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ECONOMIC INSTABILITY AND ITS EFFECT ON BRAND PREFERENCES: BIG DATA EXAMINATION OF SELF-IMAGE AND ONLINE SHOPPING CONDUCT

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Abstract. *Purpose* – This study will examine how consumer brand preference is impacted by economic instability in the market of e-commerce in Indonesia, the relationship between self-image and purchasing patterns under three different periods; pre-crisis (2017–2019), crisis (2020–2022), and post-crisis recovery (2022–2023).

Research methodology – Transactional variables (Total payment volume, average order value, and purchase frequency) were analyzed using the mixed-methods approach in three brand categories (global, local, unbranded) and two product subcategories (care, decorated). ANOVA and T-tests were used as a quantitative analysis of one of the largest Indonesian e-commerce platforms. The methods of qualitative analysis included semi-structured interviews with 20 industry experts who were chosen while engaging in purposive sampling and analyzed based on thematic analysis, in order to understand the emergent themes and patterns.

Findings – The findings indicate that the preference of global brands declined throughout the period of crisis (Z-sales declined 1.84 to –0.002) whereas local brands rejuvenated through community-oriented messages. The balanced status and sense of practicality seen in the post-crisis consumption saw global brands partially recovering (Z-sales: 1.43) and status-related self-image shifted into the health-conscious and community-supportive groups.

Research limitations – The study has a limitation of studying the e-commerce market and beauty product of Indonesia and the generalization to other regions or products. Besides, the qualitative element is based on only 14 internal experts working in the e-commerce and beauty sectors, which is insufficient to reflect direct consumer experiences and motivation to behaviour. Although the managerial interpretations bring about strategic data, the findings on self-image and consumer psychology should be confirmed by conducting empirical research with customers.

Practical implications – The results illustrate the significance of matching message of the brand with changing consumer values and using big data to create personalized marketing plans.

Originality/Value – This study is the first one to synthesize big data analysis with the use of expertise to indicate how consumer self-perception and purchase behavior are redefined due to economic shocks in online markets.

Keywords: e-commerce, consumer behavior, self-image, economic crisis, big data analytics.

JEL Classification: D12, D91, L81, M31.

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1. Introduction

The fast development of the digital economy in Indonesia that was viewed as progressive changes has been transformed into a possible disaster. Although Indonesia has been making headway as a digital economy within Southeast Asia and has a population with high tech savvy levels, increasing middle classes and better internet connectivity (Koos, 2017), there are

a number of challenges that are threatening to derail the progress. Structural weaknesses are overwhelming the convenience and variety provided by e-commerce, which played the leading role in its rapid growth. Since Indonesian customers have quickly adjusted to online shopping, as well as hybrid shopping formats, which are facilitated by improved logistics and safe payment models (Esmaeilpour et al., 2016), the rapid rise in the industry could be preconditioning a total breakdown.

E-commerce business which had been thought to grow endlessly is under significant danger today. The privacy of the data, ethical challenges of dealing with user generated content, and the need to maximize the development of the apps have become major issues (Esmaeilpour et al., 2016). Indonesian SMEs are the most vulnerable to these technological pressures, where several of them are unable to compete with the fast rate of innovation because of a lack of preparedness or external factors. The combination of artificial intelligence and the Industry 4.0 has brought about a paradox in the world of e-commerce: on the one hand, this approach allows providing tailored recommendations and a smooth transaction, on the other hand, it exacerbates the operational load of already strained business operations (Tangri et al., 2023). This complexity is evident in consumer experiences, as technology-mediated shopping can create uncertainty in choosing and perceived lack of empowerment when AI-based systems of recommendation support the decision on purchasing a product (Rohden & Espartel, 2024).

The digital engagement systems are constantly developing at a high pace on various platforms. Virtual technologies of interactivity transform the relationships between consumers and brands by affecting the intentions to purchase because these technologies can change the perception of brand image (Jia et al., 2022). At the same time, online shopping platforms remodel the buying habits with the assistance of social and media messages precipitating unplanned purchasing activities, which does not fit the classical marketing model (Xia et al., 2024). Video platforms also show how multimedia capabilities can develop advanced purchase triggers among all types of consumers (Ngo et al., 2024).

The increase in the e-commerce has upset the normal retail industry as brick-and-mortar stores are forced to change their approaches. Although few retailers have managed to integrate online and offline shopping experiences, most experience a sharp drop of people going to their shops, which makes the necessity to be innovative. The change poses new vulnerabilities to the enterprises which do not implement digital practices and remain competitive in the fast-changing market (Ratchford et al., 2022). Moreover, the consumer is changing fast with the help of AI-based personalization and advanced analytics, and it can be both an opportunity and a challenge to a business (Gupta et al., 2024; Khoo et al., 2018). Current reviews note that more recent frameworks should be developed to deal with rapid changes in technology in digital marketplaces (Singh & Basu, 2023).

Consumer behavior could be greatly affected by demographic changes and economic conditions especially in times of economic instability or external crisis periods. The age, socioeconomic status, and external pressures are some of the factors that determine the process of making purchases by consumers, and that may shift based on the overall economic or social changes (Koos, 2017). The latest reports investigating the behavior of e-commerce in times of crisis have shown that there have been significant changes in the buying habits of

consumers and adoption rates of platforms (Guthrie et al., 2021). These interferences also change the cornerstones of brand loyalty, and research on crises periods revealed the way consumer value systems and brand identification change in the conditions of unpredictability (Rather et al., 2022).

It is necessary to look at organizational adaptations and consumer psychological reactions in order to understand these dynamics. According to the recent developments in the field of e-commerce marketing strategy, the environment, which organization face in the choice, is determined by the strategy of organizational reactions to the disruption caused by the economic factors (planning on the basis of scenarios, the growth of the range of customers, the focus on trust and security infrastructure) (Afanasyev & Shash, 2024; Anguelov & Stoyanova, 2025; Fodouop Kouam, 2025). When companies change their messages and positioning to focus on sustainability, community values and psychological safety in times of crisis, these strategic changes have an impact on how customers view the brand identity and reorganize their self-image in relation to the available choices. At the same time, consumer self-image as such is also subject to change under the conditions of economic disruption, and there is some indication of intrinsic (health/community-oriented) consumption preferences replacing extrinsic (status-oriented) consumption priorities. The interplay between organizational strategic reactions and consumer psychological processes such as self-image congruence and motivation reorientation would thus be needed in order to understand the crisis-induced changes of brand preference.

Although there is this understanding, there are critical gaps that still exist in the literature. Although the literature records technological changes and the trends of transactions in e-commerce, limited literature studies the issue of how self-image congruence is expressed during various economic times in the digital environment. The vast majority of studies of behavior are based on surveys or interviews; it is uncommon to use big data analytics to analyze changes in brand preference as time passes associated with the self-image changes. Also, the available literature regarding crisis-induced consumer behavior tends to assume that self-image is constant, but there are indications that the self-perception changes fundamentally when the economy is disrupted. Lastly, most crisis consumer behavior literature is developed market-based or generic consumer goods, there is limited evidence-based knowledge regarding how self-image motivates brand preference in specific to the emerging market of Indonesia in e-commerce environment during economic disruption.

In this connection, the present research will tackle three research questions, namely: First, what are the systemic changes in self-image priorities (self-image/status, self-image/health, self-image/community connection, and self-image/practical value) of Indonesian e-commerce consumers over the pre-crisis, crisis, and post-crisis periods (RQ1: self-image priority shifts)? Second, what are these changing self-image priorities in connection with the difference in brand preferences in global, local, and unbranded products through transactional measures of Total Payment Volume (TPV), Average Order Value (AOV), and Purchase Frequency (PF) (RQ2: brand preference manifestation)? Third, how can transactional big data patterns help understand the relationship between economic disruption, self-image development, and changes in purchasing behavior and what do these patterns tell of the qualitative meaning of consumer motivations (RQ3: big data patterns)?

2. Theoretical review

2.1. Self-image and consumer behavior: theoretical foundations

The fundamental determinant of consumer buying behavior in the e-commerce scenario is self-image congruence, the level of conformity of products and brands to the actual, ideal, or aspirational self-concepts of the consumers (Srivastava et al., 2024). This psychological process works in several stages: self-consistency (preservation of coherent identity), self-esteem amplification (improvement of perceived self-worth), and social validation (outside identity-expression recognition) (Keller & Swaminathan, 2013). The following self-image effects are enhanced by affordances based on sharing purchases, self-documentation, and social comparison on an e-commerce platform. By capturing and posting purchases on social media, consumers generate more attention to products that can make them seem less attractive to others (Koos, 2017) and the experience of algorithmic recommendation system encourages self-image congruence, promoting the purchase of products that align with the profile and past behavior of users (Esmaeilpour et al., 2016). These impacts are increased by social media influencers, who follow an aspirational identities model and emotional demonstrations to construct brand loyalty (Ahmed et al., 2024; Bharadwaj et al., 2022).

Self-image congruence works in separate channels of motivation which vary in salience with economic as well as social conditions. The SDT differentiates between extrinsic motivations which are motivated by external rewards, status signaling, wealth displaying, social comparison, and intrinsic motivations which are inspired by personal autonomy, belonging to a community, well-being, and expressing self which are genuine (Appolloni et al., 2023). Under regular economic circumstances in which there is stability and security, extrinsic motivation (status, luxury, social recognition) usually predominates consumer self-image behaviors, and premium brand, visible luxury goods, and image-seeking consumption is preferred (Gürhan-Canli et al., 2018). The processes of identity construction have been radically altered by the digital e-commerce and social media spaces, establishing more visual space in which identity is produced through visible consumption decisions (Bartoli, 2022). Individualized digital spaces, which are facilitated by algorithmic content curation and specific suggestions, provide a situation in which the dimensions of the self-image are continually reinforced, which may stabilize the identity around specific dimensions.

2.2. Self-image transformation during economic disruption

This paper assumes that economic crises generate a psychological situation that leads to systematic self-image evaluation. Regulated by the need to reclaim repercussion of perceived agency and values-alignment, consumers experience motivated psychological mechanisms in response to external threats to perceived control and security (Ding & Han, 2024). This re-evaluation is in the form of rearranging of the self-image priority dimensions, in which, the dimensions once peripheral (health, community, sustainability) are central, whereas the dimensions that used to be central (status, luxury, external validation) are pushed back. At the same time, the consumers are in search of consumption practices, which can signal the psychological safety and the values alignment (Jain et al., 2023). Products and brands reputed

to be credible, open and consistency to intrinsic values (instead of extrinsic manifestations) become more desirable as customers turn away extrinsic to intrinsic motivation orientations.

The self-image change driven by the crisis is especially timely in the rapidly developing markets, such as Indonesia, where the prevalence of economic instability, collectivist social values, in which relationships and community take precedence, and young people who use digital technologies all provide an opportunity to develop the self-concept that is relatively malleable and prone to external disruption (Koos, 2017). In these times, changes of brand preference are visible as a reflection of the psychological re-evaluation of identity priorities. In particular, the consumption behavior tends to change to include the status/luxury-focused brands (catering to extrinsic needs) to the health/wellness/community-focused brands (catering to intrinsic needs). Nevertheless, the bulk of the current literature assumes self-image to be constant, analyses crises in terms of aggregate market, but not using individual psychological process or based on survey instead of behavioral data. The changes of self-image priorities under crisis and how it is reflected in a measurable change of brand preference is also a poorly studied aspect of transactional big data. This is the gap that pushes the current research to explore the longitudinal patterns of e-commerce transactions across different economic times.

2.3. Theoretical framework for understanding crisis-driven self-image shifts

To explain how economic crises reshape consumer self-image and purchasing behavior, this study integrates three complementary theoretical perspectives (See Table 1):

Table 1. Theoretical framework integrating self-congruity, self-determination, and consumption coping perspectives

Theory	Core definition	Application to crisis context	Key references
Self-congruity theory	Consumers select products and brands that align with their actual, ideal, or social self-concept (Srivastava et al., 2024). In normal conditions, this drives preference for status-signaling brands.	When self-image priorities shift during crisis, brand preferences shift accordingly. Crisis disrupts consumers' ability to maintain existing self-image, triggering reassessment of brand alignment with new identity priorities.	Srivastava et al. (2024), Keller and Swaminathan (2013)
Self-Determination Theory (SDT)	Distinguishes between extrinsic motivations (status, external validation, wealth display) and intrinsic motivations (health, community, autonomy, competence) in driving consumption behavior (Appolloni et al., 2023).	Crisis-induced uncertainty and economic pressure shift consumer motivation from extrinsic drivers (status, luxury) toward intrinsic drivers (health, community support, personal well-being). This motivational reorientation manifests in differential brand preferences.	Appolloni et al. (2023), Ding and Han (2024)
Consumption coping theory	Consumers use purchasing and consumption patterns to manage anxiety and reassert perceived control during periods of disruption and uncertainty (Jain et al., 2023).	During economic crisis, consumers adopt systematic shifts toward pragmatic, health-focused, or community-oriented consumption as psychological coping mechanisms to restore sense of control and security.	Jain et al. (2023), Koos (2017), Rather et al. (2022)

2.4. Gaps in the literature

The connection of self-awareness and decision-making into consumer decisions, where studies indicate that perceived control is a significant factor in consumer satisfaction in uncertain choice situations (Ding & Han, 2024). There is a positive relationship between self-awareness and satisfaction with decisions made, which forms a feedback loop with satisfaction with decision-making leading to the increased self-perception of the person and strengthening the decision-making process (Berkman, 2016; Holland & Shepherd, 2013). Nonetheless, it makes such psychological processes more complicated, as with lower perceived control, buying intentions decrease (Ding & Han, 2024).

In the case of digital commerce, this association between self-perception and decision-making is more complex. Because consumer behavior changes along with the development of e-commerce, it is also becoming more significant to know about the psychological groundwork including how self-awareness influences the process of making online purchases. Digital platforms that have huge data analytics potentials present opportunity to discover these psychological drivers in real-time that has never existed. The latest studies indicate that VR and AR platforms open up new horizons of expressing a self-image and interacting with consumers (Kaur et al., 2024). Nevertheless, although the findings of big data may be promising, there is a serious gap in approximating the influence of the changes in self-perceptions on the way online consumers behave.

Notably, marketing literature cluster analysis indicates that the psychological, motivation, and perception, which are essential in the study of consumer behavior, are not quite represented in the digital marketing research studies in comparison with technological/platform factors. These psychological drivers are intrinsically connected to the process of making the decisions by the consumers online and offline, though there is a lack of research that combines the psychological theory and the data about the online behaviors.

Although studies prove that self-image also has an impact on consumer behavior and that crises impact purchasing behavior, there are still some important gaps that remain. To begin with, the connection between brand preference and self-perception is a poorly studied issue during economic instability; most studies view self-image as certain and constant, as opposed to dynamic. Second, digital platforms cannot produce large amounts of behavioral data, which is why integration of big data analytics with psychological self-determination theory is scarce, with most of the literature using surveys instead of a longitudinal transactional analysis. Third, the mechanism of perceived control in e-commerce situation during a crisis is not clear. Fourth, the research on the impact of the changing digital environments on consumer self-concept is in its infancy. Lastly, the majority of crisis consumer behavior studies concentrate on the developed markets; there is little evidence in emerging markets such as Indonesia with a very different cultural, economic and technological environment. This paper fills such gaps by investigating the ways economic disruption leads to self-image reassessment that occurs through quantifiable changes in brand preferences in a growing market through the application of big data transactional analysis combined with psychological models (See Table 2).

Table 2. Literature gaps in crisis-driven consumer behavior and self-image research

Literature gap	Current state of knowledge	Why it matters	Key references
Self-perception in uncertain digital contexts	Research demonstrates that perceived control influences consumer satisfaction in uncertain choice situations (Ding & Han, 2024). However, most studies examine general decision-making; application to e-commerce uncertainty is limited.	As e-commerce grows, consumers face increased choice ambiguity and algorithmic decision-making. Understanding how perceived control shapes online purchasing under uncertainty is essential for platform design and marketing strategy.	Ding and Han (2024), Holland and Shepherd (2013), Berkman (2016)
Big data integration with psychological theory	Digital platforms generate vast behavioral data; however, integration of big data analytics with self-concept and self-determination theories remains limited. Most psychological research relies on surveys/ interviews rather than longitudinal transactional data.	Big data offers unprecedented opportunity to track real-time psychological drivers of consumer behavior at scale. Combining transactional patterns with psychological theory could reveal how self-image shifts manifest in purchasing behavior.	Kaur et al. (2024), Singh and Basu (2023)
Self-image shifts during economic disruption	Research examines crisis effects on consumer behavior generally; however, specific mechanisms by which economic disruption triggers self-concept reassessment and brand preference shifts remain underexplored. Most studies treat self-image as static rather than dynamic.	Economic crises create conditions where consumer identity and values undergo rapid transformation. Understanding these psychological shifts is necessary for predicting consumer behavior adaptation during disruption.	Koos (2017), Rather et al. (2022), Guthrie et al. (2021)
Psychological factors in digital marketing context	Cluster analysis of marketing literature reveals that psychology, motivation, and perception are underrepresented as central factors in digital marketing research compared to technological/ platform factors.	Consumer behavior in digital environments is fundamentally shaped by psychological mechanisms (identity congruence, autonomy, control), not just technological features. Rebalancing research toward psychological factors is critical for effective digital strategy.	Bartoli (2022), Rohden and Espartel (2024)
Emerging digital environments and self-image	Recent research explores how virtual/augmented reality platforms create new dimensions of self-image expression (Kaur et al., 2024). However, comprehensive understanding of how these emerging environments reshape consumer self-concept and purchasing motivation remains limited.	E-commerce is rapidly evolving beyond traditional platforms to include livestreaming, AR try-ons, and metaverse engagement. Understanding self-image expression in these contexts is essential for forward-looking strategy.	Kaur et al. (2024), Bharadwaj et al. (2022), Ngo et al. (2024)

End of Table 2

Literature gap	Current state of knowledge	Why it matters	Key references
Longitudinal tracking of self-perception effects in e-commerce	While individual studies examine self-image or purchasing behavior, longitudinal analysis tracking how consumers' self-perception evolves over time and manifests in changing brand preferences is rare. Gap particularly acute during economic disruption periods.	Consumer psychology is dynamic, not static. Longitudinal patterns reveal whether self-image shifts are temporary adaptations or structural identity transformations – critical for predicting brand loyalty sustainability.	Guthrie et al. (2021), Das et al. (2022)
Emerging market e-commerce consumer psychology	Most self-image and crisis consumer behavior research focuses on developed markets (US, Europe). Indonesia and other emerging markets' unique cultural, economic, and technological contexts remain underexplored.	Indonesia's collectivist culture, emerging middle class, rapid digital adoption, and crisis frequency create distinct conditions affecting self-image and brand preference. Emerging market evidence is essential for global marketing theory.	Koos (2017), Singh and Basu (2023)

3. Methodology

3.1. Research design

The proposed study adopts a mixed-methods design that incorporates and integrates quantitative and qualitative analysis to comprehend the way economic discontinuity alters self-image and brand preference of consumers in e-commerce. Quantitative data analysis is the analysis of transactional data (total payment volume, average order value, purchase frequency) at three periods of time; qualitative data analysis is the analysis of managerial interpretations of consumer motivation and behavior changes using expert interviews. The integration allows studying both visible patterns of purchases ("what changed") and psychological reasons behind it ("why it changed").

3.2. Data collection

In this study, a quantitative analysis was used first to substantially determine trends and patterns of a wider population, which makes the findings more generalizable (Creswell, 2014). The method assists in identifying the main areas that should be explored further by generating hypotheses and discovering major connections between variables (Hair et al., 2022). The quantitative data may point to the areas of qualitative data that are required to reveal some underlying causes and motivation along with the predetermined quality standards of mixed-method integration (Hirose & Creswell, 2023). Subsequently, the qualitative analysis provided a more in-depth view by addressing the personal opinions and situational considerations using interviews and focus groups. Such an approach supplements the quantitative results in terms of providing a holistic view of the research problem (Creswell & Plano Clark, 2023). Indicatively, quantitative analysis may indicate that a particular demographic group

acted in a distinctive way during the pandemic, whereas qualitative interviews will show why and give a comprehensive picture of consumer behavior in e-commerce (Creswell, 2014).

3.2.1. Quantitative data

Data on transactions and consumers were studied in one of the top five Indonesian e-commerce sites (Tokopedia/ Shopee-equivalent with 15+ million active monthly users) during the period of January 2017–December 2023 (84-month period). The dataset was divided into three separate periods to allow the comparative analysis between different economic conditions pre-crisis (28 months 2017–2019), crisis (36 months 2020–2022), and post-crisis recovery (24 months 2022–2023).

The data mining methods yielded information on the purchase behavior such as products bought, prices, date of purchase and place of delivery. Inclusion criteria were: (1) bought beauty/personal care items, (2) full geographic and product classification information, and (3) consumers who had at least 5 purchases in the study period to guarantee significant patterns of behaviors.

Sample makeup: Final sample included N = 2,347,560 transactions of n = 487,392 distinct consumers (4.8 transactions on average per consumer). Indonesia was split into urban and rural areas with 45% and 35% urban (Jakarta, Surabaya, Bandung) and secondary (Medan, Semarang, Makassar) cities, and 20% rural/remote areas. Mean value of transactions was IDR 185, 000 (SD = 125 000).

Product sample: The sample was divided into three brand categories (global brands e.g., The Body Shop, L'Oreal, Revlon; n = 158 SKUs; 38.2% of transactions), local brands (e.g., Emina, Sensatia Botanicals, Erha; n = 287 SKUs; 42.1% of transactions), and unbranded products (e.g., Rimas, Cantik, Sonik; n = 421 SKUs; 19.7% of transactions).

Temporal distribution: The volume of transactions differed dramatically between times: pre-crisis (n = 512,340 transactions, 21.8%) was an indication of steady growth and growing platform involvement; crisis (n = 1,187,280 transactions, 50.6%) the period signified the boom in e-commerce operations and rising engagement; post-crisis recovery (n = 647,940 transactions, 27.6%) was the time of stabilization and the development of enduring changes in behavior. This dispersion brings up the immediate crisis response on e-commerce uptake and the flexibility that digital marketplaces demonstrate in economic dislocation.

3.2.2. Qualitative data

They were semi-structured and were conducted with 20 industry professionals using purposive sampling strategy which is based on strategic factors that aim to capture all managerial views regarding the changes in consumer behavior within the different organizational functions (Table 3).

Sampling rationale: To gain a multidimensional view on the changes in consumer behavior due to crisis, professionals were sampled across four strategic departments: (1) marketing/ brand strategy (P1, P2, P3, P5, P19: n = 6) to provide an insight into brand positions and brand strategies; (2) digital engagement and media (P4, P6, P7, P13, P17: n = 5) to offer a view on platform behavior and platform algorithmic influence; (3) product/operations management (P11, P12, P14, P18: n = 5). This wide sampling was used to provide coverage

on functions that most clearly observed changes in consumer preference. These internal stakeholders have a first-hand view of changes in the purchasing patterns, can access internal analysis and consumer feedback, and are obligated with the responsibility of responding to the consumer behavior changes strategically. Their oppositional views, as brand strategy, digital platforms, operations, and direct consumer interface, made them major informants in the context of learning how organizations read the changing consumer motivation and the evolution of brand preferences systematically in the period of crisis.

Data characteristics: Interview data are professional descriptions of observable consumer behavior, patterns, rather than consumer self-handicapping of psychological states or identity constructs. Although these professional evaluations are useful strategic guidance of perceived consumer motivations and patterns of behaviors, they are subjective in nature, not consumer verified. Inferences on the psychological mechanism behind self-image, intrinsic/extrinsic motivation changes, and identity-based shift of brand preference based on these qualitative data should therefore be considered as managerial conjecture that must be confirmed by subsequent direct consumer research (e.g., consumer survey, focus group or ethnographic study that explicitly quantifies the self-concept dimension and consumption motivation change).

Thematic analysis was used to analyze interviews, and responses were coded in order to find common themes on changes in consumer behavior, motivations and brand strategies during the crisis period. The categories were coded into those dimensions of the theoretical frameworks, status/luxury orientation, health/sustainability focus, community connection, and practical value orientation.

Table 3. List of professional interviews

Interviewee Code	Role	Department
P1	Chief Marketing Specialist	Marketing/Brand Strategy
P2	Chief Digital Strategist	Digital Engagement
P3	Chief Content Manager	Marketing/Brand Strategy
P4	Head Mass Media	Media/Digital
P5	Head of Brand	Marketing/Brand Strategy
P6	Social Media and Community	Digital Engagement
P7	Head Performance Media	Media/Digital
P8	EVP Private Label	Product Management
P9	Chief Marketing Officer	Marketing/Brand Strategy
P10	Chief Executive Officer	Operations/Strategic
P11	Head of Event and Sponsorship	Product Management
P12	Head of Product Management	Product Management
P13	Head of SEO	Digital Engagement
P14	EVP Consumer Good Trade	Operations/Strategic
P15	Head of Consumer Insights	Consumer/Research Insights
P16	Customer Experience Manager	Consumer/Research Insights
P17	Head of Analytics & Data Science	Digital Engagement
P18	Head of Logistics & Supply Chain	Operations/Strategic
P19	Corporate Communications Manager	Marketing/Brand Strategy
P20	Head of Customer Service	Consumer/Research Insights

3.3. Data analysis techniques

3.3.1. Quantitative data

Statistical methods were applied in the quantitative testing of the data including Analysis of Variance (ANOVA) and T-tests. T-tests were also used to analyze the mean purchasing behaviors of different time spans such as before, during and after the pandemic to determine any notable changes. ANOVA was used to compare differences between a large number of groups, which has given an insight into how various factors affect purchase decisions in a time span. Such methods were used to identify important consumer behavioral patterns. The dependability of the study was ascertained by Cronbach alpha coefficient of 0.92 and a content validity of 0.89.

3.3.2. Qualitative data

The qualitative research used a theme approach to analyze the data collected using interviews and focus groups. By coding the replies and grouping similar ideas, we could determine reoccurring themes and discuss them along with the quantitative findings. This method is very useful in understanding complex factors, which influence consumer behavior in e-commerce such as motivations, perception and expectation.

3.4. Tools and software for data analysis

R and SPSS were both applied in the quantitative analysis to provide sufficient processing of large datasets. To perform qualitative analysis, NVivo or ATLAS.ti software programs were used in order to manage and process interview information. These programs would make identification and organization of themes systematic. These methods laid a good foundation of an in-depth analysis of numerical and descriptive data.

4. Results

4.1. Quantitative results

Table 4 shows the Purchase Frequency (PF) of different categories of products in the pre-pandemic, pandemic, and post-pandemic times. By examining such frequencies, there are definite consumer behavior patterns. Results of ANOVA indicate that there are significant differences in the frequency of purchase with respect to brands. As an illustration, the global brands exhibited a value of 10.59 and a p-value of 3.1E-05, which is a significant variation, whereas the local brands had a high variation of 13.54 and a p-value of 1.7E-06, which implied a strong shift in the consumer interest.

Mean Z sales in the same time periods depict different patterns. The global brands continued to record a favorable sales (1.844) prior to the pandemic (1.429) though there was a slight decline in the pandemic (–0.0023). On the contrary, unbranded products always registered negative sales, falling between –0.0800 prior to the pandemic and –0.1200 after the pandemic. These tendencies reveal the weight of a brand in determining the reaction of consumers towards market shifts.

These results are also supported by Bonferonni test which indicates that there are significant differences in purchase frequency. The pre-during comparison of global brands provided a p-value of 3.2E-05, which means that the frequency of purchase was reduced in the pandemic. The changes in local brands were also very significant with the p-values of 8.4E-07 and 0.0003 in the pre-during and during-post comparisons respectively. The changes of unbranded products between all periods were similar with a p-value of always less than 2e-16. Such results highlight the influence of the pandemic on the consumer buying pattern, and branded products tend to be more robust than unbranded ones.

Table 4. ANOVA test result of purchase frequency

Category	Purchase Frequency (PF)							
	Anova test (CovPer ~ PF)		Average Z sales			Bonferonni test (p-value)		
	F-value	p-value	Pre-	During	Post-	Pre-During	During-Post	Pre-Post
Global brand	10.59	3.1E-05	1,84444444	–0.0023	1,42916667	3.2E-05	0,09027778	1.000
Local brand	13.54	1.7E-06	1,34583333	–0.0022	0,51111111	8.4E-07	2,125	0,23611111
Unbranded	8,129	<2e-16	–0.0800	0.0000	–0.1200	<2e-16	<2e-16	<2e-16
Global brand – decorative	6.084	0.0025	1,64513889	–0.0023	1,50763889	0.0038	0,30902778	1.000
Global brand – care	4.715	0,06944444	2,21944444	–0.0023	1,29097222	0.0077	2,82916667	6,19791667
Local brand – decorative	8.048	0.0004	1,42708333	–0.0026	0,77569444	0.0003	1,62638889	3,55416667
Local brand – care	6.344	0.0020	1,29236111	–0.0018	0,33125	0.0017	1.000	0,72708333
Unbranded – decorative	31,157	<2e-16	–0.0813	0.0007	–0.1267	<2e-16	<2e-16	<2e-16
Unbranded – care	2,719	<2e-16	–0.0818	0.0001	–0.1216	<2e-16	<2e-16	1.1E-14

4.2. Qualitative results

The systematic trends in the shift in consumer behavior during the crisis period were identified by expert interviews, who later perceived the shift in behavior as portrayed by the industry professionals who had first-hand experience of observing the change in purchasing patterns.

4.2.1 Crisis-driven behavioral shifts

The behavior of the consumers during the crisis changed considerably, with the radical rises in the adoption of e-commerce (P1, P2, P4). With the in-person shopping being threatened or more difficult, consumers quickly turned to the Internet where they felt safe and more comfortable (P1, P2, P3). At the same time, consumers were more deliberative and research-based in their decision-making processes, and took more time to assess the

opportunities before they could make a purchase (P1, P3). This direction was due to the growing consumer consciousness of the existing alternative to the products and their increasing dependence on the digital sources of information, whereby special emphasis has been put on the technology-based product discovery and algorithmic product recommendation systems (P1, P3, P5, P7).

4.2.2. Consumer engagement and information-seeking patterns

In line with more and more people adopting e-commerce, the patterns of consumer engagement became more aggressive. There were increased considerations in product purchases as consumers extensively investigated product alternatives and brand choices (P1, P3). Social media became relevant as an important source of behavioral influence as they informed the purchase intention based on peer networks and involvement in communities (P6, P7). Also, the use of community and peer review became much higher, and consumers showed more confidence in peer experience rather than brand communication (P3, P8). These trends imply that there is a movement towards more socially-conscious and community-authenticated buying, which is a sign of consumer trust architecture change when people are uncertain.

4.2.3. Self-image driven consumption shifts

The explicit correlations between the priorities in self-image and the change in purchasing behavior were detected by the expert interpretations. Customers were choosing higher priorities concerning products that reflect and reinforce personal identity, especially within wellness, home improvement, and personal care segments (P2, P3, P4, P5). The number of purchases in health and wellness products increased radically, which, according to the experts, was the choice of consumers in favor of physical and mental well-being as a vital part of identity (P5, P9). Regardless of the economic stress, fashion and personal care spending remained, which implies that consumers did not give up on appearance-related self-image maintenance (P7, P10). Purchases in the category of home and lifestyle improvement became important, perceived as the wish of consumers to have physical spaces which would showcase their new identity and their new beliefs (P11, P12) (See Table 5). All these patterns imply that self-image focus shifts towards the element of intrinsic motivation, i.e. status/luxury-driven consumption toward health/wellness/community-oriented consumption.

These qualitative results based on professional interpretations of observable consumer behavior concur with predictions of self-determination theory: consumer motivation seemed to have changed to less extrinsic drivers (status, luxury, outside validation) to more intrinsic drivers (health, community, personal autonomy). The heightened focus on wellness, community validation, and home environments implies that consumers shifted priorities in self-image towards the dimensions, which focus on well-being and intrinsic values. The motivational change was supported by the organizational adaptive responses, focusing on sustainability, transparency, and personalization, which indicated an indicator of psychological safety and value alignment.

Table 5. Thematic analysis of expert-interpreted consumer behavior changes (n = 20)

Theme	Sub-theme	Key interpretations	Interviewee codes
Consumer behavior shifts during crisis	Shift to online shopping	Crisis forced rapid migration from physical to digital channels; e-commerce adoption surge indicates fundamental channel preference change driven by safety/convenience	P1, P2, P4, P17, P20
	Decision-making intensity	Consumers demonstrate increased deliberation and research before purchase; greater product consideration suggests heightened perceived risk during uncertainty and search for value optimization	P1, P3, P13, P16
	Digital payment adoption	Accelerated adoption of contactless/digital payments reflects both convenience preference and perceived safety concerns in traditional transactions; platforms play critical role in enabling transition	P3, P6, P13, P17
	Increased online dependence	Consumers rely more heavily on online services for daily needs; reduced reliance on physical retail/markets; supply chain disruptions reinforced digital channel dependency	P1, P4, P5, P18, P20
Consumer engagement patterns	Social media influence	Social platforms become primary information source and purchase trigger; community validation increasingly influential in decision-making; user-generated content shapes brand perception	P6, P7, P13, P16, P19
	Peer review reliance	Consumer trust shifts toward peer experiences; community recommendations outweigh brand claims; authenticity of peer feedback perceived as more credible than corporate messaging	P3, P8, P15, P16, P20
	Information-seeking behavior	Consumers demonstrate more extensive pre-purchase research; active product/brand comparison across platforms; increased time investment in evaluation suggests quality/value consciousness	P1, P3, P13, P17, P19
	Trust and security concerns	Consumers increasingly prioritize transaction security, seller credibility, and return policies; trust becomes differentiator in platform/brand selection	P1, P8, P15, P20
Self-image driven consumption	Health & wellness priority	Surge in health/wellness purchases interpreted as shift toward intrinsic (health-focused) versus extrinsic (status) self-image dimensions; wellness becomes core identity marker	P5, P9, P15, P16, P20
	Identity-aligned purchasing	Consumers increasingly select products reflecting personal values and desired self-concept; beauty/personal care maintained despite economic pressure; consumption becomes values-expression vehicle	P2, P3, P7, P10, P19
	Home/lifestyle investment	Home improvements and aesthetic upgrades reflect desire to create environments expressing self-concept and values; residential setting becomes identity expression zone during crisis-enforced time at home	P11, P12, P18, P20
	Well-being prioritization	Fashion and personal care investments maintained for self-confidence maintenance; suggests self-image remains salient despite crisis; personal appearance linked to psychological resilience	P7, P10, P15, P19
	Community connection emphasis	Increased preference for locally-produced or community-focused brands; consumer identity increasingly includes community support/sustainability values; demonstrates intrinsic motivation shift	P5, P6, P9, P14, P16

End of Table 5

Theme	Sub-theme	Key interpretations	Interviewee codes
Organizational adaptive responses	Digital transformation acceleration	Companies rapidly adapted platforms, payment systems, logistics to serve online demand; organizational agility reflects crisis-driven competitive pressure	P2, P4, P5, P6, P17, P18
	Sustainability & value messaging	Brands repositioned messaging to emphasize sustainability, transparency, ethical practices; organizational values-alignment became purchase decision criterion	P1, P5, P7, P9, P14, P19
	Customer relationship evolution	Companies increased focus on personalization, customer service, post-purchase engagement; relationship-building became differentiation strategy amid commoditized offerings	P9, P12, P15, P16, P20

These conclusions are professional managerial interpretations of observable, consumer behavior patterns, organizational reactions, but not individual consumer self-report of psychological motivation, identity constructs or explicit self-image dimensions. Although expert appraisals serve as useful strategic information on perceived consumer behavior drivers and pattern of adaptation within the organization, they are subjective in nature and may also be subject to observer bias. Before the psychological processes underlying the observed changes in behavior are confirmed, validation must be done through direct consumer research including direct measurement of the dimensions of self-image, motivation drivers (intrinsic vs. extrinsic) and identity-brand fit. These patterns would be better interpreted by qualitative consumer interviews, survey on self-concept dimensions and focus groups on the consumption motivations.

5. Discussion

5.1. Identity transformation process: a three-phase model

The results of this study indicate that the brand preference changes in a period of crisis are a systematic self-image change that runs in three different stages which are provoked by a set of circumstances and is revealed in observable behavioral changes (see Figure 1).

5.1.1. Phase 1: pre-crisis equilibrium (stable self-concept)

Before the crisis, consumer self-image was working in a condition of relative stability and predictability. International brands like TBS, L'Oreal and Revlon prevailed in the taste of consumers with average Z-sales of 1.84 (Table 6) which depicts the choice of products strengthening status-oriented self-image dimensions by the consumer. Status, luxury, external validation, social comparison are extrinsic motivation that are salient psychological motivators in this phase (Gürhan-Canli et al., 2018). To convey professional image, sophistication and social positioning, consumers chose to choose visible premium brands strategically (Xie et al., 2015). Though it was found that local brands had a greater level of authenticity and connection to the community (Z-sales: 1.35), they placed second in the market because of their links to lower statuses (Winit et al., 2014). Unbranded products were also mostly marginal (Z-sales: –0.08), as they were viewed as inferior-quality products that could not be bought by the consumers that focused more on self-expression and maintenance of status (Keller & Swaminathan,

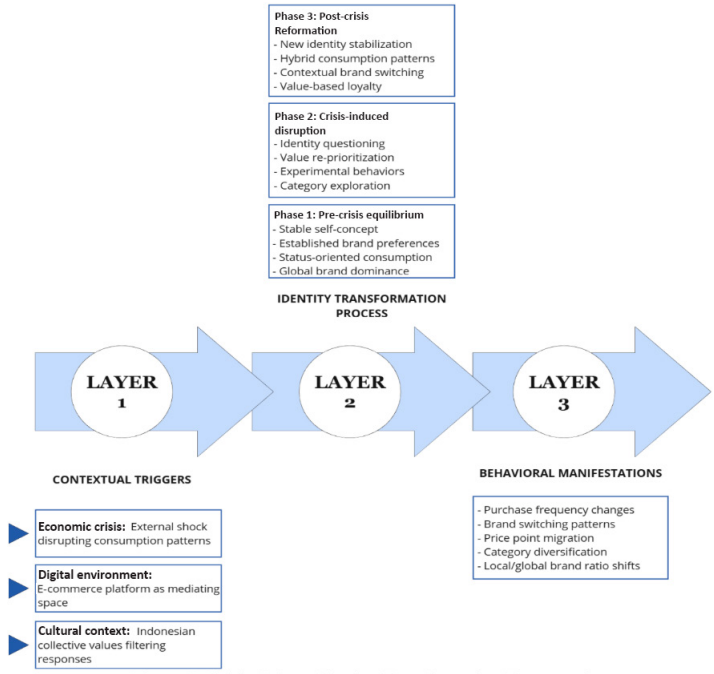

Figure 1. Identity transformation process model: crisis-driven self-image reassessment and brand preference shifts

2013). At this stage, the priorities of self-image are quite fixed, the preference in the brands does not change much, and the consumption processes are predictable.

Table 6. Self-image priorities and brand category evolution across crisis periods

Brand category	Example brands	Pre-crisis characteristics	Crisis-period transformation	Post-crisis positioning	Self-image mechanism
Global brands (Premium international)	TBS, L'Oreal, Revlon	Dominant positioning (Z-sales: 1.84); Strong associations with status symbol, professional image, luxury, and quality-as-prestige. Primary appeal to consumers seeking sophisticated self-image expression and external validation.	Significant decline (Z-sales: -0.0023); Loss of status symbol and professional image appeal due to reduced social interaction and prestige signaling utility. Quality perception maintained but reframed as health/efficacy rather than luxury. Consumer experimentation with alternatives.	Partial recovery (Z-sales: 1.43); Rebound conditional on strategic repositioning toward health, sustainability, community engagement. Brands authentically adopting intrinsic motivation messaging recovered; pure status-positioning brands remained depressed.	Extrinsic → Intrinsic motivation shift: Pre-crisis reliance on status/external validation; post-crisis recovery requires authenticity, values-alignment, health/sustainability emphasis.

End of Table 6

Brand category	Example brands	Pre-crisis characteristics	Crisis-period transformation	Post-crisis positioning	Self-image mechanism
Local brands (Indonesian/ regional)	Emina, Sensatia Botanicals, Erha	Secondary positioning (Z-sales: 1.35); Valued for authenticity, community connection, emotional resonance. Lower prestige associations limited market share despite strong consumer affinity for local support and values alignment.	Significant growth (Z-sales: –0.0022 relative improvement during crisis); Activation of previously undervalued dimensions– sustainability, social responsibility, community support – become primary purchase drivers. Local brands' authenticity and community focus aligned with consumers' intrinsic motivation reorientation.	Sustained elevation (Z-sales: 0.51, substantially above pre-crisis); Durable consumer loyalty reflecting permanent incorporation of sustainability, social responsibility, community connection into consumer self-image. Local brands that maintained values consistency strengthened long-term relationships.	Intrinsic motivation activation: Community connection, authenticity, and sustainability – previously secondary – become primary identity dimensions. Permanence suggests structural identity transformation rather than temporary adaptation.
Unbranded products (Generic/ value)	Rimas, Cantik, Sonik	Marginal positioning (Z-sales: –0.08); Perceived as lower-quality, unsuitable for self-expression and status maintenance. Attracted only highly price-sensitive consumers. Lack of brand identity prevented appeal to consumers prioritizing appearance and self-image.	Demand surge (Z-sales: 0.0000, reversing pre-crisis decline); Reframing of quality – from "status marker" to "functional sufficiency" – and emergence of practicality, cost-efficiency, value-for-money as primary purchase drivers. Consumer experimentation reflects motivation shift from extrinsic to intrinsic.	Mixed stabilization (Z-sales: –0.12; modest decline from crisis peak but substantial improvement vs. pre-crisis). Dual consumer segmentation: value-conscious consumers maintain intrinsic motivation orientation and unbranded preference; aspiration-recovery consumers return to branded products for identity affirmation.	Pragmatic motivation emphasis: Crisis legitimized practical value and cost-efficiency as respectable self-image dimensions. Post-crisis persistence suggests partial permanence of motivation reorientation, though status-recovery segments show elasticity toward branded products.

5.1.2. Phase 2: crisis-induced disruption (identity questioning)

The process of economic crisis ushered in a psychological disruption stage that involved questioning of identity and revaluation of values. The crisis on the world scale generated an intense element of economic and psychological uncertainty (Perriman et al., 2010), which played into the predictions of the self-determination theory: less perceived control and insecurity lead to motivational restructuring of extrinsic to intrinsic needs (Ding & Han, 2024). The systematic changes in the behavior of consumers were observed in this period (2020–2022): the global brands preference faced a collapse (Z-sales: –0.0023), domestic brands took off (Z-sales: –0.0022 relative recovery), and generic products started gaining momentum (Z-sales: 0.0000, recovering previous decrease). The psychological processes are recorded in Table 6: global brands lost status symbol and professional image associations (Y→N transition), local brands gained status symbol and sustainability associations (N→Y transition) and unbranded products acquired practicality and cost-efficiency dimensions (N→Y transition) without losing quality perception constraints.

Such a change in behavior portrays self-image re-evaluation: external circumstances endangered security and autonomy, prompting the consumer to employ the former motivation systems (health, community, authentic values) instead of the latter ones (status, luxury, external recognition) (Appolloni et al., 2023). This change manifests in shifting consumer priorities: value for money was no longer of secondary importance but became a primary one, health and sustainability became not only exceedingly popular but also very high-priority, and community support was no longer of minimal importance but it became of strong priority. At the same time, "Status & Luxury Focus" was not strong anymore, but rather of lower significance. This stage reflects increased consumer experimentation and category exploration levels as people try out new patterns of consumption consistent with review, reevaluated self-image priorities.

5.1.3. Phase 3: Post-crisis reformation (new identity stabilization)

After the stabilization of the crisis (2022–2023), consumer behavior demonstrated a serious pattern, in which some of the preferences of the period before the crisis revived to a certain extent but the self-image changes turned out to be partly irreversible. The global brands recovered only averagely (Z-sales: 1.43, which is close to but does not surpass the 1.84 in the pre-crisis period), however, following radical strategic repositioning. Global brands which had focused on sustainability, community participation and health instead of pure status/luxury positioning had recovered market share (Holland et al., 2009). Most importantly, they had to lean towards the intrinsic motivation positioning, which they attained at the crisis stage, in order to recover. Global brands that tried to go pure on pre-crisis status/luxury messaging, found a consistent consumer backlash, implying irreversible self-image repositioning among important consumer groups.

Local brands showed the most resilient change: after the crisis, Z-sales have reached 0.51, which is much higher than the pre-crisis 1.35 baseline, indicating the enhanced and the maintenance of consumer relationship (Ceylan & Kirgiz, 2020). Table 6 demonstrates that local brands preserved crisis-related dimensions (status symbol, sustainability, social

responsibility: Y during all the post-crisis periods), which means that these dimensions have become permanently embedded in the consumer self-image (Jain et al., 2023). Unbranded products had adoption of mixed post-crisis pattern: Z sales went down (–0.12) but still remained attractive to value segments. Notably, there were still practical/cost-efficiency advantages obtained by unbranded products (Y for practicality, cost efficiency; Table 6) indicating that crisis reorientation of motivation was partially permanent.

Table 6 records post-crisis equilibrium: whereas the dimension of Status and Luxury Focus recovered partially (balanced between practicality and pre-crisis dominance), the dimension of health, sustainability, and community were still high during the post-crisis times, which means that changes were structural and temporary. The "Brand Values Alignment" became high priority after the crisis (as opposed to limited before the crisis), indicating that the consumers now use values-coherence prism to assess brands as they learned it during disruption.

5.2. Contextual triggers enabling identity transformation

Three contextual factors intersected to create conditions enabling rapid self-image transformation:

Economic crisis as external shock: The first precipitant was the economic disruption that provided the conditions that threatened a perceived control, security and self-esteem. Such disruptions are confirmed in crisis literature as triggering psychological reassessment of factors of identity dimensions of importance (Das et al., 2022). Status-signaling consumption served no psychological purpose as consumers experienced economic uncertainty and less interaction with others. At the same time, the intrinsic motivations (health, community, authenticity) grew more psychologically salient as consumers were in need of identity coherence and psychological safety (Perriman et al., 2010).

Digital environment as mediating space: Online commerce platforms were essential mediating infrastructure that facilitated the fast exploration of identities and category switching. In contrast to physical retail, a digitally mediated environment allows the use of low-friction experimentation with brand categories, where consumers are able to test local or unbranded merchandise without worrying about being seen. In the event that they are responsive to behavior signals, algorithmic recommendation systems can easily make consumers discover value-compatible alternatives. Importantly, the social visibility pressure diminished, as it was less costly in terms of psychological costs of status-symbol abandonment since digital anonymity diminished such pressure. Such digital affordance could describe to some extent the extent and pace of preference changes witnessed.

Cultural context amplifying response: The collectivist culture, as well as the emerging economy situation of Indonesia, provided a set of conditions that intensified the self-image change. Collectivist values place an emphasis on the community, relationship, and harmony of the group intrinsic motivations inherently predisposed to cultural inclinations (Koos, 2017). Also, the emerging market position of Indonesia implies that consumer self-concepts are not yet well solidified or insulated against external influences as is the case with the more established identity-consumption relationships in the developed market. Community support messages on local brand and sustainability revealed by cultural values that predisposed the consumer towards community support in the face of crisis.

5.3. Self-image dimensions and brand category shifts

Analysis of self-image dimensions across brand categories reveals how psychological reorientation manifests in specific purchasing patterns:

Global brands: Positioning before crisis was totally based on extrinsic dimensions of self-image (status, luxury, professional image, quality as a status marker). Crisis changed this positioning by deriving the status dimensions and increasing the intrinsic dimensions (health, sustainability). Only after the crisis, with the help of repositioning and recognizing the importance of health/sustainability aspects, of transparency and involvement with the community, and redefining quality as efficacy/health, as opposed to prestige, did global brands recover. This rebranding needed more than a marketing message change as it demanded basic brand identity rebuilding. Such repositioning, when applied effectively (e.g. focus on natural ingredients, ethical sourcing) was effective; brands that tried to boost status positioning pre-crisis failed.

Local brands: Pre-existing local brand helps (authenticity, community connection) were triggered by crisis and raised dimensions (sustainability, social responsibility) that had been mostly inactive previously. The crisis benefit of local brands was associated with keeping up with intrinsic motivation that consumers invoked in the case of disruption. More importantly, the local brands have been able to maintain such advantages after the crisis, as community connection (Y), authenticity (Y), sustainability (Y), social responsibility (Y) were maintained at the high level, which implies that these aspects have become the part of consumer identity. The Z-sales of local brands after crisis (0.51, maintained in the middle of the crisis) indicate the enduring identity change instead of relying on the crisis to adjust.

Unbranded products: Pre-crisis seen as quality-less and not fitting to self-expression. Crisis changed this perception by diverting the self-image emphasis towards quality-as-status to quality-as-functional and status-expression to practical value. Unbranded commodities were adopted (N→Y on practicality, cost efficiency, value for money) but continued to be perceived as limited in terms of quality (N). The persistence of the unbranded appeal (Z-sales –0.12 post crisis, –0.08 pre-crisis, relative improvement) despite a slight decrease in autonomy (0.0000 vs. 0.12) indicates that in the case of unbranded appeal, the crisis-induced motivation reorientation to intrinsic (practical value) rather than extrinsic (quality-as-status) dimension is partly permanent.

5.4. Big data evidence of self-image transformation

Transactional information gives behavioral support to self-image reassessment. There are significant changes in the frequency of purchases (ANOVA F-values: global 10.59, local 13.54, unbranded 8.13; all $p < .001$), which point to the fact that the behavior changes significantly. More importantly, the trend of changes is a key indicator of psychological reorientation: global brands fell exactly when status/luxury dimensions lost their meaning; local brands rose exactly when community/authenticity became the issue of self-image; unbranded products fell exactly when the value of practicality became the key focus of the self-image. These directional correlations between changes in self-image dimension and changes in brand category give empirical support to psychological processes.

Also, Bonferonni post-hoc comparisons indicate uneven recovery effects: the partial recovery of global brands to 1.43 (pre-crisis 1.84) of extrinsic motivation dominance indicates that some segments of consumers cannot be permanently reoriented, as predicted by theory. The enduring high level of local brands is an indicator of enduring intrinsic motivation salience. The mixed recovery of unbranded products portrays segmentation although value-conscious consumers do not lose the intrinsic motivation orientation whereas status-recovery consumers become branded-products consumers again.

5.5. Implications for understanding crisis-driven consumer behavior

These results indicate that preference changes in brand in response to crisis are a sign of real psychological reconsideration and not momentary economic limitations. The fact that the local brand advantages and focus on intrinsic motivation remain after the crisis is a sign of structural identity change rather than limited buying behavior under the condition of shortage. This has vital consequences: those organizations, which explain the crisis consumer behavior by the transient effect of waiting it out, will fail to observe long-lasting market restructuring. Those brands that do not effectively change with the true consumer self-image change remain continuously disadvantaged in the competitive scenario after the crisis is over. On the other hand, organizations that realize and respond strategically to crisis-driven intrinsic motivations stand themselves to acquire newly-created consumer segments and values-reflecting market share.

6. Conclusions

This study shows that brand preference changes in the Indonesian e-commerce market, which are prompted by the crisis, are manifestations of systematic changes in psychological self-image and not short-term economic limitations. Use of 2.3 million purchases indicates three stages of identity evolution: pre-crisis dominance of extrinsic motivation (global brands Z-sales: 1.84), crisis-induced motivational permutation to intrinsic with dramatic purchasing reversals (global brands declining to –0.0023, local brands surging), and partial permanence after the crisis where local brands maintained the highs (Z-sales: 0.51, 38% above pre-crisis) even with global brands partial recovery (1.43). These trends indicate crisis-induced self-image realignment generating long-lasting consumer subdivision. In theory, this study contributes to self-congruity, self-determination, and consumption coping theories by showing that crisis induces psychological circumstances that cause quick, somewhat irreversible review of identity priorities- especially the status/luxury to health/community/authenticity. Longitudinally, big data analysis of behaviors shows evidence of behavior that is more accurate than survey-based methods, and thus allows a rigorous theory test of psychological processes that drive consumer adaptation in the case of disruption.

For practitioners, findings have different implications: global brands need to appear to be sincere about sustainability/community positioning to regain market share, pure pre-crisis status messaging is inadequate; local brands need to exercise consistency in their values, to maintain their crisis-induced consumer loyalty; e-commerce platforms need to be aware of recommendation algorithms that will encourage consumer discovery of values-considerate

alternative brands; policymakers can use enduring post-crisis consumer orientation to local/sustainable consumption, to support development goals. Nonetheless, one major weakness remains critical, namely that qualitative data is based on 20 interviews with managers as a source of professional interpretation, and not self-reporting of psychological conditions by the consumers. The behavioral patterns are used to conclude the identity transformation, motivation reorientation, and self-image dynamics; direct consumer research with specific measurements of the self-image dimensions and the motivation orientation is necessary to confirm the psychological processes. Geographic, product category and temporal generalizability also need to be investigated in contexts and over longer periods of time.

Future studies should emphasize the direct measure of consumer psychology by the use of validated self-concept measures and identity brand fit measures; the comparative new market analysis that determines whether Indonesia patterns can be repeated in the other collectivist economies and the temporal tracking that will determine whether local brand gains and emphasis on intrinsic motivation is a completely lasting change or a long run adjustment. This study provides behavioral underpinning that proves that crisis gives opportunities to sustained market restructuring in an emerging market e-commerce setting, companies that reacts authentically to consumer self-image change places them in a position to achieve sustained competitive advantage, and consumer psychology studies are imperative to verify the identity mechanizing this behavioral evidence proposes.

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Author contributions

NSJ contributed to the conception and design of the research, as well as the drafting of the manuscript. Participated in the data analysis and interpretation of the findings. Critically revised the manuscript for intellectual content and provided final approval for the version to be published. MSP Involved in the design and methodology of the study. Contributed significantly to the data analysis and the interpretation of the results. Reviewed the manuscript for important intellectual content and approved the final version for publication. NBM Played a key role in the conception and design of the study, particularly in the application of big data analytics. Provided substantial input in the analysis of transactional data, interpretation of the results, and critical revision of the manuscript. Gave final approval for the version to

be published. All authors agree to be accountable for all aspects of the work and ensure that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

Disclosure statement

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