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**Developing an augmented multidimensional CBBE model for social media brand Instagram: its applications to the role of brand index (RBI)**

8D04106 – Marketing

Dissertation for an academic degree of Doctor of Philosophy (Ph.D.)

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**LIST OF ABBREVIATIONS**

APAAmerican Marketing Association

AVE Average Variance Extracted

BAS Brand Associations

BAW Brand Awareness

BLY Brand Loyalty

BPQ Brand Perceived Quality

CBBE Consumer-Based Brand Equity

CFA Confirmatory Factor Analysis

CMB Common Method Bias

CMV Common Method Variance

EFA Exploratory Factor Analysis

ENG Engagement

eWOM Electronic Word of Mouth

INT Interaction

NPV Net Present Value

RBI Role of Brand Index

SEM Structural Equation Modeling

SM CBBE Social Media Consumer-Based Brand Equity

SMM Social Media Marketing

SOC Social Value

SPSS Statistical Package for Social Sciences

UGC User-generated Content

UI Usage Intention

VCC Value co-creation

WarpPLS Warp Partial Least Squares

**INTRODUCTION**

**Relevance of the research topic.** Today, the development of digital technologies and the growing role of social networks have a significant impact on the daily lives of consumers and the processes of market value formation. In the context of a global digital space, the structure of interaction between market participants is being transformed, and the importance of intangible assets such as image, reputation, and perceived brand value is increasing, especially in the digital environment. At the same time, the intensifying competition encourages companies to manage brand perception more and strengthen their emotional connection with the consumer. In other words, under modern conditions, forming a strong brand becomes a tool for marketing positioning and a key strategic resource ensuring the company's long-term sustainability and competitive advantages. Digital technologies have radically changed the communication landscape between business and consumer, providing instant access to information, the possibility of personalized interaction, and involvement in content creation. A special place in these transformational processes is occupied by digital platforms and social networks, which have turned into universal channels for branding and marketing interaction.

These global trends are also entirely relevant for Kazakhstan, where recent years have witnessed the rapid development of digital infrastructure, the growth of digital literacy among the population, and increased social network users. According to data from the Bureau of National Statistics of the Republic of Kazakhstan, the level of internet penetration in Kazakhstan exceeds 85%, and social networks are actively used by both young and adult audiences in their daily lives and consumer behavior [1]. Thus, starting from the mid-2000s, several significant state strategic documents have been implemented in the country, such as the Telecommunications Industry Development Program of the Republic of Kazakhstan for 2006–2008, the Program for Reducing the Information Divide in the Republic of Kazakhstan for 2007–2009, the State Program for the Development of “Electronic Government” for 2008–2010, the State Program “Digital Kazakhstan” for 2018–2022, and the National Project “Digital Nation” for 2021–2025. These initiatives have contributed to the institutional and technological formation of the digital environment, the expansion of digital communication channels, and the creation of prerequisites for the active growth of digital brands and online marketing in Kazakhstan.

The significance of the digital agenda was further confirmed in the Address of the President of the Republic of Kazakhstan Kassym-Jomart Tokayev on September 2, 2024, titled “A Fair State. One Nation. A Prosperous Society”, which emphasizes the need for large-scale digital transformation of the economy, including the development of digital platforms, strengthening of innovation activity, expansion of domestic business presence in the digital space, and the formation of an intellectual economy based on intangible assets [2]. Special attention is given to supporting digital entrepreneurship, developing the startup ecosystem, and promoting new forms of employment through social networks and online platforms. These provisions directly correspond to the necessity of forming sustainable and recognizable digital brands with high consumer value capable of effectively competing in the digital environment.

In this context, global digital platforms such as Instagram acquire particular importance. They perform not only the function of communication channels but also serve as a full-fledged environment for forming and promoting brands. As a visually oriented social network, Instagram provides unique opportunities for building brand identity, engaging audiences, and generating user content. In Kazakhstan, this platform is actively used by individual users and companies striving to enhance brand recognition, loyalty, and emotional appeal.

Nevertheless, the existing theoretical and methodological approaches to brand evaluation, including the classical Consumer-Based Brand Equity (CBBE) model, do not usually consider the specific characteristics of brand functioning in the digital environment. Aspects such as visual design, algorithmic promotion, user engagement, reposting, influencer marketing, and content scalability require rethinking traditional branding models.

Thus, the relevance of this study is determined by the need to develop an extended multidimensional CBBE model adapted to the specifics of social networks and, in particular, the Instagram platform. This model should incorporate classical brand components (awareness, associations, perceived quality, loyalty) and modern digital metrics, visual identity, depth of engagement, strength of social influence, user-generated content activity, and network effects. In the context of Kazakhstan, where there is a growth of the digital economy and active use of social networks in marketing activities, such an approach makes it possible to establish scientifically grounded mechanisms for assessing brand effectiveness in the digital space and to develop more effective marketing strategies.

**The degree of problem development.**The issue of assessing Consumer-Based Brand Equity (CBBE) and brand formation in social media has gained particular importance in recent decades due to the digital transformation of market interactions and changes in consumer behavior models. In modern research, CBBE is considered a complex multidimensional construct reflecting consumer perception of a brand and its influence on behavior, loyalty, and the creation of added value. The theoretical foundations of CBBE were laid in the works of Aaker D., Keller K.L., Christodoulides G., Yoo B., Donthu N., Schivinski B., Baalbaki S., and Guzmán F.

With the development of digital technologies, CBBE studies began to adapt to new conditions, especially the social media environment. An in-depth analysis of the impact of digital platforms on brand perception is presented in the works of Appel G., Stephen A.T., Grewal L., Swaminathan V., and Hadi R. A significant contribution to the development of methodological foundations for brand analysis in the online context was made by Colicev A., Malshe A., Pauwels K., Godey B., Manthiou A., Rokka J., Aiello G., and Donvito R. Specific aspects of user interaction with brands through digital channels are explored in the works of Shang Y., Gómez M., Vacas-de-Carvalho L., Schivinski B., and Muntinga D.G.

At the same time, the theory of Value Co-Creation (VCC) was actively developed, initially proposed by Prahalad C.K. and Ramaswamy V., and later expanded within the service-dominant logic by Vargo S.L. and Lusch R.F. Contributions to the development of the VCC concept were also made by Ritzer G., Jurgenson N., Fuller J., Schroll R., Dennhardt S., Hutter K., Islam S., Tajvidi M., and Richard M.-O. Their works emphasize the participation of consumers in creating brand value through user-generated content, engagement, and interaction in the digital environment.

A separate line of research concerns the influence of social media elements, engagement, electronic word-of-mouth (eWOM), interactivity, and social value on the formation of CBBE. These aspects are explored in the works of Seifert C., Kwon W.S., Farzin M., Fattahi M., Rao K.S., Gupta A., Hussain A., Cheung M.L., and others. Modern measurement models of engagement and CBBE in the context of social media are being developed in the studies of Paruthi M., Kaur H., Pontes H.M., and Lukasik P.

However, despite significant attention from the academic community and the active development of theoretical approaches, the degree of conceptual and applied elaboration of the problem as applied to brands formed in social media remains limited. Most existing models were developed for the offline market and consider the behavioral characteristics of digital users, the phenomenon of "prosumers," and the specifics of visually-oriented content platforms only to a limited extent. As shown in the research of Alvin Toffler, Dwivedi A., Johnson L.W., Wilkie D.C., Cheung M.L., and others, existing CBBE models only partially capture the dynamics of user behavior in social media and rarely include value co-creation components as an intermediate mechanism for brand commitment formation.

Moreover, despite the dominance of platforms such as Facebook and Instagram in daily communications and commercial strategies, there is no unified and publicly accessible methodology for assessing CBBE. Existing commercial methods, such as the Interbrand model using the Role of Brand Index (RBI), are highly closed and unavailable for scientific purposes. Individual studies, for example, by Jayasuriya N.A., Bonanno A., Terzić S., and Salinas G., examine comparative approaches to brand valuation. Still, they do not offer solutions for digital platforms and social networks.

Thus, despite an extensive theoretical base, there is a clear academic gap in integrating the Consumer-Based Brand Equity (CBBE) model and the Value Co-Creation (VCC) concept in the context of social media as an independent environment for brand formation. The lack of open, reproducible, and empirically validated models for brand value assessment in the digital environment determines the need for a systematic study to develop and test a multidimensional CBBE model adapted to the specifics of social media.

**Research aim and objectives.** The dissertation aims to develop scientifically grounded theoretical and methodological approaches and practical recommendations for applying a multidimensional Consumer-Based Brand Equity (CBBE) model to Instagram branding in social networks within the context of marketing activities.

In accordance with the stated aim, the following key objectives are proposed:

* to explore the theoretical foundations of consumer-based brand equity formation in social networks;
* to systematize modern approaches to brand evaluation in the digital environment;
* to analyze the impact of user engagement, eWOM, and social value on the formation of value co-creation (VCC);
* to assess the integration of VCC into the extended CBBE model;
* to determine the applicability of the CBBE model for calculating brand contribution in the digital environment;
* to develop practical recommendations for using the CBBE model in marketing activities on the Instagram platform.

**Subject of the research.** The processes of formation and evaluation of consumer-based brand equity in the digital environment.

**Object of the research**. Social networks, in particular the Instagram platform, are an element of the digital marketing ecosystem, enabling co-creative user participation in brand equity building.

**Research methods.** The study's methodological basis relies on applying both qualitative and quantitative methods, which made it possible to comprehensively assess the factors influencing the formation of Consumer-Based Brand Equity (CBBE) in social media, taking into account the mechanism of Value Co-Creation (VCC). The following methods and analytical approaches were used in the course of the study:

* a survey of Instagram users in Kazakhstan (n = 687), selected using stratified sampling based on data from ACT Kazakhstan;
* data standardization using Z-score normalization to enhance scale comparability and ensure the validity of factor analysis;
* exploratory factor analysis (EFA) using the Principal Axis Factoring method with Promax rotation, implemented in SPSS 23.0 to identify the latent structure of the indicators;
* testing for common method bias using Harman’s single-factor test and full collinearity VIFs analysis;
* confirmatory factor analysis (CFA) and structural equation modelling (SEM) in WarpPLS 7.0 to assess reliability, convergent and discriminant validity, and to test hypotheses;
* mediation analysis using the Preacher & Hayes (2014) approach within the PLS-SEM framework to evaluate indirect effects in the model;
* model fit assessment using the Tenenhaus GoF index and reliability criteria: Cronbach’s α, composite reliability (CR), and average variance extracted (AVE);
* regression analysis, including checks for multicollinearity (VIF), heteroskedasticity (LOESS), and the exclusion of outliers based on Mahalanobis distance.

The application of PLS-SEM enabled the analysis of both first-order and second-order models, as well as the assessment of the contribution of VCC and CBBE factors to brand continuance intention and the formation of brand equity from the consumer perspective. The informational and empirical basis of the research includes theoretical and applied developments in brand management, value co-creation (VCC), and brand evaluation in the digital environment.

Special attention is given to the limitations of traditional methods (cost-based, market-based, income-based) in assessing intangible assets within social media and the absence of unified standards for calculating the Role of Brand Index (RBI) among leading brand valuation providers.

As an alternative, user behavior analysis was applied, reflecting engagement and co-creative participation in brand formation, which allowed for the adaptation of the evaluation model through the integration of resources and consideration of the brand as the result of a triadic interaction among the platform, the user, and the producer.

**Scientific novelty**. The present study contributes to developing branding theory and digital marketing by proposing an updated model for evaluating Consumer-Based Brand Equity (CBBE) in social media. The study expands the theoretical framework of the classical CBBE model, initially developed for the traditional offline market, by integrating the Value Co-Creation (VCC) component, which reflects user behavior characteristics in the digital environment.

The main results of the study are as follows:

* a modernized SM CBBE model was proposed, adapted for the evaluation of both traditional and digital brands, as well as social media brands themselves, based on the specifics of user interaction and engagement;
* a theoretical convergence of the CBBE and VCC concepts was achieved, incorporating elements of consumer engagement theory and social brand equity, representing a new direction in social media marketing research;
* the brand is conceptualized as a social process in which value is co-created through the participation of consumers, digital platforms, and other stakeholders;
* a comprehensive SM CBBE evaluation system was developed, covering the entire cycle of brand equity formation from behavioral predictors to financial performance indicators, enabling its application in strategic brand management within the digital economy.

**Scientific statements submitted for protection:**

* a proprietary interpretation of "social media brand equity" is presented as a value co-created by users through electronic word-of-mouth, engagement, and the social value of the brand;
* the use of a brand equity model (SEM) is proposed for analyzing user demand in order to determine the contribution of the brand name to Instagram brand valuation through net present value;
* the evaluation of the Instagram brand equity model showed that the intensity of user co-creation influences the size of brand equity, being an integral part of it;
* the level of user engagement, the intensity of electronic word-of-mouth, and the significance of the brand’s social value determine user co-creation activity in building and strengthening the Instagram brand;
* the brand equity model evaluates the effectiveness of brands’ marketing activities on Instagram.

**Theoretical significance of the research results**. The theoretical significance lies in expanding the scientific understanding of brand equity formation within the social media environment, considering user behavior and digital interaction specifics. The developed SM CBBE (consumer-based brand equity) model offers a new interpretation of the consumer's contribution to creating and maintaining brand value based on the concept of value co-creation (VCC). A systematic approach is proposed that integrates marketing and behavioral aspects in evaluating intangible assets, thereby highlighting the brand's relevance as a social construct in the context of the digital economy. The presented model addresses the existing academic gap between marketing and financial approaches to brand evaluation, contributing to advancing an interdisciplinary theory of digital branding and consumer participation in brand formation.

**The practical significance of the research results.** The practical relevance of the research lies in the applicability of the developed social media consumer-based brand equity (SM CBBE) model for strategic planning, implementation, and evaluation of marketing communications. The model can be used for co-creating and strengthening brands in the digital environment, considering the contributions of users and other stakeholders to brand building. The results are relevant for social media platforms and online and offline brands that use social networks as a key tool for audience engagement. The proposed approach allows for determining the brand’s contribution share when calculating its market value using the discounted cash flow method, enhancing its practical value for marketing, brand management, and digital analytics professionals. The research findings can be considered in implementing national initiatives and programs such as "Digital Kazakhstan," "Digital Nation," and the Creative Economy Development Concept until 2025, supporting more effective use of digital platforms for entrepreneurship and marketing development.

**Аpprobation of the research results.** The main findings of the study were tested and validated through practical application for the Beauty Flora brand of “ARBOR GROUP” LLP and the Jacobs brand of “JDE Kazakhstan” LLP.

**Publications.** The main results of the dissertation have been published in 7 scientific papers, including: 1 in a ranked journal indexed in the Scopus database (with a percentile above 35); 3 in journals recommended by the Committee for Quality Assurance in the Sphere of Science and Higher Education (CQASHE); and 3 in the proceedings of international scientific and practical conferences.

**Structure and scope of the dissertation.** The dissertation consists of three chapters, comprising theoretical, analytical, and practical recommendation sections. The work contains 136 pages, includes 18 tables, 12 figures, and 6 appendices. A total of 256 sources were used in the research.

**1 THEORETICAL AND METHODOLOGICAL FOUNDATIONS OF BRAND EQUITY FORMATION THROUGH SOCIAL MEDIA MARKETING**

**1.1 Theoretical foundations of the concept of consumer value co-creation in social media context**

Social media refers to a collection of online platforms and tools that enable users to create, share, and exchange information and ideas with other users worldwide. Social media offers users diverse communication types, including text, images, audio, video, and webinars, enabling individuals to interact with each other in real time or asynchronously. Social media smoothly integrates into modern global communication. It transforms how people interact, manage information, consume media, and even manage media. Examples of social media include Facebook, Twitter, Instagram, YouTube, LinkedIn, TikTok, and many others. This new media is a subject of modern research in many areas, including marketing. Branding is one of the most actual topics to study in social media. This research undertakes a complex objective. This analysis examines the construction of brand equity on social media from a consumer perspective, intending to apply it to brand valuation. Although brand valuation has been one of the most extensively investigated areas for several decades, its calculation method remains disputable.

Brand value building is crucial in strategic planning for most established organizations, as it makes an undeniable contribution to customer value and overall firm value. Brand valuation is a pivotal but difficult task within the responsibilities of marketing and finance functions. One of the problems is the subjective nature of consumer attitudes and perceptions of brands, which influence their purchasing behavior, ultimately affecting brand sales and financial results. The consumer factors frame Consumer-Based Brand Equity (hereinafter - CBBE). It is a widely used concept for brand valuation from the consumer's perspective. Many other aspects affect brand value calculation, where the modern environment's changes require special attention, particularly the agile evolution of digital technologies and the subsequent means and tools. For example, social media influences consumers, increasing their social power to create new or reinforce existing human behavioral patterns, such as value сo-сreation.

Brand valuation of social media firms is a relatively new and challenging scholarly area that involves estimating interrelated financial and marketing indicators. From a financial perspective, brand valuation is intricate due to the low predictability of calculations for dynamically growing and developing social media platforms. Additionally, it is almost impossible to evaluate user surplus or the extra money consumers are willing to pay for the brand versus the actual price, as most social media services are free. The conventional CBBE model is a proven concept for the offline market but not for online companies like social media, where the role of customers is much more important than before due to the exclusive features of social media. Customers and social media are equal actors in establishing brand equity. Therefore, estimating social media brand equity requires a specific approach, considering the unique peculiarities of user behavior. It is a new, sophisticated, and rapidly evolving scientific field as social media continues to rise in scale and quantity. From the customer's perspective, no solution or measurement model for estimating brand equity on social media is widely accepted for use in academic and business practices.

*Definition and Concept of Social Media*

Social media have become an impressive worldwide communication tool for people to exchange information and collaborate, for businesses to build brand awareness and connect with their global target audience more effectively and efficiently. The concept of social media constantly evolves due to the emergence of new platforms and high-tech innovations, in which users continue to discover the latest means to connect and take action.

Modern scholars recognize social media as a multi-faceted e-based platform that empowers people’s lives, work, and leisure due to the significant and unpredictable potential that needs proactive investigations [3]. The scientists explain the phenomenon of the noticeable people’s endorsement of social media as a modern universal intercommunication tool with a well-known, unrivalled nature conditioned by up-to-date Web-based networking technologies. Using these potent digital instruments, people get instant global interconnections with each other and most organizations or brands through various forms, including text, voice, graphics, or video. Accordingly, it is much easier for humans to form diverse communities everywhere across the globe. From the marketing perspective, such consumer networks logically become the observed forces of numerous official organizations and commercial firms to impact many aspects of social lives and business activities. However, it is challenging to predict the further development of social media and its consequences for people without a detailed investigation of the phenomenon, its heritage, evolution, and expansion.

The functional design of Web 2.0 entrusts all Internet users with unprecedented opportunities to form virtual communities for exchanging news, information, and ideas, creating and publishing their content regardless of location and social status in an easy, fast, and efficient way [4]. Modern scholars propose several definitions to describe online communities. The term social networking sites portrays its mission to allow people to be connected across geographical borders, sharing their common interests [5]. A similar definition of social network sites explains the process of forming networks by registering public or semi-public individual profiles and building a personal network of direct and indirect connections [6]. A shorter expression of social networks is popular among scholars to underline open and real-time networking of users [7]. Other terms, such as Consumer-Generated Media [8] and social Web sites [9], are less frequently utilized in academic and business literature.

A more popular definition within the examined literature is social media. This term highlights the critical public role of online communities for ordinary people, who can openly share their content with the masses and participate in global business and social life [10]. This view considers social media as an alternative to traditional media, given the international society's involvement in creating instant messages worldwide. The phenomenon of “participatory communications” demonstrates the engagement character of the new era in terms of people's cooperation opportunities [11, p. 21].

Some scholars distinguish between terms related to social media and social networks. However, most of them, together with marketers, interchangeably use both terms. Based on the reviewed literature, it is possible to consider social media as virtual publishing houses, which enable all Internet users to share their content with the global audience, regardless of profession or social status. The ease, transparency, and quickness of information diffusion, as well as universal broadcasting via social media, make it a potent force for human progress in almost all aspects of life, including politics, society, the environment, technology, and innovation.

The social media concept has roots in the idea of digital people networking. It means that people digitally connect with those who have similar interests or characteristics. Social media platforms provide a virtual space for users to interact with others and share content, information, and ideas in a 24/7 manner. Therefore, the social media concept is grounded in the collaborative user-generated content shared with their networking followers, friends, and even unknown but connected people.

Social media's critical and unique feature is the continuous online interaction between Web tools, media technologies, and people as equal actors [12]. The preferable conditions are free access, easy usage, high speed, and global coverage that encourage people to regularly create and communicate user-generated content [13]. This content has a social nature and represents a specific class of big data or conglomerate of the vast number of individual inputs, which are generated, spread, and exchanged in virtual communities [14].

Thus, existing research confirms the decisive importance of social media marketing studies for business. A rationale for this point of view is that social media applications for practitioners overwhelm social media usage for socializing purposes, which is the initial historic function of this modern type of digital media [3, p. 331]. Therefore, further studies are necessary to investigate the utilization of social media for business purposes. Existing marketing investigations of social media cover various aspects of social media usage within business areas. However, the research is not yet sufficiently systematized. Additionally, this study highlights a lack of a holistic approach to social media research, which is often based on solid theoretical foundations, such as social media theory. Meanwhile, this theory continues developing due to the constant evolution of this advanced type of media.

From a theoretical perspective, the social media theoretical background encompasses concepts and frameworks from various disciplines, including communication, sociology, psychology, and marketing. Current social media studies employ diverse theories to understand various aspects of social media, ranging from its structure and technologies to human behavior [15].

One of the primary concepts to underpin social media research is social network theory, which examines the networking effects of media through its structural characteristics [16]. This theory posits that the net structure facilitates a process of information spreading throughout the labyrinth. Theoretical notions, such as structural centrality, cohesion, and structural equivalence, define actors' positions and links within the network, as well as its size, the flow of communications, and modality [16, p. 1]. The theory highlights the patterns of connections and relationships between individuals or groups within online social networks, depending on their positions within complex social structures.

In studying social media, some scientists apply the uses and gratification theory [17]. The theory posits that there are specific purposes to use media, where gratification is derived from the content and experience of the users. For example, scholars reveal that people utilize social media platforms for entertainment, social connection, information seeking, self-expression, and other purposes. Similarly, other researchers employ resource-based theory, which explains the vitality of virtual communities through the interrelationships between technological resources and the benefits provided to users within the networks [18].

Concerning human behavior, the theory of collective actions helps scientists in social media research [19]. Initially, this classic theory reveals the nature of group decision-making within formal organizations, where an individual may altruistically contribute to the group’s interest or selfishly free-ride, posing a dilemma for the organization. The company needs to address this issue through employee motivation for goods production, which benefits the group’s interests while bearing noticeable firm costs [20]. However, evolving Web technologies, especially social media, facilitate collective actions at a significantly lower cost, as the only requirement is to establish the proper network for internal communication [21; 22; 23]. The theory of collective action can benefit organizations beyond the individual. Social media blurs the private-public border, providing a free and easy passage from the group’s common interest to the global community at zero cost. Private communities can inform global audiences about emerging needs for new public goods that are addressed across the entire industry worldwide [24]. So, ordinary people can easily participate in creating new products, services, or ideas by official organizations. This process of co-creation served as a basis for the value VCC theory, which was suggested by Prahalad and Ramaswamy in 2000 [25]. However, the theory is not yet widespread in current social media investigations. This study considers a research gap in the coverage of VCC theory in social media analysis.

Other borrowed theories are social correlation theory, balance theory, and status theory [14, p. 27]. Social correlation theory explains the interrelationships between community members as a social process involving the mutual influences of individual attributes of actors and social ties, all of which are shaped by the external environment. Balance theory reflects a balance of triad relationships among two people and attitude objects. Status theory justifies attachments of personal relations based on the degree of individual statuses.

Therefore, the reviewed literature demonstrates that the theoretical background for social media research encompasses the social aspects as a critical component in analyzing contemporary digital media more deeply. Regarding CBBE theory, numerous studies have examined the impact of social media factors on various brands' equity, as described in the text below. However, sporadic research applies CBBE theory specifically to social media brands [26]. The limited studies of social media brand equity demonstrate another research gap to address in this thesis.

*Social Media Impacts VCC*

VCC theory creators view a linear process of value creation driven by companies towards customers within the traditional business model. It means that producers and consumers are opposite players in the market. The scholars believe that the Internet diminishes the dictated role of firms in developing new offers due to the provision of consumers with various Web tools for quicker feedback and initiatives to the firms. Therefore, the new value creation model centres on the collaborative co-creation of companies and customers, where both are equal partners involved in the mutual development of goods and services. The VCC model underlines the innovative potential of customers for companies in terms of unique skills, knowledge, and creative ideas. It represents a new consumer function that is a source of new creation competence. VCC has become a critical concept for companies' marketing and business strategies that engage customers in the product value-creation process.

Vargo and Lusch proposed a seminal principle of VCC theory, namely, service-centered dominant logic [27]. This logic involves a shift in economic and marketing orientations from tangible to intangible values, from product features to the quality of consumer relationships and experiences, from a producer-centric to a consumer-centric perspective. The prior paradigm views market context as an exchange with manufactured goods, where the satisfaction of consumer needs and preferences through the products’ features manages the demand and supply interrelationship within economic law [27, p. 1]. However, other criteria for market success have been developing since the 1980s. These driving resources include a firm’s superior expertise, information availability, and effective customer relationships, where the intangible attributes prevail over the physical characteristics of the offerings [27, p. 2]. The scholars coined the term "service" to describe this governing intangible competence of firms.

Many scholars acknowledge VCC theory and service-dominant logic, supporting the benefits of Co-creation compared to the individual firm’s product development. These advantages include enriched engagement and ownership among participants, who actively contribute to the new value creation or improvement of current offerings [28]. It means that the VCC process can help increase commitment, motivation, and a sense of ownership among stakeholders, resulting in more enthusiastic adoption and advocacy of the outcomes. Overall, the heightened engagement and proprietorship can foster long-term relationships and collaboration between consumers and firms, leading to sustained value creation over time.

Recent research shows that social media have activated the role of consumers from passive recipients of goods and services to eager actors, who influence brand processes from evolvement to advertising due to enabling accessible communications to producers. Prahalad and Ramaswamy explicitly described this process as a growing trend of ordinary activities of firms and people communities due to technologies, which allow consumers to input ideas and expertise to the brand value formation and sustainment [28, p. 11]. However, consumers are not the only co-creators of brand value. Other internal and external stakeholders, such as employees, suppliers, and distributors, are meaningful sources of brand VCC and are a focus of modern studies and brand managers [29].

Future investigations may discover or clarify deeper details in the mechanism and effect of the stakeholders’ co-creation behavior in building and growing brand value and further increasing firm value. Payne, Storbacka, and Frow analyzed the VCC process from the perspectives of interrelations or dialogue between an organization and its customers [30]. This is reflected in the conceptual model presented in Figure 1.

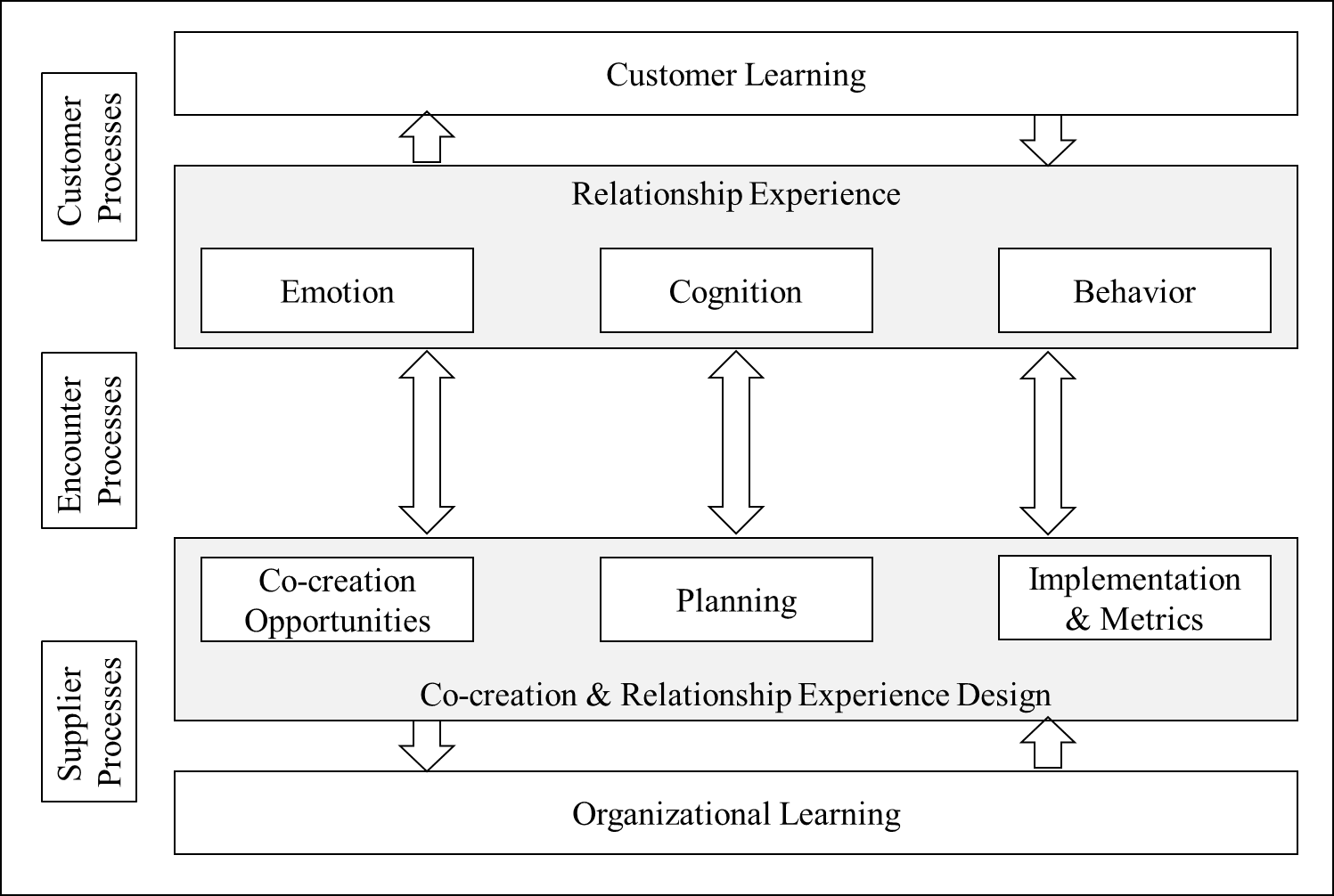


Figure 1 - A Conceptual Framework for Value Co-creation

Note – [30] compiled by the author based on the data

The model demonstrates the energized role of customers in value creation through a complex system of interactions with the organization. The figure shows non-linear relationships and vigorous learning processes of the customer and the firm as equivalent partners during value creation. It explains customer experience through unconscious practices resulting from ongoing relationships under the organisation's management due to acquired competence. The given VCC framework illustrates a continuous business process.

Ritzer and Jurgenson supported this VCC conceptual model and proposed the prosumer term for the modern customer to express his new function of co-creation or co-production [31]. That means the advanced role of contemporary consumers in manufacturing, where people simultaneously consume and produce goods and services for themselves. So, the prosumer phenomenon converges production and consumption into the rise of the new capitalist form. Traditional capitalism means a clear division between producers and consumers. Companies produce goods and services. People purchase and use these ready offerings passively. However, the authors state that individuals now easily create and share content, participate in online communities, and even collectively contribute to the development and design of products due to the Internet and digital tools. The scholars believe that prosumer capitalism represents a shift in the role of ordinary people in the world economy.

Furthermore, social media as an online social tool accelerates co-creation progress due to the possibility of prosumers networking on a global scale, increasing pressure on producers. Economic exchange has become a social process due to mutual interactions between firms and consumers, and even among consumers. Some scholars call this process social innovation or product development [32]. This means a shift in the co-creation focus from fragmented to networked consumers who can quickly organize brand societies or socialized communities across the globe. This transition challenges traditional marketing approaches and dictates an integration of social exchange into marketing relationship strategies. These strategies can give marketers a competitive source of leveraged collective consumer intelligence for innovations. The social aspect of co-creation is a modern reality. Marketing studies, including social media research, should focus on exploiting the phenomenon in marketing innovation activities more proactively [32, p. 18].

From a brand theory perspective, social media introduces a social element to brand structure, transforming firm-consumer relationships through сo-сreation and social innovation. Fueller, Schroll, Dennhardt and Hutter described this social component as social brand value, reflecting a perceived benefit that results from online consumer interactions within their brand communities and demonstrates the power of consumers’ social ties within social media activities [33]. Other scientists support this new brand philosophy, describing the brand as a continuous social process involving multiple stakeholders in the brand's VCC model, which enhances the brand management concept [34]. The scholars underline that the concept covers contexts of business-to-consumer, business-to-business, goods, and services. VCC theory has been developing in multiple directions, including general marketing and specific areas such as service, innovation, technology, and consumer behavior streams, where service and marketing areas dominate [35]. However, VCC is an authorized structured product development activity that involves different stakeholders [36]. It means that co-creation is a collaborative process in which individuals or groups work together to create something new or solve a current problem. Practically, it involves active participation and engagement from multiple stakeholders who contribute their ideas, insights, skills, and perspectives to jointly design, develop, and produce a good, service, experience, or solution. In principle, co-creation involves an inclusive and participatory approach where diverse perspectives are valued and integrated into a single process.

The current literature review shows that co-creation occurs in different domains, such as business, innovation, design, marketing, policymaking, and community progress. An example of a successful implementation of the VCC concept is the profound alliance between governments and their citizens to implement civil projects in Spain through e-activities [37]. Co-creation can take differing forms. For example, it can be structured workshops, focus groups, brainstorming sessions, co-design processes, user-driven innovation initiatives, or ongoing partnerships. It can involve many stakeholders, such as customers, employees, suppliers, partners, and other relevant parties, who work together to co-generate value and achieve a common goal.

The outcomes of co-creation can vary widely, from tangible products or services to intangible experiences, insights, or relationships. They can lead to innovative solutions finer aligned with the needs and expectations of the end-users. Various extant cases demonstrate that co-creation emphasizes the importance of teamwork, open communication, mutual trust, and shared ownership to result in more relevant, meaningful, and sustainable offers for the participants and the broader community. The most famous example is Lego. The company involves consumers in co-creating new product ideas via crowdsourcing based on the corporate website.

Value is a critical aspect that closely interrelates with the сo-сreation phenomenon discussed among modern marketing scholars [36, p. 197]. Value formation through co-creation involves legion stakeholders developing new products, services, or experiences. Social media usage yields value that is not solely determined by the producer or service provider but is instead сo-сreated in association with customers and other stakeholders, who bring together varied perspectives, insights, and expertise. By pooling common knowledge, experiences, and ideas, Co-creation can lead to a more comprehensive understanding of customer needs, preferences, and expectations [36, p. 201]. This shared understanding can significantly enrich the invention of products, services, or experiences that are more relevant, meaningful, and valuable to the end-users. Additionally, stakeholders collaborate to identify and address actual challenges and opportunities. By benefiting the consumer's shared creativity and the expertise of other participants, Co-creation can lead to innovative solutions that may not have been possible through individual efforts. These concerted efforts can produce a unique offering that provides differentiated value for the market.

Ultimately, the co-creation process places consumers at the center of value creation as they co-develop products, services, experiences, and brands. By this, co-creationreflects an active consumer involvement and engagement in brand life. Consequently, co-creation can ensure that the customer needs, preferences, and feedback are organically integrated into the value design, leading to consumer-centric solutions that better meet their likelihood [36, p. 202]. It should positively affect customer satisfaction and loyalty by achieving the targeted value for consumers and manufacturers.

Moreover, a stronger connection exists between VCC and consumer brand engagement in the digitalized market context. This is reflected in Ramaswamy and Oscan's dynamic and integrative brand VCC model, which serves as a multifaceted framework for brand engagement [38]. The brand engagement platform is the heart of the framework, where the joint interrelation activities of stakeholders create the marketing value of the offer. This framework integrates people, processes, digital interfaces, and firms into a highly effective structure, ultimately driving the co-created brand value, as depicted in Figure 2.

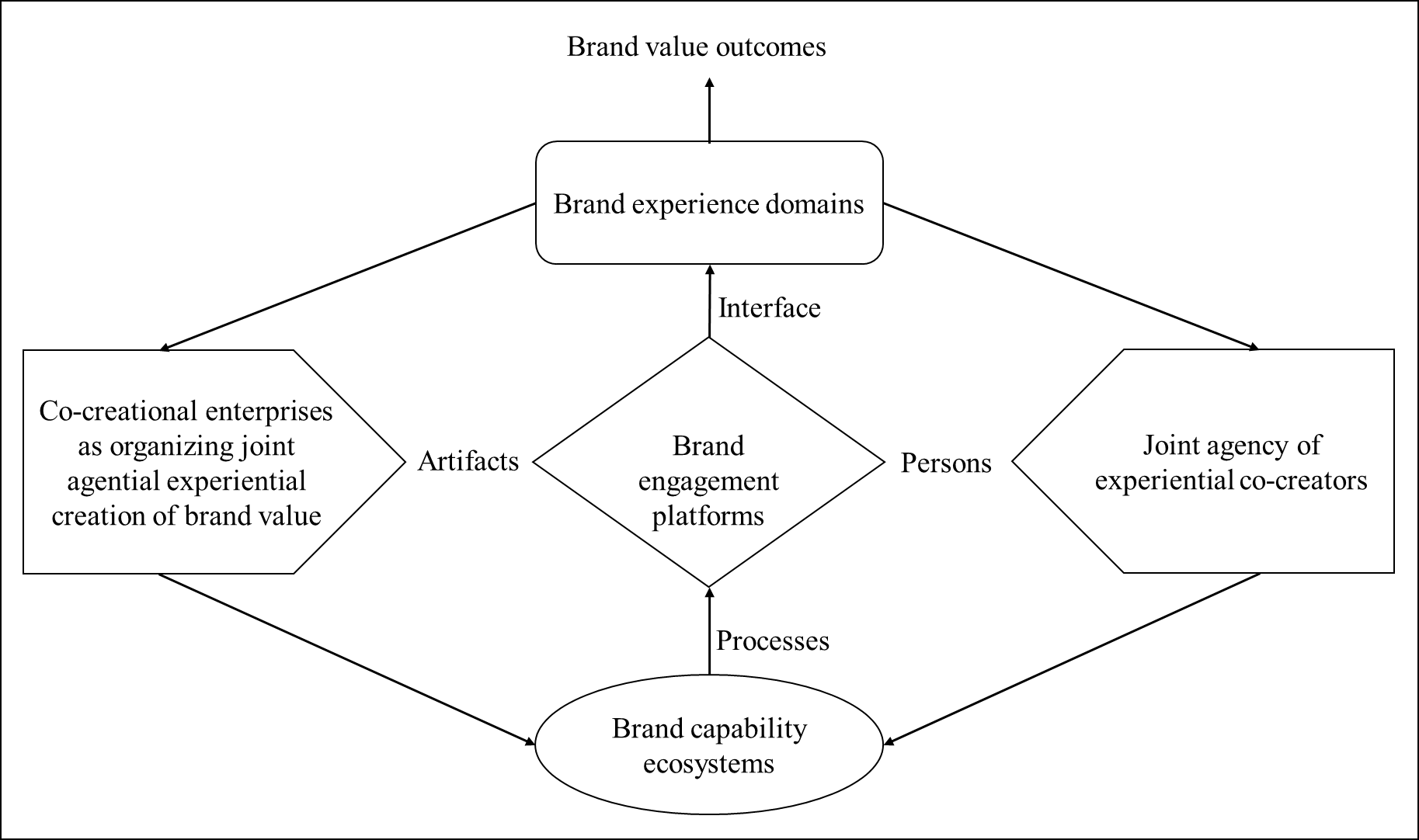


Figure 2 - Brand value co-creation in the digitalized world.

Note – [38] compiled by the author based on the data

In the social media era, VCC has advanced significantly through consumer online networking, offering 24/7 support for product innovations in both commercial and non-commercial areas worldwide [32, p. 16]. Customers can easily engage in co-creationdue to ubiquitous social media features. Social media enables brands to interact with customers in real-time, respond to feedback, and address concerns promptly. By actively listening to customers and acknowledging their needs, brands can better co-create value with the customers and build stronger relationships. So, apart from improving consumer perception of brand value through social media marketing, the extant literature highlights a facilitation function of social media in activating customers’ active participation in building, maintaining, and boosting brand value. For example, Tajvidi, Richard, Wang, and Hajli explored a process of brand VCC through social media in detail, where social media antecedents of brand VCC are social value, including emotional and informational support, sharing information, and quality of relationship with customers, which facilitate consumer opportunities to generate and share their content, called user-generated content (UGC) [39]. UGC can relate to a brand through various means, such as reviews, testimonials, and product demonstrations. Brands can leverage this user-generated content to co-create value with their customers by showcasing their products or services in a more authentic and relatable way. When customers share their positive brand experiences with others, they advocate on their behalf. By encouraging and amplifying customer advocacy, brands can co-create value with their customers and build a community of loyal brand defenders.

The role of social media in VCC is indisputable. Some scholars have explored the brand VCC process on social media and found that social value, including emotional and informational support, sharing information, and relationship quality, facilitates the generation and sharing of consumers’ thoughts and ideas, known as user-generated content (UGC). This means that brands can motivate consumers to create and disseminate user-generated content (UGC) on digital media, leveraging marketing actions to co-create and reinforce brand value. Therefore, social media is one of the three actors in the complex VCC structure, aligning with the customer and firm through contemporary resource integration logic [40]. However, firms should be capable of providing a synthesis of the resources and processes described above. For example, some scholars suggest creating engagement objects via posts about social justice, donations, and events as a guideline for SMM managers on how to co-create brand value on social media [41].

Overall, the joint efforts of consumers and business owners to form brand value, or VCC, have been representing a phenomenon in the realm of modern marketing and consumer studies since the 2000s [10, p. 643]. There are 14 categories of existing literature on VCC, including customer involvement, customer experience, formation, social media, public value failure, social marketing, the sharing economy, spectator experience, digital ecosystem view, and other areas [42]. Social media studies utilize VCC theory as a valuable framework for understanding the development process of digital media. The brand value model proposed by Shen and Yang is grounded in the prosumer perspective [43]. This model consists of the new social media-based dimensions, including experience, relationship quality, citizenship behavior, and esteem. Here, VCC theory serves as a lens through which to view social media's specific mechanisms, activities, and interactions. Whereas, the simultaneous and interconnected consumption and production of virtual information on digital media enhance brand value theory, highlighting the activated consumer role in brand creation [44].

Existing sporadic studies show the most common factors of brand VCC on social media, including interaction, consumer engagement, and electronic word-of-mouth (eWOM), which are described below. Some research exhibits a combination of two of the factors. This work considers all three factors together to get a comprehensive VCC model on social media. Also, this research recognizes brand social value as the fourth VCC factor in digital media. A reason is that extant studies demonstrate this value as an essential outcome of social media for its users [45]. People form digital communities of interest or identity, getting a sense of belonging to society. They acquire unlimited social connections to relate with others, share similar experiences, challenges, feelings, and ideas, and get social support.

First, the most frequently mentioned social media VCC antecedent in the existing literature is consumer engagement, which indicates a certain level of customer investment in their mental, emotional, and psychological efforts to interact with the brand [46]. It means that the customer uses branded products or services, actively participates in the brand’s social media activities, such as liking, commenting, and posting, and recommends them to others. Many scholars consider the described consumer behavior part of a psychological process. In the case of a successful brand trial, customers can become loyal to the brand. They may even feel a strong emotional connection with it, engaging in brand activities, which is much more than just satisfying customer needs and preferences [47]. Therefore, firms are advised to adopt a comprehensive approach to viewing brand value creation as a system of interrelated impression management, brand utilization, community engagement, and social networking [48]. Consumer engagement has been proven to be a predictor of сo-сreation in various social media contexts, including the banking industry [49], social commerce [50], the restaurant business [51], and social media itself [41, p. 917; 52; 53]. Still, this research area is recognized as under-investigated, especially in the social media market [54]. Therefore, this research considers social media user engagement behavior as a precursor to brand VCC for social media brands.

**H1**: Social media antecedents have a significant and positive influence on the formation of VCC behavior for social media brand.

**H1a:** User engagement significantly and positively influences forming VCC behavior for social media brands.

Contemporary research views the multidimensional construct of consumer brand engagement and proposes different measurement scales. Some scholars find that consideration, conversation, interrelations, emotions, synesthetic delight, and prompt activation contribute to forming consumer engagement and an overall customer experience of the brand [55]. This engagement scale represents a lively process system of the concurrent brand-customer interrelationship and strategic brand communications. Other scientists propose that inspired involvement, social liaisons, and affection can be used to measure engagement in a social media context [56]. Several researchers consider consumption and contribution aspects of consumer engagement [57]. More scholars recommend adding creation behavior to this two-factor measurement scale [58; 59]. This study employs a three-factor scale encompassing the consumption, contribution, and creation aspects of engaging behavior.

The current scientific research suggests a second social media antecedent of VCC that is eWOM. It describes the sharing of information by ordinary people about a product, service, or experience through electronic channels such as social media, email, online reviews, and other online tools [60]. The overwhelming majority of scholars and practitioners recognize the significant role of eWOM in business. Either favorable or unfavorable towards a brand or firm, eWOM can be addressed by prospective, current, or former consumers to millions of people and organizations throughout the Internet [61]. Negative reviews or comments can quickly spread and damage the brand, leading to a sales decrease. Thus, eWOM has a distinct and rather commercial meaning because this type of consumer online activity directly affects other consumers’ buying decision-making and monetary outcomes for the business [62].

eWOM is a subject for modern social media studies. One of the reasons is that social media features facilitate consumers’ exchange of opinions about brands, which can build or destroy these brands faster than before. That is why many scientists observe that eWOM on social media contributes to brand VCC [63; 64; 65]. For example, some scientists demonstrate the mediating role of VCC in the impact of eWOM on purchase intention among brand fans on the Facebook page in 2021 [66]. However, there is a gap in existing research regarding the contribution of eWOM to VCC for social media brands, which is addressed in this study.

**H1b**: User eWOM has a significant and positive informational impact on formation of VCC behavior for social media brand.

A third common predecessor of VCC on social media, as identified in the extant literature, is consumer interaction with companies and other consumers. Some scholars observe that social media provides consumers with real-time interaction, contributing to VCC via advertising value [67]. Other scientists have detected the VCC antecedent effect of interaction in a close interrelationship with eWOM, customization, entertainment, and trendiness on social media, as analyzed in the smartphone market [65, p. 118]. However, no impact of interaction has been found in the healthcare market [68]. There is an emerging trend among scholars to focus on the role of consumer-to-consumer interaction in brand Co-creation on social media. For example, some scientists suggest a mechanism for the effect of the interaction on VCC through participative behavior and citizenship behavior on digital media [69]. A customer-dominant logic is used to explain the input of consumer interaction to VCC via social media platforms [70]. Acknowledging this logic and existing research findings, this study views consumer interaction on social media as a lever for its owners to co-build brand value.

**H1c**: User interaction has a significant and positive influence on the formation of VCC behavior for social media brands.

Fourth, contemporary literature showcases the enhanced ways in which people can derive or enrich social value from social media usage. Many scholars observe that modern digital technologies, including online social media, can help reduce feelings of loneliness [71; 72]. Other well-being psycho-social effects, including compensatory usage, self-presentation, socializing, addiction, virtual self, and seeking sexual partners, are revealed from Facebook usage [73]. A virtual self is an online visit card presented through individual Facebook profiles. Compensatory use of Facebook covers unmet psychological needs in real-world life, where social interactions are inadequate or unsatisfying. However, it can have negative consequences in terms of social media addiction. So, compensatory usage and addiction are interconnected factors that present a potential risk for well-being. Other social benefits of online media usage are self-status seeking, entertainment [74], playfulness, and social enhancement [75].

Scarce literature is devoted to the role of social value in the VCC brand process. At the same time, modern scholars recognize a brand as a social process involving various stakeholders in creating brand value [34, p. 685]. It refers to a complex social network of interrelationships between the brand and its stakeholders, enabling them to co-build and co-develop the brand. Therefore, сo-сreation is also a social process [76; 77; 78], where social values form the foundation of the VCC, a kaleidoscopic phenomenon encompassing numerous perspectives and implications [79, p. 14]. Concerning virtual communities, social and cultural values are prominent measures of VCC that reflect the underlying beliefs, norms, and preferences of stakeholders involved in the сo-сreation process [80]. By considering these values, companies can co-develop strategies and co-create brand values that resonate with stakeholders through the social media community. Based on existing research findings, this study hypothesizes that the social value provided by social media to its users contributes to the VCC process for social media brands.

**H1d**: Social value has a significant and positive influence on VCC behavior for social media brand in terms of socialization.

Thus, the first hypothesis suggests that social media factors positively contribute to VCC behaviour, including consumer engagement, eWOM, interaction, and social value.

**1.2 Marketing approaches to assessing consumer-based brand equity on social media: International experience including Instagram**

The definition of brand equity describes a product enhancement that incorporates the intangible value of a brand, such as its name and logo, to complement the functional advantages of the product [81]. It means the manufacturer offers a specific product benefit that differentiates it from similar rivals, denoting a distinctive name and symbol to indicate the brand. Several brands can offer distinct features for the same product type, delivering specific values to targeted audiences. Customers distinguish brands by their unique features, brand awareness, and image, which collectively form brand knowledge and lead to positive or negative reactions, known as brand equity from a customer perspective or customer-based brand equity (CBBE) [82]. Brand knowledge is a crucial stage in the consumer's purchase decision-making process. Therefore, CBBE plays a role in the customer's brand choice between branded and non-branded analogous goods. Firms invest in CBBE through long-term marketing efforts to win the battle against competition [83], generating financial value and demonstrating brand achievement in monetary terms or finance-based brand equity [84]. Apart from consumers, other stakeholders contribute to total brand equity, including employees, distributors, suppliers, media, governmental, non-governmental organizations, and other partners. The stakeholders’ interrelationships form the daisywheel model of brand equities, e.g., employee-based brand equity, to depict the overall management system for brand value creation [29, p. 50]. Brand equity is a significant research area today and will be actual tomorrow [85; 86]. Because sufficient marketing investments to the robust CBBE, or brand strength, contribute to the sustainable financial well-being of the firm [87].

Aaker (1991) structures the CBBE scale with several interrelated dimensions, including brand perceived quality, name awareness, brand associations, brand loyalty, and other brand-registered possessions [88]. Furthermore, all these elements form overall brand equity that positively or negatively affects the value obtained by the customer and firm. Customer value is more straightforward when interpreting and processing information about products or services due to the formed brand awareness and associations. The product or service experience can add or subtract customer value due to its high or low perceived brand quality. Brand loyalty indicates customer satisfaction with the brand and confidence in choosing the brand now and in the future. As a result, the customer feels differently using different brands due to the overall brand equity formed by its dimensions in his mind. At the same time, the customer preference for the particular brand over other alternatives makes it possible for the brand owner to charge a higher price and get more margin for the branded product or service. Also, the satisfied customers form a loyal customer base that grows due to the increasing brand equity. For stronger brand producers it is easier and less expensive to extend the brand and enter retail, getting more competitive advantage with the bigger brand size. Finally, the bigger and stronger brands increase the effectiveness and efficiency of marketing activities due to the more significant loyal customer base. See Figure 3 for the traditional brand equity model.

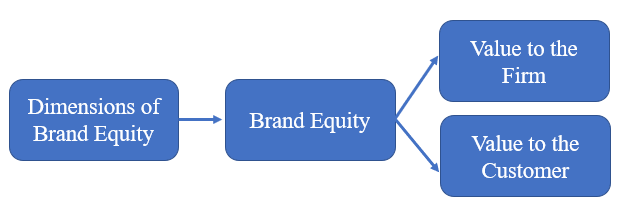


Figure 3 – Traditional brand equity model

Note – [88] compiled by the author based on the data

Later, Yoo, Donthu, and Lee extended the Aaker model to include marketing efforts as CBBE antecedents that can be either “brand-building” or “brand-harming” in the long term [89, p. 206]. For example, price promotions may noticeably decrease the consumer’s perceived brand value in the future, while intense investment in the brand image can positively affect it for a long time. Figure 4 shows the same Aaker’s brand equity model but with the added marketing efforts, which form CBBE dimensions.

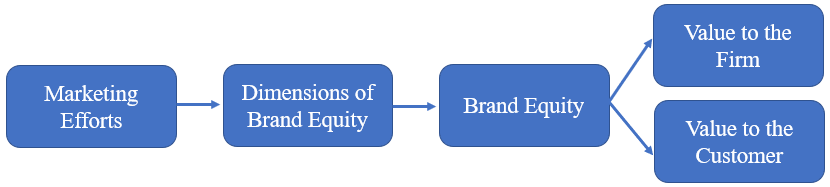


Figure 4 – Traditional brand equity model extended with marketing efforts

Note – [89] compiled by the author based on the data

Keller proposed the CBBE dynamic pyramid to represent a consistent process of creating a strong brand [90]. The pyramid consists of six building blocks within four stages, addressing four basic questions about the brand: brand identification, meaning, consumer responses to the brand, and the probability of forming intense consumer-brand relationships. The first stage, or the first box, is the brand salience or identity stage, where the firm provides targeted consumers with extensive and comprehensive information about the brand’s existence and availability on the market. During the second stage, the firm explains to consumers the brand performance and brand imagery, which are the second and third boxes. The objectives for the third stage are to achieve favorable consumer judgments and appreciated feelings about the brand, as indicated in the fifth box. The sixth box represents the fourth stage, where the firm establishes and develops strong brand relationships with consumers.

Chatzipanagiotou, Veloutsou, and Christodoulides propose another dynamic system of CBBE to describe a firm’s continuous process of motivating consumers to pay a premium price, make recommendations, and repurchase [91]. The process consists of three key working blocks: brand building, brand understanding, and brand relationships. The first building block is based on the Keller pyramid, which incorporates interrelated brand attributes that are both functional and emotional. The second understanding block represents consumer brand knowledge, encompassing the following indicators: reputation, brand awareness, brand-self connection, and brand associations. The third relationship block represents interconnected measures, including trust, intimacy, and the quality of the partnership. The three blocks shape overall brand equity that affects consumer behavioral outcomes. Despite various measurement models, CBBE remains a common strategy for creating and maintaining powerful brands that deliver value to consumers and firms [92].

It is widely acknowledged that social media and related marketing play a crucial role in creating brand equity [93]. Some scholars have identified the impact of conversations and relationships on CBBE on social media, which involves enhancing perceived brand quality, fostering positive brand awareness and associations, and promoting consumer brand loyalty [94]. Other scientists suggest that the influence of social media on engaging content affects consumers’ purchase intentions and participation in brand activities, leading to increased brand equity [95]. Additionally, social media facilitates the evaluation of brand equity more easily and quickly using online tools, including sentiment analysis, RapidMiner, and NodeXL, for retrieving and analyzing social media data [96]. These instruments help provide firms with insights into consumers’ perceptions, behavior towards the brand, their preferences, and the brand’s competitive position by collecting and processing data from various social media platforms quickly and on a global scale.

The SMM role in building brand equity is one of the most significant and challenging research areas over the last decade [97; 98; 99]. However, scant studies focus on the equity of online brands formed under the influence of SMM. It is observed that consumer engagement, exposure, loyalty, and influence on social media input to CBBE of e-commerce brands via its dimensions [100]. At the same time, Web-based brands are big enough to be scrutinized for CBBE measurement addressing the specific features of online settings. Some scholars even suggest special terms, including e-brand equity [101], website brand equity [102], online brand equity [103], and Consumer-Based e-brand equity [104]. However, scant research is devoted to measuring the CBBE of social media brands, e.g., the study by Dwivedi [26, p. 1176].

A limited number of studies analyze the VCC's contribution to CBBE creation and its maintenance on social media. Since social media are service platforms, this research emphasizes scholarly findings about the interrelationships between VCC and CBBE in service and digital markets. Some authors have noticed a growing research interest in the VCC concept on the tourist market and have uncovered a positive influence of VCC on client satisfaction, trust, and loyalty, which is one of the CBBE aspects [105]. The significant encouraging effect of VCC on overall brand equity is evident in the highly competitive offline service market for small and medium enterprises, as observed through client citizenship and participation behaviors such as information seeking, interactions, advocacy, tolerance, and responsible behavior [106]. Some scientists have detected the effect of CBBE, formed in conjunction with VCC, on customer satisfaction in the hotel industry [107]. This means that VCC activities for growing CBBE firms can enhance brand competitiveness by improving client satisfaction.

Regarding virtual communities, current research indicates the significant role of user VCC behavior in enhancing tourist brands [108]. This enhancing effect is explained by the functional value that online communities are perceived to have by their users in terms of comments, feedback, and recommendations. Thus, an organic alliance between social media and VCC is formed through consumer involvement in online brand activities [109]. The phenomenon can be referred to as social media VCC. It is a complex social process that covers both business-to-consumer and consumer-to-consumer Co-creation activities [110]. Additionally, modern studies examine the interconnection between social media VCC and CBBE in terms of overall brand equity [111; 112; 113] or specific CBBE elements, such as brand loyalty [114; 115; 116; 117]. Thus, social media represents innovative opportunities for prosumers’ engagement and their integration with all other stakeholders in VCC, which is an intrinsic part of contemporary general business strategy to form competitive brand equity and brand value [118].

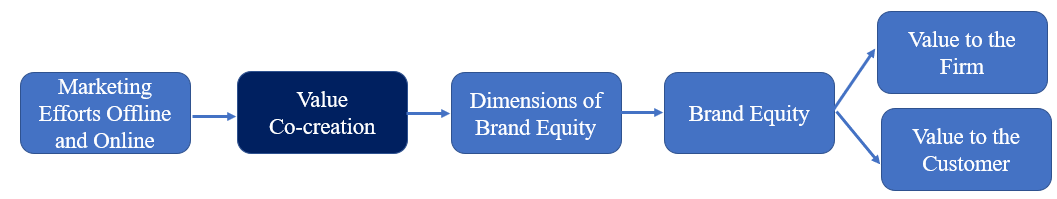
Overall, the existing literature highlights the need to integrate two theories, CBBE and VCC, through social media activities. This study proposes an enhancement of the traditional brand equity model by incorporating VCC behavior to address the modern digital context, where social media empowers consumers with Co-creation capabilities, as illustrated in Figure 5. Contemporary marketing efforts utilize both traditional and social media, facilitating VCC actions that contribute to the establishment of CBBE. Therefore, VCC is assumed to be a mediator of the effect of marketing efforts on brand equity.

Figure 5 – The augmented brand equity model

Note – compiled by the author

The reviewed literature shows that the area of social media brand equity is under-investigated. Addressing this research gap and applying the advanced CBBE model, this study will examine the impact of VCC behavior on overall brand equity, utilizing second-order construct analysis.

**H2**: Value Co-creation affects CBBE of social media brand.

Also, this research considers each CBBE dimension of a social media brand as co-created with its users, applying the first-order construct analysis.

**H2a**: Value Co-creation affects brand awareness and brand associations of social media brand.

**H2b**: Value Co-creation affects the perceived brand quality of social media brand.

**H2c**: Value Co-creation affects brand loyalty of social media brand.

The traditional brand equity model confirms value for the firm as one of the potential CBBE outcomes in terms of profitable cash inflow [88; p. 27]. It means that consumers vote for brands by their purchasing decisions. The buying potential is measured by the purchase intention factor, which is the probability of buying among targeted consumers based on their preferences and attitudes [119]. Current research demonstrates that firms’ social media activities facilitate the positive effect of the higher CBBE on an increase in consumer purchase intention in the luxury fashion market [120] and cosmetic business [121]. Primarily, advertising on Facebook was found to be useful in motivating customers to form a purchase intention through the generation of eWOM [122] and consumer engagement [95, p. 3552]. Instagram is revealed to be an effective business platform for developing brand equity and generating purchase intention for products and services through promotional posts [123; 124]. Concerning social media brands, most services are free and continuous. So, continuous usage intention rather than purchased intention is more relevant to the study of digital media. One of the research objectives is to complete the comprehensive research model with the CBBE outcomes. The third hypothesis covers the impact

This study analyses the effect of the overall CBBE on continuous usage intention, applying second-order construct.

**H3**: CBBE contributes to continuous usage intention for social media brand.

Also, the research tests the impact of each CBBE dimension on continuous usage intention, applying first-order constructs.

**H3a**: Brand awareness and brand associations contribute to continuous usage intention for social media brand.

**H3b**: Perceived brand quality contributes to continuous usage intention for social media brand.

**H3c**: Brand loyalty contributes to continuous usage intention for social media brand.

The second result of CBBE is the value it provides to the customer within the traditional CBBE model. Numerous studies confirm this effect on the offline market in business-to-consumer [125, 126] and business-to-business contexts [127], as well as in service settings [128]. These studies demonstrate that a brand with a stronger CBBE offers superior value in the consumer’s mind compared to brands with a weaker CBBE. However, the CBBE contribution to the customer value on social media and for social media brands is under-analyzed. This study aims to test the value that users benefit from their utilizing social media services. The testing follows a comprehensive approach to CBBE measurement from its antecedents to results. This research assumes that, similarly to the offline market, a higher CBBE of social media brands leads to a higher precepted user value.

The second-order construct views the input of the overall CBBE to the user value.

**H4**: CBBE contributes to the user value of social media brands.

The first-order constructs are also analyzed.

**H4a**: Brand awareness and brand associations contribute to the user value of social media brands.

**H4b**: Perceived brand quality contributes to the user value of social media brands.

**H4c**: Brand loyalty contributes to the user value of social media brands.

Therefore, all hypotheses form the augmented CBBE model, which encompasses the building process for brand equity, co-created with consumers through social media, resulting in values for both users and firms. This study uses the model to measure the CBBE of social media brands.

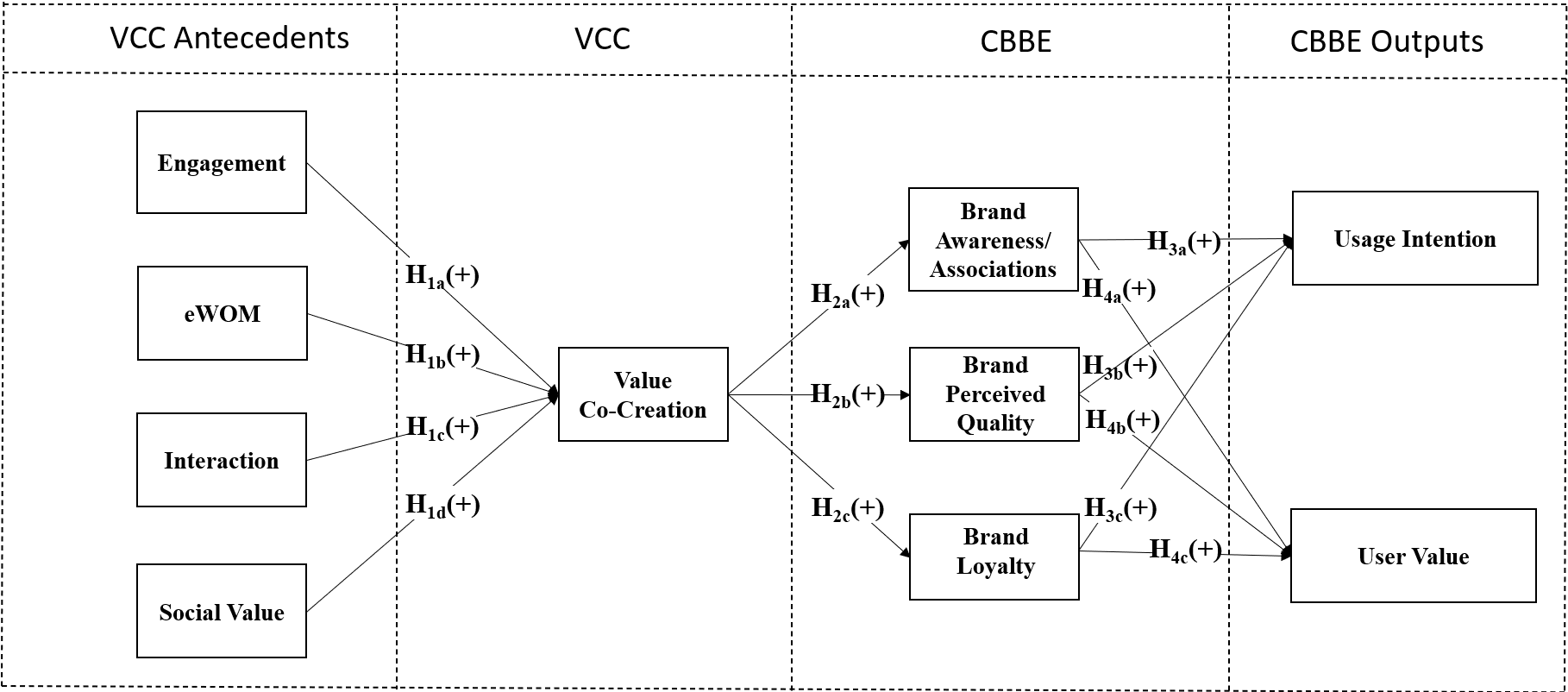


Figure 6 – The augmented CBBE model

Note – compiled by the author

Figure 6 explains the model’s factors interrelationships within the modernized CBBE model. The complex research model conditions the mediation effects of VCC and CBBE, which are considered in second-order construct analysis.

**H5a**: Value Co-creation mediates the effect of engagement on CBBE of social media brand.

**H5b**: Value Co-creation mediates the effect of electronic word of mouth on CBBE of social media brand.

**H5c**: Value Co-creation mediates the effect of interaction on CBBE of social media brand.

**H5d**: Value Co-creation mediates the effect of social value on CBBE of social media brand.

**H6a**: CBBE mediates the effect of value Co-creation on user value of social media brand.

**H6b**: CBBE mediates the effect of value Co-creation on continuous usage intention for social media brand.

**1.3 Methodological approaches to examining the role of consumer-based brand equity in brand valuation**

*Research Methodology*

The methodology addresses this study’s questions and objectives through the numerical indicators of the research model, including the tested factor means, factor loadings evaluated with the acceptable ranges of p-value, and R-squared that represents a proportion of variance in dependent variables explained by its predictors. It serves as a measure of the model’s explanatory power.

The research framework of Mentzer and Khan outlines a process for generating ideas and further validating the constructs developed within the elaborated research model [29]. The authors propose a framework for developing, testing and applying the theory. Hyun and Kim adopted and adapted this research framework to refine and validate the destination brand equity scale [130]. This study adopts the methodological approach of Hyun and Kim for building, testing, and validating the SM CBBE model, as depicted in Figure 7.

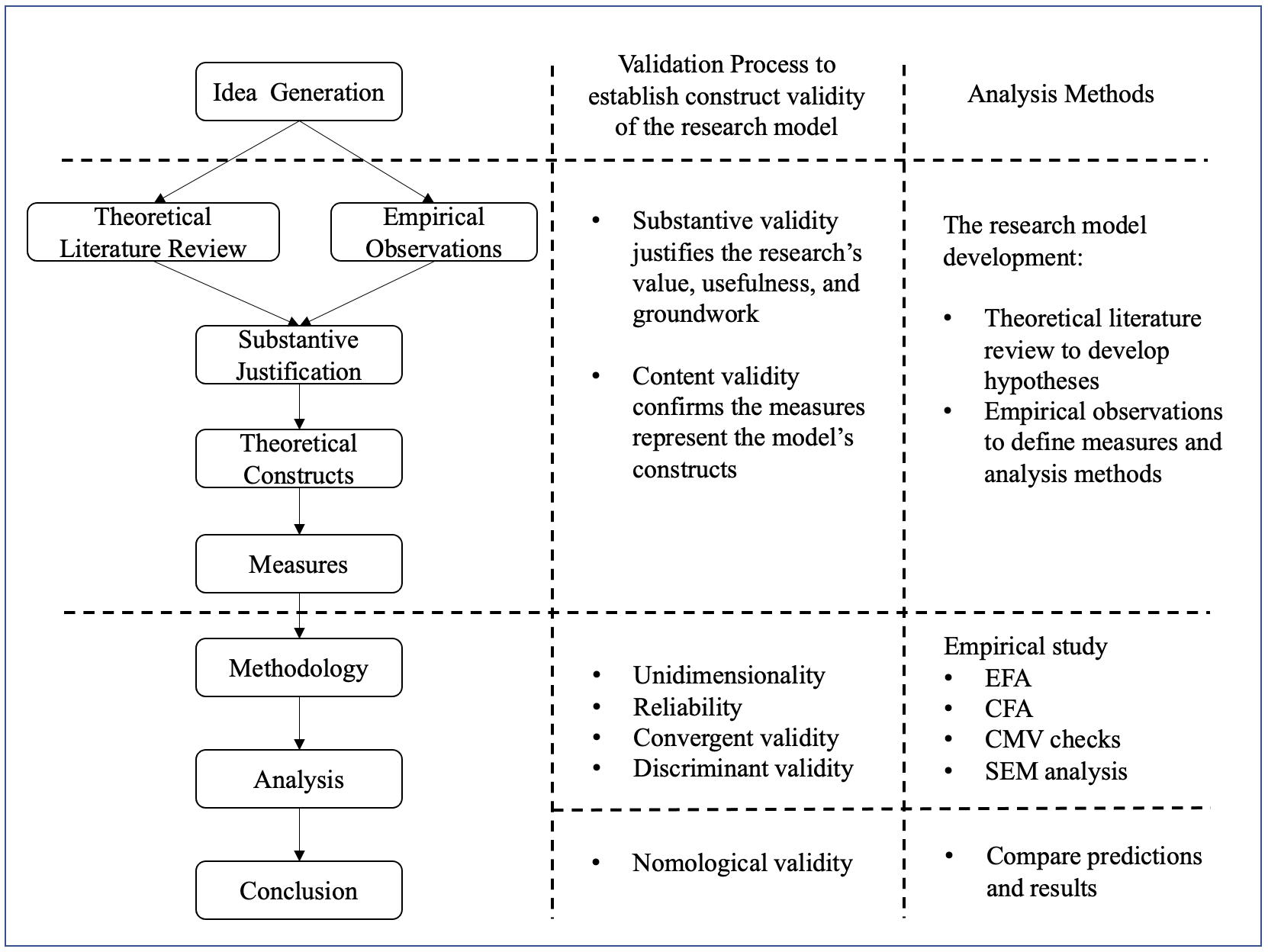


Figure 7 – The research framework and methodology

Note – [130] compiled by the author based on the data

The methodological framework outlines the subsequent research stages of these processes and describes the tasks and methods employed during the study. This research framework requires establishing the construct validity of the SM CBBE model, rooted in its subdimensions. Generally, the validity term “refers to the appropriateness, meaningfulness, and usefulness of the specific inferences made from test scores” [131, p. 9]. APA defines test validation as a necessary procedure for accumulating evidence to support the interpretation of results. Messick promoted validity as a component statement, which is appropriately and adequately based on extant theories and empirical data, and confirmed by the own test scores [132].

Various scholars propose several fundamental indicators of research validity, apart from the definition of construct validity described above. O’Leary-Kelly and Vokurka suggested ensuring content validity, construct validity, and nomological validity to recognize the research results [133]. Sureshchandar, Rajendran, and Anantharaman considered substantive validity, content validity, discriminant validity, convergent validity, and criterion validity as essential types of validity necessary for the acceptance of research findings [134]. Borsboom, Mellenbergh, and Van Heerden suggested the concept of test validity, arguing that the measured attributes are valid if they exist and their variations causally produce the test scores, which have both theoretical and practical value [135]. According to these commonly recognized validity types, this study generates, tests, and validates the SM CBBE model, following the consequent stages of the research framework. The described principle provides decisive guidance in developing the constructs within the SM CBBE model, ensuring that it does not overlook current theories and prior investigations.

*Substantive validity*

This study analyzes prior observations and literature reviews, which help provide a deep understanding of the historical roots of the research area and the related detailed scope of preceding empirical findings, thereby generating the research idea [129, p. 234]. Theoretical literature is reviewed to create research hypotheses based on existing theories and various investigations and to select the most appropriate research design and statistical tools for testing the developed model. Scopus, Web of Science, and citation index databases have been utilized to search for thematic papers with high citation rates in journals with high impact factors over the past decade. Additionally, the relevant books, articles in conference proceedings, university publications, dissertations, and white papers are reviewed to define the research concept and related research model constructs.

This research goal involves the thorough elaboration of the SM CBBE model, which is based on the classical CBBE theory. Considering the Web-based nature of social media, this research encompasses related concepts, including social media theory, VCC theory, social value concept, and consumer engagement theory. Thus, the SM CBBE model incorporates these five theories, which were identified as interconnected during the literature review, focusing on prior conceptual, theoretical, and empirical studies of brand equity on social media and for social media brands. Additionally, this search encompasses studies on social media aspects, which directly influence the formation of brand equity for various offline and online brands, with a focus on the mechanisms, drivers, and challenges of creating and developing Internet brands. For example, the examined conceptual and experimental research papers [101, p. 157; 103, p. 282; 104, p. 5] propose various scales for evaluating the brand equity of Web-based brands.

A literature review shows that the CBBE scale is well-established for offline brands, but the unobservable CBBE variables for online brand measurement vary across several studies. So, this research employs theoretically and empirically well-justified dimensions. The study does not create a new CBBE measurement scale; instead, it advances the classical CBBE model by utilizing existing constructs from related theories to address the modern digital business environment. It orchestrates major impactful factors caused by social media features conditioned by Web technologies. The first chapter of this dissertation establishes the substantive validity of the developed CBBE model through an analysis of theoretical literature and existing empirical findings. Substantive validity is crucial for further empirical testing to explain theoretical connections between each specific variable and its items [136; 137]. This study runs confirmatory factor analysis (hereinafter - CFA) before structural equation modeling (SEM) to scrutinize the model’s items to confirm substantive validity as generally recognized for the measure’s performance predictability [138].

*Theoretical Constructs*

This study uses extant theories to explain facts and their relationships, developing theoretical constructs into a comprehensive CBBE model and advancing brand equity theory [139]. Existing knowledge is applied to establish a basement for interpretations of the enhancing effect of social media on VCC and CBBE as a modern phenomenon [140]. Used theories help create and test the study’s hypotheses through the developed research constructs, which serve as the essential ground for the CBBE model [141]. This study used proven theoretical constructs to establish content validation, one of the critical concepts of test validity [142]. Unlike substantive validity, when the individual item must represent the variable, content validity assures that all items present the whole items’ universe [143]. Some scholars name content validity as face validity and believe it is the most key validity due to the check of the compatibility of individual items in building a summated scale and a concept of a single variable within a measurement scale or model [144]. This study ensures content validity by forming the research model based on empirical investigations by experts in social media brand equity analysis [26, p. 1192; 95, p. 3553; 145]. The role of experts is undisputable in the content validation process [146]. Thus, theoretical literature review and extant quantitative research serve as a basis to elaborate hypotheses to the statements on non-observable variables for empirical testing [129, p. 233].

*Measures*

This study develops measures for the SM CBBE model by applying a survey questionnaire based on justified theoretical constructs. The questionnaire captures the attitudes, perceptions, and actions of social media users, which influence the formation of brand equity for social media brands. The questionnaire consists of 11 blocks with 57 measures that were adopted and adapted from existing research as shown in Tables 1.1 and 1.2.

First, sporadic studies incorporate specific elements into the classical CBBE aspects, taking into account the unique characteristics of the business context. For example, destination brand image in the travel industry [130, p. 1522], or perceived sentiment if measured on social media [96, p. 108]. Other researchers suggest using the e-brand equity term to measure brand awareness and brand activity as a unique element, addressing the role of active online consumer behavior [101, p. 157]. However, most scholars acknowledge the evaluation of CBBE in relation to the classical Aaker’s CBBE dimensions in various business areas, as explored in both theoretical and empirical studies [89, p. 206; 147; 148]. This study employs the traditional CBBE scale, which includes brand perceived quality, brand associations, brand awareness, and brand loyalty [88, p. 27].

Brand loyalty is a central element of CBBE, resulting in increased future sales due to repeated or loyal purchases associated with higher brand loyalty [88, p. 44]. Brand loyalty refers to the degree of consumer attachment to a brand, indicating the likelihood of switching to a competing brand if the price or characteristics of the brand change. The primary distinction between loyalty and other CBBE dimensions is that loyalty is a direct consequence of product usage. There are five sequential levels of brand loyalty [88, p. 45). A switcher or non-loyal buyer is the first level, where all products with different brand names are essentially equivalent to the consumer. Here, brand name plays a minor role in the consumer buying decision process. However, if the customer is satisfied after the first trial of the branded product, they can progress to the second level of brand loyalty, becoming a satisfied or habitual buyer. However, he remains vulnerable to competition. The third level is the more gratified consumer. He is ready to invest additional money or time to find the brand for the purchase. The fourth level of loyalty is liking the brand. The buyer favors the brand as a friend, having an emotional attachment to it. The fifth level of loyalty is the pinnacle, where the committed buyer expresses themselves through the brand and recommends it to others. Social media presents a highly competitive dynamic market where new launches constantly appear. So, this study considers user loyalty as one of the decisive measures of SM CBBE.

Brand perceived quality is an abstract or general consumer feeling of a brand [88, p. 81]. Customers form their overall perception of the brand, relying on its features and performance. Social media brands offer various means to their users for intercommunication, information exchange, influencing others, idea promotion, advertising, business, collaboration, and other numerous facilitating tools to improve people’s lives and work. Consumers assess the speed, convenience, functions, and other attributes of social media during its usage. The user evaluation of these characteristics contributes to the general impression of social media quality, a critical measure for this research.

Brand awareness refers to a potential purchaser's ability to identify or recall a brand within a specific trade category [88, p. 61]. Aaker (1991) distinguishes the four levels of brand awareness and explains its advantages for the brand [88, p. 62]. Consumers are unaware of the brand name on the first level. Customers recognize the brand name among different brands within the same product category on the second level of brand awareness. Consumers can recall the brand name if prompted on the third level. The highest or fourth level of brand awareness means that the brand name comes to mind first if asked about a particular product category. The top position of the brand name in the consumer’s mind gives the brand an advantage over competitors with lower brand awareness in terms of buying decision-making. The higher brand awareness among non-users is promising for potential sales growth. Being aware of the brand, consumers may consider it for trial use when envisioning its potential benefits. This study measures brand awareness as one of the indicators of existing market status and projection of foreseen market sales and share, along with other brand attributes.

Brand associations are closely tied to brand awareness, as both elements relate to human memory [88, p. 101]. Remembering the brand, a consumer has unique associations that differentiate it from other brands within the same product category. The uniqueness and brightness of brand associations depend on a firm’s marketing activities to form a sharp positioning in consumers’ minds, allowing it to stand out from the competition. This study evaluates brand associations as part of a comprehensive analysis of social media brand equity.

This study adopts CBBE measures from scholarly research, which scrutinize brand equity in the social media context. The items of brand loyalty, brand perceived quality, brand associations, and brand awareness are adopted from Schivinski, Muntinga, Pontes, and Lukasik [149]. The items of overall brand equity are adopted from the study of Schivinski, Lukasik, and Dabrowski [150]. Dwivedi, Johnson, Wilkie, and De Araujo-Gil combined brand awareness and brand associations into a single factor, along with brand perceived quality and brand loyalty, to measure the CBBE of social media brands [26, p. 1185]. This study employs the same approach, focusing on brand awareness and associations.

Second, sparse literature suggests varied measurement scales for consumer VCC behavior. Yi and Gong focused on customer behavior and proposed two groups of multidimensional sources, including customer participation behavior and customer citizenship behavior [151]. The former comprises information-seeking, information-sharing, personal interaction, and responsible behavior. The latter contains feedback, helping, advocacy, and tolerance. Ranjan and Read measured VCC through co-production and value-in-use [152]. The former includes knowledge, equity, and interaction determinants. The latter comprises personalization, experience, and related sources. Merz, Zarantonello, and Grappi estimated VCC based on customer motivation and resources, including passion, commitment, trustworthiness, knowledge, creativity, skills, and connectedness [153].

This study aims to reveal users’ initiatives in developing social media brands through the items from VCC1 to VCC5, adapted from Seifert and Kwon. The authors observe that the consumer plays a role in co-forming purchase intention due to the positive brand-relevant eWOM effect through social networking sites [154]. The items VCC6 and VCC7 are designed to measure customer-brand interaction within the VCC process, adapted from Cheung, Pires, Rosenberg III, and De Oliveira, who analyzed the effect of interactive and engagement activities on Facebook users' intention to co-create brand value [155].

Third, the consumer engagement items are adapted from Schivinski, Christodoulides, and Dabrowski, who elaborated on and used the engagement scale to measure users’ behavior on social media [156]. The items from ENCS1 to ENCS3 estimate consumption behavior, including reading posts, watching visual information, and following brands on social media. The items from ENCT1 to ENCT6 quantify the contribution activities of users who may like, comment, or share posts and visual data of others on social media. The items from ENCR1 to ENCR4 rank the creation and sharing of content with other users on social media.

Fourth, all eWOM items are adopted from Farzin and Fattahi, who proposed a comprehensive WOM scale to demonstrate complex causalities between its antecedents and outputs [157]. The scale explains insight into consumer activities on social media. WOM1 and WOM2 uncover users’ actions in choosing and purchasing various brands relying on information from other users on social media. The items from WOM3 to WOM6 reveal details about sharing experiences with others on different products and services on social media.

Fifth, user interaction items are adopted from Godey, Manthiou, Pederzoli, Rokka, Aiello, Donvito, and Singh [158]. The authors thoroughly explore the key factors of SMM and its ability to generate favorable consumer interactions and responses in terms of loyalty, preference, and willingness to pay price premiums. These actions are considered helpful in building high brand awareness and a superior brand image. The scientists investigate the interaction behavior of consumers who actively follow the favored luxury brands on social media. This study utilizes three interaction items to investigate consumer attitudes toward social media brands regarding the usability and ease of sharing opinions and conversations on social media.

Sixth, this study adapts a four-item scale from Sweeney and Soutar to measure social brand value [159]. The authors explain how the brand can enhance the consumer perception of social self-concept and suggest a scale to measure the brand's social value. This research utilizes the scale to evaluate users’ social acceptance and social approval, as well as opportunities to improve impressions and perceptions through the use of social media brands.

Seventh, user value items are adapted from Itani, Kassar, and Loureiro and Stojanovic, Andreu, and Curras-Perez [160; 161]. The authors intensively study the multidimensional model of social media usage, including customer value, among other factors in the context of tourist destinations. This research utilizes three items to investigate user attitudes toward social media services provided by the brand, focusing on the perceived benefits and value both today and in the future.

Eighth, three items of continuous usage intention are adapted from Parra-Lopez, Bulchand-Gidumal, Gutierrez-Tano, and Diaz-Armas [162]. The authors suggest a scale to measure the tourists’ usage intention for social media. UI1 investigates the users’ opinions about increasing social media brand usage in the future. The items UI2 and UI3 analyze the intention to use social media further and recommend the usage to others. Table 1 summarizes the sources of all survey questionnaire items.

Table 1 – The used items sources, including authors, publication years, methods, and subjects

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Construct | Authors | Year | Method | Subject |
| Brand Awareness/ Associations; Brand Perceived Quality; Brand Loyalty | Dwivedi, Johnson, Wilkie, & De Araujo-Gil | 2019 | Online survey, CFA, SEM/SPSS | 340 social media users, Australia |
| Engagement | Schivinski, Christodoulides, & Dabrowski | 2016 | Online FGs/interview, netnography, CFA, SEM/M*plus* | 2578 consumers/social media users/299 brands, Poland |
| Value Co-creation | Cheung, Pires, Rosenberger, & De Oliveira; Seifert & Kwon | 2020; 2020 | Online survey, PLS-SEM | 408 Facebook users/smartphone users, Brazil |
| eWOM | Farzin & Fattahi, | 2018 | Filled-in questionnaires, SEM | 400 MBA students/social media users, Iran |
| Interaction | Godey, Manthiou, Pederzoli, Rokka, Aiello, Donvito, & Singh | 2016 | EFA, CFA, SEM | 845 luxury brand consumers/social media users, China, India, Italy, France |
| Overall Brand Equity | Schivinski, Lukasik, & Dabrowski | 2015 | Online survey, EFA, CFA, SEM | 336 social media users/11 brands users, Poland |
| Usage Intention | Parra-López, Bulchand-Gidumal, Gutiérrez-Taño & Díaz-Armas | 2011 | PLS-SEM | 404 Internet users/travelers, Spain |
| User Value | Itani, Kassar, & Loureiro; Stojanovic, Andreu, & Curras-Perez | 2019; 2018 | Online survey, CFA, SEM; Personal survey, PLS-SEM | 397 restaurant visitors, USA; 249 tourists/social media users, Spain |
| Social Value | Sweeney & Soutar | 2001 | Telephone survey, EFA, CFA | 273 PG students (1st stage); 303 respondents (2nd stage), Australia |
| Note – compiled by the author | | | | |

The table presents a summary of key constructs related to CBBE in social media context, along with their associated authors, years of publication, research methods, and sample characteristics. The studies employed a variety of quantitative and qualitative methods across different platforms and countries. The constructs explored include CBBE elements, engagement, value co-creation, eWOM, interaction, usage intention, user value, and social value, reflecting diverse perspectives on how consumers engage with brands in digital environments.

*Definition of Brand Valuation*

Brand valuation is a financial estimation of the brand advantages for the firm, considering its subjective nature due to the intangible character of the brand itself [163]. Most scientists support this opinion because the brand valuation process has a hypothetical and evaluative nature to a certain extent, which poses a significant challenge for scholars and professionals. The reason is that, apart from the accurate financials, the process involves analyzing personal consumers’ brand preferences, behavioral intentions, and actions, as well as a future projection of the firm's financial results [164]. Moreover, brand valuation is a dynamic and continuously evolving process due to the enduring advancements in the brand management discipline and practice, with the emergence of new technologies, a changing communication landscape and context, the increasing complexity of firms’ brand portfolios, modifications to trade structures, and other various circumstances [165, p. 416]. Therefore, the role of intangibles, such as brands, managerial skills, professional expertise, and other intellectual properties, steadily rises in financial terms, making brand value assessment a vital research area [166, p. 2].

*Existing Approaches to Brand Valuation*

Numerous brand valuation measurement techniques exist, which bring different and contestable results. For instance, Terzic and Dalic present alternative brand value figures for ten famous brands, including Apple, Facebook, and BMW, as the results of applying the methods of Interbrand, Brand Finance, and Millward Brown Optimor [167]. Initially, Cravens and Guilding grouped various brand valuation methods into four categories, comprising cost-based, market-based, income-based, and formulary approaches [163, p. 58]. The authors consider the advantages of cost-based methods, given the standard accounting procedures for all expense calculations related to the brand’s creation, launch, and development. They recognize the disadvantages of cost-based approaches in the challenges of capturing and calculating the intangible effects from strategic brand-related marketing activities, as well as the internal focus of the estimation. Alternatively, the market-based approach has an external focus, considering the financial market value of the brand based on its potential sales to the market, considering competition and distinguishing between tangible and intangible assets. According to the authors, more accurate valuation techniques are based on income. It appraises only brand-related net revenue, eliminating cost-dependence problems and considering discounted present value with the appropriate rate. Formulary approaches utilize multiple criteria to define brand-related income and profit based on financial reports.

Later, Abratt and Bick expanded the existing classification of brand valuation by introducing a fifth category of specific situation approaches, which reflects possible explicit circumstances that may be incompatible with internal and external estimations [168]. Furthermore, Salinas and Ambler investigated methodologies of 52 brand valuation providers, identifying 23 techniques, 8 of which are beyond the traditional classification of Cravens and Guilding because formulae based on accounting data, multiple based on proprietary research data, real options, stock price movements, and other financial indicators [169]. The authors consider each method appropriate for a specific type of application. For instance, the real-options technique of brand valuation is suitable for decisions on its geographical expansion or extension.

Recently, PwC has elaborated on an innovative way to assess brand value online through its Digital Intelligence Services. It gathers and analyzes all brand-mentioned messages across over 150 million data sources, including social media, forums, blogs, and news. The data present consumer metrics of brand relevance, awareness, and image. Financial models of real-time brand valuation use these data. PwC clients can see the immediate effects of their branding campaigns on brand value and take appropriate and prompt actions. The main principle of real-time brand valuation is the direct impact of brand awareness on brand value in financial terms [170].

The primary challenge for scholars and practitioners is to evaluate brand value as an intangible asset of a firm. Notwithstanding, the task is problematic as many other factors impact the firm’s financial results, including economic turmoil, political decisions, or competition forces [171, p. 18]. Market share indicators are difficult to estimate precisely, and the effect of brand portfolio extensions is challenging to assess accurately [167, p. 70]. Different brand valuation techniques bring different results [172]. Each method has advantages and disadvantages. No common practice has been recognized yet, so scholars continue to work on further developing the concept of brand valuation [173].

*Interbrand’s Method of Brand Valuation*

One of the leading global brand consultancies, Interbrand pioneered its brand valuation method in the 1980s [174]. Along with economic profit and brand strength score (BSS), the role of a brand index (RBI) is a key element of this brand valuation methodology. The method is certified with ISO 10668, the official requirement for monetary brand valuation [174, p. 6]. Best Global Brands reports by Interbrand include only global brands that meet specified criteria, such as brand revenue exceeding 30% outside of their home markets [175]. Interbrand utilizes its research data, firms’ annual reports, financial data from Refinitiv (formerly Thomson Reuters), GlobalData, which contains information about consumer goods, Infegy as a social intelligence tool, and other data from recognized investors, experts, and analysts [176]. Figure 8 illustrates Interbrand’s valuation method.

A screenshot of a cell phone

Description automatically generated

Figure 8 - Interbrand’s brand valuation methodology

Note – compiled by the author based [190]

Economic profit refers to the financial forecast analysis based on the official financial performance indicators of a brand. BSS presents the specific internal brand factors such as clarity, commitment, protection, responsiveness, and external factors like authenticity, relevance, differentiation, consistency, presence, and understanding, which characterize the overall ability of the brand to ensure the consumer demand and company profit in the future [174, p. 6]. BSS assessment has the advantage of scrutinizing brand peculiarities. However, the indicator itself is subjective, built mainly on hypotheses, but helps to compare it with a similar non-branded product, which is often challenging.

RBI is an output of customer demand analysis represented by the internal factors that impact the generation of consumer appeal and motivate prospective and current users to purchase the brand [174, p. 5]. The index reflects the brand's contribution to a consumer's purchase decision. RBI excludes other factors such as price, distribution, and product features. RBI indicates the strength of customer demand attributable to the brand at the point of sale, which can contribute to the firm's revenue [177]. The measure is a percentage that defines the brand name contribution from the total brand earnings. However, the RBI is subject to a significant extent, expressing expert personal views to illustrate historical industry benchmarking data [172, p. 298].

A combination of financial, demand, and competitive analyses leads to an appraisal of the economic value added to the brand [174, p. 2]. The RBI calculation formula is protected and used exclusively by global brands. It is closed for any brand owner or marketer [178]. So, alternative metrics for brand value are needed through scholarly investigations to be widely available for academies and businesses.

*Consumer-Based Brand Equity within Brand Valuation*

Yoo, Donthu, and Lee suggested that the concept of creating value for firms and consumers through brand equity within marketing activities is a continuation of Aaker’s CBBE model [89, p. 196]. There are two modifications to the model. Firstly, the authors added antecedents as marketing efforts, which can enhance brand equity dimensions by increasing brand awareness, forming preferable associations, improving perceived brand quality, and enhancing consumer loyalty to the brand. Secondly, the scientists embed a construct of overall brand equity as a mediator between CBBE dimensions and the values of the firm and the customer. The reason for introducing the new construction is to assess the contribution of each CBBE dimension to overall brand equity, which indicates the value of a brand name. The authors believe these two adjustments to the traditional CBBE model encompass the entire CBBE building cycle, from customer relationship initiation to brand value creation for customers and organizations through brand equity development. According to the scientists, the augmented CBBE model more accurately reveals a dependence of brand value on overall brand equity, rather than its distinct dimensions. The described model requires measuring general CBBE as an individual factor. Despite the explained differences, both CBBE models - the classical and updated - exhibit the role of CBBE measurement in brand valuation.

Unfortunately, many practitioners use the terms brand equity and brand value interchangeably. However, it is necessary to distinguish between the definitions and understand their relationship. Keller posed that brand equity explains the reasons for positive or negative consumer attitudes and behavioral reactions to brand features and related activities compared to non-branded analogs [179]. This difference represents the addition or subtraction of the income from the branded product, calculated in monetary terms as future potential profits. It refers to brand value, which indicates the financial impact of brand equity on the company's performance [171, p. 19].

The presented conceptual framework of interrelated brand equity and brand value justifies the usage of CBBE for brand valuation by providing a framework for understanding the value that a brand holds in the minds of its customers. The CBBE concept illustrates that it measures brand benefits for consumers through various dimensions, including brand awareness, brand loyalty, perceived quality, brand associations, and other factors that contribute to the overall brand perception. To utilize CBBE for brand valuation, a company can research the dimensions of brand equity and their relationship to customer behavior and business performance. For example, a brand with high brand awareness, loyalty, and perceived quality may command higher prices, generate more revenue, and achieve more market share than a brand with weaker brand equity. This investigation may involve surveys, focus groups, and other research methods to understand how customers perceive the brand and what factors influence their purchase decisions.

Therefore, CBBE can be a valuable tool for brand valuation, as it provides a comprehensive framework for understanding the brand advantages for consumers and their translation into financial performance. By utilizing CBBE to evaluate the various dimensions of brand equity and their influence on customer-perceived brand value, companies can gain a more precise and nuanced understanding of the financial value of their brand.

*Challenges in Brand Valuation of Social Media*

Despite the dot-com crisis in 2001, new online companies, including Amazon.com, Yahoo!, Google, eBay, and Facebook, survived and even surpassed traditional offline companies in terms of brand equity, which led to the emergence of academic interest in measuring digital brand equities [97, p. 214]. At the same time, an obstacle was assessing the brand equity and brand value of online brands. Traditional brand valuation methods rely on relatively stable financial indicators, such as trade listings, income, and adequate analyst coverage, which do not perfectly fit the assessment of agile online brands [180]. The high speed of Internet firms’ growth is a reason for the uncertainty of variable costs and opportunistic financing [181]. Apart from the dynamic expansion, the online landscape constantly evolves. New technologies, platforms, and digital marketing strategies emerge rapidly. The rapid development of the digital environment could pose a barrier to accurate calculations for online brands' long-term value and sustainability, given the swift shift in consumer trends and preferences.

The precise contribution of online brand activities to overall brand value is hard to define. Online brands often employ multi-channel marketing, where consumers interact with the brand through multiple touchpoints across various platforms and devices. It is essential to account for these complex customer journeys and accurately assign value to each interaction, which can be a challenging task. Estimating the brand value of online brands is challenging.

Some traditional valuation methods are adapted to consider the unique characteristics and dynamics of the digital landscape. Addressing these challenges, Schwartz and Moon proposed a valuation model based on assumptions about the forecasted rate of growth for income and the structure of the firms’ costs [182]. Schosser and Ströbele applied the technique to evaluate Facebook’s brand value [181, p. 286]. However, some scholars suggest enhancing the model to account for unpredictable expenses, potential financing, capital expenditures, and depreciation [183]. The complication in valuing a brand on social media stems from the unique characteristics of this platform and how brand value is created and sustained within it.

Another financial challenge is the monetary estimation of the benefits of social media for their clients, given the non-paid nature of most social media services. The economic approach to measuring the value of products or services to customers is based on consumer surplus, which is the difference between actual costs and prices consumers are willing to pay [184]. Also, consumer preferences are sophisticated to measure because users evaluate social media brands based on subjective perceptions and experiences rather than physical assets or financial metrics. The described subjectivity poses challenges for accurately estimating brand value on social media.

From a marketing perspective, social media users are notoriously fickle and unpredictable. Various factors, including new trends, competitor offerings, and social and political events, influence consumer behavior. The behavioral changes make it ambitious to predict and measure the impact of brand-building activities. These objections should influence the development of a valuation strategy for social media brands. Unfortunately, a limited number of studies are devoted to the topic. Therefore, there is a need for a systematic method of valuing social media firms based on marketing-finance-related factors, where the direct impact of brand value on firm value is crucial [185].

*CCBE Model for Social Media Brand Valuation*

This study suggests considering the CBBE concept for social media brand valuation because it focuses on the perceptions and attitudes of consumers, which are crucial for building brand value from the customer's perspective in both social media and traditional or offline markets. The CBBE concept is consumer-centric, assessing consumer perceptions, attitudes, and experiences to build brand equity. This study examines the alignment of CBBE with social media, where consumers actively engage with brands, share their opinions, and influence brand perceptions through user-generated content and interactions. Social media platforms provide rich data about consumer sentiments and attitudes, making the CBBE model a suitable framework for understanding and evaluating brand value in this context.

Interbrand uses the RBI resulting from the demand analysis, which reflects consumer purchase behavior, to define the contribution of the brand name to brand value [174, p. 5]. The demand analysis addresses one of the three critical requirements of the standard BSI ISO 10668: the behavioral analysis, which is added to legal and financial investigations [186]. CBBE also measures consumer buying behavior in brand choice, where positive equity converts brand preference into sales, increasing brand revenue and its economic value, and negative equity deteriorates brand sales and earnings [82, p. 8]. By leveraging the CBBE model for social media brand valuation, marketers and researchers can gain insight into the relationships between consumer perceptions, brand equity, and brand value. This approach enables a more comprehensive evaluation of brand value, considering the unique dynamics and the impact of social media on brand-consumer interactions. Therefore, the CBBE model can be scrutinized as an alternative analysis to user demand analysis for assessing the brand contribution within brand valuation.

Overall, social media significantly contributes to building brand value for most offline and online companies, thanks to the active use of digital media for brand promotion. At the same time, social media are subject to their brand valuation due to the considerable extent and continuing surge over the last decades. However, the high speed of their development complicates brand valuation, where traditional financial methods are inappropriate without adaptation. Therefore, social media requires a targeted marketing approach for brand valuation from the consumer's perspective.

CBBE theory serves as the basis for the research of the SM CBBE model, specifically for social media brands. Additionally, the VCC theory is a supportive theory due to the active role of consumers empowered by their engagement with social media capabilities. Several social media dimensions have been proposed to measure VCC across various industries. However, the current literature review has found few studies on VCC's universal social media antecedents. Despite the continuous growth of the theoretical base regarding social media brand equity, the evidence base remains fragmented, particularly about autonomous social media types. It focuses even more on the most popular platforms, such as Facebook, Instagram, and Twitter.

The significance and power of brand value for an organization's success are widely recognized. Still, brand valuation is complex and disputable due to the numerous methods elaborated on and used by scholars and businesses. The problem is that defining a share of a brand name contributes to the brand's overall sales. One of the leading global brand valuation firms, Interbrand, identifies the role of a brand index based on customer demand analysis. It examines the factors influencing consumer preferences in choosing and purchasing a particular brand. However, Interbrand's method is patented and closed to scientists and practitioners. The multidimensional SM CBBE model can be proposed and tested as an alternative system for revealing consumer demand and intention in selecting and purchasing a specific brand among competitors, thereby defining the contribution of the brand name to the brand value on social media.

**2 ANALYSIS OF THE FACTORS AND STRUCTURE OF THE AUGMENTED CONSUMER-BASED BRAND EQUITY MODEL FOR INSTAGRAM**

**2.1 Analysis of the impact of engagement, eWOM, and social value on value co-creation in Instagram**

*Instagram is the Social Media Brand to Analyze*

Different social media platforms offer distinct functionalities and modes of communication, shaping the varying nature and structure of people's online interactions. Thus, each social media platform requires an individual approach to brand equity and brand valuation. This study uses elaborate measures to analyze Kazakhstan's leading brand in the social media market. The flagship social media brand typically has a massive user base with high engagement rates and significant influence on others. The dominant social media brand is supposed to attract diverse users from various regions with different demographics and backgrounds. As a prominent player in the social media space, the brand often sets industry standards and trends. This study assumes that top social media brands can offer marketers more extensive advertising and monetization capabilities than smaller brands. The described benefits can provide more opportunities to study the effectiveness of marketing communications in engaging users in the co-creation of CBBE and brand value. Instagram is the leading social media platform used for commercial purposes in Kazakhstan. It is confirmed by the Datareportal data about advertising reach. According to “Digital 2020: Kazakhstan” by Datareportal, Instagram has the highest advertising reach among social media platforms in the country, reaching 8.3 million people (187). This number comprises 60% of the total population older than 13 in Kazakhstan, which has an average quarterly growth rate of 6.4% [187, p. 31].

*Data Collection*

The questionnaire consists of the following five sections:

1. Demographics: age, gender, education level, Instagram usage behavior;
2. VCC antecedents: user engagement (consumption, contribution, and creation aspects), eWOM, interaction, social brand value;
3. VCC scale: user value Co-creational behavior;
4. CBBE scale: brand awareness/associations, brand perceived quality, and brand loyalty;
5. CBBE outcomes: user value, continuous usage intention.

This study uses a Likert scale to collect and analyze multiple personal attitude characteristics of Instagram users [188]. These attributes are the main components of the SM CBBE model. Likert scales are commonly used in survey research to measure attitudes, opinions, and other subjective factors. Respondents are asked to agree or disagree with the series of statements in the questionnaire. Many scholars apply the scale as a “simple, pragmatic method for measuring attitudes” through several declarations, summed to form a distinct composite latent variable, where balanced bipolar categories follow each item to answer [189, p. 127]. Six-level Likert scale is chosen and scored from 1 (one) to 6 (six): 1 (strongly disagree), 2 (disagree), 3 (partially disagree), 4 (partially agree), 5 (agree), and 6 (strongly agree).

This study employs an even scale, excluding the neutral point of “neither agree nor disagree,” to address one of the research objectives: applying the SM CBBE model as an alternative to demand analysis for RBI calculation within brand valuation. RBI proceeds from the consumer demand analysis. The analysis grades consumer evaluations of the brand on an ascending scale, ranging from the lowest to the highest rank. Likewise, this study utilizes a scale to measure consumer attitudes and behavior, ranging from minimum to maximum levels, without neutral assessments, thereby maintaining the ascending grade system.

Some experts recommend using an odd Likert scale for the survey [189, p. 126]. However, from the statistical analysis perspective, some studies demonstrate that factor loading, correlations, and reliability do not significantly depend on the absence of a neutral assessment [190]. The scientific practice offers numerous examples of the Likert scale being used in behavioural research on social media [191, 192], social research [193], consumer studies [194], medical investigations [195, 196], and political analyses [197]. During our prior local studies, a tendency of abuse by neutral points was observed among respondents. Krosnik described this phenomenon as one possible solution for respondents to make it easier to answer a long list of questions on various topics [198]. The reason is that respondents often simplify their responses when they find the task difficult, requiring noticeable cognitive effort. Probably, the even scale may contribute to getting more accurate user responses within the study.

The questions were translated from English to Russian and back to English. The first version of the Russian questionnaire was technically identical to the original English one. However, a pilot test among potential respondents revealed that some items and phrases were unclear to local people. Some wording was fine-tuned to address the local mentality and ensure comprehensiveness for respondents. The sample size for the pilot test is 18, which is in line with the general recommendations based on the pilot objectives [199; 200; 201].

Several pilot respondents found it challenging to define the degree of strength of associations with Instagram because the direct translation of “strong associations” is not commonly used in Russian. More frequently, local people describe associations with various brands as “bright” or “special” to emphasize the strength of their memorable impression, which is linked to the brand's signal, advertising, and promotion. The phrase “strong associations” was rephrased to “special associations”. It makes it easier to understand the question's meaning and provide an appropriate answer about Instagram’s brand.

Most of the pilot respondents expressed concern about the social value item “Instagram helps me feel acceptable.” This phrase is rather old-fashioned in Russian, as it was commonly used in the 20th century in an offline context. The item was rephrased to the current expression “to be a part of society.” It has the same meaning as social acceptability but sounds more meaningful to local people and is more appropriate in a social media context. The described concerns and respective corrections helped mitigate the potential ambiguity of items for respondents due to local mental nuances, syntax, and vocabulary [202]. Yet, the item's vagueness reduces the responses' accuracy [203].

The common scaling arrangement of research measures and self-reported surveys can lead to problems with common method bias (CMB) [204, 205, 206, 207]. This study designs a questionnaire to minimize or even exclude CMB. First, the questionnaire has several sections. Each section begins with a heading that provides a brief description of the meaning of the following questions to prevent the items from mixing across the constructs [208]. Second, the questions with the key antecedents and dependent variables are placed furthest from each other and in switched sequences to minimize a probable hint of causality between the factors [208, p. 882]. The section with CBBE items is well-disconnected from continuous usage intention. VCC section is placed after CBBE one, VCC antecedents – after VCC section.

The questionnaire introduction includes a statement about anonymity and confidentiality of respondent information and answers. It is done to ensure a more comfortable experience for people, allowing them to give the most honest and sincere replies during the fill-in survey [208, p. 888]. Each respondent got 500 tenge as motivation. Many scholars recommend motivation as one of the effective ways to elicit more accurate responses during surveys [202, p. 551]. The local research agency, “CIOM” provided a service that included recruiting, controlling, and obtaining responses from respondents, paying them, and reporting the collected data.

This study includes an analysis of Instagram user behavior to gain insight into usage patterns that can be compared with those of other social media platforms. The first question concerns the average daily time spent on Instagram (less than 1 hour per day, 1-2 hours per day, 3-4 hours per day, 5-6 hours per day, or more than 6 hours per day). This study assumes that the time users devote to the platform can directly reflect their level of engagement. The second question concerns usage frequency, which can help define the intensity of platform usage (1-5 times per day, 6-10 times per day, or more than 10 times per day). The third question is about the duration of Instagram usage during a visit to know the level of user involvement in interaction with the brand (less than 5 minutes for one visit, about 15 minutes for one visit, about 30 minutes for one visit, about 1 hour for one visit, more than 1 hour for one visit).

The demographic part of the questionnaire includes the following data: gender (male, female), age (18-24, 25-34, 35-54, 55-64, 65+), education (secondary school, specialized college, bachelor, master, doctor/Ph.D./Professor), city of residence.

Appendix A presents the scans of the questionnaire on Survio.com, including the introduction, all measures described in the consequences, and guiding comments for respondents.

The collected data are from people aged 18 and above who live in Kazakhstan and use Instagram. Stratification sampling is based on the latest available data on the usage of social media in Kazakhstan, as reported by ACT Kazakhstan in 2017. According to the agency’s survey, 67% of Instagram users are urban, and among them, Almaty has the most extensive base, at 18% [209]. Also, the research shows that the group of Instagram users aged 18-29 years old is the biggest among respondents (62%), followed by the group of 30-40 years old (26%), 41-55 years old (12%), and female/male split is 58/42% [188, p. 2]. The sample size is 687, or more than ten times larger than the number of items in the SM CBBE model (55), which exceeds the commonly required ratio of the sample to the number of variables [144, p. 172]. The data were collected between September 19 and October 18, 2020, using Survio.com, the Web-based platform.

*Data Analysis*

This study utilizes two software programs for statistical data analysis: the Statistical Package for the Social Sciences (SPSS) and Partial Least Squares Structural Equation Modeling (PLS-SEM). The SPSS tool is popular among researchers due to the numerous statistical tests. For example, correlations and comparisons for univariate and multivariate analyses using non-parametric and parametric techniques have a user-friendly interface [210]. SPSS is an appropriate tool for this study to test the multivariate SM CBBE model, estimating correlations between items and defining the most influential factors in the model formation. The chosen research framework requires establishing the correlations among the factors before testing the antecedents and predictors of CBBE.

PLS is an appropriate statistical tool for analyzing structural relationships to assess the effectiveness of organizational or marketing strategies [211]. This is because the tool handles success factors as formative constructs, analyzes higher-order constructs, and suits it to examine e-businesses for success factors [211, p. 409]. This study examines engagement, eWOM, interaction, and social value as key success factors in marketing strategies that co-build brand equity with social media users. The SM CBBE is the entire model, comprising distinct variables that have a differential impact and contribute to the total effect of the model [211, p. 419]. Additionally, PLS is useful for predicting modeling tasks involving complex model structures with multiple independent and dependent variables, such as this research model, which defines effect and causal relationships, thereby representing multivariate correlation analysis [210, p. 21]. WarpPLS is suitable for this study because the hypothesized relationships are in question and need to be tested [212].

This study analyzes and verifies each construct using the basic methods of Exploratory Factor Analysis (hereinafter - EFA) and Common Method Variance (hereinafter - CMV) in SPSS. The research model is operationalized using CFA and Structural Equation Modeling (hereinafter - SEM) in WarpPLS. EFA is widely used in validation studies of the psychological and social sciences to define the minimum number of factors required to represent the data on constructs [213] accurately and to analyze scales that are not justified by existing theory [214]. This study employs EFA to establish the composition of variables within each construct [144, p. 92], which is verified using the complementary method of CFA [215].

CFA helps support or reject the entire research conceptual model, including its constructs, which have been validated through EFA [168, p. 603]. This study employs CFA to examine factorial validity, or structural validity, through unidimensionality, scale reliability, and the observation of latent structure, establishing the scoring system, and exploring the interrelations between constructs and subconstructs [216]. Overall, unlike EFA, CFA assesses the general acceptability of the complete research model [155, p. 394].

PLS-SEM has evolved into a widely applied methodological tool in marketing research, experiencing substantial growth in usage over the past decade [217]. Marketing scholars primarily prefer to analyze complex research models using PLS-SEM, which enables them to interpret the intricate relationships between variables better, handle both first-order and higher-order constructs, and perform mediation analysis [218]. The described advantages align with this research due to the comprehensive, multidimensional research model, which encompasses direct and indirect relationships among variables and necessitates both first-order and second-order analyses.

This study employs EFA and item-total correlations to establish an initial scale for the constructs, followed by a reliability assessment [219]. *Reliability* is one of the leading indices of construct validity. It measures an internal consistency of items within a latent construct in summated scale, where reliability for each indicator is calculated as the measurement error subtracted from 1.0 [144, p. 546]. Cronbach’s alpha (α), composite reliability, average variance extracted, and item-to-total correlations are used to evaluate the reliability of the measures. Cronbach’s alpha is “an estimate of the correlation between two random samples of items from a universe of items like those in the test” [220, p. 297]. A reliability coefficient of 0.7 is used in this study, as it is the generally recognized level, with 0.6 considered an acceptable limit [221]. 0.7 is the lowest level established for this research due to the large number of items, which typically leads to an increase in the reliability index [144, p. 125]. Correlations of 0.5 or higher for item-to-total correlations and 0.3 or higher for inter-item correlations are accepted for evaluating the SM CBBE model’s constructs, as the literature recommends [221, p. 13]. This study employs the composite reliability index, which represents the proportion of variance in the latent variable, ranging from 0 to 1, excluding measurement error [222].

As soon as the constructs scales and item-total correlations are defined, this study establishes *unidimensionality* for the SM CBBE model to ensure that the different items evaluate the same variable for all constructs. It means that one specific latent trait characterizes each measure [223]. Unidimensionality is obligatory for research model validation because it involves more than two constructs, where each item should relate to only a single construct, and all cross-loadings are equal to zero [144, p. 606]. Next, this study establishes the validity of the SM CBBE model, demonstrating a degree of correct representation of the research concept through the proposed set of measures, making it eligible for further generalization.

*Convergent validity* confirms that the model measures are theoretically associated and empirically justified as interrelated, using independent instruments [224; 225]. Convergent validity is necessary for this investigation to assess the degree of shared variance among indicators of each specific construct [226]. This study employs the commonly recommended factor loading of 0.7 or higher as one measure of convergent validity [144, p. 618] and an average variance extracted (AVE) of approximately 0.7 [144, p. 632]. This research employs the AVE indicator to measure the degree of convergence among items within the latent construct, expressed as a percentage [144, p. 601].

*Discriminant validity* is one of the critical indicators of measurement scales, assessing the degree of distinction or uniqueness of each construct within the SM CBBE model [227]. Discriminant validity is a widely recognized condition for scrutinizing interrelations among latent variables [228]. It is considered to be achieved if two factors of the research model have AVE bigger than the square of the correlations between these two factors [144, p. 605].

*Nomological validity* is necessary to test the SM CBBE model’s constructs for the reflection of the underlying theoretical concept [229] and exploration of the antecedents and consequences of the model [230].

Regarding *CMV*, several methods are available for its detection. One of them, Harman’s single-factor test, is widely used [231], despite its efficacy being underinvestigated [204, p. 3193; 208, p. 889]. In addition to Harman’s single-factor test, this study employs a full collinearity test [232] to verify the gathered data on CMV.

This study addresses the general requirement of model fit, as indicated by Tenenhaus' goodness of fit above the 0.36 level, a significant beta coefficient with a p-value of less than 0.01, and a variance inflation factor for collinearity below 5.0 [144, p. 201].

The SM CBBE model exhibits complex interrelationships among its latent variables. VCC is supposed to mediate the impact of its precedents, including eWOM, interaction, engagement, and social value, on CBBE. CBBE intervenes between its VCC and outputs, such as user value and continuous usage intention. VCC and CBBE need to be checked for the mediation within the model using statistical methods [233]. The PLS-SEM algorithm is a proven composite-based method to estimate complex mediation effects [234]. The PLS-SEM scrutinizes the entire structural relationships within a complex model through a single analysis, running separate regressions of dependent variables on related independent constructs [234, p. 294]. This study employs the principle of Hayes and Preacher to evaluate the indirect effect, considering its significance, effect size, and confidence interval [235].

*Profile of respondent*

697 Instagram users have filled in questionnaires aged 18 and older. The age and gender proportions are very close to the targeted splits, in line with local statistical data on social media usage. The female group prevails over the male segment, with almost 60% of respondents. Almost 78% of the participants in the survey are under 34, representing millennials and Generation Z. This study does not aim to establish specific proportional targets for the sample in terms of education level and social media usage behavior. Factually, this study gets well-educated respondents. The graduates represent more than half of the participants, while post-graduates make up around 3%. It can be characterized as an intelligent social media tool for local people to communicate, entertain, follow brands, conduct business, and engage in various activities.

Regarding usage timing behavior, 55% of the respondents use Instagram fewer than six times daily. The largest group, which is almost 39%, spends one to two hours daily. It is a relatively high usage compared to the global average daily time of 145 minutes on all social media platforms in 2019 [236]. Moreover, almost 29% of the respondents spend three to four hours daily, and nearly 13% - more than five hours per day on Instagram. It indicates a considerable investment of time and attention to the platform. It can be said that individuals dedicate significant time to engaging with this social media. It may lead to potential addiction with a negative impact on the mental health and overall well-being of Instagram users. On the other hand, the fixed extensive Instagram usage may signal a strong desire for social connection and interaction.

Regarding visit duration, one visit typically lasts around 15 minutes for the largest group, which accounts for 42%. It demonstrates a high level of engagement with Instagram compared with other markets. For example, the average session length for Instagram users in the US was 2.95 minutes in 2019 [237]. During the 15-minute visit, respondents have ample time to consume a large amount of content and share it on Instagram. It may illustrate the platform’s stickiness and usefulness for local people. Longer visit durations increase the potential exposure to advertising content on Instagram which has practical implications for marketers.

Table 2 demonstrates the demographic and Instagram usage behavioral data of the respondents.

Table 2 - Profiles of respondents

|  |  |  |
| --- | --- | --- |
| Variable | Value | N (%) |
| Gender | Female | 400 (57.4) |
| Male | 297 (42.6) |
| Age | 18-24 | 287 (41.1) |
| 25-34 | 255 (36.6) |
| 35-54 | 149 (21.4) |
| 55-64 | 6 (0.9) |
| Education | High school graduates | 54 (7.7) |
| College graduates | 131 (18.8) |
| Bachelors | 363 (52.1) |
| Masters | 130 (18.7) |
| Doctors | 19 (2.7) |
| Instagram Usage Frequency | 1-5 times per day | 382 (54.8) |
| 6-10 times per day | 209 (30.0) |
| More than 10 times per day | 106 (15.2) |
| Instagram Usage Time | Less than 1 hour per day | 138 (19.8) |
| 1-2 hours per day | 269 (38.6) |
| 3-4 hours per day | 200 (28.7) |
| 5-6 hours per day | 57 (8.2) |
| More than 6 hours per day | 33 (4.7) |
| Instagram Usage Duration | Less than 5 minutes per visit | 165 (23.7) |
| About 15 minutes per visit | 294 (42.2) |
| About 30 minutes per visit | 147 (21.1) |
| About 1 hour per visit | 48 (6.8) |
| More than 1 hour per visit | 43 (6.2) |
| Note – compiled by the author | | |

*Sample Size Adequacy*

The actual sample size collected for this study is 697. After excluding 10 outliers, 687 questionnaires are for statistical analysis, i.e., 12.5 samples per item, the sample size is above 385 number calculated as the adequate sample size for Kazakhstan's population of 18 million people with a confidence level of 95%, the margin of error 5% using calculator.net.

*Linear Regression Analysis*

Residual statistics include Mahalanobis distance. 10 outliers with extreme values above 181.663 and below 15.902 were detected and excluded from further analysis.

This study uses collinearity statistics to check correlations between independent variables. No serious multicollinearity is for all items with variance inflation factor (VIF) values much below 10, which matches the accepting tolerance cut-off level of 0.1 [238].

The homoscedasticity assumption was tested through the graph with ZPRED on the X-axis and ZRESID on the Y-axis. No sharp turn was detected on the Locally Weighted Scatterplot Smoothing (LOWESS), more frequently called LOESS (locally weighted smoothing) fit line. Thus, homoscedasticity is confirmed as the visual test showed an equal distribution of error terms across all values of the independent variables [238, p. 42]. A scatterplot with LOESS Fit Line is in Figure 9.



Figure 9 - LOESS line

Note – compiled by the author

*Descriptive statistics*

No missing data is detected in the sample. All the independent variables met the data variance assumptions with all the variance numbers below 10. The highest variance results in 5.670 for SOC2. Independent variables were checked for univariate normality using recommended values, which ranged between -1.000 and 1.000 for skewness and between -2.000 and 2.000 for kurtosis [239]. All Brand Awareness items (BAW1, BAW2, BAW3, ENCS2, INT3, and VCC7) were excluded from further statistical tests due to their skewness and kurtosis values exceeding the applied thresholds. A significance level of 0.000 was found for both tests, the Kolmogorov-Smirnov and Shapiro-Wilk tests, which recommended a threshold of 0.05 to reject the null hypothesis and recognize the non-normal distribution of the data’s means across the sample [240]. Appendix B shows the indicators for each item.

*Exploratory Factor Analysis*

The data were examined using the Principal Axes Factoring (PAF) extraction method to determine the minimum number of factors required to identify the constructs of VCC and its antecedents within the SM CBBE model, which accounts for the shared variance of a set of variables [238, p. 5]. Promax rotation was used to analyze the correlated factors [241], as it is the most commonly used oblique rotation due to its proven practical effectiveness in various contexts [242].

The general rules were used during EFA, including the latent root criterion of eigenvalue more than 1.0, deleting items with extraction commonalities below 0.5 (VCC1 with .477, WOM1 with .462) [144, p. 109] for practical significance. No cross-loaded items resulted. Key indicators of the appropriateness of the factors were according to recommended ranges. Thus, KMO and Bartlett’s test of sphericity was applied to check if the data fit EFA. KMO confirmed the sample adequacy with a coefficient of 0.902, whereas the recommended minimum value is 0.60 [243]. The minimum Bartlett’s test resulted in a Chi-square of 9356.764 (p<.001), confirming a sufficient common variance of the intercorrelation matrix. It recognizes the appropriateness of the factor analysis used. The value of total variance explained (TVE) is 71.833%, above the recommended threshold of 60% [144, p. 109].

Principal axis factoring and Promax rotation result in the following factors: Engagement (ENG) with four items (ENCT1, ENCT4, ENCT5, ENCS3), Electronic Word of Mouth (WOM) with four items (WOM3, WOM4, WOM5, WOM6), value co-creation (VCC) with three items (VCC4, VCC5, VCC6), interaction with three items (INT1, INT2, INT3), and Social Value (SOC) with four items (SOC1, SOC2, SOC3, SOC4).

*Reliability of Constructs*

Item analysis was conducted through the calculation of item-to-total correlations and coefficient alpha to assess the reliability of all factors [221, p. 10]. All item correlations were found to be higher than 0.5, and Cronbach’s coefficient alpha values were detected above 0.7 for all constructs, as recommended in the literature [144, p. 123]. The minimum Cronbach’s coefficient alpha value is .759 (BAS), and the minimum item-to-total correlation is .503 (BAS3).

**2.2 Assessment of integration potential of value co-creation concept into the augmented consumer-based brand equity model for Instagram**

*The First-Order Construct Analysis using SEM in WarpPLS*

*CMV check*

Harman’s single-factor test using SPSS resulted in 43.063% of TVE, indicating no detection of CMB due to a lower 50% threshold [204, p. 3197]. However, the PLS-SEM method produced complete collinearity variance inflation factors (VIFs) at an acceptable level, with values ranging from 1.0 to 3.3 for all factors except UV (3.393), which indicates CMV for this factor [232, p. 7]. Other factors fall within the range of 1.517 (INT) to 2.503 (UI) values. Further analysis excludes user value factors that do not contaminate the model.

*Reliability and Validity of The First-Order Constructs*

All constructs were double-checked for reliability and validity using composite reliability (CR), Cronbach’s alpha coefficients, and average variance extracted (AVE) analysis with WarpPLS. Internal consistency was established for all constructs due to Cronbach’s alpha values above the recommended threshold of 0.7 [144, p. 633]. Additionally, convergent validity was established, with an average variance extracted (AVE) of more than 0.6 for all constructs, which exceeds the recommended threshold of 0.5 [144, p. 619]. All the values meet the threshold criterion with significant loadings of the indicators on the factors, as all loadings are above 0.7 and p-values are less than 0.001 [144, p. 617] shown in Appendix C.

*Discriminant Validity of The First-Order Constructs*

Discriminant validity was established as all squared roots of AVEs for all the constructs on the diagonal are higher than any other correlations among all latent variables. Table 3 shows that all the correlations and squared roots of AVEs are significant with a p-value less than 0.001.

Table 3 - Discriminant validity test for the first-order constructs

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) |
| (1) SOC | **0.923** |  |  |  |  |  |  |  |  |  |
| (2) ENG | 0.520\*\*\* | **0.846** |  |  |  |  |  |  |  |  |
| (3) VCC | 0.498\*\*\* | 0.449\*\*\* | **0.868** |  |  |  |  |  |  |  |
| (4) eWOM | 0.570\*\*\* | 0.403\*\*\* | 0.545\*\*\* | **0.910** |  |  |  |  |  |  |
| (5) UI | 0.563\*\*\* | 0.516\*\*\* | 0.307\*\*\* | 0.459\*\*\* | **0.864** |  |  |  |  |  |
| (6) BAS | 0.495\*\*\* | 0.421\*\*\* | 0.268\*\*\* | 0.251\*\*\* | 0.439\*\*\* | **0.823** |  |  |  |  |
| (7) BPQ | 0.521\*\*\* | 0.484\*\*\* | 0.344\*\*\* | 0.328\*\*\* | 0.578\*\*\* | 0.603\*\*\* | **0.870** |  |  |  |
| (8) BLY | 0.544\*\*\* | 0.533\*\*\* | 0.318\*\*\* | 0.407\*\*\* | 0.608\*\*\* | 0.622\*\*\* | 0.611\*\*\* | **0.864** |  |  |
| (9) INT | 0.431\*\*\* | 0.353\*\*\* | 0.219\*\*\* | 0.306\*\*\* | 0.499\*\*\* | 0.440\*\*\* | 0.441\*\*\* | 0.463\*\*\* | **0.880** |  |
| (10) UV | 0.692\*\*\* | 0.557\*\*\* | 0.398\*\*\* | 0.523\*\*\* | 0.732\*\*\* | 0.468\*\*\* | 0.649\*\*\* | 0.622\*\*\* | 0.513\*\*\* | **0.907** |
| Notes – compiled by the author. Two-tailed test for correlations between factors: \* t =1.960 is significant at 0.05; and \*\* t = 2.576 significant at 0.01.; Diagonal bold numbers signify the square roots of the AVEs; \*\*\* p<0.001 | | | | | | | | |  |  |

*Model Fit of The First-Order Constructs*

All indicators of the SM CBBE scale satisfy the model fit requirements, including Tenenhaus goodness of fit is 0.465, which is above the large level of 0.36, and the average full collinearity VIF of 2.189, which is below 5.0 as recommended in the literature [144, p. 201]. Effect of size is 0.086, goodness-of-fit is 0.244. R2 and AVE used in calculations are in Table 4.

Table 4 - Validation criteria for a PLS-SEM model, the first-order constructs

|  |  |  |
| --- | --- | --- |
| Endogenous factors | R2 | AVE |
| Brand associations | 0.074 | 0.677 |
| Brand perceived quality | 0.120 | 0.758 |
| Brand loyalty | 0.103 | 0.746 |
| Value co-creation | 0.410 | 0.753 |
| Usage intention | 0.456 | 0.747 |
| User value | 0.526 | 0.822 |
| Average | 0.282 | 0.750 |
| Notes – compiled by the author. | | |

Effect of size or f2 for R2 is small if equals to 0.02, medium if 0.15, and large if 0.35. The formula to calculate f2 is:

)

Goodness-of-Fit or GoF is small if equals to 0.10, medium if 0.25, and large if 0.36. The formula to calculate GoF is:

*Structural Equation Modelling, The First-Order Constructs*

The first-order constructs analysis explores the interconnected relationships between social media factors, VCC, brand equity and its outputs. By examining how VCC and its antecedents contribute to building strong brand equity and fostering its values for firm and user. Figure 10 illustrates the found relationships among these first-order variables obtained from the SEM-PLS analysis.

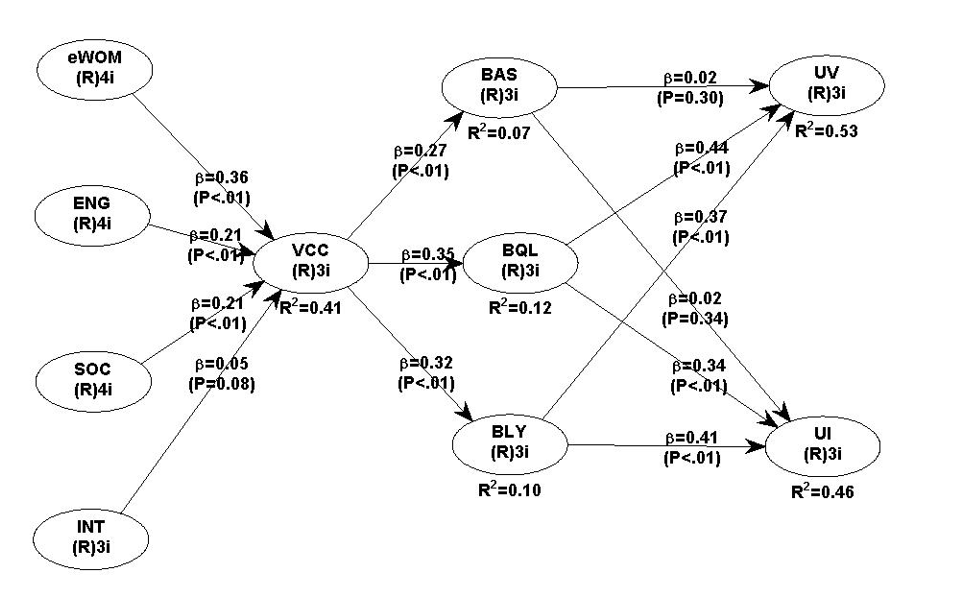


Figure 10 - The First-Order SM CBBE model in SEM-PLS

Note – compiled by the author

As depicted in the above figure, the impact of social media factors such as user eWOM, engagement, and social value on VCC is positive and significant. In turn, VCC has a positive influence on brand equity elements, including brand associations, brand quality, and brand loyalty. Furthermore, CBBE elements, except brand associations, contribute to the brand's continuous usage intention and user value. However, user value factor was detected for common method bias. So, brand associations and user value will be excluded from the second-order constructs analysis.

Path coefficients illustrate the relationships between factors within the SM CBBE model. Beta coefficients are significant and range from 0.21 (ENG to VCC, SOC to VCC) to 0.44 (BQL to UV), confirming extant theories and the reviewed results from prior studies on brand equity in the social media context. However, three relationships are not significant (INT to VCC, BAS to UV, BAS to UI).

This study confirms five hypotheses, proving the direct effects of eWOM, ENG, and SOC on VCC, which influence CBBE and result in UI, as shown in Table 5.

Table 5 - Results of the hypothesized model and β coefficients tests

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Hyp | Paths | β coefficients  (Std. error) | t-value | Effect size | Test result |
| H1a | ENG→VCC | 0.213\*\*\* (0.037) | 5.720 | 0.096 | Supported |
| H1b | eWOM→VCC | 0.360\*\*\* (0.037) | 9.804 | 0.198 | Supported |
| H1c | INT→VCC | 0.053ns(0.038) | 1.388 | 0.012 | Not Supported |
| H1d | SOC→VCC | 0.207\*\*\*(0.037) | 5.540 | 0.104 | Supported |
| H2a | VCC→BAS | 0.272\*\*\*(0.037) | 7.325 | 0.074 | Supported |
| H2b | VCC→BPQ | 0.347\*\*\*(0.037) | 9.426 | 0.120 | Supported |
| H2c | VCC→BLY | 0.320\*\*\*(0.037) | 8.677 | 0.103 | Supported |
| H3a | BAS→UI | 0.016ns (0.038) | 0.421 | 0.007 | Not Supported |
| H3b | BPQ→UI | 0.341\*\*\*(0.037) | 9.257 | 0.198 | Supported |
| H3c | BLY→UI | 0.411\*\*\*(0.037) | 11.241 | 0.250 | Supported |
| H4a | BAS→UV | 0.020ns(0.038) | 0.512 | 0.009 | Not Supported |
| H4b | BPQ→UV | 0.436\*\*\*(0.036) | 11.963 | 0.284 | Supported |
| H4c | BLY→UV | 0.371\*\*\*(0.037) | 10.109 | 0.232 | Supported |
| Notes – compiled by the author. Two-tailed test for hypothesis verification: \* t =1.960 is significant at 0.05; and \*\* t = 2.576 significant at 0.01; \*\*\*p<0.001. | | | | | |

*The Second-Order Construct Analysis using SEM in WarpPLS*

*CMV check*

Full collinearity variance inflation factors (VIFs) are in the acceptable range of 1.638 (VCC) and 2.191 (CBBE), which show no detection of CMB [232, p. 7].

*Reliability and Validity of The Second-Order Constructs*

SM CBBE construct checked for reliability and validity using composite reliability (CR), Cronbach’s alpha coefficients, and average variance extracted (AVE). Internal consistency was established with acceptable CR and Cronbach’s alpha above the recommended threshold of 0.7 [144, p. 617]. Convergent validity was established with an AVE of more than 0.5, as recommended by the literature [144, p. 619]. All the values meet the threshold criterion shown in Table 6.

Table 6 -Results of the CFA for the multi-dimensions of the CBBE scale, the second-order constructs

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Factors and items | Convergent Validity | Reliability | | |
|  | WarpPLS Std. Loadings (t-value) | Cα | CR | AVE |
| CBBE 0.759 0.892 0.806 | | | | |
| Brand perceived quality | 0.898\*\*\*(25.824) | | | |
| Brand loyalty | 0.898\*\*\*(25.824) | | | |
| Notes – compiled by the author. Cα = Cronbach’s α, CO = composite α, AVE = average variance extracted; \*\*\* for p<0.001; \* t =1.960 is significant at 0.05; and \*\* t = 2.576 significant at 0.01 (two-tailed test). | | | | |

*Discriminant Validity of The Second-Order Constructs*

Discriminant validity was established as all squared roots of AVEs for all the constructs on the diagonal are higher than any other correlations among all latent variables. Table 7 demonstrates the correlations and squared roots of AVEs, which are significant with a p-value less than 0.001.

Table 7 - Discriminant validity test for the second-order constructs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Variable | (1) | (2) | (3) | (4) | (5) | (6) |
| (1) SOC | **0.923** |  |  |  |  |  |
| (2) ENG | 0.520\*\*\* | **0.846** |  |  |  |  |
| (3) VCC | 0.498\*\*\* | 0.449\*\*\* | **0.868** |  |  |  |
| (4) eWOM | 0.570\*\*\* | 0.403\*\*\* | 0.545\*\*\* | **0.910** |  |  |
| (5) UI | 0.563\*\*\* | 0.516\*\*\* | 0.307\*\*\* | 0.459\*\*\* | **0.864** |  |
| (6) CBBE | 0.593\*\*\* | 0.566\*\*\* | 0.369\*\*\* | 0.410\*\*\* | 0.661\*\*\* | **0.898** |
| Notes – compiled by the author. Two-tailed test for correlations between factors: \* t =1.960 is significant at 0.05; and \*\* t = 2.576 significant at 0.01.; Diagonal bold numbers signify the square roots of the AVEs; \*\*\* p<0.001. | | | | | | |

*Model Fit of The Second-Order Constructs*

All indicators of the SM CBBE scale satisfy the model fit requirements, including Tenenhaus goodness of fit is 0.501, which is above the large level of 0.36, and average full collinearity VIF of 1.925, which is below 5.0 and as recommended in the literature [144, p. 201]. The model’s effect of size for R2 is medium of 0.114, and goodness-of-fit is medium of 0.283 based on the factors’ R2 and average variance extracted, which are in Table 8.

Table 8 - Validation criteria for a PLS-SEM model, the second-order constructs

|  |  |  |
| --- | --- | --- |
| Endogenous factors | R2 | AVE |
| Usage intention | 0.440 | 0.755 |
| Value co-creation | 0.384 | 0.764 |
| CBBE | 0.137 | 0.822 |
| Average | 0.320 | 0.780 |

*Structural Equation Modelling (SEM), the Second-Order Constructs*

Second-order construct captures the overall essence or broader CBBE dimension shared by the first-order constructs, including brand quality and brand loyalty. Therefore, the CBBE second-order construct represents a concept formed by these two variables. Figure 11 illustrates the SEM results of the second-order constructs analysis.

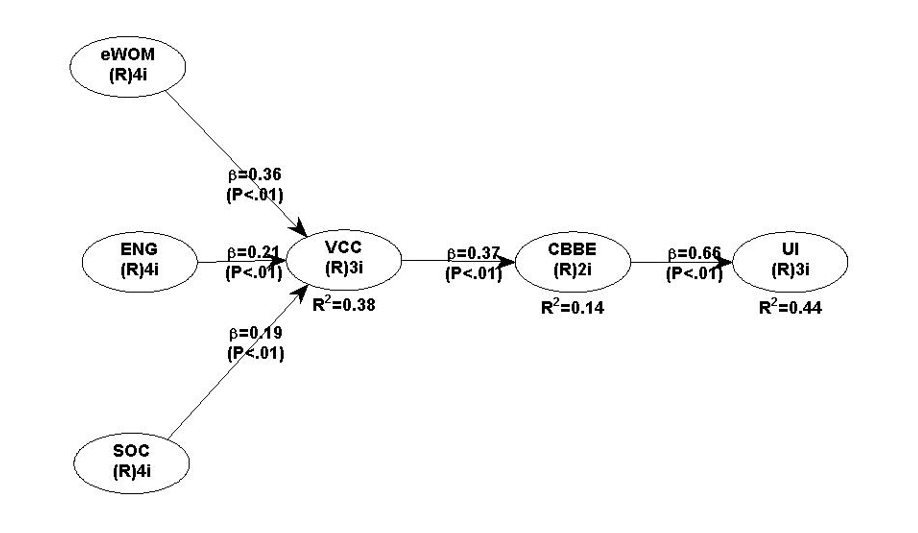


Figure 11 - Significant Structural Paths of The Second-Order SM CBBE model in SEM-PLS

Note – compiled by the author

The impact of two CBBE measures, brand quality and brand loyalty, are calculated on the higher or combined level to show its consolidated effect as CBBE on the model.

This study confirms four hypotheses proving the direct effects of eWOM, ENG, and SOC on VCC that influence SM CBBE, which results in UI, shown in Table 9.

Table 9 - Results of the hypothesized model and β coefficients tests

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Hyp | Paths | β coefficients  (Std. error) | t-value | Effect size | Test result |
| H1a | ENG→VCC | 0.205\*\*\*(0.037) | 5.492 | 0.092 | Supported |
| H1b | eWOM→VCC | 0.356\*\*\*(0.037) | 9.688 | 0.195 | Supported |
| H1d | SOC→VCC | 0.191\*\*\* (0.037) | 5.115 | 0.096 | Supported |
| H2 | VCC→CBBE | 0.370\*\*\* (0.037) | 10.088 | 0.137 | Supported |
| H3 | CBBE→UI | 0.663\*\*\*(0.036) | 18.620 | 0.440 | Supported |
| Notes – compiled by the author. Two-tailed test for hypothesis verification: \* t =1.960 is significant at 0.05; and \*\* t = 2.576 significant at 0.01; \*\*\*p<0.001. | | | | | |

*Mediation Analysis*

Mediation analysis indicates a significant indirect effect of value Co-creation antecedents (eWOM, ENG, and SOC) on CBBE through users’ VCC behavior, which indirectly affects usage intention via CBBE with large effect sizes. The mediation analysis output using the Hayes and Preacher approach [235, p. 467] is presented in Table 10.

Table 10 - Mediation analysis, the second-order constructs

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Hyp. | Paths | β coefficients  (Std. error) | Effect size | Test Result |
| H5a | ENG→VCC→CBBE | 0.076\*\* (0.027) | 0.043 | Supported |
| H5b | eWOM→VCC→CBBE | 0.132\*\*\* (0.027) | 0.054 | Supported |
| H5d | SOC→VCC→CBBE | 0.071\*(0.027) | 0.042 | Supported |
| H6b | VCC→CBBE→UI | 0.246\*\*\*(0.026) | 0.075 | Supported |
| Note – compiled by the author | | | | |

In conclusion, the research data are collected from 697 users of Kazakhstan's largest social media platform in terms of advertising reach. A total of 687 questionnaires are statistically analyzed after excluding 11 outliers. Using SPSS 23.0 for descriptive statistics and EFA, the study confirms the applicability of 27 out of 55 measures. Using WarpPLS 7.0 for CFA and SEM, the research validates the overall research model, excluding brand awareness, interaction, and user value for the Instagram brand. Initially, user engagement, eWOM, and social value contribute to user VCC behavior as the social media-specific antecedents. Then, VCC forms CBBE resulting in continuous usage intention as the firm value, ensuring the long-term life to the brand. The SM CBBE model satisfies all necessary statistical assumptions to be empirically validated confirming the literature review and prior theories.

**2.3 Perspectives of the application of the consumer-based brand equity model to Instagram brand valuation**

Brand valuation is a fundamental process at the intersection of marketing strategy and financial performance, influencing decisions on investments, pricing, and long-term brand positioning. Traditionally, brand valuation has been guided by complex methodologies, including consumer-based evaluation models such as Interbrand’s Demand Analysis. While Interbrand’s proprietary framework has been widely recognized - integrating financial performance, brand strength, and competitive market positioning - its applicability to social media brands remains relatively recent.

Moreover, there is a noticeable lack of publicly available, standardized methodologies for the valuation of brands operating predominantly on social media platform and social media per se. Given the rapid evolution and dynamic nature of the social media landscape, there is an increasing demand for transparent and adaptable valuation approaches that accurately reflect user-driven brand equity in digital ecosystem like social media.

To address this gap, any proposed valuation technique must account for the distinctive characteristics of social media, specifically by incorporating user attitudes, behavioral patterns, and engagement metrics. These user-centric elements are essential for capturing the real-time, co-creative, and engaging nature of brand value in social media environment.

The application of the CBBE model in brand valuation is both theoretically sound and practically relevant. From a theoretical stand point, there is a strong conceptual linkage between brand equity and brand value. Brand equity refers to the added value that brand mane imparts to a product or service, based on the consumer perception, attitude, and behavior toward the brand. Brand value reflects the financial worth of the brand as an intangible asset. While the two are not synonymous, brand equity is a key driver of brand value. Empirical research supports this interrelationship. Stronger brand equity enhances pricing power, customer loyalty, and resistance to competitive threats, all of which translate into superior financial performance and higher brand value.

The SM CBBE model offers a contextually relevant and data-rich model to assess the Instagram’s user demand. Built upon Aaker’s foundational CBBE framework, the SM CBBE model incorporates user engagement, sentiment, and behavior patterns specific to Instagram. This provides a more immediate and behaviorally grounded perspective on brand equity – one that aligns more closely with how value is actually perceived and co-created in today’s digital-first environments.

In this study, seven out of eleven considered variables were empirically verified as significant contributors to brand equity, including key demand-related factors such as eWOM, user brand engagement, social brand value, VCC, brand association, brand loyalty, and brand quality. These variables map directly to user attitudes and behaviors that drive brand preference and usage intent, offering a user-centric and behaviorally predictive valuation approach.

In essence, the SM CBBE model functions as a digitally adaptive analog to Interbrand’s Demand Analysis. It maintains the foundational aim of quantifying brand contribution through demand-side metrics using the attitudinal and behavioral indicators as a proxy for the Instagram user demand. This positions it as not only a valid alternative but, in digitally dominant markets, a potentially superior methodology for brand valuation that reflects both the co-creative nature of brand value today and the fluid dynamics of consumer-brand relationships in the social media era.

To quantify brand contribution, a structured approach was applied where users’ actual survey evaluations were compared to the maximum possible scores. Each factor was rated on a scale from 1 to 6, yielding a maximum total score of 42 for seven factors of the model. The survey results indicated a total actual score of 26.67, leading to a calculated brand contribution of 63.49% for the Kazakhstan market. Table 11 presents the results.

Table 11 – Brand contribution calculation for Kazakhstan

|  |  |  |
| --- | --- | --- |
| Demand analysis factors | Users' evaluations | Max possible scores |
| SM CBBE model factors | Actual means | Maximum means |
| Electronic word-of-mouth | 2.98 | 6 |
| User brand engagement | 4.16 | 6 |
| Social brand value | 3.59 | 6 |
| Value co-creation | 2.86 | 6 |
| Brand perceived quality | 4.48 | 6 |
| Brand loyalty | 4.29 | 6 |
| Continuous usage intention | 4.29 | 6 |
| TOTAL SCORE | 26.67 | 42 |
| Demand score or brand contribution = Actual means/max Means | 0.6349 |  |
| Note – compiled by the author based on the data | | |

Since the brand contribution measured for Kazakhstan represents only a fraction of Instagram’s global reach, it must be calibrated to a broader market. Instagram’s total advertising reach in 2020 was 928.5 million users worldwide [187, p. 124], compared to 8.3 million users in Kazakhstan [187, p. 31]. Given that Kazakhstan’s population in 2020 was approximately 18.78 million and the global population was 7.79 billion, according to the populationpyramid.net, the penetration rate of Instagram advertising was 44% in Kazakhstan versus 12% worldwide.

To ensure an equitable global valuation, Kazakhstan’s brand contribution needs to be adjusted downward to account for the higher penetration rate. Since Kazakhstan’s Instagram penetration rate is 3.69 times higher than the global rate, the brand contribution measured for Kazakhstan must be scaled down accordingly. The resulting global brand contribution is estimated at 17.21%, as illustrated in Table 12.

Table 12 – Brand contribution calculation for global market, 2020

|  |  |
| --- | --- |
| Kazakhstan population 2020, populationpyramid.net | 18,776,707 people |
| Instagram advert reach in Kazakhstan 2020, datareportal.com | 8,300,000 people |
| Penetration of Instagram in Kazakhstan 2020 | 44% |
|  |  |
| World population 2020, populationpyramid.net | 7,794,798,729 people |
| Instagram advert reach worldwide 2020, datareportal.com | 928,500,000 people |
| Penetration of Instagram worldwide 2020 | 12% |
|  |  |
| KZ Brand Contribution | 63.49% |
| KZ to WRD ratio (44%/12%) | 3.69 |
| **Global Brand Contribution (61.92%/3.69)** | **17.21%** |
| Note – compiled by the author based on the data | |

A comprehensive financial assessment is crucial to determine Instagram’s brand value. The historical financial data of Instagram from 2017 to 2021, sourced from Refinitiv, serves as the foundation for financial projections for 2022-2025 through NPV calculations. Key macroeconomic indicators, such as risk-free rates and market return expectations, were derived from the S&P index, ensuring a robust valuation framework. WACC is widely used as the discount rate in NPV calculations:

Where CFt represents future cash flows over time t. If NPV > 0, the investment is possible, as it generates return greater than the cost of capital. If NPV < 0, the investment is unattractive, as return do not cover the financing cost. Thus, WACC serves as a benchmark for determining a firm’s valuation. A lower WACC indicates cheaper financing cost, making a company more valuable. Investors and analysts use WACC to assess if a company is efficiently using its capital. A company’s capital structure, including mix of debt and equity, directly affects WACC. Debt is cheaper than equity due to tax benefits, but excessive debt increases financial risk. Companies aim to optimize WACC by balancing debt and equity financing. WACC is widely used to evaluate the cost-effectiveness of acquiring new assets or companies. A company with a lower WACC can finance acquisitions more efficiently.

WACC is a fundamental financial tool that helps companies determine the minimum return required to satisfy investors and creditors. It influences decision-making investment appraisal, valuation, and capital structure optimization. A lowe WACC improves profitability, while a higher WACC suggests increased financing costs, potentially discouraging investments.

Table 13 presents a comprehensive calculation of the Weighted Average Cost of Capital (WACC), incorporating key financial components such as risk-free return, risk premium, beta, cost of equity, cost of debt, and tax effects.

Table 13 - Weighted average cost of capital calculations based on Refinitiv data, 2021

|  |  |
| --- | --- |
| Weighted Average Cost of Capital, WACC calculations | Value |
| Risk-Free Return, RFR, S&P 500, % | 1.45 |
| Risk Premium, RP, S&P 500, % | 4.72 |
| Market Rate of Return | 6.17 |
| Beta | 1.30 |
| Cost of equity | 0.076 |
| Total Equity, m$ | 124,879.00 |
| Total Debt, m$ | 14,454.00 |
| Weight of Equity | 0.90 |
| Weight of Debt | 0.10 |
| Interest Expense, m$ | 15.00 |
| Cost of Debt | 0.001 |
| Effective Tax Rate | 0.167 |
| WACC | 0.0681 |
| Note – compiled by the author based on the data | |

The WACC is a crucial financial metric that represents a firm’s overall cost of capital, considering both equity and debt financing. It reflects the average rate of return required by investors and lenders, serving as the minimum return threshold for new investments. WACC is widely used in corporate finance for valuation, capital budgeting, and investment decision-making, particularly in calculating NPV. The general formula for WACC is:

WACC = (WE × rE) + (WD × rD × (1 – T)

Where WE is weight of equity or percentage of financing from equity, rE is cost of equity or required return for equity investors, WD is weight of debt or percentage of financing from debt, rD is cost of debt or effective interest rate on company debt, and T is effective corporate tax rate.

The risk-free return (RFR) represents the return on an investment with zero risk. It is typically based on government bonds because they are considered default-free. A higher risk-free rate increases the cost of equity, thereby raising WACC. The RFR is based on the S&P 500 and is specified as 1.45% in 2021.

The risk premium (RP) is the additional return expected by investors for taking on market risk beyond the risk-free rate. It is often derived from historical stock market returns. Companies operating in volatile markets or industries with high uncertainty tend to have higher risk premiums. The RP is based on the S&P 500 and is specified as 4.72% in 2021.

The market rate of return (MRR) is computed as the sum of the risk-free return and the risk premium:

MRR = RFR + RP = 1.45% + 4.72% = 6.17%

Beta is a measure of a company’s stock volatility compared to the overall market. If beta is equal to 1.0, then the company moves in sync with the market. A beta more than 1.0 indicates higher risk and volatility, while a beta less than 1.0 suggests lower risk. A higher beta increases the cost of equity, leading to a higher WACC. The beta is based on Refinitiv and is specified as 1.30 for Instagram in 2021.

The cost of equity represents the return required by shareholders to compensate for their investment risk. It is estimated using the capital asset pricing model (CAPM):

rE = RFR + β × (MRR – RFR)

Where MRR is the market rate of return. A high cost of equity increases WACC, making equity financing more expensive. Instagram’s total equity is reported by Refinitiv as $124,879 million, and total debt as $14,454 million in 2021. Applying the formula:

Cost of equity = 0.0145 + 1.30 × (0.0617 – 0.0145) = 0.0145 + 1.30 × 0.0472 = 0.0759

Thus, the cost of equity is 0.076 (7.6%).

The proportions of debt and equity in the capital structure are calculated as follows:

The cost of debt is the effective interest rate paid by the company on its borrowed funds. The interest expense incurred by Instagram is $15 million as reported by Refinitiv in 2021. It is calculated as:

The Instagram’s low cost of debt indicates favorable borrowing conditions, while the weight of equity suggests that the firm relies heavily on equity financing. Since interest payments are tax-deductible, reducing the company’s overall tax burden. The effective tax rate influences WACC by lowering the cost of debt. A higher tax rate decreases WACC due to greater tax savings on interest payments. The effective rate is specified as 16.7% that reported by Refinitiv in 2021. Substituting the values in the WACC formula:

WACC = (0.90× 0.076) + (0.10 × 0.001 × (1 – 0.167) = 0.0681

This means a blended average cost of capital considering Instagram’s actual debt/equity structure, market risk, and tax advantages from interest expense. This metric is crucial for assessing decisions, corporate valuation, and determining the minimum return that a company must generate to satisfy its investors. This 6.81% WACC is used as the discount rate in NPV for the firm’s brand value.

Table 14 shows historical financial metrics of Instagram from 2017 to 2021, according to Refinitiv.

Table 14 – Historical financial metrics for Instagram 2017-2021

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Financial metrics, $m/Years | 2017 | 2018 | 2019 | 2020 | 2021 |
| EBIT | 20,203 | 24,913 | 23,986 | 32,671 | 46,753 |
| Effective Tax Rate, ETR | 22.60% | 12.80% | 26.50% | 12.20% | 17.00% |
| Applicable taxes | 4,566 | 3,189 | 6,356 | 3,986 | 7,948 |
| Net Operating Profit After Tax | 15,637 | 21,724 | 17,630 | 28,685 | 38,805 |
| Net Plant Property and Equipment | 13,721 | 24,683 | 35,323 | 45,633 | 57,809 |
| Total Assets | 84,524 | 97,334 | 133,376 | 159,316 | 165,987 |
| Current Liabilities | 3,760 | 7,017 | 15,053 | 14,981 | 21,135 |
| Capital Employed | 80,764 | 90,317 | 118,323 | 144,335 | 144,852 |
| Capital Charged | 5,944 | 6,647 | 8,709 | 10,623 | 10,661 |
| Intangible Earnings | 9,693 | 15,077 | 8,921 | 18,062 | 28,144 |
| Note – compiled by the author based on the data | | | | | |

Historical Instagram’s earnings before taxes (EBIT) data are provided by Refinitiv for 2017-2021. A compound annual growth rate (CAGR) of 23.34% (2017-2021) is used to forecast EBIT for 2022-2025.

Historical Instagram’s effective tax rate (ETR) data are provided by Refinitiv for 2017-2021. An average of 18.22% (2017-2021) is used to forecast the effective tax rate for 2022-2025. Taxes are computed as:

Applicable taxes (AT) = EBIT × ETR

Net operating profit after tax (NOPAT) represents core operating profit after taxes, excluding debt effects:

NOPAT = EBIT – AT

Historical Instagram’s net plant property and equipment (Net PPE) data are provided by Refinitiv for 2017-2021. A compound annual growth rate (CAGR) of 43.27% (2017-2021) is used to forecast Net PPE for 2022-2025.

Historical Instagram’s total assets (TA) data are provided by Refinitiv for 2017-2021. A compound annual growth rate (CAGR) of 18.38% (2017-2021) is used to forecast TA for 2022-2025.

Historical Instagram’s current liabilities (CL) data are provided by Refinitiv for 2017-2021. A compound annual growth rate (CAGR) of 53.98% (2017-2021) is used to forecast CL for 2022-2025.

Table 15 calculates the NPV of Instagram’s brand earnings from 2021 to 2025 using discounted cash flow methodology. This involves forecasting future brand-related earnings and discounting them using the WACC as the discount rate, yielding an estimate of Instagram brand value

Table 15. Net Present Value calculations for Instagram, 2021-2025

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Financial metrics, $m/Years | 2021 | 2022 | 2023 | 2024 | 2025 |
| EBIT | 46,753 | 57,665 | 71,124 | 87,725 | 108,200 |
| Applicable Taxes | 7,948 | 10,507 | 12,959 | 15,983 | 19,714 |
| Net Operating Profit After Tax | 38,805 | 47,159 | 58,165 | 71,741 | 88,486 |
| Net Plant Property and Equipment | 57,809 | 82,823 | 118,660 | 170,005 | 243,566 |
| Total Assets | 165,987 | 196,495 | 232,611 | 275,365 | 325,977 |
| Current Liabilities | 21,135 | 32,544 | 50,111 | 77,161 | 118,812 |
| Capital Employed | 144,852 | 163,952 | 182,501 | 198,205 | 207,166 |
| Capital Charged | 9,864 | 11,165 | 12,428 | 13,498 | 14,108 |
| Intangible Earnings | 28,941 | 35,993 | 45,737 | 58,243 | 74,378 |
| Brand Earnings | 4,981 | 6,194 | 7,871 | 10,024 | 12,800 |
| Discounted Brand Earnings | 4,663 | 5,430 | 6,460 | 7,702 | 9,208 |
| Brand Value | 33,462 | | | | |
| Note – compiled by the author based on the data | | | | | |

Capital employed (CE) reflects long-term funding used in the business, including equity and long-term debt. It is calculated as:

CE = TA – CL

Capital charge (CC) represents the return investors require on the capital employed. It is calculated using WACC (6.81%):

CC = CE × WACC = CE × 0.0681

Intangible earnings (IE) are the surplus returns above the capital charge that attributed to intangibles like brand, innovation. This is the value created beyond the expectations of capital providers. It is calculating as:

IE = NOPAT – Capital charge

Brand earnings are the Instagram contribution to intangible earnings that are defined with help of SM CBBE model as 17.21%. So,

Brand earnings = IE × 0.1721

To get the present value of future brand earnings (2021-2025), they are discounted using a brand discount rate of 6.81% that is the same as WACC. It is calculated as:

Where r is the discount rate of 0.0681 and t is number of years forward, e. g. 2021 = 1, 2022 = 2, etc. Discount facts are provided in the table and increase each year.

NPV of brand earnings for 2021-2025 is a sum of the discounted brand earnings for years 2021-2025 gives $33,462 million. This estimated brand value is compared to independent external estimates for 2021, including Interbrand (32,007 million), Brand Finance ($25,073 million), and Statista ($33,480 million) for 2021. The discounted cash flow-based valuation aligns closely with external sources, supporting the credibility of the SM CBBE model. The study underscores the importance of incorporating consumer engagement metrics into financial models to enhance accuracy in brand valuation.

The findings of this study have several strategic implications for Instagram and brands that are promoted via this platform. First, they demonstrate that consumer attitude and engaging activities on Instagram significantly contributes to brand equity and, consequently, brand valuation. Businesses should leverage social media brand-building strategies to maximize engagement, strengthen loyalty, and enhance perceived brand quality. Second, the SM CBBE model provides a methodological framework for measuring Instagram brand name contribution, which can be adapted to other social media platforms such as TikTok, Twitter, and Facebook. Future research should explore haw varying social media algorithms impact brand engagement and value perception.

Additionally, the study highlights regional differences in brand contribution and the necessity of adjusting metrics for global valuation. Market-specific factors such as cultural attitudes toward social media engagement and eWOM in line with purchasing power and competitive landscape should be integrated into future iterations of the model to refine its predictive accuracy.

This research successfully applies the modernized CBBE model to measure Instagram’s brand equity through its users’ attitudes and behavior. By integrating real-time social media-driven demand analysis into brand valuation, the proposed SM CBBE mode; offers a practical and data-driven methodology for assessing brand name contribution in the contemporary digital age. The results underscore that Instagram’s brand equity substantially impacts its financial valuation, validating the relevance of social media-brand equity models. Future studies could refine this model further, applying it to diverse social media, other online digital platforms, and cross-country comparisons, ensuring that brand valuation methodologies remain aligned with evolving consumer behavior and online engagement and co-creational trends.

*Overall Results*

This empirical study partially accepts the hypothesized effects of measures within the proposed research model. The following hypotheses are accepted:

H1a: User engagement has a significant and positive influence on the formation of VCC behavior for social media brand.

H1b: User eWOM has a significant and positive informational impact on formation of VCC behavior for social media brand.

H1d: Social value has a significant and positive influence on VCC behavior for social media brand in terms of socialization.

H2: Value Co-creation affects CBBE of social media brand.

H2a: Value Co-creation affects brand awareness and brand associations of social media brand.

H2b: Value Co-creation affects the perceived brand quality of social media brand.

H2c: Value Co-creation affects brand loyalty of social media brand.

H3b: Perceived brand quality contributes to continuous usage intention for social media brand.

H3c: Brand loyalty contributes to continuous usage intention for social media brand.

H5a: Value Co-creation mediates the effect of engagement on CBBE of social media brand.

H5b: Value Co-creation mediates the effect of electronic word of mouth on CBBE of social media brand.

H5d: Value Co-creation mediates the effect of social value on CBBE of social media brand.

H6b: CBBE mediates the effect of value Co-creation on continuous usage intention for social media brand.

The following hypothesis was partially accepted:

H1: Social media antecedents have a significant and positive influence on the formation of VCC behavior for social media brand.

H3: CBBE contributes to continuous usage intention for social media brand.

The following hypotheses were rejected:

H1c: User interaction has a significant and positive influence on formation of VCC behavior for social media brand.

H3a: Brand awareness and brand associations contribute to continuous usage intention for social media brand.

H4a: Brand awareness and brand associations contribute to the user value of social media brand.

H4: CBBE contributes to the user value of social media brand.

H4b: Perceived brand quality contributes to the user value of social media brand.

H4c: Brand loyalty contributes to the user value of social media brand.

H5c: Value Co-creation mediates the effect of interaction on CBBE of social media brand.

H6a: CBBE mediates the effect of value Co-creation on user value of social media brand.

The study results confirm the findings from the extant literature. The SM CBBE model for social media brands comprises eight factors: traditional brand equity dimensions like brand associations, brand perceived quality, and brand loyalty; social media antecedents of users’ value Co-creation behavior like social brand value, electronic word-of-mouth, and user brand engagement; users’ value Co-creation behavior and continuous intention to use social media. Hypotheses H4 (CBBE → User Value) and H5c (Interaction → CBBE via VCC) require further research. It may be worth considering the combined effect of rejected factors with other variables such as social value or eWOM.

**3 RECOMMENDATIONS AND DIRECTIONS OF MARKETING APPLICATIONS OF THE AUGMENTED CONSUMER-BASED BRAND EQUITY MODEL ON INSTAGRAM**

**3.1 Recommendations of marketing applications of the consumer-based brand equity model on Instagram**

*Traditional CBBE Scale for Social Media Brands*

This study addresses the first research objective of assessing the applicability of the classical CBBE scale in measuring social media brands. This investigation results in the CBBE scale of Instagram with no brand awareness dimensions that contrast with the conventional measurement scale for brands in an offline environment [83, p. 9; 88, p. 63], social media context [173, p. 12], and social media brands per se [26, p. 1189].

A probable reason is that Instagram users only were selected for the survey. Therefore, most answers are positive regarding Instagram logo recognition and brand awareness, resulting in skewness and kurtosis at an unacceptable level. Hypothetically, surveys among brand users and non-users may elicit both positive and negative responses regarding brand awareness, with the data following a normal distribution. Thus, the results suggest that brand awareness may be a questionable measure of SM CBBE in the survey among brand users only. Therefore, the research scale requires further examination of other social media brands among both users and non-users of the brand in various settings and cultural contexts.

Two conventional CBBE elements, namely perceived brand quality and brand loyalty, are confirmed in line with both modern and older studies in both offline and online markets.

*Value Co-creation Measurement*

Before addressing the second research objective this study defines the VCC elements from the most recent studies among social media users [179, p. 95; 180, p. 530] among smartphone users. The questions about consumer recommendations, sharing consumer ideas, sharing consumer experiences, sharing consumer problems, and providing consumer support to others are sourced from the former study. The items on consumer involvement and brand encouragement for Co-creation are sourced from the latter research. All the items relate to consumer aspects within the VCC process, except one regarding brand activities to encourage the consumers in the Co-creation process.

Three items of seven measures are confirmed for Instagram. These findings differ from those in prior research. A possible reason is behind the various markets and contexts examined in the extant literature. Most investigations focus on offline brands and their environmental impact. There is an insufficient research base for social media brands and context. Further studies are needed to validate the VCC scale for other social media brands in diverse cultural markets.

However, the studies below typically yield outputs in terms of the dimensions, demonstrating an engaging customer attitude and behavior towards brand development activities. This research confirms three VCC dimensions for Instagram, specifically comprising the encouragement of its users to co-create new services, as well as two other user-related items, such as idea sharing and problem sharing. This study reveals that recommending Instagram to others, supporting other users in resolving usage issues, and sharing personal experiences with others exhibit lower correlations with the primary items within the VCC scale. This can be attributed to the widespread popularity of Instagram in the country. Most likely, there is no need for a usage recommendation. Also, Instagram seems quite an easy tool to use. Therefore, there may be little need to share experiences or solve problems for this social media brand. Regarding brand-related items, such as inviting users to create new services, the positive skewness in respondent answers demonstrates that Instagram does not involve its users in Co-creation but encourages them to participate in the process. Table 16 demonstrates VCC measurement suggested by different studies.

Table 16 - VCC dimensions confirmed by this study and prior research

|  |  |  |
| --- | --- | --- |
| Study | VCC Dimensions | Method/Context |
| This study | Consumer ideas sharing, Consumer problem sharing, Brand encouragement for Co-creation | Online survey, EFA, CFA, PLS-SEM; 687 Instagram users, Kazakhstan |
| Yi & Ging, 2011 | Customer participation behavior (information seeking, information sharing, responsible behavior, and personal interaction), customer citizenship behavior (feedback, advocacy, helping, and tolerance) | Survey, CFA/Mplus, PLS-SEM; 296 UG and PG students, various markets, South Korea |
| Merz, Zarantonello, & Grappi, 2018 | Customer-owned resources(brand knowledge, brand skills, brand creativity, and brand connectedness), customer motivation (brand passion, brand trust, and brand commitment) | In-depth interviews, online survey, EFA, PLS-SEM; 300 consumers with Co-creation experience, USA |
| Seifert & Kwon, 2020 | Consumer recommendation, usage encouragement, consumer ideas sharing, consumer experience sharing, consumer problem sharing, consumer support to others, consumer information seeking, consumer information sharing | Online survey, EFA, CFA, SEM; 262 SNS users, college students, USA |
| Cheung, Pires, Rosenberg III, & De Oliveira, 2020 | Consumer suggestion, consumer needs sharing, consumer co-operation, consumer involvement, brand encouragement for Co-creation | The online survey, PLS-SEM; 408 smartphone users, Brazil |
| Note – compiled by the author based on the data | | |

*Input of Value Co-creation to CBBE of Social Media Brand*

Addressing the second research objective on VCC input to the CBBE of social media brands, this study reveals the contribution of the analyzed extensive construct of user VCC behavior to the CBBE of Instagram. The result confirms previous studies. However, various authors employ different VCC constructs, as depicted in Table 17. Despite the measures reflecting consumers’ attitudes and activities towards their involvement and participation in brand value creation, nuances differ from study to study. Some scholars observe the indirect influence of VCC dimensions on content, dialogue, and customization aspects in CBBE through the involvement factor [112, p. 58]. Alqayed, Foroudi, Dennis, Foroudi, and Kooli suggested that brand loyalty is one of the outcomes of consumer attitudes, such as favorable VCC behavior, which is a dimension of CBBE [116, p. 218].

Despite existing differences in the VCC measurement scale, modern research is unified in its understanding of the effect of consumer VCC behavior on CBBE in various contexts. Many scholars consider consumer VCC activities on social media as an integral part of modern business strategy [118, p. 137]. This study confirms the role of VCC in forming brand equity using Instagram data.

Table 17 - VCC impact on CBBE

|  |  |  |
| --- | --- | --- |
| Study | VCC dimensions that impact on CBBE or its dimensions | Method, Context |
| This study | Consumer ideas sharing, consumer problem sharing, brand encouragement for Co-creation | Online survey, EFA, CFA, PLS-SEM; 687 Instagram users, Kazakhstan |
| Christodoulides, Jevons, & Bonhomme (2012) | Content creation enjoyment, online dialogue, brand trustworthy, confidence through customization. Indirect impact through involvement | Online survey, SEM; 202 users of UGC platforms, USA |
| Mulyana, Rudiana, & Taufiq (2019) | Dialogue, risk assessment, access, transparency | SEM; 322 coffee shops’ consumers, Indonesia |
| Moise, Gil-Saura, & Ruiz-Molina (2020) | Customer participation behavior, customer citizenship behavior | Face-to-face interviews, PLS-SEM; 309 tourists, Spain |
| Rubio, Villaseñor, & Yagüe (2021) | Self-value Co-creation, communal-value Co-creation | Telephone interview, CFA, SEM; 600 Tripadvisor users |
| Alqayed, Foroudi, Dennis, Foroudi, & Kooli (2021) | Perceived quality, experience, identification | Concept development |
| Note – compiled by the author based on the data | | |

The confirmed input of VCC to CBBE on Instagram contributes to the development of a new, comprehensive approach to brand equity in a social media setting. Unlike the traditional manner of CBBE consideration for offline brands, the SM CBBE model incorporates brand equity theory, aligning with modern concepts of VCC. The reason is that current research observes the transformational role of social media, enabling consumers to shift from passive recipients to active participants in creating brand value. The digital environment offers unprecedented opportunities for consumers to enrich brand meaning without borders instantly. As a result, consumer VCC behavior enables brands to develop their collaborative and engaging equity and value. Integrating the VCC system into the SM CBBE model, this study acknowledges the evolving roles of consumers and their impact on brand equity, which is co-created through the collective efforts of active brand fans. It shows online VCC as a far-reaching driver of brand equity on social media. It refers to the active involvement and emotional connection between consumers and the brand. By incorporating the VCC concept into the SM CBBE model, this study acknowledges the importance of fostering meaningful and ongoing user participation in building brand equity.

Converging brand CBBE and VCC theories, the SM CBBE model provides a more holistic understanding of Instagram’s brand equity-building system. It acknowledges the multifaceted nature of brand-consumer relationships and the dynamic nature of the VCC process. This study contributes to the further development of CBBE theory and the extension of the VCC concept, utilizing more empirical data on the growing and evolving social media market.

*Social Media Value Co-creation Antecedents*

Responding to the third research objective on social media VCC antecedents, this study analyzes the most commonly used social media VCC factors identified in the literature. The VCC antecedents’ measures are adopted from various studies and authors who investigate consumers’ participation behavior in building the value of different offline and online brands within the social media environment [58, p. 7; 182, p. 161; 183, p. 212]. However, the scholars do not investigate user contribution in value creation for the social media brands they utilize. Also, most research focuses on one or two antecedents.

Based on prior literature, this study developed a comprehensive VCC construct with four social media antecedents and tested it for the social media brand Instagram. The findings confirm prior surveys, except for the interaction factor. Thus, the VCC model resulted in three social media antecedents: eWOM, engagement, and social brand value. Nevertheless, interaction should be scrutinized further for the social media market as one of the critical aspects of social media users’ behavior [65, p. 2]. Table 18 summarizes and compares VCC precedents in this and other contemporary studies.

Table 18 - Comparison of VCC antecedents of This Study with Prior Studies

|  |  |  |
| --- | --- | --- |
| Study | VCC antecedent | Method/Context |
| This study | User engagement, eWOM, social brand value | Online survey, EFA, CFA, PLS-SEM; 687 Instagram users, Kazakhstan |
| Schau, Muniz, & Arnould (2009) | Community engagement, social networking, brand use, impression management | In-depth interviews, meta-analytic review; brand communities, Global |
| Edvardsson, Tronvoll, & Gruber (2011) | Social forces | Exploratory conceptual study |
| See-To & Ho (2014) | eWOM in SNSs, trusting beliefs | Theoretical analysis, SNSs, Global |
| Ranjan & Read, 2014 | Co-production, value in-use | Online survey, PLS-SEM; 230 users of Subway and Facebook, USA, India |
| Agrawal, Kaushik, & Rahman (2015) | Interaction, relationship | Case study; RSBY, India |
| Kao, Yang, Wu, & Cheng (2016) | Interaction, engagement | In-depth interview with expert, case study; coffee shop, Facebook, Taiwan |
| Ramaswamy & Ozcan (2016) | Consumer engagement | Conceptual framework; examples of Starbucks and Apple |
| Sorensen, Andrews, & Drennan (2017) | Consumer engagement | Netnography, content and thematic analysis; Cause communities on Facebook, Twitter, YouTube, Australia |
| Kunja & Acharyulu (2018) | eWOM | SEM; 762 smartphone users/Facebook fun pages, India |
| Hernández-López, & Del Barrio-García (2018) | Customer motivation | Literature review |
| Cannas, Argiolas, & Cabiddu (2019) | Social values | Face-to-face interviews, qualitative exploratory approach; 13 business owners/tourist industry, Italy |
| Tajvidi, Richard, Wang, & Hajli (2020) | Social value (emotional support and informational support), information sharing, customer relationship quality | PLS-SEM; social commerce, 230 Facebook/Twitter/Pinterest users, USA |
| Khajeheian & Ebrahimi (2020) | Customer participation | Online survey, PLS-SEM; 274 social media users, Iran |
| Ferm & Thaichon (2021) | Engagement, participation attitude | Online survey, EFA, SEM; 489 retail banking customers/social media users, USA |
| Rao KS, Rao B, & Acharyulu, (2021) | ePWOM (electronic positive word-of-mouth), trust beliefs | EFA, SEM; 497 smartphone users/Facebook fun pages, India |
| Cheung, Pires, Rosenberg III, Leung, & Ting (2021) | Entertainment, customization, interaction, eWOM, trendiness | PLS-SEM; 392 smartphone users/social media users, China, Hong Kong |
| Rodríguez-López (2021) | Cultural and social values | Netnography; Facebook virtual communities, Spain |
| Huynh, Trieu, Nguyen, Tran, & Lam (2021) | Collaboration | PLS-SEM; 182 employees, B2B IT, Vietnam |
| Rubio, Villaseñor, & Yagüe (2021) | Functional value | Telephone interview, CFA, SEM; 600 Tripadvisor users |
| Tajvidi, Wang, Hajli, & Love (2021) | Social commerce interactivity, social value, relationship quality | Online survey, PLS-SEM; 192 users of brand pages on Renren, China |
| Note – compiled by the author based on the data | | | |

The first suggested antecedent is consumer brand engagement. Consumer engagement indicates a certain level of customer investment in his mental, passionate, and psychological efforts to interrelate with the brand [46, p. 559]. This means that firms involve consumers in various brand activities, such as new product development, communications, and promotions. The involvement can include asking customers for feedback, running contests or promotional events, and creating content to encourage sharing and participating actions. Many scholars support the opinion on consumer engagement as a part of the psychological process of a customer, who moves from the brand trial and experience to repeated purchase or loyalty in case of a stronger emotional connection with the brand, more than just satisfaction of the customer needs and preferences [47, p. 66].

Ramaswamy and Oscan presented a holistic view of the brand engagement concept within the VCC integrative framework, where brand engagement platforms are a central element [38, p. 103]. The authors described the actors, processes, artefacts, and interfaces that participated in the Co-creation process surrounding the two types of brand engagement platforms. These are brand offerings and brand relations. Other scholars apply a similarly comprehensive approach to viewing value creation as a system of interrelated impression management, brand use, community engagement, and social networking [48, p. 36]. Confirming existing research, this study presents a forward-thinking theoretical view of engagement as a new component of the modern CBBE model, co-created on social media platforms.

The second proposed antecedent of VCC is eWOM for Instagram. Here, it is necessary to recall the history of the creation of the WOM definition. Arndt was the first scholar to propose this definition, describing the dissemination of information or opinions about a brand, product, or service from one person to another through conversation or informal communication [60, p. 42]. The author defines three key elements of Word of Mouth (WOM), including the communicator of the message, the message itself, and the recipient of the message. Additionally, Arndt specifies that the receiver perceives the communicator as a non-commercial representative not affiliated with the brand producer. It means that WOM is a form of communication that relies on personal recommendations or referrals from individuals rather than brand advertising or other forms of paid promotion. So, word of mouth (WOM) is one of the most effective marketing tools, as people tend to trust advice from family and friends more than advertising from companies. It is a reason for WOM recognition as a powerful tool for businesses to create buzz and build brand trust among potential customers.

Within digital marketing, another frequently used term by scholars is user-generated content (UGC). UGC means a broader concept than WOM [73, p. 45]. WOM relates to commercial transactions by brands, goods, and services. It does not require creativity to express opinions or respond to commercial actions. UGC extends beyond the commercial context to encompass a variety of topics, including social and political issues. Additionally, the UGC requires a creative approach to composing reviews and capturing photos or videos. UCG utilizes various web tools, including blogs, vlogs, micro-videos, AR, VR, etc. With the rise of Internet tools like social media and online communication, various Web technologies add an electronic element to the WOM term.

The term electronic word of mouth (eWOM) is used in this study because it investigates the commercial component of people sharing their experiences and opinions about used products and services with a vast audience immediately via Instagram, an electronic online platform. This study supports recent research on eWOM as a precursor to the VCC. However, this research adds another angle of the eWOM view in terms of its enrichment role for CBBE design conditioned by social media features. This empirical finding extends the current theoretical platform of eWOM, examining its role in forming VCC and CBBE within the social media brand Instagram.

The third introduced VCC antecedent is social brand value. The suggestion is based on the theory of consumption values. This research argues that incorporating social brand value into the SM CBBE model, based on findings from the Instagram analysis, is justified for several reasons. Numerous studies have provided evidence of the significant impact of social media on society, enabling users to express their opinions, share experiences, and engage in discussions about brands. By incorporating social brand value, this study acknowledges the influence of social media brands on broader social conversations and their capacity to generate a positive social impact. This research illustrates that social media are inherently social, fostering the formation of online communities and brand-consumer interactions, as exemplified by Instagram. This analysis acknowledges the importance of community engagement and user participation in shaping brand perceptions and loyalty by considering social brand value.

The prior literature suggests that social value is one of the key customer consumption values, which aligns with the innate social nature of social media. The consumption value theory posits that social value is one of the factors people consider when making purchasing or consumption decisions [244]. Naturally, online social media provide users with several social values, including enriched well-being [245]. This study demonstrates that social brand value is a significant factor within the SM CBBE model for Instagram, serving as the VCC antecedent. The positive empirical test allows the inclusion of social brand value in the SM CBBE measurement model for this brand. Consequently, the theory of consumption values and CBBE theory complement each other due to the social nature of social media and synergistically converge in the SM CBBE model, as illustrated by the Instagram case. By incorporating social brand value into the brand equity model of Instagram, this study extends both theories —the conventional CBBE and consumption values —to the digital market, addressing the current digitally connected reality.

Interaction effect on VCC was rejected in the study. However, further research is needed to test a combined effect with another rejected factor of user value and other variables, such as social value and eWOM.This research consolidates the segmental findings of various studies on the VCC antecedents into a comprehensive VCC theoretical structure observed on social media, encompassing engagement, eWOM, and social value.

*Continuous Usage Intention as an Output of CBBE*

Addressing the fourth research question on CBBE outputs for social media brands, this study identifies the most commonly used factors in the literature, including consumer purchase intention and customer value, for empirical testing. Past research underlines that consumer intention to purchase goods is one of the crucial behavioral outcomes of brand equity within offline settings [246; 247; 248]. Additionally, the mediator role of brand equity in the effect of advertising on consumer purchase intention is revealed in existing studies [249]. Social media is found to be a favorable environment for motivating consumers to make purchases through brand equity building in literature [250, 251].

Regarding social media services, which are free, continuous usage intention is considered rather than purchase in this analysis. The current scholarly papers demonstrate various factors of social media usage intention [74, p. 79; 252]. However, prior research has not concentrated on the continuous intention to use social media as the outcome of their enhanced CBBE. Extant literature presents sufficient proof of the impact of CBBE on purchase intention for offline brands in the offline context described in the literature review part. The effect of CBBE on the usage intention of online services, including social media, is under-investigated.

This study posits that continuous usage intention is a vital output of CBBE for Instagram, reflecting the likelihood and willingness of its users to consistently engage with the brand and its offerings on the online market. Current studies view continuous usage intention in terms of the indicator of the behavioral aspect of brand equity. It extends beyond mere attitudes or perceptions to capture the likelihood of consumers translating their positive brand perceptions into actual usage intentions. It serves as a bridge between brand attitudes and actual ongoing consumer behavior on social media.

As such, this study completes the research model by demonstrating the significant payoff effect of SM CBBE on maintaining user interest in regular social media usage, showing a noticeable positive impact of brand equity on continuous usage intention for Instagram. However, this study does not empirically confirm that customer or user value is the outcome of CBBE for Instagram. The factor is advised to be checked for other social media brands.

The completion of the SM CBBE model for Instagram, with continuous usage intention, confirms the traditional CBBE model in terms of the imperative output of CBBE as a firm value. From a consumer engagement perspective, the reviewed modern literature demonstrates that social media brands thrive on active user involvement and participatory actions on the platforms. Prior research has shown that usage intention assesses the extent to which consumers are motivated and inclined to actively engage with the brand's content, interact with other users, and contribute to discussions on social media. It helps to measure the level of involvement and active user participation in the brand's social media activities. Based on these research results, it can be stated that a solid usage intention indicates a high likelihood of developing long-term brand success for Instagram. When consumers consistently express an intention to use a particular social media brand, it indicates a deeper connection and sustained interest in the brand over time. This finding contributes empirical data on the relationship between CBBE and usage intention for social media brands to the CBBE theory and the existing empirical research base.

*Mediating Role of Value Co-creation in the Research Model*

Since solid research focuses on CBBE measurement for offline brands, there are proven effects of offline precedents on brand equity formation conditioned by the physical contact with consumers via advertising, promotion, and involvement in Co-creation activities [82, p. 15; 88, p. 232; 253; 89, p. 206; 254]. Contemporary research encompasses the Web, social media, and other online factors that influence both offline and online brands [112, p. 67; 116, p. 521]. However, there is a lack of analysis of consumer participation in the equity Co-creation of social media brands.

This study demonstrates the active role of Instagram users in the development of CBBE as a subsequent process, where VCC behavior mediates the contribution of users' activities on Instagram to the brand equity foundation for this social media platform. This research finding reveals a system of interrelationships between Instagram and its active users, leading to increased brand equity through users' co-creative behavior. Therefore, this study posits that user VCC behavior is a critical factor in CBBE building and a mediator of the influence of user activities on social media brand equity, as illustrated in the case of Instagram.

*Definition of Social Media Brand Equity*

This study defines the SM CBBE model based on several considerations. Acknowledging the classical theory of CBBE, this research considers the specific social media features that equip users with highly productive VCC tools. Additionally, the social media antecedents of user VCC behavior are highlighted and incorporated into the research model. The CBBE outputs complete the value chain for the brand equity process on social media. Thus, this study proposes to define social media brand equity as a specific type of online brand equity, which is co-created with users due to distinct social media features that provide favorable VCC antecedents such as eWOM, user brand engagement, and social brand value. A higher SM CBBE leads to a stronger intention to use social media brands continuously.

Overall, this study states that developing the SM CBBE model for social media brands offers theoretical contributions by expanding existing knowledge of brand equity dynamics in the digital context, exploring the unique aspects of social media platforms, and uncovering the role of consumer behavior and actions like engagement, Co-creation, and user-generated content in brand equity formation [255]. This research conceptualizes and analyses the SM CBBE model for the social media brand Instagram.

The current literature lacks a clear definition of social media brand equity. This study identifies SM CBBE, an extension of the conventional concept of CBBE, which was proposed and recognized for offline brands. While the fundamental concepts and principles of CBBE apply broadly across different contexts, defining the specific explanation of CBBE for social media brands is applicable for several reasons. Current scholarly papers provide insight into the distinct features and dynamics of social media, as compared to traditional marketing channels, including real-time interactions, user-generated content, viral sharing, and community engagement. These characteristics necessitate a nuanced understanding of how brand equity is developed and sustained in the social media context.

Additionally, existing studies demonstrate that social media has significantly transformed consumer interaction with brands, influencing their expectations, preferences, and behaviors. Defining CBBE for social media brands acknowledges the shifts in consumer behavior and explores how these changes influence brand perceptions, loyalty, and advocacy. Social media platforms offer unique opportunities for brand-consumer interactions and experiences. Describing CBBE for social media brands helps capture the nuances of technology-mediated brand experiences and their impact on brand perceptions.

The literature suggests that social media serves as a consumer engagement platform for consumers’ VCC actions, where interaction between the brand and consumers is a central element, and eWOM is a resource within the value creation pyramid for social media [38, p. 103]. Therefore, consumer brand engagement, interaction, and eWOM are closely interrelated with the creation of user VCC and CBBE by social media brands. This study demonstrates that eWOM and engagement aspects are positive and significant components of the SM CBBE definition.

It is essential to define the term CBBE for social media brands to identify relevant indicators and measurement techniques that account for the specificities of social media platforms. Social media is a dynamic and evolving field, with new brands, offers, trends, and technologies constantly emerging. The distinct CBBE definition for social media brand allows researchers and practitioners to stay updated and adapt their understanding, consequent strategies, and frameworks to the changing social media landscape.

The proposed term complements CBBE theory by extending the application of the CBBE concept to social media brands, which are now a new influential marketing technology. The SM CBBE term distinguishes itself from traditional CBBE by adopting and converging several contiguous theories, which enhance each other due to the virtues of social media. Unprecedentedly, social media facilitates diverse consumer value creation (VCC) initiatives by businesses and related activities, becoming an inherent part of modern business strategy [118, p. 141]. In turn, social media brands benefit from user VCC activities, which boost brand equity and increase the intention to use social media brands, as examined in this study of Instagram.

Therefore, by developing a specialized definition of CBBE for social media brands, researchers and practitioners can gain deeper insights into the unique dynamics and factors that shape brand equity in the digital realm. It can provide a framework for understanding the specific challenges, opportunities, and strategies involved in building and managing brand equity within the social media context. The proposed CBBE term is developed using an Instagram study. A generalization of the definition requires more research on other social media brands.

**3.2 Directions for Instagram marketing strategies informed by the consumer-based brand equity model and the future marketing investigations**

The dissertation aims to address one of the priority directions of the development of science, approved by the Higher Scientific and Technical Commission under the Government of the Republic of Kazakhstan. It is the “Information, Communication, and Space Technologies.” Modern studies show the importance of information and digitalization technologies development in Kazakhstan to proceed with local industrial advancement [256]. This study offers practical recommendations for local companies to leverage the popular modern communication tool, Instagram, a social media platform, to cultivate advanced and effective strategic relationships with their consumers. It helps to reinforce and grow local businesses in the long-term perspectives. Because it is a proven method for establishing and growing businesses through building strong brands. Also, value co-creation is recognized as a universal tool for contemporary business, facilitating research, innovation, and progress. The shared efforts of all interested stakeholders to create something new or more meaningful than any individual or closed group could achieve on their own. Local organizations in Kazakhstan should leverage this global expertise in brand co-creation and development to evolve further and prosper.

*The conceptual SM CBBE model*

Overall, the conceptual SM CCBE model has strategic marketing applications. In the era of digital transformation, social media platforms such as Instagram are more than just communication tools, they are complex ecosystems that integrates users into very fabric of brand creation and promotion. The framework illustrates a strategic model for understanding the process by which user behavior influences brand equity through VCC, ultimately impacting the platform’s long-term usage intentions.by breaking down the journey from social media antecedent conditions to brand equity outcome, this model offers marketers a comprehensive roadmap for leveraging user engagement and VCC in building robust brand equity and value.

This strategic brand equity model aligns well with modern marketing imperatives that emphasize collaboration, user-centricity, and sustained engagement. Each component, beginning from user engagement, eWOM, and social brand value, flowing through user VCC and CBBE, and culminating in continuous brand usage as the value to firm, demonstrates how companies can harness user participation to enhance brand equity and drive long-term growth. All four blocks, each representing a key component in strategic marketing flow – from VCC antecedents, through VCC itself and CBBE, to the final brand outcome are shown in Figure 12.

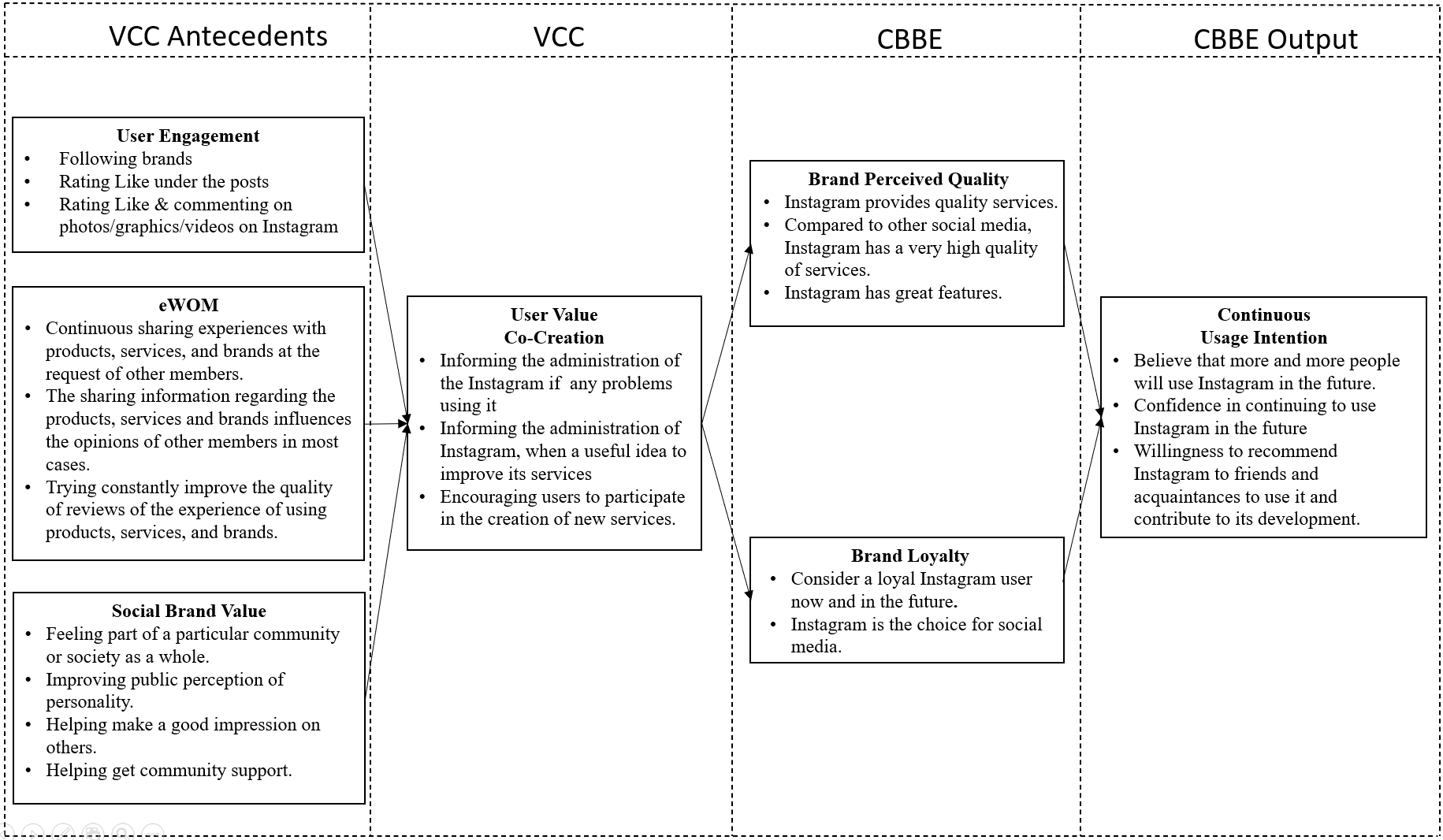


Figure 12. The conceptual SM CBBE model.

Note – compiled by the author

*VCC Antecedents Block*

The first block, VCC antecedents, sets the foundation for user participation in the brand ecosystem. These antecedents are critical inputs that influence users’ willingness and ability to contribute meaningfully to brand VCC. Companies are advised to elaborate and implement social media marketing activities to generate the antecedents. Brands are recommended actively cultivate the low-barrier forms consumer activities, as they signal interest and involvement.

Kazakhstani practitioners should be aware of social media as one of three actors of the complex VCC structure in line with customer and firm following contemporary resource integration logic [40, p. 49]. This means that social media serves as a critical resource for co-creation. It can be named a co-creation platform. For example, Facebook groups, Twitter chats, and LinkedIn communities provide brands with the space to co-create value with their customers in a more structured and collaborative way. By bringing together customers, stakeholders, and experts, these platforms enable brands to explore the summated intelligence of their communities to create brand value together.

As a co-creational platform, social media can be viewed as a source of new ideas and innovation for brands, as customers share their feedback and ideas for improving products or services. By listening to their customers and incorporating their ideas into their products or services, brands can easily co-create value and enhance their offerings in Kazakhstan. Therefore, social media provides brands with a powerful tool for co-creating value with their customers and stakeholders. By engaging with customers, leveraging user-generated content, encouraging brand advocacy, fostering innovation, and using co-creation platforms, local brands can build stronger strategic relationships, enhance their products or services, and create more customer value.

However, a favorable effect of SMM on consumer VCC behavior depends on the firm capabilities to coordinate and harmonize its business processes and social media capabilities to interact with the consumers, establish brand value, and increase brand value [41, p. 900]. VCC theory can enable local marketers to analyze the benefits of social media services for the users who participate in content generation and social interrelations. By examining the perceived value to users, local managers can gain insights into the factors that attract and retain users on social media. VCC theory can help practitioners understand the progress of network outcomes and how they influence the VCC process in a social media context in Kazakhstan. By applying the theory, this study raises awareness of the unique characteristics and opportunities provided by social media, thereby contributing to the advancement of knowledge in the field of social media research.

Social media antecedents of the user VCC process equip local practitioners with the interconnected tools to involve consumers in brand building and development. By understanding the contributing factors to successful VCC on social media, businesses can develop SMM strategies or identify areas for improvement in the existing strategic plans. For example, low customer engagement on social media should motivate marketers to improve their content or communication strategies to better connect with their audience. Additionally, analyzing social media antecedents can help businesses stay ahead of the competition. By identifying trends and best practices in value Co-creation on social media, local companies can develop differentiation strategies that ensure a competitive advantage. Analyzing consumers’ VCC behavior on social media enables businesses to create meaningful relationships with their customers using modern digital means, ultimately driving long-term success.

The first social media antecedent is user engagement, which represents the various forms of involvement users have with a brand on a social platform. On Instagram, engagement is realized through following brands, liking posts, and commenting on photos, videos, and graphics. Therefore, strategic content planning, using compelling visuals, call-to-action, and interactive formats like polls or reels, can stimulate greater engagement. High engagement increases the likelihood of users becoming brand advocates and participating in deeper forms of co-creation.

This study illustrates that local Instagram users follow brands, evaluate their text and visual content with the “Like” option, and comment on various visual activities on the platform. Kazakhstani marketers are advised to leverage the impact of engagement on VCC, utilizing the opportunity to communicate with customers, respond to inquiries and feedback, and foster relationships with them through engaging content and promotional campaigns 24/7. It means that customers can provide feedback, ask questions, and share their experiences with a brand directly on Instagram, and businesses can respond in a timely and personalized manner. This study proposes brand engagement in real-time through social media platforms to involve consumers in VCC and build higher brand value through customer contributions, which makes them feel valued and heard.

The second antecedent is eWOM, which encompasses the informal communication users share about their experiences with products, services, and brands. Key behaviors include sharing experiences upon request, providing detailed reviews, influencing others’ opinions, and contributing to the improvement of product/service reviews. eWOM is a highly credible and scalable form of marketing. Brands should monitor conversations, amplify positive reviews, and engage with user feedback. Encouraging user-generated content campaigns or incentivizing reviews can also drive eWOM, which strengthens brand credibility and extends reach organically.

This research reveals that Instagram users constantly improve their product and service reviews, as they are aware of their impact on others. This study advises marketers to motivate people to generate eWOM by actively encouraging them to share their experiences and opinions about brands on Instagram. This social media platform enables brands to reach a broader audience than ever before. By creating engaging content and leveraging eWOM, local brands can attract more followers and expand their reach. This study suggests that Kazakhstani companies make brand engagement and eWOM activities part of their modern SMM strategy. It helps build stronger customer relationships, increase customer loyalty, and improve brand quality perception. These aspects reinforce brand equity and brand value to ensure long-term business success.

The third antecedent is social brand value, which addresses the emotional and social benefits users derive from associating with the brand. It includes feeling part of a community, improving public perception, making a good impression, and receiving community support. Creating and nurturing branded communities can foster emotional loyalty. For Instagram, this may involve community hashtags, events, influencer collaborations, or storytelling that emphasizes shared values. A strong social identity around a brand deepens engagement and makes users more inclined to advocate for and contribute to the brand.

Providing social brand value for consumers has a strategic marketing importance for practitioners today. Modern digital technologies, including online social media, are observed as helpful for people in reducing feelings of loneliness [71, p. 600; 72, p. 15]. The reason is that online tools allow them to connect with others and form social relationships, where they can easily share personal experiences and similar interests, regardless of geographical location. These social ties provide people with a sense of connection to the relevant communities. It helps them overcome the social isolation observed during COVID-19 circumstances.

Even before the pandemic, sporadic studies have shown the well-being and psycho-social effects of social media, mainly Facebook. One of the studies discloses the compensatory use of this social media platform to cover unmet psychological or social needs [73, p. 431]. However, this investigation highlights the negative consequences of Facebook’s excessive use as a means to compensate for unmet social needs in the offline world. One of them is the addiction to this online media. So, compensatory use and addiction are interconnected factors that represent the inappropriate behavior of Facebook. Gladly, the study finds a small share of respondents with these maladaptive symptoms. Anyway, heavy Instagram usage should be treated as a potential risk in the future, as it may negatively impact the well-being of local people due to the possibility of rising addiction to social media.

This study suggests that Instagram provides social value as a tool for creating equity for itself and other brands. This study reveals that Instagram helps its local users feel like part of a specific community or the broader society, improves their perception and acceptance by society, and earns their support. It discloses the compensatory use of Instagram to cover unmet social needs. Here, there is an intersection point of social and marketing views. According to the theory of consumption values, social value is a proven factor influencing choice behavior within the consumer buying-decision process, alongside functional, conditional, emotional, and epistemic values [254, p. 160]. It means that different consumer groups have distinct values and priorities formed by the society to which they belong. For example, in some cultures, collectivism is more valued than individualism, as seen in Kazakhstan. This attitude can influence personal purchasing decisions for the benefit of the community or society. Socioeconomic factors, such as income and educational level, can also influence consumer behavior. Consumers with higher incomes and levels of education may be more willing to pay a premium for products or services that align with their conscious preferences, such as those that are sustainably produced or ethically sourced.

*VCC Block*

At the heart of the SM CBBE framework lies the user VCC block, which is the transformative stage where users move from passive consumers to active contributors. This involves active participation in improving and innovating brand services. It includes informing the administration of problems, providing ideas to improve services, and helping develop new services. Thus, brands should build structured channels for user feedback and suggestions. Platforms like Instagram can use surveys, beta testing, community forums, and social listening to identify user-generated innovations. Rewarding contributors and showcasing user influence on platform features increases trust and loyalty, and instills a sense of ownership.

In strategic terms, co-creation builds a reciprocal relationship between brand and user. It enhances customer satisfaction and service relevance while enabling lean innovation cycles. This also serves as a form of internal marketing, wherein the users become part of the development process and thus internal stakeholders of the brand’s success. Once users participate in co-creation, their perception of the brand shifts. The CBBE component represents how this altered perception manifests in two main pillars such as brand perceived quality and brand loyalty.

Based on the research findings, this study advises Instagram and other companies to tailor their products and marketing strategies to the local social context to achieve greater success in reaching their target audiences through social media. This is because social value can form positive or negative individual perceptions of a product or service associated with a specific social group or groups comprising demographic, socioeconomics, and cultural characteristics [254, p. 161]. Several disciplines, including sociology, economics, psychology, and marketing, contribute to this theory through empirical confirmations of the value components and their impact on consumer choice behavior [254, p. 168]. Many scholars use the theory of consumption values to explain and predict consumer behavior. This study aims to investigate social value as a factor influencing social media user behavior, which in turn impacts the Co-creation process for brand equity and brand value.

This study shows three elements of Instagram users’ VCC behavior: informing, sharing, and participating. Local social media users inform brand owners about potential issues with service usage, share ideas for brand improvement, and appreciate invitations to participate in brand development. This research views VCC as an iterative and flexible process in which ideas and solutions can be refined and adapted based on feedback and insights from stakeholders in real time, facilitated by social media functions. This agility and adaptability can enable quicker response to changing customer needs, market trends, or environmental factors, resulting in more responsive and relevant offerings that create value in dynamic and evolving contexts. The research defines the prevailing VCC antecedents and crucial factors influenced by social media, which enhance the brand equity model of social media brands themselves.

*CBBE Block*

Based on the reviewed modern literature, this study advises Kazakhstani managers to use the conventional CBBE scale for measuring the brand equity of both offline and online brands. However, these empirical research findings justify the application of the two conventional CBBE dimensions —brand loyalty and brand perceived quality —for measuring Instagram brand equity.

In a broader context, this study advises local companies to view the strategic benefits of the growing brand equity. That increases the effect of the brand promotional programs, justifies premium pricing, facilitates extension to new product categories, provides easier access to distribution channels, and build high barrier for rivals due to the stronger competitive advantage [88, p. 29]. Also, local marketers can use existing research on SMM that is analyzed by this study.

The quality dimension reflects users’ evaluation of Instagram’s service quality, particularly in comparison to alternatives. Key indicators are belief that Instagram provides high-quality services, recognition of superior service compared to other platforms, and acknowledgement of great features. Perceived quality is shaped by user experience, innovation, reliability, and visual appeal. Continuous enhancement of features, superior user experience design, and reliable performance help solidify quality perception. Marketing strategies should highlight these differentiators in campaigns, product updates, and user testimonials to reinforce Instagram’s superiority.

Brand loyalty reflects users’ long-term commitment and preference for the platform. It is expressed as continued use in the future and viewing Instagram as the platform of choice. Loyalty is a core driver of sustainable growth. Brands can cultivate loyalty by offering personalized experiences, recognizing loyal users, and providing consistent value. Instagram might use features like personalized content feeds, memory reels, or user anniversary badges to nurture loyalty. In strategic terms, loyal users are less sensitive to competitors and more likely to contribute to organic growth via advocacy. They are also more receptive to monetization strategies like premium features or advertising.

*CBBE Output Block*

The recognized CBBE model states that a firm value and customer value are the outputs of brand equity. It highlights the practical role of CBBE in forming a brand asset for organizations. The reviewed literature reveals one of the most widely recognized factual equity results from the consumer perspective, applicable to both offline and online businesses. It is a purchase intention. The more customers intend to buy a particular brand, the higher future cash flow can be projected, and the longer business potential can be expected. However, service companies evaluate service usage intention. This study examines the continuous usage intention of Instagram to assess the effect of brand equity from a practical perspective. It is beneficial to understand the platform's potential to retain and expand its user base, as well as generate additional revenue through paid services. This study recommends that marketers measure usage intention as a qualitative indicator of marketing activities to build and increase brand equity. Regularly assess the metric to evaluate the impact of various marketing actions and select the most effective ones. Additionally, routine evaluation and analysis of usage intentions may help steadily improve marketing strategies and operations.

Continuous usage intention captures the ultimate strategic objective of any service company. The SM CBBE model highlights usage intention as the behavioral manifestation of brand equity, representing the firm value. The usage intention denotes a strong behavioral intention toward sustained use and promotion of the platform. It includes belief in the platform growing popularity, confidence in continuing to use it, and willingness to recommend it to others. This stage is critical for achieving customer lifetime value. It reduces churn and transforms users into promoters. Instagram and similar platforms can reinforce this by celebrating milestones, offering referral incentives, and fostering a sense of evolution. Moreover, user-driven advocacy energies viral growth. Practitioners must ensure the user experience remains fresh, inclusive, and socially valuable to retain and grow this advocacy base.

Hence, the SM CBBE framework illustrates a clear and actionable pathway from initial user engagement to long-term brand attachment. Strategically, it serves as a comprehensive guide for marketers aiming to build enduring relationships with users through VCC and CBBE. Key takeaways for strategic marketing applications include fostering engagement early, amplifying eWOM and community belonging, integrating users into brand value creation, strengthening brand perception, and driving long-term usage intention.

In a digital-first economy, where user preferences shift rapidly and competition is fierce, this model highlights a sustainable approach to branding that is collaborative, user-centric, and strategically aligned with enduring value creation. By understanding and operationalizing each component of this framework, marketers can transform into living brands that grow in value with every user interaction.

*Application of SM CBBE Model for RBI Calculation*

This study is not limited to the SM CBBE model construction, which contributes to the employed theories and provides practitioners with verified instruments to build and enhance brand equity for social media brands. The research suggests further practical applications of the model in brand valuation, addressing the fifth research question on the applicability of the SM CBBE model for social media brand valuation, specifically to define the brand's contribution to brand value. Based on the received results, this research suggests using SM CBBE as an alternative to Interbrand customer demand analysis to define RBI, the contribution index of the brand name into the brand value, according to the available facts about the Interbrand methodology. This study's findings are innovative in brand valuation due to the intersection of marketing and financial sciences and practices.

This research confirms that six factors or measures of brand attractiveness are justified for the survey among Instagram users. As a result, the SM CBBE model, analogous to Interbrand demand analysis, encompasses eWOM, user brand engagement, user value co-creation, brand quality, and brand loyalty. All six of these factors are empirically proven inputs to the continuous usage intention, which represents value for Instagram in ensuring long-term brand growth.

*Recommendations for the future marketing investigations and applications of consumer-based brand equity in the social media context*

While this study provides substantial insight into the application of the SM CBBE model for Instagram, several limitations in the research design and methodological approach signal opportunities for future marketing investigations and practical applications. These considerations aim to enhance the rigor, reliability, and generalizability of research findings in this evolving domain.

To begin with, the study utilizes a self-administered web survey methodology, which is widely recognized for its efficiency and scalability, particularly in digital environments. Web-based surveys offer a cost-effective and user-friendly means of reaching diverse user populations across digital platforms. However, one inherent drawback of this method lies in the absence of direct researcher intervention or supervision during the completion of the questionnaire. Without guidance, participants may misinterpret questions, leading to inconsistencies or inaccuracies in the data collected. Such misunderstandings can compromise the credibility and validity of the results. To mitigate this limitation, the study incorporated a rigorous pilot phase, wherein all survey items were tested and linguistically adjusted to ensure clarity, cultural relevance, and alignment with local syntactic norms, especially within the Russian-speaking demographic.

Moreover, the data collection process was facilitated by a research agency that carefully screened and selected participants based on demographic quotas, such as age and gender, to mirror the user profile of Instagram’s target audience. This process included a preliminary consent phase through short interview, ensuring voluntary and informed participation. Despite these measures, it is recommended that future studies consider incorporating hybrid data collection methods, such as online and interviewer-administered surveys, or adaptive questioning techniques using artificial intelligence chatbots that provide clarifications in real-time. These improvements can significantly elevate the precision and representativeness of the sample and enhance the overall reliability of findings.

Another key limitation stems from the geographically constrained context of the study. Conducted exclusively in Kazakhstan, the study’s findings may not fully capture the variability of user behavior, brand perceptions, or cultural dynamics that influence social media engagement in other regions. Social media platforms like Instagram operate on a global scale, with varying levels of popularity, penetration, and cultural resonance across markets. Therefore, expanding the geographical scope of similar research to include multiple countries or cross-cultural comparisons would enhance the generalizability of the results. Comparative studies can illuminate how cultural variables, digital literacy, economic development, and platform-specific regulations shape user perceptions of brand equity. These findings would provide valuable inputs for international marketing strategies and localized brand positioning initiatives.

Furthermore, the study focuses exclusively on Instagram as the subject of the SM CBBE model. While Instagram is a prominent and widely used platform, consumer behavior in the digital ecosystem is inherently multi-platform. Individuals often interact with multiple social media channels simultaneously, such as Facebook, TikTok, LinkedIn, Twitter, and Snapchat, each offering unique features, content format, and value proposition. As such, isolating Instagram may limit the ability to generalize the findings across the broader social media landscape. Future studies should explore comparative analyses across platforms to assess whether the proposed SM CBBE constructs remain stable or require modification based on platform-specific characteristics. Such research would support a more holistic understanding of social media brand equity and inform strategies for integrated digital branding across channels.

A notable omission in the study is the consideration of regulatory development affecting the social media industry. Increasing scrutiny around data privacy, misinformation, algorithmic transparency, and platform accountability is reshaping the strategic landscape for social media marketing. Regulations such as the General Data Protection Regulation in Europe, the Digital Services Act, and similar policies globally influence how brands engage with users and manage brand equity. Future research should incorporate regulatory variables as potential moderators or mediators in the SM CBBE framework. This would enable marketers and researchers to better understand how compliance, trust, and corporate responsibility influence user perceptions and brand loyalty in regulated digital environments.

Following the successful validation and refinement of the SM CBBE model across multiple geographies, one promising avenue for application lies in the integration of financial valuation metrics. Specifically, once a robust and generalized model is established, a brand contribution ratio can be derived and applied to NPV calculations. Financial data from sources such as Refinitiv or Bloomberg can support this valuation, enabling a linkage between brand equity metrics and tangible financial performance indicators. The resulting metrics can then be benchmarked against figures provided by leading brand valuation firms, offering valuable insights for investor communications, marketing budgeting, and brand portfolio management.

In terms of future research direction, further confirmatory analyses should be undertaken to test the robustness and adaptability of the proposed model. The constructs developed in this have demonstrated convergent and discriminant validity, which are essential components of trait validity. However, more studies are needed to confirm the established nomological validity to demonstrate that the relationships between constructs conform to theoretical expectations and can be predictably replicated. This will strengthen the theoretical foundations of the SM CBBE model and facilitate its adoption in academic and professional contexts alike.

One area particularly ripe for exploration is the role of brand awareness within the SM CBBE framework. Although brand awareness has historically been a cornerstone of traditional CBBE models, its role in digital and social media context is less clear. This study did not identify brand awareness as a significant contributor to brand equity on Instagram. Further research is required to reassess this assumption. It would be beneficial to investigate whether the omnipresence of social media brands reduces the relative importance of awareness compared to deeper engagement variables like perceived quality, brand loyalty, and co-creation.

Additionally, future studies should explore the structural dimensions of the VCC antecedents that precede brand equity formation. This includes understanding how engagement, eWOM, and social value contribute to co-creation process and subsequently enhance brand equity. The current study acknowledges the importance of these dimensions but lacks empirical verification. Targeted investigations into these antecedents would provide a more nuanced understanding of the social dynamics that shape brand equity in digital communities.

Furthermore, the SM CBBE model should be tested across various social media platforms beyond Instagram. Users’ behavior on LinkedIn, for example, is influenced by professional considerations, whereas engagement on TikTok or Snapchat is often driven by entertainment and creativity. Each platform offers unique affordances, and understanding how these influence brand equity perceptions is critical. Multi-platform studies can identify commonalities and divergences in user behavior, helping brands to tailor their strategies accordingly.

External validation across cultures is also critical. Social media is a global phenomenon, but its interpretation and usage vary widely by region. Constructs such as interaction, loyalty, and co-creation may hold different meanings across cultures, influenced by local peculiarities, language, and norms. Testing the SM CBBE model in multiple cultural contexts will facilitate the creation of a more universally applicable framework and support the development of culturally nuanced branding strategies.

Age-based segmentation represents another avenue for future analysis. Different generations approach social media with varying goals and expectations. While younger users may seek identity expression and community, older users may prioritize functionality or privacy. Understanding these generational differences can inform the design of personalized brand strategies that resonate with specific demographics and help brands anticipate future trends based on emerging youth behavior patterns.

Further conceptualization and investigation of additional VCC and CBBE antecedents are also recommended. Social media brands often rely heavily on brand advocates and influencers to shape consumer perceptions. Future research should investigate how influencer marketing, brand advocacy, and peer-to-peer recommendations contribute to brand equity. The viral nature of social media content and its ability to rapidly scale brand measuring presents a compelling case for examining these dynamics as integral elements of the SM CBBE model.

Additionally, the facilitation of two-way communication on platforms like Instagram underscores the importance of mutual value exchange. While this study recognizes engagement and co-creation, future studies should examine how elements such as a trust-building, user responsiveness, transparency, and authenticity influence users’ participation in brand equity creation. These insights can help marketers build more resilient, trustworthy brand communities.

Lastly, it is imperative to reassess the SM CBBE model in a post-pandemic context. The COVID-19 pandemic accelerated digital adoption and reshaped online behaviors in profound ways. As people return to hybrid modes of living, their reliance on social media may evolve, necessitating adjustments to the model to reflect new patterns of engagement, motivation, and value perception.

Regulatory changes must also be incorporated into future studies. As governments and regulatory bodies increasingly scrutinize digital platforms, the rules governing data, content, and marketing practices are becoming more stringent. These regulations could significantly influence how brands operate and build equity on social media, making it vital for future models to account for these external forces.

Despite substantial insight into the CBBE model for Instagram, there are several limitations in the research design and methodology.

First, this study uses a self-administered Web survey, which is convenient for the research sampling and easier for users of various Internet-based platforms. However, this method does not afford any control or support to the respondents in filling in the questionnaire. This non-manageable process may generate some inaccuracy in their answers, which can affect the research data's credibility. It is necessary to minimize and better eliminate possible misunderstandings of survey statements. So, the questionnaire was tested during the pilot study, when each item was clarified and fine-tuned to local syntaxis in the Russian language to be clear and understandable. Also, the research agency collected the research data, pursuing the people group close to the local gender and age structure of social media users who use Instagram through the preliminary short interview taking their agreement on participation in the survey. Besides all described procedures, this study gets the respondents' number above the maximum recommended ratio to item number. Therefore, this study addresses the limitation of the method of an online survey to increase the credibility of the findings in terms of sample representativeness and data accuracy.

Second, Kazakhstan is a limited geographical location on the global scale.

Third, this study tests the SM CBBE model for the only social media brand, Instagram. It is a limitation since practically people use several social media sites. Therefore, this study's findings cannot be confidently generalized to other social media brands considering the multiplatform usage of social media.

Forth, the study does not cover the regulatory changes in social media market as most modern scholar papers do. However, the regulatory changes can have possible influence on social media branding strategies.

As soon as the SM CBBE model is validated and refined for Instagram on several geographical markets, an average RBI can be defined and used for NPV calculation based on the financials of Instagram from Refinitiv or Bloomberg. Then, the result needs a comparison with the data from the leading brand valuators.

This study suggests directions for future research. Other confirmatory analyses can affirm and advance the conceptualized, developed, and tested SM CBBE model. The model constructs are suitable for further validation, as they demonstrate convergent validity and discriminant validity, which serve as indicators of trait validity. Additionally, the theoretical justification and empirical evidence presented in this study provide a foundation for future research to test the nomological validity of the proposed model.

In conclusion, first, further research can be conducted to test the composition of the CBBE scale in the social media market. Despite brand awareness being well recognized as one of the proven measures of CBBE for offline brands and being found critical for online and social media brands in sporadic studies, this study does not confirm it as the source of brand equity for Instagram. More investigations can help clarify the role of brand awareness in forming SM CBBE, supporting or rejecting this study's findings. The future results can contribute to the extension of the CBBE theory to the social media market.

Second, forthcoming surveys can examine the number of dimensions of the SM CBBE model. VCC antecedents deserve research interest. The existing literature demonstrates that consumer engagement, its creative aspect, and interaction serve as precedents for the online VCC. However, this study did not verify these factors for Instagram. Prospective evaluations can advance VCC theory with more solid empirical ground on social media. Additionally, as one of the critical outputs of CBBE in an offline context, customer value needs to be analyzed more thoroughly for social media.

Third, subsequent studies are necessary to test the SM CBBE scale and model for other social media platforms, such as Facebook, LinkedIn, Snapchat, and other popular social media platforms. Considering the multi-platform usage behavior of social media users, a study is needed to determine the most popular social media brands across various usage patterns. It can help generalize the SM CBBE model for the social media market.

Fourth, external validation of the SM CBBE model is needed. Considering cultural differences will help validate the model. Moreover, various social media are popular in different countries. So, ambiguous dimensions should be assessed across as many cultures as possible to develop and generalize the SM CBBE model.

Fifth, the SM CBBE model needs to be tested for behavioral and attitudinal patterns between various age groups. Analyzing the SM CBBE model among the youngest can help predict future social media trends in terms of motivation, usage patterns, brand perception, attitudes, values, and other key aspects.

Sixth, other possible VCC and CBBE antecedents for social media marketers should be conceptualized and investigated. This study believes in the potential of social media brands to mobilize brand advocates and influencers who can amplify the brand's message and engage with their followers. Influence and advocacy generated through social media channels can significantly impact a brand's reach, credibility, and customer loyalty. Social media are observed in their facilitation of the rapid spread and amplification of brand messages, content, and campaigns. Analyzing the effect of influence and advocacy on CBBE of social media brands, future studies recognize its potential for viral marketing, eWOM, and the ability of social media brands to create buzz and generate widespread awareness.

This study demonstrates that VCC and user engagement enable direct and real-time communication between brands and consumers via Instagram. Therefore, the SM CBBE model recognizes the significance of two-way communication and the mutual value exchange between the brand and its consumers. However, other factors, such as building trust and user responsiveness, may emphasize the significance of users’ participation in building brand equity and brand value for social media brands. Thus, other key antecedents of user VCC behavior can be revealed not only for Instagram but also for other brands.

Seventh, since the SM CBBE model was tested during the COVID-19 pandemic, the model should be re-analyzed in the context of the post-COVID period. The limitations imposed during the pandemic have facilitated and reinforced the use of online means, including social media, in people's lives and work. Changes in people's lifestyles can affect their behavior on social media and alter SM CBBE constructs to some extent.

Eights, the regulatory changes in the social media market should be covered in future studies due to their possible impact on social media branding strategies.

**Conclusions**

1. The evolving landscape of digital communications has dramatically reshaped the dynamics of brand value creation. Social media, as a transformative medium, plays a critical role in shifting traditional marketing paradigms toward consumer-centric and engaging approaches. This study explored the theoretical and methodological foundations of brand equity formation within social media marketing, highlighting the pivotal role of brand value co-creation. Through the integration of relevant theoretical frameworks, including social network theory, service-dominant logic, consumer values, and engagement concept, the thesis underscores that brand value is no longer solely created by firms but co-developed through the active participation of consumers and other stakeholders.

The emergence of prosumer, who simultaneously produces and consumes content, signifies a fundamental transition in how brands engage with their target audience. Social media platforms facilitate continuous exchanges, allowing users to generate electronic word-of-mouth, interact, engage with brand and each other, getting social value through emotional, informational, relational support. Brand social value emerges as a critical driver of consumer motivation and participation in co-creation processes. These activities not only enhance consumer experiences but also contribute significantly to the formation of brand equity in the social media space.

The investigated literature points to the complex, multi-layered nature of value co-creation on social media, where engagement, word-of-mouth, interaction, and social ties converge to shape brand meaning. Despite the growing scholarly interest, there remains a gap in systematically applying consumer-based brand equity theory to social media brand, signaling the need for further empirical validation and framework development. This study considers social media as fertile ground for reimagining brand equity as a co-constructed, socially embedded concept.

2. Traditional models by Aaker, Yoo, and Donthu provide a robust foundation for understanding the dimensions of consumer-based brand equity, including brand awareness, brand associations, brand quality, brand loyalty, which are formed due to marketing activities providing values for firms and consumers. However, these classical models require enhancement to capture the interactive, user-driven dynamics of social media platforms. In particular, the integration of value co-creation concept offers a modern lens through which to assess brand equity, acknowledging the active role of consumers in shaping brand experiences and perceptions.

A contemporary view is that social media enables continuous interaction between consumers and brands, turning users into co-creators who influence brand value through engagement, electronic word-of-mouth, interaction, and social value. This study proposes an augmented consumer-based brand equity model that incorporates value co-creation as a mediating factor, reflecting how marketing efforts on social media platforms can drive both brand strength and user value. The model also connects brand equity to key outcomes, including continuous usage intention and user-perceived value, which are especially pertinent to social media services that operate outside traditional purchase models.

By addressing current gaps in brand equity measurement for social media brands, this research provides a conceptual framework that aligns with digital consumer behavior. Future empirical validation of this model will enhance theoretical understanding and offer deeper practical insights for brand management in digital environments.

3. The study methodology is a structured approach for developing and validating a research social media brand equity model, integrating the explored theoretical and empirical elements. Idea generation is followed by a theoretical literature review and empirical observations, leading to substantive justification. From there, theoretical constructs and measures of the model are defined, forming the basis for methodology and analysis. The validation process includes assessing substantive and content validity, ensuring the model’s relevance and measurement accuracy. Additional steps evaluate unidimensionality, reliability, convergent and discriminant validity, and nomological validity. Analysis methods incorporate exploratory factor analysis, confirmatory factor analysis, common method variance check, and structural equation modelling analysis. Overall, it is a rigorous approach that combines theory and data to ensure construct validity and robust hypotheses testing.

The dynamics of brand valuation and its influence on business strategy, emphasizing the role of financial metrics, particularly net present value, in assessing brand worth. The findings demonstrate that applying quantitative valuation models enhances the objectivity and reliability of brand-related decisions, particularly in emerging markets such as Kazakhstan. By integrating financial indicators and strategic considerations, businesses can make informed and sustainable choices in managing their brand assets.

4. Instagram is the most influential social media platform in Kazakhstan, confirmed by its high advertising reach. By integrating a rigorous methodological approach including ranging from tailored use of a six-point Likert scale to localizing survey terminology, the research ensures cultural sensitivity and accuracy. The questionnaire design effectively addresses common method bias and captures nuanced user behavior, attitudes, and co-creation of brand value. With a robust sample and detailed demographic stratification, the findings offer valuable insights for both academic inquiry and marketing strategies.

The statistical analysis confirms the robustness and reliability of the data used to examine the developed social media consumer-based brand equity framework. The sample size exceeds the recommended threshold, and key assumptions for linear regression, including multicollinearity, homoscedasticity, and normality, are appropriately tested and satisfied. Exploratory factor analysis validates the structure of the constructs, revealing strong factor loadings and adequate variance explained. Reliability analysis demonstrates high internal consistency across all measured variables. The findings provide a sound methodological foundation for further interpretation and contribute to a deeper understanding of Instagram users’ behavior in forming of brand equity and its outputs in the modern digital environment.

5. Two-stages structural equation modelling approach provides a robust empirical validation of the research model, drawing on data from 687 Instagram users in Kazakhstan. Through meticulous testing the study affirms the reliability of the first- and second-order constructs, meeting all statistical thresholds. The analysis reveals that social media-specific factors, including user engagement, electronic word-of-mouth, and brand’s social value, significantly influence value co-creation. In turn, it positively impacts customer-based brand equity, which leads to increased usage intention, confirming the model’s pathway from experience to brand longevity.

Common method variance is within acceptable limits, with only user value excluded due to slight inflation. Discriminant and convergent validities are established for all constructs, and model fir indices, including Tenenhaus good-of-fit and full collinearity variance inflation factor, indicate excellent overall fit. Mediation analysis further supports the indirect effects of electronic word-of-mouth, engagement, and social value on usage intention via value co-creation and brand equity, underlining importance of user participation in brand-building processes on social media. The findings support prior theoretical frameworks while offering new insights into the mechanism through which social media marketing translates into tangible brand equity and long-term user loyalty.

6. The brand contribution of Instagram in the Kazakhstan market is determined to be 63.49% through a structured evaluation based on seven key demand analysis factors. However, due to Kazakhstan’s significantly higher Instagram penetration rate compared to the global average, this figure is adjusted to reflect a more accurate global context. By scaling the contribution down by a factor of 3.69, the global brand contribution is defined at 17.21%.

Instagram’s historical financial data from 2017 to 2021 by Refinitiv reveals strong growth across key metrics. These trends provide a solid foundation for forecasting future financial performance from 2022 to 2025. Instagram’s weighted average cost of capital for 2021 is calculated at 6.81%, based on Refinitiv data. It reflects its low debt cost, high equity reliance, and favorable tax rate. This level of the rate serves as the benchmark discount rate in Instagram’s brand valuation through net present value estimation.

The resulted Instagram’s brand value of $33,462 million aligns closely with external estimates, reinforcing the reliability of the social media brand equity model and highlighting the value of integrating user behavioral metrics into financial assessment. The conducted analysis demonstrates the practical applicability and significance of the net present value method in the context of brand valuation, using Instagram as an example. The used approach enables the quantification of Interbrand’s economic benefit by forecasting future income flows generated by the brand and discounting them to present value. This technique offers an objective financial metric that reflects both the time value of money and the risk profile associated with future earnings.

7. Social media brand equity is defined by this study as a specific type of online brand equity, which is co-created with users due to distinct social media features that provide favorable value co-creation antecedents such as electronic word-of-mouth, user brand engagement, and social brand value. Also, the findings of this research offer several important marketing applications for social media brands, particularly Instagram, and other brands, which use social media marketing. The proposed brand equity model highlights how marketers should shift their focus from traditional brand awareness to fostering active consumer participation in value creation. Marketers are advised to prioritize deeper consumer interrelationships, such as encouraging content generation, enabling users to share ideas or feedback.

The study identifies value co-creation as a critical element in building brand equity on social media. Marketers can leverage this by creating platforms and campaigns that invite users to contribute to service development, share experiences, and help others. This not only strengthens brand loyalty and perceived quality but also transforms consumers into active brand partners. Also, practitioners are recommended to cultivate online communities highlighting the social benefits of brand participation. These efforts will amplify consumer voices, enhance emotional connection, and ultimately reinforce brand equity. Continuous usage intention, driven by brand equity, emerges as a key marketing goal. By applying the social media brand equity model, brands can sustain long-term relationships, optimize online experience, and manage customer value in the evolving social media environment.

8. Kazakhstani companies can leverage Instagram marketing strategies grounded in the social media brand equity model to create and maintain stronger brands and foster long-term business growth. Through the lens of value co-creation theory and supported by empirical findings, the study highlights the importance of brand equity and usage intention as the critical indicators of sustainable success in the digital era.

By positioning Instagram not just as a promotional channel but as a co-creational platform, businesses are encouraged to view their audiences as collaborators, not just consumers. This collaborative approach allows for innovation, stronger relations, and increased brand value. The findings further support the applicability of the social media brand equity model as a practical tool for brand valuation and strategic decision-making in Kazakhstan’s evolving digital economy. This research provides a strategic framework for integrating classical brand equity theory with modern social media marketing strategies. It offers actionable insights for local companies to remain competitive by aligning their marketing strategies with the socio-cultural and technological shifts shaping consumer behavior today. These insights also contribute to the broader academic and strategic thinking of brand building in the digital communication landscape.

Despite the methodological and contextual limitations, including the use of a self-administered online survey, single-platform focus, and geographical specificity, the study succeeds in offering a grounded framework for future marketing research and practice. Importantly, this research sets a foundation for future investigations aimed at refining the social media brand equity model across different platforms, age groups, and cultural contexts. It also opens avenues to explore new antecedents of value co-creation and brand equity, such as trust, advocacy, and regulatory influences. The recommendations stress the importance of adapting to the evolving digital landscape, where consumers are not just recipients of brand messages but active co-creators of value.

Given the growing significance of digital and social media marketing, continued exploration of the social media brand equity model will help align theoretical insights with practical brand-building strategies. Future studies can enhance the model’s global generalizability, validate it in post-pandemic and regulatory contexts, and deepen our understanding of how social media behavior shapes brand perceptions and usage intention. Ultimately, the insights from this research can guide marketers in designing more adaptive, culturally sensitive, and value-driven strategies to strengthen consumer-based brand equity in an increasingly interconnected digital world.

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**APPENDIX** **A**

**Survey questionnaire with coding**

1. Ваш пол GND

|  |  |
| --- | --- |
| Женский | 1 |
| Мужской | 2 |

1. Ваш возраст AGE

|  |  |
| --- | --- |
| 18-24 | 1 |
| 25-34 | 2 |
| 35-54 | 3 |
| 55-64 | 4 |
| >65 | 5 |

1. Город Вашего проживания CTY \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Ваше образование EDU

|  |  |
| --- | --- |
| Средняя школа | 1 |
| Специализированный колледж | 2 |
| Бакалавр | 3 |
| Магистр | 4 |
| Доктор/Ph.D./Профессор | 5 |

1. Сколько часов в день Вы пользуетесь Инстаграм? USHR

|  |  |
| --- | --- |
| Менее часа в день | 1 |
| 1-2 часа в день | 2 |
| 3-4 часа в день | 3 |
| 5-6 часов в день | 4 |
| Более 6 часов в день | 5 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| ***6. Осведомленность об Инстаграм BAW*** |  |  |  |  |  |  |
| BAW 1 Я слышал/а об Инстаграм | 1 | 2 | 3 | 4 | 5 | 6 |
| BAW 2 Я хорошо знаком/а с Инстаграм | 1 | 2 | 3 | 4 | 5 | 6 |
| BAW 3 Я могу узнать лого Инстаграм среди других брендов | 1 | 2 | 3 | 4 | 5 | 6 |
| ***7. Ассоциации (представления), связанные с Инстаграм BAS*** |  |  |  |  |  |  |
| BAS 1 Инстаграм вызывает у меня особенные ассоциации | 1 | 2 | 3 | 4 | 5 | 6 |
| BAS 2 Инстаграм вызывает у меня благоприятные ассоциации | 1 | 2 | 3 | 4 | 5 | 6 |
| BAS 3 У меня есть ясное представление об Инстаграм | 1 | 2 | 3 | 4 | 5 | 6 |
| ***8. Качество услуг Инстаграм BQL*** |  |  |  |  |  |  |
| BQL 1 Инстаграм предоставляет качественные услуги | 1 | 2 | 3 | 4 | 5 | 6 |
| BQL 2 По сравнению с другими социальными медиа, Инстаграм отличается очень высоким качеством услуг | 1 | 2 | 3 | 4 | 5 | 6 |
| BQL 3 Инстаграм имеет отличные функции | 1 | 2 | 3 | 4 | 5 | 6 |
| ***9. Лояльность к Инстаграм BLY*** |  |  |  |  |  |  |
| BLY 1 Я считаю себя лояльным пользователем Инстаграм | 1 | 2 | 3 | 4 | 5 | 6 |
| BLY 2 Инстаграм является выбором №1 для меня среди социальных медиа | 1 | 2 | 3 | 4 | 5 | 6 |
| BLY 3 Я буду лояльным пользователем Инстаграм в будущем | 1 | 2 | 3 | 4 | 5 | 6 |
| ***10. Вовлеченность в Инстаграм ENG*** |  |  |  |  |  |  |
| **Consumption** |  |  |  |  |  |  |
| ENCS 1 Я читаю посты в Инстаграм | 1 | 2 | 3 | 4 | 5 | 6 |
| ENCS 2 Я смотрю фото/картинки/видео в Инстаграм | 1 | 2 | 3 | 4 | 5 | 6 |
| ENCS 3 Я слежу за брендами в Инстаграм | 1 | 2 | 3 | 4 | 5 | 6 |
| **Contribution** |  |  |  |  |  |  |
| ENCT 1 Я ставлю свою оценку “Нравится” под постами в Инстаграм | 1 | 2 | 3 | 4 | 5 | 6 |
| ENCT 2 Я комментирую посты в Инстаграм | 1 | 2 | 3 | 4 | 5 | 6 |
| ENCT 3 Я делюсь постами в Инстаграм (“Share”) | 1 | 2 | 3 | 4 | 5 | 6 |
| ENCT 4 Я ставлю свою оценку “Нравится” под фото/картинками/видео в Инстаграм | 1 | 2 | 3 | 4 | 5 | 6 |
| ENCT 5 Я комментирую фото/картинки/видео в Инстаграм | 1 | 2 | 3 | 4 | 5 | 6 |
| ENCT 6 Я делюсь фото/картинками/видео в Инстаграм (“Share”) | 1 | 2 | 3 | 4 | 5 | 6 |
| **Creation** |  |  |  |  |  |  |
| ENCR 1 Я пишу свои посты в Инстаграм | 1 | 2 | 3 | 4 | 5 | 6 |
| ENCR 2 Я размещаю свои фото/картинки в Инстаграм | 1 | 2 | 3 | 4 | 5 | 6 |
| ENCR 3 Я размещаю свои видео в Инстаграм | 1 | 2 | 3 | 4 | 5 | 6 |
| ENCR 4 Я пишу свои обзоры в Инстаграм | 1 | 2 | 3 | 4 | 5 | 6 |
| ***11. Сколько раз в день вы используете Инстаграм? (отметьте галочкой или крестиком) USFR*** |  |  |  |  |  |  |
| 1-5 раз в день | 1 |  |  |  |  |  |
| 6-10 раз в день | 2 |  |  |  |  |  |
| Более 10 раз в день | 3 |  |  |  |  |  |
| ***12. Сотрудничество с Инстаграм VCC*** |  |  |  |  |  |  |
| VCC 1 Я рекомендую друзьям и родственникам пользоваться Инстаграм | 1 | 2 | 3 | 4 | 5 | 6 |
| VCC 2 Я делюсь своим успешным опытом пользования Инстаграм | 1 | 2 | 3 | 4 | 5 | 6 |
| VCC 3 Я помогаю тем, кто испытывает проблемы при пользовании Инстаграм | 1 | 2 | 3 | 4 | 5 | 6 |
| VCC 4 В случае возникновения у меня проблем при пользовании Инстаграм, я сообщаю об этом администрации приложения | 1 | 2 | 3 | 4 | 5 | 6 |
| VCC 5 Когда у меня появляется полезная идея по улучшению услуг Инстаграм, я сообщаю об этом администрации приложения | 1 | 2 | 3 | 4 | 5 | 6 |
| VCC 6 Администрация Инстаграм поощряет пользователей участвовать в создании новых услуг | 1 | 2 | 3 | 4 | 5 | 6 |
| VCC 7 Я активно участвую в разработке новых услуг Инстаграм | 1 | 2 | 3 | 4 | 5 | 6 |
| ***13. «Сарафанное радио» в Инстаграм WOM*** |  |  |  |  |  |  |
| WOM 1 Чтобы **выбрать** подходящие для меня товары, услуги или бренды, я часто использую онлайн-обзоры других пользователей Инстаграм | 1 | 2 | 3 | 4 | 5 | 6 |
| WOM 2 Чтобы **убедиться**, что я покупаю подходящие для меня товары, услуги или бренды, я часто читаю онлайн-обзоры других пользователей Инстаграм | 1 | 2 | 3 | 4 | 5 | 6 |
| WOM 3 Я **делюсь** своим опытом использования товаров, услуг и брендов по запросу других пользователей в Инстаграм | 1 | 2 | 3 | 4 | 5 | 6 |
| WOM 4 Я **продолжу делиться** своим опытом использования товаров, услуг и брендов с другими пользователями в Инстаграм | 1 | 2 | 3 | 4 | 5 | 6 |
| WOM 5 Информация о товарах, услугах и брендах, которую я размещаю в Инстаграм, обычно влияет на мнение других пользователей | 1 | 2 | 3 | 4 | 5 | 6 |
| WOM 6 Я стараюсь постоянно улучшать качество своих обзоров об опыте использования товаров, услуг и брендов в Инстаграм | 1 | 2 | 3 | 4 | 5 | 6 |
| ***14. Взаимодействие в Инстаграм INT*** |  |  |  |  |  |  |
| INT 1 Инстаграм позволяет обмениваться информацией с другими | 1 | 2 | 3 | 4 | 5 | 6 |
| INT 2 Высказать свое мнение через Инстаграм легко | 1 | 2 | 3 | 4 | 5 | 6 |
| INT 3 Беседа или обмен мнениями с другими возможны через Инстаграм | 1 | 2 | 3 | 4 | 5 | 6 |
| ***15. Какова средняя продолжительность вашего одного визита Инстаграм? USTM*** |  |  |  |  |  |  |
| Менее 5 минут за визит | 1 |  |  |  |  |  |
| Около 15 минут за визит | 2 |  |  |  |  |  |
| Около 30 минут за визит | 3 |  |  |  |  |  |
| Около часа за визит | 4 |  |  |  |  |  |
| Более часа за визит | 5 |  |  |  |  |  |
| ***16. Ценность бренда Инстаграм SMBE*** |  |  |  |  |  |  |
| SMBE 1 Я доверяю Инстаграм | 1 | 2 | 3 | 4 | 5 | 6 |
| SMBE 2 Я считаю, что Инстаграм - хороший способ гарантировать оказание качественных услуг | 1 | 2 | 3 | 4 | 5 | 6 |
| SMBE 3 Я считаю, что Инстаграм повышает ценность социальных медиа | 1 | 2 | 3 | 4 | 5 | 6 |
| SMBE 4 Я предпочитаю пользоваться Инстаграм вместо других социальных медиа | 1 | 2 | 3 | 4 | 5 | 6 |
| ***17. Использование Инстаграм в будущем USIN*** |  |  |  |  |  |  |
| USIN 1 Я думаю, что все больше и больше людей будут пользоваться Инстаграм в будущем | 1 | 2 | 3 | 4 | 5 | 6 |
| USIN 2 Я уверен/а, что буду пользоваться Инстаграм в будущем | 1 | 2 | 3 | 4 | 5 | 6 |
| USIN 3 Я буду рекомендовать своим друзьям и знакомым пользоваться Инстаграм и вносить свой вклад в развитие этого приложения | 1 | 2 | 3 | 4 | 5 | 6 |
| ***18. Ценность услуг Инстаграм для потребителя CV*** |  |  |  |  |  |  |
| CV 1 Мне выгодно пользоваться услугами Инстаграм | 1 | 2 | 3 | 4 | 5 | 6 |
| CV 2 Инстаграм предоставляет ценные услуги своим пользователям | 1 | 2 | 3 | 4 | 5 | 6 |
| CV 3 Я полагаю, что услуги Инстаграм являются более ценными по сравнению с другими социальными медиа | 1 | 2 | 3 | 4 | 5 | 6 |
| ***19. Социальная ценность Инстаграм SV*** |  |  |  |  |  |  |
| SV 1 Инстаграм помогает мне чувствовать себя частью определенного сообщества или общества в целом | 1 | 2 | 3 | 4 | 5 | 6 |
| SV 2 Инстаграм улучшает восприятие моей личности обществом | 1 | 2 | 3 | 4 | 5 | 6 |
| SV 3 Инстаграм помогает мне произвести хорошее впечатление на других | 1 | 2 | 3 | 4 | 5 | 6 |
| SV 4 Инстаграм помогает мне получить поддержку общества | 1 | 2 | 3 | 4 | 5 | 6 |

**Appendix B**

**Descriptive statistics of the collected data**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Factor and item | Mean | Std. deviation | Skew-ness | Kurtosis |
| ***Brand Awareness/Associations*** |  |  |  |  |
| BAW1 I heard about Instagram. | 5.35 | 1.177 | -2.246 | 4.762 |
| BAW2 I am very familiar with Instagram. | 5.01 | 1.295 | -1.543 | 1.922 |
| BAW3 I can recognize the Instagram logo among other brands. | 5.24 | 1.326 | -1.900 | 2.733 |
| BAS1 Instagram gives me special associations. | 4.01 | 1.453 | -.417 | -.622 |
| BAS2 Instagram gives me favorable associations. | 4.21 | 1.329 | -.562 | -.202 |
| BAS3 I have a clear understanding of Instagram. | 4.72 | 1.316 | -.978 | .238 |
| ***Brand Perceived Quality*** |  |  |  |  |
| BQL1 Instagram provides quality services. | 4.39 | 1.182 | -.596 | .144 |
| BQL2 Compared to other social media, Instagram has a very high quality of services. | 4.40 | 1.253 | -.691 | .204 |
| BQL3 Instagram has great features. | 4.66 | 1.136 | -.794 | .602 |
| ***Brand Loyalty*** |  |  |  |  |
| BLY1 I consider myself a loyal Instagram user. | 4.36 | 1.387 | -.723 | -.121 |
| BLY2 Instagram is my first choice for social media. | 4.21 | 1.555 | -.583 | -.651 |
| BLY3 I will be a loyal Instagram user in the future. | 4.31 | 1.414 | -.660 | -.278 |
| ***Engagement Consumption*** |  |  |  |  |
| ENCS1 I read posts on Instagram. | 4.50 | 1.360 | -.857 | .170 |
| ENCS2 I watch photos/graphics/videos on Instagram. | 4.99 | 1.203 | -1.466 | 2.072 |
| ENCS3 I follow brands on Instagram. | 4.04 | 1.565 | -.410 | -.831 |
| ***Engagement Contribution*** |  |  |  |  |
| ENCT1 I rate my “Like” under the posts on Instagram. | 4.47 | 1.496 | -.932 | .038 |
| ENCT2 I comment on Instagram posts. | 3.52 | 1.709 | -.104 | -1.206 |
| ENCT3 I share posts on Instagram (“Share”). | 3.78 | 1.758 | -.257 | -1.233 |
| ENCT4 I put my rating “Like” under the photos/graphics/videos on Instagram. | 4.38 | 1.537 | -.841 | -.199 |
| INCT5 I comment on photos/graphics/videos on Instagram. | 3.75 | 1.698 | -.280 | -1.125 |
| INCT6 I share photos/ graphics/videos on Instagram (“Share”). | 4.02 | 1.649 | -.489 | -.912 |
| ***Engagement Creation*** |  |  |  |  |
| ENCR1 I write my posts on Instagram. | 3.53 | 1.800 | -.088 | -1.344 |
| ENCR2 I post my photos/graphics on Instagram. | 4.23 | 1.661 | -.648 | -.775 |
| ENCR3 I post my videos on Instagram. | 3.90 | 1.797 | -.423 | -1.186 |
| ENCR4 I write my reviews on Instagram. | 3.00 | 1.813 | .365 | -1.260 |
| ***Value Co-creation*** |  |  |  |  |
| VCC1 I recommend friends and family to use Instagram. | 3.76 | 1.599 | -.329 | -.944 |
| VCC2 I share my successful Instagram experience. | 3.39 | 1.651 | .032 | -1.166 |
| VCC3 I help those who have problems using Instagram. | 3.57 | 1.720 | -.168 | -1.256 |
| VCC4 If I have any problems using Instagram, I inform the administration of the application about it. | 3.06 | 1.751 | .327 | -1.239 |
| VCC5 When I have a useful idea to improve Instagram services, I inform the administration of the application about it. | 2.54 | 1.612 | .725 | -.718 |
| VCC6 The Instagram administration encourages users to participate in the creation of new services. | 2.99 | 1.605 | .252 | -1.059 |
| VCC7 I am actively involved in the development of new Instagram services. | 2.27 | 1.507 | .961 | -.225 |
| ***eWOM*** |  |  |  |  |
| WOM1 I often use the online reviews of other Instagram users to select products, services or brands that are right for me. | 3.64 | 1.631 | -.223 | -1.039 |
| WOM2 To make sure I'm buying the right products, services, or brands for me, I often read online reviews from other Instagram users. | 3.62 | 1.649 | -.148 | -1.044 |
| WOM3 I share my experiences with products, services, and brands on Instagram at the request of other members. | 2.99 | 1.647 | .251 | -1.154 |
| WOM4 I will continue to share my experiences on products, services, and brands with other fellow members on Instagram. | 3.05 | 1.659 | .254 | -1.133 |
| WOM5 The information that I spread on Instagram regarding the products, services and brands influences the opinions of other members in most cases. | 3.09 | 1.643 | .146 | -1.191 |
| WOM6 I try to constantly improve the quality of my reviews of the experience of using products, services, and brands on Instagram. | 2.80 | 1.619 | .444 | -1.013 |
| ***Interaction*** |  |  |  |  |
| INT1 Instagram allows sharing information with others. | 4.72 | 1.289 | -.917 | .247 |
| INT2 Expressing own opinion through Instagram is easy. | 4.64 | 1.331 | -.895 | .197 |
| INT3 Conversation or exchange of own opinion with others is possible through Instagram. | 4.62 | 1.362 | -.937 | .246 |
| ***Social Value*** |  |  |  |  |
| SOC1 Instagram helps me feel part of a particular community or society as a whole. | 3.63 | 1.582 | -.225 | -.990 |
| SOC2 Instagram improves public perception of my personality. | 3.60 | 1.618 | -.184 | -1.066 |
| SOC3 Instagram helps me make a good impression on others. | 3.64 | 1.655 | -.226 | -1.139 |
| SOC4 Instagram helps me get community support. | 3.49 | 1.651 | -.108 | -1.140 |
| ***Overall Brand Equity*** |  |  |  |  |
| OBE1 I trust Instagram. | 3.79 | 1.383 | -.304 | -.483 |
| OBE2 I think Instagram is a good way to guarantee quality service. | 4.03 | 1.343 | -.415 | -.327 |
| OBE3 I believe that Instagram increases the value of social media. | 4.25 | 1.301 | -.561 | -.126 |
| OBE4 I prefer using Instagram over other social media. | 4.06 | 1.505 | -.444 | -.706 |
| ***Usage Intention*** |  |  |  |  |
| UI1. I think that more and more people will use Instagram in the future. | 4.59 | 1.236 | -.699 | .047 |
| UI2. I am sure that I will use Instagram in the future. | 4.44 | 1.354 | -.782 | .092 |
| UI3. I will recommend my friends and acquaintances to use Instagram and contribute to its development. | 3.85 | 1.579 | -.288 | -.921 |
| **User Value** |  |  |  |  |
| UV1. It is beneficial for me to use the services of Instagram. | 4.15 | 1.422 | -.537 | -.343 |
| UV2. Instagram provides valuable services to its users. | 4.23 | 1.334 | -.631 | .006 |
| UV3. I believe that Instagram services are more valuable than other social media. | 4.05 | 1.424 | -.434 | -.502 |
| Note – compiled by the author | | | | | |

**Appendix C**

**Results of the CFA for the multi-dimensions of the SM CBBE model, the first-order constructs**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| *Factors and items* | Convergent Validity | Reliability | | |
|  | WarpPLS Std. Loadings (t-value) | Cα | CR | AVE |
| ***Brand Awareness/Associations*** | 0.759 0.862 0.677 | | | |
| BAS1 Instagram gives me special associations. | 0.835\*\*\*(23.867) | | | |
| BAS2 Instagram gives me favorable associations. | 0.872\*\*\*(25.027) | | | |
| BAS3 I have a clear understanding of Instagram. | 0.757\*\*\*(21.451) | | | |
| ***Brand Perceived Quality*** | 0.840 0.904 0.758 | | | |
| BQL1 Instagram provides quality services. | 0.847\*\*\* (24.241) | | | |
| BQL2 Compared to other social media, Instagram has a very high quality of services. | 0.892\*\*\* (25.660) | | | |
| BQL3 Instagram has great features. | 0.871\*\*\* (24.994) | | | |
| ***Brand Loyalty***  0.830 0.898 0.746 | | | | |
| BLY1 I consider myself a loyal Instagram user. | 0.857\*\*\* (24.557) | | | |
| BLY2 Instagram is my first choice for social media. | 0.843\*\*\* (24.128) | | | |
| BLY3 I will be a loyal Instagram user in the future. | 0.891\*\*\* (25.600) | | | |
| ***Engagement*** 0.866 0.909 0.715 | | | | |
| ENCT1 I rate my “Like” under the posts on Instagram. | 0.866\*\*\* (24.821) | | | |
| ENCT4 I put my rating “Like” under the photos/graphics/videos on Instagram. | 0.899\*\*\*(25.868) | | | |
| INCT5 I comment on photos/graphics/videos on Instagram. | 0.837\*\*\*(23.963) | | | |
| ENCS3 I follow brands on Instagram. | 0.775\*\*\*(22.021) | | | |
| ***Value Co-creation*** 0.835 0.901 0.753 | | | | |
| VCC4 If I have any problems using Instagram, I inform the administration of the application about it. | 0.841\*\*\* (24.044) | | | |
| VCC5 When I have a useful idea to improve Instagram services, I inform the administration of the application about it. | 0.906\*\*\* (26.093) | | | |
| VCC6 The Instagram administration encourages users to participate in the creation of new services. | 0.855\*\*\* (24.486) | | | |
| ***eWOM*** | 0.931 0.951 0.828 | | | |
| WOM3 I share my experiences with products, services, and brands on Instagram at the request of other members. | 0.914\*\*\*(26.334) | | | |
| WOM4 I will continue to share my experiences on products, services, and brands with other fellow members on Instagram. | 0.925\*\*\*(26.676) | | | |
| WOM5 The information that I spread on Instagram regarding the products, services and brands influences the opinions of other members in most cases. | 0.901\*\*\*(25.923) | | | |
| WOM6 I try to constantly improve the quality of my reviews of the experience of using products, services, and brands on Instagram. | 0.900\*\*\*(25.900) | | | |
| ***Social Value*** | 0.942 0.958 0.851 | | | |
| SOC1 Instagram helps me feel part of a particular community or society as a whole. | 0.893\*\*\*(25.688) | | | |
| SOC2 Instagram improves public perception of my personality. | 0.935\*\*\*(27.000) | | | |
| SOC3 Instagram helps me make a good impression on others. | 0.927\*\*\*(26.753) | | | |
| SOC4 Instagram helps me get community support. | 0.934\*\*\*(26.974) | | | |
| ***Interaction*** | 0.854 0.911 0.774 | | | |
| INT1 Instagram allows sharing information with others. | 0.854\*\*\*(24.455) | | | |
| INT2 Expressing own opinion through Instagram is easy. | 0.888\*\*\*(25.522) | | | |
| INT3 Conversation or exchange of own opinion with others is possible through Instagram. | 0.897\*\*\*(25.814) | | | |
| ***User Value*** | 0.892 0.933 0.822 | | | |
| UV1. It is beneficial for me to use the services of Instagram. | 0.898\*\*\*(25.841) | | | |
| UV2. Instagram provides valuable services to its users. | 0.920\*\*\*(26.525) | | | |
| UV3. I believe that Instagram services are more valuable than other social media. | 0.902\*\*\*(25.956) | | | |
| ***Usage Intention*** | 0.830 0.898 0.747 | | | |
| UI1. I think that more and more people will use Instagram in the future. | 0.831\*\*\*(23.726) | | | |
| UI2. I am sure that I will use Instagram in the future. | 0.897\*\*\*(25.795) | | | |
| UI3. I will recommend my friends and acquaintances to use Instagram and contribute to its development. | 0.864\*\*\*(24.779) | | | |
| Notes – compiled by the author. Cα = Cronbach’s α, CO = composite α, AVE = average variance extracted; \*\*\* for p<0.001; \* t =1.960 is significant at 0.05; and \*\* t = 2.576 significant at 0.01 (two-tailed test). | | | | |

**APPENDIX D**

**Population in the world and Kazakhstan, 2020**

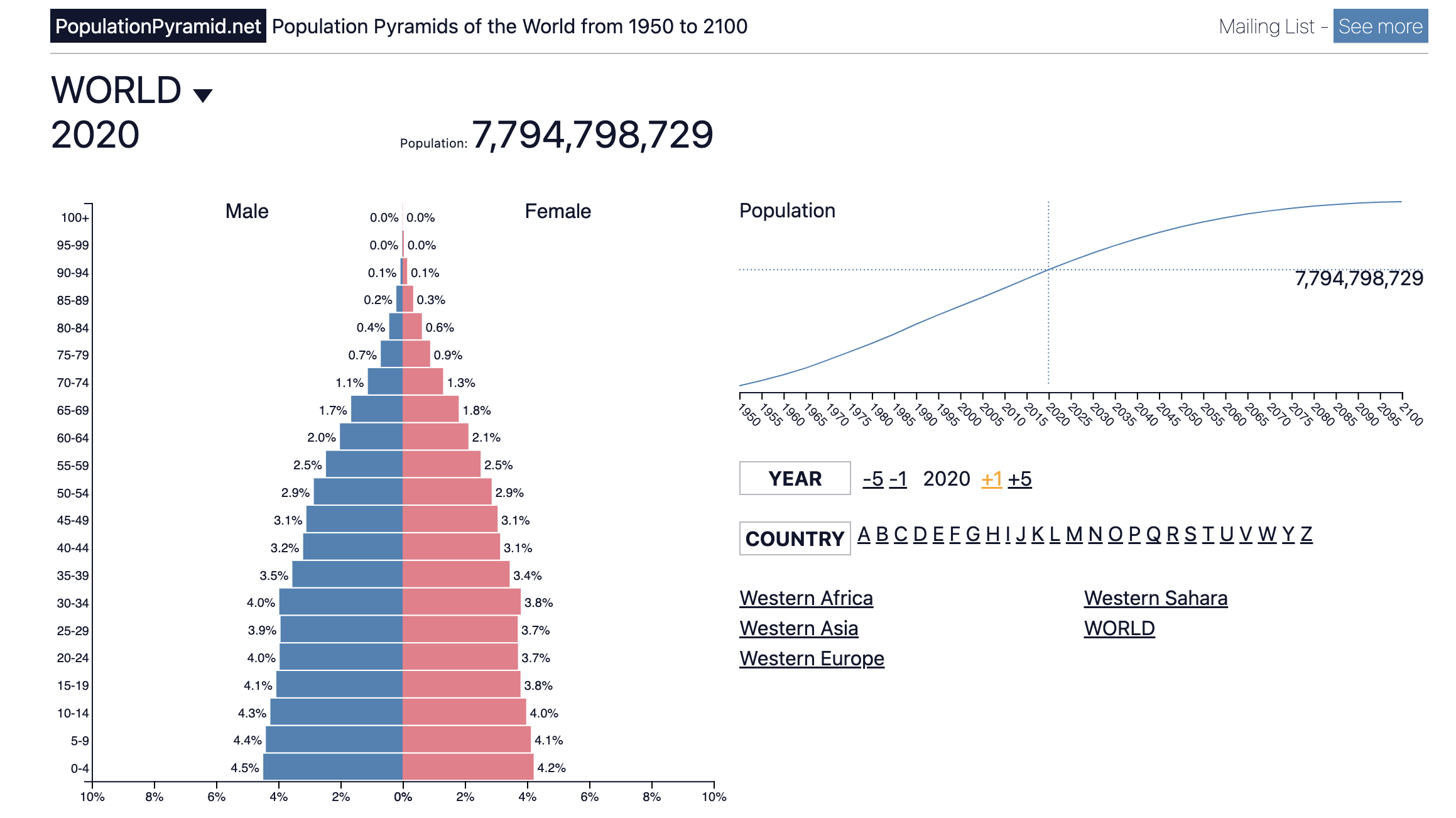


Figure 1 – Population in the world by populationpyramid.net, 2020

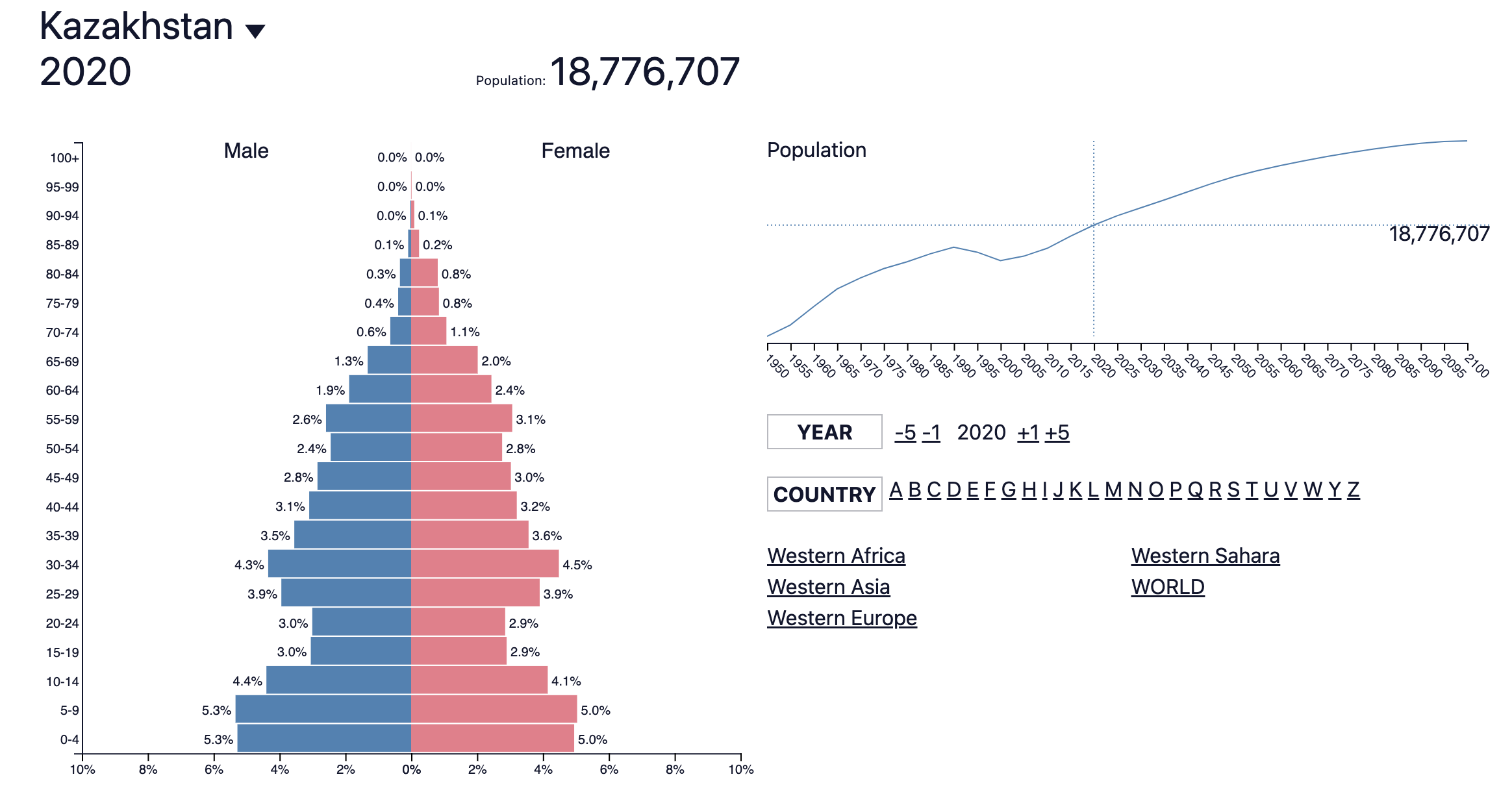


Figure 2 – Population in Kazakhstan by populationpyramid.net, 2020

**APPENDIX E**

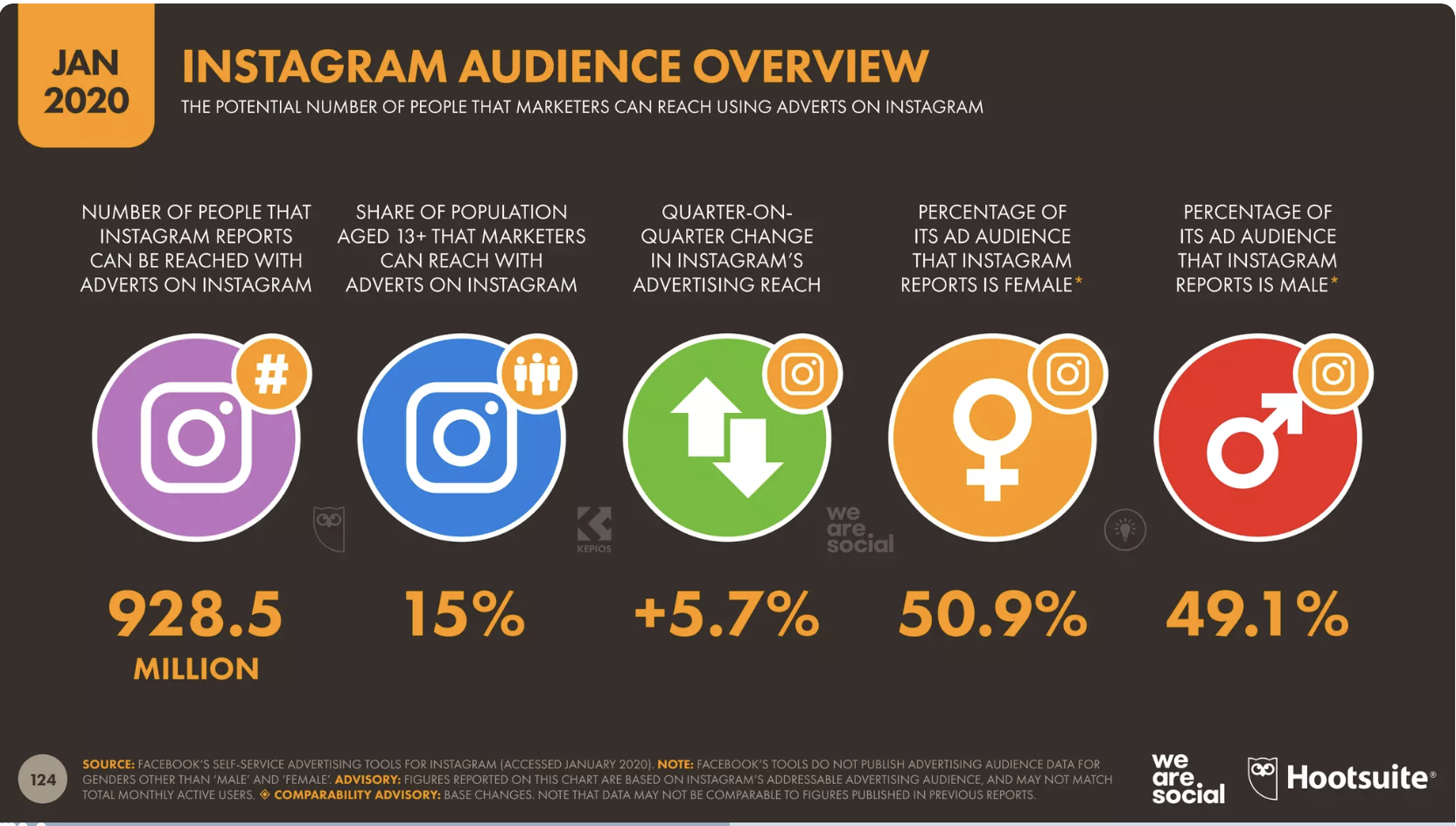
**Instagram advertising reach in the world and Kazakhstan by Datareportal, 2020**

Figure 3 – Instagram advertising reach in the world, 2020

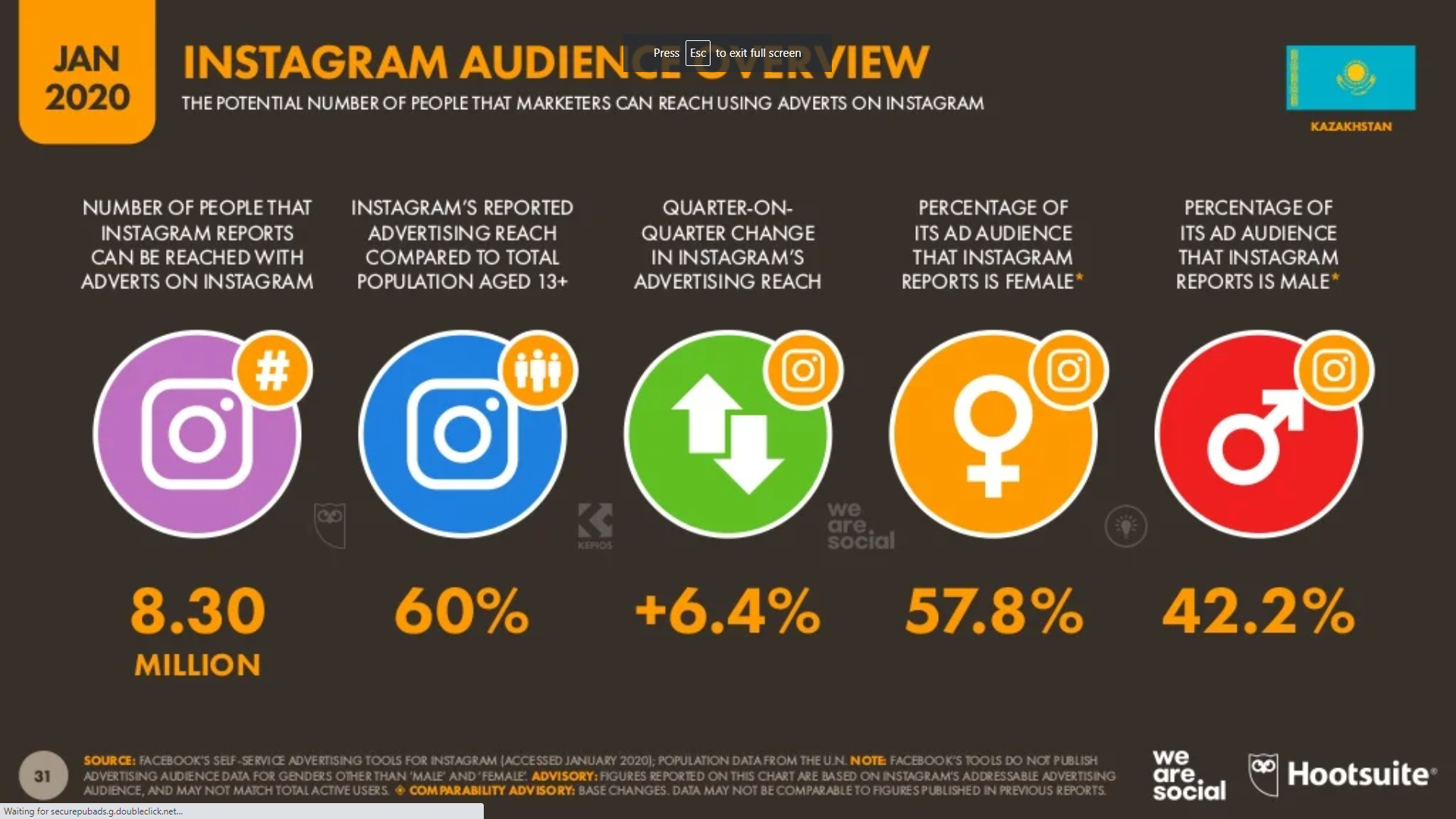
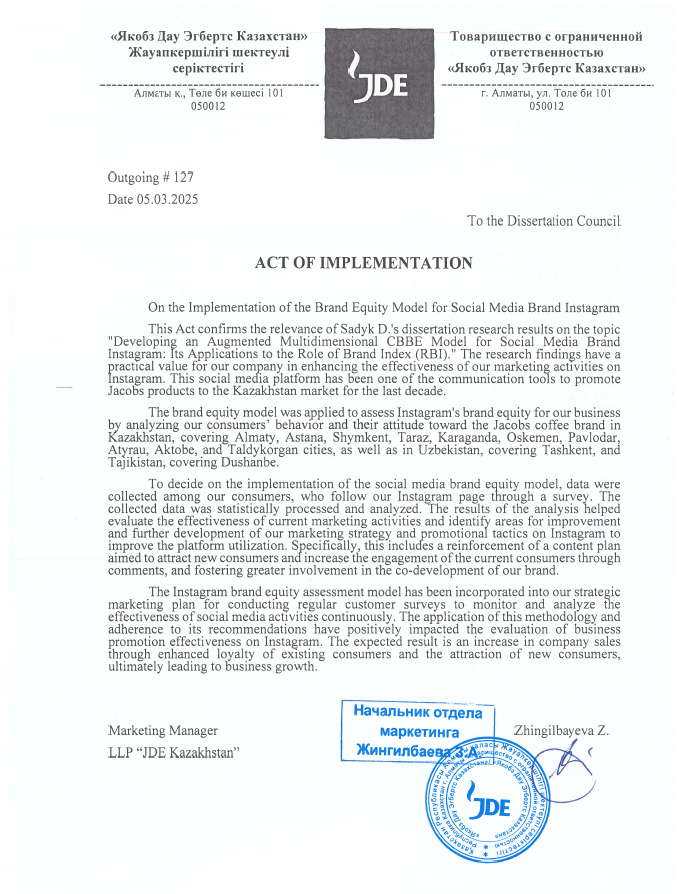


Figure 4 – Instagram advertising reach in Kazakhstan, 2020

**APPENDIX F**

**Acts of implementations**

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