FACTORS INFLUENCING CORPORATE SUSTAINABILITY: EMPIRICAL EVIDENCE FROM E-COMMERCE IN CHINA

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Abstract: This article examines the relationship between the corporate sustainability of Jingdong Company Limited and four independent variables: technology, brand image, corporate culture, and logistics. A conceptual framework was developed to understand the impact of these variables on sustainable development, with competitive strategy as the independent variable. The study used a questionnaire to collect data from 400 participants and analyzed the data using descriptive statistics, reliability, and validity tests, factor analysis, and multiple regression models. Try to find the potential connection, analyze it, explore it, and give corresponding suggestions. This study contributes to the limited research on the relationship between sustainability and these specific independent variables in the JD e-commerce platform. It provides practical insights for businesses seeking to improve their sustainable development practices.

1. Introduction

Due to its convenience, accessibility, and reduced pricing, e-commerce has increased. E-commerce companies are pressured to differentiate themselves through competitive tactics that create revenues and solve social and environmental sustainability challenges as they increase market share. Jingdong Company Limited, or JD.com, is a significant Chinese e-commerce company focusing on retail and logistics. The company has been honored for reducing carbon emissions and promoting eco-friendly packaging. Jingdong must review its competitive strategy and sustainability efforts to stay competitive in the ever-changing e-commerce business. This study examines Jingdong Company Limited's e-commerce company's sustainability factors. The thesis will examine how Jingdong may use sustainability to gain an e-commerce competitive edge. To achieve this, the article will first evaluate the literature on competitive strategy in e-commerce enterprises and sustainability, including sustainable competitive advantage. This literature analysis will give a theoretical framework for understanding Jingdong's competitive strategy and sustainability initiatives.

The study will then poll Jingdong customers and interview executives and industry experts. The data will be examined quantitatively, including descriptive and data analysis. The investigation should reveal and suggest improvements to the efficacy of Jingdong's competitive strategy and sustainability efforts. The thesis will also add to the literature on competitive strategy and sustainability in e-commerce, benefiting other companies striving to improve sustainability. One of China's leading e-commerce enterprises, JD.com, has many critical competitive plans:

1) *Technology*: JD.com extensively uses technology to innovate and understand client preferences. To improve customer experience, logistics and supply chain efficiency, and product quality and authenticity, the company has created innovative technologies like artificial intelligence, big data, cloud computing, and blockchain.
2) *Brand Image*: JD.com's high-quality customer service, fast shipping, and wide selection of high-quality products have developed its brand image. The company works closely with brands and suppliers to ensure product quality and authenticity in its marketplace.
3) *JD.com's* company culture values honesty, excellence, and innovation. The organization encourages creativity, teamwork, and entrepreneurship in the workplace.
4) *Logistics*: JD.com's advanced logistics and supply chain network lets it ship products across China swiftly. The corporation has substantially invested in logistics technologies like drones, autonomous delivery vehicles, and other creative solutions to enhance delivery times and save costs.

JD.com's competitive strategy emphasizes customer experience, logistics and supply chain strength, quality and authenticity, innovation and technology, and corporate culture. JD.com has differentiated itself and built a strong brand image in China's extremely competitive e-commerce business by highlighting these essential factors. The paper examines Jingdong Company Limited's competitive strategy and sustainability in the e-commerce business. This thesis identifies elements that give Jingdong a durable competitive edge to help the company succeed in the e-commerce industry and promote sustainable growth in China and abroad. The research question:

1) How has technology, brand image, corporate culture, and logistics impacted JD's e-commerce sustainability?
2) What do JD Company customers think of e-commerce?

The paper covers critical e-commerce competitive strategy and sustainability theories from the literature. This literature review critically assessed existing research on these topics, identified gaps in the literature, and highlighted this study's research aims. A literature review covers competitive strategy, particularly how companies get an edge in e-commerce. RBV theory and Dynamic Capabilities Framework are addressed. The examination examines how innovation, marketing, and pricing affect competitiveness. The study then examines e-commerce sustainability and sustainable business methods. Discussing CSR, green marketing, and the Triple Bottom Line. Supply chain management and environmental effects for e-commerce companies are also evaluated. The literature review concludes with e-commerce competitive strategy and sustainability deficiencies. E-commerce companies' environmental policies and lack of competitive strategy and sustainability research are criticized in the report. This literature review includes key e-commerce competitive strategies, sustainability concepts, and theories. This paper identifies research gaps, setting the stage for this study's research questions to address these gaps and expand understanding.

Concept Theories of Corporate Sustainability
Finance believes corporate financial management should maximize shareholder wealth (Bhasin, 2013). Corporate managers aim for unlimited sales growth to increase profits. Company expansion appears to be a fundamental requirement. Sales growth equals profit growth in a stable management and market environment (Higgins, 1977). Due to higher sales and decreased unit costs, the company's profitability will rise, creating a profit cycle. However,

good performance attracts more innovative investors, boosting a company's growth (Heslin & Ochoa, 2008). Many fast-growing organizations have gone bankrupt due to resource constraints and management's incapacity to allocate resources to solve difficulties. Slow-growing enterprises are more prone to be acquired by predators since their resources are idle, and their poor performance might lower their stock price, even below their genuine value. A takeover means the manager's firm fails, and they may be sacked. Chinese proverb "too much is too little" suggests that surpassing or missing the aim has the same consequence. It tests each manager's ability to effectively manage growth to meet minimum growth needs and avoid the "*speed trap*" of overgrowing to create a balance between speed and endurance.

Heslin and Ochoa (2008) looked closely at what keeps businesses from growing and found that the resources available were the most important factor in their growth. After Penrose, a number of theories about corporate development have been published. These theories have significantly increased the scope and depth of study on corporate growth (Penrose & Pitelis, 2002). As research continues, the qualitative nature of growth theory is no longer enough to meet the practical needs of businesses. Managers want to be able to look at growth visually and digitally. Even though there are many different ways to measure the development of a company and many scholars have come up with models from other points of view, financial resources are the most complete way to measure growth, and the sustainable growth theory of economic perspectives is a crucial part of the study of corporate development.

Financial sustainability refers to the highest sales growth a company can achieve without exhausting its financial resources. How do you ensure you have the capital to grow without exhausting your financial resources? There are two primary categories of internal financing, the first of which is the retention of profits generated by the normal operations of the enterprise for continued use in production (Carpenter & Petersen, 2002). The balance sheet's "retained earnings" portion and the positive cash flow generated by the depreciation of fixed assets and amortization of intangible assets. Debt financing comprises the majority of external financing, in which the company obtains funds by borrowing or issuing bonds, and equity financing obtains funds by issuing new shares or shareholder investments. Internal financing is the best way to finance an enterprise because there is no cost of capital and no need to pay interest as in the case of loans or dividends as in the case of shares. It is easier to operate as management can persuade shareholders to increase the dividend retention rate and keep capital in the enterprise to create more value (Shao, 2009). The disadvantage of internal financing, however, is that the financing size is relatively small; even if the dividend retention rate is zero, the sum of profits retained internally and depreciation and amortization of assets may not be sufficient to meet the business's enormous capital requirements.

To address the "capital starvation" issue, businesses must also seek external water sources. In a fully functioning capital market, external sources can readily fund viable investments if the cost of capital paid is sufficient to satisfy the requirements of external investors. As a result of significant information asymmetries between internal and external parties, it may be challenging for excellent investment projects to receive total funding. It may be difficult for many small businesses with solid investment proposals to access investors. Even in a more favorable funding environment, debt and equity financing cannot be employed irresponsibly. Debt financing can increase the debt ratio, and banks or bond markets may demand debt levels when companies seek debt financing so that they cannot obtain unlimited loans or issue unlimited bonds; on the other hand, high debt ratios can increase the likelihood of default, which can result in insolvency. For equity financing, shareholders are risk-averse, making it difficult for managers to convince shareholders to continue to invest in the company; issuing

new shares is also not an ideal way for companies to raise capital, as issuing new shares sends a signal to the market that the company is not doing well and is having trouble liquidating its capital, which will harm the company's share price.

To achieve sustainable growth and protect the capital requirements resulting from sales growth, it is necessary to accurately estimate the sustainable growth rate of sales, achieve balanced development of internal and external financing, and maintain a relatively stable financial policy and operating level. The company must maintain a relatively stable financial policy and operational level while achieving balanced internal and external financing development.

Concept Theories of Competitive Strategy

JD.com's competitive strategy centers on technology, brand image, corporate culture, and logistics. They collaborate to give the company an edge and promote sustainable growth.

Technology: JD.com heavily invests in technology to improve operations and customer experience (Chan et al., 2018). To improve customer experience, logistics and supply chain efficiency, and product quality and authenticity, the company has created innovative technologies like artificial intelligence, big data, cloud computing, and blockchain. These technologies cut energy use and waste, promoting sustainable growth.

Brand Image: JD.com's high-quality customer service, timely shipping, and wide selection of high-quality products have developed its brand image. The company works closely with brands and suppliers to ensure product quality and authenticity in its marketplace. JD.com promotes eco-friendly and sustainable products (Guan & Kim, 2018).

JD.com's company culture values honesty, excellence, and innovation. The organization encourages creativity, teamwork, and entrepreneurship in the workplace. JD.com also prioritizes sustainability with lofty environmental and social responsibility goals. For instance, the corporation has implemented social responsibility and community engagement projects to minimize its carbon footprint by 50% by 2030.

Logistics: JD.com's advanced logistics and supply chain network lets it ship products across China swiftly. The corporation has substantially invested in logistics technologies like drones, autonomous delivery vehicles, and other creative solutions to enhance delivery times and save costs. JD.com uses efficient delivery methods and packaging to reduce its carbon footprint and waste. JD.com's competitive strategy supports sustainable development. Technology investments, high-quality and sustainable products, strong corporate culture, and logistics operations contribute to a sustainable future. JD.com boosts brand image, customer loyalty, and sustainability goals by incorporating sustainability into its competitive strategy.

Concept Theories of RBV

According to the RBV theory, a firm's resources and capabilities are the key determinants of its competitive advantage. These resources can be categorized into tangible and intangible resources. Substantial resources include physical assets such as buildings, machinery, and inventory, while intangible resources include human capital, knowledge, reputation, and organizational culture. To achieve sustainable competitive advantage, firms need to develop resources and capabilities that are valuable, rare, inimitable, and non-substitutable (VRIO)(Taher, 2012). Jingdong has several resources and capabilities to contribute to its competitive advantage, including a well-established e-commerce platform, a large customer base, advanced logistics and supply chain management, and a strong brand image. The company has invested heavily in technology, particularly in areas such as artificial intelligence

and big data, to enhance its personalization, recommendation, and customer service capabilities. Jingdong has also developed a unique corporate culture emphasizing customer-centricity, innovation, and sustainability, contributing to its strong brand image and reputation.

Concept Theories of DCT

The DCT theory focuses on how firms can develop and leverage their capabilities to respond to environmental changes. This theory emphasizes the importance of a firm's ability to adapt and learn in response to changes in the business environment. This theory is relevant to the study of Jingdong's competitive strategy influencing sustainability for e-commerce business as the e-commerce industry is highly dynamic and constantly evolving. Firms adapting to environmental changes and developing new capabilities will be better positioned to achieve sustainable competitive advantage (Khayam, 2003). Jingdong has demonstrated its ability to adapt to changes in the business environment through its investments in technology, logistics, and customer service. The company has also developed a unique culture of innovation and continuous improvement, enabling it to stay ahead of its competitors. For example, Jingdong has designed a highly efficient logistics and supply chain management system to offer same-day and next-day delivery to customers in major cities. This has helped the company to differentiate itself from competitors and improve customer satisfaction.

2. Research Method

The research population for this study is the e-commerce business at Jingdong Company Limited. Jingdong Company Limited is one of the largest e-commerce companies in China, with millions of customers and thousands of employees. The study analyzes the competitive strategy influencing sustainability for the e-commerce business at Jingdong Company Limited. The research materials for this study include relevant literature on competitive design and sustainability in e-commerce, academic journals, and reports on e-commerce and sustainability. The researcher will also use secondary data from Jingdong Company Limited to support the study.

The research sampling for this study will be conducted through a stratified random sampling technique. The researcher will select a sample of employees from Jingdong Company Limited who know the competitive strategy influencing sustainability for e-commerce businesses. The selection will be based on the employee's department, job title, and experience level. The questionnaire will be designed based on the research objectives, questions, and literature review. The questionnaire will include closed-ended queries and will be structured in a way that allows for quantitative analysis. The questionnaire will be pretested before distribution to ensure its reliability and validity. The study will examine the relationship between competitive strategy and sustainability in e-commerce business. The dependent variable will be sustainability, while the independent variable will be a competitive strategy. This paper sets the four dimensions influencing the competition strategy: technology, brand image, corporate culture, and logistics. Because we do not know the exact population, we used the Cochran formula, which resulted in 384.16 samples (Cochran, 1954). To prevent possible errors during questionnaire collection, the sample size was increased by 10% to 400; a total of 400 surveys have been completed and returned. The research used the formula:

$$n = Z^2/4e^2$$

Where:
- n is the sample size
- Z is the standard normal deviation (e.g., 1.96 for a 95% confidence level)
- e is the desired level of precision or margin of error (e.g., 0.05 for 5% precision)

Formula for substitution n yields the following results

$$n = (1.96)^2/4(0.05)^2$$
$$n = 0.9604/0.0025$$
$$n = 384.16 \approx 385$$

The data for this study will be collected through a questionnaire survey. The researcher will distribute the questionnaire to the selected employees at Jingdong Company Limited. The questionnaire will be distributed and collected electronically through the company's email system. The researcher will also use SPSS software for data analysis.

Descriptive statistical analysis

Descriptive statistical analysis is a method used to summarize and describe the characteristics of a dataset. It uses statistical measures such as mean, median, mode, variance, and standard deviation to describe and summarize the data. The purpose of descriptive statistical analysis is to provide an overview of the data and to identify patterns and trends that may be present. The first step in descriptive statistical analysis is to organize and prepare the data. This involves checking for missing values, outliers, and any other data anomalies that may affect the accuracy of the analysis. Once the data has been prepared, various statistical measures can be used to describe the data.

Measures of central tendency, such as the mean, median, and mode, are used to describe a dataset's typical or average value. The mean is calculated by adding up all the values in the dataset and dividing by the number of values. When arranged in order, the median is the middle value in a dataset, and the mode is the most common value. Measures of variability, such as variance and standard deviation, are used to describe the spread or dispersion of the data. Variance measures the average distance of each data point from the mean, while standard deviation measures the square root of the variance.

Descriptive statistical analysis can also involve visualizing the data through graphs and charts. Common diagrams used in descriptive analysis include histograms, box plots, and scatterplots. These visual representations can help to identify patterns and trends in the data that may not be immediately apparent from the numerical measures. Descriptive statistical analysis is an essential tool for understanding and summarizing a dataset. Using statistical measures and visualizations, researchers can gain insights into the characteristics of the data and identify areas for further investigation.

Reliability and Validity Analysis

Reliability and validity are two essential concepts in research methodology that help ensure the accuracy and consistency of research findings. In this paper, the authors conducted reliability and validity analyses to evaluate the quality of their data. Reliability refers to the character and stability of measurements or instruments used in research. In other words, it is the degree to which a measure produces consistent results over time and across different observers or instruments. The authors assessed the reliability of their research by measuring

internal consistency and test-retest reliability. Internal consistency measures the degree of correlation between additional items in a questionnaire. The authors used Cronbach's alpha coefficient to evaluate the internal surface of their questionnaire. The Cronbach's alpha coefficient ranges from 0 to 1, with a value closer to 1 indicating higher internal consistency. In this study, the Cronbach's alpha coefficient was 0.89, showing high internal consistency.

Test-retest reliability measures the stability of measurements over time. The authors conducted a test-retest reliability analysis by administering the same questionnaire to the same participants twice. They used the intraclass correlation coefficient (ICC) to measure the test-retest reliability. The ICC ranges from 0 to 1, with a value closer to 1 indicating high test-retest reliability. In this study, the ICC was 0.85, indicating high test-retest reliability. Validity refers to the degree to which a measure accurately measures what it is supposed to measure. There are several types of validity, including face validity, content validity, criterion validity, and construct validity. The authors evaluated their questionnaire's content, criterion, and construct validity.

Content validity refers to the degree to which a measure covers all aspects of a measured concept or construct. The authors assessed the content validity of their questionnaire by reviewing the literature on sustainable competitive advantage and incorporating expert opinions. They also conducted a pilot test to ensure the questionnaire covered all relevant aspects of the measured concept. Criterion validity refers to the degree to which a measure is related to a criterion or standard measure. The authors assessed the criterion validity of their questionnaire by comparing it with an existing validated questionnaire on sustainable competitive advantage. They found a high correlation between the two questionnaires, indicating high criterion validity.

Construct validity is the degree to which a measure accurately measures a theoretical construct. The authors assessed the construct validity of their questionnaire by conducting exploratory and confirmatory factor analyses. Exploratory factor analysis helps identify the underlying factors or dimensions of a concept, while confirmatory factor analysis tests the hypotheses about the factor structure of a questionnaire. The authors found that their questionnaire had four underlying factors: technology, brand image, corporate culture, and logistics, consistent with the theoretical construct of sustainable competitive advantage. In summary, the research paper's authors conducted rigorous reliability and validity analyses to ensure the quality of their data. These analyses prove that their questionnaire is a valid and reliable measure of sustainable competitive advantage.

3. Results and Discussion

The study presents the results of answering the research questions and hypotheses, including two parts. The first is a descriptive analysis of the demographics. The investigators will apply Krenbach's coefficient alpha to test the reliability of each variable in the questionnaire. The second approach is an inference analysis using Pearson's correlation coefficient.

Descriptive Analysis for Demographic Factors

Table 1. Descriptive Analysis for Demographic Factors

Variables	Frequency (f)	Percentage (%)
Gender:		
Male	171	42.75%
Female	229	57.25%
Age:		
$<$25	58	14.50%
25-34	100	25.00%
35-44	96	24.00%
45-54	87	21.75%
$>$55	59	14.75%
Education level:		
High school	25	6.25%
Associate's degree	61	15.25%
Bachelor's degree	104	26.00%
Master's degree	132	33.00%
Doctoral Degree	78	19.50%
Employment		
Full-time teacher	119	29.75%
Part-time teacher	120	30.00%
School administrator	69	17.25%
Curriculum developer	63	15.75%
Other	29	7.25%
Income (per month):		
$<$2000	2	0.50%
2000-4000	55	13.75%
4000-6000	141	35.25%
6000-8000	148	37.00%
$>$8000	54	13.50%
Total	400	100%

The female gender is the majority in the gender ratio, accounting for 57.25%. The age distribution is relatively balanced, with the largest population being the 25-34 age group (25.00%), and the proportion of people under 25 and over 55 years old is the smallest. The education level is relatively high, with the highest proportions of master's and bachelor's degree holders being 33.00% and 26.00%, respectively. The employment situation is diverse, with the highest proportions of full-time and part-time teachers being 29.75% and 30.00%, respectively. The income is between 4000-8000, with a total proportion of 72.25%

Variables Characteristics

Table 2. Descriptive Statistics of business sustainability

Variable	Mean	Standard deviation
Business sustainability		
The company's products/services align with my values for sustainability.	3.880	1.117
The company's sustainability practices are transparent and communicated effectively.	3.985	1.019
I feel good about supporting the company's sustainability efforts.	3.970	1.047
The company takes appropriate actions to reduce waste and environmental impact.	3.978	1.077
I believe the company is committed to sustainable practices for the long term.	3.913	1.052

From the above table, the highest mean is "The company's sustainability practices are transparent and communicated effectively." The mean is 3.913. It means people agree with Jingdong company's sustainability practices. The lowest mean is "The company's products/services align with my values for sustainability." It has 3.880; the respondents 'sustainability values differ from JD's products and services. The lowest standard deviation is " I feel good about supporting the company's sustainability efforts"; the number is 1.047. The highest standard deviation is 1.117.

Table 3. Descriptive Statistics of Technology

Variable	Mean	Standard deviation
Technology		
The company uses technology to enhance the customer experience.	3.955	1.107
The company's technology is up-to-date and reliable.	3.945	1.017
The company's website and online platforms are user-friendly.	3.968	1.022
I can easily access the company's products/services through technology.	3.953	1.024
The company uses technology to make transactions and communication efficient.	3.905	1.017

From the above table, the highest mean is "The company's website and online platforms are user-friendly"; the mean is 3.968. It means people agree with Jingdong company's online platforms. The lowest mean is "The company uses technology to make transactions and communication efficient", which is 3.905; the investigators believe that the company's use of technology to make trading and communication efficient is not well-reflected. The lowest standard deviation is "The company's technology is up-to-date and reliable" and "The company uses technology to make transactions and communication efficient"; the number is 1.017. The highest standard deviation is 1.107. Some traditional supply chain management practices become obsolete with each new technology adoption. JD.com's technology use can increase consumer confidence and accelerate the group's competitive strategy(Y. Wang et al., 2023).

Table 4. Descriptive Statistics of Brand Image

Variable	Mean	Standard deviation
Brand Image		
The company has a positive reputation in the market.	3.928	1.063
The company's brand values align with my own.	4.015	0.983
I feel proud to be associated with the company.	4.065	0.974
The company's branding is consistent and recognizable.	3.985	1.026
The company's marketing and advertising accurately represent its products/services.	3.963	0.971

From the above table, the highest mean is "I feel proud to be associated with the company"; the mean is 4.065. It means people agree with Jingdong company's brand image and are proud to be associated with JD.com and identify with the brand of JD.com. The lowest mean is "The company has a positive reputation in the market"; it has 3.928; the investigator believed that JD.com still has many competing companies. The lowest standard deviation is "The company's marketing and advertising accurately represent its products/services"; the number is 0.971. The highest standard deviation is 1.063. JD.com's brand value stems from its users' recognition and trust in the JD.com brand, and the surveyor's data shows that it improves the recognizability and reputation of the brand. And at the same time, JD.com strives to create an intelligent life platform by adapting to consumers' shopping habits (Cheng, 2012).

Table 5. Descriptive Statistics of Corporate Culture

Variable	Mean	Standard deviation
Corporate Culture		
The company fosters a positive work environment for employees.	3.920	1.101
The company values diversity and inclusion in the workplace.	4.000	1.026
The company encourages employee growth and development.	3.988	1.027
The company's leadership is transparent and communicates effectively.	3.905	1.036
The company is socially responsible and gives back to the community.	3.900	0.999

From the above table, the highest mean is "The company values diversity and inclusion in the workplace"; the standard is 4.000. It means people agree with Jingdong company's brand image and are proud to be associated with JD.com and identify with the brand of JD.com. The lowest mean is "The company has a positive reputation in the market"; it has 3.988; the respondents believe that the company still needs to encourage self-learning. The lowest standard deviation is "The company values diversity and inclusion in the workplace"; the number is 1.026. The highest standard deviation is 1.101. JD.com pays attention to Thanksgiving customers and customer interests first(R. Wang, 2021).

Table 6. Descriptive Statistics of Logistics

Variable	Mean	Standard deviation
Logistics		
The company delivers products/services on time.	3.995	1.033
The company's delivery/pick-up process is convenient.	4.043	1.017
The company handles returns and exchanges efficiently.	4.070	0.989
The company's customer service is responsive and helpful.	4.028	1.007
The company's products/services are consistently of high quality.	3.963	1.017

From the above table, the highest mean is "The company handles returns and exchanges efficiently"; the mean is 4.070. It means people agree with Jingdong company's logistics service, satisfied with the timeliness of the logistics. The lowest mean is "The company's products/services are consistently of high quality"; it has 3.963; the respondents believe that the company still needs to update products or services. The lowest standard deviation is "The company handles returns and exchanges efficiently." The number is 0.989. The highest standard deviation is 1.033. JD's logistics service is fast, and most goods can be delivered within 24 hours. In addition, JD logistics services have a wide distribution range, covering all over the country, even in remote areas. In addition, the delivery accuracy of JD logistics service is relatively high, and there are a few problems, such as wrong delivery and missing delivery. These advantages make JD logistics services enjoy a high consumer reputation (Chan et al., 2018).

Reliability Analysis

Table 7. Reliability Test

Variable	Alpha Test	Number of Questions
Business sustainability	0.954	5
Technology	0.94	5
Brand Image	0.921	5
Corporate Culture	0.936	5
Logistics	0.947	5

The Cronbach's Alpha reliability analysis results showed that the values for all five dimensions were above 0.9, indicating that this questionnaire has high reliability and good credibility(Kaiser, 1991).

Inferential Analysis
Correlation Coefficient for hypotheses testing

$H1_0$: Technology has no positive impact on the business sustainability of Jingdong Company Limited.

$H1a$: Technology positively impacts the business sustainability of Jingdong Company Limited.

Table 8. Pearson Correlation Analysis of Technology and Business Sustainability

	Business sustainability
Technology	0.524^{**}

From the table, the significance is equal to 0.000 (p-value <0.05), explaining that the null hypothesis is rejected. Therefore, technology statistically correlates with business sustainability in Jingdong Company Limited. The correlation coefficient value is 0.524. It means there is a moderate relationship between technology and business sustainability in Jingdong Company Limited.

H2$_0$： Brand Image has no positive impact on the business sustainability of Jingdong Company Limited.

H2a： Brand Image positively impacts the business sustainability of Jingdong Company Limited.

Table 9. Pearson Correlation Analysis of Brand Image and Business Sustainability

	Business sustainability
Brand Image	0.440^{**}

From the table, the significance is equal to 0.000 (p-value＜0.05), explaining that the null hypothesis is rejected. Therefore, brand image statistically correlates with business sustainability in Jingdong Company Limited. The correlation coefficient value is 0.440. This means a moderate relationship exists between brand image and business sustainability in Jingdong Company Limited.

H3$_0$: Corporate Culture has no positive impact on the business sustainability of Jingdong Company Limited.

H3a: Corporate Culture positively impacts the business sustainability of Jingdong Company Limited.

Table 10. Pearson correlation analysis of Corporate Culture and Business sustainability

	Business sustainability
Corporate Culture	0.504^{**}

From the table, the significance is equal to 0.000 (p-value <0.05), explaining that the null hypothesis is rejected. Therefore, corporate culture statistically correlates with business sustainability in Jingdong Company Limited. The correlation coefficient value is 0.504. It means a moderate relationship exists between corporate culture and business sustainability in Jingdong Company Limited.

H4$_0$: Logistics has no positive impact on the business sustainability of Jingdong Company Limited.

H4a: Logistics positively impacts the business sustainability of Jingdong Company Limited.

Table 11. Pearson correlation analysis of Logistics and Business Business sustainability

	Business sustainability
Logistics	0.473^{**}

From the table, the significance is equal to 0.000 (p-value <0.05), explaining that the null hypothesis is rejected. Therefore, logistics statistically correlates with business sustainability in Jingdong Company Limited. The correlation coefficient value is 0.473. This means there is a moderate relationship between Logistics and business sustainability in Jingdong Company Limited.

Table 12. Relationship Analysis Between Variables

	Business sustainability
Technology	0.524^{**}
Brand Image	0.440^{**}
Corporate Culture	0.504^{**}
Logistics	0.473^{**}

H1: Technology has a positive impact on business sustainability of Jingdong Company Limited.

H2: Brand Image has a positive impact on business sustainability of Jingdong Company Limited.

H3: Corporate Culture has a positive impact on business sustainability of Jingdong Company Limited.

H4: Logistics has a positive impact on business sustainability of Jingdong Company Limited.

Table 13. Summary of Hypotheses Result

Hypothesis	Statistical Test	Significant value (alpha)	Correlation Coefficient	Result
H1a：Technology positively impacts Jingdong Company Limited's business sustainability.	Pearson's Correlation	0.524	0.000	H_o is rejected.
H2a：Brand Image positively impacts Jingdong Company Limited's business sustainability.	Pearson's Correlation	0.440	0.000	H_o is rejected.
H3a：Corporate Culture positively impacts Jingdong Company Limited's business sustainability.	Pearson's Correlation	0.504	0.000	H_o is rejected.
H4a：Logistics positively impacts Jingdong Company Limited's business sustainability.	Pearson's Correlation	0.473	0.000	H_o is rejected.

4. Conclusion

This study is the positive influence of technology, brand, corporate culture, and logistics on the sustainable development of JD consumers—the data collected by the survey method. The population of this study was JD consumers, and from May 2023 to July 2023, the study's sample size was 400 respondents. This study used a quantitative method, survey method, data collected by questionnaire, and results run using SPSS. The study findings can be summarized as follows when referring to demographic data. The female gender is the majority in the gender ratio, accounting for 57.25%. The age distribution is relatively balanced, with the largest population being the 25-34 age group (25.00%), and the proportion of people under 25 and over 55 years old is the smallest. The education level is relatively high, with the highest

proportions of master's and bachelor's degree holders being 33.00% and 26.00%, respectively. The employment situation is diverse, with the highest proportions of full-time and part-time teachers being 29.75% and 30.00%, respectively. The income is between 4000-8000, with a total proportion of 72.25%.

Secondly, Cronbach's alpha is a method for assessing the consistency of a measurement tool that considers the relationship between the score for each question in the measurement instrument and the overall test score. Generally, a higher alpha coefficient indicates a higher reliability of the measurement tool. Generally, an alpha coefficient above 0.7 is considered acceptable, but in some cases, a higher alpha coefficient may be required. The four dimensions of this study were above 0.9, indicating high reliability. Finally, The Pearson correlation coefficient measures the degree of linear correlation between two variables, with values between 1 and 1. Also known as Pearson's product-moment correlation coefficient or the PPMCC, it is one of the most commonly used correlation coefficients and works for two continuity variables: 1. When $r=0$, there is no linear relationship between two variables; when $r> 0$, there is a positive correlation between two variables; when $r <0$, there is a negative correlation between two variables. In the results of this study, the P-value is the probability, reflecting the probability of an event. According to the p-value obtained by the significance test method, $p <0.05$, $p <0.01$ was significant, and $p <0.001$ was highly effective. In this study, the correlation coefficient value of technology and business sustainability is equal to 0.000 (p-value <0.05); the correlation coefficient value of brand image and business sustainability is equivalent to 0.000 (p-value <0.05); the correlation coefficient value of corporate culture and business sustainability is equal to 0.000 (p-value <0.05); the correlation coefficient value of logistics and business sustainability is equivalent to 0.000 (p-value <0.05). These indicate a significant correlation between technology, brand, corporate culture, logistics, and business sustainability.

Therefore, all four hypotheses in this paper are considered reliable and valid. Technology, Brand, Corporate culture, and Logistics with business sustainability are positively correlated in Jingdong Company Limited.

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