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The Factors of Brand Reputation in Chinese Luxury Fashion Brands

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Abstract: This study employs an ordinary least squares (OLS) regression approach to investigate the impact of digitalization, innovation, marketing, and social media presence on the brand reputation of Chinese luxury fashion brands listed on the Shenzhen and Shanghai Stock Exchanges from 2012 to 2022. The findings of this study reveal that digitalization, marketing, and social media presence positively influence brand reputation, while innovation negatively affects it, suggesting that certain innovative designs may mislead consumers. Heterogeneity analyses based on fashion cycle, industry group, and firm size further indicate that these factors have varying impacts depending on the brand's specific characteristics. For example, digitalization and social media are more impactful for small-sized and footwear brands, while marketing has a stronger effect on large-sized apparel brands. Policy implications suggest that luxury fashion brands should align their strategies with these findings, particularly by emphasizing digitalization and social media presence to enhance brand reputation, and cautiously approach innovation to align with consumer expectations.

Keywords: luxury fashion brands; digitalization; innovation; marketing; social media presence

1. Introduction

The luxury fashion market of China witnessed substantial growth over the last decade and has now become a critical player in the global luxury fashion industry. As per reports, the market size of the Chinese luxury fashion market was $73 billion in 2020 [1], with expectations of continued growth driven by the increasing purchasing power of Chinese consumers, this market value reached $82.4 billion in 2023, representing an 8.7% annual growth from 2020 to 2023. The Chinese luxury market accounts for 21% of the global luxury industry, making it a critical region for luxury fashion brands to expand their global footprint [2]. This substantial growth of the luxury fashion market underscores the need to understand the dynamics at play, particularly in the apparel and footwear segments, as brands are struggling to gain growth in this lucrative market [3]. Additionally, studies on economic growth patterns in emerging markets and risk assessment using mixed modeling provide new insights for luxury brands' expansion strategies in China [4,5].

In this competitive environment of the luxury fashion market, brand reputation is a key factor that directly influences consumer behavior and brand loyalty. It does not only motivate new customers but also engages the current customer base in the long run [6]. It influences consumer trust and purchase intentions and is thus

considered a vital asset for luxury brands striving to sustain their customers [7]. Chinese consumers increasingly prioritize brands with strong reputations, associating with exclusivity, quality, and heritage [8]. As a result, luxury brands invest in building and maintaining a positive brand reputation to get a competitive advantage in a highly competitive market to ensure long-term success [9], and there can be numerous factors that can help them with these efforts. By adopting evaluation and improvement methods from other industries, luxury brands can enhance operational efficiency and resource management, further boosting their market competitiveness and reputation [10,11].

Among many factors, that can play a substantial role in framing brand reputation, digitalization, innovation, marketing efforts, and social media presence are the most emerging, which could have become the need of every luxury brand to develop and sustain their customers [12]. Digitalization with its transformative role, shapes brand reputation within China's luxury fashion market through developing connections with customers. The widespread adoption of digital technologies revolutionizes the process through which brands interact with customers, and thus offers opportunities to foster brand image and engagement [13]. Digital platforms, particularly customer relationship management (CRM), have become critical in reaching and influencing consumers directly [14]. The integration of digital strategies in brand-building processes enables luxury brands to create more personalized and consistent brand experiences, and thus enhance their reputation among tech-savvy consumers [15]. During their transformation and growth, luxury brands can learn from other industries by leveraging data analytics and customer relationship management to enhance service quality and customer satisfaction [16].

Innovation through research and development (R&D), plays a crucial role in building and maintaining a brand reputation through providing new products and processes, which are innovative in nature and able to get consumers' attention. Brands that consistently innovate their product designs, sustainability practices, customer interaction processes, and customer experiences are positively perceived by consumers in competitive markets [17]. Innovation does not only help to stay relevant in a fast-evolving market, but it also strengthens brand image, which could be highly valued by consumers to sustain their loyalty [18,19]. The innovation focus allows brands to differentiate themselves in a competitive market, attract a loyal customer base, and reinforce their reputation [20]. Luxury brands can draw on research from other industries to enhance customer confidence and brand loyalty through innovative engagement methods, particularly in differentiated and personalized services [21].

Marketing efforts are crucial for every brand in the luxury fashion market as these efforts can help brands to reach customers. In the modern fashion market, there are modern marketing strategies, such as storytelling, influence partnerships, and exclusive events, which are essential to convey a brand's heritage, quality, and status in consumers' minds [22]. Amin, Ghazali [23] argue that marketing campaigns in the Chinese consumer market, are designed to the cultural nuances and market trends to enhance brand reputation and drive consumer engagement for long-term. In a market where consumers have many choices, an effective marketing approach can prove effective in getting high consumer engagement [24], thereby contributing to the brand reputation. Additionally, reducing operational costs and enhancing an eco-friendly image can further strengthen a brand's market appeal and reputation [25,26].

Social media marketing emerges as a personalized marketing tool, which allows brands to directly interact with consumers to know about their changing minds about luxury fashion. In China, platforms like WeChat, Weibo, and Xiaohongshu offer brands tools to engage directly with consumers, share their brand experiences, and thus build a strong and direct connection with consumers [24]. The interactive form of social media enables luxury brands to cultivate a positive reputation by responding to consumer feedback and creating an effective campaign that is tailored to the consumers' feedback [27]. The risks of negative feedback, viral negative content, and misleading communication can also damage a brand's reputation if not managed effectively [28]. Additionally, luxury brands can leverage data analytics and advanced digital tools to better understand customer needs and develop precise social media strategies, increasing their influence and recognition among target audiences [29,30].

Numerous studies examined the factors of brand reputation in various contexts and industries, however,

there remains a gap in understanding the impact of digitalization, innovation, marketing, and social media presence on brand reputation in the Chinese luxury market [1,14,18,24,27]. To address this gap, this study aims to examine the factors within the context of China's luxury apparel and footwear market. Using unbalanced panel data of Chinese luxury fashion brands from 2012 to 2022, this study examines how digitalization, innovation, marketing, and social media presence can influence brand reputation. It contributes to the existing literature by showing how the effects of these factors vary across fast fashion and traditional fashion brands, apparel and footwear brands, and large size and small-sized enterprises.

The remaining of this paper is structured as follows: Section 2 presents the literature review and develops hypotheses of the study; Section 3 covers data, variables of the study, and methodology used in this study; Section 4 presents empirical results; Section 5 concludes the paper and presents policy implications.

2. Literature Review and Hypotheses Development

Brand reputation is the cornerstone of a luxury fashion enterprise, as it reflects the brand's perceived value, exclusivity, and trustworthiness in the eyes of consumers [31]. A strong brand reputation not only differentiates a brand in a crowded market but also drives customer loyalty, which is essential to gain and sustain long-term success. In the luxury sector, where consumers seek not only products but also experiences and status symbols, maintaining an impeccable brand reputation is crucial to preserve the brand's allure and market leadership [32,33]. A firm builds a brand reputation by utilizing different tools and strategies that can aid it in reaching customers and building relationships. Digitalization via the integration of digital technologies in the luxury fashion industry transformed how brands interact with consumers and manage their operations systematically. It includes a range of innovations from customer data analytics to customer relationship management systems, which can support customer acquisition. Hyun, Park [34] state that digital transformation enhances customer engagement and satisfaction in luxury industries as it enables brands to offer personalized shopping experiences. Huang and Benyoucef [35] argue that digital tools including virtual fitting rooms and augmented reality features increase consumer satisfaction by creating a systematic framework of interaction between brand and consumer. Digital innovations improve operational efficiency and create a unique value proposition that could attract tech-savvy consumers [36].

Additionally, digitalization enables luxury brands to extend their reach to the international markets, particularly in those regions where digital consumption is prevalent. Luxury fashion brands integrate digital channels into their marketing and advertising strategies to be better positioned to gain the attention of the young generation [37]. The digital platforms led luxury brands to engage directly with consumers through targeted marketing campaigns [38]. Resource-based view theory postulates the link between digitalization and brand reputation by stating that brands that are engaged in effectively leveraging digital resources could achieve sustainable competitive advantage, and thus enhance their reputation [39]. Drawing on this view, we can postulate this hypothesis:

Hypothesis 1: *Digitalization enhances the brand reputation of Chinese luxury fashion brands.*

Innovation serves as the critical driver for the success of luxury fashion brands through constant product development and the introduction of new designs and technologies – all of which are mandatory to maintain consumer loyalty. Lee and Watkins [40] argue that luxury fashion brands that invest in innovative processes are more likely to resonate with and retain consumers, as innovation is directly associated with the quality and exclusivity of products brands of brands. Palmatier and Sridhar [41] suggest that innovation in customer experience, such as the implementation of omnichannel retailing, enhances customer satisfaction and makes them engaged in the long run. These innovations develop a distinct brand image for a luxury brand in a competitive market and enable them to set new industry dynamics, thereby reinforcing market leadership and brand reputation [42].

The sustainability focus of luxury fashion brands is directly linked to innovation. Brands develop eco-friendly products and processes to meet the growing need for sustainable luxury products through adopting innovations [43]. Luxury brands such as Stella McCartney are pioneers in using sustainable materials and following ethical production practices, which not only enables the company's eco-friendly image but also

fosters its reputation in the industry [44]. The nexus of innovation with brand reputation can be explained through the lenses of the dynamic capabilities framework, which states that a brand's ability to innovate and adapt to the changing market trends is mandatory to maintain its competitive advantage and brand reputation [45]. Based on the aforementioned views, we can propose this:

Hypothesis 2: *Innovation enhances the brand reputation of Chinese luxury fashion brands.*

Effective marketing tactics could enable luxury fashion to communicate its value proposition, build brand equity, and enhance its reputation. Traditional marketing strategies, such as exclusive events, celebrity endorsements, and limited-edition products, could create a sense of desirability and exclusivity for consumers [19]. These strategies reinforce luxury brand's status and resonate with consumers' desire to have unique and prestigious products [46]. Experiential marketing, which involves creating immersive and memorable brand experiences, has become important for luxury brands to build and sustain long-term relationships with consumers. Experiential marketing campaigns, such as pop-up stores and interactive fashion shows, can aid consumers to engage with brands on a deeper level, and thus strengthen their emotional association with the brand and enhance their reputation as well [47].

Furthermore, digital marketing strategies enable luxury fashion brands to reach and engage with a broader consumer audience. Firms utilize marketing tools to have effective and meaningful connections with customers and keep them informed about their current and upcoming products [48]. De Vries, Gensler [49] state that marketing tools allow firms to become aware of the changing needs of the customers thereby guiding the production managers on what attributes of products should be added to get customer satisfaction. It can be said that brand reputation is directly linked to marketing tactics, as firms engaging with marketing tactics can be more exposed to the customers and thus get a high brand reputation. Based on this explanation, we can postulate this hypothesis:

Hypothesis 3: *Marketing tactics positively influence the brand reputation of Chinese luxury fashion brands.*

Social media marketing is an indispensable tool for luxury fashion brands, aimed at building and sustaining brand reputation in the digital age, where all companies bear the pressure to leverage digital tools to get an interactive connection with consumers. The interactive nature of social media platforms helps luxury brands to engage with consumers in real time, create opportunities for direct communication, and get constructive feedback as well [50]. Christodoulides, Jevons [51] underscore the importance of social media marketing to shape brand perception, as it enables brands to create and disseminate narratives to build an overseas audience. Social media platforms such as Instagram, Facebook, YouTube, and Pinterest are particularly effective for luxury fashion brands, as they present visual content and allow brands to showcase their products in a curated and pleasant manner [52]. This visual appeal is crucial for luxury brands, as it reinforces brand image in terms of exclusivity and sophistication.

In addition to this, social media marketing helps luxury brands to tap into the power of influencer marketing, where social media influencers can endorse products and share their usage experience with the followers of brands [53]. It is also argued that influencer endorsements significantly impact consumer perceptions of brand reputation, particularly when influence is perceived as authentic and aligned with the brand's nature as well [54]. Social identity theory comprehensively explains the nexus between social media marketing and brand reputation as it posits that consumers derive part of their identity from brands with, which they are associated [55]. Luxury brands engage in leveraging social media to create a strong and positive brand identity, and thus it can enhance brand reputation and foster customer loyalty. Drawing on these views, we may postulate this hypothesis:

Hypothesis 4: *Social media marketing positively fosters the brand reputation of Chinese luxury fashion brands.*

3. Data, Variables, and Empirical Modeling

3.1. Data

This study uses data from luxury fashion brands, listed on Shenzhen and Shanghai Stock Exchanges. The

sample includes firms in the textile and footwear industry. Firm-level data is directly sourced from CSMAR. We use the sample period of 2012–2022, and the sample size is finalized as: first, we drop the enterprises with partial or special treatment in any year of the sample period, second, we exclude firms with missing values, and final we have the sample of Chinese fashion brands. Our final sample includes Louis Vuitton, Gucci, Chanel, Hermès, Dior, Prada, Burberry, Balenciaga, Saint Laurent, and Fendi with many other companies operating in China. Due to the lack of data availability for the entire sample period, we have unbalanced panel data for this study.

3.2. Variables of Study

3.2.1. Independent Variables

Digitalization (Digit): The firm's digital transformation index is used as the measure of the digitalization of the luxury fashion brands of China.

Innovation (Inov): It is measured as a logarithm of a firm's investment in research and development operations.

Traditional Marketing (Mkt): The logarithm of a firm's marketing expenditures is used as the measure of the traditional marketing variable.

Social media marketing (S_mkt): A luxury fashion brand's total number of followers on social media platforms is used as the measure of social media marketing level for firms.

3.2.2. Dependent Variable

Brand reputation: The logarithm of the firm's net goodwill value is used as the proxy of brand reputation in this study.

3.2.3. Control Variables

Following [38,41,42,47], we use the control variables of fashion brand's tangibility (Tang) measured as the tangibility ratio of the firm, debt to equity ratio (D/E) measured as total liabilities to total shareholders' equity, luxury fashion brand's operating revenue growth (Growth), return on assets ratio (ROA) measured as the net income to total assets of the company, and firm's financial health (Size) measured as the natural logarithm of total assets of fashion brand.

3.3. Empirical Modelling

This study utilized the ordinary least squares (OLS) regression approach to examine the regression effects of independent variables on dependent variables. The empirical models for all four hypotheses will be constructed as:

$$\text{Brand} = \beta_0 + \beta_1 \text{Digit} + \beta_2 \text{Tang} + \beta_3 \text{DE} + \beta_4 \text{Growth} + \beta_5 \text{ROA} + \beta_6 \text{FSize} + \epsilon \qquad (1)$$
$$\text{Brand} = \beta_0 + \beta_1 \text{Inov} + \beta_2 \text{Tang} + \beta_3 \text{DE} + \beta_4 \text{Growth} + \beta_5 \text{ROA} + \beta_6 \text{FSize} + \epsilon \qquad (2)$$
$$\text{Brand} = \beta_0 + \beta_1 \text{Mkt} + \beta_2 \text{Tang} + \beta_3 \text{DE} + \beta_4 \text{Growth} + \beta_5 \text{ROA} + \beta_6 \text{FSize} + \epsilon \qquad (3)$$
$$\text{Brand} = \beta_0 + \beta_1 \text{S\_mkt} + \beta_2 \text{Tang} + \beta_3 \text{DE} + \beta_4 \text{Growth} + \beta_5 \text{ROA} + \beta_6 \text{FSize} + \epsilon \qquad (4)$$

where *Brand* is the brand reputation of luxury fashion brands of China, *Digit* denotes digitalization, *Inov* represents brand innovation, *Mkt* is the traditional marketing effort, *S_mkt* denotes social media marketing, *Tang* denotes firm tangibility, *DE* represents debt to equity ratio, *Growth* is the operating revenue growth, *ROA* denotes return on assets ratio, *FSize* is the firm size, *β* represents regression coefficients, and *ε* denotes standard error.

4. Empirical Results and Interpretation

4.1. Descriptive Results Analysis

The descriptive statistics for all variables are reported in Table 1. The brand has a mean value of 7.4553 with a minimum deviation of 1.0106, which indicates that firms in the luxury fashion industry of China have a strong

brand reputation. Digit has a mean value of 33.0415, while its values range between 23.2689 and 56.1511, which shows that luxury fashion brands have a moderate level of digitalization in their operations. Inov reports a mean value of 7.6000, while its standard deviation is 0.5431 which reflects a minimum deviation in adoption of innovation by the Chinese luxury fashion brands. The mean value for Mkt is 0.0581, reflecting almost 6% of the firm's spending on marketing, which is not a high value. It can be seen that for social media marketing, there is significant spending of the firm, reflected by the mean value of 0.1280. The descriptive statistics for all control variables are in a normal range.

Table 1. Descriptive statistics.

Variable	Observations	Mean	Std. Dev.	Min	Max
Brand	288	7.4553	1.0106	4.1418	9.6334
Digit	288	33.0415	6.8518	23.2689	56.1511
Inov	288	7.6000	0.5431	5.8790	9.1690
Mkt	288	0.0581	0.1258	0.0080	0.2093
S_mkt	288	0.1280	0.1239	0.0063	0.4911
Tang	288	0.9094	0.1042	0.3324	0.9996
D/E	288	0.8201	1.1605	−8.8301	7.6373
Growth	288	1.2224	12.4843	−1.0000	201.6749
ROA	288	0.0581	0.1258	−1.8061	0.2093
Size	288	9.6185	0.4050	8.7871	10.9783

4.2. Correlation Matrix Analysis

The correlation matrix results of this study are reported in Table 2. It is shown that Digit has a positive relationship with Brand, reflected by a correlation coefficient of 0.2822. It indicates a strong and significant relationship between digitalization and brand reputation among Chinese luxury fashion brands. For Inov, it is found that there is a negative relationship exists with a brand reputation as represented by a correlation value of -0.0266. It can be argued that firms engaged in highly innovative designs may not always be welcome by customers, thereby causing a negative relationship. The relationship between Mkt and Brand is found positive as indicated by 0.0796. Similarly, the correlation coefficient between Brand and S_mkt is positive and highly significant, indicating that increased social media presence fosters the brand reputation.

Table 2. Correlation matrix results.

	Brand	Digit	Inov	Mkt	S_mkt	Tang	D/E	Growth	ROA	Size
Brand	1.0000									
Digit	0.2822***	1.0000								
Inov	−0.0266**	−0.0001	1.0000							
Mkt	0.0796*	0.0383	0.0409	1.0000						
S_mkt	0.2588***	0.3719***	0.0225	0.0188	1.0000					
Tang	−0.5789***	−0.2424***	−0.0032	−0.0432	−0.2203***	1.0000				
D/E	0.0885*	−0.0207	−0.0547	−0.0128	−0.1516*	−0.0465	1.0000			
Growth	−0.0507***	0.0725	0.1133	−0.0211	−0.0557	−0.0302	0.0014	1.0000		
ROA	0.0796**	0.0383	0.0409	1.0000	0.0188	−0.0432	−0.0128	−0.0211	1.0000	

Cont.

	Brand	Digit	Inov	Mkt	S_mkt	Tang	D/E	Growth	ROA	Size
Size	0.0770*	0.2763***	0.1551**	0.0609	−0.0915	0.0702	0.1430*	0.1876***	0.0609	1.0000

Note: *, **, and *** denotes the significance level at 10%, 5%, and 1% respectively.

4.3. Baseline Regression Analysis

Table 3 reports the baseline regression results of this study for all variables and empirical models. Column (1) reports the results of model 1 and shows that Digit has a positive impact on Brand as reflected by the regression coefficient of 0.0193. It indicates that with the increased focus of firms on digitalization, there would have been more chances to boost the brand reputation of luxury fashion brands. This finding accepts hypothesis 1, stating the positive impact of digitalization on brand reputation in Chinese luxury fashion brands. Column (2) reports the results for model 2 and shows that there is a negative impact of firm innovation on brand reputation in Chinese luxury fashion brands. In other words, if luxury fashion brands have a greater volume of investments in research and development, they would not be able to get brand loyalty, thereby negatively affecting their reputation. This finding rejects hypothesis 2, which proposes the positive impact of innovation on the brand reputation of Chinese luxury fashion brands.

Table 3. Baseline regression results.

Variable	Brand	Brand	Brand	Brand
	(1)	(2)	(3)	(4)
Digit	0.0193**			
	(2.55)			
Inov		−0.0719*		
		(-1.80)		
Mkt			0.3630***	
			(2.95)	
S_mkt				1.2579***
				(3.16)
Tang	−5.3522***	−5.6954***	−5.6904***	−5.3526***
	(−11.18)	(−12.25)	(−12.25)	(−11.39)
D/E	0.0469*	0.0356*	0.0382*	0.0591
	(2.13)	(1.85)	(1.91)	(1.41)
Growth	−0.0075*	−0.0071*	−0.0074*	−0.0067
	(−1.92)	(−1.80)	(−1.88)	(−1.73)
ROA	0.3552***	0.3730***	0.2540***	0.3523***
	(2.93)	(2.97)	(2.77)	(2.93)
Size	0.2158*	0.3293**	0.3150**	0.3318**
	(1.69)	(2.65)	(2.56)	(2.74)
Intercept	9.5596***	9.9714***	9.5571***	8.9093***
	(7.94)	(7.54)	(7.86)	(7.34)
N	288	288	288	288
Adj R−squared	0.3626	0.3492	0.3501	0.3701

Note: *, **, and *** denotes the significance level at 10%, 5%, and 1% respectively. T-statistic values are reported in parentheses.

Column 3 of Table 3 reports the results of empirical model 3 and shows that Mkt has a regression coefficient of 0.3630. It indicates that marketing has a positive impact on the brand reputation of Chinese luxury fashion brands. Luxury fashion brands that are spending high on marketing expenditures are able to garner a high brand reputation in China. Based on this finding, we can accept our third hypothesis, claiming the positive impact of marketing on brand reputation. Column 4 of Table 3 presents the results of model 4 and shows that S_mkt has a regression coefficient value of 1.2579, reflecting that social media marketing leads brands to become more popular among consumers. In simple terms, a brand that is highly present on social media platforms is able to achieve a high brand reputation in the luxury fashion industry of China. This finding leads us to accept hypothesis 4, which postulates the positive effect of social media marketing on brand reputation.

4.4. Heterogeneity Analysis

In addition to the baseline regression results, we also perform heterogeneity analysis tests to get an insightful understanding of the effects of digitalization, innovation, marketing, and social media presence on brand reputation across various groups of enterprises.

4.4.1. Fast Fashion vs. Traditional Fashion Brands

Luxury fashion brands could be traditional or faster to adopt the trends, and this might influence their different marketing and innovation tactics to garner brand reputation. Fast fashion brands adopt aggressive approaches as they need to follow the changing market trends and meet the customers' needs quickly [56]. Columns (1) to (4) of Table 4 report the results for the fast fashion luxury brands, and columns (5) to (8) report the results for the traditional fashion brands. Traditional fashion brands are not very flexible to make rapid changes in their offerings as they own a long history, renowned for their craftsmanship, timeless appeal, and exclusivity, such as Bosideng, Uma Wang, and Moire in China. Fast fashion brands are flexible to adapt changes; they appeal to consumers seeking rapid style changes, such as Zara and H&M. It is shown that Digit has a greater regression coefficient for fast fashion brands, indicating that fast fashion brands employ digital technologies more effectively to boost the brand reputation. Inov has shown negative regression coefficients for both groups, however, the regression coefficient is significant for only traditional fashion brands. Mkt is found positive and significant for only fast fashion brands, indicating that marketing is leading the fast fashion brands to become more reputed among consumers. For S_mkt, it can be seen that the regression coefficient is relatively higher and more significant for fast fashion brands, which indicates that fast fashion brands are more efficient in leveraging social media marketing tools to achieve a high brand reputation. Overall, the impact of digitalization, marketing, and social media presence is found more positive for fast fashion brands to gain brand reputation.

Table 4. Heterogeneity analysis results: Fast fashion vs. traditional fashion brands.

Variable	Fast Fashion Brands				Traditional Fashion Brands			
	Brand	Brand	Brand	Brand	Brand	Brand	Brand	Brand
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Digit	0.0311***				0.0148**			
	(3.79)				(2.31)			
Inov		−0.1145				−0.0427**		
		(−0.79)				(−2.36)		
Mkt			1.0671**				0.5510	
			(2.25)				(1.25)	
S_mkt				1.9865***				1.7812**
				(2.74)				(2.01)
Control Var.	Included	Included	Included	Included	Included	Included	Included	Included
Intercept	6.2429***	7.8404***	7.3031***	6.7296***	13.5908***	13.3734***	13.1574***	12.8177***

Cont.

	Fast Fashion Brands				**Traditional Fashion Brands**			
	(4.57)	(4.99)	(5.17)	(4.68)	(7.41)	(7.00)	(7.28)	(7.12)
N	120	120	120	120	168	168	168	168
Adj R−squared	0.5535	0.4995	0.5011	0.5099	0.3152	0.3084	0.3121	0.3248

Note: *, **, and *** denotes the significance level at 10%, 5%, and 1% respectively. T-statistic values are reported in parentheses.

4.4.2. Apparel vs. Footwear Brands

Apparel and footwear brands have distinct strategies of innovation, digitalization, marketing, and social media marketing management, so the impact of these strategies could vary on brand reputation in Chinese luxury fashion brands. The apparel luxury brands such as Hermes, Chanel, and Dior are more focused on adopting the customers' changing fashion needs and they adopt those strategies through which can offer more personalized products to achieve high brand loyalty. On the other hand, footwear luxury brands such as Christian Louboutin, Jimmy Choo, and Giuseppe Zanotti, are focused on offering standardized products. Table 5 reports the results of the heterogeneity analysis for the luxury fashion brands of apparel and footwear categories. Columns (1) to (4) of Table 5 show the regression results for Apparel fashion brands and columns (5) to (8) of this table present the results for footwear brands. It can be observed that Digit has a relatively higher impact on brand reputation for footwear fashion brands. The impact of innovation (Inov) is found positive in apparel luxury fashion brands, and negative in footwear fashion brands. It can be said that the apparel industry is more exposed to the benefits of innovation to achieve a better brand reputation. For Mkt, it can be seen that impact is relatively higher for apparel luxury brands, indicating that luxury apparel firms achieve a high brand reputation through their marketing spending. In the same stride, the impact of S_mkt is found positive for both, apparel and footwear fashion brands. Based on these findings, it can be claimed that social media marketing enables a better market reputation for the apparel luxury fashion brands in China.

Table 5. Heterogeneity analysis results: Apparel vs. Footwear brands.

	Apparel				**Footwear**			
Variable	**Brand**	**Brand**	**Brand**	**Brand**	**Brand**	**Brand**	**Brand**	**Brand**
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**
Digit	0.0008				0.0243***			
	(0.07)				(2.90)			
Inov		0.1849*				−0.1706**		
		(1.71)				(−2.36)		
Mkt			1.0688**				0.8462*	
			(2.16)				(1.90)	
S_mkt				4.3290***				0.2581**
				(4.21)				(2.58)
Control Var.	Included	Included	Included	Included	Included	Included	Included	Included
Intercept	10.8411***	9.8772***	10.8416***	9.8582***	11.0188***	12.0919***	11.1366***	10.8907***
	(5.55)	(4.84)	(5.57)	(5.32)	(8.06)	(7.72)	(7.94)	(7.41)
N	145	145	145	145	143	143	143	143
Adj R−squared	0.3866	0.3966	0.3910	0.4564	0.4800	0.4553	0.4520	0.4493

Note: *, **, and *** denotes the significance level at 10%, 5%, and 1% respectively. T-statistic values are reported in parentheses.

4.4.3. Small Sized vs. Large Sized Firms

Firm size is found another critical factor that can influence the capability of a fashion brand to adopt digitalization, innovation, and/or marketing to achieve the brand reputation. Large-sized enterprises have a rigid and static nature, so they might not be able to fully transform their operations to achieve better market results (as shown in Figure 6). On the other side, small-sized firms are more adaptive to the changes in the industry and could be able to achieve a high brand reputation in the industry (1). Digit is found positive and significant only for small-sized enterprises, which indicates that small-sized luxury fashion brands are relatively more focused on adopting digital technologies and framing an effective brand reputation in the industry. Inov has a regression coefficient of -0.1746 for small-sized enterprises, which is found a significant negative factor in impacting brand reputation in luxury fashion brands. Mkt has shown a positive and highly significant regression coefficient for large-sized enterprises. It shows that large-sized firms are more engaged in adopting digitalization, innovation, marketing, and social media marketing to achieve a brand reputation in luxury fashion brands. For S_mkt, it is found that the regression coefficient is relatively higher for small-sized enterprises. It can be argued that small-sized firms are able to achieve a high brand reputation through having a greater presence on social media platforms. Overall, the results show that small-sized enterprises are able to achieve a better market reputation by adopting digitalization and social media presence strategies among luxury fashion brands in China .

Table 6. Heterogeneity analysis results: Large-size vs Small size Firms.

Variable	Large Size				Small Size			
	Brand (1)	Brand (2)	Brand (3)	Brand (4)	Brand (5)	Brand (6)	Brand (7)	Brand (8)
Digit	0.0119				0.0352***			
	(0.99)				(3.49)			
Inov		0.0959				−0.1746**		
		(0.72)				(−2.42)		
Mkt			1.7585***				0.5003	
			(2.55)				(1.36)	
S_mkt				1.1891*				1.4462***
				(1.86)				(2.65)
Control Var.	Included	Included	Included	Included	Included	Included	Included	Included
Intercept	3.7295	3.4463	4.0793	2.9560	8.3893***	6.5616***	5.5030	7.3012***
	(1.43)	(1.26)	(1.58)	(1.12)	(2.90)	(2.21)	(1.91)	(2.52)
N	141	141	141	141	147	147	147	147
Adj R−squared	0.3632	0.3610	0.3633	0.3747	0.4377	0.3974	0.3930	0.4180

Note: *, **, and *** denotes the significance level at 10%, 5%, and 1% respectively. T-statistic values are reported in parentheses.

5. Conclusion and Policy Implications

Using data from Chinese luxury fashion brands listed on the Shenzhen and Shanghai Stock Exchange for the period of 2012–2022, this study examines the impact of digitalization, innovation, marketing, and social media presence on brand reputation. This study employs an ordinary least squares (OLS) regression approach to present the factors of the brand reputation of Chinese luxury fashion brands. The findings of this study show that digitalization, marketing, and social media presence have a positive impact on the brand reputation of Chinese luxury fashion brands. However, the impact of innovation on brand reputation is found negative, reflecting that firms' innovative designs can mislead customers. Additionally, we perform heterogeneity analysis tests based

on the fashion cycle, fashion industry, and firm size. Fashion cycle heterogeneity results show that digitalization, marketing, and social media presence have greater positive effects on brand reputation in Chinese luxury fashion brands. Heterogeneity analysis based on industry groups shows that apparel luxury fashion brands garner greater benefits from marketing and social media presence to achieve brand reputation, while digitalization has a greater contribution to the brand reputation in Chinese footwear luxury fashion brands. Firm size heterogeneity analysis results show that digitalization and social media presence have a greater contribution to the brand reputation of small-sized luxury fashion brands, while marketing has a greater positive influence on the brand reputation of large-sized fashion brands in China.

There are several policy implications presented by this study. First, luxury fashion brands in China must tailor their innovation strategies as per their potential needs to have effective and efficient use of research and development investments to achieve high brand reputation. The innovations without strategic paradigm can lead to increase the cost pressure for luxury brands, potentially leading to ineffective results to gain higher brand reputation in market. In addition to this, rapidly adopting trends can also jeopardize brand reputation, as customers may perceive any delays in following market trends as a failure to meet expectations, resulting in dissatisfaction and thus leading to reduced brand reputation. Second, luxury fashion brands should adopt strategies relevant to digitalization, marketing, innovation, and social media presence, to their specific industry segment, fashion cycle, and firm size to avoid any capacity loss. Third, policymakers should promote investments in digitalization and social media presence, as they both found the most effective tools to promote the brand reputation of Chinese luxury fashion brands. Fourth, luxury fashion brands need to adopt a data-driven approach, which could be essential to sustaining the competitive edge and getting a strong market presence. Finally, policymakers should understand the changing market dynamics to frame their strategies as per their potential needs to achieve better market outcomes.

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