are integrated in higher brain regions, in particular the ventromedial prefrontal cortex (VMPFC), to regulate decision-making in situations of complexity.

Tech start-up = an early-stage entrepreneurial venture within the IT/tech industry. Usually consists of a team with 2-5 people.

TGH = trade growth hacker marketing—the process of encouraging peer-to-peer marketing through kickback-incentives, for example by rewarding users with money, free trials, free space, etc. for acquiring new users.

Traditional marketing channels = television ads, radio ads, newspaper ads, newsletters, cinema ads, magazines and outdoor ads.

Viral cycle time (ct) = the amount of time it takes for a user to become aware of a website site or an app, then go through all of the steps required for users to reach the point where they invite a new user.

Viral coefficient (K-factor) = used to describe the growth rate of websites, apps, or a user base. The formula is roughly as follows:

i = number of invites sent by each user
c = percent conversion of each invite
k = i * c

1. Introduction

So you have decided to start your own tech company. Cool. To go through the journey of building your own business and make it grow is an amazing experience that relatively few people ever get to do. We are glad that you took a leap of faith and decided to go for it. However, as you probably already have figured out, it takes more than a smile to succeed in the world of tech. Sure, you have read about the success of Snapchat, Dropbox, AirBnB and Uber, but the entrepreneurial life is not as easy as it might seem. As an entrepreneur, you are going to face numerous challenges, and many questions need to be answered, tested and proved right. One challenge that you undoubtedly have to overcome is how you are going to make your business grow and how to get the word out about your product or service. This is a tricky task to overcome, especially considering that start-ups, in general, initially tend to have very limited financial resources to invest in growth, which is why it is so crucial to invest your funds where you get the most "growth for the buck".

1.1 Who are we

We are the founders of the social media app Shoutaway, currently available on the AppStore. Shoutaway is an app in which users can make time-limited check-ins, called "shouts". Our mission statement for Shoutaway is to become "the world's best collective video-filter of the nightlife industry". We have been admitted to SSE Business Lab, a prestigious incubator in Sweden, by a jury consisting of Sebastian Knutsson (Co-Founder of King Digital Entertainment, the company behind the success Candy Crush Saga), Sebastian Siematkowski (CEO and Co-Founder of Klarna) and Christina Stenbeck (large shareholder in the investment company Kinnevik) among others. At the time of writing, Shoutaway has over 2 000 active users and growth is slow, but constant. The user retention in the app on a daily basis is roughly 30%, on a weekly basis 40% and on monthly basis 55%. The user retention is defined as the percentage of the user segment who used the Shoutaway app in period A and returned to the app in period B, where period B comes after period A (it could also be defined as the inverse of user churn rate). We have raised 700 000 SEK to the company in seed funding (first investment round), and one of the investors is the former CEO of Carnegie Investment Bank. Like many other tech start-ups, our big challenge is growth. This is a challenge that many tech start-ups today are facing and it is of vital importance to understand the key drivers behind growth (Kutcher, Nottebohm and Sprague, 2014).

1.2 Ethical note

It shall be noted that the field experiment in this thesis was conducted using the Shoutaway app as experimental tool. Thus, there is a potential risk of biases since we are the founders of Shoutaway and have a personal interest in the field experiment, which consequently might have an effect on objectiveness of the field experiment. We are aware of the risk of potential biases, and thus, we have tried our utmost to maintain an objective approach.

1.3 Background

According to a report by McKinsey & Co (2014), growth is the single most important factor for tech start-ups in order to achieve success. McKinsey & Co states that the importance of growth can be pinned down to three main positive consequences: it yields greater returns, it predicts long-term success and it enhances market capitalisation. Growing in a fast phase is thus one of the ultimate ways for tech start-ups to gain market share in today's competitive market. Furthermore, for the economy as a whole, the growth of start-ups is also essential to maintain a stable employment rate. According to the Kauffman Foundation, start-ups currently account for most new net employments in the United States (Kane 2010, p.2).

To get a better understanding of how to grow tech start-ups—whether it's growing in sales, growing the user base in an app or driving more traffic to a company's web page—we need to explore what different marketing channels there are and which ones are considered to be the most effective. Therefore, we will firstly present knowledge gathered through influencers in the industry, that is, suggestions from successful start-up marketers and entrepreneurs on how to effectively grow a tech start-up. It will then be followed by a review of the current knowledge in academics on how to grow a tech start-up, which then will lead to a defined problem area and the specific research question.

1.3.1 Tech start-up marketing practices

As previously stated, one of the most common challenges tech entrepreneurs encounter is to spread knowledge about their company and make their businesses grow (Gulati & DeSantola 2016, p.1). Many tech start-up entrepreneurs therefore chooses to invest in **traditional marketing channels** such as television ads, radio ads, newspaper ads, newsletters, cinema ads, magazines and outdoor ads (Thimothy 2016, p.1). This might be a lucrative option for some tech start-ups, in particular those with large seed fund investments (a couple of million SEK) and for those that, with a rather robust certainty, can expect the average customer life time value (CLV) to exceed the average cost per install (CPI).

Marketers have traditionally relied heavily on these types of traditional marketing channels with great results (Lavinsky 2013, p.1). The relevance and importance of traditional marketing channels become even more palpable when looking at the hard numbers. In fact, in year 2016, approximately $127.7 billion was invested into these types of traditional marketing channels in the US. This implies an increase of $1.2 billion compared with the previous year of 2015 (Conlon and Winterberry Group, 2016). As presented in the pie charts below, investments in digital marketing channels constitute roughly 70% of the total expenditure in traditional marketing channels.

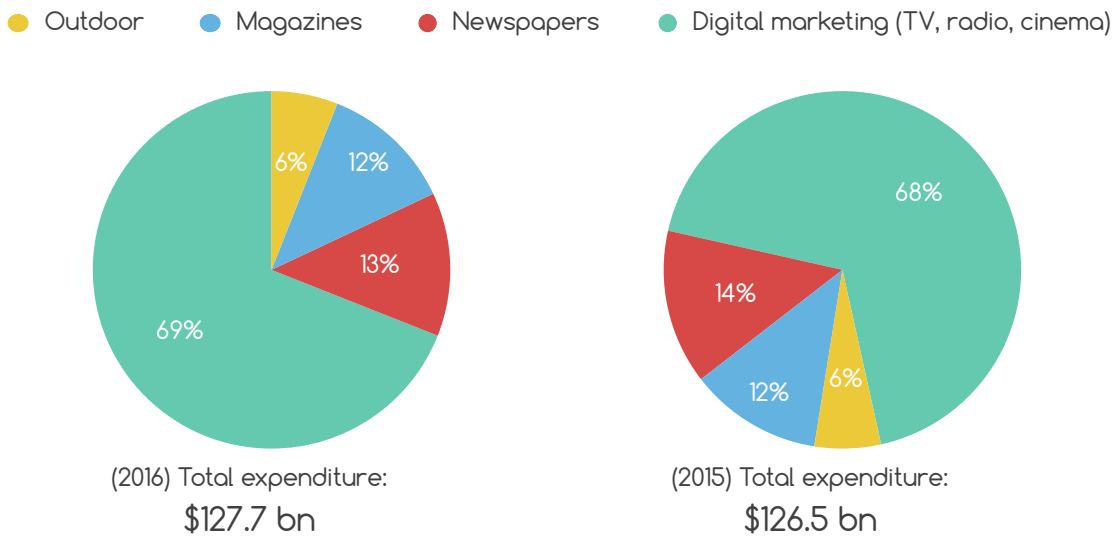


Chart 1: USDs invested in traditional marketing 2015/2016.

However, Hung et al. (2015, s. 192) and Knight (2000, p. 17) argue that many tech start-ups try to avoid using traditional marketing channels since it limits tech start-ups' reach out to the broader mass due to limited financial resources. The capital requirements would thus be a disadvantage that limits start-up companies' abilities to be competitive through this type of traditional marketing.

Another digital marketing field embraced by many tech start-ups, that has exploded in usage among marketers since its arrival, is **social media marketing**—the process of using social media platforms and websites to promote products or services (Treadway and Smith 2012, p.20). In Sweden, the average time spent on social media on a daily basis is approximately 2 hours, which naturally makes social media a lucrative marketing platform for tech start-ups. Approximately 77% of all Swedish internet users visit social media on a daily basis, where 68% visit via their smartphones (The Internet Foundation In Sweden 2016, p.19). The majority of these social media platforms offer data analytic tools, which enables tech start-ups to track progress, success, engagement of ad campaigns and set own marketing budgets. These tools also allow tech start-ups to closely analyse and revise their own advertising campaigns. Facebook and LinkedIn are leading social media platforms for social media marketing, mainly due to that advertisers can hyper-target theirs ads. Hyper-targeting ads are advertisements targeted to a specific audience where not only users' public profile information is underlying target criteria, but also information users choose to not reveal publicly (Treadway and Smith 2012, p.111). Consequently, this makes Facebook and LinkedIn advertising much more accurate in terms of targeting various audiences, compared to other social media platforms. It is thus not surprising that 52% of marketers consider Facebook to be the best social media platform and LinkedIn the second best (Nanji, 2015).

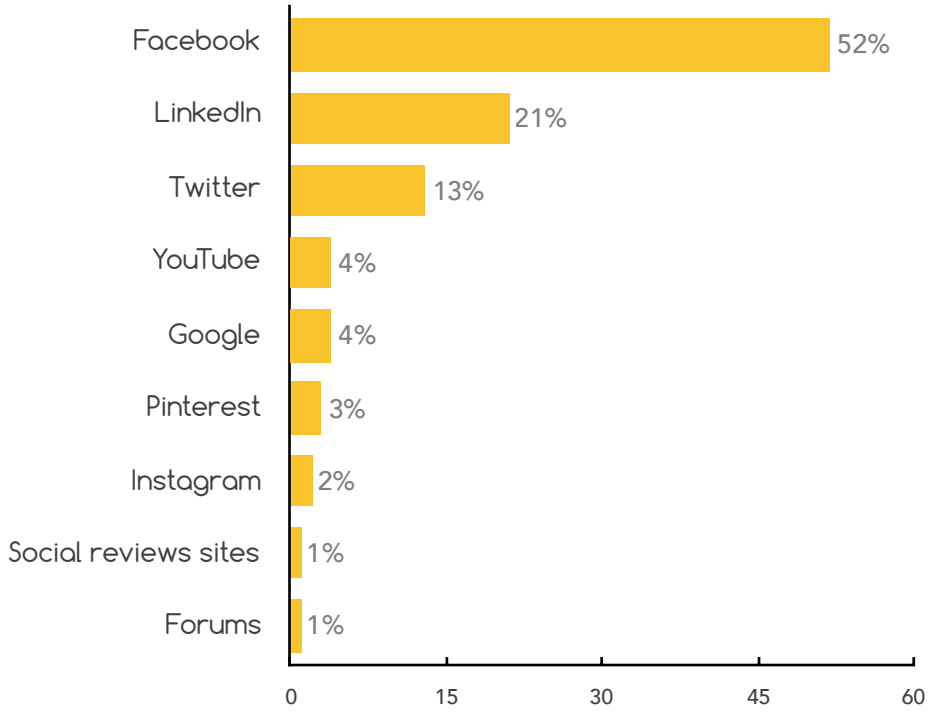
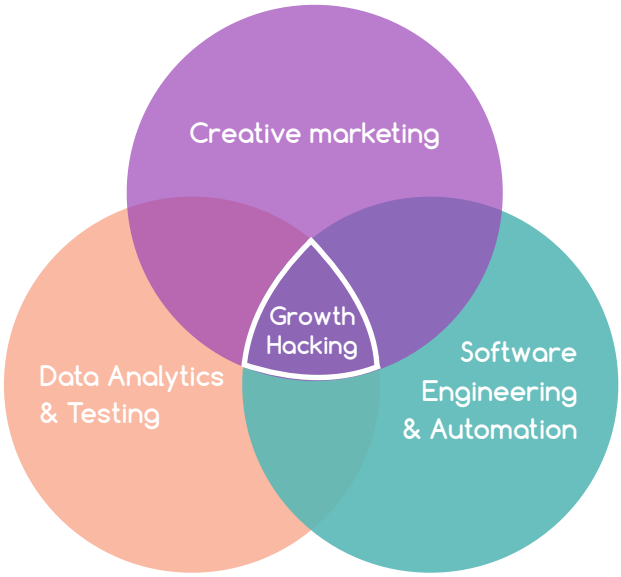


Chart 2: Marketing usage of social media platforms.

Initially, advertising on Facebook was mainly driven by desktop ads but has in recent years shifted to mobile ads. For Facebook, mobile advertising in Q4 2016 makes up 84% of its ad revenue, the same as last quarter accounting for $7.248 billion, signalling that Facebook has successfully completed its shift to mobile. However, an extensive set of sources argue that Facebook marketing is not an effective strategy for tech start-ups to employ in the pursuit of growth (Thimothy, 2016). It is argued that reach, impressions and clicks are easy achievable with Facebook ads, but conversation rates are generally low without complementary tools or creative content.

In recent years, an alternative marketing approach to traditional marketing channels and social media marketing has emerged as a result of the digitalisation of businesses, called **growth hacker marketing**. The term "growth hacker marketing" was coined by the famous entrepreneur Sean Ellis (the first marketer at Dropbox—the famous company that offers file hosting storage and services) in the year 2010. Ellis quickly concluded that traditional marketers in Silicon Valley did not have the knowledge nor competence to successfully create the sustainable and viral growth necessary to make tech start-ups grow fast (Norman 2015, p. 9). Ellis never properly defined what growth hacker marketing is. However, to put it simply, a



Model 1: Growth hacker marketing model

growth hacker is a marketer armed with coding skills who's objective is to make a company grow fast through data driven techniques. Ryan Holiday, the serial entrepreneur and the author of the e-book "Growth Hacker Marketing", defines a growth hacker as follows:

> "A growth hacker is someone who has thrown out the playbook of traditional marketing and replaced it with only what is testable, trackable, and scalable. Their tools are e-mails, pay-pay-click ads, blogs, and platform APIs instead of commercials, publicity, and money. While their marketing brethren chase vague notes like "branding" and "mind share", growth hackers relentlessly pursue users and growth—and when they do it right, those users beget more users, who beget more users. They are inventors, operators, and mechanics of their own self-sustaining and self-propagating growth machine than can take a start-up from *nothing* to *something*." (Holiday 2013, p. 9).

In short, growth hacker marketing is the result of tech start-ups that, in the absence of big marketing budgets, figured out ways to hack the system to build their companies fast. According to Patel (2013) the term "growth hacker" has three significations that summarises what a growth hacker is—firstly, a growth hacker is a marketer who is considered to be smart and who finds ingenious shortcuts to growth and success, secondly, a growth hacker can write code and thirdly, a growth hacker has a tendency to slightly bend the rules for what is actually legal.

Companies that embrace growth hacker marketing, have abandoned the old assumption that product development and marketing are two distinct and separate processes. Instead, they believe that the objective for every tech-company is to build a self-perpetuating marketing machine that reaches millions by itself (Holiday 2013, p. 11). There are, nowadays, several successful examples of tech start-ups that have had tremendous growth partly as a result of intelligent growth hacking techniques. One well-known example of this is the taxi-app Uber. As the Uber team launched their product in 2009, they realised that they had to expand and scale quickly in order to become competitive on the market. Therefore, instead of investing too heavily in traditional marketing channels, they created an incentive-system in which Uber users would get free rides for acquiring new users to the app (Brown, 2014). According to Holiday, this is one of the reasons why Uber, in such a short time-frame, could become one of the most successful and highest valued start-ups in the world (Holiday 2013, p.14). Another renowned example is Dropbox, which offered its users up to 16 GB storage bonus for acquiring new users (DropBox's Website, 2017).

Growth hackers often measure viral coefficients, i.e. the rate at which current users acquire new users. To create a self-perpetuating product that reaches million by itself, virality must be integrated into the product. The chart below present varying viral coefficients, measuring time on the x-axis and number of user on the y-axis. If every user on average acquire another user, the viral coefficient is 1.0 which implies that the growth for a tech start-up is linear. However, as the viral coefficient increases, linear growth transforms into exponential growth. For example, if the viral coefficient is 1.3—i.e. every user on average acquire 1.3 new users—growth becomes exponential. As mentioned before, the objective for growth hackers is to create exponential growth (Taylor, 2017).

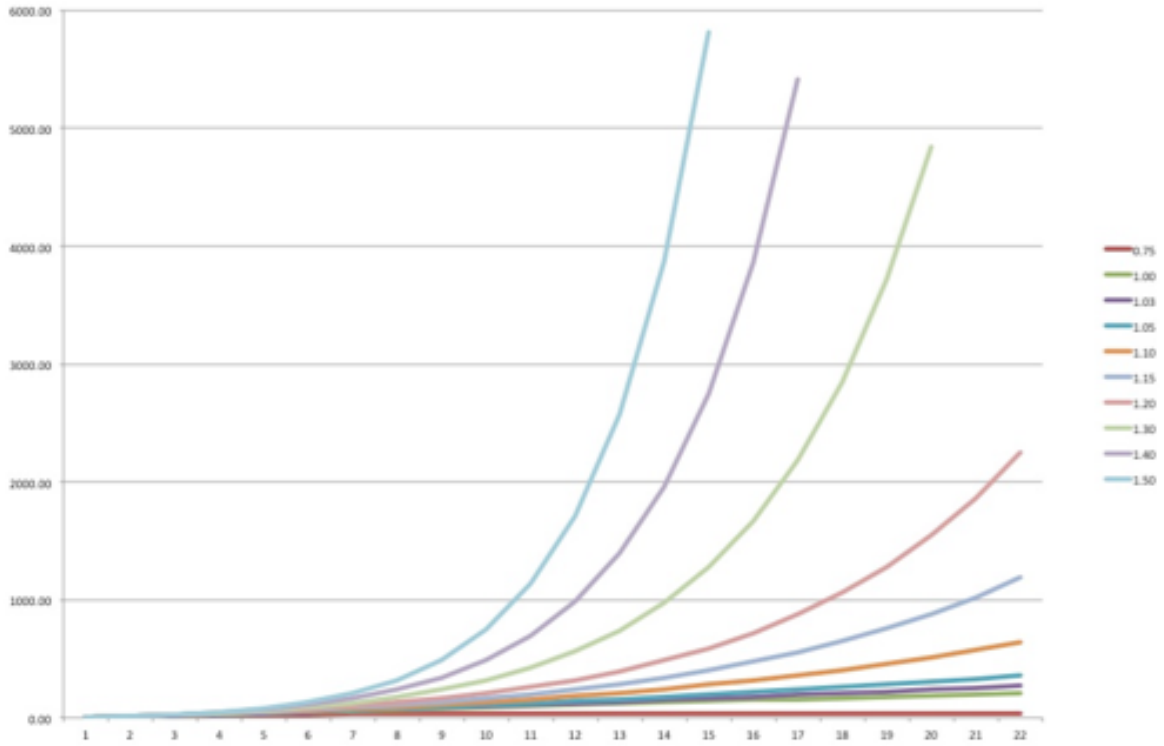


Chart 3: Various viral coefficients in growth hacker marketing

Michael D. Geer, who is currently the COO of AnchorFree and Co-Founder of the dating app Badoo, suggests that there are three levels of virality: *inherent virality*, *trade vitality* and *sharing virality*. Inherent virality is achieved when current users gain more value of the product by bringing more users into the product. However, current users must not necessarily care whether new users find value in the product or not. For example, if a Dropbox user wants to share a powerpoint presentation with a non-user, an invite will be sent to the non-user with a sign up link in which the non-user must sign up with Dropbox in order to access the presentation. In other words, the inviter does not really care whether the new user enjoys Dropbox or not, but gains more value from the product since the inviter now is able to share the powerpoint presentation. Another example is Snapchat—the social media app in which users can send photos and videos that self destructs in 10 seconds or less—where the product itself becomes more valuable if current users acquire more friends to interact with. Geer argues that inherent virality is the most powerful level of virality and that products that have all three levels of virality integrated, will acquire more than 60% of users from inherent virality. However, inherent virality is difficult to achieve since it requires that tech start-ups truly understand the underlying psychological behaviour of their users.

Trade virality, on the other hand, is much easier to obtain than inherent virality, although it is not as powerful. In trade virality, companies offer users rewards for acquiring new users, often rooted in monetary incentives (e.g. AirBnB offers their users the following: "When you send a friend 350 kr SEK in Airbnb credit, you'll get 175 kr SEK when they travel and 650 kr SEK when they host") (AirBnB's Website, 2017). In other words, trade virality is an artificial form of inherent virality. Geer believes that approximately 25-30% of

growth comes from trade virality in products that contains all three levels of virality. Lastly, sharing virality occurs when users share the product to new users in the form of word of mouth (WOM) marketing. The incentives for current users to acquire new users are not always clear, since current users do not gain obvious benefits for doing so. Geer argues that sharing virality may occur because consumers want to be perceived as "enlightened" and "in the know" when sharing new products to their circle of friends. Geer states that sharing virality is the weakest weakest type of virality and that products that are integrated with all three levels of virality, will acquire roughly 15-20% of users from sharing virality (Geer, 2015).

Even though growth hacker marketing might sound like a far more suitable marketing strategy for tech start-ups, there are potential downsides with this strategy as well. According to Wollsén (2015, p. 21), growth hacker marketing might be difficult to apply practically since it is a more recently discovered marketing strategy which has not been applied and tested to the same extent as traditional marketing or social media marketing. Furthermore, Wollsén argues that it can be seen as difficult and risky for tech start-ups to test and implement a growth hacking strategy due to the risk of loosing valuable time and money. It requires a lot of knowledge on how to write code, which might be costly and time consuming to acquire. In addition, the author Dan Kaplan (2014) states the following:

"Among real growth experts — the ones who have worked on growth at high-growth Internet companies — "growth hacking" is a loaded term. Loaded with hype. Loaded with bad ideas about how Internet companies actually grow: Empty at best, misleading at worst."

To conclude, opinions differ within the tech start-up community regarding which marketing strategies are the most effective to put in practice in order to grow. Some consider strategies rooted in traditional marketing to be the most effective, others believe in social media marketing, while some advocate the possibilities of growth hacker marketing.

1.3.2 Current state of tech start-up marketing research

Theories in the world of academics also diverge on how tech start-ups should grow their businesses. Stibel (2008) argues that the reason why traditional marketing channels do not work for tech-start ups is because of their inapplicability in an internet context:

"For the last 50 years or so, marketing has been a one-trick pony. Olgilvy, Mather, Young, Rubicam, Saatchi (and Saatchi), and all the rest built their reputations on having great advertising campaigns. But that model breaks down on the Internet. The Internet provides a greater wealth of feedback, more inventory than other media, and response times measured in milliseconds, as opposed to days."

Stibel (2008) further argues that traditional marketing theory often can be counterproductive in the online world of fast media. According to him—brands, positioning and classic marketing models belong to the last century and the ultimate key to growth in modern times for any tech start-up is to find the best marketing campaigns through marketing trial and error testing. According to Stibel, tech start-ups need to "throw everything they've got into the universe and see what works" and measure

feedback using analytic tools. This view is shared by many academics (Berry & Linoff 1997, p. 68). However, Hoffman and Fodor (2010) present a rather contradictory view, in which they argue that tech start-ups should not rely on measurement tools since this approach is ill-suited for the complex interactive media environment and focuses too much on short-term goals and ignores more qualitative objectives, such as customer relations. Hoffman and Fodor argue that tech start-ups easily forget customer relations by focusing too much on metrics:

> "Effective social media measurement should start by turning the traditional ROI approach on its head. That is, instead of emphasizing their own marketing investments and calculating the returns in terms of customer response, managers should begin by considering consumer motivations to use social media and then measure the social media investments customers make as they engage with the marketers' brands."

Thereafter, Hoffman and Fodor present the 4C's perspective where they argue that *connections*, *creation*, *consumption* and *control* drive consumer use of social media. According to the authors, the 4C's perspective is of great importance since it leads to a consumer-oriented framework for evaluating social media marketing. However, according to Holiday (2013), all the above-mentioned theories and models might come off as rather abstract and difficult for tech start-ups to apply in practise. Moreover, according to Holiday, it seems that academic research quite often forget to take into account that tech start-ups have relatively scarce financial resources and are thus unable to create widespread advertising campaigns—let alone *experimenting* with advertising campaigns—to try out all these theories and models to see which one(s) that work(s) (Holiday 2013, p. 10).

Furthermore, other fields within academics that have been studied, that is applicable for tech start-ups in the pursuit of growth, are user virality as well as electronic word-of-mouth marketing (eWOM). Note that growth hacker marketing differ from eWOM since eWOM focuses more on the general knowledge exchanged between consumers in the online sphere, while growth hacker marketing focuses on how to grow through viral spreads in which users beget more users.

Regarding user virality, Guerini et al. (2012) argue that virality is a phenomenon strictly connected to the nature of the *content* being spread, rather than to the influencers who spread it. This is rather contradictory to the theory of *sender effects*—another widespread field within marketing research—which suggests that the characteristics of the sender highly influence the receivers perception of the stimuli. This controversy is interesting for tech start-ups because it focuses on *content* versus *the sender*—which is of high value in both social media marketing campaigns, eWOM, user virality, and growth hacker marketing.

On the subject of eWOM, Cheung and Thadani (2012) writes that eWOM has some characteristics in common with traditional WOM marketing, but still differs in nature. These differentiating dimensions contribute to the uniqueness of eWOM:

"First, eWOM communications possess unprecedented scalability and speed of diffusion, unlike traditional WOM. Communications involve multi-way exchanges of information in asynchronous mode and information in the form of eWOM does not need to be exchanged at the same time when all communicators are present. Second, eWOM communications are more persistent and accessible. Third, eWOM communications are more measurable than traditional WOM. The presentation format, quantity, and persistence of eWOM communications have made them more observable" (Cheung and Thadani 2012, p. 462).

Moreover, Chu and Kim (2011, p. 1) argue that "tie strength, trust, homophile, normative and informational interpersonal influence are positively associated with users' overall eWOM behaviour, whereas a negative relationship was found with regard to homophily". This is also interesting for tech start-ups, as it highlights the characteristics of user behaviour in an internet environment and apply to both social media marketing, user virality and growth hacker marketing.

Although there is a magnitude of articles researching traditional marketing channels, social media marketing, eWOM and user virality—growth hacker marketing is a fairly new phenomena in the world of marketing research, which is why academic research is relatively scant on the subject. Our comprehension is that academic research is lagging behind due to that growth hacker marketing came from a sub-culture not rooted in academics. This is one the reason why the growth hack field experiment conducted in this thesis is of great importance for academic research.

1.4 Problem area

When time comes to put theories into practice, many tech start-ups are torn between marketing strategies. In marketing courses at universities, much emphasis lie on theories and models related to traditional marketing channels. Moreover, traditional marketing channels are costly and the possibilities of measuring feedback are limited. In parallel to the global digitalisation, research in the area of social media marketing has increased tremendously. The research area of growth hacker marketing, however, is rather scarce and unexplored, probably since it is a relatively new field in marketing academia. When searching in databases and literary works it becomes clear that research regarding the most effective growth strategy for tech start-ups is limited. As clearly stated by Marmer et al. (2011) the lack of information is a problem for many tech start-up entrepreneurs:

"Yet despite this huge knowledge base emerging about how startups work, startups have been able to absorb little more than the basic patterns of how to build a startup. Most founders don't know what they should be focusing on and consequently dilute their focus or run in the wrong direction. They are regularly bombarded with advice that seems contradictory, which is often paralyzing. And while startups are now gathering way more qualitative and quantitative feedback than they were just a few years ago, their ability to interpret this data and use it to make better business decisions is sorely lacking." (Marmer et. al 2011, p. 3).

While serial entrepreneur Holiday (2013) states that traditional marketing strategies are often flawed and spending is inefficient, Dan Kaplan (2014) states that in fact growth hacker marketing is a misleading strategy. Tredaway and Smith (2012) argue for benefits and possibilities with social media marketing—e.g. that it is a cost-effective way to acquire users, increases brand loyalty, uncovers valuable insights about users (which is crucial for tech start-ups that still learn about their users and the market), improves search engine

rankings, and generates more inbound traffic. Olivieri (2017) argues that marketing on social media is too crowded and that consumers pay very little attention to commercials on social media. In addition, Thimothy (2016) argue that social media marketing is very time consuming and that tech start-ups put themselves at risk when advertising on Facebook since consumers can give negative feedback which will negatively affect the brand.

It is thus noticeable that there are differing opinions within the start-up community, as well as in the world of academics, regarding the effectiveness of different growth strategies. It would therefore be both justifiable and valuable to research this area in a more specific context.

1.5 Purpose and research question

The purpose of this thesis is to examine whether tech start-ups should direct their resources to trade growth hacker marketing or Facebook marketing in order to scale, and to analyse the divergent impact these different methods have on growth effectiveness. To do this, an empirical study of experimental nature will be carried out to explore the practical implications of trade growth hacker marketing and Facebook marketing. More precisely, our main research question is:

- *Is it more effective for tech start-ups to acquire new users via trade growth hacking techniques than through mobile Facebook ads?*

where effectiveness is defined as the attention, interest and desire, obtained in relation to the cost it takes for a user to take action (i.e. CPI). The budget for the experiment amounted to 23 960 SEK. The field experiment will anchored in the AIDA-model framework (see section *2.0 Theoretical framework*).

1.6 Delimitations

In this thesis, we have chosen to exclude traditional marketing channels as a research area. The underlying reason for this is that the average seed fund investment for early stage tech start-ups in Sweden is between 250 000 SEK and 500 000 SEK[1], which we do not consider to be sufficient financial resources to afford investing in traditional marketing channels.

Furthermore, in the field of social media marketing—which is a vast field of research—we have chosen to narrow the research question down to only focus on **mobile Facebook ads**. The rationale behind this is that Facebook is the market leader when it comes to social media marketing, and mobile advertising accounts for 84% of Facebook's ad revenues. Moreover, our field experiment involves marketing the app Shoutaway and therefore it makes more sense to study mobile advertising since the product itself is mobile. In the field of growth hacking, we have chosen to only focus on trade virality, also called **trade growth hacking** (TGH). The reasoning behind this is that tech start-ups often consider

[1] Business meeting with angel investor Anders Lindqvist, Co-Founder of The Springfield Project, 2016-02-30

Facebook ads and TGH marketing to be viable options since these methods are both actionable and affordable for tech start-ups.

Due to that the time interval for this thesis is limited, further delimitations have been made. Initially the study has been limited to only include tech start-ups, and the study has been made on users of the social networking app Shoutaway. Consequently, the results from our study is solely based on one field experiment, and is thus not necessarily applicable on all tech start-ups and any general conclusions regarding other types of start-ups cannot be drawn with certainty. Since the area of investigation is the effectiveness of Facebook marketing compared to TGH marketing for tech start-ups, the conclusions will only be applied on tech start-ups that have achieved product market fit (PMF). Since the retention of the app Shoutaway on a daily basis is roughly 30% (D1), on a weekly basis 40% (D7) and on monthly basis 55% (D30), one can assume that Shoutaway has achieved PMF. In other words, the conclusions made will not necessarily be applicable on tech start-ups with unfitted and unwanted products. Moreover, since Shoutaway is only available for iOS—smartphones running on other operative systems are excluded in our field experiment.

This thesis is practical and entrepreneurial in nature. However, this does not imply that this thesis shall be considered insignificant from an academic lens. Oppositely, it shall serve as a major contribution to the academic literature as it covers both growth hacker marketing and growth scaling of start-ups, tech start-ups in particular—which are rather scant research areas. As a reader, we hope that you take this into consideration when evaluating this thesis from an academic lens.

1.7 Expected Contribution

The objective of this thesis is to create a clear and unbiased conception of the effectiveness of Facebook marketing compared to TGH marketing. Furthermore, we want to illuminate the strengths and weaknesses of these two channels to examine if either of them could serve as a more or less effective growth method for tech start-ups to employ. By using and analysing large data sets derived from our field experiment, we want this thesis to function as a toolbox for entrepreneurs in need of guidance when scaling up their tech start-ups. Consequently, by understanding the key drivers behind consumers' interests and actions, this thesis will enhance tech entrepreneurs ability to allocate resources in a more effective manner. Our ambition is also to provide a fundamental standpoint for further academic research in the area of marketing effectiveness for tech start-ups.

2. Theoretical framework

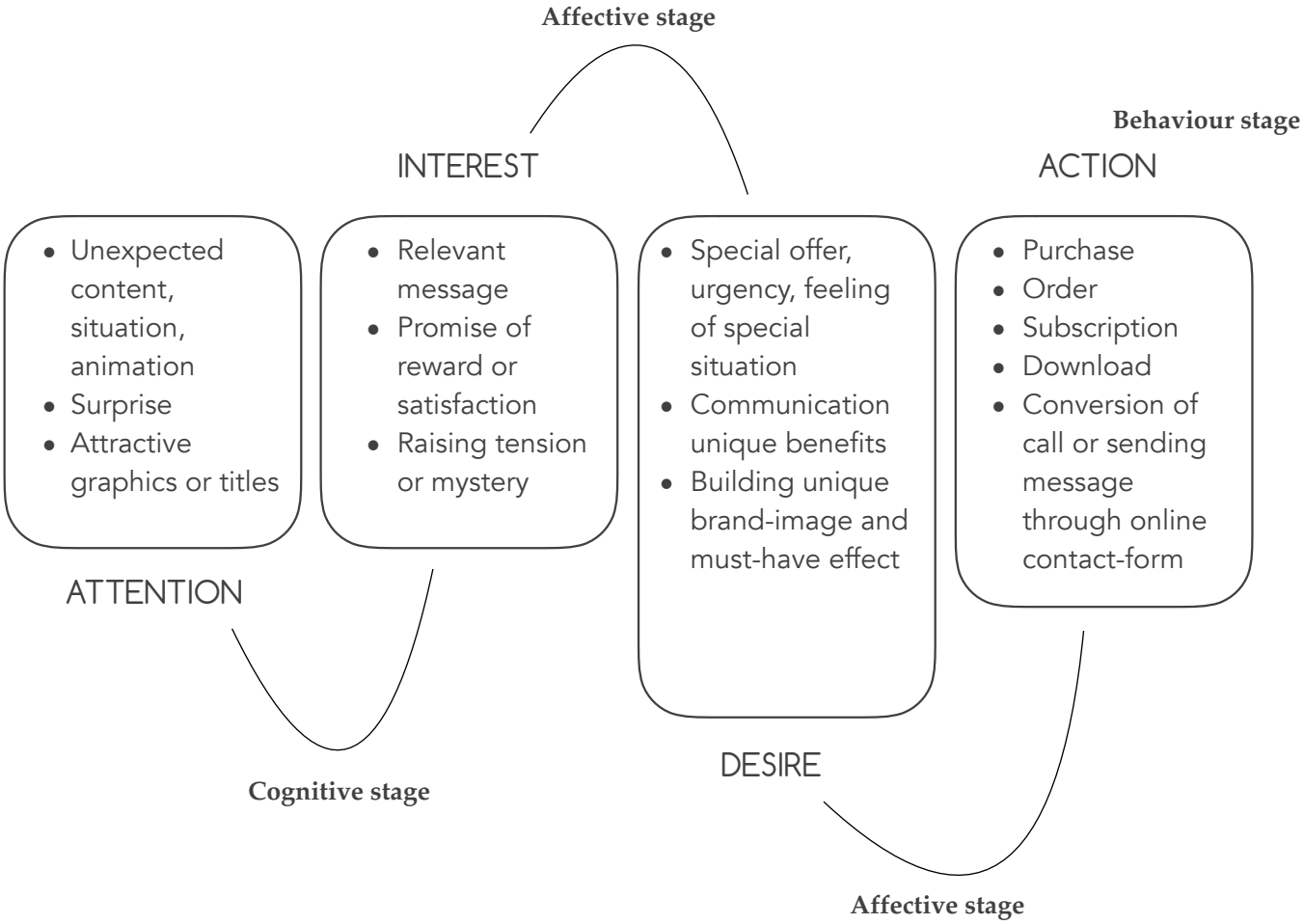
The following section presents relevant theory for the study and the hypotheses that underpinned the theory. In part 2.1 the AIDA model is presented and described, whilst in part 2.2 it is described how the model is relevant when discussing effectiveness of Facebook marketing and TGH marketing in a start-up marketing context. Thereafter, hypotheses are formulated based on the theories about the effectivity measurements; attention, interest, desire and action. Finally, part 2.3 deals with the cost effectiveness of the different marketing strategies as it is part of our research question but separated from the AIDA model. The purpose with this chapter is to explain the theory behind the AIDA model and how it is implemented in our study.

2.1 The AIDA-model

Our choice of theoretical framework for this thesis is the well-known marketing model AIDA. The AIDA model (Model 2, below) describes the decision-making process and is an acronym for: Attention, Interest, Desire, Action. The model was developed by Elias St. Elmo Lewis in year 1900 and defines the different stages a consumer goes through when buying a product or service. It is a type of funnel, and theory argues that the consumer has to pass through each of these four stages before they finally make a purchase. AIDA is one of the most well-known marketing models of all time and it is often used to find the most effective strategy to market different products or services. (Hassan, Nadzim & Shiratuddin 2014, p. 262).

Attention is the first step of the model, which is defined as the stage where the consumer establishes a brief first contact with the marketing content. This stage is defined to give the prospects a reason to take notice. Secondly, if attention is achieved, the consumer engages in a more elaborate and thorough consideration of the information presented. This stage embeds cognitive processes, and if achieved, the consumer moves on to a stage of interest or disinterest. If interest is evoked in the consumer's mind, the consumer will gradually establish an affection and need for the product. Finally, the interest shifts to desire which consequently reaches a behavioural stage and triggers action.

This model can be applied to our research question since it examines the effectiveness of different communication strategies and channels. The chosen topic of discussion—to compare Facebook marketing with TGH marketing—is highly relevant and important to investigate for the tech start-up community. In the midst of Facebook content, marketers must ensure that their digital marketing activities make consumers go from attention to action. Likewise, marketers involved in trade growth hacks, must ensure that consumers are intrigued by the trade(s) offered and consequently go to action. Therefore, we would like to research the marketing effectiveness with TGH marketing and mobile Facebook marketing respectively—using the AIDA framework as our theoretical basis.



Model 2: The AIDA model

2.2 The AIDA-model in a tech start-up marketing context

To understand the differences between the two marketing strategies, we shall analyse the effectiveness by observing; the marketing channels' reach and exposure, the traction each marketing channel generate, the number of downloads achieved and the CPI.

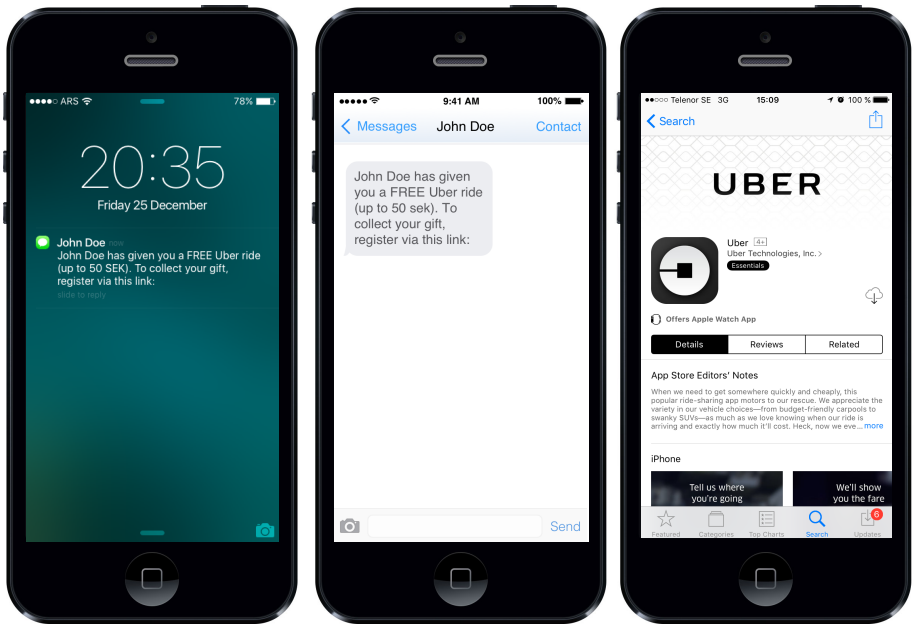
2.2.1 The link between theory and practice

To examine how the AIDA-model is applicable to mobile Facebook marketing and TGH marketing trough a theoretical lens, we first need to present a quick overview how these types of marketing channels work in practice (see Image 1 and Image 2 below).



	Stage 1 (Attention)	Stage 2 (Interest)	Stage 3 (Desire)	Stage 4 (Action)
Mobile Facebook ads	User scrolls and the ad is displayed in the newsfeed	The ad evokes interest (ad divergence/ relevance)	Product or service matches user's demand	User presses call-to-action

Image 1: Mobile Facebook marketing process.



	Stage 1 (Attention)	Stage 2 (Interest)	Stage 3 (Desire)	Stage 4 (Action)
Trade Growth Hacks	User gets a text, most likely from a familiar source. The alert tone and the directness causes attention. Ad is displayed in the text.	The ad attracts interest (ad divergence/ relevance). Since the text most often comes from a acquaintance, the level of interest might increase.	User determines whether the product or service matches user's demand.	User presses call-to-action (e.g. a download- or sign up link, shop now, get it here, etc.).

Image 2: Growth hacker marketing process

2.2.2 Attention: Cognitive stage

According to Michael D. Geer one of the most important factors to trigger attention among a broad audience, is to establish a viral marketing effect. This is achieved when the viral coefficient is above 1.0—i.e. users on average acquire more than one user and thus exponential growth is achieved. However, if the viral coefficient is below 1.0. the user base will not grow in a viral manner as the number of new users gradually decrease every other cycle.

In this regard, theory would suggest that successful TGH marketing (i.e. viral coefficient larger than 1.0) sparks a viral effect, unlike Facebook marketing that does not create a viral effect to the same extent. According to Berger and Milkman (2014), virality on social media is mainly driven by content that evokes either high-arousal positive emotions (awe) or negative emotions (anger or anxiety) as the eWOM effect becomes apparent. However, this type of content is difficult to produce which suggests that it is more difficult to reach a larger audience with Facebook marketing. Thus, from an AIDA perspective, TGH marketing should generate greater attention within the AIDA framework than mobile Facebook marketing.

Furthermore, according to Smith et al. (2007) theories on ad creativity, an ad's content has to be marketed in an original manner to capture attention. Originality is one of the five factors affecting the ad's divergence which, according to Smith et al. (2007), is necessary to make the marketing noteworthy. Since the TGH marketing will generate a text message, this will create a push notification for the potential consumer which is a clear trigger to achieve a greater attention. In other words, it contains elements that are "rare and surprising" which are aligned with the descriptives of attention embodied in the AIDA framework. On Facebook, however, push notifications are not available for mobile marketing ad campaigns, which argues that TGH marketing will generate greater reach. In fact, studies show that the chances of achieving attention increases by 88% if push notifications are enabled (Hoch, 2014). Consequently, the divergence of Facebook as a marketing channel is not as *original* which according to Smith et al. (2007) decreases the chance of achieving attention.

Based on the above stated theories and studies discussing the severe importance of viral coefficients, eWOM and divergence originality, this brings us to the first hypothesis of our thesis:

Hypothesis	
H1	TGH marketing will achieve a greater reach and exposure than Facebook ads

2.2.3 Interest: Affective stage

According to Cho et al. (2014), the user is much more keen to react and notice the marketing content if shared by an acquaintance. This theory is called sender effect or sender trust. The recipient would expect the sender to provide useful information and therefore the sender is perceived as a more reliable and thus a noticeable source. This would argue that TGH marketing—in which the content marketed is delivered by an acquaintance and thus the sender effect is present—would generate a higher interest than mobile Facebook marketing.

However, the research by Cho et al. (2014) also reveals that there is an overall scepticism among consumers towards marketing that is directed through private communication platforms (e.g. email, sms, etc.) where the perceived risk of encroachment on personal rights is considered higher. Consumers have a tendency to feel that viral ads violates their perception of personal integrity creating anxiety and irritation, which would decrease consumers' interest to accept the offer. According to Ankeny (2012), 60% of all smartphone users do not wish to receive any promotional text messages as they consider them annoying.

In terms of sender effect and virality, Guerini et al. (2012) argue that virality is not dependent on the influencer who spreads the message, but is strictly connected to the nature of the content. On the other hand, Bauer and Rosén (2014, p.11) states that it is also of vital importance to consider *how* the content is presented on the market. This is based on a theory called signalling theory where credibility has an important signalling value.

Although the opinions within the interest stage of the AIDA framework diverge, the vital impact of the sender effect leads us to believe that there is a greater likelihood that increased interest is created through TGH marketing than through mobile Facebook marketing.

2.2.4 Desire: Affective stage

Since Facebook's targeting tools enable tech start-ups to hyper-target their ads, the segmentation strategy implemented can be based on both *casual* and *descriptive* factors. Therefore, Facebook ads cannot only be targeted to a specific geographic area or toward users that fit certain demographical criteria, but also toward users that search for certain keywords on digital search engines. Thus, one could argue that there is a strong link between hyper-targeting and the following segmentation approaches presented by Haley (1995):

- *Geographic segmentation*: describes the market in a discrete way in terms of geographic area.
- *Demographic segmentation*: differentiates users from non-users, but is a poor predictor of behaviour.
- *Volume/heavy half segmentation*: directs dollars towards the most important parts of the market.

- *Benefit segmentation*: measures consumer value systems in detail together with what the consumer thinks about various brands in the product category of interest.

Unlike Facebook marketing, TGH does not apply benefit segmentation nor hyper-targeting—at least not to the same extent. With TGH, there is a risk that the inviter does not perform any kind of segmentation or targeting at all but simply invites whoever comes to mind first. However, this depends on the nature of the trade growth hack—there is a severe difference if the current user receives the reward by *inviting* a new user or by *acquiring* a new user. Acquiring a new user implies that the reward is achieved when the inviter has managed to convert one or more consumers to users. If the current user receives the reward by acquiring a new user, at least some sort of segmentation will be made by the current user since non-targeted invitations minimise the chance of achieving the reward.

Due to hyper-targeting and benefit segmentation, Facebook marketing seems to have a more thorough targeting process than TGH marketing which leads us to believe that Facebook ads will create a higher desirability for consumers gaining interest in the campaign. According to Lewis (1900), desire is the final step to reach the behaviour stage and consequently action.

2.2.5 Action: Behavioural stage

According to Damasio (Heath 2012, p. 138), decision making and behaviour are highly influenced by emotions. Several theories within the area of behavioural economics support this statement. Even though a consumer may have all facts clear, which logically would motivate a certain decision, logic rationale needs to be complemented by emotions to trigger action. On this subject, the human mind has two ways of making decisions:

- *System 1:* an automatic system which is a form of decision making mechanism that is "irrational, instinct, emotional, fast, uncontrolled and illogically intuitive")

- *System 2:* a reflective system that is "slow, controlled, conscious and logically deductive").

We argue that Damasio's model of decision making captures the essence of the action stage in the AIDA framework, since merely being awareness, interest and desire do not necessarily provide sufficient conviction for consumers to actually *act*.

Furthermore, Damasio's decision making model also includes two routes—route A and route B. Route A is a traditional reasoning model of decision making in which, similarly to system 2, is based on reasoning and rationale. Route B operates in parallel, in which "gut feelings" is the dominating source for decision making. Route B is automatically deployed in all decision making situations and is based on somatic markers.

We want to explore how emotions throughout the AIDA process trigger action, and thereby compare the effectiveness in terms of generating downloads between Facebook ads and TGH marketing. Although hyper-targeting argues for that Facebook ads will generate more desire than TGH marketing, Damasio's theory on behavioural economics would suggest that the sender effect would favour TGH marketing over Facebook ads. Moreover, the possibilities with divergent, original marketing channels and exponential viral coefficients would also advocate the effectiveness with TGH marketing.

To properly measure the outcome, however, we will test and analyse the following hypothesis:

Hypothesis	
H2	TGH marketing generate more acquired users (downloads) than Facebook ads

2.3 Cost per install (CPI)

The CPI is calculated by dividing the advertising expense with the number of new users acquired. We will calculate the CPI for Facebook ads and TGH respectively, and thereafter analyse the difference in cost effectiveness. According to Tredaway and Smith (2012) the marketing cost for Facebook ads is both effective and predictive. Since we will be using a cost-per-click (CPC) marketing technique, it implies that every click to the Appstore will result in a fixed cost. This cost then needs to be adjusted according to the drop-off rate from AppStore, since not all consumers that go to AppStore actually will download the app and become users. Furthermore, the total campaign cost will be monitored throughout the Facebook campaign using Facebook's Ads Manager.

The average drop-off rate for apps in the category "social networking" on App Store is 11,36% (Pratskevich, 2017). Analysing the Shoutaway app's metrics in the company's iTunes Connect account it is presented that the app has a drop-off rate of 13,46%. However, the drop-off rate may differ depending on the users' perception of the marketing channel distributing the information.

(See formula 1a-1c for calculation of CPI for Facebook ads)

Formula 1a:

Total cost of FB ads = *((Total reach * Conversion rate) *CPC)*

Attention **Interest + Desire**

Formula 1b:

Total number of downloads *= (Total reach) * (Conversion rate)*(1-Drop-off rate)*

Attention | **Interest + Desire** | **Action**

Formula 1c:

$CPI_{FB\ ads}$ *= (Total cost)/(Total number of downloads)*

In contrast, the total cost for the TGH marketing is calculated by combining two different costs—one variable and one fixed. The variable cost is calculated by multiplying the cost for each reward ("giveaway") distributed to current users with the total number of invites sent. The fixed cost is the cost for developing and implementing the TGH marketing campaign into the Shotuaway app. Growth hacker marketing is, as previously mentioned, a method aiming to minimise cost and maximise the number of users. As stated by the Huffington Post:

> "A major goal of growth hacking is to build and engage your user base to convert them into return customers at a low cost." (Roach 2017).

Thus, it is often argued that TGH marketing is more cost effective than Facebook marketing. In this thesis, we have set the budget for TGH marketing to 11 000 SEK (fixed development cost) in combination with a the variable cost of 20 SEK per invite sent.

(See formula 2a-2c for calculation of CPI for TGH marketing)

Formula 2a:

Total cost of TGH marketing *=(((Giveaway cost * Number of invites sent))+(Fixed development cost))*

Formula 2b:

Total number of downloads *= (Total reach) * (Conversion rate)*(1-Drop-off rate)*

Attention | **Interest + Desire** | **Action**

Formula 2c:

$CPI_{TGH\ marketing}$ *= (Total cost)/(Total number of downloads)*

Based on the comparisons concerning CPI presented above and the fact that H1 and H3 assumes that TGH marketing will generate a wider reach (attention) and a greater download rate (action) than mobile Facebook marketing, we present the following hypothesis regarding the cost effectiveness:

Hypothesis	
H3	TGH marketing result in lower CPI than Facebook ads

3. Methodology

3.1 Scientific approach

To test our hypotheses by means of a deductive approach, we did a field experiment. The reason for this is two-folded—first, we wanted to ensure that the conclusions drawn from the experiment would have high external validity, that is, be applicable in a real world setting (Bryan and Bell 2015, pp. 40-69). Since one of the purposes of this thesis is to provide tech start-ups with actual field data, merely handing out surveys would not give us the reliability and external validity needed. Secondly, we did not want to sully the experiment with our own views and opinions, but to retain an objective approach. Thus, a field experiment is favourable as it makes the data more valid and less bias. The field experiment consisted of implementing a trade growth hack into the app Shoutaway, live on the AppStore, as well as launching a mobile Facebook campaign. The budget for the field experiments amounted to 23 960 SEK. In regard to the trade growth hack, virality and its implications of user behaviour was measured and analysed using Mixpanel and iTunes Connect (online tools that tracks interactions with web and mobile applications) as well as Microsoft Excel version 15.19.1. The results from the Facebook campaign, however, was measured using Facebook's ads manager, power editor, Facebook pages, ads manager app, and Mixpanel (Facebook Help 2017 and Mixpanel, 2017).

3.2 Study design

To ensure the validity of the field experiment, we first did a preliminary investigation. Thereafter, we crafted and designed a value offering through iterative processes. We then designed and hyper-targeted our Facebook campaign while simultaneously designed, developed and implemented our trade growth hack into the Shoutaway app. We were able to do the design and the hyper-targeting ourselves, but we had to hire IT developers from Belarus for the development and implementation of the trade growth hack into the Shoutaway app. The ad displayed on Facebook and in the trade growth hack had identical designs (Image 3 and 4) since we wanted to measure the difference between mobile Facebook marketing and TGH marketing as channels, regardless of advertising content. If we had used different content in the advertisements, the difference in growth success between the channels, if any, would imaginably depend on the content type, and not solely on the channels—which is not desirable.

3.2.1 Preliminary investigation

A fundamental prerequisite of the experiment, was that the content advertised had to be appealing to consumers and create a desire for consumers to act. If the advertisement for the Shoutaway app was not desirable to consumers, the comparison between Facebook marketing and TGH marketing could be disrupted by the promotional content. This is also aligned with Damasio's decision making theory as the content promoted needs to evoke emotions in order to trigger immediate action. Thus, we did a preliminary quantitive investigation in the design of a questionnaire, using Google Forms.

The survey was posted in several of the Stockholm School of Economics closed Facebook groups and received a total amount of 223 respondents in which an array of ads and value offerings was presented (Table 1 below).

Questions asked in survey	
1	Suppose you just registered an account at Shoutaway. How would you react to the offer: ”Please invite 5 friends to Shoutaway in order to continue”?
2	Which of the following ”giveaways” would make you invite one or more friends to Shoutaway?
3	Which of the following promotional messages would make you download Shoutaway?

Table 1: Questions asked in survey

As shown in Table 1, respondents were asked which of the following “giveaways” would make them download Shoutaway as well as invite friends to the app. The top three most popular triggers for inviting new users were to get discount codes at Uber-taxi, SF-bio and UberEATS (see Chart 5).

Likewise, the top three most incentivising promotional offers to download the app were discount codes at Uber Taxi, SF-bio and Uber Eats (see Chart 4). We designed the survey to both discover the intentions to download an app but also the intentions to recommend and app since the TGH marketing is built upon users interest to recommend the app to friends and family.

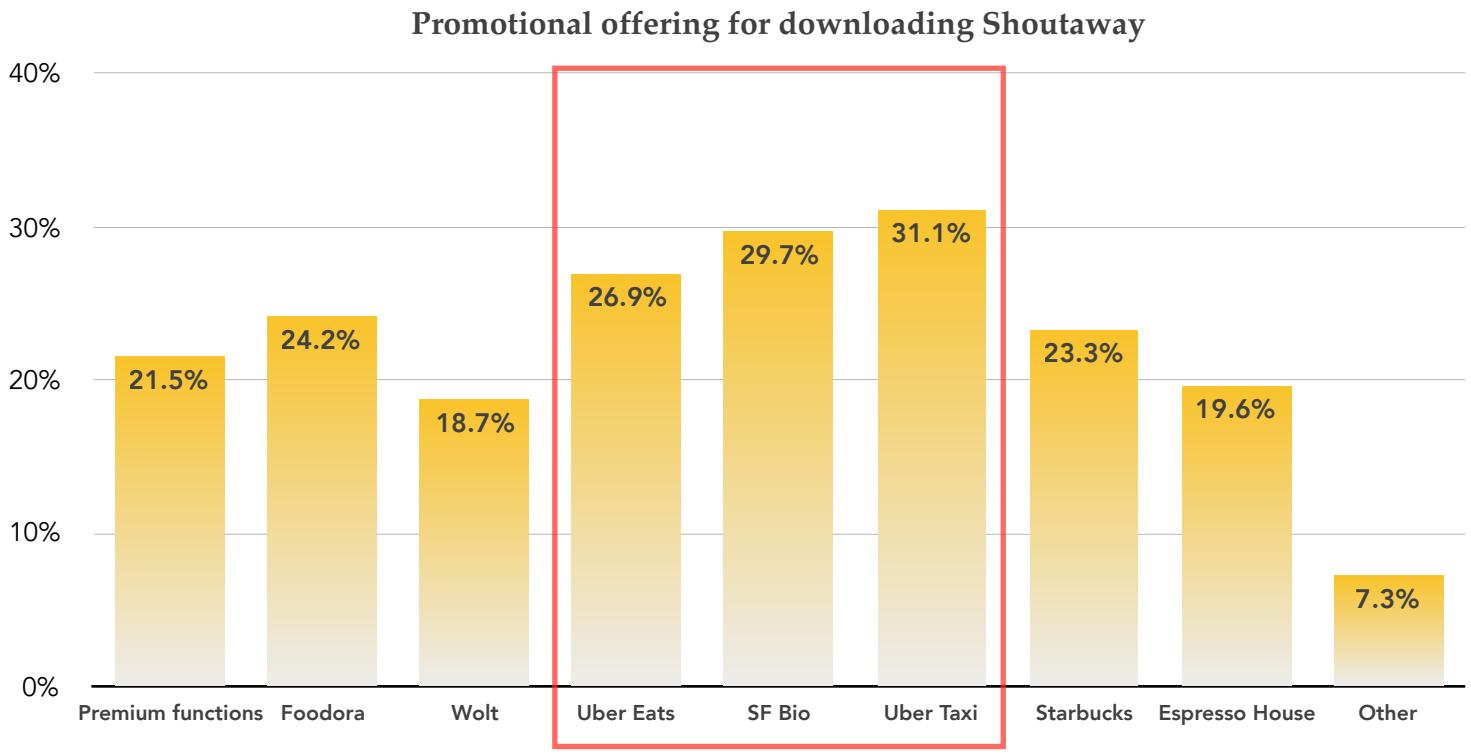


Chart 4: Respondents' coupon preferences regarding downloading an app

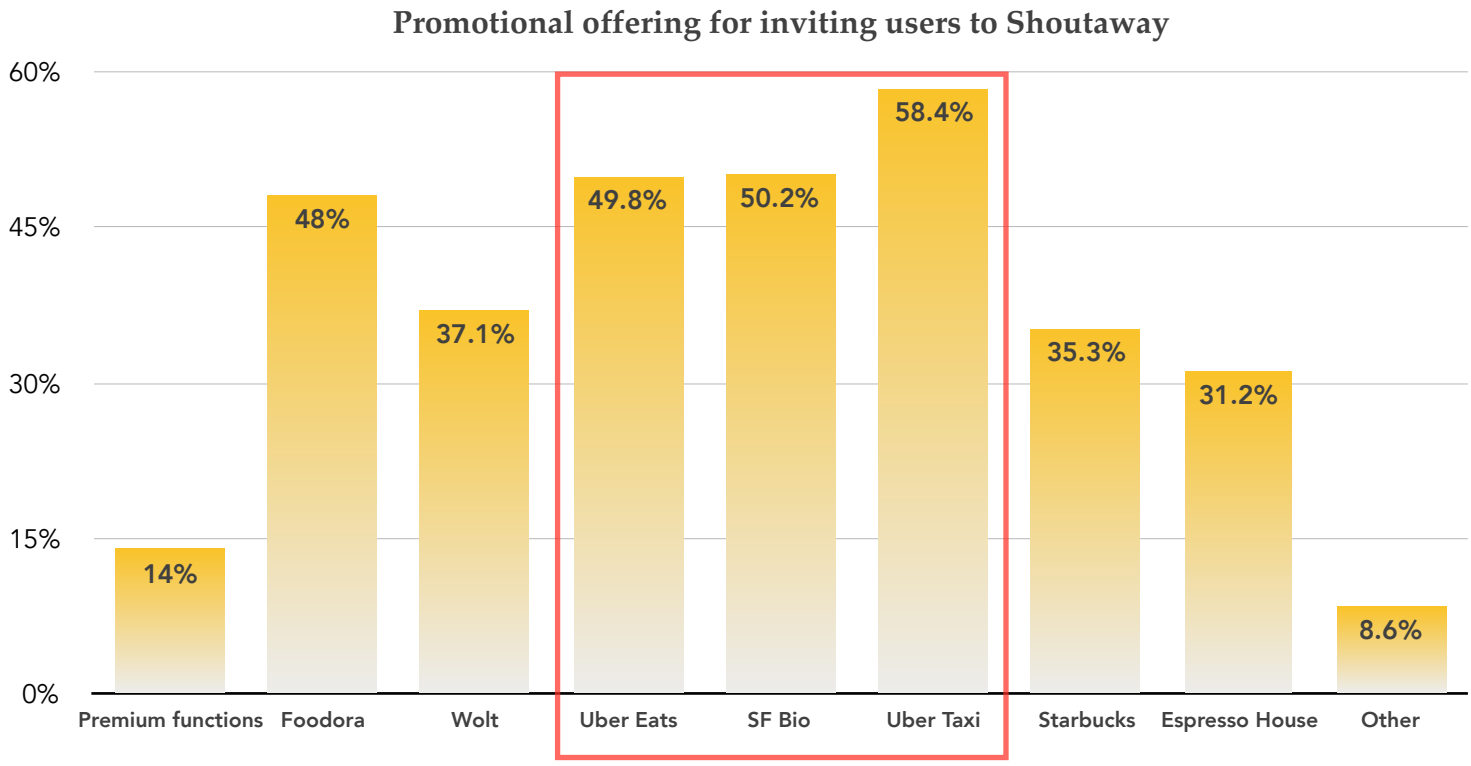


Chart 5: Respondents' coupon preferences regarding inviting friends to an app

Once the results from questionnaire had been gathered and analysed, we contacted all relevant companies from the survey and requested discount codes. We were able to receive discount codes from both UberEATS worth 100 SEK. 110 out of 221 respondents (49.8%) had marked UberEATS discount codes as their top choice for triggering an action to download the Shoutaway app. In terms of inviting other users, 59 out of 219 respondents (26.9%) had marked UberEATS their top choice, which also was among the highest rated alternatives.

Furthermore, we contacted the food company Wolt and were once again able to get a discount code, this time worth 150 SEK. Although Wolt was not a top choice among respondents, we still consider it a desirable value offering to consumers. The reason for this is three-folded. Firstly, 150 SEK is quite a large sum of money to get for free when ordering food online. Secondly, both UberEATS and Foodora scored very high in the questionnaire and Wolt delivers more or less the exact same service. Thirdly, Wolt is a fairly unknown brand among consumers since the company only recently launched their operations on the Swedish market (Wolt is originally a company from Finland) and thus the lack of popularity in the survey was due to respondents' ignorance, not Wolt's service itself.

UberEATS and Wolt are online food delivery services. UberEATS entered the Swedish market in year 2016 and has rapidly increased its market share. Uber Sweden AB's revenues on the Swedish market amounted to approximately 11 million SEK in 2015 and the annual net income was 582 000 SEK (Annual report for Uber Sweden AB 2015). Wolt entered the Swedish market a couple of months later, and has yet not received the same market share and top of mind awareness among consumers as UberEATS.

We would have wished to have SF bio and Uber taxi as collaborators in this campaign for the purpose of high validity, but since they did not have any interest in this type of collaboration we had to content ourselves with UberEATS and Wolt. Although, UberEATS and Wolt did not achieve the top scores in our survey, we still consider them to have reliability and validity since they were in the top sheet when calculating the accumulated scores in the survey.

Each time a discount code was used in either UberEATS or Wolt, the Shoutaway company had to pay 20 SEK as a fee.

3.2.2 Facebook Ad design

The advertisement was presented in the Facebook app as well as in the web-based mobile app of the Facebook newsfeed. We used a CPC set-up where each click to Appstore generated a cost for Shoutaway's business account. Furthermore, we used hyper-targeting in order to direct the marketing towards our target audience, which is in accordance to Hayley's benefit segmentation approach. The ad was designed as presented in the image below (Image 3). We hyper-targeted the ad based on the following choice criteria—first, we specified the geographical areas in which the ad should be displayed; Östermalm, Södermalm, Vasastaden and Kungsholmen (the main districts within the inner city of

Stockholm). The second choice criteria was based on the age and gender of the target audience, in which the age range was set to 15-30 years old and no genders were excluded. Lastly, demographics, interests and behaviours were accounted for in the hyper-targeting. We decided to target an audience with lifestyle preferences related to; parties, fast food, friends, family, alcohol and events. These hyper-targeting criteria were based on user behaviour observed within the current Shoutaway user base. The campaign ran for five days and the total investment amounted to exactly 8 660 SEK. We also choose to target a narrow geographic area since the app is dependent on having many users within a smaller region in order to function in an effective and useful manner.

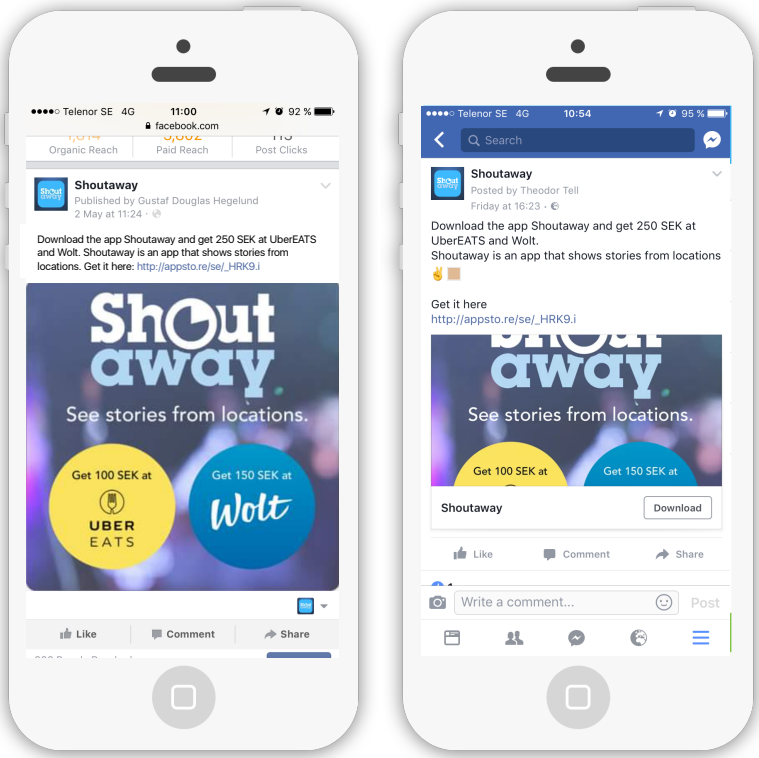
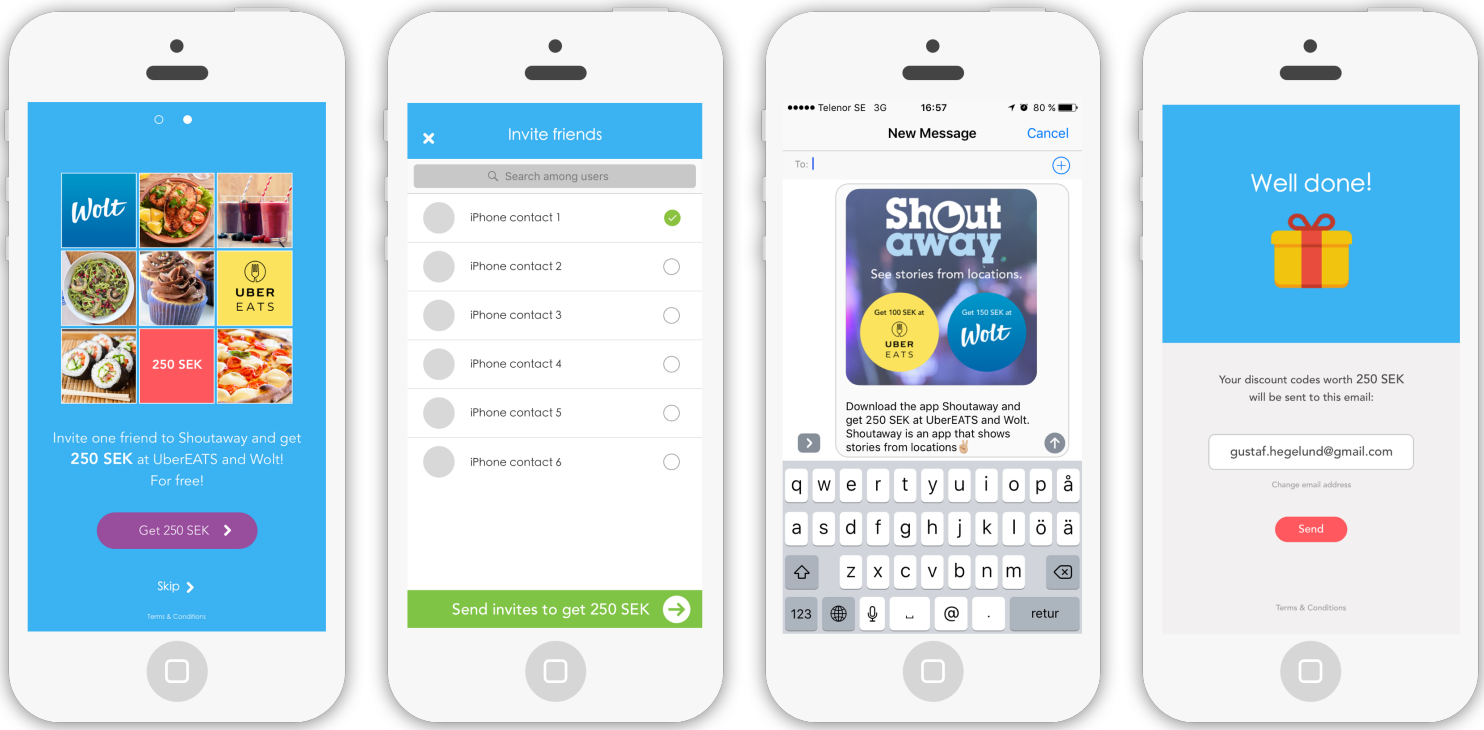


Image 3: Facebook campaign design (mobile website to the left, app to the right)

3.2.3 Trade growth hack design

The trade growth hack was integrated into two parts of the app—the sign-up process as well as from a separate menu inside the app (only accessible once the user had logged in). When the user opened the Shoutaway app for the first time, a tutorial and infomercial was presented (slide-show) to inform and educate the user about the app's functionality. This is important from a growth hacker marketing- and sender effect perspective, since users might be reluctant to invite new users to an app they yet have not tried nor know nothing about. In our case, users were asked to invite new users already during the sign-up process, which is why this becomes even more important. The sign-up process had the following design (Image 4). Step one for the user was to press a "Sign in with Facebook" button and to confirm whether the user wanted to use the current Facebook profile picture or to upload an alternative one. Next, the user was presented with the growth hack value offering "*Download the app Shoutaway and get 250 SEK at UberEATS and Wolt. Shoutaway is*

*an app that shows stories from locations✌🏽 Get it here: *download link**"*. We used the phrase "Get 250 SEK" and added a purple design to make users more eager to take the offer. Furthermore, the user had the option to press "Skip" and thus decline the offer. The reason why we choose the word *Skip* was because we wanted to evoke a feeling of urgency and a feeling of "missed opportunity" if the user did not proceeded with trade growth hack process. In reality, however, pressing "Skip" did not result in missing out on the offer since the offer could be accessed from inside of the app—although this was not apparent to the user at sign up. If the user decided to take the offer, the iPhone contact book would pop up from below in which the user could choose one, or more, friend(s) to invite. To spur the user's ambition to proceed, the green send-button below displayed "Send invites to get 250 SEK". Next, the user got to the Message-app where the text and advertisement image had been pre-implemented. Finally, the user were given the 250 SEK codes—sent via email of choice as well as via the notification center in the app.



Step 1	Step 2	Step 3	Step 4
User was presented with the value offering / advertisement.	User choose from the contact book which friend(s) to invite.	A pre-written text + image appeared in the Messages app.	The user gets the reward (250 SEK discount codes) sent to email and as a notification in the app's notification center.

Image 4: Trade growth hack design and process

Naturally, the recipients of the text would get an alert tone (Image 5), which resonates with the theory of divergence originality. Here, it is of particular interest to analyse the sender effect and signalling theory, which is why we choose to design the trade growth hack as described. Moreover, we integrated the trade growth hack with text (sms) as driver component since texts easily trigger a viral effect due to high open conversion-rates which maximises the opportunity of generating an exponential viral coefficient.



Image 5: The text (sms) received and opened in Messages-app

The budget limit set for the trade growth hack campaign was 20 SEK per download (variable cost). Moreover, the implementation and the development of the trade growth hack was roughly 11 000 SEK (fixed cost).

3.2.4 Execution

The survey in our preliminary investigation was sent out to students at Stockholm School of Economics in January, about four months before the main investigation was executed. To increase the response rate of the survey and decrease the perceived effort needed, the questionnaire was designed to be easy to understand and only contained three questions. Furthermore, we decided to include a short video clip where we described the use and purpose of the survey, which made the survey more personal and consequently enabled respondents to feel exclusively selected in order to amplify higher response rates.

The data was collected in May 2017 and the campaigns ran for five days each, from 2/5-2017 to 6/5-2017 (TGH) and from 6/5-2017 to 10/5-2017 (Facebook). We began by conducting the TGH marketing experiment and afterwards we performed the Facebook marketing campaign in order to minimise the risk of mixing up the metrics in the two different data sets. The advertising content was designed and presented in the exact same way in both marketing channels since the content itself should not affect the result in the field experiment. The content that was marketed was designed by ourselves in the design software Sketch.



*"Download the app Shoutaway and get 250 SEK at UberEATS and Wolt. Shoutaway is an app that shows stories from locations✌🏽 Get it here: *download link*"*

Image 6: Ad content design

The ad was displayed on the Facebook page to those that had been targeted through hyper-targeting techniques and to anyone who received the text message. In the text message the ad had the size of 485x500 pixels and in the Facebook feed it had the size of 750x850 pixels. In the experiment we were able to calculate: the number of people reached, the number of clicks to App Store, the total number of downloads and the cost effectiveness of each marketing channel by calculating the CPI.

3.3 Data analysis tools and tests

In order to analyse the data from the survey in the preliminary research we used the online survey tool Google Forms to conduct the survey. Furthermore, we also used Microsoft Excel version 15.19.1 in order to summarise the data and analyse it properly.

The business analysis programs Mixpanel, Facebook Business and iTunes Connect were used to analyse and measure the data from our field experiments. As our goal with this thesis was to examine the effectiveness of Facebook marketing and TGH marketing through the attention, interest and desire obtained in relation to the cost it takes for a consumer to take action, we had to analyse several types of metrics. First of all, we

examined how many consumers that we reached in total through the different channels. For the TGH marketing this was analysed by measuring the total number of text messages that had been sent out, whilst in Facebook marketing this was measured by measuring the number of consumers reached. Furthermore, we investigated the number of clicks to Appstore and the download rate related to the TGH marketing text message and mobile Facebook ads. Lastly, we were able to conclude which of the two marketing channels that reached the lowest CPI and thus was the most cost effective marketing channel. Since our main investigation was based on a field experiment, we did not use SPSS analysis tools provided by the Stockholm School of Economics. As the field experiment captured consumers' real life choices, the data analysed in Mixpanel, Facebook Business and iTunes Connect was sufficient to achieve high reliability and validity.

3.4 Reliability and validity

One flaw with the trade growth hack from a validity perspective, is that the text-invites could be sent to Android phones. Since Shoutaway is only available for iOS, the virality effect could therefore potentially get interrupted occasionally which would inhibit the trade growth hack. In Sweden, 56% of the inhabitants own iOS devices and 44% own Android devices (DeviceAtlas, 2016). By using mobile Facebook marketing it is possible to hyper-target only iOS users, which consequently makes it a high validity source. Unfortunately, in terms of growth hacker marketing, it was not technically feasible to develop an Android version of the app in such a short timeframe, as to decrease the possible inhibition of the virality effect. To reduce the risk of inhibiting the viral process, we could have chosen to only distribute digital discount coupons to users who had *acquired* new users and not only *invited* new users. Nonetheless, this could potentially impact the virality effect negatively as well for obvious reasons. To summarise, we were unfortunately unable to overcome this issue due to the short time-frame (to develop an Android version is time consuming).

Another flaw, from a validity point of view, was that the digital discount codes to UberEATS and Wolt were not customised for every individual user (i.e User A would get the exact same discount codes as User B for inviting new users, hence, the codes were not customised for every individual user). This could potentially cause a risk that word get out and consumers started sharing the discount codes with each other without actually downloading the Shoutaway app. However, since this experiment was rather short, we considered this risk to be fractional. Moreover, to make every individual user believe that the codes actually were customised, we made the appearance of the codes complex.

To ensure the validity of the experiment, we did a large preliminary investigation. We did this preliminary investigation (survey) at two different points in time to ensure the reliability of the survey. Moreover, by asking respondents which giveaways would make them download an app as well as asking them which giveaways would make them invite new users to an app, one could argue for strong validity due to that these are almost the same.

Additionally, large sample sizes were used—both on the Facebook campaign and the trade growth hack. 285 texts were sent as a result of the TGH marketing and over 89 000 people were reached via the Facebook marketing ad. We also let the experiments run for five days each to ensure the reliability of the experiment. Furthermore, the experiments were done on separate days in order to minimise the risk of them influencing each other, spill-over effects.

4. Results and analysis

In this chapter we will present and analyse the results from our field experiment based on the hypotheses presented in *2.0 Theoretical framework*. Given that a noticeable difference in effectiveness between the TGH marketing and mobile Facebook marketing is obtained, we will examine the differences in effectiveness in the following areas: attention effectiveness, action effectiveness and cost effectiveness.

4.1 Results in terms of attention (H1)

The purpose with our first hypothesis described in the theoretical framework was to examine the difference in attention between TGH marketing and mobile Facebook marketing. More specifically, our objective is to understand which of the two strategies that generate widest reach among consumers. As theory suggested that TGH marketing would receive a greater attention, the following hypothesis was stated: *TGH marketing will achieve a greater reach and exposure than Facebook ads.* This hypothesis was based on the theory of divergence originality and under the assumption that the TGH marketing would establish a severe viral marketing effect (a viral coefficient larger than 1.0) where new users invite several friends to join the app. In the field experiment the hypothesis was tested by comparing the number of *reaches* on the mobile Facebook ads with the number of *invites sent* through the Shoutaway app.

4.1.1 Reach and exposure through TGH marketing

From a theoretical lens, it is argued that TGH marketing will generate a greater reach and exposure than mobile Facebook ads. As stated by Smith et al. (2007), the divergence originality of the marketing strategy is of great importance in order to achieve recognition (see 2.2.2). The TGH marketing text message will generate a push notification, whilst mobile Facebook ads lack originality in the sense that the marketing content is not pushed to its users through a notification. In addition, as Michael D. Geer states, Facebook ads rarely generates any virality which is an important trigger to achieve attention. Attention as a measurement for effectiveness is both relevant and interesting since the AIDA framework propose that attention is the first step in achieving the final goal—action. As we can see in our data provided by the business analysis program Mixpanel, our TGH marketing campaign generated 285 text messages sent during the course of five days. Furthermore, studies prove that the average number of text messages opened by an individual consumer is 98% (Essany, 2014). This indicates that the TGH campaign generated 279 opened text messages, which in turn lead to 234 AppStore page views. Consequently, the users participating in the campaign—i.e. the total user base in Shoutaway version 2.6—sent on average 1,099 text invites. The number of users at the beginning of the TGH campaign was 74 and amounted to 289 at the end of the project scope. Chart 6 below illustrates how many invites that were sent each day of the campaign. Chart 7 below portrays the funnel describing the reach and click-through rate for text messages. The number of consumer reached was way below our expectation. We believed that the reach would be much more substantial since we thought that the viral effect would have had a greater impact.

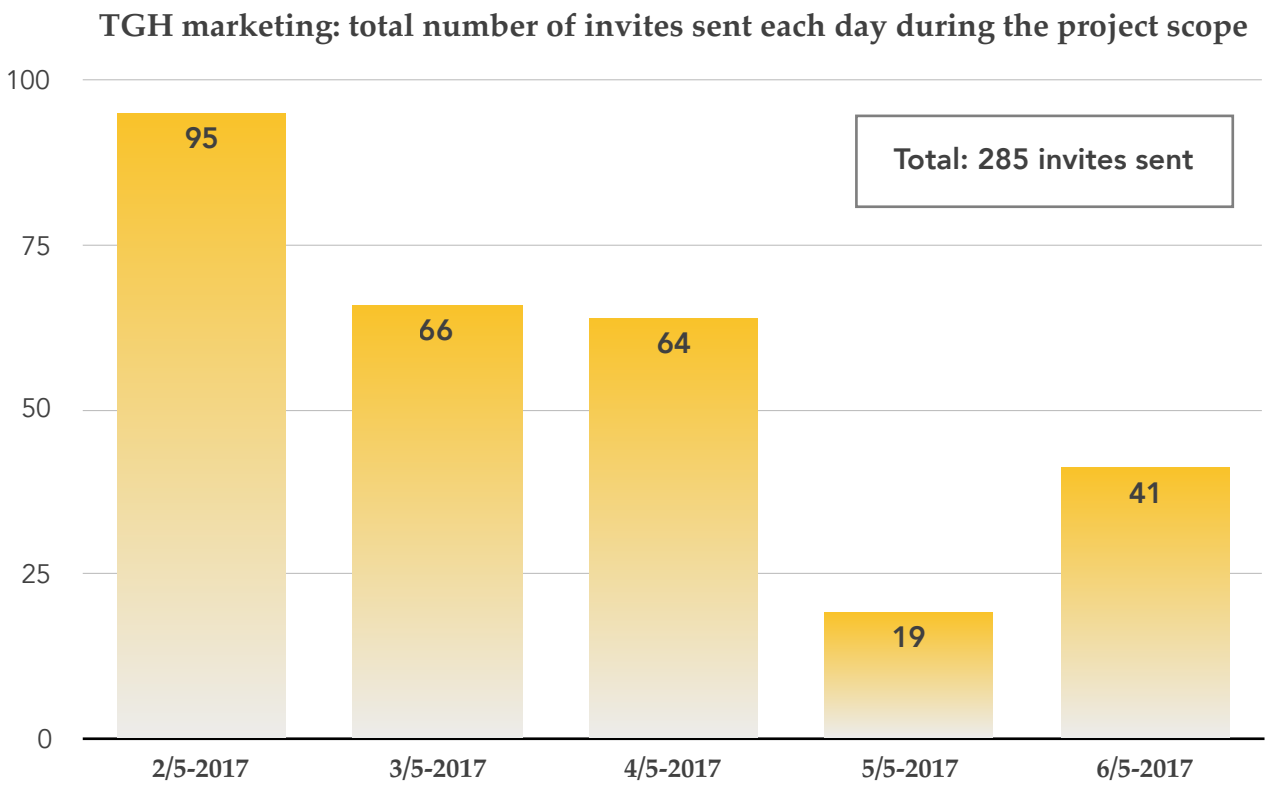


Chart 6: The total number of invites sent per day during the field experiment

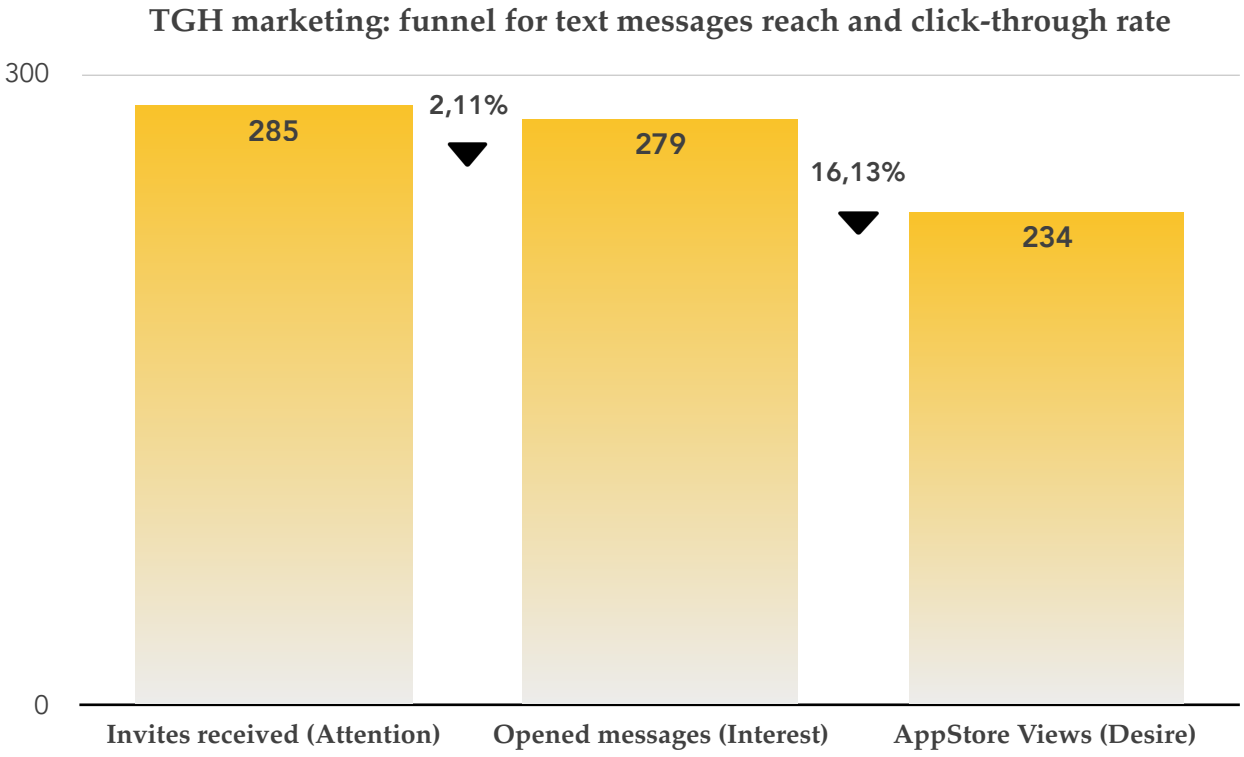


Chart 7: Funnel for text messages reach and click-through rate through TGH marketing

4.1.2 Reach and exposure through mobile Facebook ads

Mobile Facebook advertising is considered to be one of the most effective marketing strategies within digital media since Facebook is the worlds largest digital platform to this date (Dehghani 2015, p.599). Likewise, our experiment also confirms the strength of this digital platform's magnitude. After having run the campaign for five days we reached 89 245 consumers. As shown in the Chart 8, the extensive reach is both a result of Facebook's expansive network but might also be a result of Facebook users sharing the campaign content with their Facebook friends.

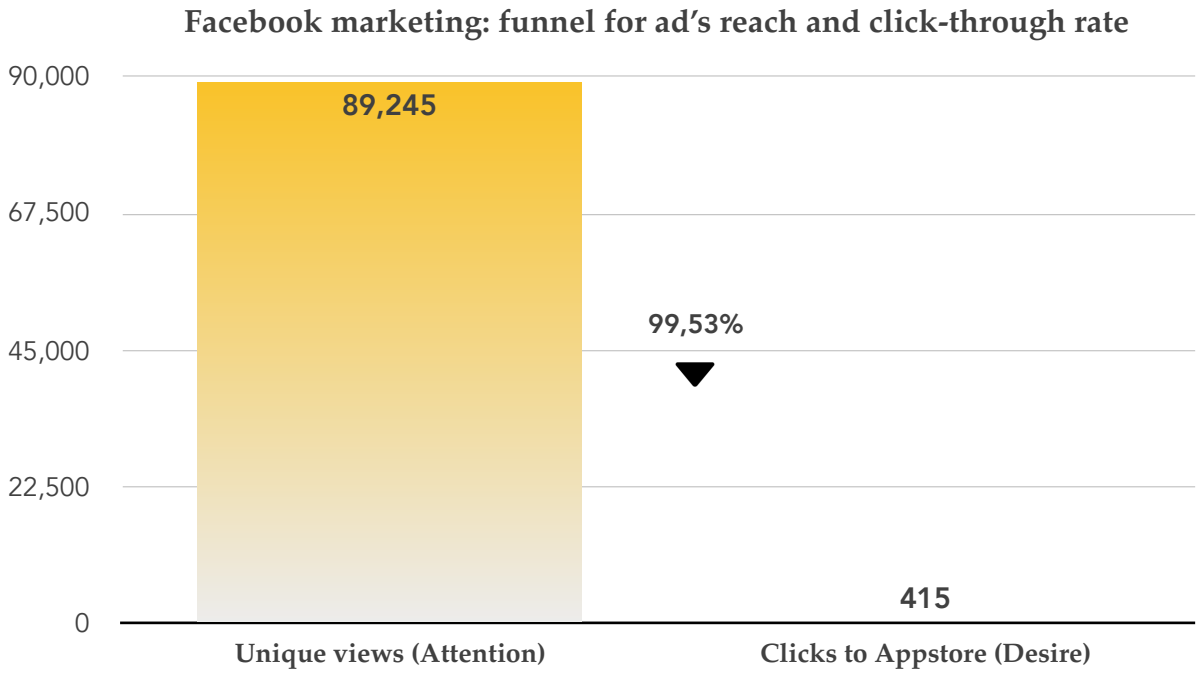


Chart 8: Funnel for ad's reach and click-through rate

4.1.3 Mobile Facebook ads generate a greater reach and exposure than TGH

As the field experiment proves that mobile Facebook ads reached a far greater audience, one can conclude that the result does not support our Hypothesis 1 stating that TGH marketing would have a greater reach and exposure than Facebook marketing. More specifically, the number of invites sent per user was below our expectation. Therefore, based on the results, this contradicts the theories regarding the importance of divergence originality and sender effects, which in turn supports the aforementioned theory by Guerini et al. (2012) stating that influencers have no effect. Naturally, it is reasonable to assume that the eWOM incentives were too low for users to invite *more than one* person to join the app, which consequently hampered the viral coefficient (the viral coefficient, K, achieved in the field experiment with TGH marketing was 0,83, please see Table 2). In order for the TGH marketing to generate a wider reach than our Facebook ad it would demand that all current users—and new users— would have to send at least 4,89 invites each, which would in total generate 89 874 invites (Chart 9) and a viral coefficient of 3,7. As shown below the viral effect of such a spread would have a more substantial reach than the Facebook ad.

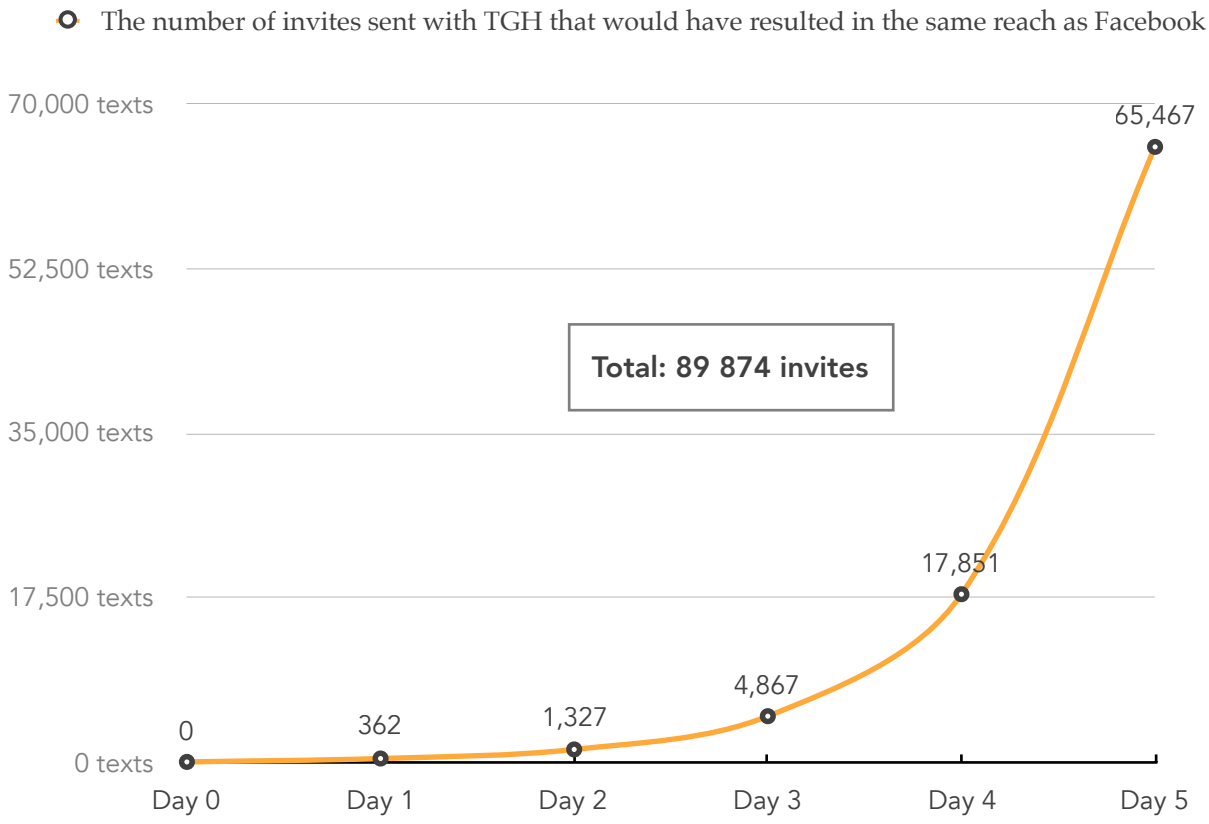


Chart 9: The hypothetical invites sent in order for TGH marketing to achieve the equivalent reach as Facebook ads.

To sum up, our first hypothesis is not empirically supported by the field experiment conducted:

Hypothesis		
H1	TGH marketing will achieve a greater reach and exposure than Facebook ads	**Not supported**

4.2 Results in terms of action (H2)

Our second hypothesis was to find out whether TGH marketing outperforms mobile Facebook marketing in terms of generating downloads. In the field experiment, this was measured by comparing and analysing the number of downloads generated by TGH marketing and mobile Facebook marketing respectively.

4.2.1 Users acquired through TGH marketing

Given that our first hypothesis was not supported (that is, mobile Facebook marketing actually generated a wider reach and exposure than TGH marketing), one might therefore assume that Facebook marketing also would generate more downloads (action). Since the AIDA model is a funnel, a larger audience in the cognitive stage (attention) should generate a greater number of downloads in the behavioural stage (action) unless the drop-off or conversion rates drastically differ. As presented above (Chart 6) the number of invites sent during the experiment period amounted to 285. Moreover, the open-rate from the trade growth hack text is assumed to follow the average of 98%, which shall be considered to be substantial since the average open-rate for email marketing is 21,71% (MailChimp, 2017). Furthermore, in our experiment, the download conversion (download conversion is adjusted according to the drop-off rate from AppStore) for TGH marketing exceeded the download conversion for Facebook marketing by far. As a consequence, the 285 invites generated 215 downloads which means that the average download conversion per invite was approximately 75,4%.

To calculate the viral coefficient of our TGH experiment, we multiply the average number of text messages sent by each new user with the download conversion. Thus, the trade viral coefficient generated by our experiment was:

$$(0{,}754 \times 1{,}099 \text{ invites}) = 0{,}8286 \approx 0{,}83$$

Hence, we were not able to achieve exponential growth from TGH marketing since the viral coefficient was below 1.0. Note, however, that this calculation has some assumptions to it. First, this viral coefficient calculation is solely based on trade virality—-however, in reality, sharing virality and inherent virality may have contributed to the viral coefficient achieved in the experiment. After all, Shoutaway is a social media app, and thus WOM and eWOM was probably present (sharing virality) and the product becomes more fun if users beget more users (inherent virality). Therefore, the trade viral coefficient in reality might be lower than 0,83 since the calculation in our field experiment is solely based on trade virality.

Viral coefficient calculation (calculated in Excel)			
Inputs		**Value**	**Description**
Users at start	Cust(0)	**74**	The number of users in Shoutaway 2.6 before the launch of the campaign.
Users at time t	Cust(t)	**K**	This is the variable that we want to compute.
Number of invites	i	**1,099**	Sent out by each "infected" users.
Download conversion	Conv%(c)	**75,4%**	i.e. % of invited new users that actually sign up.
Computed viral coefficient (K)			
Viral coefficient	K	**0,754 x 1,099 ≈ 0,83**	i.e. the number of actual users that sign up as a result of the invites being sent out = number of invites * download conversion %

Table 2: Calculation of viral coefficient (K)

Viral cycle time (ct) with viral coefficient *K = 0,83*							
Cycles	**0**	**1**	**2**	**3**	**4**	**5**	**Total**
New users added this cycle		61	50	41	34	28	**214**
Total users: U(u)	74	135	185	227	261	289	**289**
Reach (number of sent invites)		81	67	55	46	38	**287**

Table 3: Presentation of new users, total user base and total reach on a per-cycle basis

4.2.2 Users acquired through mobile Facebook ads

Although the reach of mobile Facebook ads were substantial, the number of clicks to Shoutaway's AppStore page generated was much more conservative. In total, the Facebook campaign generated 415 clicks to Appstore which accordingly generated 66 downloads. By comparing the corresponding number generated from the TGH marketing, it is evident that Facebook marketing might be appropriate if one's objective is to establish top-of-mind awareness, however, it is not as effective in generating actual downloads. The download conversion for mobile Facebook ads was 0,074% which is notably less than the download conversion of the TGH marketing. Furthermore, the Facebook ad's drop-off rate of 84,1% on Shoutaway's AppStore landing page was also significantly higher than previous measurements made through iTunes Connect.

4.2.3 TGH generated more users (downloads) than mobile Facebook ads

In terms of Damasio's theory of psychological decision-making, which is one of the foundations in our theoretical framework, the sender behind a stimulus does most likely incorporate an emotional attitude for the receiver which favoured TGH marketing over Facebook marketing. TGH marketing generated more downloads than the mobile Facebook ad, which implies that our hypothesis regarding user acquisition is valid:

Hypothesis		
H2	TGH generate more acquired users (downloads) than Facebook ads	**Supported**

4.3 Results in terms of cost effectiveness (H3)

Finally, the last hypothesis stated concerns the cost effectiveness of the marketing strategies. This hypothesis is dependent on two variables; the cost for each strategy and the number of downloads each strategy generated.

4.3.1 Cost per install through TGH marketing

As presented above, we can see that the TGH marketing resulted in 285 number of invites sent. We also assume that 98% of the text message recipients opened up and read the message. Consequently, since the download conversion was 75,4%, the TGH marketing amounted to a total of 215 downloads. Furthermore, since the cost of implementing the growth hack in the app was 11 000 in fixed costs and 4300 in variable costs, this entails a total cost of 15 300 SEK. Thus, the CPI is 15 300 SEK/215 downloads ≈ 71 SEK.

4.3.2 Cost per install through mobile Facebook ads

The total cost for the Facebook campaign added up to 8 660 SEK since we used a cost-per-click marketing solution that resulted in 415 number AppStore link clicks. Furthermore, due to that the drop-off rate on App Store was higher than normal (84,1%) the total number of downloads is: 415 * (1-0,841) ≈ 66. Consequently the CPI is 8660 SEK/66 downloads ≈ 131 SEK.

4.3.3 TGH marketing has a lower cost per install than mobile Facebook ads

As presented above, the TGH marketing resulted in a lower CPI than the Facebook campaign. In order for the mobile Facebook ads to have a lower CPI than the TGH marketing, the number of downloads would need to be 122—which would imply a drop-off rate of 71%.Thus, our hypothesis in the regard is supported:

Hypothesis		
H3	TGH marketing result in lower CPI than Facebook ads	**Supported**

4.4 Summary of hypotheses results

Below we have summarised the results of our hypotheses, including the AIDA model and the theories embodied within the framework.

Summary of hypothesis table				
Hypotheses	**Components of AIDA and CPI**	**Theories**	**Statement**	**Results**
H1	Attention	Viral effect	TGH marketing will achieve a greater reach and exposure than Facebook ads	**Not supported**
		Divergence originality		
H2	Interest	Sender effect	TGH marketing will generate more installs (downloads) than Facebook ads	**Supported**
		Signalling theory		
	Desire	Segmentation strategy (hyper-targeting)		
	Action	Damasio's theory		
H3	CPI	Formula for CPI	TGH marketing result in lower CPI than Facebook ads	**Supported**

Table 4: Summary of hypotheses

5. Discussion and conclusions

In the following section, we will discuss and conclude the most important results from our field experiment. In addition to this, we will also present the implications of our study, bring forth critique and limitations as well as suggest future research within the research area.

5.1 Discussion and implications

Based on the results conducted in our field experiment, we can conclude that the number of downloads are greater for TGH marketing than mobile Facebook marketing and thus the CPI is also lower for TGH marketing. Consequently, two out of our three hypotheses were empirically supported and thus has the main purpose of this thesis been achieved since we can conclude that TGH marketing is more effective than mobile Facebook marketing for tech start-ups to employ in the pursuit of growth. This result is worthwhile for tech start-ups, marketers and academics.

In terms of customer acquisitions and cost-effectiveness, TGH marketing is far more suitable for tech start-ups than Facebook ads. However, the perquisite of this is that the viral coefficient larger than 1.0 and thus it is vital for tech start-ups to establish a realistic strategy on how to achieve an exponential viral coefficient before indulging in TGH marketing activities. By using our formula in section 4.2.1, tech start-ups can calculate, analyse and predict different outcomes of TGH marketing activities using three factors: the initial size of the user base, the average invite sent per user and the download conversion. This is a powerful tool for tech start-ups when applying growth hacker marketing, and we encourage tech start-ups to use it.

Furthermore, it was interesting to see that mobile Facebook marketing in total generated a much greater reach than TGH marketing, although theories on virality would support the opposite. This has, to the best of our knowledge, never found empirical support before which is interesting since many growth hacker marketing theories highlight virality as a clear advantage. However, one must note that we were unable to generate a viral coefficient larger than 1.0, but the difference is still remarkable (89 245 versus 285). Subsequently, mobile Facebook ads shall be considered of interest for tech start-ups and marketers if the objective of the marketing activities is of other nature than generating customer acquisitions, for example promoting awareness or increasing brand equity. Another key-finding for tech start-ups, marketers and academics is that the cost per view is rather low with Facebook ads. We spent 8660 SEK on the Facebook campaign which generated 89 245 views and the cost per view was 0,097 SEK, compared to TGH where the equivalent cost per view was 53,68 SEK.

5.1.1 Evaluation of theories

Each stage with the AIDA framework was embodied with theories in which TGH marketing and Facebook marketing would have different outcomes. The Attention stage was embodied with virality effect and divergence originality. In terms of virality, the viral coefficient needs to be greater than 1.0 to create exponential growth. As for divergence

originality, it is clear that although the open-rate of the text messages was higher than the open-rate of the mobile Facebook ad (which supports that divergence originality influence consumers' attention), it lacks power in terms of growth without virality—which further emphasise the importance of producing a exponential viral coefficient.

As for Interest, signalling theory and sender effect were the underlying theories within the AIDA framework. Our preliminary investigation showed that the content marketed had high signalling value, however, the difference in consumers' perceived value between Facebook marketing and TGH marketing could for technical reasons not be properly measured. However, since mobile Facebook marketing generated 415 clicks to the AppStore (out of 89 245 reached consumers) while TGH marketing generated 234 clicks (out of 285 reached), we can conclude that Facebook marketing generated more interest in absolute numbers and TGH marketing generated more interest measured as a percentage. As for sender effect, it is clear that although the open-rate of the text messages was higher than the open-rate of the Facebook ad (which supports that sender effect influence consumers' attention), it lacks power in terms of growth without virality. In other words, it is not of vital significance whether a tech start-up employ TGH marketing or Facebook marketing, as long as the virality component is not integrated in the growth hack. To sum up, signalling theory did not support any particular marketing strategy, while sender effect supported TGH marketing.

The Desire stage in the AIDA framework, was based on benefit segmentation and hyper-targeting. In our field experiment, the hyper-targeting on Facebook did not have a substantial impact on desire nor action. With TGH marketing, benefit segmentation was not implemented and the segmentation process was controlled by the user base in the app.

In the Action stage of the AIDA framework, Damasio's theory of psychological decision-making was the underlying theory. System 2 was clearly more active with consumers reached via Facebook ads, since the drop-off rate from AppStore was substantially higher. Thus, it is apparent that consumers evaluate commercials to a greater extent and require higher signalling value to act with Facebook ads, compared to TGH marketing. Moreover, one must not forget that the AIDA framework is a funnel, and thus sender effect, virality effect, divergence originality and benefit segmentation also affected the Action stage substantially.

As for the CPI hypothesis, it is clear that TGH was advantageous from a cost perspective. However, one must also denote that the CPI for TGH marketing included the cost of developing the trade growth hack in the app, which can differ quite dramatically between tech start-ups.

5.1.2. The importance of an exponential viral coefficient

At first glance, one might consider the idea of generating a wider reach with TGH marketing compared to mobile Facebook marketing rather far fetched. Indeed, our field experiment showed that the reach with TGH marketing was 285 text invites sent whereas with Facebook marketing the reach was 89 245 mobile displays. However, one must not

forget that our initial user base after the trade growth hack implementation was only 74 users and we did not have any requirements regarding the minimum level of invites users had to send in order to get the digital discount coupons at UberEATS and Wolt. As a counterfactual hypothesis, it would thus be of interest to calculate the reach with TGH marketing if: 1) the entire user base, i.e. 2000 users, would have updated the app on the initial day of launch, 2) the average invite sent per user was two texts instead of one, and 3) the conversion rate remained constant. A scenario such as this would have immense consequences for the reach, as presented in the tables below (Table 5 and Table 6).

Viral coefficient calculation (calculated in Excel)			
Inputs		**Value**	**Description**
Users at start	Cust(0)	**2000**	The number of users in Shoutaway 2.6 before the launch of the campaign.
Users at time t	Cust(t)	**K**	This is the variable that we want to compute.
Number of invites	i	**2**	Sent out by each "infected" users.
Download conversion	Conv%	**75,4%**	i.e. % of invited new users that actually sign up.
Computed viral coefficient (K)			
Viral coefficient	K	**0,754 x 2 ≈ 1,5**	i.e. the number of actual users that sign up as a result of the invites being sent out = number of invites * conversion %

Table 5: Alternative viral coefficient

Viral cycle time (ct) with viral coefficient *K = 1,5*								
Cycles	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**
New users added this cycle		3000	4500	6750	10125	15188	22781	34172
Total users: U(u)	2000	5000	9500	16250	26375	41563	98516	98516
Reach (number of sent invites)		4000	6000	9000	13500	20250	30375	45563
Total reach							**83125**	**128688**

Table 6: Alternative viral cycle time

With this seemingly rather small change, the contrariness in the numbers is astonishing. Somewhere in the early stage of cycle 7, the reach would have been greater with TGH marketing than mobile Facebook marketing. This is under the condition that the viral coefficient is 1,5 as opposed to our experiment in which it was 0,84. Yet, this counterfactual example illustrates the power of growth hacking when all variables are aligned and spawn a viral coefficient larger than 1.0. Thus, it is not as obvious as it might seem at first glance that Facebook marketing would outperform TGH marketing in terms of attention (reach) in the AIDA framework.

5.2 Conclusion

To summarise, the results indicate that mobile Facebook ads are less effective in generating downloads, but more effective in establishing a wide reach. Consequently, Facebook ads had a higher CPI due to that the drop-off rate from AppStore was higher, which in turn lead to a low number of downloads. This concludes that, in the pursuit of achieving growth, TGH marketing is more effective than Facebook marketing for tech start-ups. Finally, within the limitations of this experiment, we conclude that there is empirical evidence to support the following statement:

Yes, it is more effective for tech start-ups to acquire new users via trade growth hacking techniques than through Facebook ads.

5.3 Critique and limitations

It can be discussed to what extent this study is limited and to what extent the results should be evaluated with caution. Initially the field experiment was based on a preliminary investigation with a relatively small and homogenous selection of respondents. It is fair to assume that solely using university students as respondents had an effect on the preliminary study which consequently affected the result in the field experiment. A greater number of respondents and a less homogenous group would therefore have been preferable.

Furthermore, the field experiment is limited to iOS devices which most with robust certainty had an effect on the result. Another limitation in the field experiment was that the offering was based on digital discount coupons on UberEats and Wolt—two companies solely operating in larger cities. Therefore, inhabitants living in the suburbs or smaller cities have a limited interest to partake in such an offer.

Besides from the above mentioned, the results could also have been affected by the extensiveness of the experiment. The fact that the thesis is based on one single experiment could argue against its practical relevance and reliability.

Another aspect that was not embodied in our field experiment was the difference in user retention derived from Facebook marketing versus TGH marketing respectively. For early stage tech start-ups, retention curves are extremely important for growth as it directly affects the viral coefficient. To have a loyal user base is fundamental and it would be interesting to examine if TGH marketing generated more loyal users than mobile Facebook marketing, or vice versa. Unfortunately, were unable to research this area due to time limitations and technical limitations (it is not possible to track user retention in Mixpanel based on whether the user was acquired from the Facebook campaign or TGH marketing). However, it is reasonable to assume that growth hacking would generate superior retention curves since User A most likely has a more positive attitude towards the product if acquired by User B, than if acquired from a Facebook ad. That being said, this area is thus left for future research.

5.4 Future research

This thesis should be considered interesting and useful for future research within the area of growth hacking strategies and social media marketing. Since this study was conducted on a small tech start-up company situated in Stockholm, it would be a natural step for future researchers to perform similar field experiments on a larger tech start-up companies situated in other cities, e.g. Hong Kong, China. It would also be interesting to observe the similarities and differences if the field experiment would have been conducted on a larger scale and with a larger scale. Another relevant field experiment would be to perform a similar comparison between growth hacking and other marketing channels, for example TV ads, radio ads or other social media channels.

A further area of investigation that was excluded from our field experiment was the varying drop-off rates from Appstore. The content marketed through the Facebook ad had

a higher drop-off rate than the content marketed via text messages. Therefore, further research within this area would also be of interest as a complement to the observations obtained in our field experiment. For example, it would be valuable to examine if the varying drop-off rates is a result of sender effect. Moreover, as mentioned above, it would relevant to measure the loyalty of users acquired from Facebook ads versus TGH marketing. This could be done by implementing and analysing retention curves in an analytics tool.

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7. Appendix

The preliminary survey is attached in the pages below, or could alternatively be found here (press the link):

PRELIMINARY SURVEY

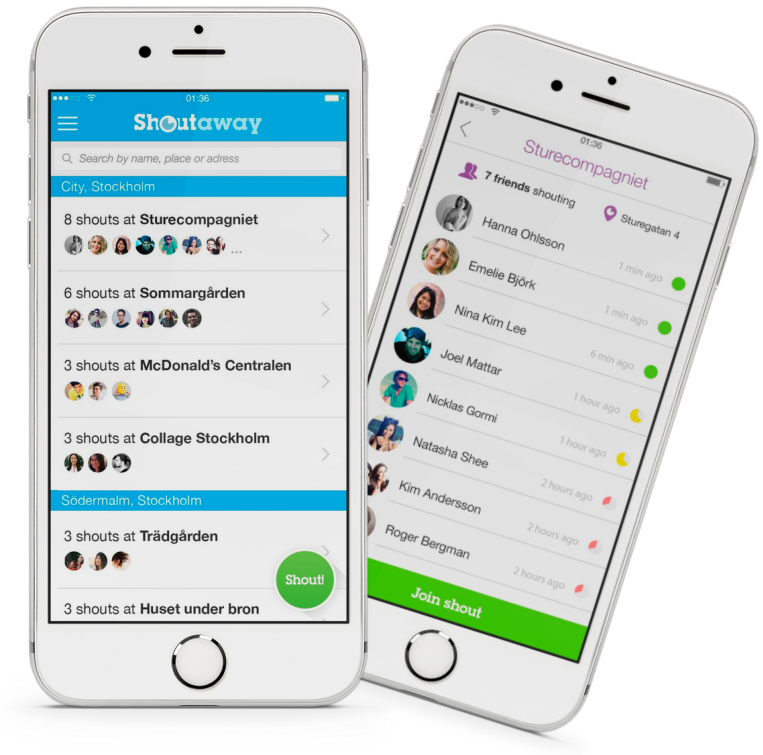
En marknadsundersökning

Vi är två killar från Handelshögskolan som har utvecklat en app inom sociala medier som heter Shoutaway. I Shoutaway kan användarna göra tidsbegränsade "check-ins", så kallade Shouts. På så sätt kan användarna i appen alltid hålla kolla på var deras vänner/ umgängeskretsar befinner sig. I appen kan man även dela bilder, videor, chatta, ha en egen profil, mm.

Vår data visar att de som börjar använda Shoutaway tycker om konceptet och vår genomsnittliga "besöks-frekvens" är väldigt hög.

Problemet vi däremot står inför är att **vi har svårt att få downloads**.
Vi tror att lösningen på detta problem är att få våra befintliga användare att bjuda in nya användare - d.v.s. vi tror på att växa organiskt. *Vi vill helt enkelt att våra befintliga användare ska sprida Shoutaway vidare.*

Därför har vi några frågor vi skulle vilja ställa dig.



Page one of the preliminary survey.

1. Låt oss säga att du registrerar dig i Shoutaway för första gången. Hur skulle du reagera om appen sa "Please invite 5 friends to Shoutaway in order to continue"?

O Jag skulle inte tycka om det. Jag vill inte bli tvingad att bjuda in mina vänner i samband med registrering överhuvudtaget.

O Jag skulle göra det. Varför inte? Att bjuda in 5 vänner går ju fort

O Jag tycker 5 vänner är för mycket.
Jag skulle däremot kunna göra det om det var 1-2 vänner istället (valfritt).

2. Vilka av nedanstående "gåvor" skulle kunna få dig att bjuda in en eller flera vänner till Shoutaway? OBS! Du kan välja flera alternativ.

O "Bjud in en vän till Shoutaway och få nya premium funktioner till appen helt gratis. Tillgängligt i 24 timmar."

O 100 kronor i rabatt-kupong på Foodora (mat-app)

O 100 kronor i rabatt-kupong på Wolt (mat-app)

O 100 kronor i rabatt-kupong på Uber Eats (mat-app)

O 100 kronor i rabatt-kupong på en SF biobiljett

O 100 kronor i rabatt-kupong på Uber (taxi-app)

O En gratis kaffe på Starbucks

O En gratis kaffe på Espresso House

O Inget av ovanstående alternativ är tillräckligt värdefullt tyvärr för att jag ska orka bjuda in mina vänner till appen

Eget förslag_____

Page two of the preliminary survey.

3. Tänk dig nu att du har blivit inbjuden till Shoutaway av en vän via sms. Vilket av följande sms är bäst för att få dig att ladda ner Shoutaway?

O Shoutaway Premium is an invite-only app, and your friend XXX has invited you to join. Click on this link to join: http://premium.shoutaway/invite

Only available 30 min.

O So I've have added you on Shoutaway, but you have to accept!😈 Download here: https://appsto.re/se/_HRK9.i

O XXX has given you a FREE ticket to **SF-bio** (up to 100 kr). To claim your free gift, sign up with Shoutaway using this link: https://www.shoutaway.com/invite/gustaf15ue

O XXX has given you a FREE meal at **Foodora** (up to 100 kr). To claim your free gift, sign up with Shoutaway using this link: https://www.shoutaway.com/invite/gustaf15ue

O XXX has given you a FREE meal at **Wolt** (up to 100 kr). To claim your free gift, sign up with Shoutaway using this link: https://www.shoutaway.com/invite/gustaf15ue

O XXX has given you a FREE meal at **UberEats** (up to 100 kr). To claim your free gift, sign up with Shoutaway using this link: https://www.shoutaway.com/invite/gustaf15ue

O XXX has given you a FREE ride at **Uber** (up to 100 kr). To claim your free gift, sign up with Shoutaway using this link: https://www.shoutaway.com/invite/gustaf15ue

O Download Shoutaway and get a free coffee at **Starbucks**. Download here: https://appsto.re/se/_HRK9.i

O Download Shoutaway and get a free coffee at **Espresso House**. Download here: https://appsto.re/se/_HRK9.i

O Inget av ovanstående alternativ är tillräckligt värdefullt tyvärr för att jag ska ladda ner appen

Page three of the preliminary survey.