

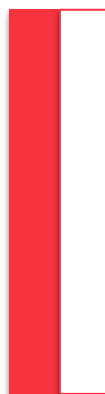
**MASTER
MANAGEMENT**

What are the determinants of engagement and loyalty with local newspapers on social media?

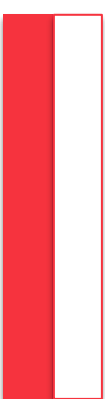
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What are the determinants of engagement and loyalty with local newspapers on social media?

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Abstract

Purpose: This paper aims to advance research into the determinants of engagement and loyalty with local newspapers on social media, by identifying the content and user characteristics that promote engagement and analyzing the impact of engagement on loyalty towards the social media presence of these newspapers.

Method: The article includes a systematic literature review on the determinants of social media users' engagement and loyalty regarding general newspapers and a quantitative study addressing local newspapers conducted in Portugal in 2022.

Results: This study evidences the impacts of content strategies undertaken by local newspapers on social media on users' engagement. In line with extant literature on national/international newspapers, this study found that users' characteristics are also associated with the propensity to engage with content posted by local newspapers. This research also demonstrates engagement may vary with the type of news, namely with its local scope. Overall, these results provide important suggestions for local newspapers to foster user loyalty by disseminating news on social media.

Main contributions/innovation: The contributions on the topic of engagement and loyalty with local newspapers on social media are scarce, being one of the most prominent gaps in the literature. Furthermore, this study identified significant differences between global engagement and engagement divided into its components. Based on the gaps found, several future research suggestions are provided.

Keywords: Engagement, Loyalty, Local Newspapers, Social Media.

Resumo

Objetivo: Este artigo procura aprofundar a investigação sobre os determinantes do envolvimento e lealdade com os jornais locais nas redes sociais, através da identificação das características do conteúdo das notícias e do utilizador que promovem o envolvimento e analisando o impacto do envolvimento na lealdade para com a presença destes jornais nas redes sociais.

Método: O artigo inclui uma revisão sistemática da literatura sobre os determinantes do envolvimento e lealdade dos utilizadores das redes sociais com jornais gerais e um estudo quantitativo sobre jornais locais, realizado em Portugal em 2022.

Resultados: Este estudo evidencia os impactos das estratégias de conteúdo adotadas pelos jornais locais nas redes sociais no envolvimento dos utilizadores. Em consonância com a literatura existente sobre jornais nacionais/internacionais, este estudo concluiu que as características dos utilizadores estão também associadas à propensão para se envolverem com conteúdos publicados por jornais locais. Esta investigação também demonstra que o envolvimento pode variar com o tipo de notícias, nomeadamente com o seu âmbito local. Neste sentido, estes resultados fornecem sugestões importantes para que os jornais locais promovam a lealdade dos utilizadores através da divulgação de notícias nas redes sociais.

Principais contributos/ inovação: As contribuições sobre o tema do envolvimento e da lealdade com os jornais locais nas redes sociais são escassas, sendo uma das lacunas mais proeminentes da literatura. Além disso, este estudo identificou diferenças significativas entre o envolvimento global e o envolvimento dividido em componentes. Com base nas lacunas encontradas, são fornecidas várias sugestões de investigação futura.

Palavras-chave: Envolvimento, Lealdade, Jornais Locais, Redes Sociais.

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List of Abbreviations

ANOVA	Analysis of Variance
CFI	Comparative Fit Index
FB	Facebook
GFI	Goodness of Fit Index
RMR	Root Mean Square Residual
RMSEA	Root Mean Square Error of Approximation
SEM	Structural Equation Modelling
SM	Social Media
SNS	Social Networking Sites

1. Introduction

1.1. Background

There have been numerous changes in the production of journalistic content over the last two decades. If news used to come from a small set of highly edited sources, there are thousands of online news sites today as, with the emergence of mobility and constant technological advances, the press has been forced to keep up with these changes (Wilding et al., 2018).

According to the Reuters Institute's Digital News Report of 2020, the COVID-19 crisis caused a significant increase in news consumption, particularly for television news and online news, with 52% of American adults preferring to get their news from digital platforms by 2020. On the other hand, the consumption of printed newspapers has decreased due to blockade regimes in several countries, hampering the distribution chains for printed news products (Newman et al., 2020).

As the Internet provides many information sources and channels, people access online news not only directly through media organizations' websites, but also through a variety of paths such as search engines and social media (Nielsen & Schröder, 2014). Being a way for users to discover new articles and keep constantly updated, social media also represents a vehicle for enhancing brand loyalty and engagement among consumers and with organizations, as people can easily interact and share content (Chen & Pain, 2021; Dvir-Gvirsman, 2020).

In fact, the last decade has been characterized by the rise of social media as an important source of news (Mitchell et al., 2018). In Portugal, television and Internet (including social media) currently dominate as news sources, with social media alone being used by more than half of the population using the Internet for that purpose - about 55.3% (Newman et al., 2021). In 2020, Facebook led as a regular source of news with 36% of Americans using this platform to consume news, followed by YouTube with 23% and WhatsApp with 16% (Auxier & Anderson, 2021). With print subscriptions continuing to decline, newspapers have realized that by publishing content on their websites and social media pages, they are able to retain their readers as they move from print to online access, with their profitability coming mainly from digital advertising revenues (Lee, 2019; Shieber, 2019).

However, regardless of the actual exponential growth of news platforms, news engagement, where the news attracts and holds the reader's attention (Gil de Zúñiga et al., 2012), is declining (Lee & Chyi, 2015; Mitchell et al., 2016). Thus, this can cause media organizations to

lose control over the dissemination of information and start producing content to retain audiences (Chen & Pain, 2021). The resulting online media engagement, which includes participation and behavior in virtual communities, increases brand loyalty (Lin et al., 2018; Lischka & Messerli, 2016), which Lim et al. (2015) conceptualize as the probability of readers continuing to be loyal to newspapers, and can be described as the customer's ultimate relationship and awareness with the brand (Keller, 1993).

Other than the different forms of access, it is also important to consider the distinct types of news, since people tend to consume specific genres of news for specific reasons (McWhorter, 2019). Over the past decades, journalism scholars have focused on two types of news - soft and hard news (Lehman-Wilzig & Seletzky, 2010). Regarding the first type, these are characterized by news that are less important but attract more audience by mixing information with entertainment, in opposition to the second type of news, which presents meaning to most readers but attracts few by only providing facts, some difficult to understand (Mills-Brown, 2014; Reinemann et al., 2012). Hard news is commonly associated with informational reasons and topics such as politics, economics, and business, while soft news may be read for entertainment, such as sports, lifestyle, art, culture, or celebrity news.

Therefore, news, regardless of its content, can be published by several newspapers - local/regional, national, and international - that differ in their scope and, consequently, in the wider or narrower geographical distribution of the news. For this research, local newspapers were given special consideration, with Claussen (2003, p. 277) referring to them as 'newspapers that are not national newspapers, including those with a regional circulation if they publish news about the area in which they are published and in which they have a primary circulation base'. Two main characteristics pointed to local newspapers are decentralization and geographic limitation, thus representing a regional content and agenda (Engin, 2020).

Compared to national and international media, the corporate structures of local media are not always specialized and human resources tend to be limited, having fewer resources to invest in new digital strategies than their national or international counterparts (Ali et al., 2020; Hess & Waller, 2016; Leckner et al., 2019). As such, about the strategies being defined by these newspapers, Jerónimo et al. (2020) state that national media seek to replicate what international media do, and so do local media in imitating national newspapers. But will the strategies to be used have the same impact with newspapers having different scopes?

Although there is a relevant body of literature addressing social media as the main channel

of news consumption (e.g., Nielsen & Schröder, 2014; Pentina & Tarafdar, 2014; Vermeer et al., 2020), as well as being a way to obtain loyalty and engagement (e.g., Chen, 2020; Dvir-Gvirzman, 2020), all these studies are related to international or national newspapers whose market presence is practically dominant among the public. In this sense, there is still a lack of research assessing the effect of social media on news dissemination among the publics of local newspapers. This dissertation argues that social media can be of great relevance to local newspapers in building brand loyalty and engagement with readers, while increasing online news dissemination and dealing with the lack of resources to invest in expensive advertising.

1.2. Research Problem

Hence, guided by the gap found in the literature, the research problem defined for this dissertation is as follows: ***What are the determinants of engagement and loyalty with local newspapers on social media?***

Indeed, major newspapers have already identified key strategies to master their offline and online presence and through this, build engagement and loyalty with customers or potential customers. As studies on local newspapers are still lacking, perhaps because this is a recent change in the business model of these organizations accentuated by the pandemic, the focus of this research is to identify the determinants of engagement and loyalty and to explore social media strategies for local newspapers, since the target audience differs from national or international newspapers, which may result in different strategies as well.

1.3. Research Objectives

With newspapers increasingly publishing their articles online while the print media is diminishing (Park & Kaye, 2021), the main objective of this research is to identify the determinants of brand loyalty and engagement with local newspapers' posts on social media. Accordingly, the following research objectives were defined:

- (i) analyse the impact of news content (e.g. type of news) on engagement with local newspapers posts on social media;
- (ii) identify customers' characteristics associated with engagement with local newspapers posts on social media;
- (iii) analyse the impact of engagement on loyalty towards the presence of local newspapers on social media;

- (iv) propose effective strategies for local newspapers to increase engagement and brand loyalty with customers via social media.

1.4. Research Method

The methodology comprises a systematic literature review followed by a quantitative study. Considering that the literature about social media strategies by local newspapers is scattered, a systematic literature review regarding news on social media and the content and user characteristics that predict engagement and brand loyalty was developed, so that all the concepts of the current study could be clarified and contribute to answering the proposed research question. The process of developing this type of review includes characterizing each selected study, assessing their quality, identifying important concepts, comparing the statistical analyses presented, and conclude on what the literature reports regarding a particular intervention, while also pointing out problems/issues that need further study (Paré & Kitsiou, 2017). Furthermore, a quantitative study was conducted to provide an empirical contribution while addressing the research problem. According to Malhotra et al. (2017), quantitative methods allow for the examination of the effects of specific variables (independent variables) on an outcome of interest (dependent variables), while also enabling measurement of variables that are not objective, such as intention and attitude. For Bryman (2016), this quantitative approach aims to explain a particular phenomenon by adopting objective measures and statistical analysis of data collected through different methods, including questionnaires.

1.5. Dissertation Structure

This dissertation is divided into six chapters. The present chapter describes the background, the research problem and its relevance, the research objectives, and the methodology adopted. The second chapter of the study focuses on the systematic literature review in a comprehensive exploration of the main topics related to the research problem. The third chapter presents the conceptual framework and hypothesis development, and the fourth chapter discusses the methodology, including the description of the measures used in the study and the identification of appropriate research methods. The fifth chapter presents and discusses the results obtained from the quantitative study through the methods used. Finally, a conclusion is presented in the sixth chapter, highlighting the theoretical contributions, implications for managers, limitations, and suggestions for future research.

2. Systematic Literature Review

In order to investigate how local newspapers can build brand loyalty and engagement through social media, it is critical to understand what is currently covered in the literature. A systematic literature review was developed to ensure that all the information from different studies on a topic can be integrated, obtaining a broader spectrum of results (Sampaio & Mancini, 2007). In fact, since the production of scientific literature on this topic is increasing exponentially every year, Donato and Donato (2019) highlight that systematic literature reviews have become increasingly important as they collect all the available evidence.

2.1. Data Selection

The systematic literature review was conducted according to the PRISMA 2020 Statement for Reporting Systematic Reviews (Page et al., 2021). The eligibility criteria were defined using the PICOT strategy, and are included in the research protocol performed a priori, as represented in Table A-1.

Regarding information sources, the primary one was the integrated Web of Science as it is considered by many authors (e.g., Birkle et al., 2020; Li et al., 2018) as being the best platform for searching scientific citations and analytical information, allowing researchers to search across an extensive and widely accepted database. Thus, data was collected on 2021 August 17th following the search keys that are represented in Table A-2.

The selection of the articles comprised two phases. Firstly, titles, abstracts, and keywords were carefully screened according to the PICOT selection criteria. Articles that were beyond the defined scope were excluded. Then, the remaining articles were read in full. As described in Appendix B, a total of 182 records were initially identified. Subsequently, some records were excluded due to not being journal articles ($n = 24$), and not fitting the selection criteria in stage one ($n = 126$) and stage two ($n = 38$). Articles not in English were also excluded ($n = 5$). Thus, 13 studies were identified as addressing social media users' engagement and loyalty regarding local newspapers.

2.2. Sample Characteristics

The articles selected for this study were published between 2016 and 2021. Only two articles focus on loyalty as an outcome of newspapers' social media strategies, whereas the remaining eleven investigate how newspapers engage readers through social media. All articles focus on

major newspapers, with only one specifically referring to engagement with local newspapers. It is also worth mentioning that there is a great diversity of researchers approaching the topic and only one scholar was involved in more than one article of the sample (Kümpel, 2019, 2020). In terms of geographical distribution, the results showed a wide range of distribution across four continents, with Germany ($n = 4$) and the United States ($n = 3$) being the main contributors. Overall, this evidences the scattered and fragmented literature on the topic of users' engagement and loyalty with newspapers on social media.

Moreover, nine articles were published in journals specialized in journalism research, three were published in journals that explore themes within the media and communication field and one in a journal covering human-computer interaction and cyberpsychology, all international journals indexed by different databases. As for the scope, all belong to the field of communication, except for one in the field of psychology (Table C-1).

An overview of the thirteen articles analysed in this review is presented in Table C-2. Diverse methodological approaches were adopted, including content analysis of social media posts by newspapers (Choi et al., 2020; Khuntia et al., 2016; Park & Kaye, 2021; Salgado & Bobba, 2019) and surveys with social media users (Bobkowski et al., 2019; Chen & Pain, 2021; Lischka & Messerli, 2016). Most articles focus on the determinants of engagement (Choi et al., 2020; Eg & Krumsvik, 2019; Karnowski et al., 2017; Khuntia et al., 2016; Kümpel, 2019; Park & Kaye, 2021; Salgado & Bobba, 2019; Sang et al., 2020), by approaching several types of factors (e.g., users' characteristics, news type) and hence providing complementary perspectives on the phenomenon. Only a few studies approach loyalty toward newspapers (Bobkowski et al., 2019; Chen & Pain, 2021; Lischka & Messerli, 2016; Sang et al., 2020). The next section presents an integrated view on the contributions provided by this set of articles.

2.3. Literature Review

Social media platforms offer several easy-to-use tools such as follow, share and like buttons that simplify the process of exposure, recommendation, and dissemination of news among users, and ultimately facilitate user engagement with both news and their publishers. As demonstrated by the literature review provided along these pages, engagement is determined by a wide set of variables, including users' characteristics and content characteristics. But before delving into the determinants of engagement and loyalty, next sections explore the concept of engagement and the nature of news exposure.

2.3.1 Engagement: concept and dimensions

The literature associates social media user engagement with involvement and interaction behaviours. Napoli (2011) conceptualizes user engagement as a broad phenomenon covering all sorts of user attention and involvement with the media. Ksiazek et al. (2016) further state that engagement is often expressed as interactivity, being understood as a key component of the broader phenomenon of engagement. Ha et al. (2018, p. 720) define engagement as ‘the involvement in news content for either personal or social purposes, which can be indicated by the effort made in obtaining and utilizing the news content among the audience’.

Demonstrating the multifaceted nature of social media engagement, several authors divided it into two or more components. Some examples are provided in Table 1. Interestingly, these dimensions proposed by extant literature combine exposure, neural reactions (e.g., attention), and active interactivity behaviour (e.g., sharing). This diversity is in line with the wide and comprehensive definitions of engagement that also combine both psychological (i.e., involvement) and behavioural (i.e., interaction) aspects of the phenomenon.

Table 1: Components of news engagement proposed in the literature

Authors	#	Components of social media news engagement
Chen and Pain (2021)	2	(i) exposure engagement, i.e., attention paid to the news when using social media and the frequency of getting the news; (ii) content interaction engagement, which is manifested in sharing, commenting, quoting, and posting feelings about the news.
Salgado and Bobba (2019)	3	(i) like; (ii) share; (iii) comment
Ha et al. (2018)	4	(i) news consumption (exposure), (ii) news platform use, (iii) news sharing, and (iv) exchange of news and news media participation.

Source: The authors

Kümpel (2019) explains that behavioural interaction responses to news (i.e., liking, commenting, and sharing) are generally discussed with reference to the term social media engagement. For Chen and Pain (2021), it consists of two constructs - Exposure Engagement (attention paid to the news when using social media and the frequency of getting the news) and Functional Engagement, which is reflected in sharing, commenting, quoting the news, and posting feelings about the news.

Still, Salgado and Bobba (2019) argue that they require distinct levels of commitment, considering the subsequent effort and willingness to convey a personal position. Liking (or disliking), the lowest level, does not require much time or effort, whereas sharing can be more costly from a social point of view, as the redistribution of content originally published by

others implies the public declaration of a position. In turn, commenting involves the greatest level of commitment since it represents the willingness to convey a personal opinion.

Attesting the overall importance of the behavioural interaction responses, all studies analysed in this article consider these forms of engagement, particularly the ones adopting quantitative approaches (i.e., surveys and content analysis) to explain both the determinants of user engagement and the effects of engagement in terms of loyalty to the publisher.

2.3.2 Types of news exposure

Social media platforms often act as information intermediaries, in which non-intended news contacts are most likely to occur while users scroll their feeds. According to Wieland and Kleinen-von Königslöw (2020, p. 1050) incidental news exposure comprises ‘both unintentional contact with the news while using a medium for other reasons than active information seeking as well as the processing of and learning from unintentionally encountered news’. Due to the expected interdependence between news exposure and news engagement, several studies in the literature have explored incidental news processing (Wieland & Kleinen-von Königslöw, 2020), analysed the dimensions of incidental news exposure (Kümpel, 2020), and explored its impacts on news engagement (Kümpel, 2019).

The literature that focuses on accidental news exposure implies that there are expected differences in terms of engagement with news depending on intentional and unintentional exposure. Intentional use may involve users accessing the pages of news providers (Wieland & Kleinen-von Königslöw, 2020), or deciding to follow them, thus allowing their publications to appear in the newsfeed, becoming more relevant and likely to generate interaction. For instance, Karnowski et al. (2017) found that users’ engagement with incidentally encountered news is mainly influenced by the intersection between their perceptions of the content and their topics of interest. Still, it is important to note that possible differences in the probability of engagement between intentional and accidental news exposure have not been adequately explored yet, being one of the first research gaps identified by this review.

2.3.3 Content characteristics

As stressed by several authors (e.g., Kümpel, 2020; Wieland & Kleinen-von Königslöw, 2020), social media posts offer a preview of the news content and hyperlinks leading to the full articles on their websites, requiring that the exposed user clicks on the publication to have access to the full content. This preview includes: (i) the source, i.e., the name and profile

image of the publisher, (ii) the caption, including a title and short text, (iii) visual information, usually a preview of the linked page and an image, (iv) social endorsement cues such as the number of likes and the identification of relevant users who interacted with the post, and (v) interaction buttons that enable for instance commenting and sharing.

Thus, the literature associates several content characteristics with users' engagement with news on social media as presented in Table 2.

Table 2: Characteristics of news associated with engagement

Post Component	Characteristics of news that affect engagement	Findings	Reference
Link	Embedding external link to the full article	Increases the credibility of an article	(Khuntia et al., 2016)
Caption	Catchy title and subjectivity of style	Positive relation with the popularity of an article	(Khuntia et al., 2016)
	Negativity	Positively related to engagement	(Salgado & Bobba, 2019)
	Deviance (unusual and infrequent events)	Positive relation with liking	(Park & Kaye, 2021) (Salgado & Bobba, 2019)
	Proximity	Positive relation with all reactions, having the greatest impact on liking	(Salgado & Bobba, 2019)
	Social significance	Positive relation with commenting	(Park & Kaye, 2021)
	Soft news	Capture the user's attention	(Bucher & Schumacher, 2006)
	Visual Information	Positive emotions	Negative relation with sharing and commenting
Sadness (on cultural and international news)		Positive relation with engagement	(Choi et al., 2020)
Fear (on international news)		Positive relation with sharing and commenting	(Choi et al., 2020)
Anger (on international news)		Positive relation with commenting and reacting	(Choi et al., 2020)
Disgust (on national news)		Positive relation with engagement	(Choi et al., 2020)
Disgust (on international news)		Negative relation with engagement	(Choi et al., 2020)

Source: The authors

Khuntia et al. (2016) found that the preview of an article with a catchy title that stimulates the reader's attention will increase the popularity of an article and motivate sharing behaviours. Still, the literature points out the type of news and emotions conveyed as particularly important to explain engagement with news posts.

(i) Type of news

Given the automated relevance verification that occurs during scrolling, news posts that resemble soft news - with strong visuals and emotional cues – are more susceptible to capture the user's attention within the competitive newsfeed environment (Bucher & Schumacher, 2006). Hard news is less likely to be recognized as relatable, which reinforces the dominance of soft news in incidental news exposure (Kaiser et al., 2018; Thorson & Wells, 2016).

Concerning the topics covered in the news, one of the criteria journalists use to determine which events or issues are considered worthy of coverage are the news values (Al-Rawi, 2017; Staab, 1990). To understand the impact of these on social media users to like, comment, and share mainstream news stories on Facebook, Park and Kaye (2021) were guided by the framework proposed by Shoemaker and Cohen (2006) of two broad categories of news values - deviance and social significance - in which, according to the authors, deviance refers to news events that are unusual and infrequent, and social significance considers the extent to which an event affected people and society, consisting of four dimensions: political significance, economic significance, cultural significance, and public significance.

Accordingly, Park and Kaye (2021) found that stories with higher deviance receive more likes, in which sensational and curious stories are often more clicked on. Since commenting requires some effort and time, people tend to comment more often on articles with greater social significance than on articles with greater deviance, which can be explained in terms of cultural socialization. Regarding sharing activity, it varies between newspapers sharing stories of greater social significance more often than stories of greater deviance, with the authors suggesting that the political orientation of the readers may explain these results.

Salgado and Bobba (2019) also contributed to the research in the field of nature of events and specific features of a news article, by noticing the existence of different patterns of users' reactions and engagement with the news posts on Facebook. The authors argue that, in general, reactions appear to depend more on the nature of events than on the features of news content, that is, that unexpected events and proximity are proved to be highly significant for all reactions - having in both cases the greatest impact on likes, similar to what was previously presented by Park and Kaye (2021).

(ii) Emotions conveyed in the news

Regarding the features of content, namely negativity, emotions, and personalization, these only affected users up to a certain level, being that negativity, when present in the news post,

was significantly and positively related to likes, shares, and comments, while emotions and personalization were less significant (Salgado & Bobba, 2019).

Choi et al. (2020) tested a wide set of emotions (i.e., sadness, anger, fear, disgust, happiness, and contempt), and suggested that sadness was the emotion most associated with engagement, particularly for cultural and international news. The authors stressed that many previous studies of content virality highlighted the role of other types of negative emotions, such as anger and anxiety, whereas the role of sadness in content transmission has always received less attention for being considered a low-arousal emotion, known to be less effective for email-forwarding (Berger & Milkman, 2012) or content sharing (Berger, 2011).

Another particularity pointed out by Choi et al. (2020) was that users are less likely to share or comment on a news story with positive emotions, although they tend to react frequently to positive news stories. Still, they found that the role of certain emotions varies between national and international news, since fear and anger attracted more engagement from users for international news (fear for sharing and commenting; anger for commenting and reacting), while the same did not apply to national news. Concerning the patterns for disgust, the authors highlighted these were different as disgust was associated with more engagement for national news in terms of sharing, commenting, and reacting, while being negatively associated with engagement for international news (Choi et al., 2020).

2.3.4 Characteristics of readers associated with engagement

In addition to the content characteristics, previous studies have also shown that individual factors can influence news users' uptake, reception, and dissemination of news (e.g., Fletcher & Park, 2017; Park & Kaye, 2018; Zhang & Ha, 2016). The characteristics mostly associated with news engagement on social media are highlighted in Table 3.

Table 3: Characteristics of readers that are associated with engagement

Users' characteristics		Findings	Source
Sociodemographic characteristics	Age	Older users are less likely to interact	(Sang et al., 2020)
	Gender	Females are more willing to like and share Males are more willing to comment	(Sang et al., 2020) (Bobkowski et al., 2019)
	Education	Positive relation with sharing and commenting Positive relation with engagement	(Sang et al., 2020) (Bobkowski et al., 2019)

	Trust on the news	Negative relation with sharing and commenting	(Fletcher & Park, 2017)
	Neuroticism	Negative relation with engagement	(Eg & Krumsvik, 2019)
	Emotional Stability	Positive relation with engagement	(Eg & Krumsvik, 2019)
	Extroversion	Positive relation with engagement	(Eg & Krumsvik, 2019)
	Openness	Negative relation with engagement	(Eg & Krumsvik, 2019)
Usage behaviour	Heavy news users	Positive relation with sharing	(Sang et al., 2020)
Users' connections	Types of interests of users' connections	Hyperlocal news is generally of little interest to most distant friends	(Bobkowski et al., 2019)

Source: The authors

Some studies in the literature explored the associations between sociodemographic characteristics of the users and their likelihood to engage with news content on social media. Generally, women and younger users were found as more likely to interact with news (Bobkowski et al., 2019), in line with (Sang et al., 2020), who stated that women are more prone to share news and to interact with signalling activities (such as liking and rating), and men are more likely to engage expressively with news (commenting).

Thus, Sang et al. (2020) stressed the positive relation between education level and news engagement, including sharing and commenting news posts. Additionally, Bobkowski et al. (2019) found that less-educated individuals are more likely to share hyperlocal news, suggesting that social media may offer an opportunity for under-represented segments of the population in local participation. However, regarding the potential of social media as a tool to engage with hyperlocal news, this may be mitigated by the fact that twice as many readers share hyperlocal news via word-of-mouth than by social media (Bobkowski et al., 2019).

Another factor that is pointed out as associated with news engagement is trust in the news. Although both people who trust and those who do not trust the news are prompt to engage (Sang et al., 2020), people with low levels of trust in news media are more likely to news sharing and commenting behaviors (Fletcher & Park, 2017).

From another perspective, according to Eg and Krumsvik (2019), when referring to reader characteristics, it is also important to mention that online routines leave behind trails of data about people's identities, habits, preferences, and connections, which will serve as a filter whenever new information is searched, yielding relevant results and content of interest. This, in most cases, can mean that news is framed to appeal to individual personalities and that, in

fact, there is a relationship between personality traits and news engagement.

Indeed, people who score high on neuroticism are less likely to engage with news than those who tend more toward emotional stability, just as informational stories engage people who are more extroverted and more prone to rational engagement, while people more prone to experimental behaviour and information processing are less likely to engage (Eg & Krumsvik, 2019). To be noted, in this article, these scores were assigned according to the Big Five personality test which provides scores on five descriptive scales, each representing a personality trait, following the contributions of Engvik and Clausen (2011).

Additionally, Sang et al. (2020) suggested that heavy news users, (i.e. users who access news more than once a day) use more interaction behaviours than light users, with shares standing out when compared among both. Moreover, it was found by the authors that the level of interest in the news in general seems associated with proactive interaction with news.

Finally, some authors stressed that the use of social media to share hyperlocal news is limited in the extent that it may result from a misalignment between the people readers connect with through social media and the people who are interested in hyperlocal news, as hyperlocal news is generally of most interest to some of the geographically close connections and may be of little interest to most distant friends (Bobkowski et al., 2019).

2.3.5 Loyalty toward newspapers on social media

Currently, and since the highly competitive online environment is characterized by low switching costs for readers, it is critical to gain and retain loyal audiences for online news outlets, whereas this loyalty explains long-term and committed relationships with a brand (Lischka & Messerli, 2016). In this sense, Lim et al. (2015) state that brand loyalty is the likelihood of readers staying loyal to newspapers, and this will be positively affected whenever a company provides popular social media user content and frequently updates that same content (Erdoğan & Cicek, 2012).

Referring to this customer intention to repeat purchases in the future, Picón et al. (2014) add that loyalty comprises attitudinal, cognitive, affective, and conative, dimensions. When referring to online environments, a derived concept of e-loyalty on the behavioural dimension emerges, of which the repeat visit rate to websites and the total time spent on a website are part (Gommans et al., 2001). Thus, for online news outlets, loyal behaviour will include spending more time or visiting the brand's website more often. On the other hand, on the

cognitive loyalty dimension, users of an online news outlet consider that outlet as their best alternative to their needs. Regarding the affective dimension, users prefer a particular news outlet and will look for it whenever necessary. Finally, on the conative dimension, users express an intention to reuse the news outlet, which is expected to translate into that actual reuse behaviour (Lischka & Messerli, 2016).

Chen and Pain (2021) point out that those who are loyal to Facebook as a news source are also, in most cases, more prone to be loyal to the newspapers they see on Facebook and more likely to directly visit the newspapers' website. This also implies that since the newspaper that users get news from on Facebook are more concentrated on major or elite brands, Facebook can enhance this connection with brands that the user is already aware of, while smaller or unknown brands do not benefit as significantly from this loyalty enhancement.

Some studies tried to explore the relationships between engagement behaviours and loyalty, but the findings are somewhat inconsistent. The study conducted by Chen and Pain (2021) indicates that news that caught readers' attention (or Exposure Engagement) on Facebook is more effective than news content that prompts readers to share, react and comment (Content-Interaction Engagement) in enhancing newspaper brand loyalty, but did not support the direct association between news engagement (i.e., share, react and comment behaviours) and newspaper loyalty. However, Lischka and Messerli (2016) found a small statistically significant effect of commenting on loyalty, and of sharing mediated by satisfaction, which stood out as the main determinant of loyalty.

2.3.6 Conclusion and future research suggestions

The previous pages cover the factors associated with user engagement and loyalty with newspapers on social media by extant literature. Clearly, the number of studies on the topic is quite reduced. Still, the studies conducted so far provide relevant insights, covering both the characteristics of the news posted on social media and the characteristics of the users that interact with them. This section highlights several gaps in the literature that are suggested for future research, as follows.

Types of engagement. Described in the literature as a broad phenomenon, engagement includes interaction with posts such as commenting, sharing, or carefully reading the full article, all of which require distinct efforts (Ha et al., 2018; Ksiazek et al., 2016; Napoli, 2011). However, it may include other types of user experiences, as attention and involvement, or

interpersonal forms of interaction, such as discussing news topics with friends. Despite the complexity and multidimensionality of this concept, engagement is often approached in the literature as the types of behavioural interactions (e.g., share, comment), generating several avenues for future research to deepen the knowledge about specific types of interaction. Considering the often controversial conclusions on the determinants of each type of behaviour, it would be beneficial to have studies that explored in detail some of the common types of engagement, namely sharing which is considered by Ha et al. (2018) as the highest level of engagement. Conceptual articles exploring the communalities and distinctions between engagement and interaction would also provide relevant contributions to the literature, enabling a more rigorous definition of the constructs considered in social media studies.

Characteristics of news that affect engagement. The literature provides insights about some features that positively affect engagement related to the type of news and the emotions conveyed. One of the most discussed typologies regarding news is its hard/soft nature. Arguably, the study of its association with engagement and loyalty needs to be continued, especially during special events such as political, economic, and public health crises such as the Covid-19 pandemic. As demonstrated along these pages, there are some interesting contributions regarding the role of emotions in user engagement and loyalty (e.g., Choi et al., 2020; Salgado & Bobba, 2019). Hence, another interesting area for further research is exploring the psychological mechanisms associated with news engagement. Indeed, the intrinsic emotional nature of engagement would benefit for more studies that include cognitive and social psychology perspectives, considering theories, models, and variables that may provide additional perspectives in understanding engagement and loyalty.

Characteristics of the news provider. Most studies conducted on the topic of news dissemination on social media concerns mainstream newspapers. In line with this, only one of the studies found was about local newspapers (Bobkowski et al., 2019), which clearly need more attention by future research. As generally accepted, local newspapers use similar social media strategies than national and international newspapers but have several specific constraints in terms of resources and different scopes that should be further understood in the social media context. Another interesting topic that needs to be further investigated is source credibility. Previous studies have explored the trust in news, but trust in the information source should also be analysed, particularly the perceived credibility of the newspaper posting the news, considering the wide access to news on social media, from both known and unknown sources. In this regard, and again considering the social nature of social media, the

role of relevant others (e.g., family, friends, celebrities) as intermediaries of news, by sharing and reacting with newspapers' posts, also deserves to be further explored by future research.

Broadening the set of determinants of engagement. One of the main conclusions of this review is that the number of studies on news engagement on social media is quite small and, consequently, the diversity of determinants considered so far is limited. With this regard, new characteristics can be added to the two dimensions most explored so far: content characteristics and user characteristics. Still, other factors and perspectives are still disregarded, as the impact of previous interaction with the posts, focusing on the social nature of all types of interactions in this type of platform. One possible approach is to consider the impact of post interaction on self-presentation and self-image on social media (Schlosser, 2020).

Brand loyalty toward online news brands. Chen and Pain (2021) state that Facebook and newspapers are mutually beneficial in enhancing each other's brand value. Thus, common practices are reflected in attracting readers to visit the newspaper's website ensuring that newspapers protect this illusory loyalty and turn the loyalty of readers on Facebook into loyal readers on the websites. However, this literature applies to the major news brands. When referring to local newspapers, even if the news content is interesting to someone, it is necessary to understand whether they will consider remaining loyal to the newspaper. Apparently, the relationship between engagement and loyalty needs to be further explored to understand the extent to which one impacts the other, both due to the reduced number of studies and the unclear findings obtained so far.

Broadening the methods adopted. Finally, it is worth stressing that most of the studies conducted so far have a quantitative nature and the dominant approach is content analysis of news posted by mainstream newspapers. The types of variables identified so far as main determinants of news engagement (e.g., emotions conveyed, topic) are particularly relevant for other methodologies such as experimental design, which could provide complementary views and deeper knowledge on the topic. Additionally, qualitative approaches and conceptual studies could help strengthen the support of some causality effects that have been tested, namely regarding the users' profiles (e.g., gender, age), that in some cases could seem superficially approached as mere statistically significant correlations. Overall, this area of study deserves more sophisticated and theoretically sound approaches that can effectively help practitioners address the challenges of generating engagement and loyalty and, consequently, achieve their social media marketing objectives.

3. Conceptual Framework and Development of Hypotheses

To properly understand the determinants of customer engagement and loyalty in local newspapers, the reason for choosing the variables to be studied will be justified next, with recourse to the authors who have contributed to the literature with previous complementary studies. Subsequently, the research hypotheses and the proposed model will be presented.

3.1. Sociodemographic Characteristics

As described in the literature review, individual characteristics can influence how user's uptake, receive, and disseminate news (e.g., Park & Kaye, 2018; Zhang & Ha, 2016). Moreover, some authors have explored the associations between users' sociodemographic characteristics and the likelihood of engaging with news content on social media (e.g., Fletcher & Park, 2017; Kümpel, 2019). Age, for instance, has been pointed out as influencing online news consumption (e.g., Boulianne & Shehata, 2022; Chyi & Lee, 2013; Lee & Chyi, 2014), including evidence that this is also verified for engagement with news published by newspapers on social media, whereas younger users are expected to interact more with news (Bobkowski et al., 2019; Sang et al., 2020). In this regard, the first hypotheses were formulated as follows:

H1 Users' demographics are associated with engagement with local newspapers on social media

H1a Age is negatively associated with engagement with local newspapers on social media

Many previous studies have investigated the gender differences in news consumption in traditional and online media (e.g., Benesch, 2012; Eveland & Scheufele, 2000; Soroka et al., 2016) and in online participation (e.g., Baek et al., 2021; Lee & Ryu, 2019; Vasilescu et al., 2013). Particularly, Sang et al. (2020) found that women are more prone to like and share the news on social media, specifically for local news (Bobkowski et al., 2019), while men are more likely to comment (Baek et al., 2021), resulting in the following hypotheses:

H1b Female individuals like local newspaper posts on social media more than male individuals

H1c Female individuals share local newspaper posts on social media more than male individuals

H1d Male individuals comment on local newspaper posts on social media more than female individuals

Sang et al. (2020) also noticed that there is a positive relation between education level and

engagement, including sharing and commenting on news posts. These results are in line with other several studies that demonstrate the association between education level and news consumption and interaction (e.g., Juan Pablo et al., 2020; Lee & Chyi, 2014; Liu & Eveland Jr, 2005). However, some contradictory findings were obtained by Bobkowski et al. (2019), who found that less educated individuals are more likely to share hyperlocal news. As a result, the following hypotheses were established:

H1e Education is positively associated with sharing local newspaper posts on social media

H1f Education is positively associated with commenting a local newspaper post on social media

3.2. Place Attachment

When discussing the topic of local news, Dutta-Bergman (2004) realized that people involved in their community seek information about that community in a conventional medium and are likely to consume the same information online. Thus, the literature has been exploring the link between community attachment and engagement with local news for traditional media (e.g., Paek et al., 2005; Stamm et al., 1997), while other studies have also focused on the link between online news consumption and community attachment (e.g., Gulyas et al., 2019; Hoffman & Eveland, 2010), with Bobkowski et al. (2019) suggesting that individuals who are involved in their neighbourhood share more local news than those who are not.

Moreover, Wang et al. (2021) noticed that place attachment and social media affordance are important drivers of continual participation in online brand communities, where place attachment is defined as one's emotional connection to a place (Hidalgo & Hernandez, 2001). Thus, it is expected that the higher the attachment with the place covered by the online newspaper, the higher the engagement with its publications, leading to the next hypothesis:

H2 Place attachment is positively associated with engagement with local newspaper posts on social media

3.3. Attitude Towards News from Local Newspapers on Social Media

According to Ajzen (1991), the result of someone's cognitive values, expressing whether the person feels positively or negatively about adopting a specific behaviour, is considered as an attitude. As such, Yuan et al. (2021) suggested that a certain attitude towards using a social networking platform can affect a user's interaction with that same networking platform.

Furthermore, attitude has been pointed out both as the main determinant of intention to read news (e.g., Flavián & Gurrea, 2009; Lin, 2014), as a determinant of intention to engage in forms of civic engagement such as voting, volunteering and expressing political opinions in public forums (e.g., Hobbs et al., 2013). Thus, it is expected that if the user presents a positive attitude towards local news on social media, the engagement with a local newspaper will be higher, so the following hypothesis was developed:

H3 Attitude towards news from local newspapers is positively associated with engagement with local newspaper posts on social media

3.4. Content Characteristics

The literature associates several characteristics with users' engagement, as previously detailed in the literature review. Thus, three factors were explored, namely the type of news, the geographical scope and the relevance of the content for the user, as follows.

3.4.1 Type of News Content – Soft/Hard News

Over the years, the literature has focused on the distinction between soft and hard news (e.g., Boukes & Boomgaarden, 2015; Lehman-Wilzig & Seletzky, 2010) and on how this news are presented on social media (e.g., Steiner, 2020). There is not exactly a consensus on the definition of soft/hard news, with the topic of a news story being the most commonly used dimension when defining this type of news (Reinemann et al., 2012). For Kalogeropoulos et al. (2017), interest in entertainment, lifestyle and sports is seen as interest in soft news, while interest in political, business, economic, scientific or technology topics is considered as interest in hard news. As such, according to Wieland and Kleinen-von Königslöw (2020), soft news is dominant in incidental news exposure, leading to capture more of the user's attention when compared to hard news, thus anticipating exposure engagement. So, the resulting hypotheses are:

H4 The type of news content is associated with engagement with local newspapers posts on social media

H4a Soft news is positively associated with exposure engagement with local newspapers posts on social media

Moreover, some researchers highlight the negative association between soft news and comments (e.g., Ben-David & Soffer, 2019; Kalogeropoulos et al., 2017). On the other hand,

soft news is positively associated with shares (Kalsnes & Larsson, 2018; Karnowski et al., 2021), the same for hard news (Kalogeropoulos et al., 2017), leading to the next hypotheses:

H4b Soft news is negatively associated with commenting a local newspaper post on social media

H4c Soft news is positively associated with sharing a local newspaper post on social media

H4d Hard news is positively associated with sharing a local newspaper post on social media

3.4.2 Proximity

As stated in the literature, proximity expressed in news is another factor proven to be very significant for all engagement reactions, being an important value of the news that can impact the reader's reaction (Park & Kaye, 2021; Salgado & Bobba, 2019). This implies that an event geographically or culturally closer to the reader, when reported in a news story, becomes of higher value (Eilders, 2006), leading to increased online engagement related to those news (Trilling et al., 2017; Weber, 2014). In this sense, local news is expected to generate more engagement than international news, so the following hypothesis was formulated:

H5 Proximity is positively associated with engagement with local newspapers posts on social media

3.4.3 Relevance

Ma et al. (2014) consider relevance as the relationship that arises from a reader's need and the information itself. As such, several authors have studied how relevance may be positively associated with engagement and increased media exposure (e.g., Bobkowski, 2015; Ma et al., 2014; Rudat et al., 2014). Accordingly, Chen (2020) found a particular link between relevance and exposure engagement, while Urban and Schweiger (2014) showed that news relevance is able to capture the reader's attention. Thus, the following hypotheses were developed:

H6 Relevance is positively associated with engagement with local newspapers posts on social media

H6a Relevance is positively associated with exposure engagement with local newspapers posts on social media

3.5. SM Connection Closeness

When referring to the types of connections within the social network, the literature mentions

that close connections can positively influence the news sharing intention (e.g., Ma et al., 2014; Reagans & McEvily, 2003; Shan & King, 2015). This happens since the tie strength is related to media use, the intention to share, click and comment, and also the attention paid to the content shared by friends in that social network (Chen, 2020). In this regard, Bobkowski et al. (2019) state that the use of social media to share local news may become limited if the reader's social media network is different from those who will be interested in that news, since local news usually represents more interest to geographically close connections, and thus demonstrating a positive relationship between the two. According to this research, H7 was formulated:

H7 Close connections on social media are positively associated with engagement with local newspapers posts on social media

H7a Close connections on social media are positively associated with sharing a local newspaper post on social media

3.6. Frequency of News Use

In general, the literature has been exploring the relation between frequency of news use and online engagement (e.g., Diehl, Barnidge, & Gil de Zuniga, 2019; Xiao & Su, 2022). According to Chen and Pain (2021), exposure engagement includes the attention and enjoyment of news on social media, along with the frequency of news use. As a result, it is expected that the higher the frequency of news access, the higher the exposure to news, leading to the following hypotheses:

H8 Frequency of news use is positively associated with engagement with local newspapers posts on social media

H8a Frequency of news use is positively associated with exposure engagement with local newspapers posts on social media

Thus, Sang et al. (2020) found that heavy news users use more interaction behaviours than light users, particularly for sharing, which may suggest that the frequency of news use is also a determinant of sharing activities, so the following hypothesis is proposed:

H8b Frequency of news use is positively associated with sharing a local newspaper post on social media

3.7. Brand Page Commitment

Several studies have explored brand page commitment as one of the determinants of purchase intention (e.g., Ghasemi et al., 2018; Khodabandeh & Lindh, 2021; Lampropoulos et al., 2022). Thus, Hutter et al. (2013) state that active and emotional involvement of the user with the brand's activities can be seen as brand page commitment, with some authors mentioning that it also includes consumers' psychological bonding to a brand's community-building efforts on social media, e.g., creating a fan page to discuss those activities (Kim et al., 2008; Morgan & Hunt, 1994). As it is expected that higher involvement will lead to higher engagement with the page content, H9 was established:

H9 Brand page commitment is positively associated with engagement with local newspapers posts on social media

3.8. Source Credibility

With current digitalization, social media challenges source credibility by the presence of anonymous sources and multiple authors. Previous research on the credibility of websites (e.g., Go et al., 2016; Keshavarz et al., 2020; Rains & Karmikel, 2009) revealed that credibility plays a key role in the search for information, with people preferentially choosing a source they consider credible (Kerstetter & Cho, 2004). Furthermore, the literature points to trustworthiness as the main determinant of source credibility (Arai et al., 2014; Friedman & Friedman, 1978), influencing beliefs, opinions, attitudes and behaviors (Ohanian, 1990; Tzoumaka et al., 2016). In this perspective, when investigating the role of credibility in fake news engagement, Nedelcu and Blaban (2021) found that source credibility has an impact on the intention to share news on Facebook, so H10 emerges from this research:

H10 Source credibility is positively associated with engagement with local newspapers posts on social media

H10a Source credibility is positively associated with sharing a local newspaper post on social media

3.9. Social Media Participation

Being exposure to news the first step to news consumption, the level of participation and time spent on a social network will influence the frequency of consumption and, consequently, the engagement with posts (Kümpel, 2020; Paruthi & Kaur, 2017). Thus, customer

participation can be described as the contribution of customer effort, preference, knowledge, and other resources (Chan et al., 2010), whereby customers actively participate in the processes of production and consumption involved (Nysveen & Pedersen, 2014).

In this sense, several studies have focused on the research of customer participation as an antecedent of customer engagement (e.g., Nysveen & Pedersen, 2014; Ramaswamy & Gouillart, 2010; Vivek et al., 2012). Alternatively, social media participation is argued to be part of the definition of SNS engagement (Sigerson & Cheng, 2018). Thus, the following hypothesis is proposed:

H11 Social media participation is positively associated with engagement with local newspapers' posts on social media

3.10. Engagement

As shown in previous studies, user engagement is directly and indirectly related with loyalty toward online news brands (Chen & Pain, 2021; Krebs & Lischka, 2019), the same for the relationship between engagement and channel loyalty concerning news media outlets (Lim et al., 2015; Lin et al., 2018). Some studies had also empirically show that brand loyalty may be developed through user engagement (e.g., Dholakia et al., 2004; Jang et al., 2008).

Chen and Pain (2021) argue that news that caught reader's attention is more effective than news content that leads readers to share, react, and comment, in enhancing newspaper brand loyalty. However, Lischka and Messerli (2016) noted that commenting or sharing a post on social media may have effects on loyalty. According to the authors, commenting has a positive and direct effect on loyalty, while sharing tends to have an effect on loyalty, but not directly (Lischka & Messerli, 2016; Mersey et al., 2012). Thus, to understand the contribution of the different engagement components in building loyalty towards the social media presence of local newspapers, the following hypothesis is proposed:

H12 Engagement with local newspapers posts on social media is associated with users' loyalty towards that local newspaper's presence on social media

3.11. Trust on News

With people having multiple ways to access and be exposed to news sources, the literature has focused on the impact of trust that individuals exhibit towards the news they consume (e.g., Fletcher & Park, 2017; Kalogeropoulos et al., 2019; Sang et al., 2020). Trust in news is

also discussed regarding source loyalty, being, along with satisfaction, one of its antecedents, whereby greater trust will increase loyalty (e.g., Lischka & Messerli, 2016; Nelson & Kim, 2021). Consequently, the following hypothesis is proposed:

H13 Trust on news is positively associated with users' loyalty towards the local newspaper's presence on social media

3.12. Users' Satisfaction

As indicated by Oliver (1999), satisfaction can be defined as the perception that a service was well-completed, while loyalty refers to the commitment to those who provided that service. Previous studies have focused on the relationship of satisfaction and loyalty in a way that satisfaction is important for building brand loyalty but is only one of several antecedents of loyalty (e.g., Erciş et al., 2012; Massari & Passiante, 2006; Picón et al., 2014; Shankar et al., 2003). Furthermore, by investigating the difference between satisfaction and loyalty in online and offline environments, Shankar et al. (2003) found that while a consumer's level of satisfaction with a service is the same online as it is offline, loyalty to the service provider is higher when the service is online. As this relationship seems to be strengthened in the online environment, the following hypothesis is proposed:

H14 Users' satisfaction with the local newspaper's presence on social media is positively associated with loyalty towards that presence

Accordingly, the conceptual framework for the present study is represented in Figure 1.

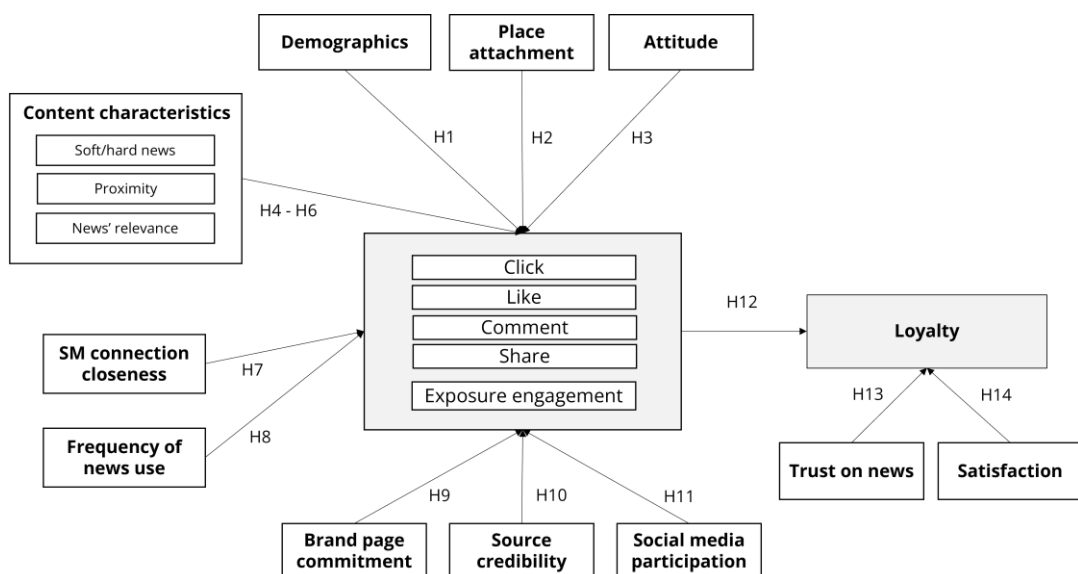


Figure 1 - Proposed Conceptual Framework

Source: The authors

4. Methodology

4.1. Research Approach

Following the findings of the systematic literature review, this dissertation included an empirical study with Portuguese people that consume news from at least one local newspaper on Facebook, by adopting a quantitative approach.

Regarding the characteristics and advantages of quantitative methods, Malhotra et al. (2017) note that they allow for the examination of the effects of specific variables (independent variables) on an outcome of interest (dependent variables), while also enabling the measurement of variables that are not objective, such as loyalty. Bryman (2016) further states that the quantitative approach aims to explain a particular phenomenon by adopting objective measures and statistical analysis of data collected through different methods, including questionnaires. Indeed, the use of questionnaires allows information to be collected from a sample of individuals and is valuable for describing and exploring human behaviour. Additionally, Cooper and Schindler (2008) argue that they are useful for reducing response biases since participants are kept anonymous and are more likely to be truthful.

In this sense, the research instrument applied in this investigation assumes the form of a self-completion questionnaire, i.e., the questions are read and answered by the respondent without the presence of the interviewer (Mattar, 2017).

4.2. Questionnaire

According to Malhotra et al. (2017), the construction of a questionnaire has several phases: the specification of the required information, the questionnaire format, the selection of the content, the structure and order of the questions, the writing of the questionnaire, and the pre-test. Firstly, the research question and hypotheses should be considered, to gather the variables selected for the research in the questionnaire. Then, it is necessary to appraise the target population and its characteristics, to tailor the questions to the group under analysis.

At the beginning of the survey, to be found in Appendix D, specific questions were asked to know if respondents were Facebook users and if they consume news from a local newspaper on that social network. Only respondents over eighteen who were Facebook users and consume at least one local newspaper's news on Facebook could proceed to the next section, as the questionnaire automatically ended in case of a negative answer to one of the questions.

The next section included questions to characterize the sample, such as age, gender, highest level of education, monthly income, and professional activity. Then, the questions go through Facebook usage and the respondent's opinion regarding the publication of news by local newspapers on Facebook. After indicating which local newspaper the respondent uses to read on Facebook, the questionnaire advances with questions about that newspaper and its news and the person's connection with the region it covers, ending with questions regarding the user's opinion about the newspaper.

4.2.1 Measures

The survey constructs were established based on existing scales from previous studies. Thus, the original scales and their adaptations are shown in Appendix E.

Firstly, respondents were asked to indicate how many hours they spend per day on Facebook for sample characterization, ranging from less than one to more than five. In addition, the items used to measure Social Media Participation were adapted from the 'enthusiastic participation' dimension of the engagement original scale of Vivek et al. (2014).

Regarding the variable SM Connection Closeness, one item was adapted from Fidan (2019) and the remaining three were self-developed to ensure that the user's network connections with contacts from the same region as the local newspaper were explored in the study. Furthermore, six items adapted from Spears and Singh (2004) were used to analyse Attitude towards news published by local newspapers on social media.

After being asked which local newspaper they see on Facebook, five items of Boley et al. (2021) were used to measure the connection between the respondent and the region delimited by that newspaper, or Place Attachment. The subsequent questions were answered according to the local newspaper indicated. Thus, the three items on Frequency of News Use were adapted from Diehl, Barnidge and Gil de Zúñiga (2019), followed by a question regarding the scope of the news published by that newspaper (local, national, international).

The type of news published (soft/hard) were also taken into consideration using four different items adapted from Lehman-Wilzig and Seletzky (2010), two being used for each type. Thus, Relevance of the news was analyzed using one item adapted from Chen (2020), and three self-developed items to complement the scale.

Hence, Engagement was divided into two constructs: Functional Engagement and Exposure Engagement, of which functional engagement was measured with a four-item scale adapted

from Chen and Pain (2021) and exposure engagement with three items from Chen (2020).

Two items adapted from (Newman et al., 2021) combined with four more items adapted from Prochazka and Schweiger (2019) were used to measure Trust in the News. Regarding Source Credibility, this was evaluated with nine items of two different dimensions – Trustworthiness and Expertise - from Ohanian (1990).

Furthermore, the six items used to measure the users' commitment to the newspaper's social media page were adapted from Hutter et al. (2013). Satisfaction was analyzed using a six item-scale of e-satisfaction adapted from Anderson and Srinivasan (2003) and, finally, loyalty was measured by using five items adapted from Zeithaml et al. (1996).

In some cases, when designing the survey, the scale formulation was slightly adapted to better fit the context and purpose of the study. Thus, a 5-point Likert scale was used to measure the constructs, ranging from 1 (totally disagree) to 5 (totally agree) or, for Engagement, from 1 (never) to 5 (all the time). The construct Frequency of News Use was an exception, where a range of 1 (never) to 10 (all the time) was used, according to the theoretical recommendation of the study used for the scale.

4.2.2 Pre-test

The designation pre-test or pilot study refers to the application of the questionnaire to a small sample of respondents and aims to detect any errors or inconsistencies in its body and the effectiveness of information collection (Hill & Hill, 2002). The number of problems that can be identified through a pilot test is remarkable, even when all steps of the questionnaire design process are carried out with the utmost rigor (Forza, 2002).

As stated by Malhotra et al. (2017), this study should be as broad as possible to test all aspects of the questionnaire, such as the wording, content and sequence of the questions, the degree of difficulty and comprehension of the questions, the instructions, and the layout. In this sense, the questionnaire was pre-tested by eight Portuguese individuals before being applied, resulting in two main changes, the first being the expected response time indicated at the beginning of the questionnaire, and some filling instructions to avoid any confusion from the respondents.

4.3. Data Collection

Data was collected through an Internet-based survey using Google Forms and disseminated

via social networks and word-of-mouth to obtain a diverse sample in terms of age and location, in a short period of time. Hence, the survey was available for two weeks between May 12th and May 26th, resulting in 568 answers.

This method was used since its characteristics were best suited to the conditions and resources of the study. Online data collection allows for a large and geographically distributed sample size, a specific structure designed for the type of questions, and with respect to financial resources, it is time and cost efficient as data entry is automated (Lefever et al., 2007).

4.4. Population and Sample

Population or universe is defined as the set of all elements that share common characteristics and about which conclusions are to be drawn for the study (Hill & Hill, 2002; Malhotra et al., 2017). In this sense, the population of this study are Portuguese users of Facebook that consume news published by local newspapers on that platform.

Regarding the sample size, Malhotra et al. (2017) recommend a minimum of 200 participants and consider a sample size of 300 to 500 participants as being acceptable. Still, one of the main criteria to define the sample size is the complexity of the model to be estimated, but it is recommended 5 to 10 times the total number of items of the variables (Hair et al., 2014).

With 568 responses collected, the sample size was in line with the recommended in the literature. However, of those, 40 respondents were not Facebook users, 92 did not consume news from at least one local newspaper on this social network and 9 were less than eighteen years old, so the questionnaire ended automatically when answering. From 568, only 427 people answered the questionnaire in full, but 37 answers had to be eliminated since the local newspapers that respondents indicated were either not local or related to other media that share news on Facebook (e.g., radios). Therefore, the final sample consists of 390 responses, and the frequencies of the most answered newspapers can be found in Appendix F.

As shown in Table 4, the sample is balanced and has a great diversity in terms of gender, age, education level, monthly income, professional activity, and hours of daily Facebook use.

Table 4: Sample characterization

		Frequency	Percentage
Gender	Female	205	52,6
	Male	183	46,9
	Other	2	0,5
Age	18-22 years	61	15,6
	23-27 years	81	20,8

	28-32 years	54	13,8
	33-37 years	41	10,5
	38-42 years	36	9,2
	43-47 years	45	11,5
	48-52 years	30	7,7
	More than 52	42	10,8
Education Level	Elementary School	42	10,8
	Secondary Education	134	34,4
	Undergraduate degree	130	33,3
	Master's Degree	80	20,5
	PhD	4	1,0
Monthly Income	No income	66	16,9
	Less than 500€	27	6,9
	From 501 to 1000€	161	41,3
	From 1001 to 1500€	81	20,8
	From 1501 to 2000€	35	9,0
	More than 2000€	20	5,1
Professional Activity	Self-employed	53	13,6
	Employed	250	64,1
	Student	58	14,9
	Unemployed, retired, housework	29	7,4
Facebook Usage/day	Less than 1 hour	167	42,8
	1 - 2 hour	148	37,9
	2 - 3 hours	43	11,0
	3 - 4 hours	23	5,9
	4 - 5 hours	5	1,3
	More than 5 hours	4	1,0

Source: The authors

4.5. Data Analysis Techniques

The various techniques presented below, as well as the definition and applications of each of them, enabled the analysis of all the information gathered. Through these techniques, the hypotheses under study were further tested to obtain fundamental conclusions.

4.5.1 Internal Consistency

Internal consistency is measured when there is a measurement scale with several possible response items, of which the score for each item will help form an overall score. In this case, it is hypothesized that the various indicators are not correlated, meaning that they do not present coherence (Bryman, 2016).

According to Malhotra et al. (2017), reliability indicates the degree to which a scale produces consistent results, and the process of assessing scale reliability includes reliability and internal consistency, where the sum of the scale items is assessed. Therefore, the average of all

coefficients produced by dividing the scale into two halves is known as Cronbach's alpha. It ranges from 0 to 1, with a value above 0.9 indicating excellent reliability, a value between 0.8 and 0.9 indicating good reliability, between 0.7 and 0.8 reasonable reliability, between 0.6 and 0.7 low reliability, and below 0.6 indicating unsatisfactory reliability (Hill & Hill, 2002).

One of the characteristics of the alpha coefficient is that its value becomes higher as the number of items on the scale increases, meaning that it can be inflated by the introduction of redundant items (Malhotra et al., 2017). Thus, the Cronbach Alpha if item is deleted column presents the values of the total alpha if a particular item is not included in the calculation and should approximate the calculated value of the alpha (Field, 2009).

When examining the correlations between items, that is, the correlation between each item and one of the other items, Hill and Hill (2002) pointed out that correlations that are considered relatively strong range between 0.4 and 0.7. Accordingly, these items should have positive values since they all share the common fact that they measure latent variables intended to obtain research results. For the item-total correlation, known by the correlation between the value assigned to each item and the total value of a set of items, this should not have a value of less than 0.3, as this means that the item is not related to the overall scale and should therefore be excluded (Field, 2009; Hill & Hill, 2002).

4.5.2 ANOVA

The statistical technique ANOVA, or Analysis of Variance, is used to compare the mean of a quantitative variable (dependent) with two or more groups of qualitative variables (independent) (Laureano, 2011). Thus, the null hypothesis assumes equality of means among the various groups under study, as opposed to the alternative hypothesis that at least two of the means under study have significant differences among them (Johnson & Christensen, 2008).

To verify that the variance of the variables was statistically identical, so that the analysis in question is valid, it is necessary to perform a test of homogeneity of variance, also called the Levene's test. If the significance of this test is greater than 0.05, the ANOVA test can be performed, but if it is lower, meaning that the hypothesis of equality of variances is rejected, a more robust non-parametric test called Kruskal-Wallis is performed with the same purpose of identifying statistically significant differences between two or more groups of an independent variable on an ordinal or continuous dependent variable. In both cases, to validate the hypothesis that the means of the responses are similar, a significance (α) of 0.05 was

considered, as suggested by Forza (2002).

Thus, if the p-value resulting from the ANOVA analysis of variance or the Kruskal-Wallis's test is less than 0.05, it is considered that there are differences between the means of the users' responses and H₀ is rejected. In this case, a Post-Hoc test should be performed to verify which pairs present significant differences between them (Laureano, 2011; Marôco, 2010). According to Laureano (2011), when the sizes of the groups are similar, the Tukey test is often used. As such, this test was applied throughout the data analysis whenever the ANOVA result rejected the equality of the means under study.

4.5.3 Linear and Multiple Regression Analysis

A regression analysis is a dependency technique that is performed in order to predict a dependent variable, knowing one or more independent variables (Hair et al., 2014). Nevertheless, these can be simple regressions, if it involves a single variable, or multiple regressions, which involves two or more independent variables.

According to Marôco (2010), the term 'linear regression' defines a set of statistical techniques used to model relationships between variables and to predict the value of a dependent (or response) variable from a set of independent (or predictor) variables. Thus, multiple linear regression is a method of multivariate analysis that allows the identification of a model promoting a linear functional relationship between one or more dependent variables (responses) and several independent variables (Afifi et al., 2005).

4.5.4 Path Analysis

Path analysis can be considered as a particular extension of the multiple linear regression model, being a set of regression equations that allows estimating the effect of independent variables (exogenous variables) on dependent (or endogenous) variables (Wright, 1934). According to Marôco (2010), the purpose of this type of analysis is to disaggregate the association between variables into different effects as those that would be observed in a set of causal relationships, the term 'causal' being associated with an assumption of the model that cause-and-effect exists. Furthermore, Kline (2015) considers that the model should be recursive or unidirectional, with all causal links flowing in the same direction and with none of the variables representing cause and effect at the same time. Thus, after excluding the paths whose coefficients are not statistically significant to simplify the model, the important relationships will change the value of the path coefficients, which will assess the strength of the

direct and indirect effects (Marôco, 2010).

Accordingly, this analysis allows researchers to conclude, in a study of trajectories, which path(s) are supported by the data and what kind of effects explain the association between variables, allowing them to uncover the complex relationships between variables and to identify the most significant trajectories involved when predicting an outcome (Lleras, 2005).

4.5.5 Structural Equation Modelling

Structural equation modelling analysis (SEM) involves a significant set of techniques based on general linear modelling (Ullman & Bentler, 2003), besides merging multivariate regression and factor analysis (Savalei & Bentler, 2010). As Weston and Gore Jr (2006) pointed out, one of the main benefits of the structural equation model is that it allows testing multivariate models in a single study, as allows the specification of relationships between observed variables and latent variables, i.e., the unobserved variables that are constructed from indicators (Sarstedt & Cheah, 2019). For that reason, SEM was also used to test the research hypotheses, being performed with AMOS software, and using a 95% bootstrap confidence interval.

At first, to assess the model fit, the Chi-square test is usually used by comparing the predicted covariance and the observed covariance matrices; however, this test is sensitive to sample size and may not be suitable for large samples ($n > 200$), as is the case of this study (Kline, 2015). Alternatively, the Root Mean Square Residual (RMR) is used to obtain the difference between the covariances estimated by the model and those observed (Marôco, 2018).

The Goodness of Fit Index (GFI) proposed by Jöreskog and Sörbom (1982) can also be used and varies between 0 and 1. Although it can exceptionally assume negative values, if $GFI > 0.95$, the adjustment of the model to the data is considered very good. Moreover, the Bentler's Comparative Fit Index (CFI) (Bentler, 1990), analyses the discrepancies between the proposed model and the analysed data, ranging between values 1 and 0, where 1 represents the best fit, although values above 0.9 are already acceptable. According to Kline (2015), another relevant index is the Root Mean Square Error of Approximation (RMSEA) (Steiger, 1990), in which values smaller than 0.05 indicate good adjustment, although values up to 0.08 are acceptable. The RMSEA value decreases according to the degrees of freedom and sample size, whereby the more degrees of freedom and the larger the sample, the lower this value will be, presenting a confidence interval of 90%.

5. Results

This chapter aims to analyze the data collected through the application of the questionnaire and to discuss the results obtained with the purpose of drawing conclusions related to the research question and the hypotheses presented. Initially, construct reliability is described, followed by differences in socio-demographic characteristics. Subsequently, regression coefficients are estimated, followed by a path analysis and structural equation modelling. Finally, a summary of the hypothesis testing is presented. Statistical treatment of the data was done using IBM SPSS Statistics software - version 27.

5.1. Construct Reliability

Cronbach's alpha ranged from 0.774 to 0.956 (Appendix G), which is higher than the agreed upon lower limit of 0.7 (Hair et al., 2014), and indicating high reliability of the constructs. According to Kline (2015) the higher the alpha value, the more reliable the scale is.

It should be noted that initially the satisfaction variable was composed of six items, three of which were inverted. The alpha was 0.588 (unacceptable), and so items were successively deleted until the result 0.887 was reached. Furthermore, it is important to underline that the nominal validity of the three items was analysed by two marketing and data analysis experts, who confirmed the nominal adequacy of the reduced construct.

Regarding the type of news variable, the alpha of soft news was also found to be unacceptable (0.427), so it was decided to consider two different types of soft news: soft-urgent and soft-non-urgent, since one construct referred to news that should be immediately published due to its interest in the public and the other referred to news that might not be published at all, as curiosities.

Since the remaining alphas were adequate, the variables were calculated by arithmetic mean. Thus, the variables were analyzed descriptively, by observing the mean, mode, median, and standard deviation as represented in Appendix H. It is important to emphasize that the statistics presented are sample measures, since they refer to the survey participants and not to the entire target population (Marôco, 2010).

5.2. Differences in Socio-demographic Characteristics

To analyse if the functional engagement activities and exposure engagement with local newspapers publications on social media occurs in the same way among the different age groups

under study, an ANOVA was performed. In this sense, the assumptions to precede the test must be evaluated, since the samples under study must be independent, come from a normally distributed population, and present homogeneous variances.

As, for example, the values presented by the gender groups (male, female, other) are not related to each other, the assumption of independence is verified. Regarding the normal distribution of data, given that all groups under analysis present a sample larger than 30 elements, the Central Limit Theorem (CLT) is applied (Field, 2009; Hill & Hill, 2002; Laureano, 2011). Although Field (2009) indicates Shapiro-Wilk and Kolmogorov-Smirnov tests to check whether the distribution deviates from a normal distribution, the author states that, in large samples, these tests have limitations and do not necessarily inform about the normality deviation. Thus, by the Central Limit Theorem, it can be considered that the distribution of this sample mean is approximately normal, and the violation of this assumption does not put in question the results of the test, since the analysis is carried out with large, independent samples and populations with finite variances (Pestana & Gageiro, 2014).

The variances were seen to be homogeneous only in the Clicks, Likes and Exposure dimensions, being the only ones in which it was possible to proceed with the ANOVA test. The analysis showed no difference between the age groups for clicking on the news links, $F(7, 382) = 1.12, p = 0.348$, the same for liking newspapers' posts, $F(7, 382) = 1.66, p = 0.117$, and regarding exposure engagement, $F(7, 382) = 0.57, p = 0.784$, as shown in Table I-1.

Regarding comments and shares, as the assumptions for conducting ANOVA were not verified, it was necessary to resort to the alternative Kruskal-Wallis's test. The test reported that there was a difference between age groups regarding commenting, $H(7) = 52.27, p < .001$, and sharing, $H(7) = 41.24, p < .001$. Thus, the interval of 38-42 years old presents the highest mean for both commenting ($M = 262.93$) and sharing ($M = 254.11$), as stated in Table I-2, which means that older people comment and share more than younger people. Since age was found to be positively associated with comments and shares, despite the extant literature (Bobkowski et al., 2019; Sang et al., 2020), **H1a is not supported.**

Thus, to identify whether there are gender differences regarding engagement activities with local newspaper publications on social media, an ANOVA test was conducted (see Table I-3), as the sample of this study is composed of three distinct groups: male, female and other. After checking the homogeneity of variances, no gender differences were found for liking, $F(2, 387) = 1.52, p = 0.221$, or sharing, $F(2, 387) = 1.22, p = 0.296$. Thus, despite the

contributions of Sang et al. (2020) and Bobkowski et al. (2019), **H1b and H1c are not supported.**

The Kruskal-Wallis test was used since the homogeneity of variances in the comments dimension was not verified. The test showed that there are differences between genders for commenting, $H(2) = 6.90, p = 0.03$, with the Other group representing a higher mean ($M = 292$), followed by males ($M = 208.21$) and females ($M = 183.20$), as shown in Table I-4. Thus, with males commenting more than females, and in line with Baek et al. (2021), **H1d is supported.**

Again, ANOVA was used to analyze whether the level of engagement with local newspaper publications is the same for users with different levels of education. After verifying the homogeneity of variances, the analysis showed a significant effect of education on shares, $F(4, 385) = 4.50, p < .001$ (see Table I-5). Post-Hoc analyses using Tukey's HSD indicated that sharing for respondents with elementary school ($M = 3.24, SD = 1.21$) was significantly different than for respondents holding secondary education ($M = 2.65, SD = 1.25$), an undergraduate degree ($M = 2.42, SD = 1.18$) and a master's degree ($M = 2.36, SD = 1.19$) but this did not differ significantly among the other levels of education, as shown in Table I-6. As those with lower levels of education share more, education is negatively associated with sharing a local newspaper's post on social media. Hence, despite the indications of previous research (Juan Pablo et al., 2020; Lee & Chyi, 2014; Sang et al., 2020), **H1e is not supported.**

However, concerning the comments dimension, since it had failed the assumption of homogeneity of variances to perform ANOVA, the Kruskal-Wallis's test showed that are differences between levels of education on commenting, $H(4) = 24.93, p < .001$, with respondents holding elementary education having the highest mean among the remaining groups ($M = 260,21$), as represented in Table I-7. Although contradicting the contributions of Sang et al. (2020), **H1f is not supported.** However, these findings are similar to those of Bobkowski et al. (2019) who found that less educated individuals share and comment more local news.

5.3. Regression Coefficients' Estimation

Since the theoretical support, and consequently the hypotheses, point either to engagement (overall), to engagement groups (functional and exposure), or to specific components of engagement (clicks, likes, comments, shares, and exposure), the hypotheses were further tested by calculating multiple regressions.

However, for regression analysis to be conducted, the division of variables into dependent and independent variables must be metric, properly transformed and well established. Then, the model is validated through the analysis of errors or residuals of the multiple regression model. For the analysis of errors, Marôco (2010) stresses the need to verify three assumptions: 1) the normal distribution of errors through the Normal Probability Plot; 2) the homogeneity of the residuals, through the analysis of the mean and standard deviation; 3) the residual correlation of the statistical regression analysis, using the Durbin-Watson test.

After checking these assumptions for the models to be tested, the analysis of the different regressions proceeded for global engagement as the dependent variable (Appendix J), with the division between functional and exposure engagement (Appendix K) and, finally, with the division of all engagement components as dependent variables (Appendix L). After these calculations, the regression analysis of loyalty as a dependent variable was carried out with the respective dimensions previously mentioned as independent variables.

The standardised coefficients for all relationships analysed in the model with global engagement can be seen in Table J-3, as for the model with engagement groups, represented in Table K-4. All relationships with the specific component division are presented in Table L-7.

Overall, the regression to global engagement as a dependent variable was statistically significant, demonstrating that there is strong evidence that these independent variables have an effect on this dimension ($R^2 = .570$, $F(14, 375) = 35.57$, $p < .001$) (see Table J-1). Thus, the Durbin-Watson index was 1.941, which is within the acceptable range of 1.5 to 2.5. Tolerance values should be above 0.1 (Tabachnick & Fidell, 2019), and VIF should be less than 5.0 for multicollinearity between the independent variables to be minimal (Hair et al., 2011). Since the observed values of Tolerance ranged between 0.440 and 0.866, and those of VIF between 1.155 and 2.275, the results can be considered reliable and no problems of multicollinearity between the variables were found.

Table K-1 shows that 45.1% of the observed variability of functional engagement is explained by the independent variables included in the regression ($R^2 = .451$, $F(13, 376) = 23.79$, $p < .001$). There is also strong evidence that the independent variables listed in Table K-2 have a significant effect on exposure engagement ($R^2 = .538$, $F(11, 378) = 40.03$, $p < .001$). As for the VIF and Tolerance values, along with the Durbin-Watson index, these indicate that the results were reliable, with no multicollinearity problems between the variables. The regression results of all the engagement components can be analyzed in Appendix L, in

which the included independent variables had a significant effect on each of the components. In relation to place attachment, it did not significantly predict engagement ($\beta = -0.039, t(375) = -0.954, p = 0.341$). However, in component analysis, place attachment was a predictor of shares ($\beta = -0.112, t(376) = -2.288, p = 0.023$), but a negative one. Thus, despite indications in the literature (Bobkowski et al., 2019; Wang et al., 2021), **H2 is not supported.**

Attitude towards news from local newspapers on social media did not significantly predict engagement ($\beta = -0.038, t(375) = -0.975, p = 0.330$), or any of its components. Thus, although contradicting some previous research (Flavián & Gurrea, 2009; Hobbs et al., 2013; Lin, 2014), **H3 is not supported by this study.**

Regarding soft news, as indicated before, the analysis was divided into soft non-urgent (soft 1) and soft urgent (soft 2) to find explanatory differences between both. However, the multiple regression analysis showed that neither soft non-urgent significantly predicts exposure engagement ($\beta = -0.008, t(378) = -0.207, p = 0.836$) nor soft urgent does ($\beta = 0.013, t(378) = 0.330, p = 0.742$). As such, despite the findings of Wieland and Kleinen-von Königslöw (2020), **H4a is not supported.**

The same happens when analyzing whether soft news is significantly preceding functional engagement, which was not shown for either non-urgent ($\beta = 0.076, t(376) = 1.808, p = 0.071$), or soft urgent ($\beta = 0.010, t(376) = 0.232, p = 0.817$). In the specific analysis of components, soft non-urgent also did not significantly predict comments ($\beta = 0.029, t(380) = 0.650, p = 0.516$), nor shares ($\beta = 0.083, t(376) = 1.827, p = 0.069$). The same is inferred for soft urgent, as not being predictors of comments ($\beta = 0.058, t(380) = 1.239, p = 0.216$), or shares ($\beta = -0.047, t(376) = -0.956, p = 0.340$). Hence, contrary to what is indicated by some authors (Ben-David & Soffer, 2019; Kalsnes & Larsson, 2018; Karnowski et al., 2021), there is no empirical evidence associating soft news and engagement with local newspapers' social media posts so hypotheses **H4b and H4c are not supported by this study.**

Sharing a local newspaper post on social media was also not significantly predicted by hard news ($\beta = 0.013, t(376) = 0.245, p = 0.807$). As so, despite the findings of Kalogeropoulos et al. (2017), **H4d is not supported** and there is no empirical support for claiming that type of news content is associated with engagement with local newspaper posts on social media.

As for proximity, it is necessary to compare three different dimensions related to the scope of the news: local, national and international. When analyzed as antecedents of global engagement, none of these dimensions proved to be significant. However, in the detailed

analysis, local news significantly predicted clicks on the news links ($\beta = 0.215, t(382) = 4.145, p = 0.001$), comments, albeit negatively, ($\beta = -0.207, t(380) = -4.192, p = 0.001$) and exposure engagement ($\beta = 0.122, t(378) = 2.793, p = 0.005$), whereas no other scope stood out as a significant predictor of these dimensions. For sharing activities, only international were found to be significant predictors ($\beta = 0.124, t(376) = 1.987, p = 0.048$). Thus, higher proximity predicted higher engagement, in line with extant literature (Salgado & Bobba, 2019; Trilling et al., 2017; Weber, 2014), but only for clicks and exposure engagement, since local news are negatively associated with comments. Furthermore, as sharing posts from local newspapers was not predicted by proximity but by distance, **H5 is partially supported.**

On the other hand, news relevance significantly predicted exposure engagement ($\beta = 0.378, t(378) = 7.858, p = 0.001$). Hence, and with this being consistent with previous studies (Chen, 2020; Urban & Schweiger, 2014), **H6a is supported.**

It was shown that close connections on social media did not significantly predict any component of engagement, particularly shares ($\beta = 0.017, t(376) = 0.380, p = 0.704$), although these were found to be a significant predictor of global engagement ($\beta = 0.079, t(375) = 2.179, p = 0.030$). As such, despite previous research (Bobkowski et al., 2019; Chen, 2020), **H7a is not supported.**

As for frequency of news use, this significantly predicted exposure engagement with local newspaper posts ($\beta = 0.206, t(378) = 5.009, p = 0.001$), as well as sharing activities ($\beta = 0.110, t(376) = 2.286, p = 0.023$). These findings are similar to those expressed in previous studies (Chen, 2020; Sang et al., 2020; Xiao & Su, 2022), **supporting H8a and H8b.**

The analysis showed that page commitment is a significant predictor of engagement ($\beta = 0.373, t(375) = 8.286, p = 0.001$). Furthermore, this variable was found to significantly predict functional ($\beta = 0.449, t(376) = 9.043, p = 0.001$) and exposure engagement ($\beta = 0.212, t(378) = 4.600, p = 0.001$). The same was verified for all specific components, most notably shares ($\beta = 0.455, t(376) = 8.489, p = 0.001$). Given this empirical evidence, in line with extant literature (Hutter et al., 2013; Kim et al., 2008), **H9 is supported.**

Source credibility, however, did not significantly predict sharing activities regarding local news on social media ($\beta = 0.074, t(376) = 1.435, p = 0.152$). Thus, and contrary to what was indicated by Nedelcu and Blaban (2021), **H10a is not supported by this study.**

Social media participation was also shown to be significantly predicting both global engagement ($\beta = 0.141, t(375) = 3.852, p = 0.001$), functional engagement ($\beta = 0.146, t(376)$

= 3.540, $p = 0.001$), and exposure engagement ($\beta = 0.098$, $t(378) = 2.606$, $p = 0.010$), findings similar to those of previous studies (Nysveen & Pedersen, 2014; Vivek et al., 2012). However, this variable significantly anticipated all the components of engagement except for clicks on news links ($\beta = 0.081$, $t(382) = 1.719$, $p = 0.086$). Since social media participation did not predict all the functional engagement elements, **H11 is partially supported.**

To further analyze the predictors of loyalty, the subsequent step of the regression was performed, with engagement (or its components), trust and satisfaction as independent variables, and loyalty as the dependent variable. The regression with global engagement, trust and satisfaction was statistically significant, $R^2 = 0.508$, $F(3, 386) = 132.93$, $p < .001$, as it was with the division by engagement groups, $R^2 = 0.508$, $F(4, 385) = 99.45$, $p < .001$, and by specific components of functional engagement and exposure, $R^2 = 0.511$, $F(7, 382) = 57.05$, $p < .001$. Through the VIF, Tolerance and Durbin-Watson index values, it was verified that the results were reliable and without multicollinearity problems between the variables.

Global engagement was found to significantly predict user loyalty towards the local newspaper's presence on social media ($\beta = 0.322$, $t(386) = 7.590$, $p = 0.001$). Comparable results to the regression when separating for functional engagement as a predictor of user loyalty ($\beta = 0.225$, $t(385) = 5.094$, $p = 0.001$) and exposure engagement ($\beta = 0.133$, $t(385) = 2.683$, $p = 0.008$), and in line with previous findings (Chen & Pain, 2021; Krebs & Lischka, 2019; Mersey et al., 2012). However, not all components of engagement were found to significantly predict loyalty since only shares ($\beta = 0.152$, $t(382) = 2.897$, $p = 0.004$) and exposure engagement ($\beta = 0.141$, $t(382) = 2.607$, $p = 0.009$) were significant, contrary to what was perceived by Lischka and Messerli (2016), who highlighted comments as having a direct link to loyalty, rather than shares. As there is no empirical support that all components of engagement anticipate loyalty, **H12 is partially supported.**

User loyalty was also significantly predicted by trust, both in the regression with global engagement ($\beta = 0.101$, $t(386) = 2.348$, $p = 0.019$) and when including the remaining components ($\beta = 0.098$, $t(382) = 2.222$, $p = 0.027$). As such, this finding is in line with extant literature (Lischka & Messerli, 2016; Nelson & Kim, 2021), and **H13 is supported.**

Finally, satisfaction predicted user loyalty, both in the regression with global engagement ($\beta = 0.424$, $t(386) = 9.182$, $p = 0.001$) as with the component division ($\beta = 0.428$, $t(386) = 9.076$, $p = 0.001$), according to previous research (Erciş et al., 2012; Massari & Passiante, 2006; Picón et al., 2014). As result, **H14 is supported by this study.**

5.4. Path Analysis

Path analysis was used so that significant effects between the variables could be further understood. The multiple linear regressions were recalculated after excluding the non-significant variables, obtaining the standardized path coefficients and their significance. Each endogenous variable has a latent variable representing the proportion of the total variability, estimated by $1-R^2$. The path coefficient is given by $\sqrt{1-R^2}$, where R^2 is the determination coefficient of the model. All the VIF, Tolerance and Durbin-Watson index values indicated that the results were reliable, without multicollinearity problems between the variables.

For the global engagement model (see Appendix M), only the variables relevance, SM connections closeness, frequency of news use, page commitment and social media participation were statistically relevant predictors of engagement ($R^2 = .560$, $F(5, 384) = 97.60$, $p < .001$), as shown in Table M-1. As for the antecedents of loyalty, there were no exclusions compared to the model presented above, whereby engagement, trust and satisfaction were found to positively affect loyalty (see Table M-2). The resulting simplified conceptual framework can be found at Figure M-1.

Moving on to the model comprising the groups of engagement (see Appendix N), there is strong evidence that frequency of news use, page commitment and social media participation are the most statistically significant predictors of functional engagement, being the only ones included in the regression, represented in Table N-1 ($R^2 = .428$, $F(3, 386) = 96.31$, $p < .001$). The same variables also predicted exposure, along with local news and relevance, explaining about 53.8% of the observed variability of this variable (see Table N-2). As previously reported, these two groups again proved to be significant predictors of loyalty, along with satisfaction and trust ($R^2 = .508$, $F(4, 385) = 99.45$, $p < .001$), as shown in Figure N-1.

As for the model that considered the components of functional engagement (see Appendix O), only local news and page commitment remained as significant antecedents for clicking in the news links ($R^2 = .229$, $F(2, 287) = 57.55$, $p < .001$). Again, brand page commitment significantly predicted likes, together with social media participation ($R^2 = .229$, $F(2, 287) = 57.57$, $p < .001$), the same variables that were shown to affect comments ($R^2 = .267$, $F(2, 387) = 70.66$, $p < .001$). Place attachment, international news, frequency of news use, page commitment and social media participation helped explain about 34.6% of sharing activities ($R^2 = .346$, $F(5, 381) = 40.55$, $p < .001$). Regarding exposure engagement, the regression model is unchanged from the one presented earlier. As for the regression of loyalty as a

dependent variable, only the predictors shares, exposure, trust and satisfaction were included as statistically significant ($R^2 = .511$, $F(4, 385) = 99.29$, $p < .001$). The resulting simplified conceptual framework from the detailed component analysis can be seen in Figure 2.

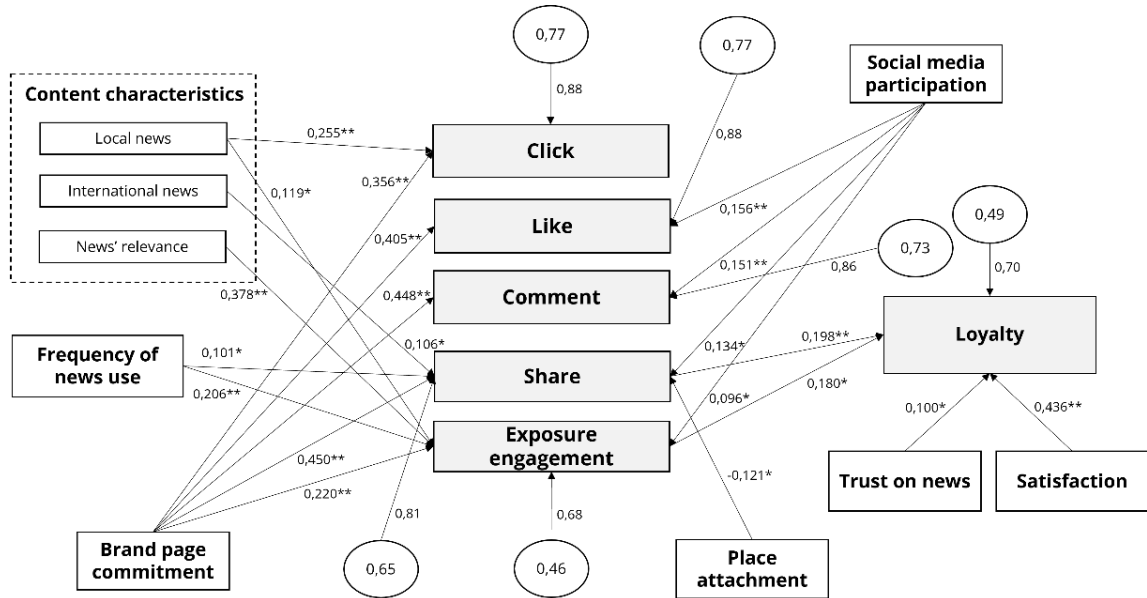


Figure 2 - Path Analysis Simplified Model for Engagement Components

Source: The authors

5.5. Structural Equation Modelling

Since one of the limitations of path analysis is that it does not estimate the paths simultaneously, structural equation modelling was used to simultaneously estimate the paths of the simplified models obtained earlier, using IBM AMOS 27 software.

The goodness of fit indicators for the revised measurement model of global engagement ($\chi^2 = 59.359$, $df = 7$, $\chi^2/df = 8.480$, $CFI = 0.961$, $GFI = 0.967$, $RMSEA = 0.139$), as well as for the model with engagement groups ($\chi^2 = 75.576$, $df = 11$, $\chi^2/df = 6.871$, $CFI = 0.962$, $GFI = 0.963$, $RMSEA = 0.123$) are acceptable, except for the χ^2/df and $RMSEA$ values. Kline (2015) notes that the effect of χ^2 can be sensitive to sample sizes and is not suitable for large samples ($n > 200$). Also, some authors consider that the $RMSEA$ coefficient may penalize complex models (Byrne, 2013; Hair et al., 2014). As the GFI and CFI values are quite good in the models with global engagement and engagement groups, the analysis proceeded and only the component model was discarded, since CFI values were lower than those previously presented (0.937) and $GFI < 0.95$ (see Appendix P).

Despite some poor fit indicators, the conclusions drawn from this estimation are in all aspects similar to those obtained by the path analysis. Appendix Q shows the structural model with the global engagement (see Figure Q-1) and the model with the division into functional and exposure groups (see Figure Q-2), as well as the individual tests of the relationships between the variables, obtained through the AMOS software.

The parameter estimates, detailed in Table 5, show that all the direct effects are significant for both models, proving the above-mentioned support of hypotheses **H5, H6a, H8a, H8b, H9, H11, H12, H13 and H14**.

Table 5: Estimates for both engagement and engagement groups models

		B (standardized)	P
Global Engagement Model	REL -> ENG	0,236	< 0,001
	SMCON -> ENG	0,083	0,018
	FNU -> ENG	0,203	< 0,001
	COMM -> ENG	0,396	< 0,001
	SMPART -> ENG	0,137	< 0,001
	TRU -> LOY	0,102	0,018
	SAT -> LOY	0,428	< 0,001
	ENG -> LOY	0,324	< 0,001
Functional and Exposure Engagement Division Model	FNU -> FUNC ENG	0,182	< 0,001
	COMM -> FUNC ENG	0,488	< 0,001
	SMPART -> FUNC ENG	0,147	< 0,001
	FNU -> EXP ENG	0,214	< 0,001
	COMM -> EXP ENG	0,232	< 0,001
	SMPART -> EXP ENG	0,098	0,008
	LOCAL -> EXP ENG	0,153	< 0,001
	REL -> EXP ENG	0,336	< 0,001
	TRU -> LOY	0,104	0,018
	SAT -> LOY	0,431	< 0,001
	FUNC ENG -> LOY	0,228	< 0,001
	EXP ENG -> LOY	0,134	0,005

Source: The authors

Appendix R provides an overview on the possible indirect effects. The total effect, calculated by AMOS, is given by the sum of the direct and indirect effects, and the indirect effects result from the product of the coefficients presented in the path diagram. As shown in Table R-1, all the effects found are significant, except for the indirect effect of SM connection closeness on loyalty (calculated as a bootstrap approximation obtained by constructing two-sided

percentile-based confidence intervals). All the remaining explainable variables of engagement, or its groups (see Table R-2) show significant indirect effects on loyalty. While these effects may seem minor, they should be considered for a more complete and critical analysis of loyalty to local newspapers on social media.

It is worth mentioning that from the analysis of the modification indices, there was a suggestion to create paths from page commitment and relevance to loyalty. If these two relationships were considered, all goodness-of-fit indicators would have adequate levels ($\chi^2 = 7.409$, $df = 5$, $\chi^2/df = 1.482$, $CFI = 0.998$, $GFI = 0.996$, $RMSEA = 0.035$), indicating the overall validity of the measurement model. However, since these relationships were beyond the scope of the study, it is noted as a suggestion for future research.

5.6. Summary of the Hypothesis Test and Discussion of Results

The hypotheses tested are summarized in Table 6, and the complete table with the results is shown in Appendix S.

Table 6: Summary of the hypothesis test

Hypotheses	Empirical support
H1a Age is negatively associated with engagement with local newspapers on SM	Not supported
H1b Female individuals like local newspaper posts on SM more than male individuals	Not supported
H1c Female individuals share local newspaper posts on SM more than male individuals	Not supported
H1d Male individuals comment on local newspaper posts on SM more than female individuals	Supported
H1e Education is positively associated with sharing a local newspaper post on SM	Not supported
H1f Education is positively associated with commenting on a local newspaper post on SM	Not supported
H2 Place attachment is positively associated with engagement with local newspaper posts on SM	Not supported
H3 Attitude towards news from local newspapers is positively associated with engagement with local newspaper posts on SM	Not supported
H4a Soft news is positively associated with exposure engagement with local newspapers posts on SM	Not supported
H4b Soft news is negatively associated with commenting a local	Not supported

newspaper post on SM	
H4c Soft news is positively associated with sharing a local newspaper post on SM	Not supported
H4d Hard news is positively associated with sharing a local newspaper post on SM	Not supported
H5 Proximity is positively associated with engagement with local newspapers posts on SM	Partially supported
H6a Relevance is positively associated with exposure engagement with local newspapers posts on SM	Supported
H7a Close connections on social media are positively associated with sharing a local newspaper post on SM	Not supported
H8a Frequency of news use is positively associated with exposure engagement with local newspapers posts on SM	Supported
H8b Frequency of news use is positively associated with sharing a local newspaper post on SM	Supported
H9 Brand page commitment is positively associated with engagement with local newspapers posts on SM	Supported
H10a Source credibility is positively associated with sharing a local newspaper post on social media	Not supported
H11 Social media participation is positively associated with engagement with local newspapers' posts on social media	Partially supported
H12 Engagement with local newspapers posts on SM is associated with users' loyalty towards that local newspaper's presence on SM	Partially supported
H13 Trust in news is positively associated with users' loyalty toward the local newspaper's presence on SM	Supported
H14 Users' satisfaction with the local newspaper's presence on SM is positively associated with loyalty towards that presence	Supported

Source: The authors

Overall, and according to the literature, both content and user characteristics have an impact on engagement with local newspapers' posts on social media. In terms of news content, despite the existing literature on the distinction of news types (e.g., Boukes & Boomgaarden, 2015; Lehman-Wilzig & Seletzky, 2010), no relation between soft or hard news and engagement on social media was found. Still, proximity was shown to be a relevant factor for news engagement, in line with previous research (Park & Kaye, 2021; Salgado & Bobba, 2019), but only for clicks, exposure and comments, albeit negatively, while shares were predicted by international news. The results also confirm that relevance plays a key role in capturing users' attention, thus leading to increased exposure engagement (e.g., Bobkowski, 2015; Ma et al.,

2014; Rudat et al., 2014).

Moreover, it was confirmed that user characteristics play an important role in fostering engagement with news publications, as indicated in the literature (Fletcher & Park, 2017; Park & Kaye, 2018). At the level of individual characteristics, older people were found to comment and share more than younger people, contradicting the findings of Sang et al. (2020), but no relation was found for the remaining dimensions of engagement. Regarding gender, differences were only found in comments, as men comment more than women, according to previous studies (Baek et al., 2021; Sang et al., 2020). As for education level, this study found that less educated people commented more on local news, in line with Bobkowski et al. (2019) and contradicting Sang et al. (2020).

Regarding local-associated variables, particularly place attachment and social media connection closeness, the findings did not confirm the expected positive relations with specific engagement components. Respondents appear to relate to the place of the newspaper indicated by them ($M = 4,15$), but this feature proved to be only a negative predictor of shares, contrary to what was suggested by Wang et al. (2021), meaning that if a person is attached to the newspaper's place, they are less likely to share local news. Indeed, according to Scannell and Gifford (2014), place attachment can be described through particular behaviours. In this case, it is expected that social media contacts will not exhibit the same interest in that area, limiting sharing activities.

Thus, despite the findings of previous research (e.g., Ma et al., 2014; Shan & King, 2015), having close contacts in the social network was shown to influence overall engagement, but not through sharing specifically - as expected, since this type of news is of interest to these same contacts, in line with Bobkowski et al. (2019), who stated that the use of social media for sharing local news may be limited exactly by this factor.

In general, people seem to consider the local newspaper they consume as a credible source of information ($M = 3,99$). However, despite what would be expected according to Nedelcu and Blaban (2021), this did not prove to be a significant predictor of sharing news posts. The same applied to the attitude towards local newspapers which, although respondents showed positive feelings towards local news ($M = 3,99$), did not have any impact on engagement or its components, contradicting the findings of Hobbs et al. (2013).

The findings demonstrate that heavy news users share more than light users (Sang et al., 2020), whereas higher news use was also positively associated with exposure engagement, as

stated by Chen and Pain (2021). Moreover, higher social media participation was expected to lead to higher news engagement (Kümpel, 2020; Paruthi & Kaur, 2017), which was true for all forms of engagement except for clicks. This reveals that participation on social media does not predict user interest in reading the full news story within the embedded link.

Regarding page commitment, since it stands for the emotional and active involvement with the brand's activities in social media (Hutter et al., 2013), the findings confirmed that it has a positive impact on engagement and all its components.

The outcomes also led to the conclusion that those who trust the news more tend to show greater loyalty towards the local newspaper's presence on social media, as found in previous studies (e.g., Lischka & Messerli, 2016; Nelson & Kim, 2021). Accordingly, satisfaction with the local newspaper's presence on social media was also shown to be a significant antecedent of loyalty towards that presence, this link being already intensively explored in the literature for several areas (e.g., Erciş et al., 2012; Massari & Passiante, 2006; Picón et al., 2014).

Finally, in line with previous studies, engagement is considered as a significant antecedent of loyalty (Lim et al., 2015; Lin et al., 2018). However, contrary to the findings of Chen and Pain (2021), news that capture the user's attention were not the most effective in enhancing newspaper loyalty, but functional engagement was. In the component analysis, only shares and exposure engagement revealed to be antecedents of loyalty, with comments showing no relationship with loyalty, despite the indications of Lischka and Messerli (2016). Nevertheless, this study proved that there is a positive effect of engagement on loyalty toward local newspapers' presence on social media, meaning that individuals who engage more with local newspapers posts will be more loyal to the newspaper presence on social media.

6. Conclusion

The main objective of this study was to identify the determinants of engagement and loyalty with local newspapers on social media. As described in detail in the previous sections, this research confirmed the complexity of the topic, proposing an integrated model to explain these variables, which comprise both factors controlled by managers (i.e., content characteristics) and aspects of users' profiles and behaviours. This study helps to fill a gap in the literature regarding local newspapers' strategies on social media, but also demonstrates the need to further study the topic. Indeed, several hypotheses based on general literature on newspapers on social media were not confirmed when applied to local newspapers. Furthermore, some interesting findings related to the local dimensions of news also demonstrate the relevance of local newspapers as a research topic. Indeed, local news published by local newspapers did not prove to be a significant determinant of all types of engagement, as expected, being only significant for explaining clicks on the link to the full article and for the attention given to the publication, and in fact negatively related to comments. Moreover, international news stories published by local newspapers drove the most shares.

Overall, brand page commitment, meaning the user's active and emotional involvement with the brand's activities on social media, was considered the most crucial factor in influencing reader engagement, followed by news relevance, frequency of news use, closer contacts on social media and social media participation. Although the effect of frequency of news use, page commitment and social media participation on both functional and exposure engagement was confirmed, relevance was evidenced as only predicting exposure engagement, together with local news. Still, page commitment predicted all engagement components, as did social media participation, the latter except for clicks. Shares, however, were negatively predicted by place attachment and positively by international news and frequency of news use, along with the aforementioned. Although both engagement and its groups enhanced loyalty along with satisfaction and trust, only shares and exposure proved to be antecedents of loyalty in the detailed component analysis.

6.1. Theoretical Contributions

This research makes several contributions. Firstly, it aggregates contributions from dispersed studies included in the systematic literature review conducted on the topic of engagement and loyalty with online news on social media and adapted it to the context of local news.

Only one study included targeted local newspapers, evidencing the gap in the literature in this regard. As such, this study allowed the identification of existing gaps in the literature, and it also provides an integrated model to explain engagement and loyalty with newspapers on social media, which combines user characteristics, news content characteristics and emotions conveyed, characteristics of the news visuals presented to the user, and characteristics of the news provider. This model was then adopted to study local newspapers, as it emerged as a major gap in the literature. Still, the model itself is adequate to study national newspapers, which were actually the main focus of extant literature.

This study also contributes with rich empirical evidence, showing that the positive relationship between engagement and loyalty also applies to local newspapers. As such, these findings become a major contribution to the literature as the relationship between these concepts combined with user satisfaction and trust in local news on social media as antecedents of loyalty had not yet been explored.

Moreover, this study demonstrates that considering engagement as one single construct, or comprising functional and exposure engagement, or the components of functional engagement (i.e., likes, shares, comments, clicks) may generate distinct findings, hence explaining some dissonant relationships suggested by the literature. Apparently, the option of considering one or more dimensions of engagement as variable constructs is not sufficiently discussed by the literature, and this study demonstrates the need to further conceptualize engagement and its dimensions.

6.2. Managerial Implications

From a managerial viewpoint, this study provides knowledge to the companies that publish local news in an online environment. Local newspapers should carefully deliberate the characteristics of their posts, depending on the definition of their desired target audience to be included in their marketing strategies. Although in these newspapers social media management is still taken lightly, the speed at which information circulates worldwide can be beneficial to any brand and/or company.

Additionally, this research provides relevant insights regarding segmentation criteria and the type of users that have higher probability of engaging with local newspapers' posts. Through the specification of the components and their antecedents found in this study, the findings help to prioritize the most important components for each newspaper's objectives, to the

extent that by analysing specifically what type of engagement activities a particular feature is most likely to generate, newspapers can adapt their strategies to increase engagement with users through social media. As this study has proven that individual characteristics influence different components, being the older and less educated users the ones that comment and share more, segmenting the social media audience according to the strategy adopted is a viable option, prioritizing the engagement activity that suits them best.

In fact, since the highly competitive online environment is characterized by low switching costs for readers, it is critical to gain and retain loyal audiences for online news outlets, by distinguish which factors promote engagement activities (shares and exposure) that prompt users to become loyal to the newspaper's presence on a social network so that, whenever they need to be updated, they will resort to that newspaper. For this to happen, social media managers and marketers must invest in relevant and reliable content that makes the user satisfied, since these are factors that will be valued and lead the user to foster loyalty towards the presence of the local newspaper on the social network, this being also positively affected if the company frequently provides and updates popular social media content.

However, this study highlights several factors that may not be equally applicable to local or general newspapers as national/international newspapers. Jerónimo et al. (2020) state that national media seek to replicate what international media do, just as local media imitate national newspapers, but this must not be the way forward for these organizations. Although the association between type of news and engagement is severely studied in the literature, and proven in relation to major newspaper brands, the same relationship was not verified in the present study, so this must not be a strategy to be considered when producing content shaped for the audience and its characteristics. As for the credibility of the source, in line with what is stated in the literature for newspapers in general, it was expected that a credible source would lead to increased sharing of its news. This might be an important factor for the newspaper organization and for the user who reads the news but does not predict sharing local news on social media.

Thus, the literature often associates close social media connections with sharing activities, while the same is not valid for local news sharing. However, closer contacts on social media have been shown to be one of the main predictors of engagement, and thus may substantially increase other engagement activities with local newspapers posts on social media.

Still, and of great importance for local newspapers whose scope of most news is local, is the

fact that this type of news generates more clicks on the news, leading to more visits to the website, and more exposure engagement, i.e., more attention given by users to the news. Exposure engagement was also proven to be effectively enhancing user loyalty towards the newspaper's presence on social media, together with shares. Although in this study it was perceptible that international news are those that lead to more shares, the newspaper can include in its strategy the production of contents with international scope that lead the user to share more, while increasing loyalty to the newspaper's online presence.

6.3. Limitations and Future Research Directions

This study is not without limitations, namely associated with the sampling method. Despite the high number of respondents (390) that participated in the study, caution should be exercised in extrapolating the results, and further research is needed to further validate the findings. Moreover, all respondents resided in Portugal, so the conclusions drawn may not be covered globally. Possible avenues for future research include conducting studies on social media engagement with local newspapers in other social networking sites, and applying other methodologies (e.g., observation, interviews) to further understand this phenomenon.

The second limitation derives from the use of a scale for soft and hard news that did not show good consistency, leading to the consideration of two distinct types of soft news: urgent and non-urgent, which still did not show any relation with engagement. However, this may reveal that soft/hard news needs conceptual development and possibly improvement of the measurement scale for future studies, as well as the adaptation of experimental studies that allow the inclusion of visuals in the content shown to the user, enabling other relevant triggers to be discovered in the topic of news consumption and interaction on social media.

As a third limitation, given the lack of unanimity among various authors concerning the antecedents of engagement and its components, future research should focus on the components of engagement individually. These represent different importance for distinct organizations, with evidence that an increase in engagement may not reflect an increase on all its dimensions. Thus, this is also different for the user, as different engagement activities represent different efforts and consequences, so future research on the topic is essential.

Furthermore, as a fourth limitation, it was proven by the modification indices that resulted from the SEM analysis that future studies may explore other variables that explain loyalty and engagement, namely the possibility that commitment and relevance have a direct impact on loyalty.

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Appendix A Data Selection for the Systematic Literature Review

Table A-1: Research protocol

Eligibility criteria	Participation/ population (P)	Intervention/ Exposure (I)	Comparator/ control (C)	Outcomes (O)	Type of Study/Time framed (T)
	Social media users	Online news	- None -	Engagement; Loyalty;	Journal article English No time-framed
Inclusion	Facebook, Instagram, and Twitter users	Any type of news on social media or including news on social media	Any study that makes comparisons with of-line news or on the newspaper's website	At least one engagement or brand loyalty outcome, directly or indirectly measured	Only Journal article No time-framed English
Exclusion	Any other social network users.	No use of social networks for online news	-	Non engagement or loyalty outcome.	Reports Books Other languages (...)

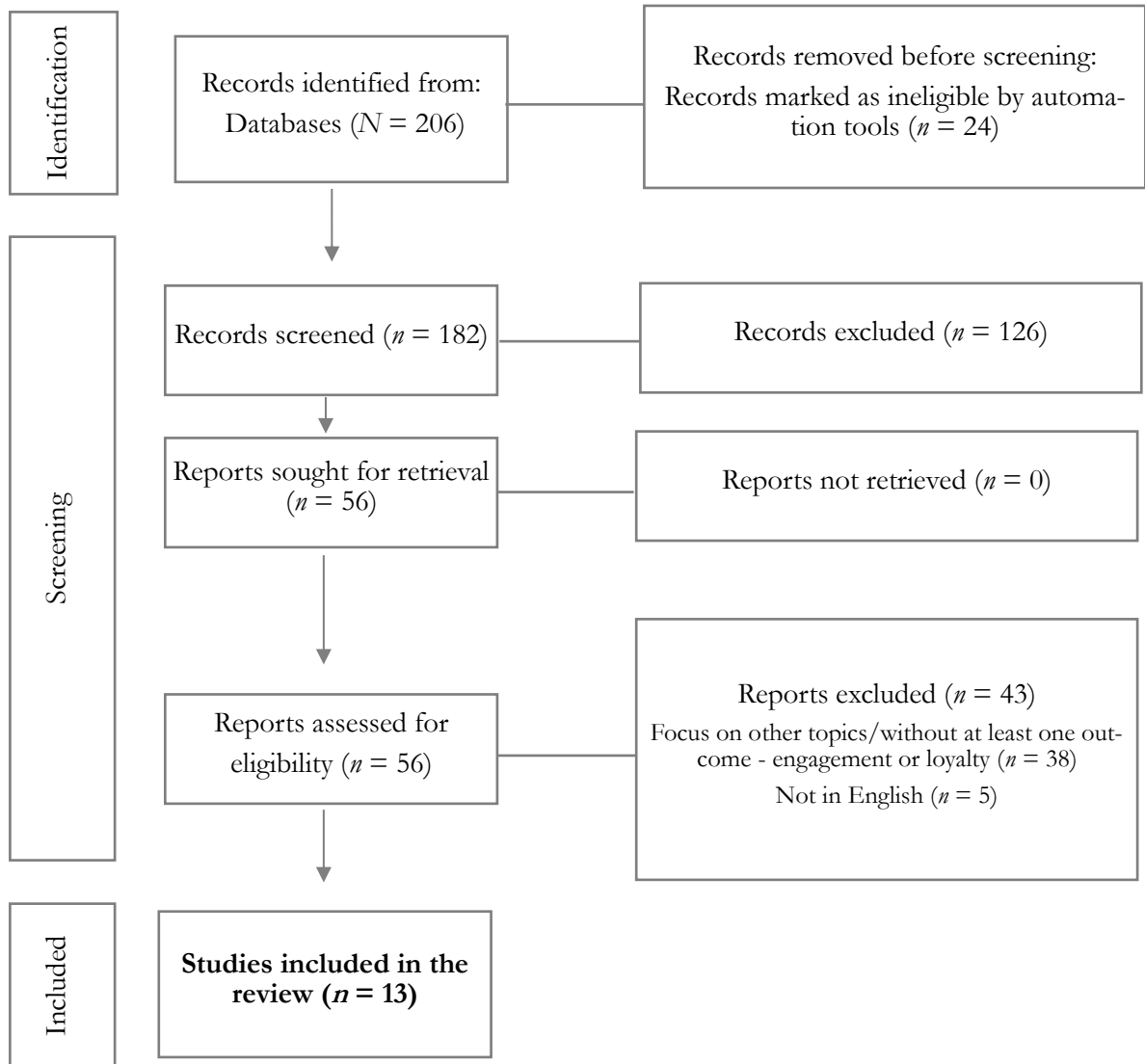
Source: The authors

Table A-2: Search keywords

Search key	Database	Hits
<p>Keywords ("online news" OR "newspaper*" OR "online news consumption" OR "digital newspaper*") AND ("social media" OR "Twitter" OR "Instagram" OR "Facebook" OR "social network* site*" OR "SNS") AND ("loyalty" OR "engagement")</p> <p>Expanders: Search also in the full text of articles. Apply equivalent subjects.</p> <p>Limiters: Language: English.</p>	Web of Science	182

Source: The authors

Appendix B Flow Diagram of Study Identification and Exclusion Criteria



Source: The authors, based on PRISMA2020: R package and ShinyApp for producing PRISMA 2020 compliant flow diagrams (Haddaway et al., 2021)

Appendix C Sample characteristics

Table C-1: Main Information on studies and publication scope

Reference	Journal	Scope	Base
(Park, 2021)	Journalism	Communication	SAGE Journals
(Chen & Pain, 2021)	Journalism & Mass Communication Quarterly	Communication	SAGE Journals
(Wieland & Kleinen-von Königslöw, 2020)	Journalism	Communication	SAGE Journals
(Sang et al., 2020)	Digital Journalism	Communication	Taylor & Francis Group
(Kümpel, 2020)	Journalism	Communication	SAGE Journals
(Choi et al., 2020)	Journalism & Mass Communication Quarterly	Communication	SAGE Journals
(Salgado & Bobba, 2019)	Journalism Studies	Communication	Taylor & Francis Group
(Kümpel, 2019)	Digital Journalism	Communication	Taylor & Francis Group
(Eg & Krumsvik, 2019)	Nordicom Review	Communication	SCIENDO
(Bobkowski et al., 2019)	Journalism Practice	Communication	Taylor & Francis Group
(Karnowski et al., 2017)	Computers in Human Behavior	Psychology	Science Direct
(Lischka & Messerli, 2016)	Digital Journalism	Communication	Taylor & Francis Group
(Khuntia et al., 2016)	International Journal on Media Management	Communication	Taylor & Francis Group

Source: The authors

Table C-2: Characteristics of the studies included in the systematic review

Reference/ year/ country of origin	Objectives	Outcome	Data sources/ meas- urement	Results
(Park, 2021); USA;	Determines the news values that drive social media users to like, comment and share top news stories on Facebook.	Engagement	Analysis of news selection and news values: 2480 articles from three major newspapers in South Korea	Stories of social significance are more widely published than stories of deviance. Social significance is a stronger predictor of comments, while deviance predicts more likes, both being predictors of likes and shares.
(Chen & Pain, 2021); Taiwan;	Examines the relationships between social media news engagement and brand awareness and loyalty toward media brands.	Engagement and Brand Loyalty	Survey with 588 respondents	Content Interaction and Exposure Engagement are two distinct dimensions of engagement in social media news, this being positively related to brand loyalty towards newspapers. Content Interaction Engagement is a major dimension, but Exposure Engagement was found to be the main antecedent of brand awareness and brand loyalty. Newspapers and Facebook help create loyalty towards each other.
(Wieland & Kleinen-von Königslöw, 2020); Germany;	Conceptualizes a triple-path model of incidental news exposure on social media as a process.	Engagement	Identification of three different pathways of incidental news processing building upon the Cognitive Mediation Model, dual systems theories on information processing, and empirical findings.	Three different paths: (A) Automatic scrolling across the newsfeed - unconscious, no awareness of news learning potentials; Emotional cues as triggers for selective (partisan) exposure. (B) Conscious encounters with news at teaser level - general awareness of news learning potentials; Processing based on cue activation and personal relevance threshold not exceeded; Influence of visuals framing. (C) Active engagement with full articles - Awareness, focused attention to a specific news publication; Processing based on cue activation and personal relevance threshold exceeded; Recall of factual knowledge.
(Sang et al., 2020); Australia;	Examines the individual factors of online news users and the different modes of interaction on digital platforms.	Engagement	Survey of news consumption carried out in Australia as part of the 2018 Reuters Institute; Multinomial Logistic Regression Analysis ($n = 1481$)	Individual factors such as gender, age, frequency of news access and interest in political news play a key role in determining the type and degree of news interaction. Distinct types of interaction activities are related to variations in demographic characteristics, as well as differences in news consumption and the use of social media to access the news.
(Kümpel, 2020);	Addresses the issue of	Engagement	Review and discussion	The positive effect of INE on learning and participatory behaviours occurs in

Germany;	incidental news exposure and engagement by proposing and explaining the existence of a 'Matthew Effect' in the use of news on social media		studies on SNS news exposure and engagement.	SNS users who are already interested in news and politics, have friends who are interested in and share news content; actively create SNS-friendly information environments; regularly interact with the news content found; reinforce system-driven personalization and become an attractive target for news advertisements.
(Choi et al., 2020); South Korea;	Examines how the emotions that news visuals convey, as well as the positivity of news texts, are associated with three management activities: sharing, commenting and reacting.	Engagement (sharing, commenting, and reacting)	Data analysis: all articles posted on four major U.S. newspapers' Facebook pages (i.e., the <i>NYT</i> , <i>USA Today</i> , <i>Washington Post</i> , and <i>The Wall Street Journal</i>)	The role of positive emotions conveyed by news stories differed depending on the types of news activities employed - the extent of positivity in the news text was found to be a negative predictor of comments, whereas it was a positive predictor of reactions. Visual news reports conveying sadness as a discrete emotion attracted higher engagement, particularly for culture and international news.
(Salgado & Bobba, 2019); Portugal, Italy;	Assesses how the nature of events and the characteristics of news content contribute to explain Facebook users' engagement with news.	Engagement	Data analysis: Facebook posts published by the two most relevant national newspapers of four southern European countries: France, Italy, Portugal, and Spain.	Some patterns of users' reactions and engagement with the posted news prevail on Facebook: reactions seem to depend more on the nature of the events than on the characteristics of the news content. Negativity as a feature of news content was shown to be positively correlated with likes, shares, and comments, while emotions and personalization were less significant. Facebook users are more receptive to breaking news (unexpected events), in their own country (proximity) and show more interest when videos are included.
(Kümpel, 2019); Germany;	Identifies the factors influencing the shift from incidental news exposure to news reporting on Facebook.	Engagement	Qualitative approach: relies on self-confrontation interviews with German Facebook users ($n = 16$)	News exposure is a key component of the Facebook experience for all participants. Engagement decisions are primarily driven by users' perceptions of news content and whether they are already interested in the issue of the linked article. This content-based relevance can be overshadowed by perceptions of social relevance and the characteristics of the news curator. Being publicly tagged under the news articles leads participants to engage with the articles, and individuals' evaluation of the news provider from which the linked article originated was identified as the least relevant factor for users to engage.
(Eg & Krumsvik, 2019); Norway;	Examines the relationship between personality and engagement with the news, through the Big Five personality traits.	Engagement	Behavioral experiment with young Norwegian adults ($n = 180$)	Personality traits can influence how people engage with the news: people who score high on neuroticism are less likely to engage with news than those who tend more towards emotional stability; informational stories were found to engage the most extraverted participants, while people who are more prone to experiential behaviours were less likely to engage.

(Bobkowski et al., 2019); USA;	Assesses the characteristics of readers who share hyperlocal news in person, over email, and through social media.	Engagement on local news	Online survey of hyperlocal news website readers ($n = 2289$), with ten hyperlocal news websites participating in the study.	The segments of the population who practice community engagement using social media may be different from those who engage through more conventional channels. The use of social media to share hyperlocal news may be limited as it is of most interest to some of the geographically close connections and may be of little interest to distant friends. Women and young people are more likely to share news on social media and of-line partnerships in community events or causes can help websites reach a larger number of engaged neighbours and convert them into regular readers and hyperlocal news sharers.
(Karnowski et al., 2017); Germany;	Determines under which conditions incidental news exposure becomes engagement, understanding how both news perceptions and general patterns of news use influence the intention to read news articles on SNS.	Engagement	Mobile forced experience sampling study and an online pre-questionnaire among Germany-speaking Facebook users ($n = 124$)	Only users' content-dependent perceptions of news articles predicted reading intentions. News engagement with incidentally news found on Facebook is mainly influenced by the situational interaction between the user and their perceptions of the content, particularly their current topical interest. INE's positive effects on political participation were stronger for people with a preference for news over entertainment content. Influence of social information added by SNS curation processes, which may lead users not only to learn more about topics they were previously interested in, but also to learn "something new".
(Lischka & Messerli, 2016); Switzerland;	Assesses whether sharing or commenting on online news increases loyalty to online news channels.	Brand loyalty	Online survey with Swiss online news users ($n = 1825$)	Sharing tends to increase satisfaction, which in turn increases loyalty. Commenting reduces satisfaction and trust, but also directly improves loyalty. Satisfaction is an important antecedent of loyalty to the online news channel, along with trust. Online readers of regional online news outlets are older but comment as much as younger readers of online news outlets.
(Khuntia et al., 2016); USA.	Determines what factors influence the sharing of news articles.	Engagement	Regression analysis using a publicly available secondary dataset of 39,797 records from Mashable	Title and style subjectivity influence shares. Enhancing the reading experience with interactive media such as images and videos is not as effective as previously believed. Rather, the best way to improve engagement is by incorporating external links. Social media is the best channel for sharing articles, with the weekend being the best time to do so.

Source: The authors

Appendix D Questionnaire

This study aims to examine engagement with local newspapers on Facebook. It is considered a local newspaper the one that provides recent and relevant information about a specific region. They differ from national newspapers (e.g., *Jornal de Notícias*, *Diário de Notícias*, *Correio da Manhã*, *Público*) which focus on the whole country and not on a specific region.

Participation is voluntary, anonymous, and confidential. The data collected will be processed aggregately and used for scientific purposes only. Please provide honest answers, as there are no right or wrong answers. The response to the questionnaire will take approximately 6 minutes. Thank you for your help, time, and cooperation!

On all questions, check a single option with an "x".

I confirm that I understand the ethical principles applied in this study and that my participation is voluntary.

Yes _____ No _____

Are you a Facebook user?

Yes _____ No _____

I follow at least one local newspaper through Facebook.

Yes _____ No _____

DEMOGRAPHICS

This information is for sample characterization only and does not allow the identification of the respondents.

How old are you?

Under 18 years old

18 to 22 years

23 to 27 years old

28 to 32 years old

33 to 37 years old

38 to 42 years old

43 to 47 years old

48 to 52 years

More than 52 years

What is the best option to describe you?

- Female
- Male
- Other

Please indicate the highest education level you have completed.

- Elementary school (9th grade)
- Secondary education (12th grade)
- Undergraduate degree
- Master's degree
- PhD

Which of these options describes your income in the past month?

- No income
- Less than 500€
- Between 501 and 1000€
- Between 1001 and 1500€
- Between 1501 and 2000€
- More than 2000€

Which of these options best describes your professional activity?

- Self-employed
- Employed
- Student
- Unemployed, retired, housework
- Other: _____

FACEBOOK USE

Indicate the option that best characterizes your use of Facebook.

How many hours do you spend on Facebook per day?

- Less than an hour a day
- 1 to 2 hours a day
- 2 to 3 hours a day
- 3 to 4 hours a day
- 4 to 5 hours a day
- More than 5 hours per day

Indicate the degree of agreement with the following statements, from 1-Totally disagree to 5- Totally agree.

	1	2	3	4	5
I spend a lot of my free time on Facebook					
I am heavily into Facebook					
I am passionate about Facebook					
My days would not be same without Facebook					
I use Fb to interact with people or groups of my local community					
Most of my contacts on Facebook are from my region					
Most of the people I interact with on Facebook are from my region					
The most important Facebook contacts for me are from my region					

LOCAL NEWSPAPERS' PUBLICATION OF NEWS ON FACEBOOK

Check the option that best describes your opinion about the publication of news by local newspapers on Facebook, between the two adjectives indicated.

	1	2	3	4	5	
Useless						Useful
Lacks important benefits						Offers important benefits
Important						Unimportant
Effective						Ineffective
Valuable						Not valuable
Recommended						Not recommended

Please indicate a local newspaper you often read on Facebook. If you follow several, please indicate the one that is most relevant to you _____

Please think about the region related to the local newspaper you have chosen. Indicate the degree of agreement with the following statements, from 1-Totally disagree to 5-Totally agree.

	1	2	3	4	5
I am very attached to my neighborhood					
My neighborhood is very special to me					

I identify strongly with my neighborhood					
My neighborhood is a part of me					
This community means a lot to me					

ABOUT THE LOCAL NEWSPAPER

In the next questions, please think of the newspaper you've indicated.

How often do you use Facebook for getting news? (1. Never – 10. Always)

How often do you use social media to stay informed about current events and public affairs? (1. Never – 10. Always)

How often do you get the news from this newspaper on Facebook to stay informed about local community? (1. Never – 10. Always)

Please indicate your level of agreement with the following statements, from 1-Totally Disagree to 5-Totally Agree.

This newspaper often publishes on Facebook...	1	2	3	4	5
... local news					
... national news					
... international news					

NEWS CHARACTERISATION OF THE LOCAL NEWSPAPER

Thinking about the paper you indicated earlier, please indicate the degree to which you agree with the following statements, from 1-Totally Disagree to 5-Totally Agree.

	1	2	3	4	5
News that is not urgent or might not even be published (e.g., curiosities)					
News that needs to be reported immediately not because of its importance, but because of its public interest (e.g., death of a celebrity)					
Important news or discoveries with influence and significance for the world (e.g., politics, society, education, welfare, economy, or environment)					
Unexpected event of great importance to most of the public (e.g., natural disaster, terrorist attack)					

Indicate the degree of agreement with the following statements, from 1-Totally disagree to 5- I totally agree.

	1	2	3	4	5
I find the news from this newspaper on Facebook relevant to me					
The news from this newspaper on Facebook keep me informed					
The news from this newspaper on Facebook keep me connected with that region					
The news from this newspaper on Facebook keep me constantly updated					

ENGAGEMENT WITH THE NEWSPAPER

Thinking about the local newspaper you have chosen, indicate how often you perform the actions indicated in each statement, from 1 - Never to 5 - Very frequently

	1	2	3	4	5
I click on the news links of this newspaper on Facebook					
I "like" this newspaper's Facebook news posts					
I comment on this newspaper's Facebook news posts					
I share the links of the news of this newspaper in Facebook					
I pay attention to this local newspaper's news when I use Facebook					
I enjoy the experience of reading this local newspaper's news on Facebook					
I get news published by the newspaper in my Facebook feed					

OPINION ABOUT THE NEWS PUBLISHED BY THE NEWSPAPER ON FACEBOOK

Thinking about your chosen local newspaper, please indicate the degree to which you agree with the following statements, from 1-Totally disagree to 5-Totally agree.

	1	2	3	4	5
I think I can trust most news most of the time					
I think I can trust most of the news I consume most of the time					
The information in the news coverage would be verifiable if examined					
The reported information by this newspaper is true					
The newspaper recounts the facts truthfully					
The facts I get from this local newspaper are correct					

Thinking about the local newspaper you indicated, choose the option that best describes your opinion, between the two adjectives indicated.

	1	2	3	4	5	
Dependable						Undependable
Honest						Dishonest
Sincere						Insincere
Trustworthy						Untrustworthy
Expert						Not an expert
Experienced						Inexperienced
Knowledgeable						Unknowledgeable
Qualified						Unqualified
Skilled						Unskilled

Thinking of the local newspaper you selected, indicate the degree of agreement with the following statements, from 1-Totally disagree to 5-Totally agree.

	1	2	3	4	5
I get informed about my city news daily					
I feel as a part of this newspaper community on Facebook					
I have a close relationship with other readers of this local newspaper on Facebook					
I participate in activities on the page very often					
I miss something if I do not visit regularly					
It is fun for me to inspire others about this local newspaper					
I am satisfied with my decision to be informed by this newspaper's Facebook page					
If I had to be informed, I would feel differently about reading news from this newspaper's Facebook page.					
My choice to read news from this newspaper's Facebook page was a wise one					
I feel badly regarding my decision to read this newspaper's Facebook page					
I think I did the right thing by reading news from this newspaper's Facebook page					
I am unhappy that I choose to read news from this newspaper's Facebook page					
I will say positive things about this newspaper's Facebook page to other people.					

I will recommend this newspaper's Facebook page to someone who seeks advise.

I will encourage friends and relatives to read from this newspaper's Facebook page.

I consider this newspaper my first choice to read news on Facebook.

I will read more from this newspaper on Facebook in the next few years.

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Appendix E Variable Measures

Variable	Adapted from	No of items	Original	Adaptation
Social Media Participation	(Vivek et al., 2014)	4 items	I spend a lot of my free time on X.	I spend a lot of my free time on Facebook.
			I am heavily into X.	I am heavily into Facebook.
			I am passionate about X.	I am passionate about Facebook.
			My days would not be the same without X.	My days would not be the same without Facebook.
SM Connection Closeness	(Fidan, 2019)	1 item	I use Facebook to interact with people or groups of my common interests.	I use Fb to interact with people or groups of my local community.
	Self-developed	3 items		Most of my contacts on Facebook are from my region.
				Most of the people I interact with on Facebook are from my region. The most important Facebook contacts for me are from my region.
Attitude	(Spears & Singh, 2004)	6 items	useless/useful	useless/useful
			important / unimportant	important / unimportant
			valuable / worthless	valuable / worthless
			advisable to choose / not advisable to choose	advisable to choose / not advisable to choose
			effective/ ineffective	effective/ ineffective
			lacks important benefits/offers important benefits	lacks important benefits/offers important benefits
Place Attachment	(Boley et al., 2021)	5 items	I am very attached to my neighbourhood.	I am very attached to that region.
			My neighbourhood is very special to me.	That region is very special to me.
			I identify strongly with my neighbourhood.	I identify strongly with that region.
			My neighbourhood is a part of me.	That region is a part of me.
			This community means a lot to me.	The community of that region means a lot to me.
Frequency of News Use	(Diehl et al., 2019)	3 items	How often do you use Facebook for getting news?	How often do you read news from this newspaper on Facebook?
			How often do you use social media to stay informed about current events and public affairs?	How often do you get the news from this newspaper on Facebook to stay informed about current events and public affairs;
			How often do you use social media to stay informed	How often do you get the news from this newspaper on

			about the local community?	Facebook to stay informed about the local community?
Scope	Self-developed	3 items		This newspaper frequently publishes local news on Facebook.
				This newspaper frequently publishes national news on Facebook.
				This newspaper frequently publishes national news on Facebook.
Soft News	(Lehman-Wilzig & Seletzky, 2010)	2 items	'Light' or 'spicy' news that need not be reported on immediately or at all, e.g. celebrity gossip, 'man bites dog' items (human interest);	News that is not urgent or might not be published at all (e.g. curiosities)
			'Light' news that needs to be reported immediately not for its intrinsic importance but rather because of its wide public interest (death or arrest of a major celebrity) or for professional reasons (exclusive 'scoop').	News that needs to be reported immediately not because of its importance, but because of public interest (e.g. death of a celebrity).
Hard News	(Lehman-Wilzig & Seletzky, 2010)	2 items	Important news, especially in the fields of politics, society (education, welfare), economics or the environment that needs to be reported as soon as possible due to its influence or ramifications on the public and surrounding world;	Important news or discoveries with influence and significance for the world (e.g. politics, society, education, welfare, economy or environment).
			A breaking, unexpected event of great import for most of the public and/or the environment (e.g. epidemic, natural disaster, terror attack);	Unexpected events of great importance to the majority of the public (e.g. natural disaster, terrorist attack).
Relevance	(Chen, 2020)	1 item	I find the news from newspapers I often see on Facebook relevant to me.	I find the news from this newspaper on Facebook relevant to me.
	Self-developed	3 items		The news from this newspaper on Facebook keeps me informed.
				The news from this newspaper on Facebook keeps me connected with that region.
				The news from this newspaper on Facebook keeps me constantly updated.
Functional	(Chen & Pain,	4 items	How often do you click on links of the news on	How often do you click on links of the news of this

Engagement	2021)		Facebook?	newspaper on Facebook?
			How often do you share the news links of news publishers on Facebook?	How often do you share the news links of this newspaper on Facebook?
			How often do you comment on the news links of news publishers on Facebook?	How often do you comment on the news links of this newspaper on Facebook?
			How often do you like the news links of news publishers on Facebook?	How often do you like the news links of this newspaper on Facebook?
Exposure Engagement	(Chen, 2020)	3 items	I pay attention to the news when using Facebook.	I pay attention to the news of this local newspaper when using Facebook.
			I enjoy the news reading experience via Facebook.	I enjoy the reading experience of this local newspaper's news on Facebook.
			I get news shared by newspapers or anyone on Facebook.	I get news shared by this newspaper on Facebook.
Trust	(Newman et al., 2021)	2 items	I think you can trust most news most of the time	I think I can trust most news most of the time.
			I think I can trust most of the news I consume most of the time	I think I can trust most of the news I consume most of the time.
	(Prochazka & Schweiger, 2019)	4 items	The information in the news coverage would be verifiable if examined.	The information in the news coverage would be verifiable if examined.
			The reported information is true.	The reported information by this newspaper is true.
			The reports recount the facts truthfully.	The newspaper recounts the facts truthfully.
			The facts that I receive regarding UE are correct.	The facts I get from this local newspaper are correct.
Source Credibility	(Ohanian, 1990)	9 items	Dependable – Undependable	Dependable – Undependable
			Honest – Dishonest	Honest – Dishonest
			Sincere – Insincere	Sincere – Insincere
			Trustworthy - Untrustworthy	Trustworthy - Untrustworthy
			Expert - Not an expert	Expert - Not an expert
			Experienced – Inexperienced	Experienced – Inexperienced
			Knowledgeable – Unknowledgeable	Knowledgeable – Unknowledgeable
			Qualified – Unqualified	Qualified – Unqualified
			Skilled - Unskilled	Skilled - Unskilled
Page Commitment	(Hutter et al., 2013)	6 items	I get informed about MINI news daily	I get informed about my city news daily.
			I feel as a part of the MINI-Facebook Community	I feel as a part of this newspaper community on Facebook.

			I have a close relationship to other MINI FB-Fans	I have a close relationship with other readers of this local newspaper on Facebook.
			I participate in activities on the page very often	I participate in activities on the page very often.
			I miss something if I do not visit regularly	I miss something if I do not visit regularly.
			It is fun for me to inspire others about MINI	It is fun for me to inspire others about this local newspaper.
Satisfaction	(Anderson & Srinivasan, 2003)	6 items	I am satisfied with my decision to purchase from this Website.	I am satisfied with my decision to be informed by this newspaper's Facebook page.
			If I had to purchase again, I would feel differently about buying from this Web site.	If I had to be informed, I would feel differently about reading news from this newspaper's Facebook page.
			My choice to purchase from this Web site was a wise one.	My choice to read news from this newspaper's Facebook page was a wise one.
			I feel badly regarding my decision to buy from this Website.	I feel badly regarding my decision to read this newspaper's Facebook page.
			I think I did the right thing by buying from this Web site.	I think I did the right thing by reading news from this newspaper's Facebook page.
			I am unhappy that I purchased from this Web site	I am unhappy that I choose to read news from this newspaper's Facebook page
Loyalty	(Zeithaml et al., 1996)	5 items	Say positive things about XYZ to other people.	I will say positive things about this newspaper's Facebook page to other people.
			Recommend XYZ to someone who seeks your advice.	I will recommend this newspaper's Facebook page to someone who seeks advice.
			Encourage friends and relatives to do business with XYZ.	I will encourage friends and relatives to read from this newspaper's Facebook page.
			Consider XYZ your first choice to buy _____ services.	I consider this newspaper my first choice to read news on Facebook.
			Do more business with XYZ in the next few years.	I will read more from this newspaper on Facebook in the next few years.

Source: The authors

**Appendix F Local Newspapers Chosen by Respondents
Which Were the Subject of the Questionnaire**

Newspaper	Frequency	%	Cumulative %
<i>Semanário de Felgueiras</i>	42	10,8	10,8
<i>Felgueiras Magazine</i>	37	9,5	20,3
<i>Notícias de Fafe</i>	30	7,7	27,9
<i>Jornal do Fundão</i>	29	7,4	35,4
<i>Mais Guimarães</i>	26	6,7	42,1
<i>Diário de Coimbra</i>	14	3,6	45,6
<i>Diário As Beiras</i>	14	3,6	49,2
<i>Jornal de Guimarães</i>	14	3,6	52,8
<i>Reflexo Digital</i>	13	3,3	56,2
<i>Jornal da Marinha Grande</i>	12	3,1	59,2
<i>A Verdade</i>	11	2,8	62,1
<i>A Voz da Póvoa</i>	10	2,6	64,6
<i>Jornal TVS</i>	10	2,6	67,2
<i>Jornal do Centro</i>	9	2,3	69,5
<i>Expresso de Felgueiras</i>	8	2,1	71,5
<i>Jornal de Leiria</i>	7	1,8	73,3
Others	104	26,7	100,0
Total	390	100,0	

Source: The authors

Appendix G Item Codes, Descriptive Statistics, and Cronbach's Alpha of the variables explained

Variable	Item Code	Items	Mean	Median	Mode	Standard Deviation	Min	Max	Cronbach's alpha
Social Media Participation	SMPART1	I spend a lot of my free time on Facebook.	2,42	2,00	2,00	1,18	1	5	0.851
	SMPART2	I am heavily into Facebook.	2,60	3,00	3,00	1,04	1	5	
	SMPART3	I am passionate about Facebook.	2,42	2,00	2,00	1,08	1	5	
	SMPART4	My days would not be the same without Facebook.	2,24	2,00	2,00	1,13	1	5	
SM Connection Closeness	SMCON1	I use Fb to interact with people or groups in my local community.	3,42	4,00	4,00	1,04	1	5	0.859
	SMCON 2	Most of my contacts on Facebook are from my region.	3,27	4,00	4,00	1,15	1	5	
	SMCON 3	Most of the people I interact with on Facebook are from my region.	3,39	4,00	4,00	1,13	1	5	
	SMCON 4	The most important Facebook contacts for me are from my region.	3,28	3,50	4,00	1,14	1	5	
Attitude towards local news on social media	ATT1	Useless/ Useful	4,36	4,00	5,00	0,73	1	5	0.883
	ATT2R	Unimportant/ Important (<i>reversed coded</i>)	3,94	4,00	5,00	1,23	1	5	
	ATT3R	Worthless/ Valuable (<i>reversed coded</i>)	3,85	4,00	5,00	1,08	1	5	
	ATT4R	Not advisable to choose/ Advisable to choose (<i>reversed coded</i>)	3,89	4,00	5,00	1,08	1	5	
	ATT5R	Ineffective/ Effective (<i>reversed coded</i>)	3,85	4,00	5,00	1,06	1	5	
	ATT6	Lacks important benefits/ Offers important benefits	4,03	4,00	5,00	1,04	1	5	
Place Attachment	PLAT1	I am very attached to that region.	4,19	4,00	4,00	0,78	1	5	0.935
	PLAT2	That region is very special to me.	4,22	4,00	4,00	0,74	1	5	
	PLAT3	I identify strongly with that region.	4,09	4,00	4,00	0,81	1	5	
	PLAT4	That region is a part of me.	4,17	4,00	4,00	0,79	1	5	

	PLAT5	The community of that region means a lot to me.	4,07	4,00	4,00	0,78	1	5		
Frequency of News Use	FNU1	How often do you read news from this newspaper on Facebook?	7,64	8,00	8,00	1,73	2	10		
	FNU2	How often do you get the news from this newspaper on Facebook to stay informed about current events and public affairs?	7,49	8,00	8,00	1,87	1	10	0.933	
	FNU3	How often do you get the news from this newspaper on Facebook to stay informed about the local community?	7,67	8,00	8,00	1,88	1	10		
Scope (local, national, international)	LOCAL	This newspaper frequently publishes local news on Facebook.	4,35	4,00	5,00	0,76	1	5		
	NAT	This newspaper frequently publishes national news on Facebook.	3,33	4,00	4,00	1,07	1	5	N.A.	
	INT	This newspaper frequently publishes international news on Facebook.	2,71	3,00	2,00	1,16	1	5		
Type of news	Soft-Non-Urgent	SOFT1	The local newspaper often publishes... [News not urgent or that could not even be published (e.g. curiosities)]	3,16	3,00	4,00	1,02	1	5	N.A.
	Soft-urgent	SOFT2	The local newspaper often publishes... [News that needs to be reported immediately not for its importance but for the public interest (e.g. death of a celebrity)]	3,39	4,00	4,00	0,98	1	5	N.A.
	Hard News	TN3	The local newspaper often publishes... [Important news or discoveries with influence and significance to the world (e.g. politics, society, education, well-being, economy or environment)]	3,59	4,00	4,00	0,99	1	5	0.719
		TN4	The local newspaper often publishes... [Unexpected event of great importance to the majority of the public (e.g. natural disaster, terrorist attack)]	3,67	4,00	4,00	0,95	1	5	

News relevance	REL1	I find the news from this newspaper on Facebook relevant to me.	3,86	4,00	4,00	0,79	1	5	0.895	
	REL2	The news from this newspaper on Facebook keeps me informed.	3,90	4,00	4,00	0,76	1	5		
	REL3	The news from this newspaper on Facebook keeps me connected with that region.	4,01	4,00	4,00	0,81	1	5		
	REL4	The news from this newspaper on Facebook keeps me constantly updated.	3,77	4,00	4,00	0,85	1	5		
Engagement	Functional Engagement	ENG1	How often do you click on links of the news of this newspaper on Facebook?	3,61	4,00	4,00	0,93	1	5	0.786
		ENG2	How often do you share the news links of this newspaper on Facebook?	2,57	3,00	3,00	1,23	1	5	
		ENG3	How often do you comment on the news links of this newspaper on Facebook?	2,15	2,00	1,00	1,25	1	5	
		ENG4	How often do you like the news links of this newspaper on Facebook?	3,19	3,00	3,00	1,17	1	5	
	Exposure Engagement	ENG5	Rate the extent to which you pay attention to the news of this local newspaper when using Facebook.	3,77	4,00	4,00	0,84	1	5	0.774
		ENG6	I enjoy the reading experience of this local newspaper's news on Facebook.	3,63	4,00	4,00	0,82	1	5	
		ENG7	I get news shared by this newspaper on Facebook.	3,52	4,00	4,00	1,06	1	5	
Trust on news	TRU1	I think I can trust most news most of the time.	4,00	4,00	4,00	0,73	1	5	0.910	
	TRU2	I think I can trust most of the news I consume most of the time.	3,94	4,00	4,00	0,78	1	5		
	TRU3	The information in the news coverage would be verifiable if examined.	3,69	4,00	4,00	0,88	1	5		
	TRU4	The reported information by this newspaper is true.	4,04	4,00	4,00	0,71	1	5		
	TRU5	The newspaper recounts the facts truthfully.	4,01	4,00	4,00	0,71	2	5		

	TRU6	The facts I get from this local newspaper are correct.	4,00	4,00	4,00	0,71	1	5	
Source Credibility	SCRE1R	Undependable/ Dependable (<i>reversed coded</i>)	4,18	4,00	5,00	0,94	1	5	0.956
	SCRE2R	Dishonest/ Honest (<i>reversed coded</i>)	4,17	4,00	5,00	0,92	1	5	
	SCRE3R	Insincere/ Sincere (<i>reversed coded</i>)	4,16	4,00	5,00	0,87	2	5	
	SCRE4R	Untrustworthy/ Trustworthy (<i>reversed coded</i>)	4,12	4,00	5,00	0,95	1	5	
	SCRE5R	Not an expert/ Expert (<i>reversed coded</i>)	3,46	3,00	3,00	1,00	1	5	
	SCRE6R	Inexperienced/ Experienced (<i>reversed coded</i>)	3,90	4,00	4,00	0,97	1	5	
	SCRE7R	Unknowledgeable/ Knowledgeable (<i>reversed coded</i>)	3,95	4,00	4,00	0,95	1	5	
	SCRE8R	Unqualified/ Qualified (<i>reversed coded</i>)	3,94	4,00	4,00	0,95	1	5	
	SCRE9R	Unskilled/ Skilled (<i>reversed coded</i>)	3,99	4,00	4,00	0,93	1	5	
Brand Page Commitment	COM1	I get informed about my city news daily.	3,61	4,00	4,00	1,00	1	5	0.869
	COM2	I feel part of this newspaper community on Facebook.	3,09	3,00	3,00	1,12	1	5	
	COM3	I have a close relationship with other readers of this local newspaper on Facebook.	2,77	3,00	3,00	1,15	1	5	
	COM4	I participate in activities on the page very often.	2,43	2,00	2,00	1,16	1	5	
	COM5	I miss something if I do not visit regularly.	3,08	3,00	3,00	1,07	1	5	
	COM6	It is fun for me to inspire others about this local newspaper.	2,99	3,00	3,00	1,12	1	5	
Satisfaction	SAT1	I am satisfied with my decision to be informed by this newspaper's Facebook page	3,85	4,00	4,00	0,80	1	5	0.887
	SAT2	My choice to read news from this newspaper's Facebook page was a wise one	3,67	4,00	4,00	0,83	1	5	
	SAT3	I think I did the right thing by reading news from this newspaper's Facebook page	3,77	4,00	4,00	0,83	1	5	
Loyalty	LOY1	I will say positive things about this	3,60	4,00	4,00	0,90	1	5	0.920

	newspaper's Facebook page to other people.						
LOY2	I will recommend this newspaper's Facebook page to someone who seeks advice.	3,47	4,00	4,00	0,99	1	5
LOY3	I will encourage friends and relatives to read from this newspaper's Facebook page.	3,46	3,00	4,00	0,94	1	5
LOY4	I consider this newspaper my first choice to read news on Facebook.	3,25	3,00	3,00	1,05	1	5
LOY5	I will read more from this newspaper on Facebook in the next few years.	3,64	4,00	4,00	0,88	1	5

Source: The authors

Appendix H Descriptive Statistics of The Variables Explained

	N	Min	Max	Mean	Standard Deviation
Social Media Participation	390	1,00	5,00	2,42	0,92
SM Connection Closeness	390	1,00	5,00	3,34	0,94
Attitude	390	2,00	5,00	3,99	0,83
Place Attachment	390	1,00	5,00	4,15	0,69
Frequency of News Use	390	2,00	10,00	7,60	1,72
Soft Non-Urgent	390	1,00	5,00	3,16	1,02
Soft Urgent	390	1,00	5,00	3,39	0,98
Hard News	390	1,00	5,00	3,63	0,85
Local Scope	390	1,00	5,00	4,35	0,76
National Scope	390	1,00	5,00	3,33	1,07
International Scope	390	1,00	5,00	2,71	1,16
News relevance	390	1,00	5,00	3,89	0,70
Engagement	390	1,00	5,00	3,21	0,75
Functional Engagement	390	1,00	5,00	2,88	0,90
Exposure Engagement	390	1,00	5,00	3,64	0,76
Clicks	390	1,00	5,00	3,61	0,933
Likes	390	1,00	5,00	3,19	1,17
Comments	390	1,00	5,00	2,15	1,25
Shares	390	1,00	5,00	2,57	1,23
Trust on news	390	1,67	5,00	3,95	0,63
Source Credibility	390	1,44	5,00	3,99	0,81
Brand Page Commitment	390	1,00	5,00	3,00	0,86
Satisfaction	390	1,00	5,00	3,77	0,74
Loyalty	390	1,00	5,00	3,49	0,83

Source: The authors

Appendix I ANOVA Analysis

Table I-1: ANOVA for age differences on clicks, likes and exposure engagement

		Sum of Squares	df	Mean Square	F	Sig.
Clicks	Between Groups	6,831	7	0,976	1,123	,348
	Within Groups	331,928	382	0,869		
	Total	338,759	389			
Like	Between Groups	15,779	7	2,254	1,662	,117
	Within Groups	518,180	382	1,356		
	Total	533,959	389			
Exposure	Between Groups	2,293	7	0,328	0,565	,784
	Within Groups	221,451	382	0,580		
	Total	223,744	389			

Source: The authors

Table I-2: Means ranks for the age - commenting and age - sharing relations

Age	N	Comments	Shares
		Mean Rank	Mean Rank
18 to 22 years old	61	194,70	195,43
23 to 27 years old	81	138,54	140,62
28 to 32 years old	54	175,04	180,19
33 to 37 years old	41	179,79	188,51
38 to 42 years old	36	262,93	254,11
43 to 47 years old	45	238,34	235,78
48 to 52 years old	30	225,12	225,43
More than 52 years old	42	223,29	213,17
Total	390		

Source: The authors

Table I-3: ANOVA for gender differences on shares and likes dimensions

		Sum of Squares	df	Mean Square	F	Sig.
Shares	Between Groups	3,682	2	1,841	1,221	,296
	Within Groups	583,661	387	1,508		
	Total	587,344	389			
Likes	Between Groups	4,154	2	2,077	1,517	,221
	Within Groups	529,805	387	1,369		
	Total	533,959	389			

Source: The authors

Table I-4: Means ranks for the gender - commenting relation

	Gender	N	Mean Rank
Comment	Female	205	183,20
	Male	183	208,23
	Other	2	292,00
	Total	390	

Source: The authors

Table I-5: ANOVA for education level differences on likes and shares dimensions

		Sum of Squares	df	Mean Square	F	Sig.
Likes	Between Groups	6,944	4	1,736	1,268	,282
	Within Groups	527,015	385	1,369		
	Total	533,959	389			
Shares	Between Groups	26,241	4	6,560	4,501	,001
	Within Groups	561,102	385	1,457		
	Total	587,344	389			

Source: The authors

Table I-6: Post-Hoc analyses using Tukey's HSD for education - sharing

Education		Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Elementary School	Secondary education	,589*	,213	,048	,00	1,17
	Undergraduate degree	,815*	,214	,002	,23	1,40
	Master's Degree	,876*	,230	,002	,25	1,51
	PhD	,988	,632	,521	-,74	2,72
Secondary education	Elementary School	-,589*	,213	,048	-1,17	,00
	Undergraduate degree	,226	,149	,549	-,18	,63
	Master's Degree	,287	,171	,447	-,18	,75
	PhD	,399	,613	,966	-1,28	2,08
Undergraduate degree	Elementary School	-,815*	,214	,002	-1,40	-,23
	Secondary education	-,226	,149	,549	-,63	,18
	Master's Degree	,061	,172	,997	-,41	,53
	PhD	,173	,613	,999	-1,51	1,85
Master's Degree	Elementary School	-,876*	,230	,002	-1,51	-,25
	Secondary education	-,287	,171	,447	-,75	,18
	Undergraduate degree	-,061	,172	,997	-,53	,41
	PhD	,112	,619	1,00	-1,58	1,81
PhD	Elementary School	-,988	,632	,521	-2,72	,74
	Secondary education	-,399	,613	,966	-2,08	1,28
	Undergraduate degree	-,173	,613	,999	-1,85	1,51
	Master's Degree	-,112	,619	1,00	-1,81	1,58

Source: The authors

Table I-7: Mean ranks for the comments - education level relation

	Education Level	N	Mean Rank
Comments	Elementary School	42	260,21
	Secondary education	134	206,14
	Undergraduate degree	130	177,75
	Master's Degree	80	176,56
	PhD	4	115,38
	Total	390	

Source: The authors

Appendix J Regression Analysis (Global Engagement)

Table J-1: Regression analysis with global engagement as dependent variable

	Standardized Coefficients (B)	t	Sig.	Collinearity Statistics		R ²
				Tolerance	VIF	
PLAT	-0,039	-0,954	0,341	0,698	1,432	0,570
ATT	-0,038	-0,975	0,330	0,738	1,355	
SOFT 1	0,052	1,390	0,165	0,832	1,202	
SOFT 2	0,006	0,141	0,888	0,711	1,406	
HARD	-0,044	-0,997	0,319	0,600	1,666	
LOCAL	-0,029	-0,673	0,501	0,627	1,595	
NAT	0,007	0,144	0,886	0,466	2,146	
INT	0,046	0,899	0,369	0,440	2,275	
REL	0,254	5,357	0,001	0,509	1,964	
SMCON	0,079	2,179	0,030	0,866	1,155	
FNU	0,205	5,123	0,001	0,716	1,396	
COMM	0,373	8,286	0,001	0,564	1,773	
SCRE	0,080	1,884	0,060	0,639	1,566	
SMPART	0,141	3,852	0,001	0,859	1,164	

F = 35,567 ($p < 0,01$); Durbin-Watson = 1,941

Source: The authors

Table J-2: Regression analysis with loyalty as dependent variable

	Standardized Coefficients (B)	t	Sig.	Collinearity Statistics		R ²
				Tolerance	VIF	
ENG	0,322	7,590	0,001	0,710	1,408	0,508
TRU	0,101	2,348	0,019	0,683	1,464	
SAT	0,424	9,182	0,001	0,597	1,674	

F = 132,931 ($p < 0,001$); Durbin-Watson = 1,972

Source: The authors

Table J-3: Standardized coefficients for all variables analysed

	ENG		LOY
PLAT	-0,039	ENG	0,322**
ATT	-0,038	TRU	0,101*
SOFT 1	0,052	SAT	0,424**
SOFT 2	0,006		
HARD	-0,044		
LOCAL	-0,029		
NAT	0,007		
INT	0,046		
REL	0,254**		
SMCON	0,079*		
FNU	0,205**		
COMM	0,373**		
SCRE	0,080		
SMPART	0,141**		

Note: * $p < .05$, ** $p < .01$

Source: The authors

Appendix K Regression Analysis (Functional and Exposure engagement)

Table K-1: Regression analysis with functional engagement as dependent variable

	Standardized Coefficients (B)	t	Sig.	Collinearity Statistics		R ²
				Tolerance	VIF	
PLAT	-0,025	-0,545	0,586	0,714	1,401	0,451
ATT	-0,022	-0,492	0,623	0,741	1,349	
SOFT 1	0,076	1,808	0,071	0,833	1,201	
SOFT 2	0,010	0,232	0,817	0,714	1,400	
HARD	-0,035	-0,718	0,473	0,609	1,641	
LOCAL	-0,069	-1,495	0,136	0,694	1,440	
NAT	0,019	0,346	0,729	0,466	2,144	
INT	0,056	0,972	0,332	0,440	2,275	
SMCON	0,064	1,571	0,117	0,867	1,153	
FNU	0,186	4,191	0,001	0,740	1,351	
COMM	0,449	9,043	0,001	0,593	1,688	
SCRE	0,079	1,656	0,099	0,649	1,541	
SMPART	0,146	3,540	0,001	0,859	1,164	

F = 23,794 ($p < 0,001$); Durbin-Watson = 1,866

Source: The authors

Table K-2: Regression analysis with exposure engagement as dependent variable

	Standardized Coefficients (B)	t	Sig.	Collinearity Statistics		R ²
				Tolerance	VIF	
PLAT	-0,005	-0,117	0,907	0,715	1,399	0,538
ATT	-0,011	-0,302	0,763	0,895	1,117	
SOFT 1	-0,008	-0,207	0,836	0,858	1,165	
SOFT 2	0,013	0,330	0,742	0,791	1,264	
LOCAL	0,122	2,793	0,005	0,639	1,566	
NAT	-0,002	-0,046	0,963	0,485	2,062	
INT	0,018	0,350	0,727	0,442	2,260	
REL	0,378	7,858	0,001	0,528	1,895	
FNU	0,206	5,009	0,001	0,719	1,390	
COMM	0,212	4,600	0,001	0,574	1,743	
SMPART	0,098	2,606	0,010	0,868	1,152	

F = 40,032 ($p < 0,001$); Durbin-Watson = 2,050

Source: The authors

Table K-3: Regression analysis with loyalty as dependent variable

	Standardized Coefficients (B)	t	Sig.	Collinearity Statistics		R ²
				Tolerance	VIF	
FUNCT	0,225	5,094	0,001	0,655	1,526	0,508
EXP	0,133	2,683	0,008	0,521	1,920	
TRU	0,102	2,340	0,020	0,669	1,496	
SAT	0,425	9,042	0,001	0,577	1,732	

F = 99,450 ($p < 0,001$); Durbin-Watson = 1,972

Source: The authors

Table K-4: Standardized coefficients for all variables analysed - functional/exposure

	FUNCT	EXPO		LOY
PLAT	-0,025	-0,005	FUNCT	0,225**
ATT	-0,022	-0,011	EXP	0,133**
SOFT 1	0,076	-0,008	TRU	0,102*
SOFT 2	0,010	0,013	SAT	0,425**
HARD	-0,035	-		
LOCAL	-0,069	0,122*		
NAT	0,019	-0,002		
INT	0,056	0,018		
REL	-	0,378**		
SMCON	0,064	-		
FNU	0,186**	0,206**		
COMM	0,449**	0,212**		
SCRE	0,079	-		
SMPART	0,146**	0,098**		

Note: * $p < .05$, ** $p < .01$

Source: The authors

Appendix L Regression Analysis (Engagement Components)

Table L-1: Regression analysis with clicks as dependent variable

	Standardized Coefficients (B)	t	Sig.	Collinearity Statistics		R ²
				Tolerance	VIF	
PLAT	0,064	1,256	0,210	0,759	1,317	0,249
ATT	0,087	1,901	0,058	0,949	1,054	
LOCAL	0,215	4,145	0,001	0,729	1,372	
NAT	0,054	0,854	0,393	0,496	2,018	
INT	0,002	0,034	0,973	0,466	2,146	
COMM	0,288	5,309	0,001	0,669	1,495	
SMPART	0,081	1,719	0,086	0,880	1,137	
F = 18,084 ($p < 0,001$); Durbin-Watson = 1,821						

Source: The authors

Table L-2: Regression analysis with likes as dependent variable

	Standardized Coefficients (B)	t	Sig.	Collinearity Statistics		R ²
				Tolerance	VIF	
PLAT	0,078	1,516	0,130	0,759	1,317	0,238
ATT	0,048	1,045	0,297	0,949	1,054	
LOCAL	-0,038	-0,721	0,471	0,729	1,372	
NAT	0,032	0,498	0,619	0,496	2,018	
INT	0,010	0,147	0,883	0,466	2,146	
COMM	0,369	6,760	0,001	0,669	1,495	
SMPART	0,155	3,265	0,001	0,880	1,137	
F = 17,042 ($p < 0,001$); Durbin-Watson = 2,003						

Source: The authors

Table L-3: Regression analysis with comments as dependent variable

	Standardized Coefficients (B)	t	Sig.	Collinearity Statistics		R ²
				Tolerance	VIF	
PLAT	-0,005	-0,110	0,912	0,744	1,344	0,330
ATT	-0,021	-0,487	0,627	0,947	1,056	
SOFT 1	0,029	0,650	0,516	0,860	1,162	
SOFT 2	0,058	1,239	0,216	0,809	1,236	
LOCAL	-0,207	-4,192	0,001	0,724	1,381	
NAT	0,052	0,870	0,385	0,487	2,054	
INT	0,090	1,429	0,154	0,444	2,251	
COMM	0,424	8,178	0,001	0,656	1,525	
SMPART	0,147	3,286	0,001	0,879	1,138	

F = 20,809 ($p < 0,001$); Durbin-Watson = 1,836

Source: The authors

Table L-4: Regression analysis with shares as dependent variable

	Standardized Coefficients (B)	t	Sig.	Collinearity Statistics		R ²
				Tolerance	VIF	
PLAT	-0,112	-2,288	0,023	0,714	1,401	0,360
ATT	-0,029	-0,609	0,543	0,741	1,349	
SOFT 1	0,083	1,827	0,069	0,833	1,201	
SOFT 2	-0,047	-0,956	0,340	0,714	1,400	
HARD	0,013	0,245	0,807	0,609	1,641	
LOCAL	-0,050	-1,001	0,317	0,694	1,440	
NAT	-0,072	-1,199	0,231	0,466	2,144	
INT	0,124	1,987	0,048	0,440	2,275	
SMCON	0,017	0,380	0,704	0,867	1,153	
FNU	0,110	2,286	0,023	0,740	1,351	
COMM	0,455	8,489	0,001	0,593	1,688	
SCRE	0,074	1,435	0,152	0,649	1,541	
SMPART	0,127	2,863	0,004	0,859	1,164	

F = 16,246 ($p < 0,001$); Durbin-Watson = 1,864

Source: The authors

Table L-5: Regression analysis with exposure engagement as dependent variable

	Standardized Coefficients (B)	t	Sig.	Collinearity Statistics		R ²
				Tolerance	VIF	
PLAT	-0,005	-0,117	0,907	0,715	1,399	0,538
ATT	-0,011	-0,302	0,763	0,895	1,117	
SOFT 1	-0,008	-0,207	0,836	0,858	1,165	
SOFT 2	0,013	0,330	0,742	0,791	1,264	
LOCAL	0,122	2,793	0,005	0,639	1,566	
NAT	-0,002	-0,046	0,963	0,485	2,062	
INT	0,018	0,350	0,727	0,442	2,260	
REL	0,378	7,858	0,001	0,528	1,895	
FNU	0,206	5,009	0,001	0,719	1,390	
COMM	0,212	4,600	0,001	0,574	1,743	
SMPART	0,098	2,606	0,010	0,868	1,152	

F = 40,032 ($p < 0,001$); Durbin-Watson = 2,050

Source: The authors

Table L-6: Regression analysis with loyalty as dependent variable

	Standardized Coefficients (B)	t	Sig.	Collinearity Statistics		R ²
				Tolerance	VIF	
CLICKS	0,049	1,011	0,313	0,546	1,833	0,511
LIKES	0,039	0,818	0,414	0,570	1,754	
COMMENT	0,035	0,698	0,486	0,502	1,991	
SHARES	0,152	2,897	0,004	0,464	2,153	
EXP	0,141	2,607	0,009	0,440	2,274	
TRU	0,098	2,222	0,027	0,653	1,532	
SAT	0,428	9,076	0,001	0,575	1,740	

F=57,047 ($p < 0,001$); Durbin-Watson = 1,961

Source: The authors

Table L-7: Standardized coefficients for all variables analysed - components

	CLICK	LIKE	COMMENT	SHARE	EXP
PLAT	0,064	0,078	-0,005	-0,112*	-0,005
ATT	0,087	0,048	-0,021	-0,029	-0,011
SOFT 1	-	-	0,029	0,083	-0,008
SOFT 2	-	-	0,058	-0,047	0,013
HARD	-	-		0,013	-
LOCAL	0,215**	-0,038	-0,207**	-0,05	0,122*
NAT	0,054	0,032	0,052	-0,072	-0,002
INT	0,002	0,01	0,09	0,124*	0,018
REL	-	-	-	-	0,378**
SMCON	-	-	-	0,017	-
FNU	-	-	-	0,11*	0,206**
COMM	0,288**	0,369**	0,424**	0,455**	0,212**
SCRE	-	-	-	0,074	-
SMPART	0,081	0,155**	0,147**	0,127**	0,098**

	LOY
CLICK	0,049
LIKE	0,039
COMMENT	0,035
SHARE	0,152**
EXP	0,141**
TRU	0,098*
SAT	0,428**

Note: * $p < .05$, ** $p < .01$

Source: The authors

Appendix M Path Analysis (Global Engagement)

Table M-1: Regression analysis with engagement as dependent variable after excluding non-significant variables

	Standardized Coefficients (B)	t	Sig.	Collinearity Statistics		R ²
				Tolerance	VIF	
REL	0,236	5,840	0,001	0,705	1,419	0,560
SMCON	0,083	2,345	0,020	0,926	1,080	
FNU	0,203	5,180	0,001	0,746	1,340	
COMM	0,396	9,457	0,001	0,655	1,526	
SMPART	0,137	3,778	0,001	0,877	1,140	
F = 97,604 ($p < 0,001$); Durbin-Watson = 1,920						

Source: The authors

Table M-2: Regression analysis with loyalty as dependent variable after excluding non-significant variables

	Standardized Coefficients (B)	t	Sig.	Collinearity Statistics		R ²
				Tolerance	VIF	
ENG	0,322	7,590	0,001	0,710	1,408	0,508
TRU	0,101	2,348	0,019	0,683	1,464	
SAT	0,424	9,182	0,001	0,597	1,674	
F = 132,931 ($p < 0,001$); Durbin-Watson = 1,972						

Source: The authors

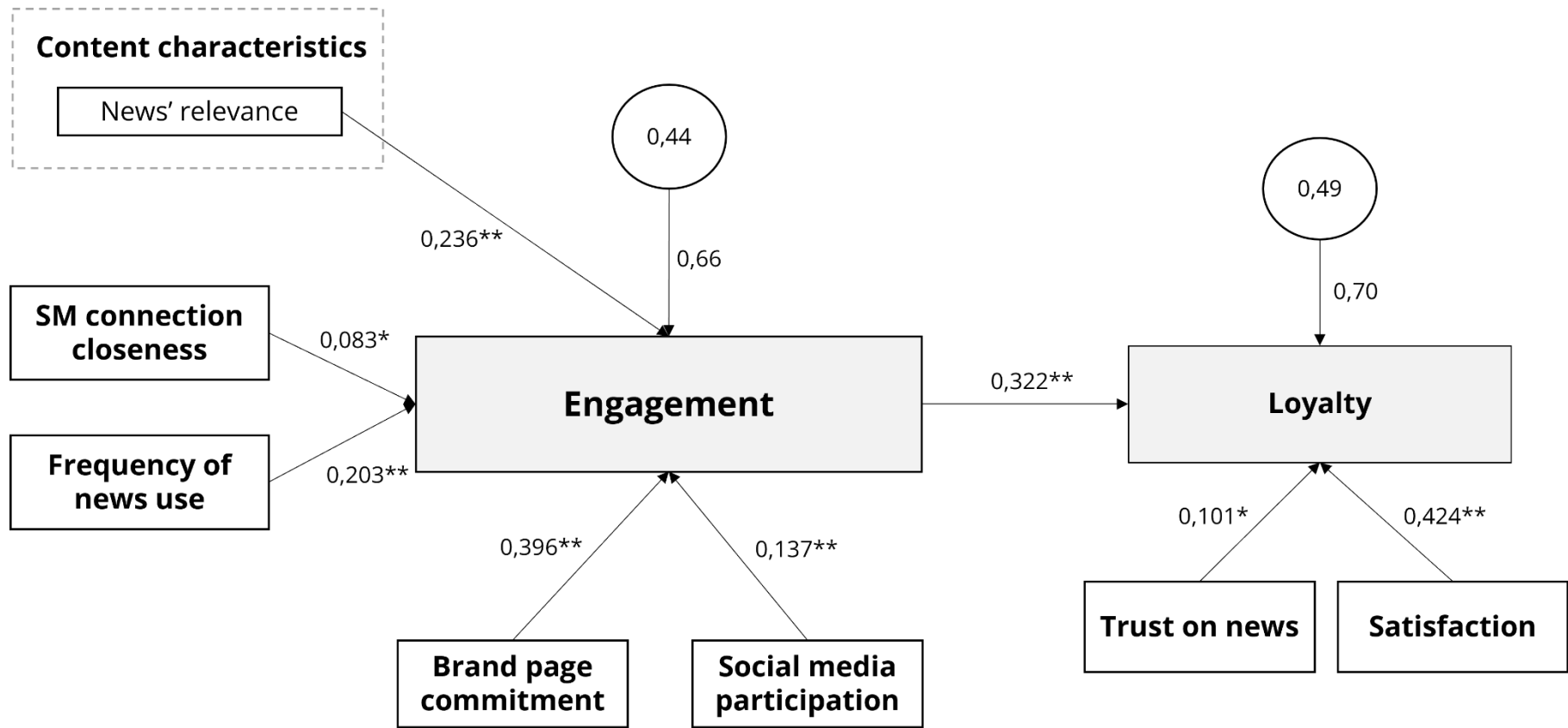


Figure M-1: Path Analysis Simplified Model for Global Engagement

Source: The authors

Appendix N Path Analysis (Functional and Exposure Engagement)

Table N-1: Regression analysis with functional engagement as dependent variable after excluding non-significant variables

	Standardized Coefficients (B)	t	Sig.	Collinearity Statistics		R ²
				Tolerance	VIF	
FNU	0,182	4,245	0,001	0,806	1,240	0,428
COMM	0,488	11,037	0,001	0,759	1,317	
SMPART	0,147	3,601	0,001	0,884	1,131	

F = 96,307 ($p < 0,001$); Durbin-Watson = 1,865

Source: The authors

Table N-2: Regression analysis with exposure engagement as dependent variable after excluding non-significant variables

	Standardized Coefficients (B)	t	Sig.	Collinearity Statistics		R ²
				Tolerance	VIF	
LOCAL	0,119	2,944	0,003	0,741	1,350	0,538
REL	0,378	8,255	0,001	0,573	1,745	
FNU	0,206	5,136	0,001	0,748	1,337	
COMM	0,220	5,170	0,001	0,663	1,508	
SMPART	0,096	2,604	0,010	0,878	1,139	

F = 89,282 ($p < 0,001$); Durbin-Watson = 2,056

Source: The authors

Table N-3: Regression analysis with loyalty as dependent variable after excluding non-significant variables

	Standardized Coefficients (B)	t	Sig.	Collinearity Statistics		R ²
				Tolerance	VIF	
FUNCT	0,225	5,094	0,001	0,655	1,526	0,508
EXP	0,133	2,683	0,008	0,521	1,920	
TRU	0,102	2,340	0,020	0,669	1,496	
SAT	0,425	9,042	0,001	0,577	1,732	

F = 99,450 ($p < 0,001$); Durbin-Watson = 1,972

Source: The authors

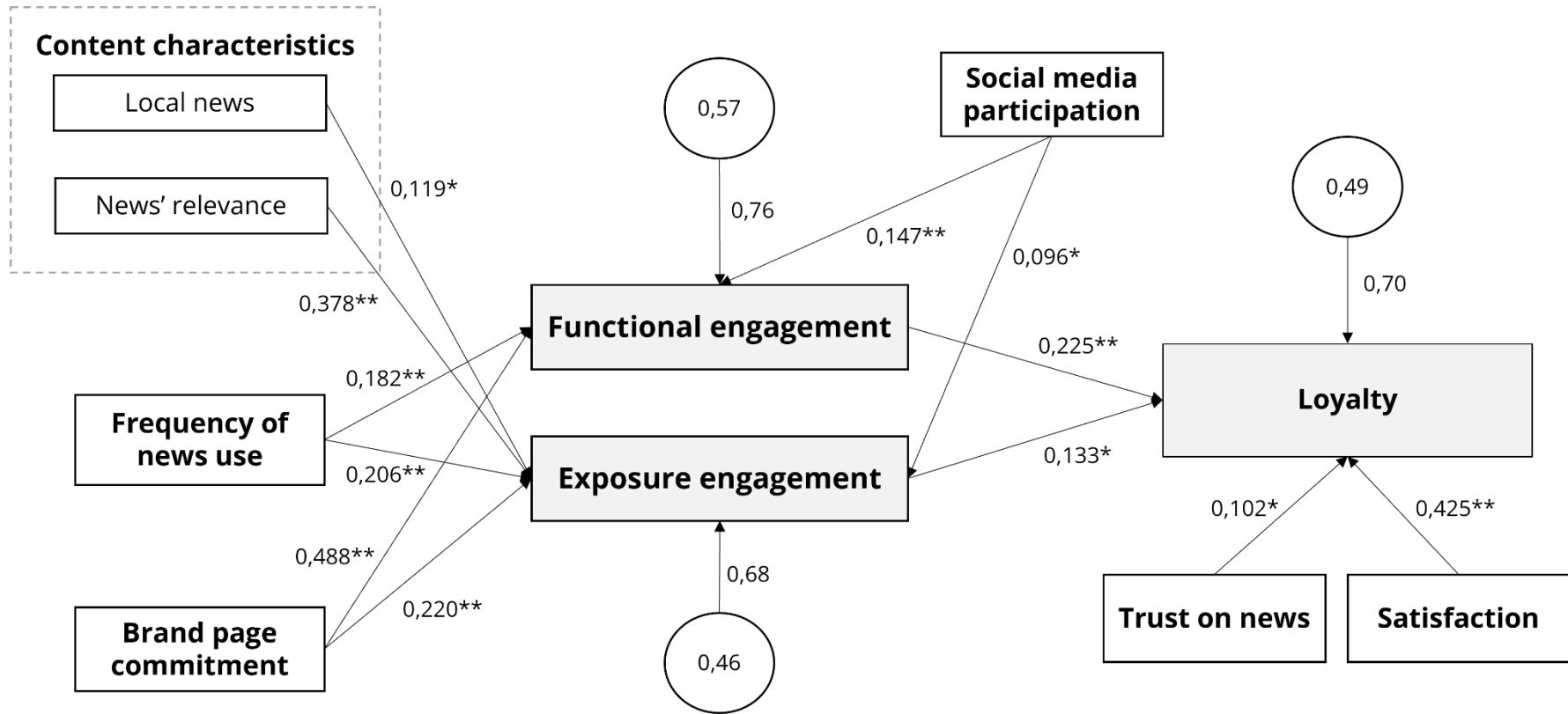


Figure N-1: Path Analysis Simplified Model for Functional and Exposure Engagement

Source: The authors

Appendix O Path Analysis (Engagement Components)

Table O-1: Regression analysis with clicks as dependent variable after excluding non-significant variables

	Standardized Coefficients (B)	t	Sig.	Collinearity Statistics		R ²
				Tolerance	VIF	
LOCAL	0,255	5,592	0,001	0,957	1,045	0,229
COMM	0,356	7,800	0,001	0,957	1,045	

F = 57,552 ($p < 0,001$); Durbin-Watson = 1,835

Source: The authors

Table O-2: Regression analysis with likes as dependent variable after excluding non-significant variables

	Standardized Coefficients (B)	t	Sig.	Collinearity Statistics		R ²
				Tolerance	VIF	
COMM	0,405	8,570	0,001	0,893	1,119	0,229
SMPART	0,156	3,304	0,001	0,893	1,119	

F = 57,570 ($p < 0,001$); Durbin-Watson = 2,004

Source: The authors

Table O-3: Regression analysis with comments as dependent variable after excluding non-significant variables

	Standardized Coefficients (B)	t	Sig.	Collinearity Statistics		R ²
				Tolerance	VIF	
COMM	0,448	9,730	0,001	0,893	1,119	0,267
SMPART	0,151	3,278	0,001	0,893	1,119	

F = 70,661 ($p < 0,001$); Durbin-Watson = 1,854

Source: The authors

Table O-4: Regression analysis with shares as dependent variable after excluding non-significant variables

	Standardized Coefficients (B)	t	Sig.	Collinearity Statistics		R ²
				Tolerance	VIF	
PLAT	-0,121	-2,783	0,006	0,896	1,116	0,346
INT	0,106	2,312	0,021	0,810	1,234	
FNU	0,101	2,157	0,032	0,781	1,280	
COMM	0,450	8,653	0,001	0,630	1,588	
SMPART	0,134	3,040	0,003	0,879	1,138	
F = 40,546 ($p < 0,001$); Durbin-Watson = 1,842						

Source: The authors

Table O-5: Regression analysis with exposure engagement as dependent variable after excluding non-significant variables

	Standardized Coefficients (B)	t	Sig.	Collinearity Statistics		R ²
				Tolerance	VIF	
LOCAL	0,119	2,944	0,003	0,741	1,350	0,538
REL	0,378	8,255	0,001	0,573	1,745	
FNU	0,206	5,136	0,001	0,748	1,337	
COMM	0,220	5,170	0,001	0,663	1,508	
SMPART	0,096	2,604	0,010	0,878	1,139	
F = 89,282 ($p < 0,001$); Durbin-Watson = 2,056						

Source: The authors

Table O-6: Regression analysis with loyalty as dependent variable after excluding non-significant variables

	Standardized Coefficients (B)	t	Sig.	Collinearity Statistics		R ²
				Tolerance	VIF	
SHARES	0,198	5,061	0,001	0,839	1,191	0,511
EXP	0,180	3,908	0,001	0,602	1,661	
TRU	0,100	2,281	0,023	0,669	1,496	
SAT	0,436	9,314	0,001	0,582	1,717	
F = 99,291 ($p < 0,001$); Durbin-Watson = 1,956						

Source: The authors

Appendix P Model Fit

	χ^2	df	χ^2 / df	CFI	GFI	RMSEA	CI	RMR	AIC	BCC
ENG	59.359***	7	8.480	0.961	0.967	0.139	[0.107, 0.172]	0.024	135.359	137.364
FUNC/ EXP	75.576***	11	6.871	0.962	0.963	0.123	[0.098, 0.150]	0.025	163.576	166.137
COMP.	197.69***	39	5.069	0.937	0.941	0.102	[0.088; 0.117]	0.062	359.687	366.636

Note: *** $p < .0001$

Source: The authors

Appendix Q Structural Models

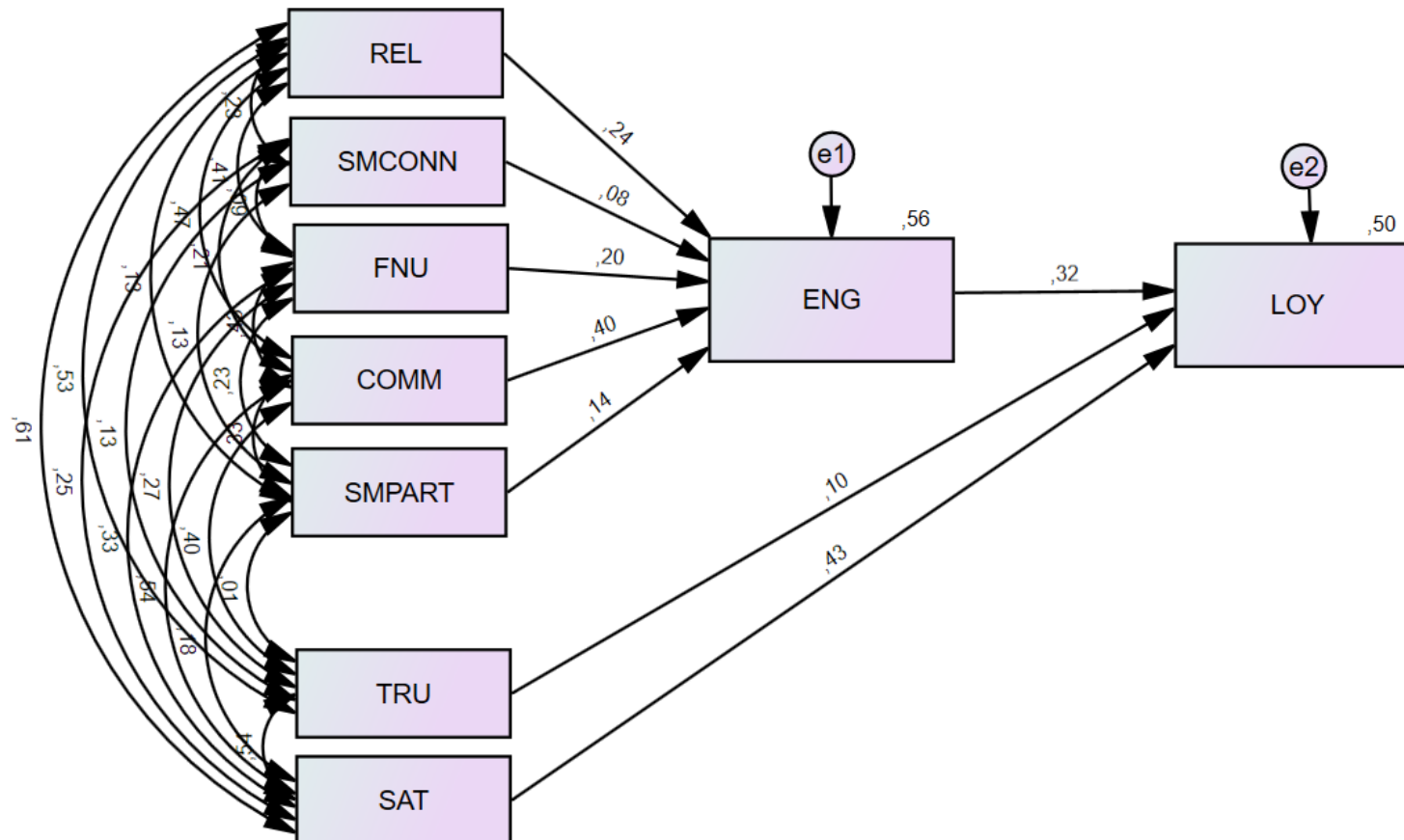


Figure Q-1: Structural Model with Global Engagement

Source: The authors, based on IBM AMOS 27 software

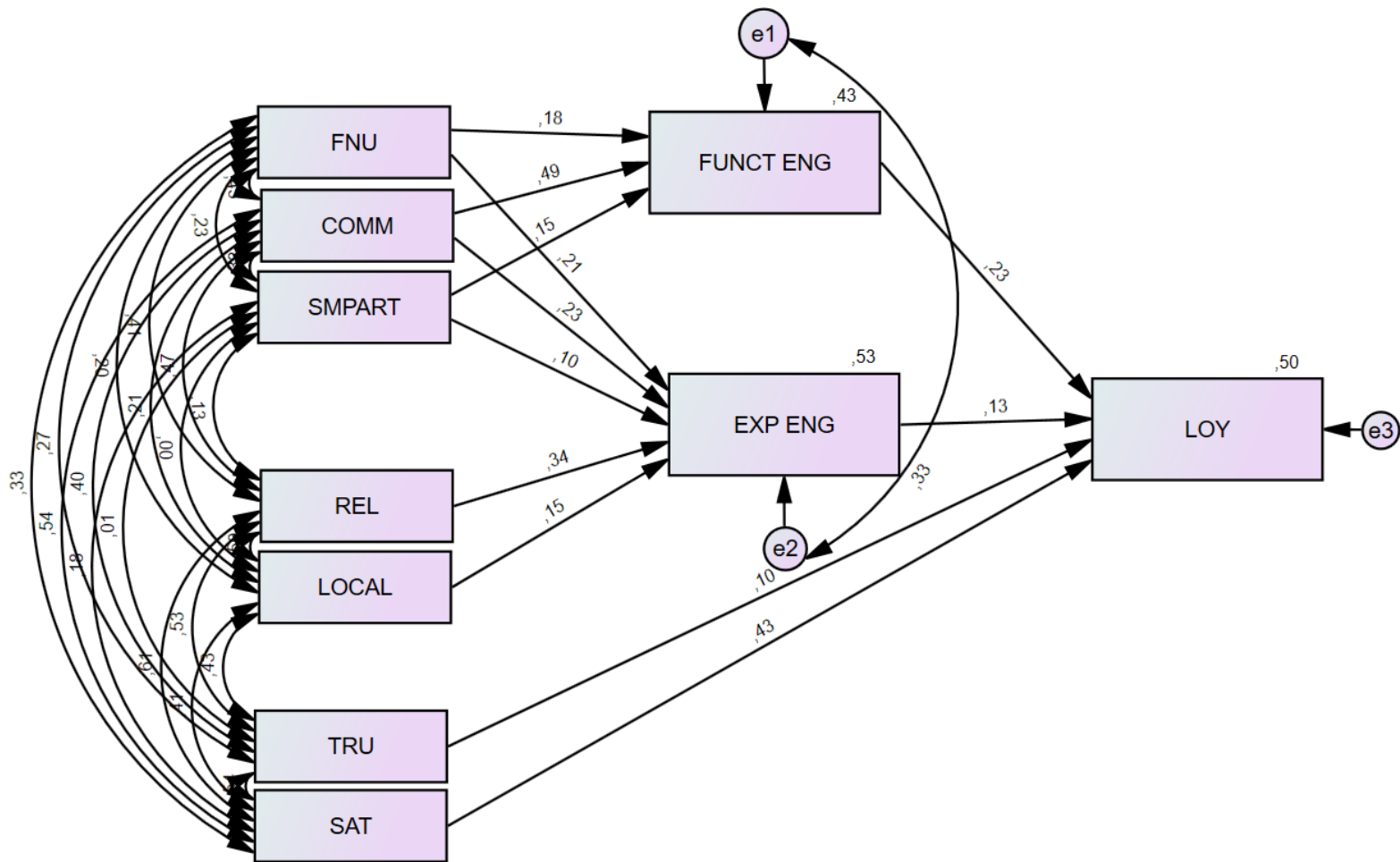


Figure Q-2: Structural Model with Functional and Exposure Engagement

Source: The authors, based on IBM AMOS 27 software

Appendix R Total, Direct, and Indirect Effects

Table R-1: Decomposition of the total effect into direct and indirect effects for the global engagement model

Dependent Variable	Independent Variable	Direct Effects	Indirect Effects	Total Effects
ENG	SMPART	0,137**		0,137**
	COMM	0,396**		0,396**
	FNU	0,203**		0,203**
	SM CONN	0,083*		0,083*
	REL	0,236**		0,236**
LOY	SMPART		0,044*	0,044**
	COMM		0,128*	0,128**
	FNU		0,066*	0,066**
	SM CONN		0,027	0,027
	REL		0,076*	0,076**
	SAT	0,428**		0,428**
	TRUST	0,102*		0,102*
	ENG	0,324**		0,324**

Note: * $p < .05$, ** $p < .01$

Source: The authors

Table R-2: Decomposition of the total effect into direct and indirect effects for the functional and exposure engagement model

Dependent Variable	Independent Variable	Direct Effects	Indirect Effects	Total Effects
EXP ENG	REL	0,336**		0,336**
	LOCAL	0,153**		0,153**
	SMPART	0,098**		0,098**
	COMM	0,232**		0,232**
	FNU	0,214**		0,214**
FUNC ENG	REL			
	LOCAL			
	SMPART	0,147**		0,147**
	COMM	0,488**		0,488**
	FNU	0,182**		0,182**
LOY	REL		0,045**	0,045**
	LOCAL		0,02**	0,02**
	SMPART		0,047**	0,047**
	COMM		0,142**	0,142**
	FNU		0,07**	0,07**
	SAT	0,431**		0,431**
	TRUST	0,104*		0,104*
	EXP	0,134**		0,134**
	FUNC	0,228**		0,228**

*Note: *p < .05, **p < .01*

Source: The authors

Appendix S Summary of the Hypothesis Test

Hypotheses	Test used	Result	Empirical support
H1a Age is negatively associated with engagement with local newspapers on SM	One way ANOVA; Kruscal-Wallis	There is statistical evidence to state that liking a post from a local newspaper on social media is processed in a similar way in all age groups, as for exposure engagement and clicks on the news links. However, there are differences regarding comments ($H(7) = 52.27, p = .001$) and shares ($H(7) = 41.24, p = .001$), as the 38-42 age group presented better means than younger ones.	Not supported
H1b Female individuals like local newspaper posts on SM more than male individuals	One way ANOVA	There is statistical evidence to state that liking a social media post from a local newspaper is processed similarly for men, women and others ($F(2, 387) = 1.52, p = 0.221$).	Not supported
H1c Female individuals share local newspaper posts on SM more than male individuals	One way ANOVA	There is statistical evidence to state that sharing a social media post from a local newspaper is processed similarly for men, women and others ($F(2, 387) = 1.22, p = 0.296$).	Not supported
H1d Male individuals comment on local newspaper posts on SM more than female individuals	One way ANOVA; Kruscal-Wallis	There is no statistical evidence to state that commenting on a local newspaper's post on social media is processed similarly for men, women, and others ($H(2) = 6.90, p = 0.03$). The means presented by the gender "Other" are higher than both female and male, and the male means are higher than the female means.	Supported
H1e Education is positively associated with sharing a local newspaper post on SM	One way ANOVA; Tukey's HSD	There is statistical evidence to indicate that the action of sharing a local newspaper's post on social media is different across education levels ($F(4, 385) = 4.50, p = 0.001$). Elementary education level presents the highest mean, when compared to other higher grades.	Not supported
H1f Education is positively associated with commenting on a local newspaper post on SM	One way ANOVA; Kruscal-Wallis	There is statistical evidence to indicate that the action of commenting on a social media post from a local newspaper is different across education levels ($H(4) = 24.93, p = .001$). Elementary education level presents the highest mean, when compared to other higher grades.	Not supported
H2 Place attachment is positively associated with engagement with local newspaper posts on SM	Multiple regression analysis	There is no statistical evidence to state that place attachment significantly predicts global engagement with local newspapers' posts ($\beta = -0.039, t(375) = -0.954, p = 0.341$), being only a negative predictor of shares ($\beta = -0.112, t(376) = -2.288, p = 0.023$).	Not supported
H3 Attitude towards news from local newspapers is positively	Multiple regression analysis	There is no statistical evidence to claim that attitude towards news from local newspapers on social media significantly predicts engagement with local	Not supported

associated with engagement with local newspaper posts on SM		newspapers' posts ($\beta = -0.038, t(375) = -0.975, p = 0.330$), or any of its groups or components.	
H4a Soft news is positively associated with exposure engagement with local newspapers posts on SM	Multiple regression analysis	Soft non-urgent did not significantly predict exposure engagement ($\beta = -0.008, t(378) = -0.207, p = 0.836$) neither soft urgent ($\beta = 0.013, t(378) = 0.330, p = 0.742$). As so, there is no statistical evidence to claim that soft news is associated with exposure engagement with local newspapers' social media posts.	Not supported
H4b Soft news is negatively associated with commenting a local newspaper post on SM	Multiple regression analysis	Soft non-urgent did not significantly predict comments ($\beta = 0.029, t(380) = 0.650, p = 0.516$), neither soft urgent ($\beta = 0.058, t(380) = 1.239, p = 0.216$). As such, there is no statistical evidence to claim that soft news is associated with commenting on local newspapers' social media posts.	Not supported
H4c Soft news is positively associated with sharing a local newspaper post on SM	Multiple regression analysis	Soft non-urgent did not significantly predict shares ($\beta = 0.083, t(376) = 1.827, p = 0.069$), neither soft urgent ($\beta = -0.047, t(376) = -0.956, p = 0.340$). Hence, there is no statistical evidence to claim that soft news is associated with sharing local newspapers' social media posts.	Not supported
H4d Hard news is positively associated with sharing a local newspaper post on SM	Multiple regression analysis	There is no statistical evidence to claim that hard news significantly predicts sharing a local newspaper's post ($\beta = 0.013, t(376) = 0.245, p = 0.807$).	Not supported
H5 Proximity is positively associated with engagement with local newspapers posts on SM	Multiple regression and Path analysis	There is no statistical evidence to claim that proximity predicts global engagement with local newspapers on social media. However, local news significantly predicted clicks on the news links ($\beta = 0.215, t(382) = 4.145, p = 0.001$), comments, albeit negatively, ($\beta = -0.207, t(380) = -4.192, p = 0.001$) and exposure engagement ($\beta = 0.122, t(378) = 2.793, p = 0.005$). International news predicted sharing activities ($\beta = 0.124, t(376) = 1.987, p = 0.048$).	Partially supported
H6a Relevance is positively associated with exposure engagement with local newspapers posts on SM	Multiple regression and Path analysis	There is statistical evidence to indicate that news relevance significantly predicts exposure engagement ($\beta = 0.378, t(378) = 7.858, p = 0.001$).	Supported
H7a Close connections on social media are positively associated with sharing a local newspaper post on SM	Multiple regression and Path analysis	There is no statistical evidence to state that close connection on social media significantly predicts any component of engagement, particularly shares ($\beta = 0.017, t(376) = 0.380, p = 0.704$). However, through path analysis, it was shown to be one of the most significant predictors of global engagement ($\beta = 0.083, t(384) = 2.345, p = 0.020$)	Not supported

H8a Frequency of news use is positively associated with exposure engagement with local newspapers posts on SM	Multiple regression and Path analysis	There is statistical evidence to claim that frequency of news use significantly predicts exposure engagement with local newspapers' posts ($\beta = 0.206$, $t(378) = 5.009$, $p = 0.001$).	Supported
H8b Frequency of news use is positively associated with sharing a local newspaper post on SM	Multiple regression and Path analysis	There is statistical evidence to claim that frequency of news use significantly predicts sharing local newspapers' posts ($\beta = 0.110$, $t(376) = 2.286$, $p = 0.023$).	Supported
H9 Brand page commitment is positively associated with engagement with local newspapers posts on SM	Multiple regression and Path analysis	There is statistical evidence to state that page commitment significantly predicts engagement ($\beta = 0.373$, $t(375) = 8.286$, $p = 0.001$), as well as all of its components, most notably shares ($\beta = 0.455$, $t(376) = 8.489$, $p = 0.001$).	Supported
H10a Source credibility is positively associated with sharing a local newspaper post on social media	Multiple regression analysis	There is no statistical evidence to claim that source credibility significantly predicts sharing local newspapers' posts on social media ($\beta = 0.074$, $t(376) = 1.435$, $p = 0.152$).	Not supported
H11 Social media participation is positively associated with engagement with local newspapers' posts on social media	Multiple regression and Path analysis	There is statistical evidence to state that social media participation significantly predicts both global engagement ($\beta = 0.141$, $t(375) = 3.852$, $p = 0.001$). However, this variable significantly anticipated all the components of engagement except for clicks on news links ($\beta = 0.081$, $t(382) = 1.719$, $p = 0.086$).	Partially supported
H12 Engagement with local newspapers posts on SM is associated with users' loyalty towards that local newspaper's presence on SM	Multiple regression and Path analysis	There is statistical evidence to state that global engagement ($\beta = 0.322$, $t(386) = 7.590$, $p = 0.001$), functional engagement ($\beta = 0.225$, $t(385) = 5.094$, $p = 0.001$) and exposure engagement ($\beta = 0.133$, $t(385) = 2.683$, $p = 0.008$) significantly predict user loyalty towards online news media. However, only shares ($\beta = 0.152$, $t(382) = 2.897$, $p = 0.004$) and exposure engagement ($\beta = 0.141$, $t(382) = 2.607$, $p = 0.009$) were found to significantly predict loyalty.	Partially supported
H13 Trust in news is positively associated with users' loyalty toward the local newspaper's presence on SM	Multiple regression and Path analysis	There is statistical evidence to state that trust significantly predicts users' loyalty towards the local newspaper's presence on social media ($\beta = 0.101$, $t(386) = 2.348$, $p = 0.019$).	Supported
H14 Users' satisfaction with the local newspaper's presence on SM is positively associated with loyalty towards that presence	Multiple regression and Path analysis	There is statistical evidence to state that user's satisfaction significantly predicts users' loyalty towards the local newspaper's presence on social media ($\beta = 0.424$, $t(386) = 9.182$, $p = 0.001$).	Supported

Source: The authors