# High versus Low: The Effect of AURs and Brand Equity in Live Stream Shopping

A quantitative study on how high versus low AURs (i.e. the viewer- and like counts) affect viewers' evaluation of a live stream shopping broadcast, and how this effect differs when a high versus low equity brand is promoted

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# Abstract

Live Stream shopping is a rising phenomenon expected to transform retail worldwide. Despite the eminent need for practitioners to understand the best case use of live stream shopping, the subject is scarcely explored in academic research. The purpose of this thesis was firstly to investigate how high versus low viewer- and like counts, referred to as Aggregate User Representations (AURs), affect viewer's evaluation of a live stream shopping broadcast. Through a quantitative experimental study design, this thesis established that viewers had higher purchase intention when exposed to high versus low AURs. A possible mechanism behind the result is viewers' reliance on cognitive heuristic processing cued by AURs in a live stream shopping environment. In contrast, comparing viewers exposed to high versus low AURs, the study found no support for an effect on broadcaster credibility perceptions or attitudes. Secondly, the moderating role of brand equity was examined. For a high equity brand, the study confirmed a lack of effect on viewer's evaluations when comparing groups exposed to high versus low AURs. An explanation of the result is the advantage of pre- existing brand knowledge and associations in viewers' minds. Unexpectedly, no statistically significant results were found comparing viewers exposed to high versus low AURs, when a low equity brand was promoted. This study brings live stream shopping into limelight and contributes to academia. Moreover, practitioners are provided with actionable guidance to enhance their business results. Lastly, opportunities for future research have been suggested.

**Keywords:** E- commerce, Live stream shopping, Source credibility, Heuristics, Aggregate User Representations, Customer-based brand equity, Purchase intention

# Foreword

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# Table of Contents

1. Introduction	6
1.1 Live Stream Shopping	6
1.2 Expected Research Contribution	8
1.3 Purpose & Research Question	9
1.4 Disposition	9
2. Theoretical Framework & Hypothesis Development	10
2.1 Theoretical Framework	10
2.1.1 Learnings from Adjacent Fields	10
2.1.2 Attitudes & Purchase Intention	12
2.2 AURs: Viewer- and Like Counts	13
2.2.1 Introduction to Source Credibility	13
2.2.2 Source Credibility Evaluations Online	14
2.2.3 Credibility Heuristics & Cues	14
2.2.4 Hypothesis Development	16
2.3 Moderating Role of Brand Equity	17
2.3.1 Customer-Based Brand Equity	17
2.3.2 Marketing Advantages of High Equity Brands	18
2.3.3 Hypothesis Development	20
3. Methodology	22
3.1 Choice of Research Subject	22
3.2 Choice of Research Object	22
3.3 Research Approach & Method	23
3.4 Pre- Study	24
3.4.1 Pre- Study & Survey Design	24
3.4.2 Pre- Study Measures	25
3.4.3 Pre- Study Sampling & Data Collection	26
3.4.3 Pre- Study Result	26
3.5 Main Study	27
3.5.1 Study Design	27
3.5.2 Survey Design	30
3.5.3 Measures	31
3.5.3.1 Dependent Variables	31
3.5.3.3 Demographic Variables	32
3.5.3.4 Manipulation Checks	33
3.5.4 Sampling & Data Collection	33
3.5.5 Assessment of Validity & Reliability	34
3.5.5.1 Reliability	34
3.5.5.2 Validity	35

4. Empirical Evidence	38
4.1 Correlations	38
4.2 AURs: Viewer- & Like Counts	38
4.2.1 Systematic Differences	38
4.2.2 Hypothesis Testing	39
4.3 Moderating Role of Brand Equity	40
4.3.1 Systematic Differences	40
4.3.2 Hypothesis Testing	40
5. Conclusions & Discussion	41
5.1 AURs: Viewer- & Like Counts	41
5.2 Moderating Role of Brand Equity	44
6. Practical Implications	46
7. Limitations & Suggestions for Future Research	47
9. References	49
9. Appendix	64
Appendix 1: Definition of Customer-Based Brand Equity	64
Appendix 2: Pre- Study Survey	65
Appendix 3: Main- Study Survey	69
Appendix 4: Live Stream Shopping Broadcasts	78

# 1. Introduction

# 1.1 Live Stream Shopping

Live stream shopping, also known as shoppable live streaming, live video commerce, and livestreaming shopping (Vasefi, 2020) is defined as "e-commerce integrated with real time social interaction" (Cai & Wohn, 2019). This new way of shopping has been booming in China, aggregated by trends such as online shopping, social isolation, and growing demand for entertainment and "real life connection" during the COVID-19 outbreak (George, 2021; Magloff, 2020). There are hundreds of streaming platforms in China including pure live stream players such as Yizhibo, Meipai, Huajiao Live, Kuaishou, Inke as well as Alibaba's ecommerce sites Tmall and Taobao to mention a few (Vasefi, 2020). To justify its magnitude, a single broadcast on Tmall attracted more than 13 million viewers and 150,000 celebrity endorsed perfume bottles were sold in minutes (Magloff, 2020; George, 2021). In terms of sales, Taobao alone is estimated to generate more than 500 million sales transactions in 2021 (Magloff, 2020). According to Statista, the most commonly purchased product category among Chinese shoppers in 2020 were clothing and apparel (36.49%), followed by cosmetics (36.14%), food (35.79%), and daily supplies (30.18%) (Ma, 2020). Increasingly, global brands such as Burberry, Carolina Herrera, and Monki are using live stream shopping to sell and advertise their products (Chitrakorn, 2019). Onwards, analysts forecast projected annual revenue of 1.2 trillion USD by 2021 worldwide (Ma, 2021).

As a first step of the live stream shopping process, individual sellers such as brands, influencers, retailers and even individual shopping agents select their own product to promote. Next, the seller broadcasts their carefully curated products in detail while discounts and promotions flash across the viewers' screen. During the broadcast, the viewers may ask real-time questions to the broadcaster about the shown product's functionalities, pricing, and other shopping details such as shipping and return. Finally, when the viewer is ready to purchase, they can click on an embedded link provided in the video to check out and get their orders delivered. In other words, the key benefit of live stream shopping is that the viewers "never have to leave the app" to make purchases (Vasefi, 2020).

Live stream shopping can take place on (1) Traditional social media networking (SNS) platforms with integrated live stream shopping features such as Instagram, Facebook, and Douyin also known as TikTok, (2) E-commerce websites such as Amazon, Shopify, CommentSold, and Taobao with specialized video sharing features embedded such as Bambuser, and (3) Pure live stream shopping dedicated video sharing platforms such as Shoploop developed by Google, Kuaishou, and Yizhibo (Sun et al, 2020; Liu, 2021).

Explaining its proliferation across various platforms, there are two underlying factors. First, a prominent feature of live stream shopping is its user engagement mechanisms including "product interactivity, communication immediacy, and peer cues" associated with the platform that could improve product evaluation and willingness to explore more products (Wang & Wu, 2019; Sun et al, 2020). Secondly, it can be said that the interactive features of live stream shopping platforms provide accessible "entertainment, social, and commercial activities" (Hilvert-Bruce et al, 2018; Xu et al; 2020) which extends the sole commercial activity of e-commerce. In live stream shopping, the streamer/broadcaster reveals their faces, personalities (i.e., social presence) and brings buyer-seller interaction and selling techniques used offline back to the online world (Wongkitrungrueng & Assarut, 2018) to build social ties and engagement with the audience (Wang & Li, 2020). This increases "trust and transparency" in direct consumer purchase behaviour that e-commerce has traditionally lacked (Sun et al, 2020; Burns, 2020; Chitrakorn, 2019).

Live stream shopping has not been "fully explored" (Sun et al, 2020). Furthermore, a literature review reveals that the majority of studies on the topic has been conducted in China. To get an overview, previous research has examined predominantly live stream shopping platform's user functionalities (Vieira et al, 2013), streamer/broadcaster's characteristics (Guo et al, 2019; Sun et al, 2020), and consumer related outcomes such as consumer loyalty in live stream shopping (Ma, 2021). Furthermore, another topic of interest is the study of human behaviour on a live stream shopping platform (Diwanji et al, 2020) such as consumer engagements and interactions with sellers (Li et al, 2018; Wongkitrungrueng & Assarut, 2018; Sun et al, 2020), intrinsic motivation of buyer engagement (Cai & Wohn, 2019), and interactivity features that enhance social presence of others (Wang et al, 2017; Zhou et al, 2016; Su et al, 2020). Notably, Wang & Wu conceptualized user engagement mechanisms of "product interactivity, communication immediacy, and peer cues" to improve user product evaluation and willingness to explore more products (2019). In turn, it positively impacted

live stream shopping platform users' attitudes and intention to shop (Wang & Wu, 2019). Moreover, Park & Lin explored the role of Internet celebrities in inducing viewer's source "trustworthiness, hedonic attitude, and self-product fit" which increased purchase intention (2020). Most recently, an increasing number of studies such as Xu et al. (2021) and Ko & Chen (2020) explore the role of emotions, parasocial interactions, and social interactivity cues on live stream shopping platforms. Conclusively, the current research provides many opportunities for further exploration within the live stream shopping domain.

# 1.2 Expected Research Contribution

Through conduction of a quantitative study, this research aims to contribute to the field of live stream shopping academically. To the authors knowledge, no research has been conducted on Swedish live stream shopping viewers. In addition, as a result of academia lagging behind, what remains to be understood is how high versus low viewer- and like counts affect viewers evaluation of a live stream shopping broadcast. In addition, how this effect differs when a brand having high versus low equity is promoted. In this study, the viewer- and like counts displayed in a live stream shopping broadcast will be referred to as Aggregate User Representations (AURs) which is computer- generated descriptive statistics representing accumulations of users' site- related behaviour (Walther & Jang, 2012). Investigating the effect of AURs on viewers is relevant considering that research in adjacent fields has shown that they impact source credibility perceptions (Weissmuller et al., 2020; Jin & Phua, 2014; Fu & Sim, 2011) and in turn attitudes and purchase intentions. (Lafferty & Goldsmith, 1999; MacKenzie & Lutz, 1989; Sallam & Algammash, 2016). Cognitive heuristic processing cued by AURs, as an evidence of social social proof, can be argued to be the underlying mechanism (Cialdini, 2001; Sundar, 2008; Metzger, Flanigan & Medders, 2010). Likewise, there is a strong indication from research that the equity of the promoted brand will moderate this effect (Hoeffler & Keller, 2003).

One can further argue that this research will be of benefit to practitioners. Brand owners need to stay informed and be aware of the changing online ecosystem (Burns, 2020) to capitalize on new technology's rapid growth. Brands must act quickly and purposefully (Larson, 2021) to engage their audiences and create immersive experiences that go beyond physical and online retailing (Chowdhary, 2020). Bringing the importance of live stream shopping into limelight will enable brands to understand the phenomenon's relevance, opening up doors of

unprecedented opportunities and future brand growth (Burns, 2020; Larson, 2021). This study is expected to improve retailers, brands, other sellers, and live stream shopping platform owners- and user experience designers' understanding of the relevant selection criterias for a successful live stream shopping broadcast. This is especially beneficial as practitioners have limited budgets allocated for its marketing strategies.

# 1.3 Purpose & Research Question

The purpose of this study is to examine how high versus low AURs such as the viewer- and like count affect viewers' evaluation of a live stream shopping broadcast. Second, this study will investigate whether this effect differs when the promoted brand has high versus low equity. Accordingly, the research question consist of two parts:

(1) How does high versus low AURs affect the evaluation of a live stream shopping broadcast? (2) And does this effect differ between high and low equity brands?

# 1.4 Disposition

Firstly, the theoretical framework is presented and hypotheses derived thereof. This is followed by a detailed description of the methodology and subsequently, the empirical evidence is presented. The discussion comes next, culminating in a summary of conclusions including implications for academics and practitioners. Lastly, the study's limitations along with suggestions for future research are presented followed by an appendix.

# 2. Theoretical Framework & Hypothesis Development

To begin with, the theoretical framework on which this study builds on is introduced. Next, learnings from adjacent fields are presented and the variables in focus as well as their links are elaborated on in detail. Furthermore, theories underlying the study are presented and hypotheses are deduced based on previous empirical evidence from several research areas.

# 2.1 Theoretical Framework

Communications' research has examined the impact of credibility on attitude towards the advertisement, attitude towards the brand, and purchase intention (Goldsmith, Lafferty & Newell, 2000) which constitutes "three of the principal outcome variables in the studies of advertising effectiveness" (Lafferty & Goldsmith, 1999). Through reliance on learnings from adjacent fields and existing theories, this thesis will firstly examine how AURs such as the viewer- and like counts in a live stream shopping broadcast impact perceived credibility of the broadcaster (i.e. source), and consequently attitude towards the broadcast, attitude towards the brand, and purchase intention. Secondly, the moderating role of brand equity will be investigated. Based on existing research, a theoretical framework on which this study is built upon has been developed (See Figure 1).

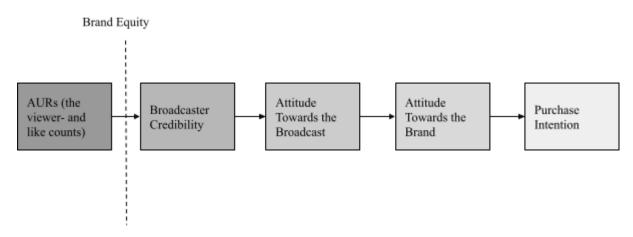


Figure 1: Theoretical framework

# 2.1.1 Learnings from Adjacent Fields

One of the adjacent fields to live stream shopping, a form of social commerce, is influencer marketing that has similar features such as a proximity to digital consumers, product promotion, and collaboration with brands. In the digital influencer marketing environment, research has been conducted on the role AURs such as like-, friend-, and follower counts.

In one stream of research in influencer marketing, many studies support the "more is better" argument whereby influencers having high compared to low follower counts are more effective for promotional purposes (De Veirman et al, 2017; Kusumasondjaja & Tjiptono, 2019). Along the same line, high AURs can directly link people's attention to a content (De Vries et al, 2012). Specifically, "likes" has been found to influence perceived popularity, opinion leadership (De Veirman et al, 2017) and foster a sense of belonging with the community (Ko & Chen, 2020). AURs have also been found to impact credibility assessments. For instance, likeability has been found to be determined by the amount of likes which sequentially enhanced credibility perceptions (Hill et al, 2017; Vrontis et al, 2021). Moreover, Weissmuller et al., (2020) found that the follower count positively impacted the credibility evaluation of social media influencer endorsement on Instagram. Somewhat contradictory to the "more is better" argument, influencers having a low compared to high follower counts have been found to be more effective communicators as they foster closer interpersonal relationships resulting in "higher engagement rates" (Dhanik, 2016; Chen, 2017; Kay et al, 2020).

Moreover, there are other fields of research that have studied AURs. Especially, literature shows strong support for a positive link between AURs and credibility evaluations. For instance, Borah & Xiao (2018) investigated the impact of the like count on Facebook posts (high versus low) on credibility perception of health- related information. A central finding was that a high compared to low like count increased credibility assessments. On the same note, Jin & Phua (2014) reported that a higher follower count increased source credibility on Twitter. However, Westerman, Spence & Van Der Heide (2012) found an inverted U relationship between the follower count on Twitter and source credibility perceptions, whereby a too high or too low count resulted in lower judgements of credibility. As in the field of influencer marketing, findings are somewhat contradictory in literature. For instance, in the study conducted by Borah & Xiao (2018), no main effect of the like count on credibility judgement was found.

Taken together, these studies highlight the role of AURs in making source credibility assessment. Consequently, the first link in the theoretical framework, between AURs such as the viewer and- like counts in a live stream shopping broadcast and broadcaster credibility,

finds support in literature. To clarify, the source is for the purpose of this study the live stream shopping broadcaster. As established, there is substantial evidence in research that high compared to low AURs lead to higher credibility assessments. The underlying mechanisms for how the AURs can be expected to impact viewers' credibility perceptions of the broadcaster will be elaborated on in section 2.2.

In addition, another learning from the adjacent influencer marketing literature is the impact of brand equity on customer related outcomes. For instance, one study explored the effects of an influencer post on endorsed brands and its perception distinguishing between unknown, weak, and strong brands (Pitz et al, 2018). The study revealed that brand experience improved to a larger extent when a weak brand compared to a strong one was shown in the influencer post (Pitz et al, 2018). As customer outcome variables are impacted by different types of brands, the moderating impact of brand equity on the effect of viewers being exposed to high versus low AURs in a live stream shopping broadcast is investigated in this thesis (See Section 2.3).

### 2.1.2 Attitudes & Purchase Intention

Attitude towards advertising is the second dependent variable in the theoretical framework (See Figure 1) and is defined as a "predisposition to respond in a favourable or unfavourable manner to a particular commercial stimulus during a particular exposure occasion" (Lutz et al., 1986). In this research, the particular commercial stimulus refers to a live stream shopping broadcast. Lafferty & Goldsmith (1999) investigated the impact of high/low endorser credibility and high/low corporate credibility on attitude towards the advertisement. A direct effect on this dependent variable was demonstrated whereby attitude towards the advertisement was significantly higher when source credibility was high compared to low (Lafferty & Goldsmith, 1999).

Establishing how attitude towards the broadcast relates to attitude towards the brand, the Affect Transfer Hypothesis (ATH) is sufficient to enhance the understanding of consumers' response to digital advertising (Stewart et al., 2018). ATH elucidates the way in which perceptions of an advertisement might influence attitudes towards the advertisement and in turn attitudes towards a brand (Mitchell & Olsson, 1981). Specifically, brand attitude is the "individual's internal evaluation of the brand" (Faircloth, Capella & Alford, 2001). Machelit,

Allen & Madden (1993) argue that a link between attitude towards the advertisement and the brand have been established in much research. To elaborate, studies have found that attitude towards the advertisement is positively related to attitude towards the advertised brand (MacKenzie & Lutz, 1989; Gardner, 1985).

As have been previously stated, research typically presumes a simple causal sequence where attitude towards the advertisement affects brand attitude, which in turn impacts purchase intention (Goldsmith, Lafferty & Newell, 2000). An intention is a "proposition that connects the individual with a future behavioural act" (Söderlund, 2010) such as a purchase. Put in a live stream shopping context for the purpose of this study, purchase intention describes the extent to which the viewer intends to purchase the product promoted in the live stream shopping broadcast. Spears & Singh (2004) highlight the importance of examining the link between attitude towards the brand and purchase intention, and research has found that attitude towards the brand is significantly positively related to purchase intention (Sallam & Algammash, 2016; Abazari, Ghasemmi & Vosti, 2014; Chin, Isa & Alodin, 2020).

# 2.2 AURs: Viewer- and Like Counts

# 2.2.1 Introduction to Source Credibility

Credibility is classically ascertained by considering the source of information, which is probably reliable if the attributed source is a credible person or organization (Sundar, 2008). By definition, source credibility is a term commonly used to imply "a communicator's positive characteristics that affect the receiver's acceptance of a message" (Ohanian, 1990) and a source is referred to as "any place from which something comes, arises or is obtained" (Dictionary, 2021).

In this paper, the source is a live stream shopping broadcaster and credibility will be investigated applying the theory of source credibility (Hovland & Weiss, 1951) which emerged as a major theoretical paradigm explaining communication effectiveness (Deepa, Debasis & Himadri, 2021). According to the theory (Hovland & Weiss, 1951), source credibility is multidimensional and commonly defined as consisting of expertness and trustworthiness (Pornpitakpan, 2004 p.244; Colliander & Marder, 2017) as interpreted by the receiver (Metzger & Flanagin, 2013; Hovland, Janis & Kelley, 1953). Expertise signals "the

extent to which a communicator is perceived to be a source of valid assertions" and trustworthiness refers to "the degree of consumer confidence in the communicator's intent to communicate the assertions he considers most valid" (Hovland, Janis & Kelley, 1953). The main effect studies of source credibility on persuasion indicate the superiority of a high-credibility source over a low- credibility one (Pornpitakpan, 2004, p.247).

### 2.2.2 Source Credibility Evaluations Online

The digital environment has increased the complexity of assessing whether a source is credible or not (Sundar, 2008). To elaborate, digital media presents a dual change: "(1) the overload of information, entertainment, and other offerings that constantly need organizing and (2) the lack of assurance of any uniformity in content quality, which necessitates a continual monitoring of credibility on the part of the users" (Sundar, 2008). Furthermore, the recent changes in the media landscape suggest a compelling view of internet use and users as "vigorously social" (Metzger, Flanagin & Medders, 2010). This is evidenced by individuals using social and group- based strategies for assessing credibility online (Metzger, Flanagin & Medders, 2010).

Live stream shopping platforms offer features to view, communicate with broadcasters, add purchase items to cart, enter payment, and delivery solutions - all features combined on one screen. According to research, humans do not often have the cognitive capacity or time to evaluate information systematically in information rich environments (Lin, Spence & Lachlan, 2016; Metzger, Flanagin & Medders, 2010; Metzger & Flanagin, 2013; Walther & Jang, 2012). Due to technological affordance and threat of information overload, individuals rely on cues and engage in cognitive heuristic processing (Lin, Spence & Lachlan, 2016; Metzger, Flanagin & Medders, 2010; Metzger & Flanagin, 2013; Walther & Jang, 2012). This implies that effortless information judgments are triggered prior to more systematic, cognitive analysis. By definition, a heuristic is simply "a judgement rule that can result in estimates of content quality" while a cue is referred to as "anything in the context of digital media use that might serve as a trigger for the operation of a heuristic" (Sundar, 2008).

### 2.2.3 Credibility Heuristics & Cues

Technological advancements have simplified the ability of digital media to dynamically collect and display information about the activity of others (Sundar, 2008). According to

Sundar (2008), the online environment can provide users with system- generated content which in turn are used to make credibility judgments. Relatedly, Walther & Jang (2012) refer to computer- generated descriptive statistics representing accumulations of users' site- related behaviour as Aggregate User Representations (AURs). AURs typically appear as ratios or counts and the authors distinguish between two types: 1) Deliberate, and 2) Incidental. Deliberate AURs display the user's "collective response to some request for overt evaluative input" (Walther & Jang, 2012). A live stream shopping function that allows users to express that they enjoy or support certain content is the like button. Likes is an indicator of popularity and a high like count conveys approval by other users (Yuri, Jungkeun & Yung 2019; De Vries et al., 2012). By contrast, incidental AURs reflect "information extracted by a computational system from records of users' behaviours that were not enacted with the purpose of signaling anything to others" (Walther & Jang, 2012) such as the viewer count displayed in a live stream shopping broadcast. The authors argue that information conveyed by AURs is robust for impression formation and evaluations in online settings as they reflect collections of user's behaviour (Walther & Jang, 2012).

A useful framework to explain perceptions of source credibility based on heuristic strategies is the MAIN model (Edwards et al., 2013). The model discusses the technological affordance which allows for heuristic processing of cues in an online setting to make judgements about the credibility of a source (Sundar, 2008). Because internet users minimize cognitive efforts and the time to process information, AURs can trigger cognitive heuristics, in turn impacting the credibility evaluation of a source (Walther & Jang, 2012; Sundar, 2008; Metzger, Flanigan & Medders, 2010).

A common heuristic that people rely on is the *bandwagon heuristic*. It implies that individuals tend to assume that if many others think something is correct or good, they are likely to as well. This heuristic is powerful in influencing credibility given that it implies collective endorsement and popularity of the underlying content (Sundar, 2008). Likely based on the bandwagon heuristic is the endorsement heuristic which suggests that "people are inclined to believe information and sources if others also do so" without much consideration of the source itself (Metzger, Flanagin & Medders, 2010).

Premised on the notion that credibility can be established from other's actions or beliefs, the endorsement heuristic is based on the psychological principle of social proof (Metzger,

Flanigan & Medders, 2010; Cialdini, 2001). According to the principle, people perceive and register what others are doing when deciding how to act in a situation and what to believe. This is especially true under conditions of uncertainty and when the proof is provided by many others (Cialdini, 2001). As stated by Cialdini (2001), social proof is "a powerful weapon to influence the tendency of a person to comply with a request". To put in context, Fu & Sim (2011) examined a video site and detected a bandwagon effect on online videos' viewership whereby videos that showed a large viewer count continued to capture more views than others.

### 2.2.4 Hypothesis Development

Specific to credibility inferences, a livestream shopping broadcast provides at least two relevant pieces of information about the broadcaster (i.e. source): the viewer- and like counts. In overcrowded environments such as that of live stream shopping broadcasts, viewers can be expected to rely on cognitive heuristic processing cued by these AURs. Reflecting the activity of others, the AURs can impact viewer's impression formation and their credibility evaluations of the broadcaster. To elaborate, two heuristics that are triggered by AURs are the bandwagon- and endorsement heuristics underpinned by the psychological principle of social proof, serving as a signal of credibility. When others are viewing and endorsing a live stream shopping broadcast, this can serve as an indication that the broadcaster is perceived as credible. According to social proof, the viewer of the live stream shopping broadcast will then also evaluate the broadcaster as credible. This can be expected to be the case especially when the AURs are high. Adding to this, there is strong support in existing research that high compared to low AURs lead to higher credibility evaluations. Taken together, the following can be hypothesized:

**H1**: A broadcaster promoting a product in a live stream shopping broadcast with high AURs, will be perceived as higher in credibility than when the AURs are low.

As indicated above, it is expected that high AURs will lead to higher broadcaster credibility perception compared to when the AURs are low. Given that attitude towards the advertisement has shown to be higher when source credibility is high compared to low (Lafferty & Goldsmith, 1999), the following can be hypothesized:

**H2**: Viewers of a live stream shopping broadcast will have a better attitude towards the broadcast when exposed to high versus low AURs.

Given H2 and research showing that better attitude towards the advertisement lead to better attitude towards the brand (MacKenzie & Lutz, 1989; Gardner, 1985), the following can be hypothesized:

**H3**: Viewers of a live stream shopping broadcast will have a better attitude towards the brand when exposed to high versus low AURs.

Given H3 and that previous research has found that better attitude towards the brand lead to higher purchase intention (Sallam & Algammash, 2016; Abazari, Ghasemmi & Vosta 2014; Chin, Isa & Alodin, 2020), the following can be hypothesized:

**H4**: Viewers of a live stream shopping broadcast will have higher purchase intention when exposed to high versus low AURs.

# 2.3 Moderating Role of Brand Equity

Despite AURs, live stream shopping viewers are also exposed to brand elements such as brand identity cues of logo and brand name (Boerman et al, 2011). The above mentioned hypotheses do not account for the moderating role of brand equity which is worth investigating.

### 2.3.1 Customer-Based Brand Equity

One of the primary goals of firms is to build and strengthen their brand equity to influence consumer preferences and choices (Ailawadi, Lehmann & Neslin, 2003). A brand can be defined as "a name, term, sign, symbol, or design, or combination of them" (Kotler, 1991; Keller, 1993). The brand is intended to "identify the goods and services of one seller and to differentiate them from those of competitors" (Kotler, 1991).

Studying the effect of different types of brands, researchers have used a number of proxies for 'strong' or 'high equity' brands. In general these have been conceptualised via familiarity (e.g. prior knowledge, ownership, or exposure to the brand) or through outcome- oriented

measures (e.g. market share leader, dominant brand, or high- quality brand) (Hoeffler & Keller, 2003). To the contrary, low equity brands have been operationalised as the opposite to high equity brands or via fictitious brands (Hoeffler & Keller, 2003). For the purpose of this study, brand equity will be examined from a customer rather than financial perspective (Aaker, 1991; Keller, 1993).

There are a number of definitions of customer-based brand equity (See Appendix 1). A common agreement in marketing research is that customer-based brand equity is identified as "an added value" to a consumer's product selection (Farquhar et al, 1991) and relies on "brand knowledge structures in the mind of the consumers" as the source of foundation (Hoeffler & Keller, 2003; Campbell & Keller, 2003). One of the most well- known customer-based brand equity conceptualisation is presented by Aaker (1991). The author argues that brand equity provides value to its customers by "enhancing their interpretations, processing information, and confidence in purchase" (Aaker, 1991). In addition, Keller (1991) argues that enhancing brand equity enables "increased consumer information search, and improved marketing communication effectiveness".

### 2.3.2 Marketing Advantages of High Equity Brands

Brands with high equity have marketing advantages over brands with low equity through its pre-established brand knowledge and associations (Hoeffler & Keller, 2003). According to Hoeffler & Keller (2003), greater brand knowledge can "lead to fundamental differences in consumer behaviour" and "produce differential responses to specific marketing activities by consumers depending on the nature of the brand involved".

Brand knowledge can be said to be created and put to use by customers through different stages of consumer behaviour; attention and learning, interpretation and evaluation, and choice (Hoeffler & Keller, 2003). In comparison to unknown brands, strong brands have a memory- encoding and storage advantage in building brand awareness and image (Hoeffler & Keller, 2003). Relatedly, familiar brands are more likely to be in consumers' consideration sets (Simonson, Huber & Payne, 1988) in comparison to unfamiliar ones. Furthermore, Kent & Allen (1994) and Tellis (1988) argue that familiar brands are selectively given more exposure, attention, comprehension and retention by consumers. Related to the interpretation and evaluation stages, the losses of switching away from a known brand is regarded as bigger

than the potential gains from using a lesser- known brand (Hoeffler & Keller, 2003). In addition, a well- developed knowledge increases consumer confidence, which in turn facilitates decision making (Hoeffler & Keller, 2003; Dacin & Smith, 1994). With regard to choice, the impact of familiarity on consumer choice is one of the most effective mechanisms that provide advantages to strong brands (Hoeffler & Keller, 2003).

To enjoy the marketing advantages of a strong brand, a brand should aim to fulfill Aaker's first four pillars of customer-based brand equity including: "brand awareness, brand associations, perceived quality, brand loyalty, and other conceptualized assets" (Aaker, 1996; Aaker, 1991; Yoo & Donthu, 2001).

Brand awareness refers to the strength of brand presence in the consumer's mind (Spry et al, 2011) and consists of brand recognition, brand recall, and top of mind awareness (Aaker, 1991). Brand awareness acts as a necessary anchor to creating specific associations to the brand and the product, provides a sense of familiarity from a customer view, and assists brand recall (Aaker, 1991). To elaborate on the familiarity aspect, familiar brands hold advantage over unfamiliar brands as familiar brands evoke previous knowledge regarding the brand that consumer has stored in their memory (Campbell & Keller, 2003). Hence, indicating that familiar brands have higher retention and enjoy higher effectiveness of advertisement than an unfamiliar brand.

On the other hand, brand associations are defined as "anything linked in memory to a brand" and is closely connected to brand image which is a set of brand associations that impact purchases and brand loyalty (Aaker, 1991). Memory plays an important role in the consumer's perception process where only selected information is attended to and passed on for further interpretation (Kuisma et al, 2010; Kong et al, 2018). A model known as the associative network memory model is frequently used in marketing to explain brand equity associations (Aaker, 1991; Keller, 1993). The model explains that human memory is made of associative networks (Anderson, 1976; Wyer & Srull, 1986; Pappu & Quester, 2006) which consists of nodes that store information and which are linked to one another (Keller, 1993). Activating one node in memory can lead to activation of other nodes (Collins & Loftus, 1975) which depends on the strength of association between them (Keller, 1993). According to the model, a strong brand is likely to be strongly associated with other nodes in memory of the consumer who would have easier brand recall and recognition. Having a strong

favourable, and unique association is important for a brand to receive an overall higher preference for its products than a weaker associated brand (Campbell & Keller, 2003). In addition, a strong brand with already established brand associations requires "less extensive and more conformational based" knowledge processing in comparison to a less well- known brand requiring more extensive information processing (Aaker, 1991).

Brand loyalty can be defined as the level of "attachment a customer has to a brand" in face of competitors offerings (Aaker, 1991) and is a main precedent to perceived quality (Biedenbach & Marell, 2010). Perceived quality is "customer's perception of the overall quality or superiority of the product in comparison to its alternatives" and has been found to have impact on brand image (Ming et al, 2011; Chen & Tseng, 2010), and indicate positive impact on purchase intention (Tsiotsou, 2006; Alhaddad, 2015). Brands with high brand equity will not only benefit from increased quality perception of its products but also act as a credibility cue. To elaborate, brands as marketing signals can improve customer perception in brand attitude level and increase confidence in brand's claim (Erdem & Swait, 1998).

### 2.3.3 Hypothesis Development

In a live stream shopping environment, AURs are prevalent as well as brand elements including logo and brand name. As has been established, high equity brands have a number of marketing advantages over low equity brands because of pre- established knowledge and associations. Hence, when the promoted brand has high equity, the importance of relying on AURs as a cue can be expected diminished. Vice versa, it can be expected that viewers rely a great extent on AURs, reflecting the activity of others, when a brand with low equity is being promoted. This could be a result of low pre-established brand knowledge and associations. Consequently, the following hypotheses with the moderating role of brand equity can be formed:

**H5**: Exposure to high versus low AURs in a live stream shopping broadcast will have an effect on broadcaster credibility perceptions when a low equity brand is promoted but not when a high equity brand is promoted.

**H6**: Exposure to high versus low AURs in a live stream shopping broadcast will have an effect on attitude towards the broadcast when a low equity brand is promoted but

not when a high equity brand is promoted.

**H7**: Exposure to high versus low AURs in a live stream shopping broadcast will have an effect on attitude towards the brand when a low equity brand is promoted but not when a high equity brand is promoted.

**H8**: Exposure to high versus low AURs in a live stream shopping broadcast will have an effect on purchase intention when a low equity brand is promoted but not when a high equity brand is promoted.

# 3. Methodology

In this section, the method used for the study is outlined. To begin with, the choice of the research subject and research object is argued. The pre- study design, method and results are presented next. This is followed by an explanation of the research approach and method for the main study. Additionally, the main- study design, survey design, measures, sampling, and data collection are presented. Lastly, the validity and reliability of the research are discussed.

# 3.1 Choice of Research Subject

Live stream shopping is a rapidly growing phenomena of shopping worldwide (George, 2021) and is gaining traction in Sweden with players such as Bambuser. With the acceleration of online shopping and retailers and brands' increased use of SNS to reach customers (Arora et al., 2019), finding ways to connect with digital shoppers is becoming ever more important. To the author's knowledge, there is a lack of study in the realm of live stream shopping as well as research experiments on Swedish viewers. Hence, this subject is of interest to academicians. To facilitate practitioners in finding effective objects to maximize their spend on marketing, this study calls attention to the understated and scarcely explored phenomenon of live stream shopping.

# 3.2 Choice of Research Object

The social media landscape has outdated traditional credibility assessments (Metzger, Flanagin & Medders, 2010) which necessitates a continual monitoring of credibility on part of the users (Sundar, 2008). To evaluate a source's credibility online, people have been shown to rely on heuristic cognitive processing cued by AURs (Sundar, 2008; Walther & Jang (2012) adhering to the psychological principle of social proof (Sundar, 2008; Metzger, Flanigan & Medders, 2010; Cialdini, 2001). In live stream shopping, a key feature is the real time interactivity between shoppers which distinguishes this new way of selling and advertising products from other more traditional methods. The viewer- and like counts are two AURs transparently displaying the activity of others. While having gained traction in adjacent fields, there exists to the authors knowledge, no research on how AURs such as the viewer- and like counts in a live stream shopping broadcast impact viewers' broadcaster credibility perceptions. This study is expected to contribute academically by filling a research

gap. As higher source credibility has shown to result in better attitudes and higher purchase intention, this object is worth exploring also from a practitioner point of view.

In addition to investigating the impact of high versus low AURs on viewers' broadcaster credibility perceptions, attitudes, and purchase intention; the moderating role of brand equity will be examined to further fill the previously mentioned research gap. The equity of the brand is a popular object of research that has been shown to influence people's perception of their environment (Hoeffler & Keller, 2003). This study explores how viewers' evaluation of a live stream shopping broadcast is impacted by looking at the effect of high versus low AURs when distinguishing between a high and low equity brand being promoted. The findings can be expected to help practitioners such as platform owners and designers, and sellers who plan to use, or currently use, live stream shopping to make more informed choices. For instance, by knowing what brand to promote under which circumstance will allow them to maximize spending on their marketing- and selling activities.

# 3.3 Research Approach & Method

The research strategy, design, and method have been chosen based on the research question investigated (Bryman & Bell 2011 p.35). For this thesis, a quantitative research strategy was employed (Bryman & Bell, 2011 p.150). It is especially suitable for testing theories, hypotheses and to explain a phenomenon (Bryman & Bell, 2011 p.27). Given the wealth of existing theories in parallel fields to live stream shopping, the choice of research strategy can be justified. Moreover, employing this approach enabled this study's authors to delineate fine differences between people in terms of the characteristics measured, and precise estimates of the degree of relationship between concepts could be provided (Bryman & Bell, 2011 p.154). Hence, the research strategy corresponds with the purpose of this study.

This study employed a predominantly deductive research approach, representing the most common view of the nature of the relationship between theory and research (Bryman & Bell, 2011 p.11). This approach was suitable as it is time efficient and highly associated with the quantitative research strategy (Bryman & Bell, 2011 p.151) making it in line with the research method chosen.

# 3.4 Pre-Study

# 3.4.1 Pre- Study & Survey Design

A manipulation check was performed prior to the main experiment (Söderlund, 2018 p. 87) through the distribution of a quantitative pre- study. It was conducted with the purpose of asking the participants about whether the treatment included the "properties" it was supposed to (Söderlund, 2018 p. 88). For the purpose of this study, the authors wanted to ensure that there was a significant difference in brand equity between the brands to be included in the different treatment versions for the main experiment.

For the pre- study, Nike was chosen to represent the high brand equity treatment as it is the world's leading apparel brand (Statista, 2021). For the other treatment, a fictitious brand name, Enik, and a logo were produced considering that weak brands often have been operationalized via fictitious brands (Hoeffler & Keller, 2003).

A survey was created in the online tool, Qualtrics, and an "experimental design" was employed for the pre- study (Söderlund, 2018 p.12-14). Firstly, the participants were informed about the purpose of the study, that their answers were to be anonymous and treated with confidentiality, and that they could withdraw from participation if desired. Additionally, the authors' contact details were provided and the participants were asked to intentionally give permission to have their responses recorded. On the next page, each participant was randomly exposed to one of the two brand logos: Nike or Enik (See Image 1).

Image 1: The brand logos used in the pre-study



After having seen its respective brand logo, the participants were asked to answer a number of related questions (See Appendix 2).

### 3.4.2 Pre- Study Measures

The brand familiarity construct consisted of three items and answers were indicated on a 7point likert scale: "Regarding the brand, are you unfamiliar/familiar?" (1 = Unfamiliar, 7 = Familiar), "Regarding the brand, are you inexperienced/experienced?" (1 = Inexperienced, 7 = Experienced), "Regarding the brand, are you not knowledgeable/knowledgeable?" (1 = Not knowledgeable, 7 = Knowledgeable). These questions were developed by Kent & Allen (1994). The Cronbach's alpha for this construct was 0.960, indicating that the questions could be computed into an index.

The brand awareness/associations, loyalty, and quality perception constructs have been developed and validated by Yoo & Donthu (2001). Brand awareness/associations were measured with five items: "I can recognize the brand among other competing brands", "I am aware of the brand", "Some characteristics of the brand come to my mind quickly", "I can quickly recall the symbol or logo of the brand", and lastly "I have difficulty in imagining the brand in my mind". The respondents were asked to what extent they agreed to these statements indicating their answers on a seven- point likert- scale. The end- points on the scales related to the first four statements were "Strongly disagree" (1) and "Strongly agree" (7), but reversed for the last one. The questions relating to this construct were computed into an index due to a Cronbach's alpha of 0.959.

The seven point likert scale mentioned in the previous paragraph was used also for the brand loyalty and perceived quality constructs. Brand loyalty was measured with these three items: "I consider myself to be loyal to the brand", "The brand would be my first choice", and "I will not buy other brands if this brand is available at the store". Quality perception was measured with two items: "The likely quality of the brand is extremely high", and "The likelihood that the brand would be functional is very high". The Cronbach's alpha for these constructs were 0.842 and 0.931 respectively, hence, indices were calculated.

Lastly, two sets of demographic questions were asked to examine the composition of the sample (Söderlund, 2018 p.124-125). Respondents were asked "What is your gender?" with the response alternatives "Female", "Male" and "Other". In addition they were asked to answer the question "What is your age?" writing their age in a text entry.

### 3.4.3 Pre- Study Sampling & Data Collection

Responses were recorded between 10th - 17th of March 2021 and answered by individuals in the author's network through convenience sampling (Bryman & Bell, 2011 p. 190) which will be further discussed in section (3.5.4).

A total of 27 respondents participated in the study. The sample consisted of 55.6% females and 44.4% males in the age range of 19-52 (See Table 2). Although the gender and age distribution does not represent the Swedish population, it does resemble the patterns of e-commerce shoppers. These shoppers include predominantly women and younger individuals between 18-29 years of age (PostNord et al., 2020).

Demographic characteristics		Frequency	Percentage
Gender	Female	15	55.6
	Male	12	44.4
Age	<20	1	3.7
	20-30	24	88.9
	31-40	1	3.7
	41-50	-	
	51-60	1	3.7
	60>	-	
			n = 27

Table 2: Demographic variables of the pre- study participants

Out of the total participants, 15 were randomly assigned to see the brand logo of Nike, whilst 12 got to see Enik. A Pearson Chi- square and Mann- Withney U test showed that there was no systematic difference between the two treatment groups regarding gender ( $X^2(1, N = 27) = 1.69$ , p = .194) or age (U = 55, p = .082).

### 3.4.3 Pre- Study Result

For the statistical tests, the maximum level of statistical significance accepted was p < 0.05 (Bryman & Bell, 2011 p.153).

A Mann- Whitney U test showed that there was a significant difference with regard to brand familiarity between the two groups (U = 5.5, p = .000). The brand familiarity was higher for Nike ( $M_{Nike} = 6.111$ ,  $SD_{Nike} = 0.957$ ) in comparison to Enik ( $M_{Enik} = 1.472$ ,  $SD_{Enik} = 1.439$ ). Similarly, brand awareness/associations were significantly higher for Nike than for Enik (U = 11, p = .000;  $M_{Nike} = 6.587$ ,  $SD_{Nike} = 0.773$  vs.  $M_{Enik} = 2.583$ ,  $SD_{Enik} = 1.652$ ). This was also

the case for brand loyalty (U = 26.5, p = .002;  $M_{Nike} = 3.489$ ,  $SD_{Nike} = 1.227$  vs.  $M_{Enik} = 1.086$ ,  $SD_{Enik} = 1.068$ ) and perceived quality (U = 9, p = .000; M<sub>Nike</sub> = 5.533, SD<sub>Nike</sub> = 1.043 vs. M<sub>Enik</sub> = 2.667,  $SD_{Enik}$  = 1.482). The results are summarized in Table 3.

#### **Table 3: Pre- study Result**

Mann- Whitney U Test	High Bra	and Equity (Nike)	Low Bra	and Equity (Enik)		
	Mean	SD	Mean	SD	Sig	U
Brand Familiarity	6.111	0.957	1.472	1.439	0.000**	5.5
Brand Awareness/Associations	6.587	0.773	2.583	1.652	0.000**	11
Brand Loyalty	3.489	1.227	1.086	1.068	0.002**	26.5
Quality Perception	5.533	1.043	2.667	1.482	0.000**	9
1 = Low Rating, 7 = High Rating						n = 27

= Low Rating, 7 = High Rating

\* is significant at the 0.05 level

\*\* is significant at the 0.01 level

Based on the pre-study results, it could be concluded that there is a difference in brand equity between Nike and Enik. In comparison to Enik, Nike scored higher on brand familiarity, brand awareness/associations, brand loyalty, and perceived quality.

# 3.5 Main Study

### 3.5.1 Study Design

The authors were looking to test the effect of high versus low AURs on several dependent variables. Additionally, the moderating role of brand equity on this effect was investigated. For the main study, an experimental approach was employed as this method is specifically designed for studying causal claims, measuring participants' reactions after being exposed to a treatment (Söderlund, 2018 pp.15, 99).

The experiment employed a 2x2 between subject factorial design (Söderlund, 2018 p. 46). In other words, two factors at two levels were investigated and each respondent was exposed to only one of the treatments to enable inferences about causation (Söderlund, 2018 p. 43). The two factors investigated and their respective levels are AURs (high/low) and brand equity (high/low). Resultatively, the study covers four treatment groups, each which is subject to one of the following scenarios: 1) High brand equity and high AURs; 2) High brand equity and low AURs; 3) Low brand equity and high AURs, 4) Low brand equity and low AURs (See Figure 2).

#### Figure 2: Scenarios for the different treatment groups

		High	Low
AURs	High	Treatment 1	Treatment 3
	Low	Treatment 2	Treatment 4

Brand Equity

Employing a 2x2 factorial design enabled investigation of the moderating role of brand equity on the effect of AURs on viewers evaluations of a live stream shopping broadcast through consideration of the two independent variables at the same time. In addition, treatment groups could be merged with the purpose of measuring the main effect of AURs (high/low) on the dependent variables. To do this, Treatment groups 1 and 3 were merged, gathering all experiment participants having seen the live stream shopping broadcast versions displaying high AURs. Treatment 2 and 4 were merged to form a second group including all participants exposed to low AURs.

As emphasized by Söderlund (2018 p.86), a cause variable in a causal relationship is to be represented by a specific treatment in an experiment. The AUR representing the number of viewers was translated to be represented by the viewer counts: 302,854 (high) and 7 (low). The other AUR, representing the number of likes, was translated into the like counts: 50,476 (high) and 2 (low). Another treatment used in this experiment was the two brand names and logos: Nike (high brand equity) and Enik (low brand equity), to further test the moderating role of brand equity.

In designing the live stream shopping broadcast, the authors wanted the scenario to look as realistic as possible (Söderlund, 2018 p. 180). By seeking inspiration from existing live stream shopping platforms in Sweden such as Bambuser's collaboration with CAIA Cosmetics, and Instagram, the stimuli was carefully crafted and designed. However, the brand and the AURs were made prominent in terms of size and magnitude to catch attention and increase the likelihood that the treatment should result in effect (Söderlund, 2018 p. 69). All other elements were kept constant which can be seen on the features included in the treatment versions (See Image 2) (Söderlund, 2018 p. 59). Moreover, a fashion accessory, namely a

black backpack, was chosen to represent the product for sale in the live stream shopping broadcast. The reasoning behind this elaborate choice was deduced from the popularity of fashion apparel in live stream shopping (Ma, 2020). In addition, the black backpack was assumed to appeal towards all subjects irrespective of demographics.



#### Image 2: Screenshots of the live stream shopping broadcast

With the aim to produce statistics from the Swedish population, a self- completion survey was designed and distributed for data collection (Floyd & Fowler, 2014 p.8). While there is a risk of abandoned and empty questionnaires (Saunders, Lewis & Thornhill, 2019 p.157), key

advantages of using a survey to collect responses include the ease of gathering information quickly, and the low cost in terms of both time and money. Moreover, the survey provided data collection for testing hypotheses (Floyd & Fowler, 2014 p.6) and hence, suited the experimental study design. Moreover, gathering data using a questionnaire enabled measurement of different types of reactions within the framework of the experiment. According to Söderlund (2018 p.110), such a multi- reaction approach provides a rich picture of the treatment.

### 3.5.2 Survey Design

The survey was distributed in English and was composed broadly of three parts: Introduction, scenario and treatment, and a questionnaire (See Appendix 3).

On the first page of the survey the purpose of the research, the estimated response time as well as a definition of live stream shopping were presented. Furthermore, participants were informed about their rights under GDPR regulations (SSE, 2021). The authors' contact information were displayed and the participant was asked to continue answering the questions only if agreeing to intentionally participate in the survey.

A role- play experimental design was used whereby the respondents were presented to a textbased scenario. This design is advantageous as it is affordable, robust, and assures that all participants in a given group receive the same treatment (Söderlund, 2018 p. 82). Participants were asked to imagine participation in a live stream shopping broadcast simulated through a screenshot on the next page. Subsequently, each respondent was presented with only one of the four randomized treatments as per the study's 2x2 design (See Image 2). Hence, this increased the likelihood that no other factors than the treatment, explained the differences between groups (Söderlund, 2018 p. 35). To increase the likelihood of the subject looking at all elements thoroughly, a time cap was set forcing the respondent to be exposed to the stimuli for a minimum of 10 seconds before proceeding.

After the treatment followed a questionnaire. Considering the issue of question order bias, the order of the questions were selected with guidance from the tutor. Firstly, dependent variables were measured followed by mediating variables, moderating variables, and control questions were included. Questions about the respondent's demographics were asked at the very end.

### 3.5.3 Measures

All answers despite the ones related to the demographic questions were indicated on a sevenpoint likert scale because of its "significantly superior performance on several aspects of measurement reliability and discriminating power" (Carlson et al., 2021). Quantifying a reaction of a respondent made it possible to aggregate the answers into group reactions (Söderlund, 2018 p.100). In turn, this enabled analysis of differences in reactions between groups receiving different treatments (Söderlund, 2018).

All constructs, despite some demographic variables, were measured using multiple-item scales, adapted and extended from prior studies with minor modifications to fit with the research context of live stream shopping. The main reason for using multiple- indicator measures was to overcome the problems of reliance on just a single indicator (Bryman & Bell, 2011 p. 156). Furthermore, the questionnaire contained measurement of variables that were later excluded from the study. The variables considered appropriate for the purpose of the paper are presented below.

#### 3.5.3.1 Dependent Variables

#### **Broadcaster Credibility**

To measure broadcaster credibility, part of the source credibility scale developed by Ohanian (1990) was adopted. Hence, this construct was measured using seven- point differential scales with five items for trustworthiness and expertise respectively. To measure trustworthiness of the broadcaster, the respondents were asked whether they perceived the person in the live stream shopping broadcast Undependable/Dependable, Dishonest/Honest, as Unreliable/Reliable, Insincere/Sincere, and Untrustworthy/Trustworthy. Expertise was measured with scales having these five end points: Not an expert/Expert, Inexperienced/Experienced, Unknowledgeable/Knowledgeable, Unqualified/Qualified, Unskilled/Skilled. Cronbah's alpha for this construct was 0.928, implying that the questions could be computed into an index.

#### **Attitude Towards the Broadcast**

Attitude towards the broadcast was measured with the question "What is your attitude towards the broadcast?" using the three semantic seven- point- likert scales: Bad/Good, Unpleasant/Pleasant, and Unfavourable/Favourable. This measure is a modified version of the

attitude towards the advertisement construct applied by Scott & Lutz (1989). Cronbach's alpha for this scale was 0.932, indicating that the questions could be computed into an index.

#### Attitude Towards the Brand

Attitude towards the brand was measured with three items: "My impression of the brand shown in the live stream shopping broadcast is good", "My impression of the brand shown in the live stream shopping broadcast is pleasant", and "My impression of the brand shown in the live stream shopping broadcast is favourable". The answers to each item were recorded on a seven-point Likert scale (1 = completely disagree, 7 = completely agree). These questions have previously been used by Colliander & Marder (2017) and were used to calculate an index, given Cronbach's alpha of 0.932.

#### **Purchase Intention**

Purchase intention was measured with three items using a seven- point semantic- differential scale: "How unlikely/likely are you to purchase the backpack shown in the live stream?" (1 =Unlikely, 7 = Likely), "How improbable/probable are you to purchase the backpack shown in the live stream?" (1 = Improbable, 7 =Probable), and "How impossible/possible are you to purchase the backpack shown in the live stream?" (1 = Improbable, 7 =Probable), and "How impossible/possible are you to purchase the backpack shown in the live stream?" (1 = Improbable, 7 =Probable). These questions have previously been used by Machleit, Madden & Allen (1993). An index was computed given Cronbah's alpha of 0.914.

### 3.5.3.3 Demographic Variables

Demographic information was collected to describe the nature and characteristics of the sample (Investopedia, 2021). They were included to guarantee that there were no systematic differences between participants in the different treatment groups, hence, ensuring random allocation. Most experiments include "typical variables" such as age and gender as demographic representations (Söderlund, 2018 p.124-125) which were also included in this study. The question regarding age was formulated as "How old are you?" and the respondents were asked to select their age using a slider. Considering the gender variable they were asked "What is your gender?" having the response alternatives: "Male", "Female", "Non-binary/third gender", and "Prefer not to say".

#### 3.5.3.4 Manipulation Checks

Instructional Manipulation checks were conducted to analyze to what extent the treatment represented the cause variables in focus (Söderlund, 2018). To measure whether the respondent recognized the brand in the screenshot, one question was "What was the name of the brand shown in the live stream?" followed by these response options: "Enik", "Puma", "Nike", and "Luma". Additionally, respondents were asked "How many viewers did the live stream have?" followed by the response alternatives "7", "151,423", and "302,854" to measure whether the participants did pay attention to the AURs in the imaginative live stream shopping broadcast.

### 3.5.4 Sampling & Data Collection

An appropriate sampling method for this study was convenience sampling which is commonly used in the field of business and management, and is "often more prominent than samples based on probability sampling" (Bryman & Bell, 2011). Although this sampling method does not ensure generalization, it can provide a suggestion for further research and allows links to be forged with existing findings in an area (Bryman & Bell, 2011). In addition, this method increases the probability of a good response rate (Bryman & Bell, 2011). The survey was distributed on social media through the author's personal network. The questionnaire link was posted on SNS such as on personal Facebook walls, in Facebook groups, on Instagram, as well as on professional network platforms such as LinkedIn. Respondents were also contacted directly through private text messages. To further increase the spread of the survey, snowball sampling was employed by which the participants were asked to distribute the survey through their own networks (Bryman & Bell, 2011).

The survey was distributed online between 12th of March - 08th of April 2021. As a consequence of the global pandemic, digital data collection was deemed as a feasible approach. The collection of data was made via Qualtrics. A total of 258 participants completed the survey. Clearance of the data started with deleting 28 respondents who had answered incorrectly on the first control question. Another 86 were excluded since they had not paid attention to the AURs. Thereby, the participants had failed to answer the second control question. Consequently, 144 valid respondents remained for consideration. Of these respondents, 31.9% were male (N = 46), 67.4% female (N = 97), and 0.7% (N = 1) non-binary/third gender. The mean age of respondents was 24.78 (SD = 6.54) and the median age

was 23 within the range of 18-57 years. Among the respondents in the final data set, the low median age of 23 and the unequal gender distribution should be considered relatively representative of this study's target population. This reflects the Swedish e- commerce shoppers who are predominantly females and young people in the age range of 18-29 (Postnord et al., 2020). See Table 4 for the summary of results.

Demographic Characteristics		Frequency	Percentage
Gender	Male	46	31.9
	Female	97	67.4
	Non- Binary/ Third Gender	1	0.7
Age	<20	2	1.4
	20-30	130	90.3
	31-40	7	4.8
	41-50	-	
	51-60	5	3.5
	60>	-	
			n = 14

Table 4: Demographic variables	of the main- study participants
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### 3.5.5 Assessment of Validity & Reliability

### 3.5.5.1 Reliability

Reliability is the extent to which several measurements of a particular variable provide similar results and is concerned with whether the results of the study are repeatable (Bryman & Bell, 2011 p. 41). This study can be deemed to be reliable based on the three prominent factors of reliability: Stability, internal reliability and inter- observer consistency (Bryman & Bell, 2011 p. 158).

First and foremost, as a consequence of lack of time, the variables have not been tested and re-tested to ensure their consistency over time. However, note that the stability level can be deemed high as the measures used have been deduced from credible resources (e.g. Ohanian, 1990; Yoo & Donthu, 2001) and have been academically approved, increasing the overall reliability (Saunders et al, 2009 p.374). Secondly, this study is subject to the issue of internal reliability as constructs measured by multiple indicators have been included (Bryman & Bell, 2011 p.158). To address this issue, a common reliability indicator, Cronbach's alpha that tests relatedness of items measuring a specific construct, was used. Related items that exhibited an acceptable level of Cronbah's alpha 0.7 or higher, were computed into an index (Söderlund, 2018 p.135-136). Lastly, inter- observer consistency (Bryman & Bell, 2011 p.158) was

secured by the nature of this quantitative study, lack of need of recording observations, and sorting data into categories.

#### 3.5.5.2 Validity

Validity presumes reliability (Bryman & Bell, 2011 p.161) and "is concerned with the integrity of the conclusions that are generated from a piece of research". The main types of validity which will be discussed are measurement validity, external validity, and internal validity (Bryman & Bell, 2011 p.42-43).

#### **Measurement Validity**

Measurement validity applies primarily to quantitative research and is about the extent to which an indicator or multiple- indicators are devised to gauge a concept that accurately measures that concept (Bryman & Bell, 2011 p.159). According to this definition, Söderlund (2018 p. 136) argues that there are two types of validity that are specifically important. Content validity refers to the degree in which the measures to a variable employed overlap with and measure the theoretical variable they are supposed to (Söderlund, 2018 p.136). This type of validity was ensured through the usage of measures that have been developed, used and tested in previous research (e.g. Ohanian, 1990; Yoo & Donthu, 2001). The second type is nomological validity which is concerned with what theory implies about the relatedness of variables to other variables included for investigation "within the framework of the same theory" (Söderlund, 2018 p.137). Ensuring nomological validity requires that variables which are theoretically correlated to each other are measured (Söderlund, 2018). Firstly, the extensive literature review conducted in this study revealed that theories contain several interrelated variables such as source credibility, attitudes and purchase intention. To affirm nomological validity, this was considered when formulating the hypothesis. Moreover, the variables found to form a nomological network were all measured in the questionnaire. Secondly, in line with literature, the correlation tests confirmed that there is a relationship between the variables included. Hence, this affirms the nomological validity of this study.

#### **Internal Validity**

Internal validity questions whether a manipulation actually causes a desired effect (Söderlund, 2018 p. 172). In other words, a study is seen as internally valid if its findings were caused by the experimental treatment. This issue has been addressed through employing statistical significance tests. However, Söderlund (2018 p.173) argues that this type of validity can be

threatened by other factors than statistical inference. History, maturity and testing can be considered to not have impacted the validity of the study since survey responses were collected during a limited period of time, and the observations of subjects were independent and they were sampled only once. As the research method was not subject to change in the course of data collection, the threat of instrumental changes can also be deemed an irrelevant threat of validity. Finally, the impacts posed by selection effects and morality were eliminated by randomly allocating the participants to treatment groups, further evidenced by analysis of the demographic variables (Söderlund, 2018 p.37). Consequently, this establishes internal validity of the study.

#### **External Validity**

External validity concerns to what extent the results from an experiment may be assumed to be valid in other situations, hence, are generalizable. Internal validity has been argued to be high and is a prerequisite to claims regarding external validity. This implies that findings could be generalized beyond the scope of this experiment. However, there are some factors that can possibly threaten the external validity of the study and are thereby addressed below (Söderlund, 2018 p. 173-174).

To begin with, the study is subject to the issue of pre- measurement through the use of a prestudy. To mitigate this issue, a disclaimer was added in the invitation of the study. Those who had already participated in the pre- study were solicited not to also participate in the main study. Furthermore, the issue of a participant being exposed to more than one treatment posed a low level of threat to external validity. To elaborate, a setting in Qualtrics was used whereby each participant could only receive one version of the survey, even if they clicked on the same survey link multiple times. To be exposed to another treatment, the participant needed to take the same survey on another device, which can be assumed unlikely.

Artificial situations and the selection of participants were two factors which further could have possibly negatively impacted the external validity. The threat of artificial situations were somewhat mitigated through designing the treatment to resemble the real world (Söderlund, 2018 p.180) taking inspiration from existing live stream shopping broadcasts. Regarding selection of participants, Katz (1972) argues that sampling issues are not particularly important when studying the effects of psychological factors which makes this threat less of a concern (Söderlund, 2018 p. 187). Using the same argument, the two sampling methods

chosen have been justified even though the participants were non- randomly sampled that could have constituted a possible threat to external validity (Söderlund, 2018 p. 191). Based on the above discussion, the external validity of this thesis can be considered acceptable.

# 4. Empirical Evidence

For the following statistical tests, a significance level of 5.0% or lower (p < .05) was accepted (Bryman & Bell, 2011 p.153).

## 4.1 Correlations

The theoretical framework (See Figure 1) was confirmed through application of Pearson Correlation tests on the dependent variables. It was shown that broadcaster credibility was significantly positively correlated with attitude towards the live stream shopping broadcast (r(142) = .443, p = .000). Similarly, attitude towards the broadcast was significantly positively correlated to attitude towards the brand (r(142) = .507, p = .000) which was in turn significantly positively correlated with purchase intention (r(142) = .364, p = .000). These results are summarized in Table 5.

### **Table 5: Correlations**

Variables	Pearson Correlation	Sig	
Broadcaster Credibility & Attitude Towards the Broadcast	0.443	0.000**	
Attitude Towards the Broadcast & Attitude Towards the Brand	0.507	0.000**	
Attitude Towards the Brand & Purchase Intention	0.364	0.000**	
* is significant at the 0.05 level			n = 144

\*\* is significant at the 0.01 level

# 4.2 AURs: Viewer- & Like Counts

## 4.2.1 Systematic Differences

Among the two treatment groups, respondents were relatively equally distributed (See Table 6). A Chi- Square and T- Test showed that there were no significant differences between the groups exposed to high versus low AURs, with regard to gender ( $X^2$  (2, N = 144) = 1.924, p = .382) or age (t(142) = -1.076, p = .284).

### Table 6: Distribution of the respondents among Treatment Groups

ID	Condition	Ν	Percentage
1 + 3	High Brand Equity/Low Brand Equity, High AURs	65	45.1
2 + 4	High Brand Equity/Low Brand Equity, Low AURs	79	54.9

## 4.2.2 Hypothesis Testing

Note that all results presented in this section are summarized in Table 7. H1 suggests that a broadcaster promoting a product in a live stream shopping broadcast having high AURs will be perceived as higher in credibility than when the AURs are low. An independent sample T-Test showed that there was no difference in perceived credibility of the broadcaster between the groups ( $M_{High} = 4.011$ ,  $SD_{High} = 1.090$  vs.  $M_{Low} = 4.114$ ,  $SD_{Low} = 1.052$ , t(142) = -.576, *p* = .566). Thereby, **H1 is not empirically supported**.

No significant differences were found between the groups with regard to attitude towards the broadcast ( $M_{High} = 4.518$ ,  $SD_{High} = 1.336$  vs.  $M_{Low} = 4.325$ ,  $SD_{Low} = 1.470$ , t(142) = .817, p = .415), or attitude towards the brand ( $M_{High} = 4.646$ ,  $SD_{High} = 1.365$  vs.  $M_{Low} = 4.325$ ,  $SD_{Low} = 1.520$ , t(142) = 1.321, p = .189). In other words, **no empirical support was found for H2 and H3**.

By contrast, an independent sample T- Test showed a significant difference between the groups in regard to purchase intention (t(121.768) = 2.344, p = .021). Thereby, **H4 is empirically supported**. The direction of the means implies that the purchase intention is higher when the AURs are high ( $M_{High} = 2.708$ , SD<sub>High</sub> = 1.487) compared to low ( $M_{Low} = 2.173$ , SD<sub>Low</sub> = 1.193).

Independent Samples T- Test	High	High AURs		AURs		
	Mean	SD	Mean	SD	Sig	t
Broadcaster Credibility	4.011	1.090	4.114	1.052	0.566	-0.576
Attitude Towards the Broadcast	4.518	1.336	4.325	1.470	0.415	0.817
Attitude Towards the Brand	4.646	1.365	4.325	1.520	0.189	1.321
Purchase Intention	2.708	1.487	2.173	1.193	0.021**	2.344
1 = Low Rating, 7 = High Rating	2.700	1.107	2.1.75		01021	n = 144

Table 7: Main	<ul> <li>study</li> </ul>	results	of high	versus	low AURs
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\* is significant at the 0.05 level

\*\* is significant at the 0.01 level

## 4.3 Moderating Role of Brand Equity

## 4.3.1 Systematic Differences

Respondents were distributed among the four treatment groups evenly (See Table 8). Tests of the four treatment groups were conducted to ensure absence of systematic differences between the respondents in each group. A Pearson Chi- square revealed no systematic differences in gender (X<sup>2</sup> (6, N = 144) = 4.75, p = .576). Similarly, an ANOVA Scheffe test showed that there were no significant differences between the treatment groups with regard to age (F(3, 144) = .495, p = .687).

Table 8: Distribution of t	he respondents among	<b>Treatment Groups</b>
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ID	Condition	N	Percentage
1	High Brand Equity, High AURs	32	22.2
2	High Brand Equity, Low AURs	35	24.3
3	Low Brand Equity, High AURs	33	22.9
4	Low Brand Equity, Low AURs	44	30.5

### 4.3.2 Hypothesis Testing

H5 suggests that exposure to high versus low AURs in a live stream shopping broadcast will have an effect on broadcaster credibility perceptions when a low equity brand is promoted but not when a high equity brand is promoted. The result from an ANOVA Scheffe Test (F(3, 144) = .838, p = .475) confirms that **H5 is not empirically supported**. This was also the case with regard to attitude towards the broadcast (F(3, 144) = .938, p = .424), attitude towards the brand (F(3, 144) = 8.240, p = .000), and purchase intention (F(3, 144) = 1.076, p = .008). In other words, **no empirical support was found for H6, H7 or H8**. These results are summarized in Table 9.

#### Table 9: Main- study results of moderating role of brand equity

ANOVA Scheffe			High Brand E	quity (Nike)			Low Brand Equity (Enik)					
	a) High AURs		b) Lov	/ AURs	Mean Difference (a - b)	Sig	c) High	1 AURs	d) Lo	w AURs	Mean Difference (c - d)	Sig
	Mean	SD	Mean	SD			Mean	SD	Mean	SD		
Broadcaster Credibility	4.053	1.226	4.309	1.015	-0.256	0.812	3.970	0.959	3.959	1.067	0.011	1
Attitude Towards the Broadcast	4.375	1.401	4.543	1.414	-0.168	0.971	4.657	1.276	4.152	1.507	3.15	0.493
Attitude Towards the Brand	5.167	1.284	4.952	1.132	0.215	0.937	4.141	1.264	3.826	1.613	0.315	0.796
Purchase Intention	3.063	1.537	2.391	1.373	0.672	0.229	2.364	1.373	2	1.012	0.364	0.696
1 = Low Rating, 7 = High Rating												n = 144
t is cissificant at the 0.05 level												

\* is significant at the 0.05 level \*\* is significant at the 0.01 level

## 5. Conclusions & Discussion

## 5.1 AURs: Viewer- & Like Counts

In this study, the impact of high versus low AURs such as the viewer- and like counts on live stream shopping viewers' credibility perceptions of the broadcaster, attitudes and purchase intention was initially investigated. As the live stream shopping environment is overwhelming and information rich, it was expected that viewers rely on cognitive heuristic processing triggered by cues (Lin, Spence & Lachlan, 2016; Metzger, Flanigan & Medders, 2010; Metzger & Flanigan, 2013; Walther & Jang, 2012), such as AURs (Walther & Jang, 2012), when evaluating the credibility of the live stream shopping broadcaster (i.e. the source) (Walther & Jang, 2012; Sundar, 2008; Metzger, Flanigan & Medders, 2010). According to the MAIN model, a common heuristics that people rely on when evaluating sources are the bandwagon heuristic (Sundar, 2008), and another one is the endorsement heuristic (Metzger, Flanigan & Medders, 2010). Based on this, the psychological principle of social proof (Cialdini, 2001) has been argued to be the underlying mechanism for how the AURs impact credibility perceptions of the broadcaster. With strong evidence from previous research (e.g. Weissmuller et al., 2020; Jin & Phua, 2014) there was a reason to believe that viewers' credibility perception of the broadcaster is higher when exposed to high versus low AURs, as formulated in H1. Unexpectedly, no empirical evidence was found for this hypothesis. In line with the study conducted by Westerman, Spence, & Van der Heide (2012), a possible scenario explaining this result is that the AURs were too high and low respectively, leading to no difference between the groups.

Given that high versus low AURs were expected to result in higher broadcaster credibility perceptions, H2-4 could be formed. These hypothesize that higher AURs would lead to higher broadcaster credibility perceptions (H1), better attitude towards the broadcast (H2), better attitude towards the brand (H3), and lastly, higher purchase intention (H4). The sequential link has been established by research showing that higher source credibility leads to better attitude towards the broadcast (Lafferty & Goldsmith, 1999) which in turn is positively related to attitude towards the brand (MacKenzie & Lutz, 1989; Gardner, 1985) and lastly, purchase intention (Sallam & Algammash, 2016; Abazari, Ghasemmi & Vosta, 2014; Chin, Isa & Alodin, 2019). Surprisingly, no empirical support was found for H2 and

H3 but for H4, whereby high AURs lead to higher purchase intention compared to when the AURs are low.

As hypotheses H1, H2 and H3 are rejected, this indicates that the AURs have a direct impact on viewers' purchase intention, straying from the theoretical framework established in this thesis. Supporting the result, previous research has found a direct effect of AURs on purchase intention. In example, Pua & Ahn (2014) investigated how the like count on Facebook brand pages impact purchase intentions and found a main effect whereby purchase intention was higher when this AUR was high compared to low. Especially in live stream shopping, interactivity features and social presence of others have been found to be significant indicators of purchase intention (Ma, 2021; Wang et al, 2017; Zhou et al, 2016; Su et al, 2020). Based on the result, it can be argued that people rely on heuristic cognitive processing cued by AURs when evaluating a live stream shopping broadcast, whereby social proof can be a possible underlying mechanism. However, the result leaves room for thought about other explanations than broadcaster credibility and attitudes in impacting viewers purchase intention, when exposed to high versus low AURs.

For instance, it could be possible that the viewers use affective information processing besides cognitive processing. It has been previously found that live stream shopping contextual cues, such as social relationship enhancing platform features, stimulate both cognitive and affective emotional states through "cognitive assimilation and arousal" which in turn directly affect impulsive shopping (Xu et al, 2020). In the survey, respondents were specifically informed about live stream shopping and asked to imagine their active participation in such a broadcast. As live stream shopping is known for its parasocial interaction, high engagement, and interactive environment, the viewer's emotional states could have interfered with broadcaster credibility perceptions and attitudes when exposed to high versus low AURs. In other words, the viewer's emotional states could have been at play rather than broadcaster (i.e. source) credibility perceptions and attitudes.

There are a number of other reasons for why some of the hypotheses found no empirical support. One of the possible scenarios could be based on the viewer's lack of knowledge, familiarity, and experience with live stream shopping which could have generated confusion and disorientation (Garaus & Wagner, 2016). Resultatively, this could have made them rely on pre- existing knowledge (Keller, 1993) from using more conventional ways of shopping.

The majority of research on live stream shopping has been conducted in Asia, specifically in China where one third of the internet users engaged in live stream shopping in 2020 (Zhu et al., 2020). In comparison to the consistent, habitual, and everyday normalisation of live stream shopping behaviour in China, the phenomena is at its infancy in Sweden. Despite well- known brands such as CAIA Cosmetics and Monki that have used this new way of selling and advertising products, the general awareness of live stream shopping can be assumed to be relatively low.

As viewers could have been disoriented and confused, this can have resulted in them relying on their previously established knowledge to navigate the broadcast and mitigate the feeling of confusion. This is in accordance with the associative network memory model which could indicate that viewers could have been depending on their memory to interpret their new environment (Keller, 1993). E-commerce websites in mobile applications have a similar interface as the screenshot shown in the survey, and this could have thwarted the respondents from imagining the live stream shopping broadcast as asked in the survey, and instead imagined a more traditional online shopping environment. The similarity could have been exasperated because of the broadcaster's appearance, distance to the camera, and her pose as well as the white background resembling a product photo- shoot.

As a consequence, the viewer could have presumed that the broadcaster was a model displaying a product rather than a source whose credibility needed to be evaluated. Instead of forming and assessing the credibility of the broadcaster based on high/low AURs which in turn impact attitudes towards the broadcast and brand, the viewers could have possibly directly focused their attention on the product. This could potentially explain why there is an impact of high versus low AURs on purchase intention but not on broadcaster credibility perceptions or attitudes. Despite the description of live stream shopping included in the survey to educate and inform participants about this new phenomena, a gap between respondent's perception of the survey questions and their conceptualization of their imagined shopping experience could have occured. Especially, if the respondent's were confused and baffled about imagining that they participated in a live stream shopping broadcast, they could not have possibly formed enough broadcaster credibility perceptions and attitudes to respond to the survey questions. In other words, the respondent might have chosen the middle alternative for the related survey questions passively, which could also have impacted the results.

## 5.2 Moderating Role of Brand Equity

Secondly, the moderating role of brand equity on viewer's broadcaster credibility perception, attitudes, and purchase intention when exposed to high versus low AURs was investigated. The study hypothesized that if the brand being promoted has high brand equity, viewer's importance of relying on AURs such as the viewer- and like counts in a live stream shopping broadcast, would be expected to diminish. In line with this expectation, exposure to high versus low AURs had no effect on viewer's broadcaster credibility perception, attitudes, and purchase intention when a high equity brand was promoted. The underlying mechanism can be argued to be the pre- established brand knowledge and associations that exist in the mind of the viewers, in line with the associative network memory model (Hoeffler & Keller, 2003; Aaker, 1991; Keller, 1993). Relatedly, Hoeffler & Keller (2003) establish that high equity brands benefit from a number of marketing advantages. For example, such brands are given more exposure (Simonson, Huber & Payne, 1988), attention (Kent & Allen; 1994), comprehension (Tellis, 1988; Aaker, 1991) and memory retention when advertised to consumers (Dacin & Smith, 1994). In addition, brands with high brand equity will not only benefit from increased quality perception of its products (Gill & Dawra, 2010) but also act as a credibility cue to the viewers participating in a live stream shopping broadcast (Spry et al, 2011).

By contrast, when a low equity brand was promoted in the live stream shopping broadcast, it was expected that exposure to high versus low AURs would have an effect on broadcaster credibility perceptions, attitudes, and purchase intention. With support from literature, brands with lower equity will not benefit from marketing advantages to the same extent as high equity brands (Hoeffler & Keller, 2003). This is because viewers lack pre- established brand knowledge and associations to the brand (Hoeffler & Keller, 2003), implying that viewers of a live stream shopping broadcast could be expected to rely on AURs to a great extent. Looking at the result, no empirical support was found for this claim. However, there could be a plausible reason to explain the result. As confirmed by the pre- study, Nike - world's leading apparel brand, had higher brand equity in comparison to Enik - a fictitious brand created to represent a low equity brand. This implies that Nike will have a marketing advantage over Enik as argued by Hoeffler & Keller (2003). However, while the brand equity of Enik is low, it cannot be ruled out that the brand's equity level is high enough for Enik to enjoy some marketing advantages. Using the same argument as in the previous paragraph,

this could explain why no difference was found on viewers' broadcaster credibility perceptions, attitudes, and purchase intention when exposed to high versus low AURs.

# 6. Practical Implications

The study's finding is relevant for practitioners such as brands and retailers, individual broadcasters such as influencers and individual shopping agents as well as for platform owners and designers - who all seek to gain more understanding of the new phenomenon of live stream shopping. Practitioners could use the findings to guide their understanding of a new "best practice" for how to use live stream shopping to their benefit. The study found that higher AURs result in higher purchase intention of the viewers, compared to when the AURs are low. With higher purchase intention that is closely related to actual behaviour, higher viewer- and like counts imply a higher conversion rate and resultatively increased business results.

For brands, retailers, and other sellers; this finding implies prioritising and acknowledging the importance of the AURs, and investing in expanding their marketing reach to impact purchase intention of their product being promoted. For the above-mentioned practitioners, the findings highlight the importance of making preparations to attract and engage a high number of viewers, leading to high AURs in a live stream shopping broadcast. For example, this could entail choosing the optimal time of the day and length of the broadcast, as well as encouraging the use of the like button, and sharing of the content to others.

For owners and user experience designers of both live stream shopping platforms and specialized video sharing embedded technologies, the study finding can assist in guiding best feature design to enhance viewer's purchase intention. At the moment, some live stream shopping platforms lack the use of AURs. To demonstrate, platforms such as CommentSold solely display a like count (CommentSold, 2021) while platforms such as Shoploop (Poojary, 2020) and e-commerce players such as Caia Cosmetics through the use of Bambuser (Lund, 2019) only display a viewer count in their live stream shopping broadcasts (See Appendix 4). Based on this study's finding, user interface designers are encouraged to include count features of viewers and likes respectively, when these AURs are expected to be high.

# 7. Limitations & Suggestions for Future Research

The study presented has limitations to be acknowledged. First and foremost, this study does not study live stream shopping broadcasts and consumer reactions in real time. Using an image to simulate the live stream shopping environment was a deliberate choice due to the difficulty of creating a live stream shopping broadcast with all features necessary to execute the study. As a great proportion of the Swedish consumers are not familiar with live stream shopping, the authors are wary that an image only would not be enough for survey respondents to imagine the real environment of live stream shopping. For future research, it is recommended to conduct experiments with images for only respondents familiar with the environment and use live video for respondents unfamiliar with the live stream shopping environment.

Another limitation to the study is the author's holistic selection of a fashion accessory. The choice of product is justified by the fashion category's popularity on live shopping stream platforms (Ma, 2020). As a result, the findings of this study cannot be generalized to apply to all types of product categories. As live stream shopping encompasses the possibility to sell products in categories ranging from all durable to fast moving consumer goods (FMCG), the findings encourage further future exploration with other categories.

Considering that live stream shopping is a phenomenon that has not yet been "fully explored" (Sun et al, 2019), there are numerous further opportunities for future research. This study has been an attempt to extend the knowledge of practitioners' on live stream shopping which has been scarcely explored, especially in the context of Swedish viewers. There are a great number of variables- both dependent variables, mediators and moderators- that could be examined in future research to further extend knowledge of the live stream shopping phenomenon. As different age groups could be susceptible to be open to varying degrees of new technology and innovativeness (Tellis et al, 2009), moderating factors worth exploring are different age groups and genders. This study recommends the use of the Technological Affordance Model (TAM) to study the population's ease of use with new technology, and social commerce shopping platforms.

Another suggestion is to further explore and investigate the moderating role of brand equity

on broadcaster credibility perceptions, attitudes, and purchase intention when viewers are exposed to high versus low AURs. The study found a tendency for the mean differences between groups exposed to high versus low AURs being higher when a low equity brand was promoted compared to a high equity brand.

Furthermore, investigation of the impact of other AURs such as comment- and purchase counts, could be explored. This could extend this study's research subject and enable academicians and practitioners to improve their understanding of the impact of high versus low AURs on viewers' live stream shopping broadcast evaluations in Sweden.

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# 9. Appendix

# Appendix 1: Definition of Customer-Based Brand Equity

Authors	Definition of Customer-Based Brand Equity
Aaker, 1991	"set of brand assets and liabilities linked to a brand, its name and symbol that add to or subtract from the value provided by a product or service to a firm and/or to that firms' customers"
Farquhar et al, 1991	"added value endowed by the brand to the product"
Keller, 1993	"the differential effect of brand knowledge on consumer response to the marketing of the brand"
Rangaswamy et al, 1993	"residual value in the form of favorable impressions, attitudinal dispositions, and behavioural predilection among all those who are exposed to marketing activities related to the brand, including present consumers, potential consumers, as well as channel members and other influencers in the buying process"
Park & Srinivasan, 1994	"the difference between overall brand preference and multi-attributed preference based on objectively measured attribute levels"
Lassar et al, 1995	"the enhancement in the perceived utility and desirability a brand name confers on a product"
Yoo et al, 2000	"the difference in consumer choice between the focal branded product and an unbranded product given the same level of product features"
Yasin et al, 2007	"the tremendous value inherent in a well-known brand name"

# Appendix 2: Pre- Study Survey



This is a survey for a research project conducted at Stockholm School of Economics.

Your answers are anonymous and treated with confidentially. You may refuse to withdrawal from participation without evaluation at any time by closing the browser window. If you want your answers to be excluded after having finished the survey, please reach out to us via e-mail: 50635@student.hhs.se or 50634@student.hhs.se.

Estimated response time are 2 minutes.

We cannot complete our work without your help- your participation is highly appreciated!

By clicking on the box below, you agree on giving us permission to use your responses in our research.

I agree

 $\rightarrow$ 

### Regarding the brand, are you unfamiliar/familiar?

1. Unfamiliar	2	3	4	5	6	7. Familiar

### Regarding the brand, are you inexperienced/experienced?

	1. Inexperienced	2	3	4	5	6	7. Experienced
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### Regarding the brand, are you not knowledgeable/knowledgeable?

1. Not knowledgeable	2	3	4	5	6	7. Knowledgeable
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### Please answer the questions below:

	1. Strongly disagree	2	3	4	5	6	7. Strongly agree
I can recognize the brand among other competing brands.	0	0	0	0	0	0	0
I am aware of the brand.	0	0	0	0	0	0	0
Some characteristics of the brand come to my mind quickly.	0	0	0	0	0	0	0
I can quickly recall the symbol or logo of the brand.	0	0	0	0	0	0	0

I have difficulty in imagining the brand in my mind.

Strongly 2 3 4 5 6 Strongly disagree
--------------------------------------

Please answer the questions below:

	1. Strongly disagree	2	3	4	5	6	7. Strongly agree
I consider myself to be loyal to the brand.	0	0	0	0	0	0	0
The brand would be my first choice.	0	0	0	0	0	0	0
I will not buy other brands if this brand is available at the store.	0	0	0	0	0	0	0

Please answer the questions below:

	1. Strongly disagree	2	3	4	5	6	7. Strongly agree
The likely quality of the brand is extremely high.	0	0	0	0	0	0	0
The likelihood that the brand would be functional is very high.	0	0	0	0	0	0	0
What is your gender?							
Female			Male			Other	
What is your age?							

Thank you for participating in this survey! If you have any questions, please send an email to: 50635@student.hhs.se or 50634@student.hhs.se

## Appendix 3: Main- Study Survey



This survey is conducted for a quantitative research project at the Stockholm School of Economics.

It contains questions about live stream shopping which is a growing e-commerce phenomena that allows a seller to present products and interact with potential buyers through a live stream video. Potential customers can express their opinions, post their comments and purchase the product displayed on a real-time basis.

Estimated response time is 10 minutes.

First, under GDPR, the data from this survey are collected solely for research purposes. Data that could possibly identify anyone will never be shared with any third party or anyone else. Results from statistical analysis of the data may be published in reports, scientific publications or other presentations. Do you agree to voluntarily participate in this study?

No, I do not agree. Therefore, I will now quit answering the questionnaire.

Yes, I do agree, and will therefore continue answering the questionnaire.

You may withdraw from participating at any time by closing the browser window. If you want your answers to be excluded after having finished the survey, please contact us via e-mail: 50634@student.hhs.se or 50635@student.hhs.se

We thank you in advance for your participation!

On the next page, you will see a screenshot of a live stream shopping event. Imagine that you are watching it in real time. Make sure you look at all elements on the screen thoroughly (product, brand, likes, comments and other symbols) before moving on to answering the questions on the following pages.

You will need to watch the screenshot for a minimum of 10 seconds before proceeding.



What is your attitude towards the live stream shopping broadcast?



To what extent do you agree with the following statements?

	1. Completely disagree	2	3	4	5	6	7. Completely agree
My impression of the brand shown in the live stream shopping event is good.	0	0	0	0	0	0	0
My impression of the brand shown in the live stream shopping event is pleasant.	0	0	0	0	0	0	0
My impression of the brand shown in the live stream shopping event is favourable.	0	0	0	0	0	0	0

To what extent do you agree with the following statements?

	1. Not at all	2	3	4	5	6	7. Very much
I am intrigued by the brand shown in the live stream shopping event.	0	0	0	0	0	0	0
I'd like to know more about the brand shown in the live stream shopping event.	0	0	0	0	0	0	0
I am a little curious about the brand shown in the live stream shopping event.	0	0	0	0	0	0	0

Learning more about the brand shown in the live stream shopping event would be useless.

1. Very much	2	3	4	5	6	7. Not at all
-----------------	---	---	---	---	---	------------------

How unlikely/likely are you to find out more about the brand shown in the live stream?

1. Unlikely234567. Likely
---------------------------------

How improbable/probable are you to find out more about the brand shown in live stream?

1. Improbable	2	3	4	5	6	7. Probable

How impossible/possible are you to find out more about the brand shown in the live stream?

1. Impossible	2	3	4	5	6	7. Possible

How unlikely/likely are you to purchase the backpack shown in the live stream?

1. Unlikely	2	3	4	5	6	7. Likely

How improbable/probable are you to purchase the backpack shown in the live stream?

1. Improbable	2	3	4	5	6	7. Probable

How impossible/possible are you to purchase the backpack shown in the live stream?

1. Impossible	2 3	4	5	6	7. Possible
------------------	-----	---	---	---	----------------

To what extent do you agree with the following statements?

	1. Completely disagree	2	3	4	5	6	7. Completely agree
It is likely that I would recommend the product shown in the live stream to others.	0	0	0	0	0	0	0
It is likely that I will talk to others about the product shown in the live stream.	0	0	0	0	0	0	0
It is likely that I would recommend the live stream shopping platform to others.	0	0	0	0	0	0	0
It is likely that I will talk to others about the live stream shopping platform.	0	0	0	0	0	0	0

How likely are you to comment, like, and share the live stream?

1. Extremely unlikely	2	3	4	5	6	7. Extremely likely
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I perceive the person in the live stream shopping event as...

	1	2	3	4	5	6	7	
Undependable	0	0	0	0	0	0	0	Dependable
Dishonest	0	0	0	0	0	0	0	Honest
Unreliable	0	0	0	0	0	0	0	Reliable
Insincere	0	0	0	0	0	0	0	Sincere
Untrustworthy	0	0	0	0	0	0	0	Trustworthy

I perceive the person in the live stream shopping event as...

	1	2	3	4	5	6	7	
Not an expert	0	0	0	0	0	0	0	Expert
Inexperienced	0	0	0	0	0	0	0	Experienced
Unknowledgeable	0	0	0	0	0	0	0	Knowledgeable
Unqualified	0	0	0	0	0	0	0	Qualified
Unskilled	0	0	0	0	0	0	0	Skilled

### How often do you use social media?

	1. Never	2	3	4	5	6	7. Very frequently		
Но	ow many he	ours per day	v do you use	social media	1?				
0	2	4 6	8	10 12	14 16	18	20 22 24		
Select number of hours									

To what extent do you agree with the following statements?

	1. Strongly disagree	2	3	4	5	6	7. Strongly agree
l often shop online using e- commerce.	0	0	0	0	0	0	0
Almost every week I shop online using e- commerce.	0	0	0	0	0	0	0
l prefer shopping online using e- commerce in searching for goods.	0	0	0	0	0	0	0
l will always use e- commerce again in shopping.	0	0	0	0	0	0	0

To what extent do you agree with the following statements?

	1. Strongly disagree	2	3	4	5	6	7. Strongly agree
Using a live stream shopping platform to acquire a product would permit me to purchase more efficiently.	0	0	0	0	0	0	0
Using a live stream shopping platform to acquire a product would permit me to purchase more quickly.	0	0	0	0	0	0	0
Using a live stream shopping platform to acquire a product would be useful to make my purchases.	0	0	0	0	0	0	0

To what extent do you agree with the following statements?

	1. Strongly disagree	2	3	4	5	6	7. Strongly agree
Using a live stream shopping platform to make my purchases is a good idea.	0	0	0	0	0	0	0
My general opinion of a live stream shopping platform is positive.	0	0	0	0	0	0	0
Using a live stream shopping platform to purchase a product seems an intelligent idea to me.	0	0	0	0	0	0	0

### What was the name of the brand shown in the live stream?

Enik	Puma	Nike	Loma

## How many viewers did the live stream have?

### What is your gender?

|--|

How o	old are yo	ou?								
0	10	20	30	40	50	60	70	80	90	100
Select your age										

Thank you for participating in this survey concerning live stream shopping! If you have any questions, please reach out to: 50635@student.hhs.se, 50634@student.hhs.se or jonas.colliander@hhs.se

Please, note that the screenshot shown in this study was a fictitious example of a live stream shopping event. The picture, designated trademarks and brands used in this research are the property of their respective owners.

# Appendix 4: Live Stream Shopping Broadcasts



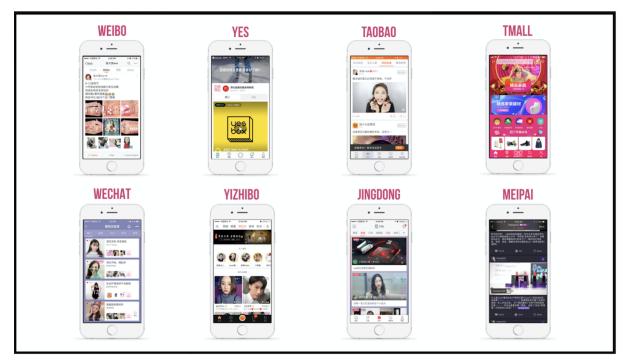
Live Stream Shopping broadcast: CommentSold



Live Stream Shopping broadcast: Shoploop



Live Stream Shopping broadcast: CAIA Cosmetics



Live Stream Shopping platforms: Chinese live stream shopping players