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THE CO-CREATION STRATEGIES IN TIMES OF CRISIS: CULTURAL RESOURCES, ACTORS, AND THE ROLE OF SOCIAL MEDIA

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The Co-Creation Strategies in Times of Crisis: Cultural Resources, Actors, and the Role of Social Media

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CONTENTS

Abbreviations

CCB	Consumer creative behaviour
CCB1	Consumer creative idea generation
CCB2	Consumer creative idea implementation
CIVC	Consumer independent value creation
CK	Consumer knowledge
CMOs	Chief marketing officers
CO	Online C2C co-creation
COBO	Culture of brand origin
COO	Culture of origin
eWOM	Electronic word-of-mouth
ICT	Information and communication technology
LDA	Latent Dirichlet Allocation
LFB	Luxury fashion brands
LIWC	Linguistic Inquiry and Word Count
S-D logic	Service-dominant logic
SE1	Creative self-efficacy
SE2	Change self-efficacy
SM	Social media
SMM	Social media marketing
SPS	Social perception score
UGC	User-generated content

Abstract

In the digital era, co-creating value with consumers through social media (SM) has become a promising marketing strategy for companies to achieve business goals and competitive advantages. Despite the popularity of such online co-creation, harnessing the power of consumers through appropriate social media marketing (SMM) strategies is an ongoing challenge, especially for companies in industries heavily affected by a global crisis. The dissertation aims to advance the understanding of firms' co-creation strategies that integrate with SM and its application during a global crisis. The key objective is to answer the following research questions: what are the important factors or actors that influence consumers' value co-creation on SM and how can SMM be strategically utilized and managed by companies to facilitate consumers' value co-creation, especially in a global crisis setting? This study draws on service-dominant logic, consumer culture theory, the view of inconspicuous consumption, and country-of-origin concepts. The dissertation is presented as a collection of three papers and uses quantitative approaches, including survey, social network analysis, and text mining.

The first paper of the collection conceptualizes consumers' value co-creation from the axioms and foundational premises of service-dominant logic and dimensions of consumer culture theory. It explains and validates the mechanism of consumers' value co-creation process during the pandemic. The results show that consumer operant resources are radically determining the main outputs of the consumer's co-creation, which are represented by consumer creative behaviours. The second and third papers further analyse and highlight the important role of consumers' cultural operant resources for the success of co-creation strategies, indicating that consumer-possessed cultural resources greatly impact firms' formulation and implementation of SMM strategies and co-creation strategies. The second paper also suggests that non-consumer and non-firm actors in online co-creation networks can be regarded as desirable marketing partners and value co-creators due to their high level of relevance to both consumers and firms. Therefore, this study suggests that firms should use more consumer-centric and cultural-oriented marketing strategies during the pandemic and engage external actors in value co-creation in order to embrace social media's communal logic. This research thus makes important theoretical contributions to several research fields and provides useful managerial implications for formulating co-creation strategies in times of a global crisis.

Introduction

This chapter first summarizes the research background, importance and status quo of the research topic. This leads to a discussion of research gaps and the rationale for research objectives and questions. Following that, the chapter expounds on the positioning and contribution of this research, highlighting the significance and novelty of this research work. The chapter concludes with the structure of the dissertation.

1 Background of Study

1.1 Value co-creation integrating with social media marketing

Social media (SM) platforms and value co-creation activities have a natural alliance (Rashid et al., 2019). By providing connectivity and interactions, SM facilitates the exchange and sharing of information between consumers as well as consumers and companies, encourages consumers to participate in co-creation (Prahalad & Ramaswamy, 2004a), and plays a vital role in enhancing value co-creation from consumers (Martini et al., 2012). SM has been recognized as the primary tool for either the consumer to consumer (C2C) value co-creation (Shen et al., 2020; Zadeh et al., 2019) or the business to consumer (B2C) value co-creation (Cheung, Pires, Rosenberger III, Leung, Chang, et al., 2021; Rashid et al., 2019). Through the SM platform, consumers, as owners and integrators of their operant resources, could invest their knowledge, skills, and experience in the process of value co-creation, forming a cooperative relationship with other actors, and becoming value co-creators (Vargo & Lusch, 2008a, 2016).

In addition, compared with both quantitative and qualitative approaches of traditional marketing research, SM provides a better way to hear consumers' voices and to capture consumers' views, preferences and opinions (Sindhav, 2011). Consumers share their attitudes, opinions and experiences about firm offerings (i.e., products, brands, services) through electronic word-of-mouth (eWOM) and user-generated content (UGC). Companies analyse these eWOM and UGC to gain better insight into consumer needs and preferences. Moreover, SM not only captures the needs and desires of consumers, but also encourages them to use their domain-specific knowledge, skills, new ideas and creativity in service improvement, branding, and new product development (Rashid et al., 2019).

As an emerging field of marketing research, value co-creation on SM is increasingly popular

because it offers greater access to data and allows scholars to delve into social settings in detail (Rashid et al., 2019). While research on the role of SM in co-creation is a growing area of interest; The existing literature is still in a developing stage, just shifting from the "what question" to the "how question" (Martini et al., 2014, p. 427). In specific, even though modern businesses spend large amounts of their marketing budgets on SM channels, the real benefits of these marketing activities have yet to be realized (Roberts & Piller, 2016). There is relatively limited research on the role of SM in the development and improvement of firm offerings, and the extant theoretical and empirical research in this field seems to be quite fragmented (Kärkkäinen et al., 2010; Rashid et al., 2019). This means that there is a significant research opportunity to investigate how SM can be used to leverage consumer power to benefit the development and improvement of firm offerings.

In other words, it is necessary to understand how to strategically use and manage SM channels to facilitate value co-creation. Such work is particularly useful for practitioners as more firms are moving their business online (Rashid et al., 2019). For firms embracing the digital world, strategically utilizing and managing their social media marketing (SMM) is important to facilitate online co-creation activities. As these companies could actively use SM and consumer-generated content to gain insight into consumer preferences. By increasing the engagement of consumers and lead users through online communities, companies can also increase consumers' commitment (Rashid et al., 2019). Prior literature has investigated the impacts of UGC on consumer behaviours (Han et al., 2018), consumer behaviours in brand communities on SM (Kamboj et al., 2018), and the impacts of firm-generated content and SMM strategies on consumer engagement (Ashley & Tuten, 2015). However, most of these studies are based solely on the consumers' perspective rather than other perspectives (Lamberton & Stephen, 2016). And there is a limited understanding focus on the relationship between SMM and value co-creation (Cheung, Pires, Rosenberger III, Leung, Chang, et al., 2021). The dearth of research on how to leverage SMM to promote value co-creation and how to strategically integrate co-creation strategies with SM provide justifications for exploring the possibility and impacts of utilizing SM elements (e.g., operant resources, external actors) in co-creation strategies. We will explain this further in the section on research gaps, questions and objectives.

Besides, from a more practical perspective, the integration of SM and value co-creation is also

noteworthy. Future marketing and co-creation activities will primarily take place in digital channels, especially on SM platforms (Vargo & Lusch, 2016). Advances in information and communications technology (ICT) and the growth of Web 2.0 have profoundly changed the landscape of marketing communication. Over the past decade, the process of digitalization has led marketers dramatically change their marketing communications from using traditional media such as television and newspapers to leveraging digital marketing channels. As one of the most widely used forms of digitalization, SM is largely responsible for these dramatic changes in marketing and communication management practices (Katsikeas et al., 2019; Lamberton & Stephen, 2016).

In fact, digital channels are outpacing traditional channels in terms of audiences and are still rising fast in both western and eastern countries. The number of SM users worldwide has mushroomed to 3.6 billion by 2020 and is expected to continue growing (Thomala, 2022b). The region with the highest percentage of SM users is Eastern Asia which is mostly driven by China. By 2020, 71% of people in China are active SM users (Koetsier, 2020). According to recent projections, the number of SM users in China reached 1.02 billion in 2022 and is expected to reach 1.21 billion by 2027 (Thomala, 2022a). India, ranking second in terms of user numbers, reached 755 million SM users in 2022, and is estimated to reach 1.17 billion by 2027 (Thomala, 2022a). In North America, 69% of people are active SM users (Koetsier, 2020). And The United States has the third largest number of SM users (302 million) (Thomala, 2022a). In Western Europe, the number is relatively low, but still 54%. Moreover, digital channels are overtaking traditional channels in terms of spending (Guttmann, 2022). Global SM ad spending reached $116 billion in 2021, and that figure is expected to more than double by 2028, surpassing the all-time high of $262 billion (Statista, 2022). In addition, in the US, the world's largest SM ad market (Faria, 2022), marketers have been reducing their budgets for traditional advertising since the beginning of 2015, while the growth in digital marketing expenses has remained positive. In September 2022, Chief marketing officers (CMOs) in the US said their digital spending was up to 15% compared to the previous 12 months (Guttmann, 2022).

1.2 The integration of value co-creation and SMM is facilitated during COVID-19

In times of a global crisis, SM is also an indispensable and effective channel for business marketing and value co-creation. The COVID-19 pandemic is one of the extreme forms of a global crisis, with

severe economic and social consequences worldwide and an unprecedented impact on the global population (Donthu & Gustafsson, 2020; Kabadayi et al., 2020). These negative effects may still exist for months if not years. The pandemic has prompted many governments to take drastic actions, such as social distancing and national lockdowns; individuals could not socialize normally as well as they used to (Hollebeek et al., 2020; Nabity-Grover et al., 2020). This lack of socializing elevates the role of SM in most people's lives; isolation and feelings of loneliness increase the use of SM (Donthu & Gustafsson, 2020). As a result, in 2020, the year of the pandemic in many countries, the number of active SM users worldwide increased by 9% from the previous year to 3.8 billion, representing 49% of the global population (Koetsier, 2020). And SM platforms generally have seen a 61% increase in usage during the pandemic (Holmes, 2020). SM has become a major channel of contacting others or socializing (Donthu & Gustafsson, 2020), as well as an essential way for consumers to access numerous online services in times of a global crisis.

Through SM, advances in innovative technology solutions enable businesses to capture more accurate consumer data and provide timely, two-way, customized, one-to-one, and database-driven marketing communications even during the turmoil period caused by severe crises such as the COVID-19 pandemic. SM brings the online participants closer and removes boundaries of time, place and medium. By encouraging more than 65 million firms to reach consumers, the wide diffusion of SM enriches opportunities for companies to develop and maintain relationships with consumers, offering an effective pathway relative to traditional marketing efforts (Adeola et al., 2020; Chuang, 2020; Morra et al., 2018). Moreover, it enables consumers to become conversation initiators and value co-creators (Koivisto & Mattila, 2020; Zadeh et al., 2019) or even independent value creators (Grönroos & Voima, 2013), especially when firm-dominant value creation activities are severely disrupted and fail in times of crisis. Consumers now control marketing communications because they can decide whether, when and where to receive information (Hewett et al., 2016). Accordingly, in the integration process of SMM and value co-creation especially in times of a global crisis, the focus of firm marketing is changing. In addition to paying attention to how consumers participate in firm-led B2C value co-creation activities, firms are also increasingly paying attention to how firms can better influence consumer-led C2C value co-creation activities.

Furthermore, many economic actors, such as multinational luxury fashion companies and

tourism companies, have been severely affected by closures and restrictions on numerous business activities. The mode of media consumption and SM engagement behaviours of both consumers and enterprises have changed (Bern, 2020). As a pervasive communication medium that played a prominent role during the global crisis (Azer et al., 2021), monitoring SM during a crisis can help marketers understand users' emotions and reactions, and identify potential changes in user behaviour (Coombs & Holladay, 2012), so as to adjust their marketing and co-creation strategies. Given the changing and growing role of SM for value creation during the crisis, an in-depth understanding of the use of SM by business entities and consumers during the crisis is essential. Applying co-creation perspectives, our study thus examines both consumer and company sides to gain insight into value co-creation on SM in times of crisis. In the next section, we will elaborate on the research gaps, questions and objectives of this dissertation.

2 Research Gaps, Questions and Objectives

This dissertation addresses a number of gaps in the marketing literature and builds on several fields of study, including service marketing, SMM, brand marketing, and international marketing. With the continuous improvement of ICT and the increase in consumers' leisure time, the phenomenon of consumer co-creation activities through SM is increasing (Grönroos & Voima, 2013; Svensson & Grönroos, 2008). Consumers could co-create UGC, services, products and brands in the digital world (Rathore et al., 2016). They are no longer passive receivers of products and services, but co-creators of value with companies (Vargo & Lusch, 2008b), or even independent creators of value to satisfy their own needs (Grönroos & Voima, 2013). For the last situation, value creation in the consumer sphere has been better recognized (Grönroos & Voima, 2013; Heinonen et al., 2010; Vargo & Lusch, 2004; Vargo & Lusch, 2016; Voima et al., 2010). Some scholars even suggest regarding this phenomenon as an independent market segment and taking it as an important direction for future research (Cova & Dalli, 2009; Martin & Schouten, 2014; Xie et al., 2008).

Since consumers are empowered by SM through creating opportunities to co-create value in the process of coming up with and sharing ideas with firms and like-minded users (Laroche et al., 2012; Peters et al., 2013), clearly, how to use SM and SMM to attract and retain empowered consumers is an area warranting scholarly attention (Barger et al., 2016; Singaraju et al., 2016). The booming of digital technologies in the past decade has led to a dramatic increase in the number of

SMM research (Appel et al., 2020). An abundance of empirical research examines the impacts of SMM on consumer engagement behaviours (e.g., liking, commenting and sharing) on SM platforms (e.g., De Vries et al., 2012; Liu, 2020). It is a consensus that SM elements play important roles to increase consumer engagement (Cheung, Pires, Rosenberger III, Leung, & Ting, 2021), to influence consumer perceived value (Frasquet-Deltoro & Lorenzo-Romero, 2018), and thus to impact the consequences of value co-creation on SM platforms (Cheung, Pires, Rosenberger III, Leung, Chang, et al., 2021; Rathore et al., 2016).

However, information on the effective operationalization of the value-creation process on SM is ill-informed (Hollebeek, 2019; Li et al., 2020), especially for the value co-creation process occurred in the consumer sphere on SM (Grönroos, 2017). Understanding how consumer operant resources influence their independent value creation on SM is correspondingly fundamental, as the individual configuration of resources (Arnould et al., 2014), and individual characteristics, influence how consumers deploy their operand resources as well as what usage they make of company operand and operant resources (Arnould et al., 2014). But to date, this debate has received only minimal attention in both theoretical and empirical terms. Research is scant on the relation between consumer-possessed operant resources and their value co-creation process, particularly on the relationship among different operant resources, and the relationship between consumer operant resources and the outputs of their value co-creation process. Therefore, empirical research examining the value co-creation process that occurred in the consumer sphere on SM is needed, as discussed in the next section.

Moreover, value is not simply co-created through isolated, dyadic interactions between firms and consumers. Rather, it is co-created through social interactions among all stakeholders in the value creation network (Iansiti & Levien, 2004). Like individual consumers (Tynan et al., 2010) or online consumer communities (Muniz & O'Guinn, 2001), other non-consumer and non-community actors, namely external actors, could also dynamically interact with consumers and firms; thus create value in the value creation network (Merz et al., 2009). The role of such external co-creators beyond the consumer-firm direct interaction is important but typically overlooked. The existing co-creation literature mainly focuses on the consumer-firm dyadic interaction (Holmqvist et al., 2020), with little or no attention to the other entities on SM that may influence value creation. A holistic,

multi-actor perspective is needed to capture the contextual, systematic and dynamic interaction of the value co-creation among the different actors, especially with the growing popularity of online service encounters that involve the use of new ICTs to deliver the service and engage with the consumers to provide them superior service experience (Sharma et al., 2020). Therefore, empirical research needs to examine the external co-creators beyond the direct consumer-firm interaction on SM.

Furthermore, the impacts of a global crisis on value co-creation activities and SMM are neglected. COVID-19 is the first global pandemic that outbreaks in the SM era (Wang et al., 2021). The pandemic has forced many countries around the world to impose severe restrictions on people's mobility and accessibility to many services. No business activity has been exempted, especially tourism companies and international companies that have experienced a huge change (UNWTO, 2020), forcing businesses to change marketing strategies and move online. That is because when the resources for marketing communication are very limited and requirements to maximize the return of investment are present in times of crisis, specific characteristics of SM enable companies to communicate with users effectively and at a low cost (Tomše & Snoj, 2014). For instance, multinational companies operating in global markets are increasingly relying on SM as a communication, branding and marketing tool, as well as a way to reach multicultural consumers. Successful use of SMM can enhance marketing performance and competitive advantage (Fraccastoro et al., 2021), thereby helping firms achieve value co-creation. Yet, sound and effective use of SMM strategies remains a challenge (e.g., Ancillai et al., 2019; Wang and Kim, 2017), especially in the highly dynamic business environments influenced by the pandemic. Not only did organizations suffer from this sudden change, but consumers had to venture into a life mode that many were unaware of or rarely explored. Faced with this scenario, organizations show a lack of knowledge about the role of consumers (e.g., consumer attitudes, consumer perceptions, and consumer behaviour), which contributes positively to the shared realization of expected benefits in the value exchange process. Therefore, empirical research needs to have a better understanding of the co-creation strategies through SM during the pandemic.

To fill the research gaps described in the above parts, address the theoretical challenges, and provide timely insights to practitioners to enable them to apply appropriate strategies in an ever-

changing marketing environment, this dissertation aims to enrich the understanding of the co-creation strategies that integrate with SMM during a global crisis, and explore the important components of SMM that influence consumers' value co-creation. Specifically, this study aims to provide a positive step towards understanding what issues are involved in the co-creation strategies on SM during a global crisis and how they are addressed, thereby making a significant contribution to streams of marketing literature that focused on value co-creation strategies and SMM strategies. In line with the main research objectives, this dissertation addresses a fundamental question:

> What are the important factors or actors that influence consumers' value co-creation on SM and how can SMM be strategically utilized and managed by companies to facilitate consumers' value co-creation, especially in a global crisis setting?

Further exploration of this issue is divided into three sub-questions:

(1) What is the underlying mechanism of consumers' value co-creation process on SM especially in times of crisis? How does SMM strategy affect such mechanism?

(2) What is the role of non-consumer and non-company actors in the value co-creation network of the SM platform especially in times of crisis? How do companies engage these co-creators through SMM strategies?

(3) What are the changes in consumption trends during the integration of SMM strategy and co-creation strategy in times of crisis? How does SMM strategy leverage these changes to achieve value co-creation?

These sub-questions focus on different spheres in which value co-creation occurs: consumer independent value creation, non-dyadic value co-creation among consumer, company and external actors, and dyadic value co-creation between consumer and company. The first sub-question intends to conceptualise consumer independent value creation through SM and highlight the important factors that influence consumers' value co-creation on SM. The second sub-question aims to examine the impact of external actors in SM, in addition to consumers and companies, on value co-creation. The third sub-question aims to understand the dyadic co-creation between

consumers and companies on SM during a global crisis.

Figure 1. The research framework and relationships between each paper

Consumers' Value Creation Occurs in Different Sphere on Social Media Platform

Research Question of Paper 1

Consumer independent value creation

(1) Conceptualization
(2) Mechanism
(3) The role of consumers' cultural operant resources

Research Question of Paper 2

Co-creation beyond the dyadic interaction between consumers and companies

(1) The role of external actors in value creation network
(2) The role of non-firm-focused communities in co-creation

Research Question of Paper 3

Brand co-creation between consumers and companies

(1) Firm side: value propositions
(2) Consumer side: consumer perceptions

Broad Research Question

The co-creation strategies for companies integrating with social media in a global crisis

These sub-questions are answered in three research papers included in this dissertation. The first sub-question is mainly addressed in Paper 1. Paper 1 aims to conceptualize and validate a consumer independent value creation model, clarify various consumer value creation paths in times of crisis, and investigate the relations of different types of consumers' operant resources in their value creation process. The second sub-question is answered in Paper 2. Paper 2 aims to find value co-creators beyond the dyadic interaction between consumers and companies on SM, to explore the associations of such co-creators with consumers and companies, and to examine the impacts of such co-creators in times of crisis. The third sub-question is answered by Paper 3. Paper 3 looks at both the consumer side and company side, discusses the relationship between these two sides, and

points out the mismatches between consumer perceptions and company value propositions on SM that lead to value co-destruction. The whole research framework and the link between the three papers are summarized in Figure 1.

3 Key Concepts and Positioning of Study

In the following, we first present the definitions of the key concepts used in this dissertation in order to ensure consistency and clarity to understand the research phenomena. The main concepts of this dissertation include value co-creation, consumer independent value creation, SM, SMM, and SMM strategy. After that, we explain the positioning of the study.

3.1 Key concepts of study

Based on service-dominant logic (S-D logic), value co-creation refers to "the actions of multiple actors, often unaware of each other, that contribute to each other's wellbeing" (Vargo & Lusch, 2016). A way to divide value creation introduced by Grönroos and Voima (2013) brought with it a new perspective to the co-creation of value. Now value co-creation results from a collaborative process involving both the consumer and enterprise (Prahalad & Ramaswamy, 2004b) or an independent value creation process controlled by either enterprises or consumers (Grönroos & Voima, 2013). Consequently, value co-creation does not always happen between consumers and firms (Grönroos & Voima, 2013; Heinonen et al., 2010; Svensson & Grönroos, 2008; Vargo & Lusch, 2016). In some cases, there is "virtually no direct interactions occur" between consumers and firms, and "value is created mostly in the consumer sphere, as is the consumer independent value creation (CIVC)" (Grönroos & Voima, 2013). CIVC depicts the value creation process by individual consumers or through inter-consumer interactions (Epp & Price, 2011; Grönroos, 2011, 2012; Grönroos & Voima, 2013; Voima et al., 2010). The author proposes that CIVC is a specific form of value co-creation. Because consumer-firm direct interaction is not a necessary condition for value co-creation (Grönroos & Voima, 2013; Vargo, 2008; Vargo & Lusch, 2008b). And the core concept of S-D logic is that value is always co-created (Grönroos, 2011; Vargo & Lusch, 2016; Yi & Gong, 2013). Consumers create value to achieve individual, relational, and collective goals (Epp & Price, 2011). Whether individually or not, the CIVC process is always influenced by a more comprehensive consumer network or ecosystem (Grönroos & Voima, 2013; Vargo & Lusch, 2016; Voima et al., 2011), indicating that even if individual consumer value creation is a form of value co-

creation.

Moreover, specifying the definition of value and value creation is a necessity to develop an analytical and operational model of CIVC in Paper 1, and it also helps to examine the impact of firms' value co-creation strategy on consumer perception in the other two papers. In the present dissertation, the value refers to value-in-use. "In-use" not only denotes physical use but also mental use and even possession (Grönroos, 2012). Value-in-use can emerge from both physical and mental use of a resource or mere possession of it (Grönroos, 2012). Value-in-use is for the consumer, who feels better after being assisted by a self-service process or a full-service process (Svensson & Grönroos, 2008). In addition, as Ramaswamy (2011) points out, the phrase co-creation of value serves as an all-encompassing expression to denote mutual value creation by the actors. But previous research suggests that this strongly metaphorical phrase causes difficulty in studying value co-creation analytically (Payne et al., 2008), and carrying out focused empirical analysis (Grönroos, 2012). Many consumer practices are mundane, daily activities, which are performed spontaneously and unconsciously (Schatzki, 1996). Hence, in this dissertation, value creation refers to a conscious and explicitly considered process.

Besides, digital technologies such as SM enable consumers to be highly informed (Prahalad & Ramaswamy, 2004b) and offer more extensive opportunities for consumers to communicate, share, and integrate information and knowledge with others. SM refers to online applications, platforms, web tools or technological systems that facilitate collaboration and content sharing between community members (Kaplan & Haenlein, 2010); examples include Facebook, Instagram, and Twitter (Arora et al., 2019). Following Kaplan and Haenlein (2010, p. 61), we identify SM as "a group of Internet-based applications that build on the ideological and technological foundations of Web 2.0 and allow the creation and exchange of UGC" (Kaplan & Haenlein, 2010). SM is seen as a means of personal expression, a marketing tool with UGC, and a source of market intelligence with complex data (Lamberton & Stephen, 2016). As a marketing tool, the way consumers interact with companies in SM is different from traditional methods.

Marketing efforts extended through SM are known as SMM (Beig & Khan, 2018). SMM is generally used as an umbrella term that describes the use of a variety of online platforms for marketing purposes, including social networks, online communities, blogs or any other form of

Internet media (Mabry & Porter, 2010; Li et al., 2021). SMM strategy is defined as "an organization's integrated pattern of activities that, based on a careful assessment of consumers' motivations for brand-related SM use and the undertaking of deliberate engagement initiatives, transform SM connectedness (networks) and interactions (influences) into valuable strategic means to achieve desirable marketing outcomes" (Li et al., 2021, p. 54). Increasing scholarly attention to SMM identifies five SMM elements that influence consumer value co-creation: entertainment, customization, interactivity, eWOM and trendiness (Cheung, Pires, Rosenberger III, Leung, Chang, et al., 2021).

Figure 2. The research domains and focus of the dissertation
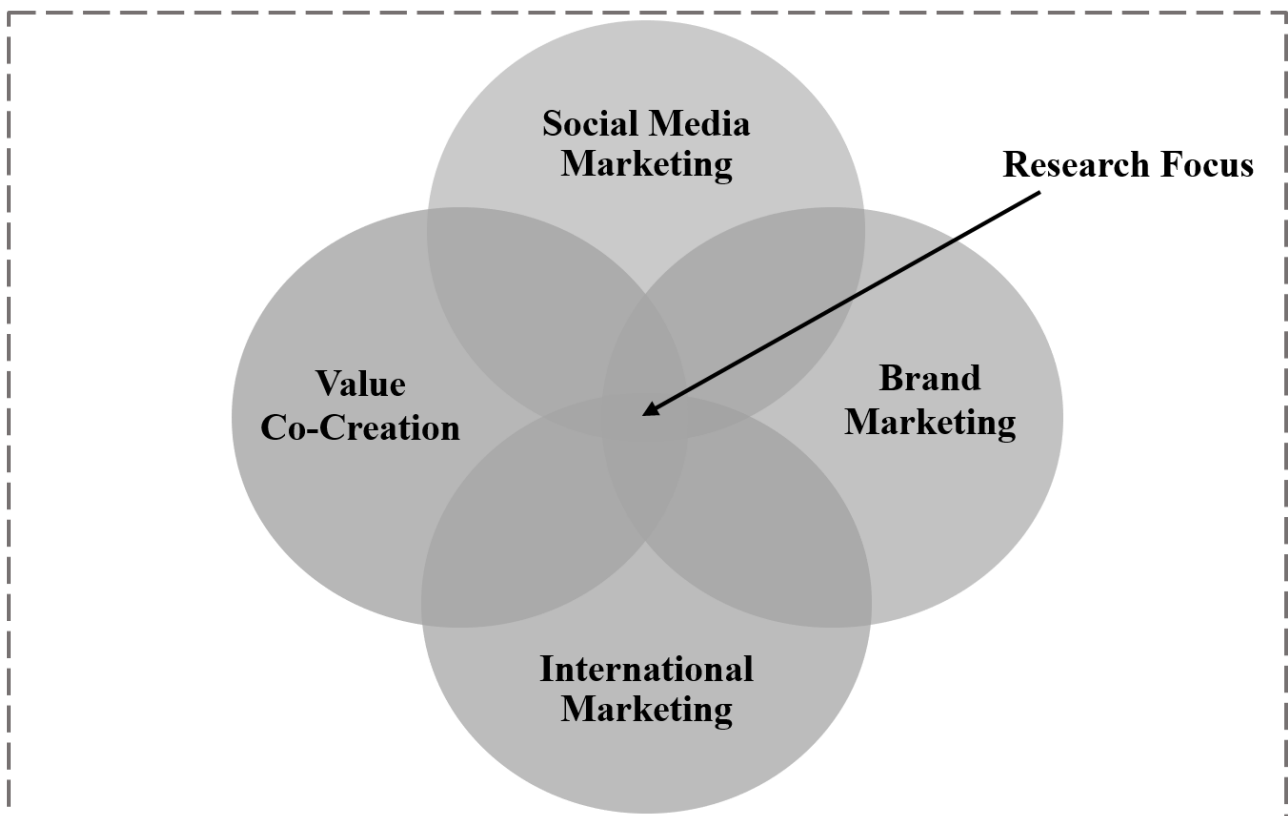
3.2 Positioning of the study

The main goal of this dissertation is to understand firms' co-creation strategies on SM, especially in a global pandemic setting. The goal-setting of this dissertation made the literature we applied mainly from value co-creation, SMM, brand marketing and international marketing. Figure 2 shows how this dissertation is at the intersection of four major literature streams. In specific, this study

explores the important influencing factors (e.g., resources, co-creators) of using SM as marketing strategies and co-creation strategies. Based on Arnould et al. (2014)'s dimensions of consumer cultural resources (i.e., physical, social and cultural ones), Grönroos & Voima (2013)'s consumer view of value co-creation, and S-D logic (Vargo & Lusch, 2014), the study conceptualizes consumers' value creation process in times of a global crisis and highlights the importance of consumer possessed resources in the process. It also investigates the mediating role of consumers' co-creation on SM in the process (Zadeh et al., 2019), and thus emphasizes the importance of SM as a channel to facilitate consumer value creation during a hard time. The study then positions itself from both firm and consumer perspectives to examine consumer co-creation on SM in times of a global crisis. Accordingly, this study is located in the overlapping area of SMM strategy and value co-creation research.

Moreover, one of the main research focuses in this dissertation aim to understand the changes in consumer brand perceptions in times of a global crisis and how to strategically use SMM strategies to face these changes and to increase consumers' perceived value of luxury brands. Here the literature on brand marketing and luxury consumption, especially the studies on conspicuous vs. inconspicuous luxury consumption (Berger & Ward, 2010; Eckhardt et al., 2015; Wu et al., 2017) provides a thorough understanding of the variation in consumer brand perceptions and are applied in these consumer brand perception studies. Thus, this study is at the intersection of SMM research, value co-creation research and brand marketing research. Furthermore, this dissertation is delimited in an international marketing context by examining consumer trends in emerging markets. More specifically, this study will investigate the international luxury companies' SMM strategies and the impact of cultural elements on consumer brand perceptions in the emerging Chinese market. The study will also explore the role of external actors in the luxury brand value co-creation network in order to provide insights for alleviating the localization-standardization dilemma that is commonly suffered by international companies in emerging markets.

Moreover, given the tremendous contextual diversity in service and marketing (Voss et al., 2016), and the varied impact of the pandemic on different industries, cross-sectorial analyses are conducted in this dissertation. The tourism sector and luxury fashion industry are selected as two distinct industry contexts. More specifically, the tourism sector has been noted as one of the areas

that need to be studied urgently for value creation phenomena (Binkhorst & Den Dekker, 2009), and has been the worst affected by COVID-19 (UNWTO, 2020). Thus, this study also draws from tourism research to better describe the research context. For the luxury fashion industry, in Chapters 2 and 3, we will elaborate on the necessity and importance of studying the value co-creation and SMM strategy in this industry, especially in emerging markets during the pandemic.

Last but not least, the choice to conduct a cross-sectorial analysis of the tourism industry and luxury fashion industry is theoretically relevant for two reasons. First, the luxury fashion industry and the tourism industry share a common focus on providing experiences to consumers (Üçok Hughes, 2016; Koivisto, 2020; Campos, 2018; Mathis, 2016), but they differ in their products and services, target markets, and business models. There is a limited understanding of how luxury fashion brands collaborate with tourism businesses to create unique and memorable experiences for consumers. Analysing the value co-creation in these two industries and understanding the important factors that influence co-creation can provide a foundation for exploring the collaboration and knowledge transfer between the two industries, as well as the opportunities and challenges that arise from such collaboration in the context of value co-creation. For instance, our research found that since the outbreak of COVID-19, Chinese luxury consumers have shown a strong preference for COBO. Therefore, luxury fashion brands could consider collaborating with relevant tourism agencies from the country of origin for marketing activities, in order to create an authentic and unforgettable travel and shopping experience for luxury consumers. By doing so, the study can contribute to the development of theoretical frameworks that can explain the interplay and collaboration between different industries in the context of value co-creation.

Second, both industries are closely interconnected and interdependent, as many luxury fashion products are consumed by tourists. For instance, Florence is considered a fashion city by many international tourists and luxury consumers; One of the main reasons why many international tourists visit Florence is to go shopping for luxury goods (Capone, 2016). Investigating the preferences of such consumers can play a pivotal role in enhancing Florence's image as a fashion capital and global destination, as well as providing valuable insights to strengthen the competitiveness of local fashion brands and retailers. By conducting a cross-sectorial analysis, this study expects to offer insights into how to enhance the competitiveness of both industries and how

to create synergies between them that benefit businesses and consumers alike.

4 Summary of Research Contributions

According to the positioning of the study, this dissertation thus contributes to the (1) value co-creation, (2) SMM, (3) brand marketing, and (4) international marketing literature streams. First, this dissertation extends the current understanding of consumers' value creation activities especially in times of a global crisis, thus adding to the body of knowledge in the field of value co-creation. Unlike previous studies that focused mainly on dyadic value co-creation between consumers and firms, this study aims to understand value co-creation from a network lens, in which the role of external actors in value creation is examined. Therefore, this study adds to the value co-creation research by clarifying the features of online external actors in the value creation network, their links with other value creators and their influences. The findings provide theoretical contributions on how to leverage external actors and how to integrate these actors with current corporate marketing strategies. Moreover, to respond to the calls to investigate the consumer-driven value creation phenomenon (e.g., Grönroos and Voima, 2013), this dissertation conceptualizes consumer independent value creation (CIVC) process, develops and validates the CIVC model. The findings propose novel insights into the processes and differences of the CIVC phenomena and provide directions for future research on the CIVC topic. Furthermore, current research in this field has predominantly concentrated on value co-creation activities occurring during the normal time, lacking knowledge of the crisis's impacts on consumers' value creation. This dissertation examines consumers' value co-creation in times of crisis, contextualizes and validates the CIVC model in the tourism sector, captures the changes in consumer trends, and thus provides useful insights for the recovery of businesses during a pandemic.

Second, this dissertation contributes to the literature in the SMM field. Prior literature on the impact of a global crisis such as COVID-19 has focused on the macro-economic implications of the crisis, related healthcare problems and issues of public crisis management (Mason et al., 2021), little attention has been given to the impacts of a crisis on consumer behaviours and related social media marketing strategies. This research aims to bridge this gap by investigating changes in consumers' SM behaviours before and during the COVID-19 pandemic. The findings demonstrate the growing importance of SMM since the pandemic began. By applying novel machine learning

methods on millions of SM data about both consumers and brands, this research provides timely insights into the impacts of a global crisis on firms' SMM and highlight the importance of SM channel for firms' marketing communications in a crisis period. The study examines new consumer trends reflected on SM in a global pandemic setting, analyses the roles of cultural resources and external actors on SM on consumer perceptions and firm's SMM strategies, thus providing theoretical contributions to how to capitalize on suitable SM components for SMM in times of a global crisis.

Third, this dissertation focuses on the accelerated SM presence of luxury brands in emerging markets during the pandemic. Thus, contributing to both brand marketing and international marketing literature on the impacts of the pandemic on brand marketing in emerging markets. Prior brand marketing literature has been done on online cross-cultural communication, but to date, studies focusing on SM marketing and communication strategies of luxury brands are exceptionally rare (Wang et al., 2020). This dissertation focuses on SMM of luxury brands in emerging markets, investigates the changes in consumer trends before and during the pandemic, scrutinizes the relations among exemplar accounts of a specific cultural attribute, brand followers and brands on SM, and analyses how specific cultural resources could impact consumer brand perceptions and SMM strategies. The research thus expands knowledge of luxury brand marketing in the context of SM channels in emerging markets and advances international marketing research by highlighting the importance of SMM in times of a global crisis.

To summarise the main contents of this dissertation, Figure 3 visually presents the main research gaps, key objectives, research questions, main outputs, and research contributions. Besides, this dissertation is organized into five parts. The first part is the introduction part. It briefly introduces the research background of this dissertation. This leads to a discussion of research gaps, as well as a justification for research aims and research questions. Subsequently, the definition of the key concepts applied in this dissertation, the scope and positioning of the research, and the research contributions are presented. At the end of this chapter, the structure of the dissertation is introduced.

Figure 3. An overview of the research gaps, objectives, questions, outputs, and contributions

Research gaps & key objective	

- Limited understanding of the mechanism underlying consumers' value co-creation through SM in times of crisis.
- Limited knowledge about the role of the value co-creators on SM that beyond consumer-firm dyadic interaction.
- Insufficient study on the impact of global crisis on co-creation strategies, especially in tourism and luxury fashion industry which are severely affected by the crisis.

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Understanding co-creation strategies integrating with SM during a global crisis, and exploring important SMM components that influence consumers' value co-creation.

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What are the important factors or actors that influence consumers' value co-creation on SM and how can SMM be strategically utilized and managed by companies to facilitate consumers' value co-creation, especially in a global crisis setting?

Main & sub research questions

What is the underlying mechanism of consumers' value co-creation on SM especially in times of crisis?	What roles do exemplar accounts on SM play in value co-creation especially during the crisis? What is the relation between these exemplars and consumers? How do companies engage these co-creators through SMM strategies?	What changes in consumer trends are reflected in SM in times of crisis? How can SMM strategies adapt to these changes to achieve co-creation?

Outputs

Paper 1 An empirical study reveals the mechanism of customer's value creation through SM during COVID-19, and identify key factors that influence consumers' value co-creation.	**Paper 2** An empirical study explores the role of exemplar accounts on SM before and during COVID-19.	**Paper 3** An empirical study explores the changes in consumer trends on SM in emerging market and examines changes in brand value proposition and consumer brand perception before and during COVID-19.

Methodology & data

Paper 1 • Method: serial multiple mediator model; bootstrapping; online survey. • Sample: questionnaire results on 472 independent tourists who travelled during COVID-19.	**Paper 2** • Method: social network mining; regression. • Data: detailed information of 2,250,377 (1,226,985) followers of 11 Italian luxury brands (256 exemplar accounts).	**Paper 3** • Method: Linguistic Inquiry and Word Count (LIWC) 2015; Latent Dirichlet allocation (LDA) topic modelling. • Data: 21,477 brand posts and 2,366,564 consumer reviews of 16 luxury brands on Weibo.

- provides literature review of the research on SMM and co-creation strategy especially in crisis period, clarify the research status, and propose possible research avenues on theoretical, methodological, and contextual issues.
- conceptualizes consumers' value co-creation through SM in times of crisis, establish consumer independent value creation (CIVC) model, contextualize and validate the CIVC model in tourism sector, and thus provide insights for the recovery of tourism during a pandemic.
- examines the role of the value co-creators on SM that beyond consumer-firm dyadic interaction, explore their impacts on consumer perceptions, and thus offer implications for marketers to enrich their co-creation strategies during the pandemic.
- explores new consumer trends on SM during a global pandemic setting, and thus provide extensive future research directions on the new trend.
- analyses the impact of cultural operant resources on consumer perception and firm's co-creation strategy.

Contributions

Note: SM refers to social media; SMM refers to social media marketing.

After that, chapters one to three present the three papers included in this dissertation. Chapter one is Paper 1. Paper 1 is an empirical study that conceptualizes CIVC in times of a global crisis and validates the CIVC model in the tourism context. Chapter one starts with a brief discussion of the theoretical background of the consumer-driven value creation phenomenon. This leads to a discussion about the importance and necessity of studying such a phenomenon. Following that, the reasons and justifications for studying the CIVC phenomenon in the tourism context are put forward. We then review the research status of the related topics, conceptualize the CIVC phenomenon, and propose the research hypothesis. The review section is organized based on several literature streams: CIVC, consumer knowledge, consumer creative behaviours, self-efficacy, and online C2C co-creation. The next section introduces the questionnaire method and regression-based bootstrapping approach applied in the study. Then, the established CIVC model is validated based on questionnaire results of 472 independent tourists who travelled during a crisis period, and the main results are discussed. This chapter ends with a discussion of research contributions and potential research directions toward future CIVC studies.

Chapter two is Paper 2. Paper 2[1] is empirical research that explores the role of exemplar accounts on SM before and during COVID-19. First, this chapter briefly introduces the research

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[1] Paper 2 won the Outstanding Doctoral Forum Paper (the first prize) at the 9th China Marketing International Conference (CMIC 2021) hosted by Chinese Scholar Marketing Association in Nanchang, China from August 12 to 16, 2021.

background of digital transformation and the localization-standardization dilemma faced by luxury brands in marketing. After that, the chapter reviews the literature in the following areas: luxury brands' co-creation on SM, understanding consumer perceptions from social network mining, and brand marketing strategies in emerging markets. Next, the big data crawling method and the social network analysis method adopted in this paper are explained in detail. This is followed by a discussion of the research findings. Lastly, the research contributions and future research directions are presented.

Chapter three is Paper 3, which is an empirical study that explores the changes in consumer trends on SM in emerging markets and examines changes in brand value proposition and consumer brand perception before and during COVID-19. Chapter three starts with an introduction to new situations in emerging luxury markets since the COVID-19 pandemic. After that, two contradictory views in academia on luxury consumption in emerging markets have been pointed out. This leads to a discussion about the research gaps, objectives and questions. Next, the chapter comprehensively discussed the theoretical view of luxury brand co-creation, conspicuous vs. inconspicuous consumption, luxury consumption in emerging and mature markets, and COVID-19 impacts on luxury goods. Then the justifications and steps of the text mining methods adopted in this paper are described. This is followed by a discussion of the results of content analysis and topic modelling. Finally, the research contributions, limitations and suggestions for future research avenues are provided.

Chapter four (Discussion and Conclusion) begins with a summary of the main findings of the three papers, followed by presenting the theoretical and managerial contributions of the dissertation. Finally, the limitations of the research are discussed, and the future research direction is suggested.

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Chapter 1

Travelling under the Threat of COVID-19: How does Consumer Knowledge Contribute to Value Creation in the Consumer Sphere?

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Abstract

This study aims to disclose the mechanism of consumer independent value creation (CIVC). A serial multiple mediation model was developed to examine the relationships among consumer knowledge, self-efficacies, online C2C co-creation, and consumer creative behaviour. Hypotheses were tested using a regression-based bootstrapping approach on a sample of 472 Chinese independent tourists who travelled during the COVID-19 pandemic. The results indicate that consumer knowledge has a driving effect on consumer creative behaviour. Self-efficacy and online C2C co-creation play mediating roles in the indirect effect of consumer knowledge on consumer creative behaviour. The study illuminates a previously unexplored mechanism by which consumer operant resources can impact CIVC processes and outcomes. The results provide insights for marketers hoping to promote the development of markets centred around CIVC. The findings also highlight the importance of tourism operant resources for the recovery of the post-pandemic tourism market, thus providing implications for the tourism industry.

Keywords: Consumer independent value creation; operant resources; co-creation; COVID-19; tourism; independent tourists

Introduction

Consumer value creation has long been considered as a key concept within service marketing (Woodruff, 1997). With the continuous improvement of information and communication technology and the increase in consumers' leisure time, the phenomenon of consumer participation in value creation activities is increasing (Grönroos & Voima, 2013; Svensson & Grönroos, 2008; Vargo & Lusch, 2004, 2008a). Consumers are no longer passive receivers of services and products, but co-creators of value with firms (Vargo & Lusch, 2008b), as well as independent creators of value to satisfy their own needs (Grönroos & Voima, 2013). In the latter situation, there is almost no direct interaction between the consumer and the firm, and "value-in-use"[1] is mainly created in the consumer sphere, that is, the consumer independent value creation (CIVC) (Grönroos & Voima, 2013). CIVC depicts the value creation activities by individual consumers or through inter-consumer interactions (Grönroos, 2011, 2012; Grönroos & Voima, 2013).

CIVC has been better recognized in the scholarship in recent years. Some scholars have suggested regarding this phenomenon as an independent market segment and adopting it as an important direction for future research (Cova & Dalli, 2009; Martin & Schouten, 2014; Xie et al., 2008). While previous researchers recognize and theorize CIVC as "consumer self-made products" (Atakan et al., 2014), "self-production" (Atakan et al., 2014), "I made it myself" (Troye & Supphellen, 2012), and "prosumption" (Xie et al., 2008), precisely how consumers independently participate in value creation is not clear. Prior research reveals that individual resource configurations and characteristics influence how consumers deploy their operand resources and how they use the companies' operant and operand resources (Arnould et al., 2014). But the exact process of value creation is poorly understood (Grönroos, 2011). Especially, the mechanisms by which consumer operant resources influence CIVC are still not addressed. Therefore, the primary motivation for this study is the development and validation of a conceptualized model to understand the underlying mechanism of CIVC.

To disclose the mechanism of CIVC, a serial multiple mediation model was developed to examine the relationships among consumer knowledge, consumer self-efficacies, online C2C co-

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[1] Value-in-use means that value can only be created and decided with the user in the process of consumption and through use (Xie et al., 2008). The physical and mental use or mere possession of a resource can produce value-in-use (Grönroos, 2012).

creation, and consumer creative behaviour. Our hypotheses were tested using a regression-based bootstrapping method on a sample of 472 Chinese independent tourists who travelled during the pandemic. The results indicate that consumer knowledge has a driving effect on consumer creative behaviour; self-efficacy and online C2C co-creation play mediating roles in the indirect effect of consumer knowledge on consumer creative behaviour. The current work contributes to the extant knowledge by illuminating a previously unexplored mechanism through which consumer operant resources can impact both the processes and outcomes of CIVC. The findings can provide insights for marketers hoping to promote the development of markets centred around CIVC, as they offer products and services that are vital ingredients for CIVC activities. This paper also has implications for the tourism industry in that it highlights the importance of tourists' operant resources for the recovery of the tourism market in a post-COVID-19 world.

In the following section, the research begins with a discussion of the research context. Next, we explain the concept of CIVC and its importance relating to service innovation. After that, a theoretical model is developed, and an empirical study is presented of factors impinging on consumers' propensity to independently create value. The goal is to provide insight into the processes that determine consumers' independent value-creation activities and outcomes. We will focus on what the resources are that ensure consumers fulfil their own value creation activities and desist from making use of alternative firm-pre-prepared products and services (Xie et al., 2008), as well as what inspirations enterprises can draw from CIVC activities to facilitate their business model innovation. In the final section, this research concludes with a discussion of theoretical and managerial implications, limitations, and avenues for future research.

1 Research Context

Due to the tremendous contextual diversity, the study of services is often in the context of a specific industry (Voss et al., 2016). Tourism is one industry that has been noted as one of the areas where CIVC needs to be studied urgently (Binkhorst & Den Dekker, 2013). This study examines value creation among independent tourists. Instead of buying pre-arranged tours or packages, independent tourists plan their own itineraries and handle everything that occurs during travel by themselves (Tsaur et al., 2010). As opposed to tourists that buy packaged tours, independent tourists are willing to take risks in choosing vacation elements. They experience an evolving itinerary; and

they have to search for travel information and possess travel knowledge to respond to different situations they may encounter during their travels (Hyde & Lawson, 2003). Having knowledge and skills in travel can make any trip safer and smoother (Tsaur et al., 2010). With the development of information and communication technology, the role of independent tourists has become increasingly prominent. The notion of tourists actively co-creating value in their own sphere is increasingly acknowledged in tourism marketing (Rihova et al., 2015). However, to the author's knowledge, although independent tourists typically engage in CIVC activities, little is known about the activity involved in the co-creation of value by independent tourists with others (Rihova et al., 2015), or when independent tourists individually contribute to the value creation process alone.

Moreover, understanding the processes by which independent tourists create value is even more important during the COVID-19 pandemic. As the world faces COVID-19, lockdown policies and unprecedented global travel restrictions have caused the worst global economic disruption since World War II (Gössling et al., 2020). Tourism has been the most severely affected of all the major economic sectors (UNWTO, 2020). Many tourism destinations have been compelled to suspend their operations, while tourists' confidence has also been significantly shaken, resulting in the postponement of their vacation plans (Sigala, 2020). Given the uncertainty and crisis caused by COVID-19, scholars and practitioners have paid attention to predicting how the pandemic will change travel behaviour and when it will rebound. Despite its significance for both theory and practice, research on this topic is still in its early stages (Del Chiappa, 2021).

In specific, on one side, the situation during the pandemic has made many tourism products and tourism itineraries inaccessible and also made conventional industry methods that rely heavily on consumer–firm interaction dysfunctional (Sigala, 2020). On the other side, as a transformative opportunity (Di Maria, 2021), the pandemic has unleashed the creativity and resilience of consumers, impose the changing of their existing habits, and prompted them to adopt more improvisational approaches in response to the challenges they face (e.g., travel ban, health concerns, offline to online), and finally innovated new modes of consumption (Sheth, 2020). Consumer's improvisation or Jugaad (Radjou, 2012), involves finding opportunities in adversity, thinking and acting flexibly, and developing effective solutions by overcoming constraints imposed by social norms or government policies (Radjou, 2012; Sheth, 2020). This ability for consumers to improvise

can lead to innovative practices. But there is no systematic empirical or scientific research on consumer improvisation (Sheth, 2020), particularly in the context of the tourism industry.

The popularity of independent travel during the pandemic is a manifestation of consumer improvisation. During COVID-19, it is noteworthy that independent travel has become increasingly relevant and attractive to travellers who seek to avoid crowded tour groups and prioritize social distancing (Wen, 2021). Many independent tourists rely on their rich travel experiences and knowledge, exchange information and knowledge with others, generate creative ideas and solutions, and successfully implement flexible travel plans during this tough period. By focusing on the improvisation behaviour of independent tourists during COVID-19, this study aims to establish and validate a model to understand how the operant resources of independent tourists contribute to the CIVC process and output creative ideas and behaviours. The study could provide valuable insights into the changing preferences and improvisation behaviours of tourists during a global pandemic. Since COVID-19 is not the first pandemic that humanity will have to deal with, nor will it be the last, given today's highly interconnected and global nature, the study could also offer a timely and more comprehensive understanding of consumer value co-creation (Cruz-Cárdenas et al., 2021; Zwanka & Buff, 2021), especially in times of crisis, This could help stakeholders in the tourism industry adapt and tailor their offerings to meet the evolving needs and expectations of travellers (Gursoy, 2020; Sigala, 2020) and ultimately benefit to the recovery of the sector in the post-pandemic era.

2 Literature Review and Hypothesis Development

2.1 Consumer independent value creation

Consumer independent value creation (CIVC) is a specific form of value co-creation where the traditional consumer–firm direct interaction is not a required condition (Grönroos & Voima, 2013; Vargo & Lusch, 2008b). In CIVC, besides operand resources (e.g., firm offerings, money), consumers use their operant resources (e.g., knowledge) to achieve "individual, relational, and collective goals" in the value creation process (Epp & Price, 2011). While the consumer may be independent, this process is always influenced by a more comprehensive consumer network or ecosystem, indicating that even individual value creation is a form of value co-creation (Grönroos & Voima, 2013; Vargo & Lusch, 2016).

To explain the phenomenon of CIVC, it is necessary to understand "what kind of value is co-created for whom, using what resources, and through what mechanism" (Saarijärvi et al., 2013). Value co-creation refers to "the actions of multiple actors, often unaware of each other, that contribute to each other's well-being" (Vargo & Lusch, 2016, p. 8). The phrase "well-being" is all-encompassing and denotes the mutual value creation by actors (Ramaswamy, 2011). But previous research suggests that this metaphorical phrasing causes difficulty in studying value co-creation analytically (Payne et al., 2008) and carrying out focused empirical analysis (Grönroos, 2012). Moreover, many consumer practices during the consumption experience are mundane and daily activities that are performed spontaneously and unconsciously (Schatzki, 1996). For these reasons, when developing an analytical and operational model of CIVC, the actual value refers to consumer perceived value-in-use. The consumer value-in-use means that "after they have been assisted by a self-service process or a full-service process they are or feel better off than before" (Svensson & Grönroos, 2008, p. 303).

The creation of value-in-use is a conscious process of consumers. When consumers find that existing products or services cannot meet their own needs, they seek to reproduce and recreate these firm offerings independently. Through cognition, thinking, processing, and production processes, consumers will transform the potential value into expected value (Grönroos & Voima, 2013; Svensson & Grönroos, 2008). Consumer operant resources are necessary for consumer value creation (Vargo & Lusch, 2004, 2008a). But the role of different forms of operant resources in influencing CIVC has not been investigated (Grönroos & Voima, 2013). According to Arnould et al. (2014), operant resources refer to resources and capabilities that exert effects on other resources; these operant resources can be divided into cultural, physical, and social resources (Arnould et al., 2014). Cultural operant resources refer to different types and amounts of expertise, imagination, and history (Baron & Warnaby, 2011). Physical resources refer to a consumer's own physical and mental strength (e.g., self-efficacy, emotion, etc.) (Arnould et al., 2014). Social resources are networks of relationships with others in which consumers exert command to varying degrees (e.g., consumer communities, and family networks). By using these different and interrelated types of operant resources, consumers determine how their operand resources (e.g., money, cars) and firm offerings are integrated in a way that generates value-in-use (Arnould et al., 2014; Baron & Harris,

2008).

CIVC allows consumers to attain opportunities to practise their own creative ideas when facing problems in life. Although the form and content might differ, in essence, the goal of all CIVC is to generate new ideas and successfully implement some of them through creative behaviours. Consumer creative behaviours refer to the intentional creation and application of new ideas within a certain role (e.g., tourists) to benefit performance (Janssen, 2004). Consumer operant resources such as domain knowledge, skills, and self-efficacies are important pre-conditional factors of consumer creative behaviour. Based on the potential value created by firms, consumers, as integrators of social and economic resources (Vargo & Lusch, 2016), could create value individually or jointly through the beneficial application of operant resources (Vargo & Lusch, 2004, 2008a). Such a value creation process leads to consumer creative behaviours totally within their own sphere.

CIVC can not only help consumers achieve exactly what they want (Nuttavuthisit, 2010), but also help foster firm innovation and the evolution of market trends (Alves et al., 2016). Within the ongoing pandemic environment, innovation, that is, "the successful implementation of a creation" (Heunks, 1998, p. 263), is central to a firm's success and survival. Innovation enables firms to meet the changing needs of consumers, increase turnover and profits, cope with the rapidly changing market, and gain competitive advantages. However, continuous innovation within an organization is not easy, especially not for small and medium-sized firms during a pandemic, and often requires an embrace of consumers. That is because innovative service ideas exist not only in the market but also in the minds of dissatisfied consumers (Duverger, 2012). This implies that consumers are potential contributors to firm-led innovation (Coviello & Joseph, 2012). More importantly, consumer research has recently demonstrated the generative roles of consumers and consumption in the creation of new markets. In the spirit of determined self-interest, fun pursuit, or both, "Prosumers" takes on the role of developing new products and market infrastructure in such new markets (Martin & Schouten, 2014).

The potential value of CIVC to the industry firms is clear, but what kind of resources are most important and how they contribute to consumer-led creative activities is still unclear. Research such as this that seeks to provide answers to these under-studied questions may be a guide to facilitate

market innovation in specific industries. In what follows, existing research on the three forms of consumer operant resources important to CIVC – cultural, physical, and social – are reviewed, and hypotheses are drawn to help examine their interrelated roles and effects on the process of CIVC in the tourism industry.

2.2 The driving effects of consumer knowledge on consumer creative behaviour

Consumer-owned knowledge is selected as a representative of cultural operant resources in this study. Nowadays, many consumers spend extensive time online learning about services and products before deciding to buy. This results in different degrees of domain-specific knowledge among consumers. As an important type of cultural resource, consumer domain-specific knowledge is key to ensuring the completion of the self-production and value creation processes (Vargo & Lusch, 2004, 2008b). In addition, it is a consensus that the major antecedent for creative behaviour is base knowledge (Hunter et al., 2008; Luo & Toubia, 2015). Increasing domain knowledge influences creativity and helps develop or verify workable ideas (Hunter et al., 2008).

Consumer owned-knowledge can be divided into two dimensions: familiarity (as accumulated consumption experiences) and product knowledge (as the sum of product category information and rules stored in memory) (Philippe & Ngobo, 1999). There are at least three reasons why consumer-owned knowledge is a determinant factor in the seamless functioning of CIVC. First, increasing consumer knowledge improves the ability to quickly search out essential information related to consumption or to process more sophisticated information. For instance, knowledgeable consumers can quickly identify useful information in advertising terminology and make judgments (Xu & Wyer Jr, 2010). Second, increasing consumer knowledge improves both the quantity and quality of new workable solutions proposed by the users, their understanding and acceptance of others' solutions, and their ability to evaluate and determine the optimal solution in value creation. For example, consumers with high-domain knowledge are good at problem decomposition and can generate more "new" ideas (Luo & Toubia, 2015). Third, consumer knowledge is the decisive factor in whether their creative behaviour will occur (Hippel et al., 2011). For instance, consumers often adopt low-cost solutions to meet their particular needs (Franke & Shah, 2003). The cost of their creative behaviours is affected by the amount and the type of knowledge required. When the cost is low, consumers will act (Morrison et al., 2000). Given the vital role that consumer

knowledge plays in the value creation process and consumer creative behaviour, this study proposes:

H1. Consumer knowledge positively influences consumer creative behaviour.

H1a. Consumer knowledge positively influences the generation of consumer creative ideas.

H1b. Consumer knowledge positively influences the implementation of consumer creative ideas.

2.3 The simple mediation effect of self-efficacies on consumer creative behaviour

As it pertains to the individual consumer, apart from cultural resources such as knowledge, physical resources are often needed in the CIVC process. Drawing on Xie et al. (2008)'s research, self-efficacy was selected as a proxy to represent physical operant resources in this study. Self-efficacy is "people's judgments of their capacity to organize and execute courses of action required to attain designated types of performances" (Bandura, 1986, p. 391). It plays an essential role in affecting both intention (Xie et al., 2008) and the performance of consumers' value creation activities (Alves et al., 2016). Domain-specific knowledge is the main individual-level factor that affects self-efficacy assessments (Gist & Mitchell, 1992).

Creative self-efficacy is the embodiment of the self-efficacy concept in the field of creativity (Tierney & Farmer, 2011). Because the creative activity is risky, participation in creative activities requires a robust intrinsic drive. This is expressed through belief in the ability to achieve successful creative results (Tierney & Farmer, 2002). Individuals' high level of knowledge and skills is the crucial factor affecting their creative self-efficacy (Gong et al., 2009; Tierney & Farmer, 2002). Strong creative self-efficacy encourages individuals to generate and implement creative ideas and actively deal with difficulties and setbacks encountered in the process of creative activity, which includes dealing with uncertainty and risk (Anderson et al., 2004). We think that for consumers with the necessary knowledge and skills, creative self-efficacy can also provide them with strong efficacy beliefs and thus could benefit the process of consumer creative behaviours.

Similar to creative self-efficacy, change self-efficacy is an embodiment of self-efficacy in a changing situation. Individual change self-efficacy refers to the perceived ability to deal with change in a given situation and to perform tasks well despite the demands of changes occurring in

the situation (Wanberg & Banas, 2000). Knowledge affects efficacy judgment (Gist & Mitchell, 1992). Consumers with more specific domain knowledge are more likely to arrive at novel solutions by summarizing relevant knowledge and experiences and having more confidence in overcoming the problems occurring during the changing process. Individuals that measure high in change self-efficacy are confident in their ability to perform well in changing environments (Conner, 1993). During the CIVC process, consumers often encounter many ambiguous situations that cause discomfort and distress. Individuals with high change self-efficacy are able to overcome the negative feelings associated with change and eventually promote the implementation of the creative idea, which usually includes making substantial changes to previous norms and routines (Ng & Lucianetti, 2016). Thus, given the influence of domain knowledge on change self-efficacy, and the influence of change self-efficacy on individual ability and behaviour, this study proposes:

H2. Consumer knowledge positively affects consumer creative behaviour through self-efficacy.

H2a. Consumer knowledge positively affects the generation of consumer creative ideas through creative self-efficacy.

H2b. Consumer knowledge positively affects the implementation of consumer creative ideas through creative self-efficacy.

H2c. Consumer knowledge positively affects the generation of consumer creative ideas through change self-efficacy.

H2d. Consumer knowledge positively affects the implementation of consumer creative ideas through change self-efficacy.

2.4 The simple mediation effect of online C2C co-creation on consumer creative behaviour

Online C2C co-creation is selected as a proxy to represent consumers' available social resources in this research. The conservation of resource theory (Hobfoll, 1989) holds that when individuals do not have enough resources to realize their goals, they may use social relationships to obtain resources from others. A similar occurrence appears in the CIVC process: C2C co-creation behaviour can provide consumers with support from others in terms of domain knowledge, skills,

or information; consumer-owned knowledge is a prerequisite of such behaviour. In addition, online platforms are recognized as the main channel for C2C co-creation (Zadeh et al., 2019), especially in the tourism industry (Shen et al., 2020).

In online C2C co-creation, consumers possess unique information and knowledge about their individual needs (Prahalad & Ramaswamy, 2004). They interact on the virtual platform, integrate operant resources such as knowledge, skills, and experience, form cooperative relationships with other consumers, and become co-creators of value (Vargo & Lusch, 2008a, 2016). The co-creation behaviour can improve the novelty or quality of ideas (Hoyer et al., 2010), create novel coping solutions to problems (Xu et al., 2016), and generate opinions about how to creatively consume firm offerings (Arnould et al., 2014). This cooperation can ultimately benefit consumer creative behaviour. Considering that consumer-owned knowledge is an essential prerequisite for C2C co-creation, and C2C co-creation can promote consumer creative behaviour, this study proposes:

H3. Consumer knowledge positively affects consumer creative behaviour through online C2C co-creation.

H3a. Consumer knowledge positively affects the generation of consumer creative ideas through online C2C co-creation.

H3b. Consumer knowledge positively affects the implementation of consumer creative ideas through online C2C co-creation.

2.5 The serial mediation effects of self-efficacy and online C2C co-creation on consumer creative behaviour

Previous research finds that self-efficacy positively affects consumer engagement in online C2C co-creation (Zadeh et al., 2019). In addition, prior literature on consumer-firm co-creation has validated that the level of co-creation undertaken by the consumer is a function of the levels of consumer expertise and self-efficacy, among other factors (Alves et al., 2016). Research on tourist-firm co-creation also suggests that tourists with high self-efficacy are more likely to participate in co-creation, and the intention of knowledgeable consumers to engage in co-creation experiences mainly comes from increased self-efficacy (Im & Qu, 2017). However, whether the influence

mechanism of consumer knowledge and self-efficacy on consumer-firm co-creation is still effective in the case of CIVC remains to be studied. To conclude, this study argues that the more domain-specific knowledge a consumer has, the higher the consumer's self-efficacy will be, then the higher the consumer's propensity for online C2C co-creation behaviour will be, and finally, the higher the level of consumer creative behaviour will be. Given the points made, this study proposes:

H4. Consumer knowledge positively affects consumer creative behaviour, first through self-efficacy and then through online C2C co-creation.

> *H4a.* Consumer knowledge positively affects consumer creative behaviour, first through creative self-efficacy and then through online C2C co-creation.

> *H4b.* Consumer knowledge positively affects the generation of consumer creative ideas, first through creative self-efficacy and then through online C2C co-creation.

> *H4c.* Consumer knowledge positively affects the implementation of consumer creative ideas, first through creative self-efficacy and then through online C2C co-creation.

> *H4d.* Consumer knowledge positively affects consumer creative behaviour, first through change self-efficacy and then through online C2C co-creation.

> *H4e.* Consumer knowledge positively affects the generation of consumer creative ideas, first through change self-efficacy and then through online C2C co-creation.

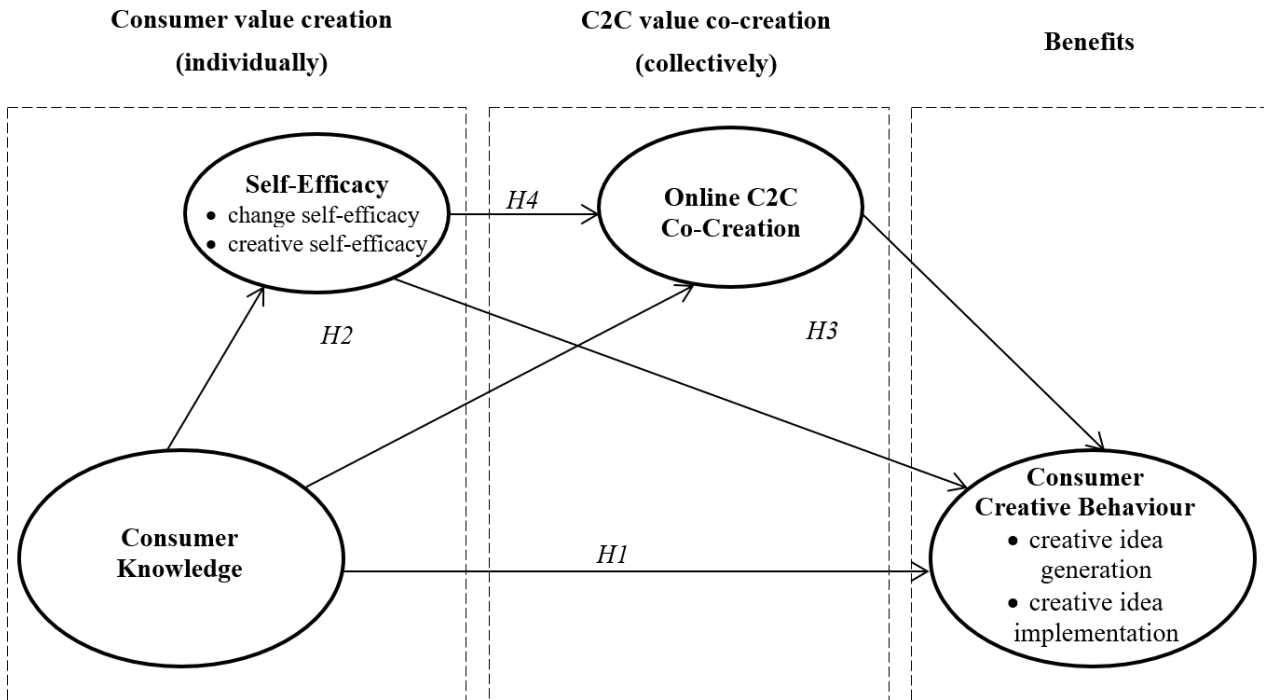> *H4f.* Consumer knowledge positively affects the implementation of consumer creative ideas, first through change self-efficacy and then through online C2C co-creation.

In Figure 1, the proposed hypotheses are visualized.

Figure 1. Conceptual model

3 Method and Data

To reveal the mechanism of CIVC phenomena in the independent travel market, we established a serial multiple mediation model to examine the relationships among consumer knowledge, consumer self-efficacies, online C2C co-creation, and consumer creative behaviour. To test the proposed hypotheses, we developed a questionnaire based on mature scales and collected data through an online channel. We focused on the Chinese travel market. Because China was the first country to experience the outbreak of COVID-19. At the time of our questionnaire collection (August and October 2020), other major travel markets, such as Italy, the United States, France, etc., were still severely affected by national quarantine and lockdown policies, making it impossible for tourism to take place. Meanwhile, under the dynamic zero clearance policy, China's quarantine policy was limited to a few provinces, and tourism activities have seen some recovery in most of the remaining provinces, although still inconvenienced by the pandemic. In the following sections, the questionnaire and the sampling technique used in the study are described.

3.1 Questionnaire

As our respondents were Chinese independent tourists, the questionnaire was prepared in English and translated into Chinese according to standard back-translation procedures (Brislin, 1980). The survey instrument was developed based on the measurement items from previous well-established

scales modified to fit the tourism context. It was then improved based on an online pilot study with 70 Chinese independent travellers of different ages, occupations, and educational backgrounds. This feedback on content validity and other concerns (e.g., layout, question phrasing) resulted in minor refinements of item wording. The final version of the questionnaire is comprised of six sections. All questions were assessed on a seven-point Likert scale, except those related to demographic information.

The first section had basic demographic questions. The second section incorporated the Luo and Toubia (2015) scale to assess consumer-owned knowledge. In the third and fourth sections, respectively, the Tierney and Farmer (2002) scale was adapted to look at creative self-efficacy, and the scale set out by Wanberg and Banas (2000) was used for the measurement of change self-efficacy. The fifth section dealt with online C2C co-creation, for which the Yi and Gong (2013) scale was utilized. In keeping with Alves et al. (2016), the author adjusted the scale to a second-order construct composed of consumer participation behaviours (four items) and consumer citizenship behaviours (four items). In the sixth section, the Janssen (2001) scale was used to probe consumer creative behaviour. Specifically for independent tourists, both creative idea generation and ideas implementation are prerequisites for a satisfying trip. Thus, this study measures these two types of creative behaviours.

3.2 Data collection

The final version of the questionnaire was uploaded to the online survey website Sojump (www.wjx.com) for data collection. To investigate the travel behaviour of Chinese independent tourists since the outbreak of COVID-19, formal sampling was conducted in August 2020 (low season) and October 2020 (high season due to the "Oct.1" golden week in China). A snowball sampling approach was adopted, and two filtering questions were included before the main items of the questionnaire, namely: (1) "In early 2020, the COVID-19 pandemic began to appear in many places. From the time there were confirmed cases of COVID-19 appearing in the country you were living in to today, have you ever travelled during this period?"; (2) "Is your current city/town still under the influence of the pandemic, so that you are not objectively free to travel?" The first question was to ensure that the respondents had travelled since their country had been affected by the pandemic. The second question was to ensure that the individual's self-efficacy when filling out

the questionnaire was consistent with the self-efficacy of the same individual when travelling during the pandemic. Respondents who answered "yes" to the first question and "no" to the second question were invited to fill out the entire questionnaire and distribute the survey link to other eligible consumers they knew.

Table 1. Characteristics of respondents (N = 472)

Variable	Demographic characteristics	N (%)	Variables	Demographic characteristics	N (%)
Gender	Male	180 (38.14)		< 0.5 hour	16 (3.39)
	Female	292 (61.86)		0.5-1 hour	63 (13.35)
Age	18-24	116 (24.58)	**Time of using**	1-2 hours	116 (24.58)
	25-34	130 (27.54)	**social media**	2-3 hours	102 (21.61)
	35-44	87 (18.43)	**(per day)**	3-4 hours	73 (15.47)
	45-54	93 (19.70)		4-5 hours	45 (9.53)
	55-64	38 (8.05)		> 5 hours	57 (12.08)
	≥65	8 (1.69)	**Profession**	Student	80 (16.95)
Education	High school and below	56 (11.86)		Entrepreneur	38 (8.05)
	Undergraduate	345 (73.09)		Professional	63 (13.35)
	Master	58 (12.29)		Business Executive	46 (9.75)
	Doctor	13 (2.75)		Medical personnel	24 (5.08)
	0-30,000	54 (11.44)		Public servant	79 (16.74)
	30,001-50,000	94 (19.92)		Blue-collar worker	12 (2.54)
	50,001-100,000	159 (33.69)		Farmer	2 (0.42)
Disposable income of household (CNY)	100,001-360,000	132 (27.97)		Military	1 (0.21)
	360,001-500,000	19 (4.03)		Retired	23 (4.87)
	500,001-800,000	5 (1.06)		Others	104 (22.03)
	800,001-2,000,000	3 (0.64)			
	2,000,000 and up	1 (0.21)			
	Rather not tell	5 (1.06)			

(1) The samples covered all 34 provinces in China. (2) In 2019, the per capita disposable income of Chinese residents was 30733 yuan. Data source: National Bureau of Statistics of China (2020).

Between 1 August 2020 and 16 August 2020, 792 raw responses were collected. Between 1 October 2020 and 11 October 2020, 822 raw responses were collected. According to the sample (1614), 709 respondents (43.93%) had travelled since the outbreak of COVID-19. Among these independent tourists, 528 respondents (74.47%) were not confined again by the pandemic and were

not under travel restrictions from the pandemic at the time they filled out the questionnaire. After eliminating the invalid samples, a final sample of 472 respondent questionnaires was available for subsequent analysis. Table 1 reports the demographic information.

Table 2. Accuracy analysis of constructs and indicators

Indicators		Loadings (Std. estimates)	Average variance extracted	Construct reliability	Cronbach's alpha
CK	CK1	0.763	0.651	0.911	0.917
	CK2	0.708			
	CK3	0.797			
	CK4	0.840			
	CK5	0.853			
	CK6	0.851			
SE1	SE11	0.715	0.630	0.866	0.872
	SE12	0.846			
	SE13	0.792			
	SE14	0.806			
SE2	SE21	0.929	0.677	0.917	0.910
	SE22	0.872			
	SE23	0.811			
	SE24	0.796			
	SE25	0.714			
CO	CO1	0.703	0.564	0.930	0.903
	CO2	0.715			
	CO3	0.694			
	CO4	0.724			
	CO5	0.738			
	CO6	0.812			
	CO7	0.825			
	CO8	0.771			
CCB	CCB1	0.876	0.811	0.962	0.962
	CCB2	0.898			
	CCB3	0.915			
	CCB4	0.931			
	CCB5	0.906			
	CCB6	0.873			

(1) CK, SE1, SE2, CO, CCB1, CCB2 and CCB represent consumer knowledge, creative self-efficacy, change self-efficacy, online C2C co-creation, consumer creative idea generation, consumer creative idea implementation, and consumer creative behaviour respectively.

Table 3. Pearson coefficients and AVEs

	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
Factor 1	**0.807**				
Factor 2	0.716	**0.794**			
Factor 3	0.599	0.697	**0.823**		
Factor 4	0.493	0.520	0.460	**0.751**	
Factor 5	0.564	0.683	0.662	0.543	**0.901**

(1) Bold diagonal numbers are AVEs.

Table 4. Heterotrait-monotrait ratios

	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
Factor 1	-				
Factor 2	0.799	-			
Factor 3	0.658	0.785	-		
Factor 4	0.535	0.579	0.506	-	
Factor 5	0.599	0.745	0.707	0.576	-

4 Results

4.1 Validation of measures: reliability and validity

Several analyses were performed to test the reliability and validity of the measurement model before it was used to analyse the proposed relationship among the constructs. Indicators confirmed the internal consistency and reliability of measures. The Cronbach alpha value and all corrected item-total correlation were above 0.85 and 0.60, respectively (Eisinga et al., 2013). Confirmatory factor analysis was performed to test the validity of measures. All measurement items produced fairly high (> 0.65) levels of factor loadings, which were positive and significant. The average variance extracted (AVE) for each construct was above 0.50, and the construct reliability for every construct was above 0.85 (Hair Jr et al., 2014), indicating that the convergent validity was good. To verify the discriminant validity, first, the square root of AVE (AVEs) was compared with the Pearson correlation coefficient of each construct (Fornell & Larcker, 1981). The results show that the AVEs of each factor were greater than the Pearson correlation coefficient of all the other factors. Second, the Heterotrait-Monotrait ratios of each construct were smaller than 0.85 (Henseler et al., 2015). Both approaches show significant discriminant validity among the constructs. In addition,

the model had reasonable fit statistics ($\chi2$/*d.f.* = 640.793/321 = 1.996, *p* < 0.001, GFI = 0.917, CFI = 0.974, NFI = 0.949, NNFI = 0.967, TLI = 0.967, IFI = 0.974, RMSEA = 0.046, std. RMR = 0.046) (Hu & Bentler, 1999). The results of the model analysis are summarized in Tables 2 to 4.

4.2 Test the direct effect of consumer knowledge on consumer creative behaviour

This study investigated whether consumer creative behaviour is affected by consumer knowledge, self-efficacy and online C2C co-creation. We first tested the direct effect of consumer knowledge on consumer creative behaviour and then used the bootstrap method developed by Hayes (2009) to test the indirect effect of self-efficacy and online C2C co-creation. To examine whether consumer knowledge positively influences consumer creative behaviour, we conducted a regression analysis with consumer knowledge as the predictor. The results show that consumer knowledge positively predicted idea generation, idea implementation, and the whole process of consumer creative behaviour respectively (β = 0.656, *p* < 0.01; β = 0.654, *p* < 0.01; β = 0.655, *p* < 0.01), indicating that consumer knowledge had a direct effect on consumer creative behaviour. The detailed results are summarized in Table 5. Thus, *H1*, *H1a*, and *H1b* were supported.

Table 5. Hypothesis-testing results for *H1*

	CCB1	CCB2	CCB
Constant	1.957***	1.927***	1.942***
CK	0.656***	0.654***	0.655***
Gender	0.008	0.035	0.021
Age	-0.035	-0.052	-0.044
Education	-0.138	-0.128	-0.133
Average annual household income	-0.036	-0.005	-0.020
Time of using social media (per day)	-0.005	-0.004	-0.004
N	472	472	472
R²	0.307	0.309	0.323
Adj R²	0.298	0.300	0.314
F	32.951	35.803	37.494

(1) p<0.1*, p<0.05**, p<0.01***. (2) CK, CCB1, CCB2 and CCB represent customer knowledge, customer creative idea generation, customer creative idea implementation, and customer creative behaviour respectively.

4.3 Simple mediation analysis

According to Hayes (2009), simulation studies have indicated that bootstrapping was a more

powerful approach than the Sobel test and the causal step approach for testing intervening variable effects, as shown in studies by MacKinnon (2004) and Williams and MacKinnon (2008). Bootstrapping can be used to make inferences about indirect effects in any intervening variable model, regardless of the complexity and number of paths between X and Y (Hayes, 2009). Therefore, following the approach recommended by Hayes (2009), this study uses unstandardized coefficients and bootstrapping with 5000 resamples to place 95% bias-corrected confidence intervals around the estimates. If the confidence interval did not include 0, then the mediating effect was considered valid (Hayes, 2009).

This study followed Hayes (2017)'s PROCESS Model 4 (i.e., a mediation model) in SPSS 24 for the simple mediation analysis (i.e., *H2* and *H3*). The results verified the direct effect of consumer knowledge on consumer creative behaviour and the indirect effects pass through three simple mediators. First, the total effect of consumer knowledge on consumer creative behaviour was 0.655 (95%CI: 0.567 ~ 0.743). Second, the indirect effect of creative self-efficacy as a single mediator was 0.477 (95%CI: 0.375 ~ 0.589), which suggests that creative self-efficacy mediated the influence of consumer knowledge on consumer creative behaviour. Consumer knowledge first positively affected creative self-efficacy, $\beta = 0.758$, $SE = 0.035$, $p < 0.01$; $F(7,464) = 75.513$, $p < 0.01$, $R^2 = 0.533$, then it affected consumer creative behaviour through creative self-efficacy, $\beta = 0.629$, $SE = 0.053$, $p < 0.01$; $F(8,463) = 54.127$, $p < 0.01$, $R^2 = 0.483$. The indirect effect also existed when the dependent variable was replaced with creative idea generation and creative idea implementation, indicating that *H2a* and *H2b* were supported.

Third, the indirect effect of change self-efficacy as a single mediator was 0.343 (95%CI: 0.234 ~ 0.468), which suggests that change self-efficacy mediated the influence of consumer knowledge on consumer creative behaviour. Consumer knowledge first positively affected change self-efficacy, $\beta = 0.598$, $SE = 0.039$, $p < 0.01$; $F(7,464) = 38.409$, $p < 0.01$, $R^2 = 0.367$, then it affected consumer creative behaviour through change self-efficacy, $\beta = 0.574$, $SE = 0.047$, $p < 0.01$; $F(8,463) = 55.344$, $p < 0.01$, $R^2 = 0.489$. The indirect effect also existed when the dependent variable was replaced with creative idea generation and creative idea implementation, meaning that *H2c* and *H2d* were supported. Fourth, the indirect effect of online C2C co-creation as a simple mediator was 0.208 (95%CI: 0.137 ~ 0.283), which suggested that online C2C co-creation mediated the effect of

consumer knowledge on consumer creative behaviour. Consumer knowledge first positively affected online C2C co-creation, $\beta = 0.474$, $SE = 0.038$, $p < 0.01$; $F(7,464) = 24.047$, $p < 0.01$, $R^2 = 0.266$, then it affected consumer creative behaviour through online C2C co-creation, $\beta = 0.440$, $SE = 0.052$, p < 0.01; $F(8,463) = 41.105$, $p < 0.01$, $R^2 = 0.415$. The indirect effect mediation effects also existed when the dependent variable was replaced with creative idea generation and creative idea implementation, indicating that *H3a* and *H3b* were supported. The analysis results are summarized in Table 6.

Table 6. Hypothesis-testing results for *H2-H3*

Paths	Indirect effect	SE	95% CI	Direct effect	SE	95% CI
CK⇒SE1⇒CCB	0.477	0.054	0.375: 0.589	0.178***	0.056	0.067: 0.288
CK⇒SE1⇒CCB1	0.473	0.056	0.368: 0.587	0.183***	0.059	0.067: 0.299
CK⇒SE1⇒CCB2	0.481	0.056	0.373: 0.594	0.172***	0.058	0.058: 0.287
CK⇒SE2⇒CCB	0.343	0.061	0.230: 0.467	0.312***	0.048	0.217: 0.407
CK⇒SE2⇒CCB1	0.344	0.062	0.234: 0.473	0.312***	0.051	0.213: 0.412
CK⇒SE2⇒CCB2	0.342	0.062	0.229: 0.470	0.312***	0.050	0.213: 0.410
CK⇒CO⇒CCB	0.208	0.037	0.137: 0.283	0.446***	0.049	0.351: 0.542
CK⇒CO⇒CCB1	0.216	0.037	0.144: 0.291	0.440***	0.050	0.341: 0.539
CK⇒CO⇒CCB2	0.201	0.038	0.127: 0.276	0.453***	0.051	0.353: 0.552

(1) p<0.1 * p<0.05 ** p<0.01***. (2) 95% CI means the 95% confidence interval calculated by bootstrap sampling, and if the interval does not include 0, it is significant. (3) CK, SE1, SE2, CO, CCB1, CCB2 and CCB represent consumer knowledge, creative self-efficacy, change self-efficacy, online C2C co-creation, consumer creative idea generation, consumer creative idea implementation, and consumer creative behaviour respectively.

4.4 Serial-multiple mediation analysis

This study then used PROCESS Model 6 in SPSS 24 to examine the serial-multiple mediators (Hayes, 2017). Two separate analyses were conducted: one was to test the serial mediation effect of creative self-efficacy and online C2C co-creation, and the other was to examine the serial mediation effect of change self-efficacy and online C2C co-creation. The output of the analyses in Table 7 supports the serial mediation Hypotheses 4. Specifically, the results of the first analysis suggested that the indirect effect of creative self-efficacy and online C2C co-creation as serial mediators were 0.071 (95%CI: 0.033 ~ 0.120). Consumer knowledge increases consumer creative self-efficacy on travel, $\beta = 0.758$, $SE = 0.035$, $p < 0.01$; $F(7,464) = 75.513$, $p < 0.01$, $R^2 = 0.533$, which in turn

increases the degree of online C2C co-creation, β = 0.316, SE = 0.048, $p < 0.01$; $F(8,463) = 28.353$, $p < 0.01$, $R^2 = 0.329$, which ultimately affects consumer creative behaviours, β = 0.295, SE = 0.049, $p < 0.01$; $F(9,462) = 55.801$, $p < 0.01$, $R^2 = 0.521$. Comparing the total effect, which was 0.655 (95%CI: 0.567 ~ 0.743), the total indirect effect of creative self-efficacy and online C2C co-creation was 0.546 (95%CI: 0.447 ~ 0.651). Moreover, the serial-multiple mediation effects also existed when the dependent variable was replaced with creative idea generation and creative idea implementation, indicating that *H4a*, *H4b, and H4c* were supported.

Table 7. Hypothesis-testing results for *H4*

Paths	Indirect effect	SE	95% CI	Direct effect	SE	95% CI
CK⇒SE1⇒CO⇒CCB	0.071	0.023	0.033: 0.121	0.109**	0.055	0.000: 0.217
CK⇒SE1⇒CO⇒CCB1	0.075	0.023	0.035: 0.126	0.110*	0.058	-0.005: 0.224
CK⇒SE1⇒CO⇒CCB2	0.066	0.022	0.028: 0.115	0.108*	0.058	-0.006: 0.221
CK⇒SE2⇒CO⇒CCB	0.045	0.015	0.019: 0.080	0.209***	0.049	0.113: 0.305
CK⇒SE2⇒CO⇒CCB1	0.048	0.017	0.020: 0.086	0.204***	0.051	0.103: 0.304
CK⇒SE2⇒CO⇒CCB2	0.043	0.015	0.017: 0.077	0.214***	0.051	0.114: 0.315

(1) p<0.1 * p<0.05 ** p<0.01***. (2) 95% CI means the 95% confidence interval calculated by bootstrap sampling, and if the interval does not include 0, it is significant. (3) CK, SE1, SE2, CO, CCB1, CCB2 and CCB represent customer knowledge, creative self-efficacy, change self-efficacy, online C2C co-creation, customer creative idea generation, customer creative idea implementation, and customer creative behaviour respectively.

According to the results of the second analysis, the indirect effect of change self-efficacy and online C2C co-creation as serial-multiple mediators was 0.045 (95%CI: 0.019 ~ 0.080). Consumer knowledge increases consumer change self-efficacy on travel, β = 0.598, SE = 0.039, $p < 0.01$; $F(7,464) = 38.409$, $p < 0.01$, $R^2 = 0.367$, which in turn increases the degree of online C2C co-creation, β = 0.241, SE = 0.044, $p < 0.01$; $F(8,463) = 26.204$, $p < 0.01$, $R^2 = 0.312$, which ultimately affects consumer creative behaviours, β = 0.312, SE = 0.048, $p < 0.01$; $F(9,462) = 58.319$, $p < 0.01$, $R^2 = 0.532$. Comparing the total effect, which was 0.655 (95%CI: 0.567 ~ 0.743), the total indirect effect of change self-efficacy and online C2C co-creation was 0.446 (95%CI: 0.341 ~ 0.565). In addition, the serial-multiple mediation effects also existed when the dependent variable was replaced with creative idea generation and creative idea implementation, indicating that *H4d, H4e, and H4f* were supported. The implications of all mediation analysis results are discussed in the next section.

5 Discussion and Conclusion

This research explored the mechanisms that drive CIVC in the independent travel market. The above results validate the proposed conceptual model and demonstrate that self-efficacy and online C2C co-creation play serial multiple mediation roles in the indirect influence of consumer knowledge on consumer creative behaviours. The findings corroborate a previously unexplored mechanism through which consumer operant resources can impact both the process and outcomes of CIVC. Specifically, the driving effect of consumer knowledge on consumer creative behaviour confirms the importance of consumer cultural resources. It indicates that experienced and knowledgeable tourists performed well in creative behaviours such as generating new travel-related ideas and successfully implementing travel plans. In addition, the simple mediating effects of both creative self-efficacy and change self-efficacy reveal the importance of consumer physical resources in the process of value creation. As an example, strong self-efficacies positively influenced independent tourists to generate novel travel ideas, cope with change, actively and creatively solve complex problems in travel, and successfully implement their travel plans, even while affected by inconveniences such as the COVID-19 pandemic. Moreover, the simple mediation effects of online C2C co-creation underpin the important role of consumer social resources in the CIVC process. Through online platforms, independent tourists formed cooperative relationships with other tourists, exchanged travel-related knowledge and experiences, matched specific needs, generated novel travel ideas and itineraries, and enjoyed a better journey.

Furthermore, independent tourists are the integrators of operant resources formalized in terms of cultural, physical, and social resources (Arnould et al., 2014). The results of the serial multiple mediation analyses show that independent tourists can combine and integrate these resources (Vargo & Lusch, 2008a) in their CIVC process, resulting in consumer creative behaviours. In other words, knowledge-rich visitors (Dickinson et al., 2014) who have a strong belief in their ability to perform well in travel and are active on online C2C platforms are likely to successfully come up with creative ideas and put them into their travel activities. For example, during COVID-19, independent tourists can wisely use these three operant resources to be more flexible in adjusting their itineraries, forming creative substitutes, and ultimately enjoying the journey, even in the face of the inconvenience of a turbulent environment.

5.1 Theoretical contributions

This study makes several important contributions to the extant body of research. While previous researchers recognize aspects of the CIVC phenomenon, such as "prosumption" (Xie et al., 2008), how consumers engage in CIVC remains largely unknown. This study's findings add to the service marketing literature by laying out both the external and internal relations among different consumer operant resources to explain the underlying mechanisms of the CIVC phenomenon. The findings identify the representative outcome of CIVC as consumer creative behaviours, and explicitly clarify the different paths of the CIVC process. Moreover, this study supports the notion that value creation also takes place in the consumer consumption process (Grönroos & Voima, 2013).

In addition, this study contributes to the tourism literature by explaining the underlying mechanisms of independent tourists' behaviour. The proposed model provides a new lens for CIVC research in the tourism sector, and the model validity is verified in a highly uncertain tourism market that remains under the threat of the COVID-19 pandemic. As such, the proposed conceptual model represents a theoretical understanding of the CIVC activities in the study of tourism marketing and consumer research.

5.2 Managerial implications

Under the COVID-19 pandemic, highly changeable policies such as quarantine and travel restrictions in various countries and regions make many traditional business models and marketing channels ineffective. The study of value creation in the consumer sphere is conducive to providing implications for developing new business models and even earnings logic (Grönroos, 2011). Accordingly, this study's findings have several managerial implications. First, this study's results should encourage firms to promote the formation and development of new markets centred on creative consumption. More and more consumers today regard creative consumption as a means of recreation (Xie et al., 2008). A market driven by creative consumption is emerging (Martin & Schouten, 2014; Xie et al., 2008), which is a potential source of profit. In fact, creative consumption is one of the most important forms of CIVC activities. This study indicates it may be worthwhile to promote the growth of these novel markets, especially in the face of highly uncertain environments like a pandemic. For example, to facilitate the revitalization of the post-pandemic tourism market, firms could provide free knowledge and training to increase the ability and

confidence of tourists to travel creatively or provide timely assistance services to increase creative problem-solving skills and confidence of tourists.

Second, the findings imply a new source for firm innovation. In the process of collaborative innovation, consumers are still directed and constrained by firms, which negatively influences their creativity and enthusiasm. Conversely, CIVC, which lies beyond the control of firms, significantly improves the enthusiasm and creativity of consumers. The new creative ideas proposed by consumers may more closely align with market trends, and paying attention to CIVC may improve the success rate of firm-level innovation. For example, the novel travel ideas and creative travel itineraries created by independent tourists may help firms improve old tourism products and itineraries, even further helping them to foster innovation of business models and contribute to the evolution of market trends (Alves et al., 2016).

Last but not least, it is worth noting that faith is a valuable currency for the tourism sector during the COVID-19 pandemic. The survey shows that less than half of the respondents had travel experiences between the outbreak of COVID-19 and the time they were surveyed. Further, more than a quarter of those who travelled had been threatened again by the pandemic and travel restricted. Two thought-provoking questions are proposed by UNWTO (2020): "How long will it take consumers to resume travel?" and "How will travel behaviours change?" Responding to the questions, this study validates creative self-efficacy and change self-efficacy as the crucial indicators for the performance of independent tourist creative behaviours and suggests that self-efficacies are valuable and powerful resources against a backdrop of heightened uncertainty in tourism, both for tourists and the tourism sector.

5.3 Limitations and future research

There are several limitations to this article that are open to being addressed through future research. First, while this study shows the value of C2C co-creation to the CIVC process, it does not explain why consumers choose to participate in online C2C co-creation. Future research is needed to analyse possible psychological mechanisms to explain who participates in the co-creation process. Second, due to the channel used to gather data (i.e., social media and an online questionnaire), the selected sample may not perfectly represent the total population. While online samples have the advantage of not being geographically limited, they tend to favour respondents with higher-than-

average engagement with online C2C co-creation, thereby under-representing those with a low frequency of using social media. Although it is difficult to survey, the latter consumer group may make up a substantial percentage of the independent travel market, so it will be necessary for further research to consider alternative data collection to include more respondents. Third, the study only focuses on Chinese independent tourists, but differences in language and cultural background may reduce the likelihood of co-creation (e.g., knowledge exchange between individuals). Cross-cultural comparisons may be a fruitful extension of the proposed conceptualization, and future research could explore the differences between various nationalities.

Supplement

Scales used in the study:

Consumer knowledge scale (Adapted from Luo and Toubia (2015) and Mitchell & Dacin (1996))

- I am very familiar with travelling.

- I am very interested in travel-related knowledge (for example, knowledge of safe travel, knowledge of tourism destinations, etc.).

- I travel a lot.

- My friend often travels.

- I read about tourism (e.g., blogs, ads, news, and related books) all the time.

- I am knowledgeable about travel.

- Compared to the average person, I know more about travel.

Creative self-efficacy scale (Adapted from Tierney and Farmer (2002))

- I have confidence in my ability to solve problems creatively.

- I feel that I am good at generating novel ideas related to travel.

- I have a knack for further developing others' travel-related ideas.

- I'm good at finding new ways to solve problems.

Change self-efficacy scale (Adapted from Wanberg and Banas (2000) and Judge et al. (1999))

- Wherever a change takes place in my travel, I'm sure I can handle it.

- I think I cope with change better than most of those with whom I travel.

- When dramatic changes happen in my travel, I feel I can handle them with ease.

- Though I may need some adaption, I have little doubt I can perform well in my travel following changes (e.g., changes caused by the ongoing COVID-19 pandemic).

- I have reason to believe I may perform well in my travel following changes (e.g., changes caused by the ongoing COVID-19 pandemic).

Consumer co-creation scale (Adapted from Yi and Gong (2013))

Participation behaviour

- I searched for tourism-related information on online travel communities.

- In online travel communities, I provided the information proper and necessary so that other consumers could understand my questions.

- I adequately completed all the expected behaviors and requests of me.

- I was friendly and polite to other consumers in online travel communities.

Citizenship behavior

- If I have a useful idea on how to improve existing travel itineraries or travel products, I let other consumers in online travel communities know.

- I recommended online travel communities to others.

- I help other consumers in online travel communities if they seem to have problems.

- If I have to wait longer than I normally expected to receive the needed information, I would be willing to adapt.

Consumer creative behavior scale (Adapted from Janssen (2001))

Idea generation

- I created new ideas for improving my travel experience.

- I found out about new tourism products, ways to travel, itineraries, and destinations.

- I generate original solutions to problems in travel. (e.g., problems caused by the ongoing COVID-19 pandemic)

Idea implementation

- I transform innovative ideas related to travel into useful travel plans.

- I carried out my travel plan wholly and smoothly.

- I evaluate the utility of innovative ideas related to travel.

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Chapter 2

Finding Brand Co-Creators beyond the Dyadic Interaction: An Analysis of Consumer Perceptions based on Mining Social Media Data

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Abstract

Brand perceived value is not simply co-created through isolated, dyadic interactions between firms and consumers. Rather, it is co-created through social interactions among all stakeholders in the value creation network. This study analyses the role of external actors that exemplify specific attributes (i.e., luxury, localised culture, the culture of brand origin) in the luxury brands' value co-creation network before and during COVID-19. To achieve the research objective, The study applied a social network mining methodology that allows measuring the association between each brand and external actors that exemplify specified attributes. The findings show the correlations between brands and external actors, highlight the important role of non-brand-focused communities in luxury brand co-creation, and provide timely insights for western luxury brands to alleviate the localization-standardization dilemma they face in social media marketing within emerging markets.

Keywords: Luxury brands; value co-creation; external actors; social network analysis; culture of brand origin; consumer perception

Introduction

Digitalization in the luxury fashion industry is increasing (Claudia et al., 2021). This trend has further accelerated during COVID-19, as lockdowns and international travel disruptions have led consumers to spend more time on screens (Bruno & Weiwei, 2022). Nowadays, much marketing and consumer engagement have moved online (Claudia et al., 2021); the social media presence of luxury brands has remarkably accelerated (Altagamma Foundation, 2020b), as the brands become more aware of the significant positive effect of this channel on brand equity (Godey et al., 2016). However, the shift to digital decreased the extent of control that a luxury firm has on brand meanings. As consumers and brands increasingly integrated into social media platforms, luxury companies had to co-own and co-define their brands with other value creators (Tynan et al., 2010). Now multiple actors, including firms, consumers, brand communities, non-brand-focused communities and so on, collectively create brand value in the value creation network (Merz et al., 2009). Luxury companies face a challenge in adapting to the new digital world without losing their core value propositions such as exclusivity and rarity (Ko et al., 2016; Quach & Thaichon, 2017).

To maintain the superior image of luxury brands in this new situation, it is necessary for marketers to better understand the role of brand co-creators on online marketing channels. To date, the existing luxury research focuses on the consumer-brand dyadic interaction (Holmqvist et al., 2020), with little or no attention to other actors that may influence online brand co-creation. In contrast to the traditional view, a holistic, multi-actor lens is needed to capture online brand interactions among different actors (Sharma et al., 2020). A research gap emerges by zooming out of the currently dominant consumer-brand dyadic interaction and examining the role of multi-actors in the online brand value creation network. With this research gap in mind, the current research aims to explore the role of external actors in luxury brand co-creation on social media before and during COVID-19.

Given the standardization versus localization dilemma commonly faced by luxury brands when conducting brand co-creation strategy on social media, this study chooses three types of external actors that exemplify specific attributes for analysis. The attributes include luxury, the culture of brand origin (COBO) and localised culture. By applying a social network mining method (Culotta & Cutler, 2016), this study first examines whether the follower group of a luxury brand overlaps

with the follower group of the selected external actors in the co-creation network. The study then measures consumers' perceived strength of a luxury brand for a given attribute and explores the relation between the perceived strength of the luxury attribute and the perceived strength of the other two attributes in consumer perceptions of a luxury brand. Finally, based on the computation results, the study explains the role of external actors that exemplify specific attributes in the brand value co-creation network before and during COVID-19.

The results demonstrate the important role of the external actors in luxury brand co-creation on social media, indicating that luxury brands could co-create value by opening up their interaction to digitally-enabled external actors that exemplify either localised culture or COBO. The findings reveal a strong positive relationship between the consumer-perceived luxury attribute of the brands and the COBO attribute during the pandemic. It suggests that the COBO concept has great potential for brand co-creation in emerging markets, especially during the pandemic. COBO, such as craftsmanship, heritage, lifestyles, traditional culture and history, may positively influence the strength of perceived luxury attributes for the brands. The results also show that the positive relationship between the consumer-perceived luxury attribute of the brands and the localised cultural attributes becomes weaker during the pandemic. It reveals that manifesting over-localised elements in social media marketing may not be a wise co-creation strategy for traditional western luxury brands in the post-pandemic emerging markets.

To recap, the research explores the role of external actors in luxury brand co-creation on social media before and during COVID-19, with a focus on the external actors that represent attributes of luxury, COBO, and localized culture. The study employs a social network mining method to examine the overlap between luxury brands' followers and external actors' followers, measures consumer-perceived strength of brand attributes, and investigates the relationship between the attributes by using a regression approach. More than 3.5 Millions social media data for 11 Italian luxury brands and 256 external actors on social media in the Chinese market are collected and used for analysing, spanning one and a half years before and after the COVID-19 pandemic outbreak. The research findings highlight the potential of external actors for brand co-creation, provide insights for practitioners to better understand consumer brand perceptions, and relieve the localization-standardization dilemma when conducting co-creation strategies in emerging markets.

The article is structured as follows: section two briefly introduces the research context, section three explains the theoretical framework of the study, summarises extant literature on the customer perception of luxury brand origin and the evolution of luxury branding, and lists the research hypotheses. Section four describes the methods and, in particular, the algorithm created to test the research hypotheses. The results of the estimation of a regression model are presented in section five. The last section presents the conclusions.

1 Research Context — Localised versus Standardized Branding Strategies

This paper investigates the roles of external actors in brand co-creation within the context of social media marketing of western luxury fashion brands in the emerging Chinese market. The Chinese market is the biggest growth opportunity for the luxury sector (Achille & Zipser, 2020) and the world's largest luxury market by 2025 (Claudia et al., 2021). For western brands, it is common to confront a localization-standardization dilemma when conducting brand co-creation strategies in emerging markets. On one side, now Chinese consumers are developing a taste for Chinese fashion. The increasingly appealing indigenous brands such as Shang Xia (Wu et al., 2017), the government's campaign to boost national pride, and the ongoing trade dispute with the U.S., provide Chinese consumers with plenty of reasons to be patriotic with their spending. As a result, western brands have to frequently use localised cultural and fashion elements, as well as local celebrities in brand marketing to please Chinese consumers.

On the other side, emphasizing COBO or the highly regarded made-in concept may have enormous potential for marketing communication of traditional luxury brands (Altagamma Foundation, 2020b, 2020c), especially during the pandemic when it becomes difficult for Chinese consumers to purchase luxury goods in the origin countries. For one of the leading sectoral players – Italian luxury fashion brands (Bonetti, 2014), recent insights from the Boston Consulting Group (2020) in collaboration with Altagamma Foundation show that Italy is reconfirmed as the favourite destination of luxury consumers for international destinations, except for the Chinese, who now rank it only in third place while before the pandemic in the first place. To regain consumers' interest and reassure other luxury shopping tourists, the priority for the Italian authorities and top-of-the-range brands is to collectively sponsor the country's image. These reports highlight one area with great potential for development, namely explicit mentions of COBO in

social media conversations regarding Italian luxury brands. The manifesting of COBO is not only to label the origin of the product but more broadly, to display the universe of Italian values (e.g., lifestyle, conviviality, quality, elegance, local roots, etc.) (Altagamma Foundation, 2020b).

The localization-standardization dilemma of brand marketing communications is well documented in the literature (Steenkamp, 2019). But research so far focused on the dyadic interaction between consumers and brands, and the roles of other critical co-influencers on this issue are neglected. Therefore, the current research provides a network view to examine the dilemma. Our research focuses on two types of external brand co-creators that may impact the dilemma: social media accounts with topics centred around the localised culture and the COBO.

2 Theoretical Background and Hypotheses Development

2.1 Luxury brand co-creation on social media

The whole luxury sector is changing, with new competitors and segments entering the market (Kim & Ko, 2012; Ko et al., 2016), and advanced digital tools are increasingly integrated into the sector's marketing (Okonkwo, 2009). As an industry, which is known for innovation, avant-gardism and cultural and creative excellence (Claudia et al., 2021), embracing digital communication technologies provides great potential for brand marketing (Okonkwo, 2009). In recent years, social media marketing gaining prominence in the luxury sector. As social media plays a considerable role in influencing consumer perceptions (Keller, 2013), luxury marketers are increasingly realising the importance of this channel (Kim & Ko, 2012). The COVID-19 pandemic is the first global pandemic that outbreaks in the age of social media (Wang et al., 2021). As the world navigating with the pandemic, lockdowns and social distancing have shifted a lot of luxury brand co-creation activities from offline to online, and the crisis has stimulated luxury firms to act more frequently on social media to tighten the relationship between consumers and brands, especially in distant markets (Bruno & Weiwei, 2022). For instance, the companies further strengthened their brand presence on local social media channels such as WeChat, Weibo and VK (going from 28% to 32%) in Asia (Altagamma Foundation, 2020a), and many of them have successfully used these channels for branding (Appel, 2020).

Social media changed the luxury industry by offering online users an active role in the brand co-creation process (Cheung et al., 2021). It enables brand admirers (owner and non-owners)

(Koivisto & Mattila, 2020), influencers and celebrities (Bu et al., 2022), and even other stakeholders to take a role in creating brand image and meanings. Service-dominant (S-D) logic provides a useful view of understanding this new situation (Vargo & Lusch, 2004, 2008). The increasing brand presence on social media enables the communication, coordination, collaboration, and cooperation of brand-related actors in the brand value creation process. The brand has transformed from the property of goods provided by companies into the brand as a collaborative and value co-creation activity of companies and all of their stakeholders (Merz et al., 2009; Vargo & Lusch, 2008). This shift in brand logic brings with it a new understanding of brand value, which Merz et al. (2009) defined as the perceived use value, and is co-created through network relationships and social interactions among the ecosystem of all stakeholders (Iansiti & Levien, 2004). Now luxury consumers are not passive receivers, they are co-creators of brand value. More importantly, like individual consumers (Tynan et al., 2010) or brand communities (Muniz & O'Guinn, 2001), other non-consumer and non-brand-community actors, namely external actors, could also dynamically interact with consumers and brands; thus, create brand value in the value creation network (Merz et al., 2009). These theoretical developments in the branding literature are consistent with FP9 and FP10 of S-D logic, which states that value is always phenomenologically determined by beneficiaries, and all economic and social actors are resource integrators (Vargo & Lusch, 2008).

However, to date, the existing luxury brand literature mainly focuses on the consumer-brand dyadic interaction (Holmqvist et al., 2020), with little or no attention to the other entities on social media that may influence consumer brand perceptions. This dyadic service encounter approach (Surprenant & Solomon, 1987), in which consumers remain largely passive and the use of digital tools is limited, has remained the norm as luxury brands are reluctant to loosen control of the service encounter (Tynan et al., 2010). In contrast to the traditional view, a holistic, multi-actor perspective is needed to capture the contextual, systematic and dynamic interaction of the brand co-creation among the different actors, especially with the growing popularity of online service encounters that involve the use of new technologies to deliver the service and engage with the consumers to provide them superior service experience (Sharma et al., 2020).

2.2 Understanding brand co-creation from social network mining

It is crucial to study consumer perceptions for shaping brand co-creation strategies. Brand value is consumer-based: the results of the companies' efforts to improve their brand value largely depend on consumers' perceptions (Keller, 2013). Text mining of user-generated-contents (UGC) is frequently used in the marketing literature for inferring consumer brand perceptions from social media data (Fader & Winer, 2012). However, the majority of UGC are sourced from a small minority of active users (Wu et al., 2011), and the role of the silent majority is ignored. For the latter, there are several types, such as followers who simply follow brands, or who like and retweet brand posts without commenting. These silent followers also have a significant influence on the brand image through their "noninteractive social presence" (Argo et al., 2005, p. 207) or "mere virtual presence" (Naylor et al., 2012, p. 106) in the brand's social network. That is because the social structure of a brand's online follower base, including active and silent users, has been shown to both reflect and influence brand image and attributes (Blasi et al., 2020; Kuksov et al., 2013; Naylor et al., 2012). By analysing the composition of a brand's follower base rather than the text of UGC, it is particularly useful for estimating perceptual attributes that consumers may be less likely to directly mention in brand interactions than core product characteristics (Culotta & Cutler, 2016).

How to use follower connections as a measure of brand perceptions? From the views of value homophily, online users always express affinity towards those whom they perceive to be similar in the social media world (Naylor et al., 2012). When a user follows or connects with a non-brand-focused community or a brand on a social media platform, such user behaviour provides explicit evidence of a person's voluntary public association with that entity (Culotta & Cutler, 2016). That is, followers of an account that is widely acknowledged as exemplifying a particular attribute (e.g., the account of LVR Magazine is an exemplar of the perceptual attribute of luxury) may, in general, place particular value on that attribute; similarly, a brand that has a large number of users who value a particular attribute is likely to be considered strong on that attribute (Blasi et al., 2020; Culotta & Cutler, 2016). Taking these principles together, the rationale of understanding brand perception from social network mining is to infer the perceived strength of a brand for a given attribute based on the degree of overlap between the follower base of a brand and the follower base of a large set of accounts that exemplify the attributes.

Moreover, the overlap of the follower bases shows online social connections among the brand, the accounts that exemplify specific attributes, and the common followers of the former two (Culotta & Cutler, 2016). Through the network view of brand co-creation we mentioned in the last section (Merz et al., 2009), the existing social connections mean that external actors (i.e., the accounts that exemplify specific attributes) could influence consumer perceptions and thus the online brand co-creation process through the common followers (see Figure 1 for an example of online social connections among a brand, the accounts that exemplify specific attributes, and the common followers of the former two). These external actors are non-consumer and non-brand-community co-creators that are beyond brand-consumer dyadic interaction (Merz et al., 2009). As such, in our research context, we expect that social media accounts with topics centred around luxury, localised culture, and COBO, as external actors, have social connections with a luxury fashion brand (LFB), and could influence the perceptual attributes of the LFB for consumers associated with them.

Based on the theory and literature reviews above, we thus put forward the following hypotheses:

Hypothesis 1. In an LFB's online co-creation network, social connections are existing between the brand and the external actors that exemplify the luxury perceptual attribute.

Hypothesis 2. In an LFB's online co-creation network, social connections are existing between the brand and the external actors that exemplify the localised cultural attribute.

Hypothesis 3. In an LFB's online co-creation network, social connections are existing between the brand and the external actors that exemplify COBO.

Figure 1. An example of online social connections among a brand, the external actors and the brand consumers
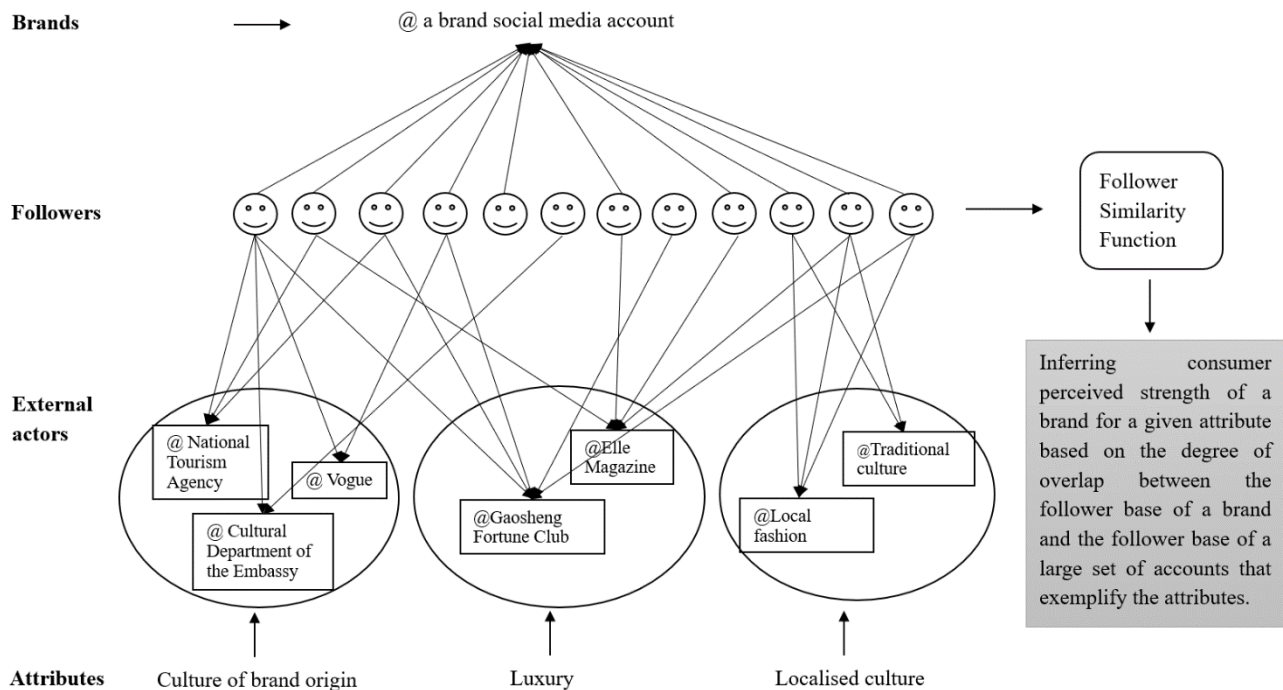
2.3 Luxury brand co-creation: cultural adaption or emphasising COBO

2.3.1 Cultural adaption of luxury brands in emerging markets.

As we mention in the section on the research context, the dilemma of whether to adapt their marketing communications to the local market has long plagued western luxury brands in emerging markets (Yu & Hu, 2020). Is it better to utilize localised cultural elements or to emphasize COBO in brand marketing and co-creation activities? The answer may depend on the stage of brand internationalization in emerging markets. The development of Web 2.0 is increasing the global accessibility of luxury brands (Ko et al., 2016). Consumers are becoming more familiar with luxury brand names that signal functional or symbolic values, leading to increased brand consciousness (Pino et al., 2019). But things are different when luxury companies are in the early stage of entering distant markets with high psychic distance (O'Grady & Lane, 1996) such as China. As cultural norms and values are powerful forces shaping consumer perceptions and behaviours (Nwankwo et al., 2014), cultural adaptation is a very important factor that affects Chinese consumers' luxury brand awareness level (Chevalier & Lu, 2009; Liu et al., 2016). Many Chinese consumers have low brand awareness and do not share the same cultural system as the consumers from the products'

origin country (Liu et al., 2016). They do not possess domain-specific cultural capital to decipher (Bourdieu, 1987), and thus appreciate the intangible values which brands try to be added through manifesting COBO.

Moreover, unlike other East Asian countries (e.g., South Korea and Japan) that connected with the modern world at an early stage, China was isolated from Western culture until the last decade of the 20th century. On the one hand, Chinese consumers are eager to get familiar with Western culture; On the other hand, they are unfamiliar with it (Kim et al., 2020). Furthermore, because of the vast territory of China, consumers in different regions may have very different perceptions of brand image and COBO for luxury products (Chevalier & Lu, 2009; Liu et al., 2016). Therefore, in the early stage, due to the low brand awareness and high level of cultural adaption required in Chinese markets (Liu et al., 2016), localised cultural elements, such as local cultural values, nationalistic appeals, colours, symbols, artefacts, and myths (Westjohn et al., 2012), are frequently incorporated in the brand co-creation activities to increase brand awareness and to meet local needs and tastes (Bai et al., 2021; Liu et al., 2019). Based on the literature reviewed above, we expect that these highly localised strategies will make the luxury perceptual attribute of luxury brands convergent with the localized cultural elements, and put forward the following hypotheses:

Hypothesis 4. There is a convergence between the localised culture and luxury perceptual attribute of an LFB.

2.3.2 Emphasizing COBO in luxury brand co-creation since COVID-19.

Since the pandemic, digitalization transformation significantly benefits the increase of LFB's brand awareness in emerging markets such as China (Appel, 2020). In this new stage of brand internationalization, a business challenge occurs between the need to continually conduct highly localised digital marketing and the need to prevent dilution of the positive effect of brand origin concept by being too localised. A trade-off between standardized and localised strategies is needed for social media marketing. At the same time, consumers in emerging markets are now living simultaneously in both global and local cultures (Karoui et al., 2019; Pratono et al., 2020; Xie et al., 2015). While many consumers may still be appealed by localised LFB, some consumers, with

increasing domain-specific cultural capital (Bourdieu, 1987), increasingly prefer brands with an emphasis on the authentic brand origin and made-in superior places to differentiate themselves from the mainstream.

In China, now consumers increasingly feel them as a part of a global elite; and the western LFB are perceived with a higher luxury attribute than the local brands. Due to China's long isolation from the Western world, the new wealthy have an affection for western goods, which are closely associated with concepts such as modernity, internationalization, cosmopolitanism, high quality, and status (Zhou & Belk, 2004). Moreover, from the view of status consumption (Veblen & Mills, 2017), social status, as a key dimension of conspicuous consumption, is associated with the preference for luxury products with a western country-of-origin (COO) attribute in BRIC economies (Marcoux et al., 1997).

COO is a brand attribute that could be leveraged to increase consumers' perceived value and to facilitate engagement with new consumers, something that would benefit customers' consumption experience, individual brand building and the country as a whole. Western LFB (especially Italian and French brands) conventionally leverage COO concepts in their communication strategies (Godey et al., 2012). The COO effect impacts consumers' perceived attributes of a brand through the product-country image (PCI) (Elliot et al., 2011). The image is the picture, the reputation, or stereotype of a specific country, which consumers link with the products (Nagashima, 1977). This image is rooted in national characteristics, history, traditions, and economic and political background (Nagashima, 1970). It involves a mix of factors connected to style, design, and most of all, the culture of the territory of origin of the products (Festa et al., 2020).

COO branding could help the brand to co-create collective meaning for the brand's value proposition on social media (Brodie & Benson-Rea, 2016). But the importance of a brand's COO may be indirect or by proxy, through the inseparable association of the product's brand name and its country-of-brand-origin (Piron, 2000). For instance, luxury fashion brands may be strongly and positively influenced by being labelled as Italian and French designer fashion (Piron, 2000), even though the product has a country-of-manufacture with a less positive impression. Facing the complex COO information (e.g., country-of-manufacture, country-of-design, country-of-assembly) conveyed by hybrid products, the COO effect in consumers' product evaluation has shifted from

the product level to the brand level (Lim & O'Cass, 2001). More emphasis is placed on the COBO rather than the products' COO in branding. As the most valuable origin that influences consumers' perceptions of a brand, COBO refers to the attribute of the cultural origin or heritage of a brand (Lim & O'Cass, 2001).

Emphasizing the COBO concept may have enormous potential for marketing communication of LFB, especially during the pandemic when it becomes difficult for Chinese consumers to purchase luxury goods in the origin countries (Altagamma Foundation, 2020b, 2020c). As an important aspect of the country's image, the "desired country associations", refer to consumers' interests in travelling to or having closer ties with the country (Heslop et al., 2008, p. 357). As a key luxury consumer segment (Euromonitor, 2016) and the prominent driving force behind luxury consumption (Bruno & Weiwei, 2022), Chinese international travellers have a high extent of "desired country associations" with brand-origin countries. Moreover, as such cosmopolitan consumers gain extensive exposure to other cultures via travelling or global media, they develop more international and less locally-oriented self-perceptions (Alden et al., 2006; Cleveland et al., 2011).

However, their "desired country associations" have been significantly influenced by China's strict quarantine policies and international travel restrictions during COVID-19. The pandemic has isolated these elite Chinese consumers from the brand-origin countries. When people lack social bonds, they suffer both mentally and physically (Baumeister & Leary, 2017). According to the tend-and-befriend theory (Taylor, 2006), when these cosmopolitan consumers feel isolated, they need to affiliate themselves with others to gain comfort and reduce the distress that results from being isolated. Pursuing luxury brands that emphasize COBO could provide social acceptance from other elite consumers (Wang et al., 2012). Unable to travel to a brand's origin country during the pandemic, these consumers instead tend to follow LFB and social media accounts that represent the COBO to affiliate with the groups they aspire to. Strong social ties with desired groups help eliminate the social threat and tensions from isolation (Thapa et al., 2022).

As a cultural resource (Arnould et al., 2014), COBO may have enormous potential to arouse consumers' positive emotions toward a luxury brand through its brand-origin myth (Eckhardt et al., 2015), especially for consumers with domain-specific cultural capital. Due to the COBO effect,

some consumers will favour more standardized luxury brands. But a subset of consumers, though fewer than before the pandemic, may still favour luxury brands that make frequent use of localised culture. Based on the theory and literature reviewed above, we put forward the following hypotheses:

Hypothesis 5. The convergence between the localised culture and the luxury perceptual attribute of an LFB is higher before the pandemic.

Hypothesis 6. There is a convergence between the COBO and luxury perceptual attribute of an LFB during the pandemic.

To conclude, due to the unique characteristics of marketing in the dynamic, cross-cultural, post-pandemic, and emerging luxury markets such as China (Kim et al., 2020), marketers and academic researchers must investigate and understand consumer perceptions toward localised culture or COBO thoroughly. Prior research has explored the effectiveness of using standardised and localised celebrity endorsers in social media marketing for different luxury markets (Yu & Hu, 2020). But limited attention has focused on the potential of cultural resources as important components of either localised or standardized strategy in luxury brands' social media marketing. By analysing consumer perceived cultural attributes of luxury brands, the current study will provide useful insights into this issue.

3 Methodology

The perspective of the value co-creation network provides a useful framework to analyse luxury brand communication strategy on social media within emerging markets. Based on the social network theory, we explore the relationship among the brand accounts, the exemplars of different attributes (i.e., luxury, localised culture, COBO), and the consumers within a social media platform. By looking at the social structure of a brand's follower base, we capture potentially useful information for estimating perceptual attributes that consumers may be less likely to directly mention in brand conversations than core product features. We explore the strength of perceived luxury for each selected brand. Then we examine if there is a convergence between the consumer perception of a brand and the localised cultural attribute (or the COBO attribute). The convergence

indicates that the perceived cultural attribute could be an important component of brand value propositions. And the consumers may have the domain-specific cultural capital to identify and decode the identified cultural attributes conveyed in the brand value proposition. The findings can provide timely insight to understand consumer brand perceptions in emerging markets since the pandemic and help managers promote luxury branding.

Figure 2. The social network mining process
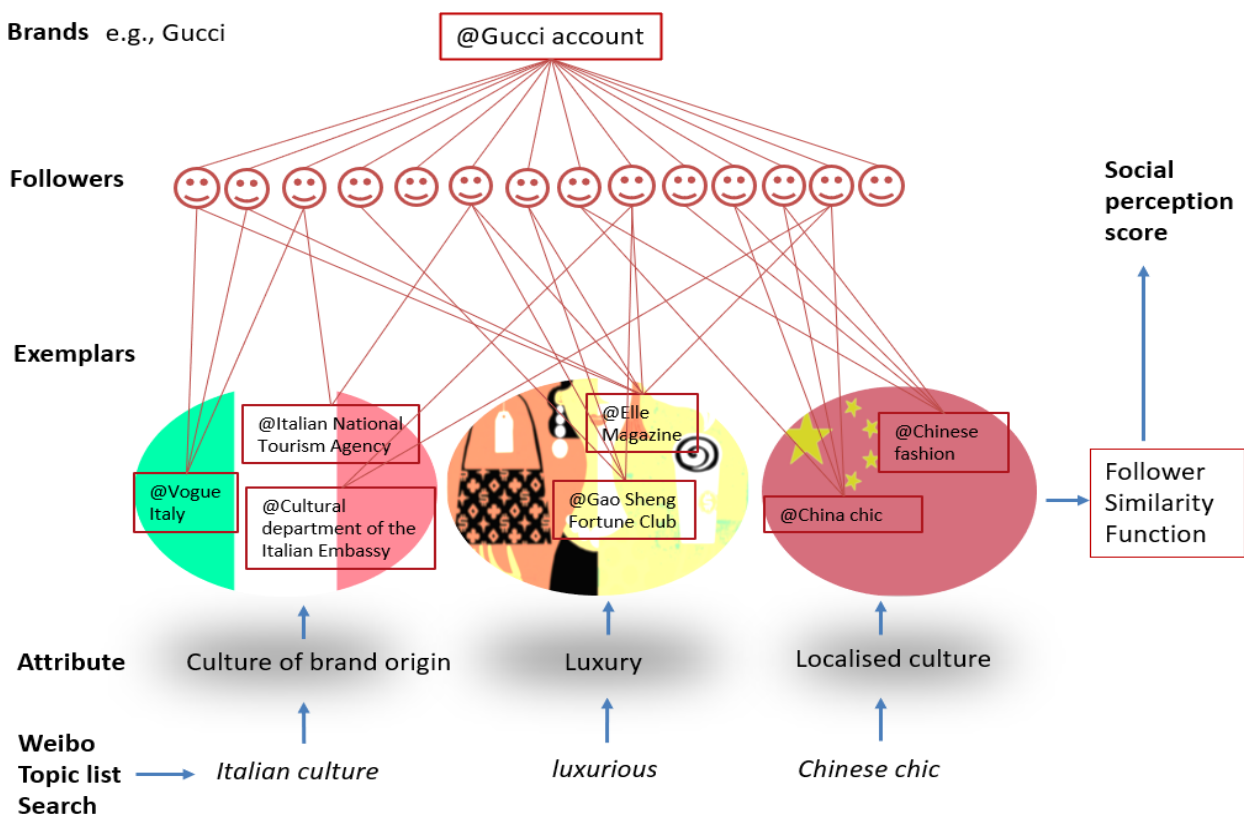
Note: Given a brand's Weibo official account and a search query representing a perceptual attribute, our algorithm first collects exemplar accounts representing the attribute, and then calculates a similarity function between the followers of the exemplars and those of the brand.

In specific, our study tests the proposed hypotheses through an online social network mining method (Culotta & Cutler, 2016), that allows for measuring the strength of consumers' perception of a luxury fashion brand for a given attribute. The method is based on attribute exemplars – that is, Weibo accounts that represent a perceptual attribute (Culotta & Cutler, 2016). The exemplars catalyse social media conversations on the topics of luxury, COBO and localised culture. Based on social network analysis theory, we computed a similarity function between the followers of the exemplars and those of a brand (See Figure 2 for the social network mining process). According to

the computation results, we validate whether the followers of exemplar accounts are also followers of a brand. And analysed the perceived strength of association between a selected brand and three attributes, respectively. After that, OLS regressions are used to explore the relationship between luxury attributes and either the attribute of COBO or localised culture, and to compare whether the standardized or the localised cultural elements are convergent with consumers' perceived strength of luxury of a brand.

3.1 Sample selection

We select the Chinese market and Italian luxury fashion brands to conduct the analysis for several reasons. First, the US and China are two of the strongest growth engines of luxury consumption during the pandemic (Boston Consulting Group & Altagamma Foundation, 2021). The finding from these countries may provide valuable implications for the restart of other markets. Compared with the mature market – the US, China has a higher psychic distance from the major luxury companies' home countries (O'Grady & Lane, 1996). It means that the Chinese market is a suitable place to examine the role of different cultural resources (i.e., COBO and localised cultural and fashion elements) in luxury brand marketing. In addition, struggling with COVID-19, China has been the only region globally to end 2020 on a positive note (Altagamma Foundation, 2020c).

Second, Italy was used as the country of reference for the analysis of luxury brands. This choice was motivated by the desire to investigate Chinese consumers' perceptions of a European country characterised by high image appeal regarding many international luxury products. According to a recent survey conducted with more than 12,000 respondents in 10 countries (including China), Italy is considered the leading country for the manufacturing of luxury products (Boston Consulting Group & Altagamma Foundation, 2018). Moreover, Italy, France and the United Kingdom are the major luxury companies' home countries (Sresnewsky et al., 2020). And Italy is the favourite destination of Chinese luxury consumers for many years (Altagamma Foundation, 2020b).

3.2 Data collection

Weibo (also known as Chinese Twitter) is the biggest microblogging website and one of the most influential social media platforms in China, with MAU (monthly active users) reaching 582 million on March 31, 2022 (Weibo, 2022). Users can publish content such as messages in microblogs and

share text, pictures, videos, and music. As the main channel for luxury brands to conduct marketing communication with Chinese consumers, Weibo has increasing influence (Altagamma Foundation, 2020b). The issue related to luxury brands has continuously been a topic of great interest on Weibo. Thus, Weibo was selected as the research platform for this study.

To collect data about the consumer perceptual attributes and monitor the conversation of a brand's followers, we need to have a group of Weibo accounts that best exemplify that attribute. Our approach requires input keywords representing the attributes. The attributes under examination are "奢侈品" (means luxury), "意大利品牌所连系的原产国文化" (means COBO), and "中国风" (means Chinese chic). For example, in our validation below, we use the terms "中国风" and "国潮" (both mean Chinese chic) as search keywords representing the attribute of Chinese chic. With these keywords, we query Weibo to identify accounts representative of the query. To do so, we rely on Weibo topic-based webpage.

A topic-based webpage, which is a dynamic aggregation webpage of microblogs containing particular thematic keywords (i.e., the tags), is one of the most popular functions on Weibo. Any users can create their topic webpage or subscribe to others' topic webpage, post microblogs and participate in the discussion. For example, in the latter case, when a user posts a microblog in the form of #keywords#, this microblog will be automatically included within the topic-based webpage named with the same keywords. Accounts that are considered to be closely associated with a perceptual attribute can be found on the thematic webpage. We used the webpage to programmatically collect exemplar accounts for each attribute as follows: (1) utilizing the "topic-based search" function, we input the keywords and collected the thematic webpage in the first 50 pages. If the search results are less than 50 pages, we collect results from as many pages as we have. (2) We retained the web pages which had larger than one million readings and manually filtered irrelevant web pages. (3) In each webpage, accounts that were active in the discussion of a certain topic, such as luxury, culture-of-Italian-brand-origin, or Chinese chic, were automatically counted for their contribution scores to that topic[1]. An account was considered an exemplar if it had more than 100 contribution scores to a topic and had more than 1,000 followers.

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[1] According to the rules set by Weibo, there are three ways for accounts to increase the contribution score on a topic. First, five scores are added for each original post related to the topic. Second, one score is added for each topic-related repost. Third, one score is added for every ten times the original topic-related post is forwarded, but the contribution

Next, we identified followers for each exemplar account as follows: (1) For each exemplar, we collected all the posts from June 1, 2018, to June 30, 2021, along with information for users (e.g., user names, user ID) that commented on, forwarded, or thumbed up the posts. (2) Users who aggregately commented on, reposted, or thumbed up the microblog during the research period were identified as followers of these accounts. (3) The collected user information of each exemplar account is classified according to the three behaviours of reviews, reposts and likes, and then combined and re-duplicated. Finally, the user sets of three exemplar accounts are formed. (4) For each keyword, we compiled a word cloud of the most cited words in the posts of each exemplar account during the research period. And to better understand the meaning of each keyword within the conversation about the exemplar accounts and improve the interpretation of the results.

Using the search methodology described above, we used the queries "奢侈品, 奢华 (represent luxury)", "意大利, 意式, 意国 (represent the Italian culture)", and "中国风, 国潮 (represent Chinese chic)" to collect exemplars for each of the three perceptual attributes. For each of the exemplar accounts, we collect the username and IDs of up to 50,000 active users that commented on, forwarded or thumbed up the posts within an exemplar account. In total, we got 69 luxury exemplars, 99 exemplars for the COBO, and 88 Chinese chic exemplars. Table 1 shows the details of the number of followers for these accounts.

For the data collection of brands' followers, the list of Italian luxury fashion brands was gathered from the Altagamma Foundation website (https://altagamma.it/members/) on July 13, 2021. To measure the luxury attribute of the brands, we selected the brands whose brand accounts have a sizeable number of followers and are widely known by Chinese consumers for analysis. Accounts with less than one million followers were excluded from the analysis. The lists of Italian brands were filtered to eliminate unofficial accounts and to keep the nationwide accounts, thus excluding accounts that referred to particular locations. As a result, there is only one official verified nationwide account on Weibo for each brand on our final brand lists. For each brand, we collected their followers with a procedure similar to the one used for the exemplars. Table 1 displays the details of the number of followers for 11 brands.

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scores of a single post can be added up to 100 at most.

Table 1. The number of collected followers per brand and exemplars before and during COVID-19

	Number of Collected Followers						Total Number of Reviews, Reposts, and Likes per Brand[1]	Total Number of Followers per Brand[1]
	Pre-COVID-19			*During-COVID-19*				
	reviews	*reposts*	*likes*	*reviews*	*reposts*	*likes*		
Brands								
Bvlgari	32415	29500	41831	51635	44231	43784	66232000	2040000
Fendi	38399	28078	37266	66072	46964	56583	34649000	994000
Ferragamo	6112	5547	7967	9716	8751	11354	2422000	585000
Gucci	74115	46124	64843	108774	81629	83674	92109000	3658000
Max Mara	9480	11114	15175	14345	9819	15082	1200000	198000
Moncler	8883	12015	17515	8501	8109	14671	14604000	691000
Prada	33572	22586	37680	56839	49973	50619	37593000	2175000
Tods	24967	17313	58712	68004	54129	56636	42161000	1050000
Valentino	42525	30496	32668	51497	38072	36306	52094000	528000
Versace	31514	22729	27193	23790	19478	20604	14626000	1013000
Zegna	37035	34879	36453	26162	23046	14827	11774000	626000
Exemplars								
Luxury	106865	205532	184360	58709	91452	49624		
COBO	11594	19047	25996	28474	38303	68213		
Localized culture	25913	86401	50468	28769	64108	83157		

Notes: (1) The number were updated on 24 May 2022.

3.3 Brand attribute ratings, social perception score index, and data mining

Marketing managers have long relied on estimates of consumer perceptions of brands along attributes of interest to inform marketing strategy (John et al., 2006). Prior methods of eliciting attribute ratings from consumers need trade-offs between completeness, cost, and feasibility (Aaker, 1996). Based on social network analysis theory, Culotta and Cutler (2016) develop a flexible and automated means of estimating brand attribute ratings from publicly available secondary social media data. For each brand, we calculated a social perception score (SPS) that indicates the

similarity between the followers of a brand and those of the exemplars. In specific, to understand how many followers of the brand also actively follow an exemplar account, we calculate the Jaccard similarity index, which is an ordinary and empirically successful function used in social network analysis (Hamers, 1989):

$$J(B, E) = \frac{F_{B,E}}{F_B + F_E - F_{B,E}}$$

The Jaccard index between the Brand B and the exemplar account E defines the similarity of two sets as the cardinality of their intersection ($F_{B, E}$) divided by the cardinality of their union ($F_B + F_E - F_{B,E}$). We subtracted the followers they have in common from the denominator to avoid counting those users twice. Finally, we get a single social SPS that indicates a perceptual attribute of a brand.

3.4 Estimation model

To determine whether manifesting COBO or Chinese chic influences the brand image, we executed an OLS regression on the selected attributes against the SPS of luxury. The linear model used in this estimation is the following:

$$SPS_l = \beta_0 + \beta_1 SPS_a + CV_s + DVs + \varepsilon$$

SPS_l is the SPS of a brand for the perceptual luxury attribute. SPS_a is the SPS of a brand for the perceptual COBO or Chinese chic attribute. CV_S are the control variables, including the total number of reviews, reposts, and likes per brand, the total number of followers per brand, and the number of collected followers per brand. DVs are the dummy variables based on the type of data (i.e., reviews data, reposts data, and likes data) per brand and exemplar. β_0 is the intercept, while β_1 is the coefficients, estimated by the linear model that describes the relationship between the two scores. In addition, we considered the relationship between these variables for the two compared research periods (i.e., dataset about followers of both brands and exemplars before and after the COVID-19 lockdown in China[1]). 23 January 2020 was selected as the split point between the two research periods.

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[1] On 23 January 2020, the central government of China imposed a lockdown in Wuhan and other cities in Hubei in an effort to quarantine the center of an outbreak of COVID-19. The lockdown in Wuhan set the precedent for similar measures in other Chinese cities. On 8 April 2020, the Wuhan lockdown officially ended. In the subsequent period of normalized epidemic prevention and control, there were also areas that entered lockdown due to repeated epidemics.

In summary, for each brand, we calculated a score that indicates the degree of the selected attributes (i.e., luxury, COBO, Chinese chic) perceived by the consumers. If the luxury score ends up being dependent on the other one or two of the selected attribute scores, we assume that utilizing the selected attribute of a brand is correlated with the luxury attribute. In other words, manifesting the selected attribute within the branding strategy may be convergent (or divergent) with consumer perceptual attributes of this brand, thus contributing to brand co-creation (or leading to brand co-destruction) with the consumers.

4 Results and Discussion

Table 2(a) and Table 2(b) show the SPS score between each brand and the specified exemplar accounts. None of the 11 brands has an SPS score of zero, indicating that a certain number of Weibo users are followers of both the brand and the three types of exemplar accounts. In other words, the consumer base of each brand overlaps with the follower base of the accounts that exemplify a specific attribute. The overlap reveals the online links among the brand, the accounts that represent a specific attribute, and the common followers of the former two. Therefore, hypotheses 1-3 are confirmed. In an LFB's online co-creation network, as external actors, Weibo accounts with topics centred around luxury, localised culture, and COBO, have social connections with both the brands and the consumers (Culotta & Cutler, 2016). These non-consumers and non-brand-community co-creators (Merz et al., 2009) can influence consumer perceptions through their co-followers with the brand, thereby influencing brand value co-creation.

Table 3 presents the regression results obtained, where either the standardized or localised cultural elements are considered in relation to the luxury attribute of a brand. Specifically, Table 3 shows how the luxury attribute is positively correlated with the perceptual localised cultural attribute of a brand before ($\beta_1 = 13.11$, $p < 0.01$) and during ($\beta_1 = 0.57$, $p < 0.01$) the pandemic. But this impact was much higher before the outbreak of COVID-19. Therefore, hypotheses 4-5 are confirmed. The findings suggest that there is a positive correlation between luxury and localised cultural elements, as important components of brand perceptual attributes; this correlation is far stronger than before the pandemic. The difference in the correlations supports the argument of previous research, indicating that luxury fashion firms frequently leveraged localised cultural elements as marketing strategies in the pre-COVID-19 emerging markets to increase brand

awareness (Liu et al., 2016); and consumers have preferences and needs for luxury brands with localised elements (Bai et al., 2021; Liu et al., 2019).

Table 2(a). Social perception score of three attributes per brand before COVID-19

		Luxury			COBO			Localized Culture		
		Pre-COVID-19								
		reviews	reposts	likes	reviews	reposts	likes	reviews	reposts	likes
Bvlgari	reviews	0.01859	0.01236	0.00895	0.00206	0.00082	0.00077	0.00136	0.00070	0.00056
	reposts	0.00744	0.01632	0.00553	0.00073	0.00178	0.00066	0.00076	0.00177	0.00059
	likes	0.00713	0.00595	0.01581	0.00086	0.00079	0.00236	0.00072	0.00089	0.00178
Fendi	reviews	0.02748	0.01795	0.01219	0.00789	0.00332	0.00205	0.00098	0.00057	0.00037
	reposts	0.01542	0.02176	0.00798	0.00463	0.00465	0.00188	0.00048	0.00132	0.00032
	likes	0.01151	0.00774	0.01791	0.00234	0.00139	0.00302	0.00055	0.00068	0.00139
Ferragamo	reviews	0.01055	0.00578	0.00257	0.00187	0.00107	0.00105	0.00047	0.00015	0.00014
	reposts	0.00438	0.00629	0.00151	0.00088	0.00110	0.00036	0.00016	0.00042	0.00014
	likes	0.00294	0.00214	0.00541	0.00087	0.00096	0.00251	0.00027	0.00033	0.00072
Gucci	reviews	0.03646	0.03107	0.01764	0.00174	0.00612	0.00145	0.00152	0.00084	0.00065
	reposts	0.01696	0.03101	0.01084	0.00125	0.00878	0.00145	0.00092	0.00234	0.00056
	likes	0.00839	0.00672	0.02029	0.00045	0.00118	0.00252	0.00051	0.00073	0.00149
Max Mara	reviews	0.02070	0.00914	0.00779	0.00314	0.00154	0.00124	0.00065	0.00025	0.00023
	reposts	0.01452	0.01971	0.00624	0.00203	0.00206	0.00088	0.00024	0.00063	0.00024
	likes	0.01272	0.00659	0.01490	0.00168	0.00108	0.00189	0.00051	0.00040	0.00087
Moncler	reviews	0.01027	0.00624	0.00355	0.00220	0.00082	0.00050	0.00034	0.00018	0.00017
	reposts	0.00600	0.01175	0.00298	0.00102	0.00174	0.00046	0.00029	0.00059	0.00019
	likes	0.00453	0.00359	0.00595	0.00138	0.00099	0.00129	0.00025	0.00030	0.00082
Prada	reviews	0.02403	0.02263	0.00854	0.00808	0.00357	0.00264	0.00173	0.00083	0.00048
	reposts	0.02379	0.02245	0.00843	0.00810	0.00358	0.00265	0.00174	0.00082	0.00048
	likes	0.01232	0.01192	0.01831	0.00328	0.00216	0.00450	0.00065	0.00066	0.00139
Tods	reviews	0.01270	0.00663	0.00581	0.03264	0.01280	0.00620	0.00057	0.00031	0.00024
	reposts	0.00674	0.00798	0.00358	0.03051	0.02313	0.00558	0.00039	0.00094	0.00031
	likes	0.00533	0.00356	0.00845	0.01064	0.00569	0.00521	0.00014	0.00029	0.00043
Valentino	reviews	0.04746	0.03897	0.01785	0.00078	0.00094	0.00046	0.00124	0.00073	0.00052
	reposts	0.02371	0.04504	0.01110	0.00062	0.00158	0.00056	0.00055	0.00113	0.00051
	likes	0.01692	0.01479	0.02248	0.00027	0.00072	0.00275	0.00046	0.00063	0.00104
Versace	reviews	0.02659	0.01916	0.01171	0.00562	0.00431	0.00201	0.00138	0.00059	0.00028
	reposts	0.01294	0.02189	0.00613	0.00234	0.00346	0.00115	0.00091	0.00111	0.00025
	likes	0.00963	0.00720	0.01458	0.00098	0.00123	0.00239	0.00117	0.00056	0.00108
Zegna	reviews	0.04107	0.03365	0.01395	0.00467	0.00373	0.00129	0.00103	0.00066	0.00038
	reposts	0.02923	0.04932	0.01158	0.00261	0.00458	0.00108	0.00048	0.00139	0.00036
	likes	0.01726	0.01575	0.01614	0.00311	0.00313	0.00241	0.00080	0.00067	0.00098

Table 2(b). Social perception score of three attributes per brand since COVID-19

		Luxury			COBO			Localized Culture		
		Since-COVID-19								
		reviews	*reposts*	*likes*	*reviews*	*reposts*	*likes*	*reviews*	*reposts*	*likes*
Bvlgari	*reviews*	0.01623	0.00857	0.00401	0.00517	0.00179	0.00102	0.01123	0.00378	0.00269
	reposts	0.00859	0.01081	0.00323	0.00239	0.00402	0.00116	0.00489	0.00485	0.00126
	likes	0.00618	0.00442	0.00703	0.00254	0.00113	0.00209	0.00589	0.00169	0.00235
Fendi	*reviews*	0.01737	0.01438	0.00581	0.00319	0.00166	0.00140	0.00713	0.00368	0.00169
	reposts	0.00705	0.01814	0.00429	0.00299	0.00349	0.00104	0.00963	0.00497	0.00209
	likes	0.00677	0.00599	0.00945	0.00177	0.00138	0.00249	0.00379	0.00243	0.00188
Ferragamo	*reviews*	0.01514	0.01467	0.00492	0.00323	0.00205	0.00151	0.00684	0.00340	0.00145
	reposts	0.00187	0.00445	0.00098	0.00267	0.00326	0.00096	0.00358	0.00170	0.00049
	likes	0.00230	0.00171	0.00375	0.00126	0.00111	0.00101	0.00145	0.00054	0.00040
Gucci	*reviews*	0.01987	0.01750	0.00594	0.00344	0.00250	0.00140	0.00942	0.00452	0.00202
	reposts	0.01321	0.02534	0.00584	0.00222	0.00430	0.00134	0.00739	0.00620	0.00183
	likes	0.00934	0.00875	0.00891	0.00127	0.00122	0.00247	0.00302	0.00207	0.00170
Max Mara	*reviews*	0.01310	0.01155	0.00778	0.00181	0.00133	0.00221	0.00329	0.00219	0.00165
	reposts	0.01089	0.01293	0.00798	0.00152	0.00177	0.00235	0.00360	0.00269	0.00176
	likes	0.00381	0.00426	0.00383	0.00152	0.00105	0.00168	0.00153	0.00095	0.00117
Moncler	*reviews*	0.00857	0.00731	0.00169	0.00127	0.00049	0.00026	0.00129	0.00051	0.00015
	reposts	0.01032	0.01299	0.00796	0.00126	0.00154	0.00225	0.00291	0.00222	0.00164
	likes	0.00886	0.00947	0.00837	0.00124	0.00125	0.00263	0.00248	0.00177	0.00164
Prada	*reviews*	0.01704	0.01311	0.00432	0.00309	0.00180	0.00114	0.00472	0.00243	0.00095
	reposts	0.01017	0.02258	0.00348	0.00137	0.00382	0.00105	0.00365	0.00415	0.00093
	likes	0.00855	0.01020	0.00813	0.00133	0.00116	0.00232	0.00228	0.00157	0.00112
Tods	*reviews*	0.01104	0.00972	0.00360	0.00167	0.00117	0.00099	0.00253	0.00167	0.00086
	reposts	0.00867	0.01263	0.00398	0.00123	0.00218	0.00108	0.00256	0.00242	0.00086
	likes	0.00682	0.00598	0.00448	0.00075	0.00080	0.00185	0.00183	0.00124	0.00115
Valentino	*reviews*	0.01445	0.01859	0.00487	0.00168	0.00125	0.00102	0.00279	0.00198	0.00095
	reposts	0.00619	0.02183	0.00253	0.00114	0.00185	0.00058	0.00177	0.00176	0.00050
	likes	0.00544	0.00600	0.00654	0.00093	0.00086	0.00133	0.00089	0.00087	0.00102
Versace	*reviews*	0.01363	0.01658	0.00540	0.00162	0.00128	0.00116	0.00474	0.00286	0.00142
	reposts	0.01052	0.01791	0.00565	0.00152	0.00188	0.00136	0.00404	0.00309	0.00150
	likes	0.00908	0.01273	0.00607	0.00128	0.00128	0.00162	0.00353	0.00236	0.00147
Zegna	*reviews*	0.01512	0.01615	0.00546	0.00213	0.00161	0.00142	0.00182	0.00139	0.00095
	reposts	0.01252	0.01664	0.00529	0.00163	0.00207	0.00126	0.00255	0.00202	0.00107
	likes	0.01197	0.01427	0.00589	0.00204	0.00167	0.00188	0.00161	0.00130	0.00098

Table 3. OLS regression between the SPS of the luxury attribute and the SPS of the other two attributes

	SPS_l		SPS_l	
	results between the SPS of luxury and the SPS of COBO		results between the SPS of luxury and the SPS of localized culture	
	Pre-COVID-19	*Post-COVID-19*	*Pre-COVID-19*	*Post-COVID-19*
SPS_a	-0.376***	1.338**	13.11***	0.570**
	(0.135)	(0.524)	(2.049)	(0.238)
T_{rrl}	-2.19e-11	-2.42e-11	-5.26e-11	-3.09e-11
	(5.00e-11)	(2.79e-11)	(4.28e-11)	(2.80e-11)
T_f	-3.82e-09***	5.54e-10	-5.24e-09***	6.32e-10
	(1.21e-09)	(6.32e-10)	(1.07e-09)	(6.29e-10)
N_{cf}	4.87e-07***	3.52e-08	4.39e-07***	3.37e-08
	(6.80e-08)	(2.83e-08)	(5.90e-08)	(2.84e-08)
D_{type_2}	-0.0168***	-0.00800***	-0.00636**	-0.00767***
	(0.00281)	(0.00152)	(0.00272)	(0.00162)
D_{type_3}	-0.00765***	0.000162	-2.88e-05	0.000200
	(0.00277)	(0.00145)	(0.00257)	(0.00147)
D_{type_4}	-0.0184***	-0.00569***	-0.0105***	-0.00578***
	(0.00280)	(0.00148)	(0.00257)	(0.00149)
D_{type_5}	-0.0136***	-0.00700***	-0.0129***	-0.00573***
	(0.00279)	(0.00140)	(0.00236)	(0.00162)
D_{type_6}	-0.0207***	-0.00498***	-0.0127***	-0.00484***
	(0.00282)	(0.00154)	(0.00256)	(0.00160)
D_{type_7}	-0.00750***	-0.00426***	-0.00209	-0.00481***
	(0.00279)	(0.00143)	(0.00251)	(0.00139)
D_{type_8}	-0.0165***	-0.00802***	-0.00630**	-0.00755***
	(0.00286)	(0.00152)	(0.00272)	(0.00164)
D_{type_9}	0.000962	0.00143	-0.000285	0.00267*
	(0.00279)	(0.00137)	(0.00241)	(0.00144)
Constant	0.0179***	0.00982***	0.00633**	0.0106***
	(0.00249)	(0.00165)	(0.00248)	(0.00149)
Observations	99	99	99	99
R-squared	0.661	0.678	0.750	0.675

Notes: (1) T_{rrl} represents the total number of reviews, reposts, and likes per brand; T_f represents the total number of followers per brand; N_{cf} represents the number of collected followers per brand. (2) Standard errors in parentheses. (3) *** p<0.01, ** p<0.05, * p<0.1.

More importantly, Table 3 shows how the relationship between the luxury attribute and perceptual COBO attribute of a brand changed from negative to positive before and during the pandemic (β = -0.376, $p < 0.01 \rightarrow \beta$ = 1.338, $p < 0.05$). The findings demonstrate that there is a strong and positive relation between luxury and standardized cultural elements as components of a brand perceptual attribute during the pandemic. Thus, hypothesis 6 is confirmed. The findings reflect the logic of the tend-and-befriend theory (Taylor, 2006) and are in line with our argument in the section on hypotheses development. That is, unable to travel to a brand's origin country during the pandemic, increasing Chinese cosmopolitan consumers instead tend to follow LFB and social media accounts that represent the COBO to affiliate with the groups they aspire to, in order to gain comfort and reduce the distress that results from being isolated during the pandemic. Moreover, the findings are consistent with recent anticipations and report that traditional western luxury brands consider emphasizing COBO more and more as a core business strategy and not just as an outdated value to the firm's offerings (Altagamma Foundation, 2020b, 2020c).

5 Conclusion

Based on social network theory and using huge amounts of Weibo users' data, this study examined the consumer perception of western luxury brands for three critical attributes exemplified by the external actors. After that, we investigated whether the strength of perceived luxury for a selected brand was correlated with COBO or localised cultural attributes within emerging markets before and since the pandemic.

5.1 Theoretical contributions

The study adds to the existing marketing research mainly through three aspects. First, our study highlights the significant effects of external actors on consumers' perceived value of brands and brand co-creation. While evidence provided by brand marketing scholars suggests that brand value is co-created through dynamically interacting between the company and the brand community members, researchers in the mid-2000s began to argue that other actors outside the customer and brand community are also important co-creators of brand value (Merz et al., 2009). As a response to this argument, our study focuses on the roles of external actors (i.e., non-brand-focused communities) in the brand value creation network, and finds vital brand co-creators beyond the brand-consumer dyadic interaction. Our study has the advantage to consider not only the consumer

side, but also the links among the brand admirers (owner and non-owners), the brands, and the representative exemplars which could significantly stimulate conversations centred around the new trend of luxury consumption and luxury fashion. Successful luxury marketing requires "the consumer to perceive sufficient value in the luxury goods to compensate for the high prices charged, especially in times of recession" (Tynan et al., 2010, p.1156). The study adds to the luxury marketing literature by highlighting the important roles of external actors on social media to increase consumer-perceived brand value, especially in times of a global crisis.

Second, the paper expands knowledge of the standardised-local international marketing strategy debate for luxury brands by considering the impacts of the global crisis. It identifies the importance of the COBO elements for influencing the success of international marketing strategies in a crisis period. The findings indicate that consumers tend to follow luxury brands and social media accounts that represent the culture of brand origin to affiliate with the groups they aspire to, as a substitute for removing social threats and tensions associated with isolation from the brand's country of origin during the pandemic. From the brand side, marketers of international luxury brands must balance global and local dilemmas due to a challenging marketing environment in a complex emerging market with low brand awareness and loyalty, and the need to maintain exclusivity and standardization of brand image across the world. By applying the tend-and-befriend theory (Taylor, 2006), the study identifies the neglected roles of social media accounts with topics centred around COBO for luxury brand marketing in emerging markets in times of a global crisis and highlights the importance of COBO element for the success of marketing strategies in a crisis period. The study thus provides theoretical contributions on how to alleviate the standardization-localization dilemma of international luxury brand marketing, especially in times of a global crisis.

Third, the research applies a novel approach to luxury marketing research to infer consumer brand perception before and during the pandemic. By using big data mining and examining millions of social links of active users, we can overcome some of the potential biases of the survey approach (Blasi et al., 2020), and reduce noise introduced by infrequent spurious follower connections.

5.2 Managerial implications

The study also makes managerial implications. First, this article extends previous research and argues that luxury brands can either benefit or hurt from opening up their brand co-creation to digitally-enabled and multi-actor interactions. Such interactions could occur among consumers, brands and external actors on social media. Despite a large number of studies considering the country-of-origin effect on consumer decision-making (Elliot et al., 2011), to the authors' knowledge, research so far has devoted limited attention to investigating the influence of the representative actors of product-country image (e.g., official Weibo account of Cultural Department of the Italian Embassy, official Weibo account of Italian National Tourism Agency) on consumer brand perceptions. Our findings suggest that in addition to consumers and brand owners, other non-brand communities are also important components influencing brand equity and therefore marketing strategy on popular social media platforms.

Second, the positive correlation between the SPS of luxury and the SPS of COBO reveals that the Italian culture has great potential for the luxury branding of Italian luxury brands. A study[1] conducted by Altagamma Foundation (2020b) examined spontaneous conversations regarding Italian luxury brands, which number over 100, on social media. The results show that the volume of spontaneous conversations mentioning the brands grew significantly in 2019 compared to the previous year on social media channels (5 million in 2018, +80%). The Altagamma Social Luxury Index, produced by Accenture Interactive - the largest digital agency in the world - also confirms a significant growth in the social media presence of Italian brands, which are now increasingly aware of the importance of this channel of communication and distribution (Altagamma & Accenture, 2020). The new Asian social media platforms, such as Tik Tok and Little Red Book, are capturing the attention of the youngest users, while the Made in Italy concept - which enjoys a high profile in reputational terms - presents a great deal of potential to exploit. Our research findings confirm that some Chinese luxury consumers are also active followers of social media accounts that introduce Italian culture of brand origin. This result indicates that some consumers may already have sufficient domain knowledge to appreciate the core cultural values conveyed by Italian brands, such

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[1] The study spanned nine languages and eight sectors and monitored 35 international digital channels over a year, including social media, blogs and forums.

as craftsmanship, heritage, lifestyle, conviviality, quality, elegance, local roots, and so on. Luxury brand marketers should highlight more cultural elements of the COBO in their marketing in the post-pandemic emerging marketplaces.

In contrast, post-pandemic, the lower SPS of Chinese chic indicates that the over-localised communication strategy by frequently leveraging localised elements may dilute the positive effect of brand origin on branding. Managers should be smart about how they incorporate Chinese elements into their marketing. As an anonymous president of a western luxury brand said in an interview (Liu et al., 2016), "it's silly to become the 'clichéd Chinese' because Chinese hate gimmicks…putting a dragon on an Aston Martin or Ralph Lauren doing a whole cheongsam dress collection is considered as patronizing by Chinese!" (Liu et al., 2016).

5.3 Limitations and future research

The findings are based on the research evidence at hand and should be interpreted with caution. This study was conducted in China and considered the impacts of the COVID-19 pandemic on this market. But the impact of the COVID-19 pandemic varies globally (e.g., government policies differ in different countries), with some areas experiencing shorter and smaller impacts. Therefore, the findings could not be directly generalized to all emerging markets. However, our findings should be valid in other emerging Asia markets that are culturally similar. Considering the market potential in these Asia countries (expected to contribute 13%-15% market share by 2025) (Claudia et al., 2021), our findings provide insights into the distant luxury market. Moreover, this study only investigated luxury fashion brands. Future studies could thus analyse if COBO and localised culture generate differential effects on consumer perception and brand co-creation among different luxury categories – e.g., wines, automobiles, furnishings, and hotels.

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Chapter 3

Inconspicuous Consumption in Emerging Markets: Exploring Consumer Perceptions of Luxury Brands on Social Media Using Text Mining Approaches

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Abstract

The rise of inconspicuous luxury consumption is seen as a growing trend in the luxury industry. But few studies have empirically examined this trend and its impacts, especially in emerging markets that favour prominent brand signals. This study explores the trend of inconspicuous consumption in emerging markets and examines the changes in brand value propositions and consumer brand perceptions before and during COVID-19. Text mining methods, including content analysis and topic modelling, are used to examine 21,477 brand posts and 2,366,564 consumer reviews of 16 luxury brands from the largest Chinese social media platform. The findings show a shift of consumer appetites toward inconspicuousness during the pandemic and highlight important mismatches between brand value propositions and consumer brand perceptions, which may inhibit brand co-creation. The findings show that loud and conspicuous branding cannot fully meet the needs of consumers in emerging markets during the pandemic; luxury firms should respond with quiet, culturally-oriented, and sophisticated branding activities that can be understood and appreciated by consumers with cultural capital.

Keywords: Inconspicuous consumption, inconspicuous luxury, luxury brand co-creation, consumer perception, social media marketing, emerging markets, text mining

Introduction

In the post-COVID-19 world, luxury practitioners should better understand consumers in emerging markets to better serve them, given the cross-cultural nature (Kapferer and Valette-Florence, 2018), the size, and growth of the markets (Kim and Ko, 2012; Wu et al., 2017). For years, the success of emerging luxury markets has been driven mainly by conspicuous consumption. But now luxury leaders indicate potential difficulties for the post-pandemic market (Eastman et al., 2022), indicating that conspicuous consumption may go out of vogue. During long-time home quarantine and collective hardship, consumers' motivation to manifest success through luxury consumption may become weak (Kapferer and Révis, 2020). In contrast, consumers' intrinsic motivation to enjoy privacy in luxury spending (Eastman et al., 2022) may become more relevant. A recent McKinsey report also highlights that, after a global crisis with heavy emotional trauma, consumer tastes could shift to "silent luxury", paying more attention to classical cultural elements such as heritage and craftmanship rather than ostentatious logos (Achille and Zipser, 2020).

We believe it is increasingly vital for luxury marketers to understand whether the trend towards inconspicuous consumption is increasing, especially in emerging markets in the wake of a global crisis such as COVID-19. Inconspicuous luxuries are often more expensive than conspicuous ones (Han et al., 2010), and inconspicuous consumers account for a large share of luxury consumption (Kover et al., 2022). This market is a considerable source of future profits (Eastman et al., 2022). Observers and marketers have noticed the trend of inconspicuous consumption for years and have recently discussed it in more detail. However, whether the trend is accelerating in emerging markets remains an open question. There are opposite views in academia on this issue (Eastman et al., 2022; Eckhardt et al., 2015; Makkar and Yap, 2018a; Nunes et al., 2011; Pino et al., 2019). Therefore, the first purpose of this article is to explore the trend toward inconspicuous luxury consumption in emerging markets during the COVID-19 crisis.

Moreover, post-pandemic, consumers will want to restart their normal lives once conditions permit. But the next normal will be quite different; luxury marketers need to find ways to anticipate and respond to the next normal, whatever it will be (Achille and Zipser, 2020). In addition to the anticipation of increased inconspicuous consumption, a recent report highlights an unprecedented digital transformation of the luxury sector (Achille and Zipser, 2020). The pandemic has boosted the performance of luxury brands' online businesses, and promoted the development of advanced virtual modes of interaction through live streaming, augmented reality, online gaming, and social

media (Lojacono and Pan, 2021). Specifically, in emerging markets, there is significant growth in the social media presence of luxury brands (Altagamma Foundation, 2020). The new competitive landscape, in which consumers and brands are increasingly embedded in a digital world, is fierce, and luxury firms are in a situation in which they co-own brands and co-define brand symbolic and cultural values with consumers (Claudia and Federica, 2021; Tynan et al., 2010).

As luxury brand logic is evolving towards co-creation (Merz et al., 2009), we propose that if consumer trends change, consumer brand perceptions and/or brand value propositions will also change. One-third of luxury consumers are now Generation Y and Z grew up in the digital world (Danziger, 2019), and the proportion is expected to rise to 70% by 2025 (Claudia et al., 2021a). Understanding younger cohorts in the digital world is a prerequisite for marketers to adapt to the new digital channel and transform firm-dominant branding strategies into co-creation. Therefore, it is necessary to investigate changes in consumer perceptions and/or brand value propositions through digital channels to better understand changes in consumer trends in emerging markets before and during the pandemic. However, the extant marketing literature on online luxury brand co-creation or digital marketing does not provide clear evidence for either the change of consumer mindsets toward inconspicuousness or the increase of inconspicuous branding in emerging markets. In light of the above, the second purpose of this study is to examine changes and new situations in consumer perceptions and/or brand value propositions in post-pandemic emerging markets in a digital context.

To accomplish these research purposes, we use content analysis and topic modelling to examine a large volume of online luxury brand posts and consumer reviews. The content analysis results provide preliminary evidence for the trend toward inconspicuous luxury during COVID-19 in mainland China, which will be the world's largest luxury market by 2025 (Claudia et al., 2021b). The topic modelling results further validate the new trend and show unique thematic dimensions of brand posts and consumer reviews before and during the pandemic. Comparing these unique dimensions reveals important mismatches between brand value propositions and consumer brand perceptions that hinder brand co-creation. The comparative results suggest that quiet, culturally-oriented, and sophisticated branding strategies may better suit certain consumers in emerging markets during the pandemic than loud and conspicuous branding. To our knowledge, this study is

the first to examine inconspicuous luxury consumption in the COVID-19 era. By applying a novel method in luxury marketing research that helps to reduce bias in data, this study presents genuine and fresh 'voices' of target consumers from millions of unstructured online texts. The findings provide timely insights for luxury fashion brands to enrich their value propositions and to co-create with consumers in the post-pandemic digital world.

The rest of this paper is structured as follows: the next section presents the research context and theoretical foundation by reviewing past work on luxury brand co-creation on social media and conspicuous/inconspicuous consumption. The third section presents our empirical studies, which support the rise of inconspicuous consumption and highlight important cultural dimensions that consumers may value. The last section discusses the findings and the implications for scholars and practitioners, especially those aimed at understanding consumer brand perceptions and achieving brand co-creation in marketing communication.

1 Research Context and Theoretical Foundation

1.1 Luxury brand co-creation on social media

The current research examines consumer trends in the context of the digital transformation of emerging luxury markets since COVID-19 (Achille and Zipser, 2020). Lockdown policies, global travel restrictions, and health concerns during the pandemic have discouraged consumers in emerging markets from visiting the countries of origin of luxury goods. In response, luxury firms significantly strengthened their brand presence on local social media channels in emerging markets (Altagamma Foundation, 2020) to stay in touch with consumers. Brands' social media presence is a prerequisite to ensure that the company has an official online brand representation (Parrott et al., 2015). It is also a prerequisite for reaching one-third of luxury enthusiasts who are young people growing up in a digital world (Danziger, 2019). Luxury firms are increasingly aware of the importance of this channel (Kim and Ko, 2012). Some have successfully used social media for brand building (Appel, 2020). By controlling and managing a brand's social media marketing (SMM) strategies, companies can signal desired messages to consumers. For instance, brand conspicuousness refers to the degree to which a brand "blatantly" draws attention to its branded products (Janssen et al., 2017), such as displaying the product logo in a prominent place, using eye-catching colours or designs. Tangible brand markers (e.g., logos) (Aw et al., 2021) and intangible

elements (e.g., value propositions) play crucial roles in SMM strategies that signal brand conspicuousness.

The shift to digitals decreased the extent of control a luxury firm has on brand meanings, forcing a change of branding strategy toward co-creation (Tynan et al., 2010). Service-dominant logic provides a helpful view to understand this new situation (Vargo and Lusch, 2004; Vargo and Lusch, 2008). From the consumer side, consumers are now integrators and co-creators of brand symbolic values in the digital world. Using brand symbolic value, consumers can communicate their individual and social identities (Ravasi and Rindova, 2008) and perform their life roles (Huffman et al., 2003). Moreover, the symbolic value of a brand is determined by the social and cultural significance connected with the brand (Ravasi and Rindova, 2008). Consumers act upon brand symbolic value to perform, recover, and create favoured cultural schemas; some schemas are driven by companies and others by consumers (Arnould et al., 2014). Such symbolic and social values attached to luxury consumption reflect the important influence of culture (Dubois and Duquesne, 1993).

From the brand side, luxury brand signals go beyond functional attributes and are more prominent in non-functional attributes such as scarcity, extraordinariness, and aesthetics (Lai and Prendergast, 2019). Luxury companies face the challenge of adapting to the digital age without losing their signalling capabilities (Eckhardt et al., 2015; Wu et al., 2017) and core value propositions, such as scarcity and exclusivity (Quach and Thaichon, 2017). As essential components of brand signals and value propositions, brand symbolic and cultural assets play important roles in the creation of luxury brand value. Many companies have launched initiatives to protect their brand heritage and culture (Lojacono and Pan, 2021). For example, Shang Xia, a Chinese luxury brand, has created a distinctive and culturally-infused brand identity based on Chinese culture, values, and aesthetics (Schroeder et al., 2014). But it is not enough for companies to preserve and exploit their own brand culture. To improve signalling ability and co-create with consumers, companies need to understand their consumers better. In particular, they need to better understand consumers' cultural operant resources, that is, domain-specific knowledge (Arnould et al., 2014) or cultural capitals (Bourdieu, 1987). These resources are the precondition for consumers to understand and resonate with culturally-oriented brand value propositions (Schroeder et al.,

2014).

The key is that there should be a convergence between the value propositions of brand co-creation strategies (e.g., conspicuous branding vs. inconspicuous branding) and consumer brand perceptions (e.g., conspicuous brand vs. inconspicuous brand). Otherwise, brand co-destruction occurs when a brand and its consumers rely on incongruent operant resources of practice (Echeverri and Skålén, 2011; Plé and Cáceres, 2010). Based on the above brand co-creation framework, we attempt to explore new consumer trends by examining and comparing brand value propositions and consumer brand perceptions on a social media platform.

1.2 Conspicuous and inconspicuous luxury consumption

Inconspicuous luxury consumption is defined as "the use of subtle signals that are unidentifiable by the mainstream but instantly observable to those with the needed connoisseurship to decode their meanings" (Makkar and Yap, 2018b). Inconspicuous luxury and conspicuous luxury are related but have differences. For both, brand signals are essential communication mediums for brand recognition and brand image (Sääksjärvi et al., 2015). But for inconspicuous luxury, the brand signals are subtle and culturally embedded, observable only by those with the necessary knowledge to decode their meaning (Berger and Ward, 2010). Blatant displays of social status are shunned (Wu et al., 2017). On the contrary, conspicuous luxury consumption is "the tendency for individuals to enhance their image, through the overt consumption of possessions, which communicates status to others" (O'Cass and McEwen, 2004). Conspicuous consumption purposely shows one's wealth and prestige in order to enhance social status (O'Cass and McEwen, 2004); the brand signals are loud and prominent. For instance, while loud brands display exaggerated and eye-catching topics on social media, quiet brands depend on the fact that insiders can identify them, even if the brand possesses discreet and inconspicuous branding strategies (Pangarkar et al., 2021).

Subtle luxury caters to inconspicuous consumers, who are very different from strictly conspicuous consumers who love to flaunt brand logos and elevate social status (Eckhardt et al., 2015). Inconspicuous consumers could be intrinsically motivated to enjoy privacy in luxury consumption (Eastman et al., 2022). They embrace quality, aesthetics, and fantasy rather than seeking ostentatious status symbols (Eastman et al., 2022). They do not wish to flaunt wealth and status but to differentiate themselves from other wealthy people. The latter might buy certain

brands for ostentatious displays of wealth and prestige (Pangarkar et al., 2021). Moreover, inconspicuous consumers could be extrinsically motivated to associate with experienced luxury consumers who have the requisite cultural capital (Eastman et al., 2022). Although the mainstream may misidentify subtle signals of quiet brands, it is not a problem for those with connoisseurship to decode their meaning (Berger and Ward, 2010). Inconspicuous consumers seek to assimilate with like-minded individuals through understated brand signals that reflect their cultural capital and good taste (Han et al., 2010). Furthermore, consumers' desire for quiet luxury is driven by factors other than income, including interests, personality, values, lifestyle, and culture (Eastman et al., 2022; Makkar and Yap, 2018a). For example, enhancing consumers' cultural identity may increase the propensity to consume luxuries, as buying luxuries is an extreme form of expressing personal value (Dubois and Duquesne, 1993). Moreover, like older consumers with inherited wealth, young consumers could be a large segment of inconspicuous luxury (Eastman et al., 2022).

1.3 Luxury consumption in mature and emerging markets

The global luxury market has been driven by personal motivations to show social status and wealth for many years (Postrel, 2008). Recently, consumer trends are shifting, along with changing consumer mindsets that move towards inconspicuous consumption (Eckhardt et al., 2015). Several recent studies indicate that the importance of the conspicuous attribute for luxury brands is falling, while at the same time, inconspicuous luxury consumption is increasing (Eastman et al., 2022; Makkar and Yap, 2018a). Quiet luxuries are trying to create a new perception of luxury in this time of inconspicuousness through their products and branding strategies (Makkar and Yap, 2018b). For instance, Gucci and Louis Vuitton are aware of the shift in tastes from "in the show" to "in the know", and have begun offering subtly branded products in response to growing consumer demand for unique, understated and sophisticated products (Aw et al., 2021).

What about the trends of inconspicuous luxury in different markets? Prior literature indicates that consumer preference for subtly (versus prominently) branded luxuries depends upon the market's maturity; the desire for quiet luxuries is more common in mature markets (Pino et al., 2019). In emerging markets, luxury consumers, whose fortune may have been acquired recently, may react differently to luxury goods than consumers in mature markets (Kapferer and Valette-Florence, 2018). Conspicuous consumption has long been seen as the main driver in emerging

markets (Pino et al., 2019; Podoshen et al., 2011), even though quiet branded luxuries continue to gain popularity in developed regions (Jiang et al., 2021). Much of the extant literature focuses on the conspicuous consumption of well-known Western luxury brands in emerging countries (e.g., Podoshen et al., 2011). Several recent studies suggest that inconspicuous consumption is rising not only in mature markets, such as Europe, but also in emerging markets, such as BRICS (Brazil, Russia, India, China), which typically favour conspicuous luxuries (Eckhardt et al., 2015; Wu et al., 2017). For example, some elite Chinese are loyal customers of the Chinese brand Shang Xia, which provides costly products with subtle brand signals. These customers consume quiet indigenous luxuries for private pleasure and to reflect their cultural identity and aesthetic taste (Wu et al., 2017).

1.4 Conspicuous luxury consumption and COVID-19

The prior literature indicates that the signalling ability of luxuries has been diluted with the proliferation of good-quality counterfeits and affordable luxury (Eckhardt et al., 2015). An important but neglected factor is the impact of a global crisis on luxury consumption. For instance, the 2008 financial crisis reportedly led to the end of conspicuous consumption, with rich people abandoning logo-laden products in favour of more subdued designs (Alex, 2008; Dewan, 2009). But whether the global crisis will stimulate a decrease in conspicuous consumption remains an open question. Some scholars argue that even in hard times like global recessions, conspicuous consumption may endure; consumers are still interested in logo-laden luxury products (Nunes et al., 2011).

Recently, home quarantine policies, health issues, and related long-term financial concerns caused by COVID-19 may significantly change consumer brand perceptions and behaviours. Luxury shoppers may be more conscious of how their luxury spending is perceived, given the financial and health problems others face in tough times (Eastman et al., 2022), and therefore may act more discretely than previously. Financial distress and social isolation can make the display of status symbols irrelevant and unnecessary (Kapferer and Révis, 2020). When no physical meetings occur, showing social status through conspicuous consumption becomes irrelevant (Echegaray, 2021). The pandemic further reinforces the need to save more, improve quality of life, and pursue well-being in times of crisis (Pangarkar et al., 2021). Consequently, personal values of luxuries may become more relevant, while social motivations for luxury spending may diminish in the post-

pandemic world (Kapferer and Révis, 2020).

Inconspicuous consumption is an expanding part of emerging markets (Eckhardt et al., 2015; Wu et al., 2017) and a potential source of profit (Eastman et al., 2022). Researchers suggest that it is an overlooked, yet important aspect of the contemporary market (Eastman et al., 2022; Eckhardt et al., 2015; Makkar and Yap, 2018a). The gap between academia's focus on conspicuous luxury consumption and the inconspicuous trend emerging in luxury retail practices indicates an intriguing research direction. Moreover, even though luxury consumption is well-studied in the literature on consumer psychology, we know much less about how luxury lovers perceive luxuries in a recession (Nunes et al., 2011) or a global crisis. A complete understanding of the way COVID-19 impacts on inconspicuous consumption in emerging markets is increasingly important for luxury marketers. Therefore, this study explores the trend of inconspicuous consumption in emerging markets given the COVID-19 impacts and examines the changes in brand value propositions and consumer brand perceptions before and during the pandemic.

2 Methodology

The research objectives are addressed through two text mining approaches, namely content analysis based on linguistic inquiry and word count (LIWC) 2015 program (Pennebaker et al., 2015), and topic modelling based on latent Dirichlet allocation (LDA) algorithm (Blei et al., 2003). The study focuses on Italian and Chinese luxury fashion brands in China in order to gain a more comprehensive understanding of luxury consumer trends in emerging markets. In content analysis, we use LIWC to analyse data and provide preliminary evidence for the rise of inconspicuous consumption in the post-pandemic market. Next, in topic analysis, we use topic modelling to capture changes in consumer brand perceptions and brand value propositions before and during the pandemic. We believe that the topic dimensions extracted from posts and reviews can reflect the brand's value propositions and consumer brand perceptions. For the above two analyses, we obtained eight types of results based on posts and reviews of traditional western luxury brands and emerging Chinese luxury brands before and during the pandemic, respectively (for types see Table 1). By comparing these results, we further explore the changes in consumer trends and reveal mismatches that hinder brand co-creation. The current research is based on the methodology suggested by Zhang (2019). Figure 1 outlines the methodological framework adapted from the

study by Zhang (2019).

Table 1. 8 types of content analysis results and extracted topic dimensions results

Text types	Brand origins	Sample periods	
		Pre-COVID-19 pandemic	**During COVID-19 pandemic**
Posts	**Italy**	pre-; Italian brand posts	during; Italian brand posts
	China	pre-; Chinese brand posts	during; Chinese brand posts
Reviews	**Italy**	pre-; reviews of Italian brands	during; reviews of Italian brands
	China	pre-; reviews of Chinese brands	during; reviews of Chinese brands

Figure 1. The analytic process (adopted from Zhang (2019))
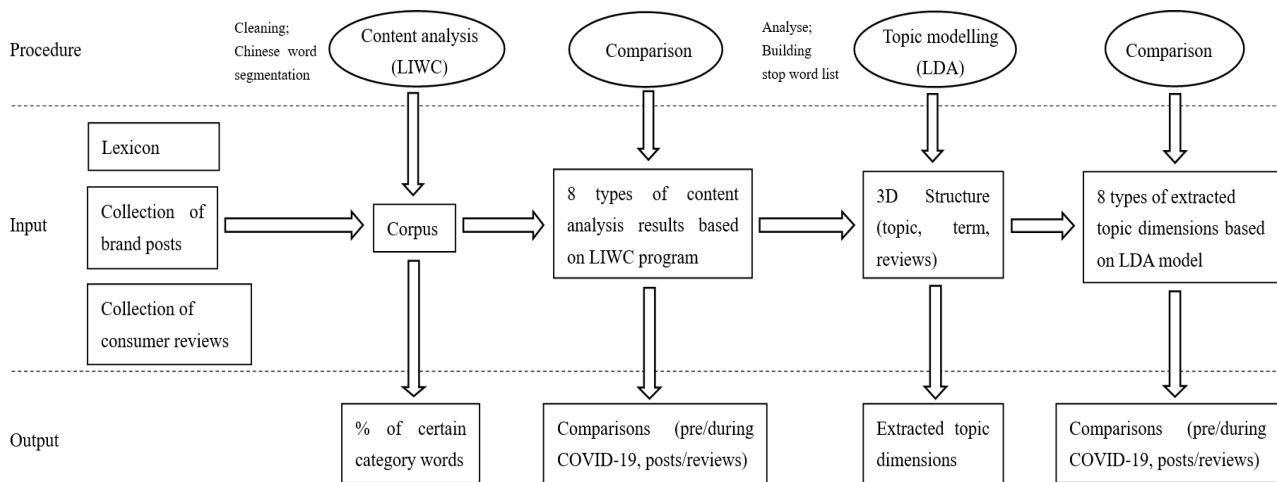
3 Data

Consumers' desire for status consumption has led to the successful performance of western luxury brands in emerging economies, particularly China. China has been the second-biggest luxury market in the world and is projected to be the biggest by 2025 (Claudia et al., 2021a). As China is a key contributor to the global luxury market, understanding this growing and changing market is essential for the luxury sector to survive in a dynamic and highly competitive business environment. Moreover, the "core of the core" of luxury segments is the market for luxury fashion goods (Claudia et al., 2021b). Italian luxury fashion brands, as the leading sectoral players along with French brands, are the first western luxury brands (that is, Zegna, Versace, Fendi, Armani) to enter China and open fully-owned stores (Bonetti, 2014). Nowadays, Italian luxury fashion brands have

higher brand awareness in China than other western luxury brands. Additionally, the boom in emerging Chinese luxury brands has threatened the growth of western luxury brands in China (Lojacono and Pan, 2021). Some Chinese are pursuing inconspicuous consumption by buying indigenous luxuries (Wu et al., 2017). We need a better understanding of consumer perceptions of both western and indigenous luxury brands. Based on these reasons, we collect data on Italian and Chinese luxury fashion brands in China to have a more comprehensive understanding of luxury consumer trends. We compiled the list of the Italian brands from the Altagamma Foundation website (https://altagamma.it/members/) on 13 July 2021. And the Chinese brands were chosen based on previous research (Eckhardt et al., 2015; Wu et al., 2017) (see Supplement 1 for the list of selected brands).

Prior reports and studies on inconspicuous consumption appear to have been based only on surveys and interviews with consumers and industry professionals. Unsurprisingly, consumers claim to prefer quiet luxury. But such narratives may simply be an attempt to avoid seeming callous while other people are suffering (Nunes et al., 2011). The recent surge in social media use by luxury brands and consumers provides a promising data source to examine consumers' perceived attributes of brands without explicitly asking people any questions. It may help to reduce data bias and thus to reflect a more credible view of brands. We collected data from Weibo, a Chinese microblogging site equivalent to Twitter. Weibo is the largest Chinese social media network and the main channel for luxury brands to conduct marketing communication in the country (Altagamma Foundation, 2020). Users can create topics on this platform to express opinions, share ideas, and seek help. On 31 March 2022, the number of monthly active users on Weibo increased to 582 million (Weibo Company, 2022). Using the crawler software Octopus (see Supplement 2 for details of Octopus we used), we collected 21,477 official brand posts and 2,366,564 consumer reviews of 16 (11 Italian and 5 Chinese) brands on Weibo. The sample period is three years from 1 June 2018 to 30 June 2021 (see Supplement 3 for the daily growth of reviews from June 2018 to June 2021). The date of the COVID-19 outbreaks in Wuhan (that is, 22 January 2020) is used to distinguish between two subsamples. According to the previous work on Chinese text mining (Yang et al., 2021), this study uses the open-source Python scripting language for data pre-processing operations (see Supplement 4 for details of data pre-processing).

4 Analysis 1. Content Analysis by LIWC 2015

4.1 Method

We first use LIWC 2015 program to analyse the texts (Pennebaker et al., 2015). LIWC is one of the most widely used linguistic analysis tools, with applications in linguistics, consumer psychology, marketing, and other research disciplines (Humphreys, 2010; Tausczik and Pennebaker, 2010; Zhang, 2019). Applying the word counting strategy, the program produces language indicators by counting the proportion of words in a given text that match the predefined dictionaries (see Supplement 5 for an example of the predefined dictionaries). These linguistic indicators are related to real-world outcomes such as one's social status, personality and social relationships (Chung and Pennebaker, 2007).

Marketing and consumer psychological literature indicate that compared to consumers with ostentatious intentions, inconspicuous consumers show a lower need to flaunt wealth, achievements, power, and social status (Eckhardt et al., 2015). Furthermore, linguistic and psychological literature suggests that the frequency of writing about personal concerns, such as money, is an indicator of a person's materialistic tendencies (King, 2020). Based on previous research, we explore the occurrences of drives and personal concerns words and their correlation with affect tones in the dataset. We select two subcategories of the predefined linguistic category of drives, namely achievement and power (Pennebaker et al., 2015), for our analysis. And the subcategory of personal concerns used in the analysis is money. In the content analysis of the reviews, we use consumers' language use (operationalized as the frequency of word occurrence in specified subcategories) as an indirect measure of consumer preference for conspicuous consumption. We also examine the correlation between the language use in selected subcategories and consumers' emotional changes before and during the pandemic. In the content analysis of the posts, we use the language use in the posts (operationalized as the frequency of words in specified subcategories) as an indirect measure of the components of the brand value propositions. We also examine the correlation between the language use in selected subcategories and the changes of emotional tone in posts before and during the pandemic.

4.2 Results and discussion

Table 2 shows the summary statistics of the data. For example, for Italian brands, the distribution of the total number of reviews received per post is right-skewed (mode = 1; mean = 1168.33; median = 17; skewness = 22.49; kurtosis = 695.1). Of the 14, 479 posts, 7228 (7251) posts were posted after (before) January 22, 2020, and a total of 1,260,877 (842,503) reviews are collected in the subperiod. Moreover, 69.4% of the Italian brand posts received less than 100 reviews, which represented .93% of the total number of reviews; and 2.67% of the posts received more than 10000 reviews, which represented 65.32% of the total number of reviews.

Table 2. Summary statistics of brand posts and reviews

	Italian Brands	Chinese Brands
Distribution of the number of reviews received per post	skewed right	skewed right
Mode	1	0
Mean	1168.33	268.54
Median	17	1
Skewness	22.49	14.72
kurtosis	695.10	297.78
Numbers of posts (reviews) before the pandemic	7251(842503)	3304 (141588)
Number of posts (reviews) during the pandemic	7228 (1260877)	3694 (121596)
Posts without any reviews	6.68%	39.26%
Posts received fewer than 100 reviews	69.40%	83.59%
Posts received more than 10000 reviews	2.67%	1.69%

Table 3 displays statistics for content analysis. For instance, on average, a pre-pandemic consumer review of Italian brands has 8.87 words, and 52.46% of words are recognized by the LIWC dictionary. Additionally, in both brand posts and consumer reviews, the affect-laden emotions contained are largely positive. For example, positive and negative emotion words accounted for 8.65% and 0.79% of total words in pre-pandemic reviews of Italian brands. This means that on average 8.65% of text words in each review are positive affect emotion words and only 0.79% are negative affect emotion words. Furthermore, in the entire data set, the occurrence of drive-related words, including achievement and power, is positively correlated with the occurrence of positive emotion words. The occurrence of money-related words is positively correlated with the

occurrence of positive emotion words in posts, but negatively (positively) correlated with the occurrence of positive (negatively) emotion words in reviews. The results imply that luxury brands embody positive symbol meanings, such as high social status, power, and success. And the brands are closely associated with expensiveness. Although luxury brands successfully maintain their image as expensive and inaccessible to the masses, consumers have positive emotions towards these brand signals.

Table 3. Correlation matrix and statistics of content analysis

#	Text Mining Indicators	1	2	3	4	5	6	7	1	2	3	4	5	6	7
		Pre-COVID-19 pandemic							*During COVID-19 pandemic*						
	Italian brand posts														
1	WC	1							1						
2	Dic	0.22	1						0.18	1					
3	Posemo	0.00	0.20	1					0.04	0.21	1				
4	Negemo	0.04	0.16	0.02	1				0.08	0.13	0.03	1			
5	Achieve	0.07	0.19	0.11	0.03	1			0.12	0.21	0.15	0.04	1		
6	Power	0.04	0.12	0.12	0.04	0.26	1		0.06	0.15	0.05	0.02	0.24	1	
7	Money	0.08	0.06	0.04	-0.01	0.05	0.03	1	0.12	0.09	0.01	-0.02	0.08	0.08	1
8	Mean	30.58	49.95	4.73	0.40	1.77	2.57	0.33	31.62	50.38	4.35	0.36	1.68	2.57	0.29
9	SD	16.63	13.58	4.86	1.43	3.00	3.39	1.21	16.86	13.46	4.63	1.27	2.83	3.26	1.19
	Chinese brand posts														
1	WC	1							1						
2	Dic	0.21	1						0.31	1					
3	Posemo	-0.10	0.37	1					0.05	0.34	1				
4	Negemo	0.07	0.14	0.00	1				0.14	0.10	0.01	1			
5	Achieve	0.25	0.28	0.12	-0.01	1			0.11	0.18	0.11	0.02	1		
6	Power	0.00	0.17	0.06	0.04	0.19	1		0.11	0.16	0.03	0.10	0.25	1	
7	Money	0.18	0.11	0.08	-0.00	0.09	0.02	1	0.18	0.12	0.11	0.06	0.10	0.06	1
8	Mean	44.87	50.77	5.23	0.29	1.3	2.25	0.41	37.70	46.21	5.20	0.25	1.46	2.38	0.38
9	SD	22.46	13.78	4.69	0.96	2.00	2.88	1.09	22.15	13.63	4.91	0.90	2.53	2.95	1.14
	Consumer reviews of Italian brands														
1	WC	1							1						
2	Dic	0.08	1						0.14	1					
3	Posemo	-0.09	0.33	1					-0.09	0.34	1				
4	Negemo	0.03	0.15	-0.06	1				0.07	0.13	-0.05	1			

5	Achieve	0.03	0.13	0.11	0.00	1			0.03	0.13	0.08	0.00	1		
6	Power	0.04	0.15	0.08	0.07	0.24	1		0.05	0.14	0.08	0.06	0.30	1	
7	Money	0.02	0.09	-0.02	0.03	0.02	0.05	1	0.02	0.08	-0.01	0.02	0.02	0.04	1
8	Mean	8.87	52.46	8.65	0.79	1.55	2.39	0.34	8.04	50.02	9.33	0.64	1.11	1.82	0.24
9	SD	8.07	25.03	13.41	3.90	5.58	6.47	2.46	7.04	25.34	14.33	3.43	4.74	5.72	2.15

Consumer reviews of Chinese brands

1	WC	1							1						
2	Dic	0.05	1						0.11	1					
3	Posemo	-0.10	0.30	1					-0.15	0.34	1				
4	Negemo	0.03	0.14	-0.07	1				0.32	0.12	-0.10	1			
5	Achieve	0.01	0.09	0.06	0.00	1			0.02	0.09	0.11	-0.01	1		
6	Power	0.04	0.14	0.03	0.07	0.11	1		0.17	0.13	0.01	0.19	0.16	1	
7	Money	-0.02	0.12	-0.01	0.01	0.04	0.08	1	0.15	0.11	-0.04	0.13	0.00	0.06	1
8	Mean	9.55	54.17	9.25	0.67	1.34	3.26	0.53	9.84	50.91	11.33	0.75	0.96	1.95	0.46
9	SD	9.68	24.37	13.87	3.51	4.32	6.89	3.34	11.04	22.99	15.50	3.45	4.83	5.73	2.71

Notes: (1) *WC*: word count; *Dic*: dictionary words; *Posemo*: positive emotion; *Negemo*: negative emotion; *Achieve*: achievement. (2) All variables, except *WC* and *Dic* are expressed as the percentage of total words used in a review text. All correlation coefficients are significant at the 0.01 level.

More importantly, the results show significant changes in the occurrence of the specified words in the text. By comparing two sample periods, for reviews, the average percentages of the total word count for money (Italian brands: mean = 0.34 → 0.24; Chinese brands: mean = 0.53 → mean = 0.46), achievement (Italian brands: mean = 1.55 → mean = 1.11; Chinese brands: mean = 1.34 → mean = 0.96), and power (Italian brands: mean = 2.39 → mean = 1.82; Chinese brands: mean = 3.26 → mean = 1.95) decreased during the pandemic. The results mean that Italian and Chinese brands have seen fewer mentions of words related to "money", "achievement" and "power" in their consumer reviews during the pandemic. The findings provide initial evidence of the change in consumer appetites toward inconspicuousness. An explanation is that consumers still love luxury during the difficult time caused by the pandemic. But they act quietly and with a low-profile when interacting with luxury brands or other consumers on social media to avoid arousing envy. However, the new trend of inconspicuous luxury is not fully reflected in the brand posts. For Italian and Chinese brand posts, only the average percentage of the total word count for money (Italian brands: mean = 0.33 → mean = 0.29; Chinese brands: mean = 0.41 → mean = 0.38) decreased during the pandemic.

5 Analysis 2. Topic Modelling

5.1 Method

When studying a specific issue or topic in online text, dictionary-based tools such as LIWC program may retrieve initial strong results. In contrast, topic modelling can interpret the text more completely, revealing nuanced details (Guo et al., 2016). We next conduct topic modelling to further explore the trend of inconspicuous luxury and the impacts of COVID-19. Topic modelling is an established unsupervised machine learning algorithm (Guo et al., 2016). The purpose of topic modelling is to discover the main topics underlying an extensive collection of unstructured documents (Blei, 2012). LDA model is the most widely used algorithm for topic modelling (Zhang, 2019) and a central method in natural language processing (Cambria and White, 2014). It is a generative probabilistic model for extracting the latent themes in discrete datasets (e.g., text sets) (Blei et al., 2003). By measuring word co-occurrence within and across texts, LDA algorithm determines the main latent themes that make up those texts and the keywords that make up each topic. LDA model is suitable for processing text data in our research context. It does not make any assumptions about the text's grammar or structure characteristics (Blei, 2012), which is particularly important for social media text that embodies unstructured features (Feldman and Sanger, 2007). Moreover, the model has been widely used in marketing, consumer psychology, and communication studies (Guo et al., 2016; Tirunillai and Tellis, 2014; Yang et al., 2021).

In addition, it is worth mentioning that text, words, and themes in social media are usually analysed in a static manner. But studies on time trends may have significant implications for researchers (Yang et al., 2021). Therefore, we applied the LDA model to measure changes in brand value propositions and consumer perceptions of luxury brands before and during the pandemic. We used a Python-assisted method for topic extraction processing. The scikit-learn package was used for LDA modelling analysis (see Supplement 6 for the Python and scikit-learn versions we used). Detailed information on how to develop the method is beyond the scope of this article. However, interested readers can find the description of how to extract topic dimensions in the references cited (e.g., Zhang, 2019). Using the LDA algorithm, we extracted the main topic dimensions of brand posts and consumer reviews. We first determined the number of topics based on the perplexity score of each model. A lower score indicates better model performance (Blei et al., 2003) (see

Supplement 7 for the perplexity curves of eight types of topic dimensions). Next, using the keyword sets generated by the LDA algorithm, we determined the name of a topic based on the logical relations between the words most frequently mentioned in the topic. We then compared the extracted topic dimensions and identified unique dimensions before and during the pandemic.

5.2 Results and discussion

Figures 2 (a-d), and 3(a-d) show the detailed results of the eight types of extracted topic dimensions, which contain the top 15 keywords associated with each of these topics. The extracted topic dimensions reveal the signals of inconspicuous consumption during the pandemic and the importance of brand cultural elements for brand marketing. Specifically, for reviews of Italian luxury brands (see Figure 2 (a-d)), one of the dimensions shifts from "pursuing conspicuous luxury" to "favouring of inconspicuous luxury", indicating that inconspicuous consumption is increasing during the pandemic. In addition, one of the dimensions during the pandemic is "discussion about the brand origin, design, and cultural heritage", suggesting an increased consumer desire to emphasise brand cultural elements, such as the brand origin, heritage, and subtlety in design when they discuss or communicate with brands.

The extracted topics dimensions for emerging Chinese luxury brands also suggest consumer preference for not standing out as ostentatious during the pandemic (see Figure 3 (a-d)). Pre-pandemic, one of the main dimensions unique to brand posts is "introduction of luxury lifestyle in ancient Chinese palace", indicating the efforts of emerging brands to build a luxury image; and "pursuing conspicuous luxury" is one of the main dimensions unique to consumer reviews. But these dimensions are no longer the main dimensions during the pandemic. In addition, "discussion about the brand origin, design, and cultural heritage" is one of the main dimensions for reviews throughout the sample period, indicating consumer preference for brand offerings with Chinese cultural elements.

Figure 2 (a-d). Topic dimensions of Italian brands before and during COVID-19

(a)

Pre-pandemic Posts

- **Lucky draw activities organised by brands**
  - lucky draw; users; fair; Weibo; tool; supervise; congratulate; unique; announce results; platform; lottery; official; cool; time; freshness
- **Introduction of new arrivals conducted by brand ambassador**
  - series products; celebrity; wear; spring and summer; autumn and winter; way of dressing; news about celebrities; brand ambassador; new arrivals; single items; explore; purchase on selection; fashion trend; bag; style
- **Brand sponsored well-known events to create a high-end luxury brand image**
  - America's Cup; trophy; whenever and wherever; sailing ship; good luck; eager; wonderful and new; sponsor; Victoria's Secret; Sydney; Auckland; beach; start using; sailing; Condotti Boulevard
- **Closing brand-customer relationships during special times and events**
  - greeting; happy new year; Mid-Autumn Festival; next year; many words of blessing; all the year round; bling-bling; bright moon; eye; throughout; apologize; dazzling; passion; walk hand in hand; flourishing
- **Products introduction and promotion**
  - pet dog themed products; bring it home; interactive activities; candy themed perfume; new arrival handbag; forever; celebrity recommend; handbags; serval; fragrance; perfume; scent; pendant; vacation; sunglass
- **Fashion show**
  - video; product series; fashion show; spring and summer; autumn and winter; official; Weibo; men's wear; show field; women's wear; Roma; brand; new arrivals; time; explore
- **Festival promotion**
  - Chinese Valentine's Day; present; gift; limited edition; new year; co-branded; Valentine's Day; festival; Christmas; selection; limited; gifts for lover; love; pick out and buy; greeting
- **Daily marketing and brand image building**
  - happiness; childishness; find yourself; series products; theme; start the New Year; style; elaborate; elegant; grace; every time; innocence; smile; charming; best choice

(b)

During-pandemic Posts

- **Lucky draw activities organised by brands**
  - lucky draw; like; congratulate; user; details; fair; supervise; announce results; tool; unique; platform; Weibo; anti-cheat program; good gift; official
- **Introduction of new arrivals conducted by brand ambassadors**
  - product series; attention; explore; spring and summer; wear; new arrival; video; autumn and winter; brand ambassador; discussion around celebrity; Weibo; handbag; style; way of dressing; brand
- **Brand sponsored well-known events to create a high-end luxury brand image**
  - America's Cup; sailing; yachting race; Chinese New Year's Eve; gifts for lover; time; like; New Zealand; dear; embrace; sports event; team; the final match; Emirates Team New Zealand; master-hand
- **Closing brand-customer relationships during special times and events**
  - greeting; Spring Festival holiday; family; Happy New Spring; keep your fingers crossed; good health; enjoy; well-being; do the New Year countdown; good fortune; ring in the New Year; good luck; auspicious; propitious omen; brand activities
- **Products introduction and promotion**
  - flowery; bag; delicate and charming; design; details; ingenuity; experience; beautiful; proud; classic; moment; super hashtags[1]; vibrant; original; new
- **Promotion of men's supplies**
  - bag; Father's Day; happy; wear; fashion magazines; possession; father; dad; star style; celebrity; shine; father's love; tiredness; not to be missed; refresh
- **Corporation social responsibility**
  - auction; donation; education; auction house; Sotheby; auction items; auction proceeds; original; global; pandemic; pneumonia; donate; fighting COVID-19; UNESCO; virus
- **Advertise online official stores**
  - handbag; notice; online flagship; jacket; panic purchasing; Miss Universe; autumn and winter; register; special bag; new arrival; arrive; sell out; autumn; Summer Palace; coming
- **Brand sponsored cultural communication activities**
  - Rong residence[2]; exhibition period; art exhibition; booking tickets; Shanghai; Chinese treasure cabinet; explore; Alex Da Corte's exhibition; individual exhibition; works; relationship; return; discussion; fairy maiden; silk

(c)

Pre-pandemic Reviews

- **Support on brands and brand ambassadors**
  - celebrity; fashion; thanks; super hashtags; brand; elegant; expect; grace; invite; charming; perfect; good-looking; handsome; global; Weibo
- **Discussion about new arrivals and related brand ambassadors**
  - ambassador; perfect lady; want to have; handsome; good-looking; classic elements; eager; fascinated; time; products; like; oneself; display; celebrity; adequate
- **Discussion about brand-sponsored activities and present celebrities**
  - celebrity; thanks; good-looking; expect; invite; super hashtags; like; cooperate; Weibo; share; brand; sponsor; clothes; love; handsome
- **Daily interaction between brands and brand followers**
  - work hard; handsome; celebrity; smart; super hashtags; ambassador; amazing; many; good looking; work; weekend; too expensive; fit; Chinese Valentine's Day; craft
- **Negative comments on brands and brand ambassadors**
  - China; apologize; protect environment; Hong Kong; picture; time; Chinese; calm; mistake; country; Macao; life; shock; celebrity; publish
- **Discussion about positive star persona**
  - brand ambassador; new year; perfect lady; wish; discover; happy birthday; beautiful; very well; like; super hashtags; blessing; convey; good health; summer; perfect
- **Chasing stars**
  - cute; celebrity; best; fresh; world; meet; great; the most beautiful; the most wonderful; gentle; smell; talent; admire; perfume; public welfare
- **Discussion about celebrities wearing products**
  - like; celebrity; good-looking; love; baby; bag; series products; wear; super hashtags; beautiful; fit; pink; suit; handbag; perfect
- **Pursuing conspicuous luxury**
  - luxurious; handsome; expensive; wear; celebrity; happy; high-end; haute couture; customized; very; fit; worthy; man; authentic; promotional video
- **Discussion about brand-sponsored teleplay and movies**
  - youthful; celebrity; cool; photo; movie star; brand; video; new teleplay; release; superior; official website; luxury brand; charming; sincere; match

(d)

During-pandemic Reviews

- **Supports on brands and brand ambassadors**
  - celebrity; thanks; luxury brand; good-looking; share; handsome; brand; expect; invite; cooperate; super hashtags; like; nice; recommend; clothes
- **Discussion about new arrivals and related brand ambassadors**
  - celebrity; luxury brand; Weibo; official; thanks; expect; series products; super hashtags; brand; invite; wonderful; future; show; online; together
- **Discussion about brand-sponsored activities and present celebrities**
  - celebrity; luxury brand; congratulate; brand; fashion; charm; thanks; cooperate; expect; classic; display; impact; invite; perfect; show
- **Daily interaction between brands and brand followers**
  - baby; style; Valentine's Day; pink; sweet; meet; celebrity; comfort; watch; handsome guy; attractive; like; handbag; eye candy; novelty
- **Negative comments on brands and brand ambassadors**
  - endorsement; fans; actor; female; brand ambassador; selection; idol; surrogacy; disqualification; celebrity; insult; first; many; product; like
- **Discussion about positive star persona**
  - brand ambassadors; fresh; fit; oneself; convey; gentle; excellent; recommend; dear; like; love; star; cute; great; fine
- **Chasing stars**
  - shine; autumn; pretty face; celebrity; love; romantic feelings; start; masculinity; like; infinite; happy holidays; meet; online; brave; video
- **Discussion about celebrities wearing products**
  - celebrity; luxury brand; elegant; good-looking; handsome; thanks; fit; like; love; brand; fashion; match; super hashtags; model; grace
- **Favouring of inconspicuous luxury**
  - celebrity; perfect match; good-looking; brand; elegance; expensive; suit; low-profile; low-key luxury; handsome; watch; gorgeous; super hashtags; colour; pleasant
- **Discussion about the brand origin, design, and cultural heritage**
  - style; Italy; culture; elements; design; Italian style; world; perfect match; celebrity; watch; sexy; meet; night; skirt; fancy

Note: (1) [1] Similar to Twitter, hashtags make it possible for Weibo users to tag a topic they are addressing in their posts so that their content pops up whenever other people search for that hashtag. A Super hashtag goes beyond the hashtag. It basically is a community account where all sorts of information is shared and organised. Users can 'follow' (关注) a Super hashtag and can also 'sign in' (签到). (2) [2] Rong residence is a western-style house located in Shanghai. After Prada assumed tenancy, the brand began a six-year building renovation project to reflect Miuccia Prada and Patrizio Bertelli's interest in the city of Shanghai and Chinese aesthetic heritage.

Figure 3 (a-d). Topic dimensions of Chinese brands before and during COVID-19

(a)

Pre-pandemic Posts

- **Festival promotion**
  - festival; happy; Mid-Autumn Festival; kindly feelings; Chinese Valentine's Day; Father's Day; Valentine's Day; gift; Children's Day; good luck; Christmas; Mother's Day; new arrival; family reunion; like
- **Introduction of new arrivals conducted by brand ambassadors**
  - product series; lucky draw; Weibo; jewellery; Chinese style product; official; fashion; brand ambassador; spring and summer; Paris; autumn and winter; wear; activity; congratulate; new arrivals
- **Introduction of Chinese custom and traditional culture**
  - the solar terms; Slight Cold (21th solar term); total 24 solar terms; Winter Solstice (22th solar term); China; Beginning of Summer (7th solar term); Beginning of Autumn (13th solar term); Chinese traditional buildings; White Dew (15th solar term); Beginning of Summer; Chung Yeung Festival; emoji; the Palace Museum; tradition; Great Cold (24th solar term)
- **Introduction of luxury life in ancient Chinese palace**
  - gold water bridge (in front of the Palace Museum); the solar terms; Great snow (21th solar terms); Gatehouse (Traditional Chinese building); Insects Awaken (3th solar term); snowy day; Great Heat (12th solar term); Chinese traditional buildings; design; heavy snow; midsummer; rainy season; Grain in Ear (9th solar term); everywhere; tradition
- **Brand sponsored Chinese-western cultural communication activities**
  - ancient buildings; tradition; China; Summer Palace; the period of Qian Long Dynasty; built in; ancient; Chinese garden; the Jade Belt Bridge (in Summer Palace); date back to; Qing Yi-yuan (prior name of Summer Palace); church; Willow Bridge (in Summer Palace); Qian Qing Palace (in the Palace Museum); Qian long Emperor
- **Introduction of Chinese attractions and special local products**
  - Autumnal Equinox (16th solar term); plan; good luck; Frost's Descent (18th solar term); light snow (20th solar term); special local product; rain and dew; China; Mount Lu (World Cultural Heritage); the solar terms; be fascinated; Golden Week; attractions; world cultural heritage; make a wish

(b)

During-pandemic Posts

- **Festival promotion**
  - special purchases for the Spring Festival; special taste; before the spring festival; be fond of; love marks; forever; brand ambassador; virtue; goodness; loyalty; preference; match; fit; endorsement; buy
- **Introduction of new arrivals conducted by brand ambassadors**
  - product series; jewellery; brand ambassador; flagship store; video; Chinese style product; moment; new arrival; Weibo; heritage; life; wear; romantic; fine; jewellery
- **Introduction of Chinese custom and traditional culture**
  - Winter Solstice (22th solar term); Pure Brightness (5th solar term); Chinese dumpling; family reunion; sweet dumplings; parent-child clothing; Chinese chic; the solar terms; Shanshui Painting (Chinese Landscape Painting); poetry of the Tang Dynasty; autumn; skirt; Beginning of Autumn (12th solar term); from dark to light; anti-epidemic
- **Discussion about daily life since the pandemic**
  - work; first day; workday; emoji package; as usual; tips; return to normal; busy; status; finish; fellow; recent; national college entrance examination; return to work; feel happy
- **Lucky draw activities organised by brands**
  - lucky draw; Weibo; congratulate; users; announce results; unique; fair; supervision; tool; high-end; platform; official; earrings; gift; gold coin
- **Brand sponsored theme concerts**
  - workday; weekend; healing and refreshing; live streaming; good night; brand-sponsored concerts; go to the store; marriage; finish; buy; clock in concert; heal the heart; good music; music; be there or be square
- **Corporation social responsibility**
  - equipment; prevention and control; protection; charity; equipment; severely afflicted area; purchase; medicine; medicament; Wuhan; relief supplies; donation; closely related; COVID-19; first half-year
- **Discussion consumptions during traditional festivals and for custom**
  - hometown; Chinese chic; local food; in peace; the solar terms; custom; meticulous; Chinese traditional Laba festival; brilliant and gorgeous culture; Mid-Autumn Festival; Cold Dew (17th solar term); Beginning of Summer (7th solar term); cost; bill; valuable
- **Closing brand-customer relationships during special times and events**
  - gift; Tmall flagship store activities; Palace Museum-style treasures; Chinese chic; treasure; dear valued customers; online flagship store; spring festival; undeliverable; temporary; Cyber Monday after spring festival; have the honour to send; period; express service; buy
- **Looking for empathy in traditional Chinese culture**
  - Chinese chic; the solar terms; Insects Awaken (3th solar term); White Dew (15th solar term); pressure; relieve; relieve boredom; the origin place of Chinese civilization; daily life; Great Heat (12th solar term); every kind of cereal crop; spring rain; traditional culture; Grain Rain (6th solar term); revival in spring

(c)

Pre-pandemic Reviews

• Corporation social responsibility
  • activities; Boutiques in Place Vendome; waste; Tmall online store; Paris; participate; organic waste; waste sorting; celebrity; public welfare ad.; public interest; explore; environment protection; high score; wonderful

• Discussion about new arrivals and related brand ambassadors
  • like; jewellery; expect; celebrity; brand ambassador; good looking; endorsement; collaborate; arrange; new year; Chinese tunic suit; thanks; elegance; grace; customized

• Discussion about the brand origin, design, and cultural heritage
  • series products; traditional culture; symbolic; China; gourd[1]; happiness; good looking; cute; wish; bracelet; panda; ring; necklace; jewellery; pendant

• Chasing stars
  • accompany; permanent; Mid-Autumn Festival; celebrity; like; gentleman; blogger; happy; smile; sincere; Chengdu; daily; in advance; promise; appear

• Discussion about brand-sponsored teleplay and movies
  • teleplay; stars; role; expect; congratulate; match; act; good fortune; honour; high quality; Chinese Lantern Festival; start filming; gain; reunion; award

• Lucky draw activities organised by brands
  • lucky draw; gift; birthday; jewellery; prize; wish; want to buy; many; warmth; show love; like; Valentine's Day; necklace; present; lucky

• Discussion about brand anniversary activities
  • Weibo; celebrity; official; thanks; myself; expect; like; brand; wish; congratulate; good looking; anniversary; happy anniversary; effort; 15th anniversary

• Discussion about eastern and western cultures
  • cheer; the West; celebrity; classical; charm; the East; like; good; mildness; feeling; merit; symbol; palace; report; vintage

• Positive comments on brand-sponsored activities and present celebrity
  • celebrity; accept; well; magazine; poster; skill; Xi'an; protect animals; tomorrow night; save; time; self-possession; strength; shining; flow

• Pursuing conspicuous luxury
  • high-end; customer service; luxurious; extravagant; products; official; noble; buy; follow up; rich; store; customer; relaxed; luxury products; services

(d)

During-pandemic Reviews

• Corporation social responsibility
  • pandemic; strive; assist; resist; Wuhan; commitment; donate; end; always; equipment; anti-epidemic; eventually; hide; sell well; angle

• Discussion about new arrivals and related brand ambassadors
  • celebrity; expect; series products; fine; wish; happiness; homophonic; symbolic; gourd[1]; thanks; jewellery; happy; good looking; surprise; like

• Discussion about the brand origin, design, and cultural heritage
  • theme; elements; traditional Chinese rice-pudding; Chinese chic; celebrity; fashion; Dragon Boat Festival; heritage; activities; China; well-being; charm; child; festival; autumn

• Chasing stars
  • be there or be square; celebrity; noble; expect; smile; beautiful; wait; perfect lady; shine; production; elegance; bright; previous; gesture; trials

• Discussion about brand-sponsored teleplay and movies
  • break; happy; discover; actors; teleplay; still; lucky; copywriting; daily; derive from; later; sincere; be invited; adorn; watch

• Daily interaction between brand followers
  • love; interaction; super hashtags; real; provide; production; friends; remarkable; community; hobby; communicate; pretty face; like-minded; open; interested

• Discussion about positive star persona
  • possess; chase; celebrity; value; cost; customized; binge-watch; weekend; to play the role of; merit; integrity; tolerance; virtue; quickly; decrease

• Negative comments of brand and brand ambassadors
  • celebrity; refuse; buy; products; endorsement; misconduct; brand; fans; plagiarize; design; promotion; brand ambassador; sales; responsibility; launch

• Support on brand and brand ambassadors
  • celebrity; good looking; star; TV show; thanks; luxury brand; support; necklace; official; nice; Weibo; brand; Chinese Valentine's Day; recommend; design

• Discussion about the online shopping experience
  • watch; perfect; respect; May Day; live commerce; changing or refunding; response; earrings; handsome; get; come; celebrity; opportunity; rich; always

• Discussion about online brand-consumer interaction experience
  • gold; live streaming; March; jewellery; heart; present; bracelet; meet; sales clerk; celebrity; discount; solve; want; spring; happy

Note: (1) [1] In Chinese, gourd (葫芦) is pronounced similarly to happiness (福禄). According to traditional Chinese culture, products designed in the shape of a gourd often contain the symbolic meaning of happiness.

Furthermore, the comparative analyses of the review dimensions and the post dimensions reveal the mismatches between these two dimensions that hindered brand co-creation during the pandemic. For Italian and Chinese brands, although consumers have an increased desire for inconspicuous luxury, as reflected in the dimension of their reviews, there is no dimension in posts that shows the companies' use of inconspicuous branding strategies. In addition, for both brands, consumers' discussion centred around brand cultural elements, suggesting that consumers already have the necessary cultural capital to decode and appreciate subtle signals of inconspicuous luxury (Berger and Ward, 2010). But such subtle and culturally embedded signals have possibly not yet been applied to online branding strategies.

In specific, the dimensions of posts during the pandemic could partly reflect the companies' emphasis on cultural elements. For Italian brands, one of the dimensions during the pandemic is "brand-sponsored cultural communication between China and the West", indicating that culture is used as a bridge to link with emerging markets when international travel is difficult. Luxury firms try to make people realise that their brands are not just product logos, but active elements and artistic ambassadors of a country's culture (Kapferer, 2014). For Chinese brands, "looking for empathy in traditional Chinese culture" becomes one of the dimensions during the pandemic, indicating that the companies expect to deepen their connection with Chinese consumers by promoting traditional Chinese culture. But it is not enough for firms to tap into the national culture. To co-create with a growing number of experienced and inconspicuous consumers in emerging markets, companies need to subtly emphasise the cultural and symbolic values of the brand itself in their branding strategies.

6 Conclusion

By applying LIWC content analysis and LDA topic modelling, this research explores the trend toward inconspicuous consumption in emerging markets and analyses the changes in consumer brand perceptions and brand value propositions before and during the pandemic. The findings show a shift in consumer preference toward subtle luxury, revealing the mismatches that prevent brands and consumers from co-creating, and highlighting the importance of subtle and culturally-oriented branding strategies for brands to reach inconspicuous consumers in the post-pandemic era.

6.1 Theoretical contributions

The findings add to the existing knowledge of the marketing discipline mainly through two aspects. First, consumer psychologists have a limited understanding of changes in consumer brand perceptions during a recession (Nunes et al., 2011) and the impacts of a global pandemic on conspicuous consumption, especially in emerging markets. The research contributes to the marketing literature by showing a shift of consumer appetites toward inconspicuousness during the pandemic and revealing the mismatches between luxury branding strategies and consumer perceptions on social media, which may inhibit brand co-creation. The findings also highlight important cultural dimensions of luxury brands that experienced consumers with cultural capital may value.

Second, this study applies a novel approach to luxury marketing research. The digital explosion has dramatically transformed ways of luxury marketing, which in turn requires the luxury fashion industry to rethink consumer brand perceptions. As consumers increasingly favour online channels rather than traditional ones, user-generated texts on social media, such as consumer reviews, offer the latest information on consumer brand perceptions. In the big data era, however, the challenges luxury marketers face includes analysing a massive amount of unstructured online text and understanding themes voiced through words that describe consumer preference. This article addresses these issues by applying text analysis and unsupervised topic modelling to analyse online texts. The extracted topic dimensions from consumer reviews provide fresh and genuine "voices" of luxury consumers in distant markets, revealing how consumers feel about their followed brand and what aspects they care about when discussing a brand on social media.

6.2 Managerial implications

Luxury players need to discern consumer trends and transform their operations to meet consumer desires and retain their relevance, especially for youth, who are set to drive 180% of the growth in the market from 2019 to 2025 (Claudia et al., 2021b). In a world governed by trends, the most important thing is to stay ahead of trends. Our findings show that the trend of inconspicuous luxury is gaining momentum among young digital generations in China during the pandemic. In contrast, luxury marketers have not yet responded to this growing trend. We believe that the new trend deserves the attention of practitioners. Because inconspicuous consumers occupy a sizeable market

share of luxury spending (Kover et al.,2022), the market of inconspicuous luxury has proved to be larger than previously thought (Eastman et al., 2022). More importantly, market observers highlight that Chinese consumers (in China), online channels, and younger generations will be the main growth drivers in post-pandemic luxury markets (Claudia and Federica, 2021). Post-pandemic, the luxury brands that are more restrained or minimalist are expected to be more successful (Kapferer and Révis, 2020). Managers should realise that the conspicuous consumption of nouveau-riche consumers in emerging economies is partly shifting to inconspicuous consumption (Postrel, 2008). Marketers should keep this motive of not wanting widespread attention in mind and communicate brand signals in a subtle and sophisticated manner that only consumers with the appropriate cultural capital can decode and appreciate.

By 2030, the luxury industry should be radically different. Instead of discussing the luxury industry, we will discuss the market for "insurgent cultural and creative excellence" (Claudia et al., 2021b). Culture is becoming a vital operant resource to enrich branding strategies, which mainly including the history of specific meaning and moments of creative innovation (Schroeder et al., 2014). To appeal to growing inconspicuous consumers in emerging markets, marketers could use culturally-oriented branding strategies to emphasise brand cultural and symbolic values in a subtle manner. For example, a brand could co-create with inconspicuous consumers by displaying a symbolic story that enables consumers to be associated with and enjoy experiencing (Makkar and Yap, 2018b). But the use of brand cultural resources such as brand heritage, design and origin should be appropriate and ingenious. To avoid brand co-destruction and achieve co-creation (Echeverri and Skålén, 2011; Plé and Cáceres, 2010), marketers should have a better understanding of brand knowledge or cultural capital that consumers possess. Inconspicuous luxury items are like membership in a secret club (Eastman et al., 2022), where cultural capital owned by consumers is the key to entry. Understanding consumers' cultural capital is the premise for marketers to choose the brand cultural elements that match with consumers for branding.

The findings suggest that consumers have the necessary cultural capital to appreciate the brand cultural and symbolic values. Chinese still love luxury, but consumer appetites for luxury are evolving. Luxury was used for conspicuous consumption and to show social status, but now the focus is shifting to culture (Murphy, 2013). Companies should manifest matched brand cultural

elements within brand co-creation strategies to meet consumers' perceptual attributes of luxury brands. For instance, as a luxury advertising designer, the role is not limited to making sketches; he or she must capture important signals of socio-cultural change and take them as a source of inspiration (Lojacono and Pan, 2021). The extracted topic dimensions include the top 15 keywords of each topic, which may provide implications for brands to select suitable cultural and fashion elements in their co-creation strategies. Furthermore, as we mentioned before, traditional western luxury brands are facing challenges from the emerging indigenous brands; many consumers want to consume indigenous brands as a way of inconspicuous consumption (Wu et al., 2017). The findings could provide insight for both brands to better understand their target consumers.

6.3 Limitations and future research

This work is not without limitations. While the findings of both studies provide initial evidence of inconspicuous consumption, we cannot be sure whether this new consumption trend is long-term because the COVID-19 pandemic is still not over. Future studies could test this proposition after the pandemic is over. Furthermore, while LDA is a widely used method in natural language processing, it is not without shortcomings. Although we follow standard LDA procedures, this approach involves a degree of subjectivity in interpreting the topic (DiMaggio et al., 2013). Our research did not fully apply some of the newest techniques, such as hashtag-pooling (Kant et al., 2020), to complement the LDA model. Hashtag-pooling treats hashtags as topic tags that indicate the core idea or context of tweets, which could be used to further improve the quality of LDA modelling (Yang et al., 2021). However, Weibo, the social media platform used in this study, differs from Twitter. The percentage of posts and reviews on Weibo that use hashtags is low, so hashtag-pooling could not evenly capture the properties of the text data. As more and more Weibo users use hashtags, hashtag-pooling is expected to improve future research on Weibo (Yang et al., 2021).

Supplement

Supplement 1: The List of Selected Luxury Brands

Table S1. The list of the luxury brands

	Number of Followers	Number of Posts	Weibo Link
Italian brands			
Gucci	3060000	5413	https://weibo.com/gucci
Bvlgari	1910000	3963	https://weibo.com/bulgari
Prada	1800000	4107	https://weibo.com/pradaofficial
Versace	985039	4011	https://weibo.com/versacechina
Tods	940000	3803	https://weibo.com/todsgroup
Fendi	935631	4173	https://weibo.com/fendi
Zegna	592879	2886	https://weibo.com/zegnaofficial
Moncler	505517	2592	https://weibo.com/monclerchina
Ferragamo	498641	2741	https://weibo.com/ferragamochina
Valentino	478240	4075	https://weibo.com/valentinoofficial
Max Mara	188447	1386	https://weibo.com/maxmaraofficial
Chinese brands			
Chow Tai Fook	726319	7393	https://weibo.com/chowtaifook
Qeelin	303199	1524	https://weibo.com/qeelinjoaillerie
Shanghai Tang	181941	1790	https://weibo.com/shanghaitangchina
Shitzy Chen	134652	2590	https://weibo.com/shiatzychen
Shang Xia	92058	2025	https://weibo.com/shangxia

Note: posts and follower count for each brand are compiled on July 7, 2021.

Supplement 2: The Details of Octopus

The version of Octopus we used is Octopus 8.5.2.40817. Octopus has not been forbidden by any website (Li et al., 2018b) and is widely used by researchers for the data collection on social media (Hamada and Naizabayeva, 2020; Mirzaalian and Halpenny, 2021). By using Octopus, we collected Weibo data from 30 July 2021 to 20 August 2021.

Supplement 3: The Daily Growth of Reviews from June 2018 to June 2021
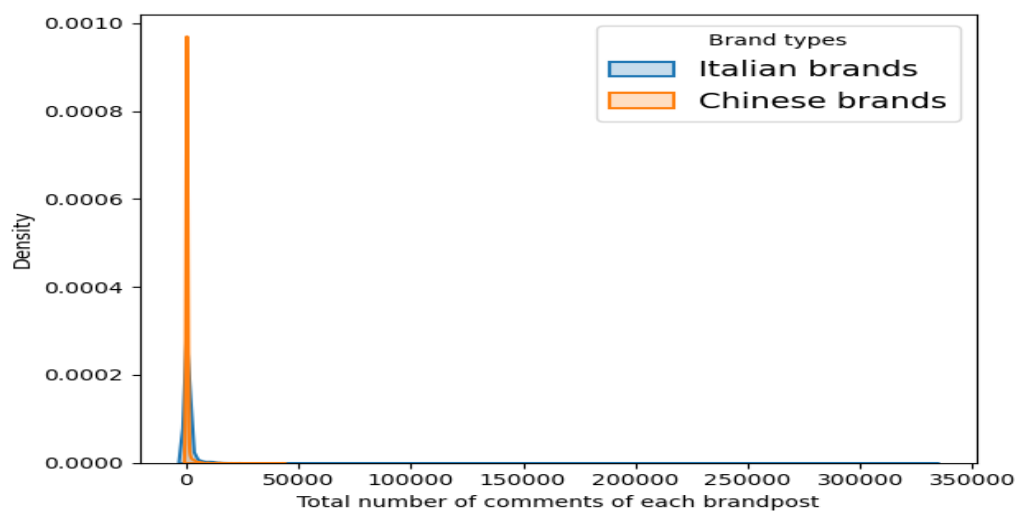
Figure S1. Number of daily consumer reviews for Italian brands on Weibo
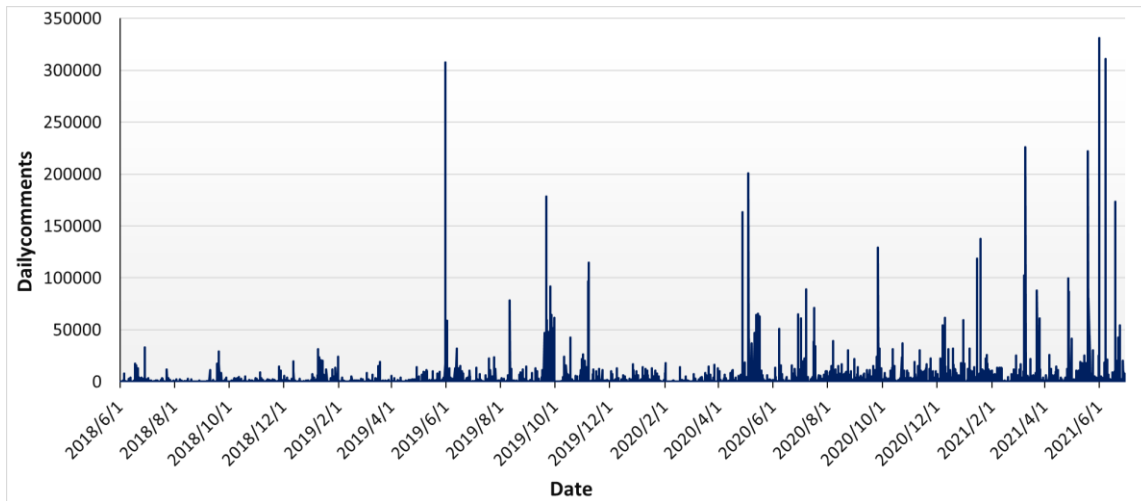
Figure S2. Number of daily consumer reviews for Chinese brands on Weibo
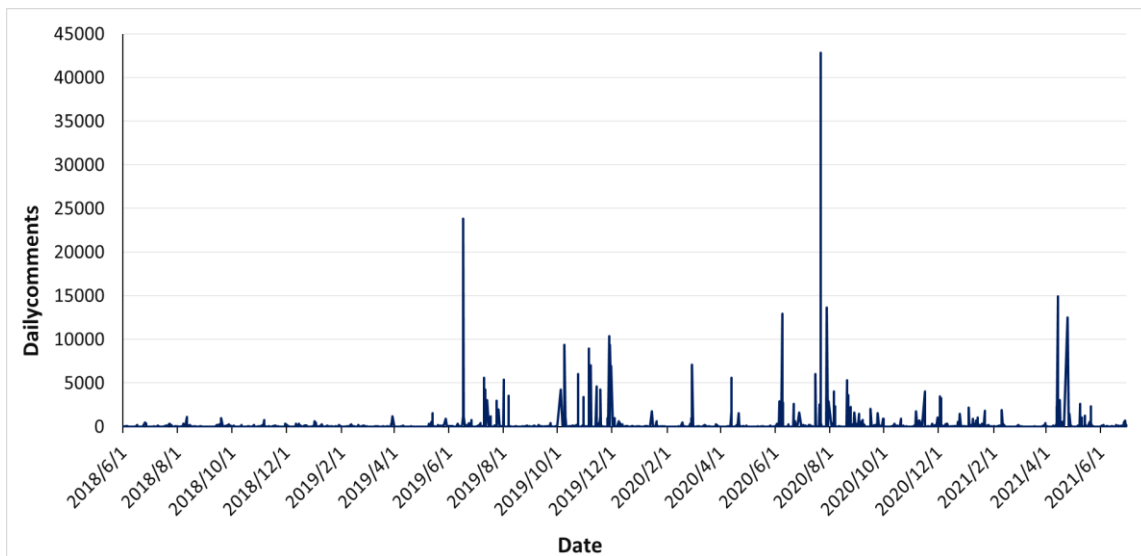
Figure S3. Density plot of the total number of comments for each post

Supplement 4: The Details of Data Pre-Processing

The data pre-processing includes data cleaning and Chinese word segmentation, which are critical to generating meaningful topic models. First, we clean the data by filtering all mis-spellings, punctuations, non-Chinese words, special characters (e.g., web addresses and emojis), and Chinese stop words in the text. The main goal of this procedure is to ensure that prior text mining analyses of social media data are strictly replicated (Guo et al., 2016; Lim and Buntine, 2014) to discover potential topics on Weibo. Then we perform the Chinese word segmentation before top modelling. Unlike English articles, Chinese articles do not use blanks as segmentation between words in a sentence. The smallest unit in Chinese is 'Zi' (character). A word segmentation tool is needed to divide words for Chinese text. Therefore, we conduct the Chinese word segmentation by using JIEBA (a Chinese word segmentation tool, https://github.com/fxsjy/jieba), which has been widely used in natural language processing and achieved good results (Day and Lee, 2016; Li et al., 2018a). The result set becomes the "corpus" for further text analysis (Manning, Raghavan, and Schutze, 2008). We regard every brand post and consumer review as an independent document and implement the above procedures for all posts and reviews.

**Supplement 5: An Example of the Predefined Dictionaries of LIWC 2015 Program**

For example, one of the predefined dictionaries in LIWC program refers to people's personal concerns, which can be inferred from what the person writes. Personal concerns are related to goals or topics (e.g., money) that a person cares about most (King, 2020). To measure personal concerns in a text, the program automatically retrieves the number of words that match the predefined dictionary of personal concerns (e.g., "owe" and "cash" are money-related words) in the analysed text. Then, the program computes the frequency with which the dictionary words occur in a text, divides it by the total number of words in the text, computing the percentage of the text that belongs to a specific language category. The frequency of word references in these categories indicates the psychological significance of these individual concerns (King, 2020).

Supplement 6: The Version of Python and Scikit-Learn

In analysis 2, the version of python we used is Python 3.9.7. And the version of Scikit-learn we used is 0.24.2 (https://scikit-learn.org/).

Supplement 7: Perplexity Index and Number of Topics

Figure S4. Perplexity curve of topic model for pre-pandemic Italian brand posts
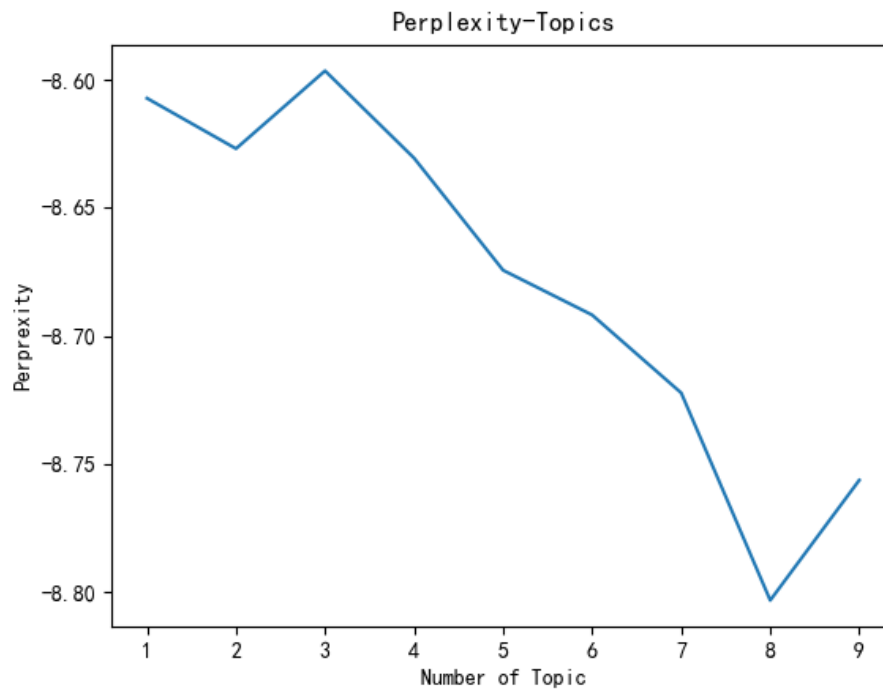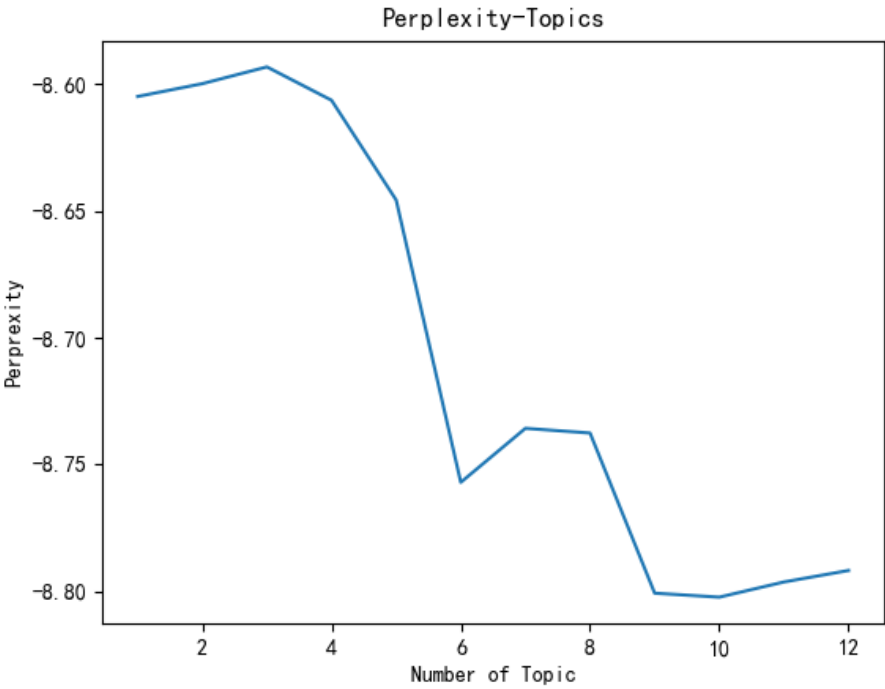

Figure S5. Perplexity curve of topic model for post-pandemic Italian brand posts
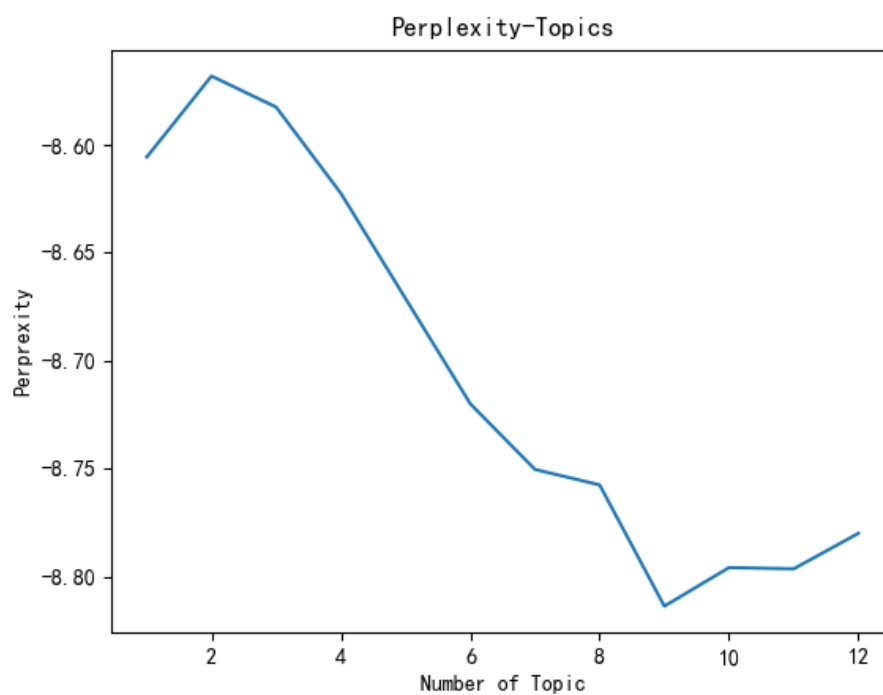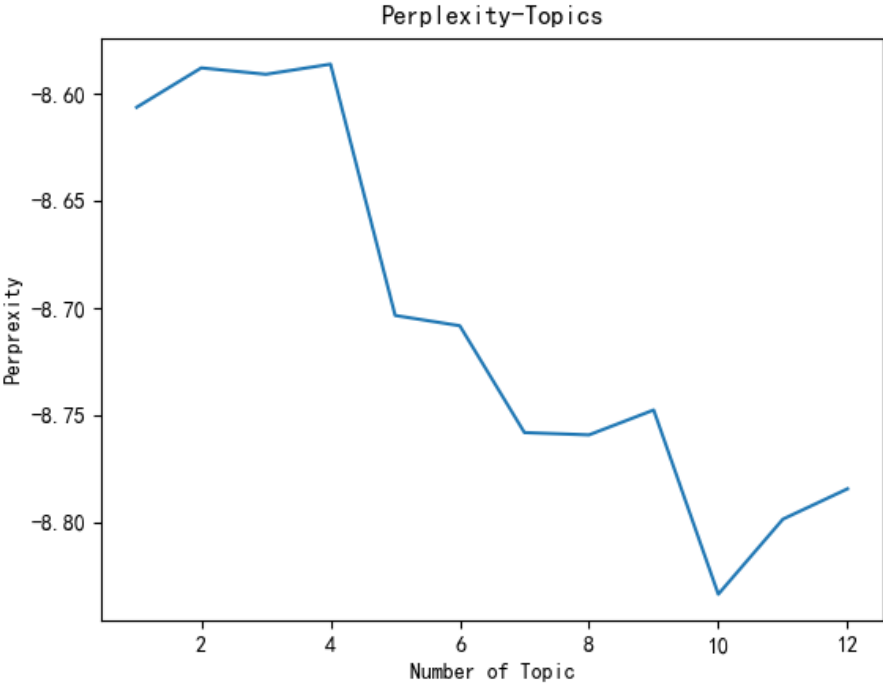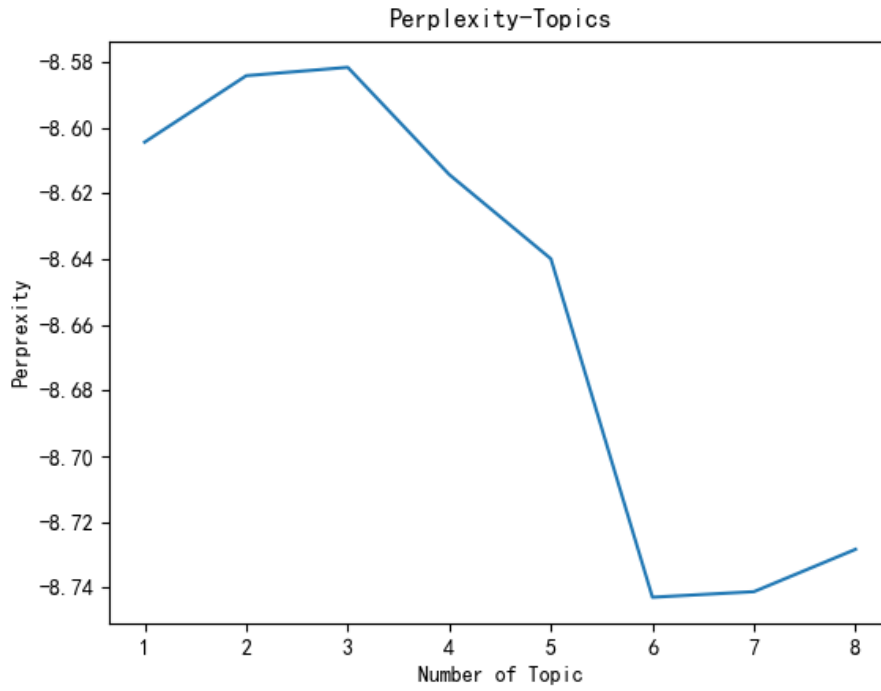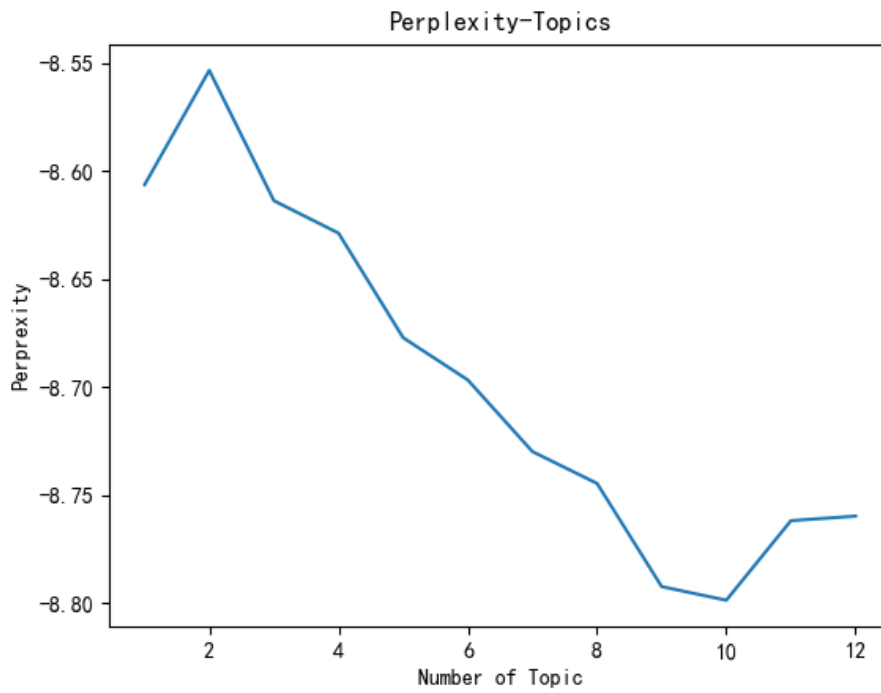
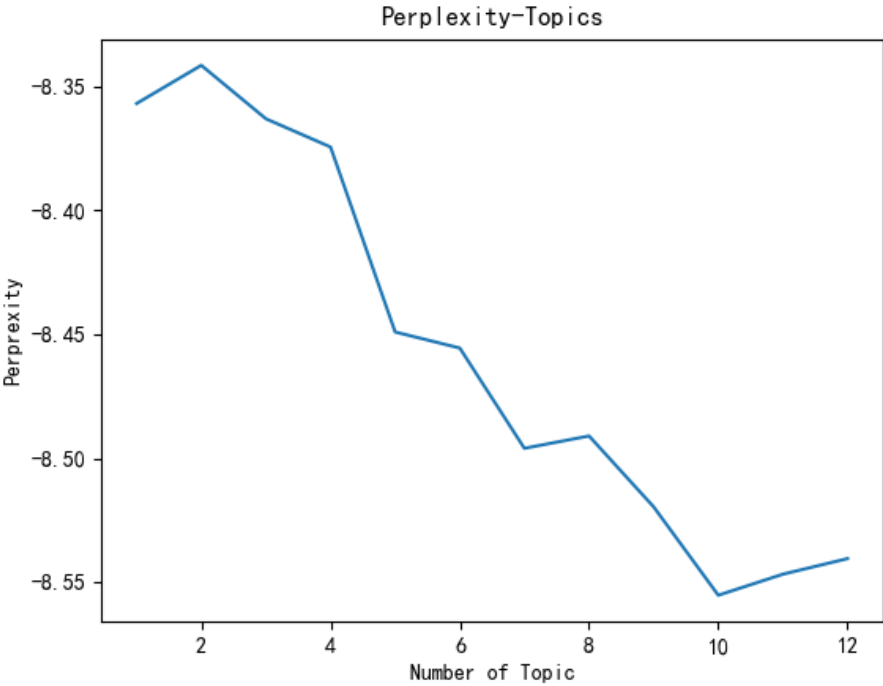**Figure S6.** Perplexity curve of topic model for reviews of pre-pandemic Italian brand posts

**Figure S7.** Perplexity curve of topic model for reviews of post-pandemic Italian brand posts

Figure S8. Perplexity curve of topic model for pre-pandemic Chinese brand posts

Figure S9. Perplexity curve of topic model for post-pandemic Chinese brand posts

Figure S10. Perplexity curve of topic model for reviews of pre-pandemic Chinese brand posts

Figure S11. Perplexity curve of topic model for reviews of post-pandemic Chinese brand posts
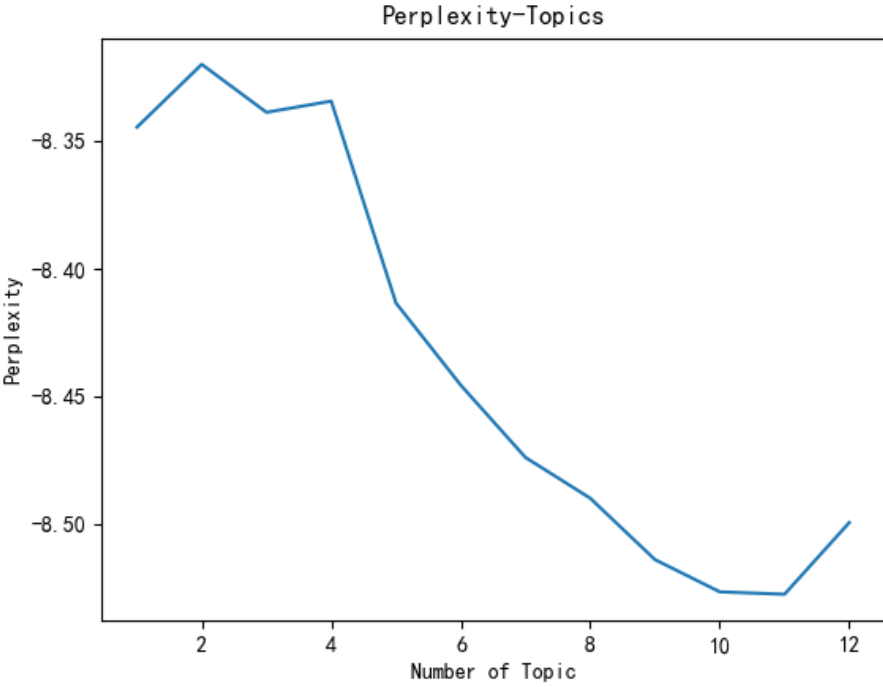
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Chapter 4 Discussion and Conclusion

This chapter reports the main findings of each paper in an integrative manner to illustrate how the three papers are linked and to meet the general purpose of the research. The discussion is followed by showing the theoretical contributions and managerial implications of the dissertation. These contributions stem not only from the findings and discussions of the empirical studies in the three papers, but also from a mixture of the research objectives, the COVID-19 context of the dissertation, the literature review, and the theoretical framework. In the process, the paper has made significant new contributions to both academic and industry practice. After that, this chapter outlines the limitations of the study's methodologies and findings. And it is concluded by proposing some fruitful avenues for future research.

4.1 Overview of the Main Findings

To recap briefly, consumers' value co-creation is recognized as an important source of companies' competitive advantage (Cheung, Pires, Rosenberger III, Leung, & Ting, 2021). With the proliferation of social media (SM) communication, marketers increasingly utilize SM platforms and apps to interact and co-create with consumers (Cheung, Pires, Rosenberger III, Leung, Chang, et al., 2021). But the scholarly attention afforded to the influential factors/actors of value co-creation on SM is limited. Therefore, the main research objective of this dissertation is to understand the co-creation strategies combined with SM during a global crisis and to explore the important factors/actors that influence consumers' value co-creation. We achieve the research objective by examining the mechanism of consumer's value creation activities and by exploring the changes in consumer trends during the COVID-19 pandemic, especially in an international marketing context. The dissertation poses one main research question and three sub-questions to guide the research objective. These sub-questions focus on different spheres in which value co-creation occurs and are addressed by the different papers in this dissertation. This section will provide an overview of the main findings in response to the main research question and three sub-questions.

Regarding the first sub-question, based on service-dominant (S-D) logic and dimensions of consumer culture theory, paper 1 conceptualizes consumers' value co-creation process in times of crisis and establishes the consumer independent value creation (CIVC) model. The developmental

model highlights consumers' operant resources including domain-specific knowledge, self-efficacy and online social relations are critical factors that determine the main outputs of the co-creation activities, which are represented by consumers' creative behaviours. Considering that the tourism sector is one of the most severely influenced by the pandemic and the Chinese tourism market is the first to be influenced (UNWTO, 2020), the study selects the Chinese tourism market to test the model. By using online questionnaire results on 472 Chinese independent tourists who travelled during COVID-19, the study validates the model and reveals the mechanism of the value creation process that occurs totally in the consumer sphere during the pandemic. We found that consumers could create value in several paths: they could independently create value or co-create value with other consumers by integrating various operant resources. In the CIVC process, consumer knowledge plays a driving role in their creative behaviours. Self-efficacy and C2C co-creation on SM serially mediate the indirect effect of consumer knowledge on consumer creative behaviour. The research findings suggest that under the threat of a global crisis, experienced travellers are likely to succeed in coming up with creative ideas and applying them to their travel activities if they firmly believe in their ability to perform well in travel and are active on online C2C platforms. Accordingly, the study suggests that firms should pay attention to the new market based on CIVC activities, and provide consumers with the necessary domain knowledge, support services, and communication channels to promote the development of such a new market.

In answering the second sub-question, paper 2 investigates the roles of external actors in the brand value creation network. At first, we selected the SM accounts that best exemplify a specific attribute (i.e., exemplar accounts) as external actors in the brand value creation network. The specific attributes include luxurious, localised cultural elements, and Italian culture-of-brand origin (COBO). Next, based on social network analysis, for each Italian luxury brand, we compute a social perception score to measure consumers' perceived strength for a given brand attribute. After that, based on the social perception score, we run regressions to further analyse the influence of either the localised culture or the COBO on consumers' perceived strength of luxurious for a brand. The findings show that exemplar accounts on SM can influence consumer brand perceptions through their co-followers with a brand, thereby influencing brand value co-creation. Thus, luxury brands should co-create value by opening up their brand-consumer dyadic interactions to digitally-

enabled external actors (i.e., exemplar accounts on SM). The roles of such external actors are further elaborated by highlighting the importance of SM accounts with topics centred around COBO for luxury brand co-creation in the emerging market, especially in times of a global crisis. The results also provide timely insights for international luxury brands to alleviate the localized-standardized dilemma in their marketing communications.

The third sub-question is answered in paper 3. By mining millions of SM data about consumers and brands, the study investigates changes in consumer trends in emerging markets in times of a global crisis. The findings confirm the anticipate from the luxury industry. Before the pandemic, the main topic domains of consumer reviews on SM reflected the prevalence of conspicuous consumption in emerging markets. Luxuries are used as a way to show social status and wealth. But luxury consumers' appetite is shifting toward inconspicuousness in emerging markets during the COVID-19 pandemic. In emerging markets, increasing amounts of luxury consumers pay more attention to the culture values of luxuries and possess enough cultural capital to understand and appreciated the cultural and symbolic meanings of luxuries. Accordingly, the findings suggest that subtle, culturally-oriented, and sophisticated social media marketing (SMM) strategies may better satisfy certain consumers in emerging markets during the pandemic than loud and conspicuous strategies. Moreover, based on the theoretical perspective of brand co-creation, the study reveals the mismatches between brand value propositions and consumer brand perceptions on SM platforms, which may inhibit brand co-creation. We found that for both domestic and foreign luxury brands, while the consumers have developed a taste for inconspicuous luxury and may already have the cultural capital to understand and appreciate subtle brand signals, there are no obvious signals in brand posts that indicate inconspicuous branding strategies.

4.2 Theoretical Contributions

This dissertation makes important contributions to the current research on value co-creation. It advances the theoretical understanding of value co-creation strategies in SMM, brand marketing, and international marketing. Figure 1 summarizes the main theoretical contributions of this dissertation.

Figure 1. Summary of theoretical contributions of the dissertation

Literature Stream	Theoretical Contributions
Contributes to value co-creation literature	• Extend the current understanding of consumers' value creation activities especially in times of a global crisis, thus adding to the body of knowledge in the field of value co-creation. • Respond to calls to investigate the consumer-driven value creation phenomenon, conceptualize consumers' independent value creation (CIVC) process, develop and validate a process model for CIVC, and provides directions for future research on the CIVC topic. • Provide a new understanding of independent tourist as resource integrator, who derives and integrates various consumer operant resources and capabilities to output value-in-use. • Provide a network view to understand value creation on SM, and clarify the features, links, and impacts of external actors in the value creation network.
Contributes to SMM literature	• Add to the SMM literature by showing that SMM gains importance in extraordinary times such as the COVID-19 pandemic. • Apply novel machine learning methods to vast amounts of SM data and provide timely insights into the impacts of a global crisis on firms' SMM. • Provide an understanding of how to strategically use SMM to drive consumers' value co-creation intention, especially in times of global crisis. • Add to the literature the role of cultural resources and external actors on SM for firms' marketing communications.
Contributes to brand marketing literature	• Provide a brand co-creation view to understand the new situations of luxury brand marketing's increasing shifts to online during the COVID-19 pandemic. • Expand knowledge of luxury brands' marketing communications by identifying several key factors that influence the success of their branding strategies. • Capture changes in consumer brand perceptions and brand value propositions before and during a global crisis. • Add to the literature of luxury brand marketing by distinguishing mismatches between consumer preferences and branding strategies that inhibit co-creation in times of a global crisis.
Contributes to international marketing literature	• Provide an integrative view to examine the emerging market from the perspective of firms and consumers, as well as domestic and foreign brands. • Argue that the trend toward inconspicuous luxury consumption is not limited to mature markets, but is also on the rise in emerging ones. • Highlight important cultural dimensions of luxury brands that consumers in emerging markets may value. • Expand knowledge of the standardised-local debate for luxury brands' international marketing. It also identifies the importance of the culture of brand origin elements for influencing the success of international marketing strategies in a crisis period. • Add to the international marketing research by highlighting the importance of SM channels for marketing communications in emerging markets, especially in times of global crisis.

4.2.1 Contribution to consumer co-creation research

This study extends the current understanding of consumers' value creation activities in times of a global crisis, thus adding to the body of knowledge in the field of value co-creation. Although the topic of consumer value co-creation has been extensively studied, our literature review shows that the study of consumer value co-creation in times of global crisis has been neglected. As an extreme form of global crisis, the COVID-19 pandemic continues to have an unprecedented impact on the

global population (Donthu & Gustafsson, 2020; Kabadayi et al., 2020), as well as severe economic and social consequences across the globe. These negative effects can continue for months or even years (UNWTO, 2020). There are many lessons we must learn from such a crisis. Because COVID-19 is not the first pandemic that humanity will have to deal with, nor will it be the last, given today's high interconnected and global nature. In the marketing field, the pandemic leads to significant and continual changes in both consumer behaviours and firms' marketing strategies (Cruz-Cárdenas et al.,, 2021; Zwanka & Buff, 2021). Re-examining these changes during the crisis and their major impacts could provide a timely and more comprehensive understanding of consumer value co-creation. Therefore, it is necessary to examine the changes, the mechanism, and the important factors of consumers' value co-creation in times of crisis. This dissertation contributes to the value co-creation literature by focusing on these aspects.

In specific, given that the consumer-driven value creation phenomenon is increasing during the pandemic, and respond to prior calls to investigate this phenomenon (e.g., Grönroos, 2013), this study conceptualizes the CIVC process by laying out both the external and internal relations among different consumer operant resources and identifying representative CIVC outcomes as consumer creative behaviour. The study develops and validates a process model for CIVC, clearly elucidates the different pathways of the CIVC process, and provides directions for future research on the CIVC topic. The study also indicates that value creation could occur in the consumer consumption sphere, especially in times of a global crisis. Moreover, the study contributes to the value co-creation literature in the tourism context. It provides a new understanding of the independent tourist as a resource integrator, who derives and integrates various operant resources and capabilities to output value-in-use.

Furthermore, researchers in the mid-2000s began to argue that other actors outside consumers' and brands' communities are also important co-creators of brand value (Merz et al., 2009a). As a response to this argument, this study provides a network view to examine luxury brands' value co-creation on SM, given that during COVID-19 luxury brands incorporate rapid and unprecedented digital transformations in their marketing communications. It adds to the luxury brand co-creation research by clarifying the features, links, and impacts of external actors in the brand value creation network.

4.2.2 Contribution to social media marketing research

This dissertation provides several contributes to SMM literature. First, the study adds to the SMM literature by demonstrating the growing importance of SMM for companies since the COVID-19 pandemic began. SMM has gained attention in today's business landscape since the transition from traditional to online business activities. This is driven by companies using the power of SMM as a strategic tool to increase company value, profitability and competitive advantage (Aral & Weill, 2007). Recent studies have shown that SMM is a viable tool that can help businesses engage consumers (Chatterjee & Kar, 2020; Dwivedi et al., 2018). But there is limited understanding of either the role of SMM for companies in times of a global crisis or the impacts of a crisis on SMM and online consumer behaviours. Previous studies on the impact of global crises, such as pandemics, have focused on the macroeconomic and social impacts of crises, crisis-related public health risks, and public crisis management (Mason et al., 2021; Nicola et al., 2020). Our study bridges this research gap by comparing and demonstrating changes in consumers' SM behaviours before and since the declaration of the COVID-19 pandemic in China. The findings indicate the growing importance of the SM as a marketing tool during a global pandemic, as it provides consumers with a way to interact with others without physical contact at a time when social distancing is a common practice.

Second, this paper applies novel machine learning methods to the millions of user-generated content (UGC) and the intricate social connections of SM users, providing a sound and effective method for analysing the massive amount of SMM data that keeps growing in recent years. Third, the study adds to the SMM literature by providing an understanding of how to strategically use SMM to drive consumers' co-creation, especially in times of global crisis. The COVID-19 pandemic coincides with the rapid development of digital transformation in many sectors (Abdel-Basset et al., 2021; Cruz-Cárdenas et al., 2021). In the luxury sector, the pandemic has significantly promoted the development of firms' online communication channels (Lojacono & Pan, 2021); and SM play an increasingly critical role in luxury firms' marketing activities during the pandemic (Altagamma Foundation, 2020). But research surrounding luxury firms' SMM and online communications remain fragmented, with limited guidance on how to design effective SMM strategies (Mandler et al., 2020). Our study adds to the literature on the important role of cultural

resources in luxury SMM strategies. To embrace SM's communal logic (Azer et al., 2021), this study provides a network perspective to explore the role of SM accounts with specific cultural attributes in influencing SM users' perceived value of a brand. The study demonstrates the impacts of different SM accounts (i.e., online actors with localised cultural attribute vs. online actors with the COBO attribute) on the perceived value of luxury fans on SM before and during the pandemic. Moreover, the study affirms the view of the popularity of inconspicuous consumption (Berger & Ward, 2010; Eastman et al., 2022; Eckhardt et al., 2015; Makkar & Yap, 2018; Wu et al., 2017) in a global crisis context. The findings highlight the importance of embedding subtle COBO signals within luxuries' SMM strategies. Accordingly, the study provides theoretical contributions on how to strategically capitalize on cultural resources for luxuries' SMM in times of a global crisis.

4.2.3 Contribution to brand marketing research

This dissertation contributes to the literature on luxury brand marketing. Research on luxury brands' communication with consumers is mainly focused on offline channels and traditional channels (e.g., television). By contrast, research surrounding luxury brands' marketing communications on SM remains limited (Wang et al., 2020). Recently, a new topic of research has emerged about how luxury brands deal with their co-created brand images in the digital world (Hughes et al., 2016). A few existing researches have investigated the role of SM in luxury brand marketing at an aggregate level (Mandler et al., 2020). But little is known about the influencing factors of luxury brands' marketing communications on SM at a more granular and strategical level, lacking guidance for luxury brands on how to design effective marketing communication strategies on SM. In fact, SMM adoption among luxury goods companies remains low due to concerns about diluting brand value and losing brand control. Luxury brands have always taken a top-down marketing approach to maintain their pre-eminence (Arrigo, 2018); but digital technology has had a significant impact on this traditional approach (Kapferer, 2014). ICT has become one of the main drivers of transformation and disruption for luxury brands (Kapferer, 2014), and in the same way, the idea of co-creation and collaboration with consumers may seem revolutionary (Arrigo, 2018). Accordingly, to strengthen the theoretical foundation of luxury brand marketing in the digital era, this dissertation adopts a brand co-creation perspective to understand the new situation where luxury brand marketing is increasingly turning to SM channels and points out the role of different cultural

factors in influencing the superior value of luxury brands. The findings provide insights to understand how can luxury brands distance themselves from the masses and maintain their superior identity while telling stories and co-creating brands on SM. The study expands knowledge of luxury brand marketing by highlighting the key factors on SM that influence the success of luxury branding and marketing communication strategies.

Moreover, the COVID-19 pandemic has become a global challenge, and the luxury industry is not immune. Governments around the world have tried to respond by offering strict rules to reduce the spread of the virus, such as recommending activities at home (work, study, worship) and implementing physical or social distancing policies. As a result, firms suffer from reduced demand (Nicola et al., 2020) and lose contact with their consumers. Luxury brands are limited in their ability to cope with the risks and costs associated with reduced business activity, and lack sufficient understanding of their consumers affected by the pandemic. To address these issues, this study tries to capture the changes in consumer trends in times of crisis from both consumer and brand sides and identify the mismatching factors between consumer preferences and brand marketing strategies that can inhibit co-creation during the pandemic. Thus, the study adds to the literature by indicating critical factors that help luxury brands to redesign their marketing and branding strategies to leverage digital channels to survive in the pandemic.

4.2.4 Contribution to international marketing research

Last but not least, this dissertation contributes to the literature on international marketing from several aspects. First, it is necessary to consider environmental elements when studying international marketing phenomena. A great deal of academic research is devoted to understanding the impact of culture or cultural differences on international marketing activities (Donthu et al., 2021), focusing on the impacts of consumer perceptions, habits, values, languages, religions, and characteristics on the processes and outcomes of marketing strategies (Grott et al., 2019). Several cultural dimensions are developed and applied for such cross-cultural studies. Among them, Hofstede and Bond (1984)' five dimensions of culture (i.e., individualism-collectivism, uncertainty avoidance, power distance, masculinity-femininity, long-term orientation) is the most widely used national cultural framework in such international marketing studies (Soares et al., 2007; Steenkamp, 2001). Similarly, some literature focuses specifically on the impacts of government policies

(Ahmed & Brennan, 2019; Donthu et al., 2021) or specific government actors (Sheng et al., 2011) on international marketing activities. However, the influence of a turbulent environment such as a global pandemic on international marketing has not received enough attention. To better understand the impacts of the turbulent environment on international marketing and to strengthen the theoretical foundations, this study investigates changes in consumer perceptions and marketing strategies before and during the COVID-19 pandemic. Thus, adding to the international marketing research by showing the changes of consumer trends in emerging markets with the influence of the turbulent environment.

In addition, the dissertation provides an integrative view of examining emerging luxury markets from the perspective of firms and consumers, as well as domestic and foreign brands. The existing research in this field has concentrated predominantly on one side (Voyer et al., 2017), preventing a comprehensive view to understand emerging markets. In light of this, this research investigated the changes in emerging markets for both domestic brands and foreign brands on consumer brand perception and brand value propositions before and during the pandemic, respectively. This integrative perspective has a substantial advantage to deepen the understanding of emerging markets.

Moreover, much of the existing literature focuses on the conspicuous consumption of well-known western luxury brands in emerging countries. Even if inconspicuous luxury continues to be popular in developed markets (Jiang et al., 2021), prior literature on luxury consumption in emerging markets is still dominant on conspicuous consumption, given that conspicuous luxury consumption has long been seen as a key driver in emerging markets (Pino et al., 2019; Podoshen et al., 2011). This dissertation argues that the trend toward inconspicuous luxury consumption is not limited to mature markets, but is also on the rise in emerging markets, especially during the pandemic. The dissertation adds to evidence of the inconspicuous trends in emerging markets and highlights important cultural dimensions of luxury brands that inconspicuous consumers in emerging markets may value. Such timely evidence provides indications of future trends of luxury consumption in China and other emerging markets and could help scholars to advance the research on emerging luxury markets. Therefore, this study extends the growing literature on inconspicuous luxury branding in the context of emerging markets (Berger & Ward, 2010; Eastman et al., 2022;

Eckhardt et al., 2015; Makkar & Yap, 2018; Wu et al., 2017).

Furthermore, this dissertation expands knowledge of the standardised-local international marketing strategy debate for luxury brands by considering the impacts of the global crisis. By applying the tend-and-befriend theory (Taylor, 2006), the study identifies the neglected roles of social media accounts with topics centred around COBO for luxury brand marketing in emerging markets in times of a global crisis. The study suggests that luxury consumers tend to follow the brands and social media accounts that represent the culture of brand origin to affiliate with the groups they aspire to, as a substitute for removing social threats and tensions associated with isolation from the brand's country of origin during the pandemic. The research thus contributes to the literature by identifying the importance of COBO elements and SM channels for alleviating the standardization-localization dilemma of international luxury brand marketing, especially in times of global crisis.

Last but not least, this dissertation conducts cross-sectorial analyses to account for the diverse contexts of service and marketing (Voss et al., 2016) and the differential impact of the pandemic on various industries. Specifically, the tourism sector and luxury fashion industry are chosen as two distinct industry contexts due to their shared focus on providing experiential value to consumers (Üçok Hughes, 2016; Koivisto, 2020; Campos, 2018; Mathis, 2016), but with differing products and services, target markets, and business models. Through the cross-sectorial analyses, this study lays a foundation for exploring collaboration and knowledge transfer between the two industries, as well as the opportunities and challenges that arise from such collaboration in the context of value co-creation. Moreover, it recognizes the interconnectedness of both industries, as many luxury fashion products are consumed by tourists (Capone, 2016). The findings suggest that luxury consumers in emerging markets not only love bling luxury brands but also appreciate the culture, heritage, fantastic stories, and even lifestyles from the brand origin country. These findings provide a better understanding of how luxury fashion brands could collaborate with tourism businesses to create unique and memorable experiences for consumers.

4.3 Managerial Implications

The findings of this dissertation not only provide theoretical contributions to the further academic inquiry of co-creation strategies in times of global crisis but also present several managerial

implications for marketing practice, especially in the period of global crisis. The following implications highlight the importance of consumer co-creation strategies, SMM strategies, brand marketing strategies, and international marketing strategies. The research findings of this dissertation provide many managerial implications for marketing practice. The following practical implications are relevant to consumer co-creation strategies, SMM strategies, brand marketing strategies, and marketing strategies for emerging markets. Figure 2 summarizes the main management implications of this paper.

4.3.1 Implications on consumer co-creation strategies

The findings of this study conducted on consumer co-creation revealed the necessity to reconsider co-creation strategies in a global crisis context. Facing the highly dynamic and uncertain market environment caused by the crisis, marketers must grasp the changes in consumer trends and develop responsive strategies accordingly. One of the significant changes in the market is the increase in consumers' independent value creation in recent years, especially during the COVID-19 pandemic. Since the pandemic, strict policies such as stay-at-home quarantines and travel restrictions imposed in many countries have made traditional business models and marketing channels in many industries that rely heavily on B2C interactions become dysfunctional. Paying attention to the value creation activities independently carried out by consumers in their own sphere is conducive to providing enlightenment for the development of new business models and even profit logic (Grönroos, 2011). Our study indicates that value creation activities that are driven by consumers are a potential source of business innovation and value creation. Consumers' operant resources such as domain-specific knowledge, creative self-efficacy, change self-efficacy, and social capital are critical factors for their value creation performance. It is wise for companies to pay attention to the development of CIVC phenomena and promote the growth of novel markets that are driven by CIVC in the face of a global crisis such as the pandemic. In addition, the prerequisite for consumers to integrate resources and create value successfully is to have enough resources. For instance, independent tourists with travel knowledge, self-efficacy and social capital are more likely to succeed in their trips in the face of the inconveniences brought about by the pandemic. Therefore, to facilitate the revitalization of the post-pandemic tourism market, tourism-related companies could provide professional travel knowledge and training to increase the ability

and confidence of independent tourists to travel creatively. They could also provide timely assistance services to increase creative problem-solving skills and the confidence of independent tourists. These kinds of behind-the-scenes services for independent tourists may be a potential source of profit for companies.

Moreover, consumer preferences and firms' marketing environments are changed during the pandemic. To achieve value co-creation, the formulation of firms' co-creation strategies should be based on careful assessments of consumer perceptions and the roles of external actors, especially in the digital era. In specific, the luxury sector is one of the industries that has seen dramatic changes during the pandemic. Faced with the impact of the pandemic on brands' offline communication with consumers, luxury companies have accelerated their digital transformation and stepped up their marketing efforts on SM platforms (Achille & Zipser, 2020). The shift to digital has reduced the degree of control luxury companies have over the meaning of their brands, forcing a shift in brand strategy towards co-creation. (Tynan et al., 2010). In the meantime, consumers are becoming younger and are willing to communicate with brands through SM platforms to express their understanding and love for brands (Claudia & Federica, 2021; Claudia et al., 2021). These digital young cohorts, always with high brand literacy, could significantly contribute to the life and meaning of the brand, and are fully engaged in the culture of the brand, as they not only follow the cultural meaning of the brand but are able to play and redefine the brand by co-creating activities (Bengtsson & Firat, 2006). As luxury brand logic is evolving toward co-creation (Merz et al., 2009b), companies should manifest matched brand cultural elements within brand co-creation strategies on SM to meet consumers' perceptual attributes of luxury brands.

In addition, businesses can either benefit or lose by using SM platforms to open up their value co-creation to digitally-enabled and multi-interactive actors. A network view could help companies to have a better understanding of digitally-enabled external actors in their value co-creation. The findings of our study highlight that in addition to consumers and brand owners, non-brand communities on SM are also important actors influencing brand equity and therefore value co-creation strategies. For example, our research confirms the recent claims that luxury brand consumers will pay more attention to the COBO concepts (Claudia & Federica, 2021; Claudia et al., 2021). The findings indicate that consumers show more interest to follow and interact with

accounts themed with the COBO on SM (e.g., the official Weibo account of the Cultural Department of the Italian Embassy; the official Weibo account of the Italian National Tourism Agency) during the pandemic. Therefore, our study suggests that marketers should also consider the positive impact that these representative SM accounts can have on consumers' perceived value of luxury brands when developing co-creation strategies.

4.3.2 Implications on social media marketing strategies

This dissertation considers the role of SM in business activities and marketing communications with consumers during the pandemic, thus offering managerial implications for the formulation of SMM strategies, especially in times of global crisis. The proliferation of UGC on SM platforms especially in the crisis period presents both opportunities and challenges for companies to understand information and develop strategies (Park et al., 2021). UGC on SM platforms is a meaningful barometer of consumer trends. Online consumer reviews could reveal fresh insights about brand performance, reflect consumer tastes and attitudes, and anticipate consumer trends. It is beneficial and urgent for companies to investigate consumer attitudes, perceptions and preferences through comprehensive data mining of multiple forms of UGCs published on SM. Our research analysis, based on the careful understanding of millions of brand-related UGC on SM, shows that during the pandemic, China's younger digital generation is increasingly turning to inconspicuous luxury goods. But marketers have not yet responded to this growing trend through their marketing communications on local SM. Therefore, the study suggests that luxury companies consider the shift in consumer preferences when formulating marketing communications strategies on SM and using more low-key luxury products to capture consumers' attention.

Moreover, our research analysis shows the importance of SM accounts outside the official representatives of the brand to the brand's SMM strategy. In specific, our study shows that online consumers' social connection behaviours, such as their liking, retweeting or following SM accounts on certain topics, can also indicate consumer profiles, preferences, and even brand perceptions. And these SM accounts with specific topics could influence consumer perceptions toward a brand through their social connections. For example, luxury brand consumers who follow environmental protection accounts may be more concerned about the environmental values embodied by a certain brand. Therefore, our study suggests that companies should consider including digitally enabled

external actors on SM when developing SMM strategies, as they are very important consumer influencers. Furthermore, while SM has become an integral part of People's Daily lives, many high-end brands are still hesitant to adopt these platforms for fear that SM's ubiquitous nature will hurt the value of the brand. Some luxury brands have decided to boost their online presence to stay relevant to their audience, especially generations Y and Z (Bolton et al., 2013). But many luxury brands are still cautiously taking their first steps on the Internet (Quach & Thaichon, 2017). Our research shows that young luxury consumers are turning to SM in an effort to stay connected to brands during the pandemic, as an alternative to offline channels being blocked. The findings highlight the important role of SMM in luxury brand marketing during the pandemic.

4.3.3 Implications on brand marketing strategies in emerging markets

Two studies in this dissertation focus on luxury brand marketing. Accordingly, this dissertation provides important managerial implications for marketers to develop brand marketing strategies. For luxury companies, the new competitive landscape is fierce, in which consumers and brands are increasingly embedded in a digital world (Claudia et al., 2021). In the highly competitive marketplace, brand heritage and culture are very important factors that differentiate luxury brands from their competitors (Beverland, 2005; Fionda & Moore, 2009), considering the inherent difficulty of emulating these dimensions of the brand. However, only when brand heritage and culture are known and understood by consumers, can they play an important role in brand marketing. Therefore, it is wise for managers to have a better understanding of brand knowledge or cultural capital that consumers possessed.

Our research findings suggest that in the largest emerging Chinese market, now luxury consumers already have enough cultural capital to understand and appreciate sophisticated and subtle brand signals. The findings also show that consumer preference of such highly brand-literate consumers (Schroeder et al., 2014), changed from focusing on the conspicuous attributes of the brands to pay more attention to the cultural attributes of the brands since the pandemic. In addition, rather than loud and attention-grabbing campaigns, experienced luxury consumers prefer to engage in low-key and sophisticated brand marketing to show their good taste and avoid arousing the envy of others who suffered from financial issues during the pandemic. Therefore, one key suggestion for brand managers is that more culture-oriented and sophisticated branding strategies should be

implemented in order to favour the needs of more experienced luxury consumers, especially since the pandemic.

Besides, as our research on luxury brands focuses on emerging markets threatened by COVID-19, we also provide relevant implications for enriching the toolbox of international marketing strategies. The COVID-19 pandemic is one of the extreme forms of a global crisis that has had an impact on the global population unprecedented since World War II (Kabadayi et al., 2020), with severe economic and social consequences across the globe (Gautam et al., 2020). Considering that the COVID-19 pandemic is still raging (Azer et al., 2021), we cannot yet fully assess its impacts, especially on emerging markets. But one thing is for sure, and it is also a sharp reminder that this kind of crisis caused by the pandemic will continue to occur in the future, and could have a more permanent impact on consumer behaviours in the future (Donthu & Gustafsson, 2020). Marketers need to understand changes in consumer trends in emerging markets during the crisis in order to develop sound international marketing strategies. Given that the COVID-19 pandemic is a global phenomenon, our research findings are likely to apply to many countries, especially emerging economies. The findings can help companies adapt to changes in consumer perceptions and online behaviours during the pandemic and can provide valuable lessons for practitioners in dealing with future global crises when conducting international marketing.

Last, current research suggests that there is no one-size-fits-all silver bullet to engage consumers worldwide. Therefore, it is critical to focus on specific types of markets and identify their unique characteristics. Considering the great potential of emerging markets for the luxury industry (Achille & Zipser, 2020; Claudia et al., 2021), our study focuses on emerging luxury markets to conduct empirical analysis. The research findings suggest that COBO concepts have great potential for marketing western luxury brands in emerging markets, especially during the pandemic. By contrast, managers should be more cautious about incorporating localized cultural elements into their marketing campaigns for emerging markets to avoid backfiring.

Figure 2. Summary of managerial implications of the dissertation

Literature Stream	Suggested Coping Strategies and Actions
Consumer co-creation strategies	• Consider the potential benefits of CIVC and incorporate it into their strategic innovation and growth plans. • Carefully consider the role of consumers' cultural, social and physical operant resources in shaping consumer behaviour and preferences. • Facilitate the growth of novel markets through the strategic promotion of CIVC on social media in highly uncertain environments. • Make better use of your marketing efforts by dynamically adjusting and incorporating matched brand cultural elements within co-creation strategies. • Take advantage of the SM to facilitate the co-creation process and allow digitally-enabled external actors to take an important role in the process.
SMM strategies	• Use comprehensive data mining of multiple forms of UGCs published on SM to have a better understanding of consumer trends. • Consider the new trend of inconspicuous consumption among young digital generations in China during COVID-19 and adapt their SM marketing strategies accordingly to effectively engage with this key demographic. • Consider the SM accounts with topics centred around a specific attribute as important influencers when shaping consumer brand perceptions and develop strategies to effectively engage with them.
Brand marketing strategies in emerging markets	• Prioritize research and analysis to have a deeper understanding of the brand knowledge and cultural capital possessed by target audiences, gain insights into the consumer mindset and tailor their strategies accordingly. • Adapt branding and marketing strategies to the trend of experienced luxury consumers preferring subtle and understated brands during the COVID-19 pandemic. • Adopt more culture-oriented and sophisticated branding strategies to cater to the needs of increasingly experienced consumers in emerging markets. • Recognize that there is no one-size-fits-all approach and that strategies must be adaptable and dynamic to effectively engage with consumers worldwide. Closely monitor and understand the changing consumer trends in emerging markets to develop and implement effective marketing strategies particularly in light of the COVID-19 pandemic. • Leverage the concept of culture-of-brand-origin to effectively market Western luxury brands in emerging markets particularly during the pandemic. And exercise caution when incorporating localized cultural elements into their marketing activities, as this could potentially lead to negative outcomes.

4.4 Limitations and Future Research Directions

While providing novel and meaningful contributions to both the marketing academy and marketers, there are several limitations to this dissertation, which open opportunities for future value co-creation research in the marketing field.

First, due to travel restrictions and health concerns associated with the pandemic, we select online channels to collect data. Our concern is that the sample chosen may not be perfectly representative of the total population. In specific, for the research on luxury brand marketing, we choose Weibo, which is the largest SM platform in China and the main Channel of luxury brand marketing in the Chinese market (Claudia et al., 2021), to crawl millions of UGC about luxury

consumers. Although market observers and previous research indicate that the proportion of online luxury brand consumers is very large (Beauloye, 2022; Claudia & Federica, 2021; Claudia et al., 2021; Danziger, 2019), online luxury brand consumers' consumption preferences, brand perceptions and behaviours may be quite different from those of offline luxury brand consumers, so it is important to keep this in mind when interpreting our research findings. For the study in the tourism context, we selected the online survey website Sojump, which has been extensively used by other service marketing researchers to collect responses from Chinese consumers (Shen et al., 2020; Wang et al., 2015; Yang et al., 2015), to send and receive questionnaires. Although the online samples have the advantage of being free from regional limitations, the respondents contacted often have a higher frequency of using SM, so the samples cannot represent those respondents who use SM less frequently. Although it is difficult to contact the latter group of respondents through offline channels during a crisis period, the latter group of consumers may account for a large proportion of the self-service travel market. Therefore, in future studies, it is will be meaningful to overcome the difficulties brought by the crisis and make the samples include more comprehensive respondents through offline channels and other means. In addition to the quantitative methods used in our study, qualitative research techniques such as observation, case studies and in-depth interviews can also be used to gain more insight into consumer co-creation phenomena and changes in consumption trends during the crisis period, and to gain a deeper understanding of the overall process of how consumers respond and behave to the threat caused by a crisis at a specific market.

Second, this study focuses only on the Chinese market in times of a global crisis, but the impact of the COVID-19 pandemic has varied globally (e.g., different government policies in different countries), with some regions experiencing smaller and shorter impacts. The roles of cultural, economic, and regulatory differences across countries are not fully appreciated. And differences in language and cultural background may reduce the possibility of consumers' co-creation intention (such as knowledge exchange between individuals). It will be interesting to know how consumers from different cultures react to the same co-creation strategies on SM in times of a global crisis. Cross-cultural comparisons and analysis may be a fruitful extension of the current study, and future research could explore the differences between different ethnic groups. For instance, to examine how consumer perceptions and behaviours toward certain value co-creation practices or SMM

campaigns during a global crisis vary across different countries and cultures. In addition, our research provides managerial implications to understand the standardized and localized strategies in the context of emerging markets. Future research could also include mature markets such as Europe and Japan to better understand standardization and localization strategies in the global SM marketing context.

Third, perhaps the largest limitation or weakness surrounding the conduct of this dissertation is the ongoing COVID-19 pandemic. Our findings provide timely and solid evidence for changes in consumer perception, preference and consumption trends before and after the outbreak of the COVID-19 pandemic. But given that the COVID-19 pandemic is still not over, we cannot investigate whether these changes have long-term effects after the pandemic. In this regard, to strengthen our understanding of results from the current literature, there is much potential for further validating our findings in the post-pandemic marketplaces, to distinguish which changes are long-term and which are short-term, and to explain the reasons and mechanisms behind the changes. For instance, as storytelling is an effective way for luxury brands to communicate brand identity to consumers (Abdel-Basset et al., 2021; Ehrensperger et al., 2022), more research can build on this study in ascertaining how the story of a brand's adherence to its heritage and authentic cultural origins can be cultivated and communicated through SM in a post-pandemic world, guided by the inconspicuous luxury trends discussed in this study.

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