



**MARKETING STRATEGY OF POWER QUALITY PRODUCTS IN  
THE CHINESE MARKET**

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**AN INDEPENDENT STUDY SUBMITTED IN PARTIAL FULFILLMENT  
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**MARKETING STRATEGY OF POWER QUALITY PRODUCTS IN  
THE CHINESE MARKET**

**Thematic Certificat**


**To  
LI YUAN**

This Independent Study has been Approved as a Partial Fulfillment of the  
Requirement of International Master of Business Administration in International  
Business Management

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**Title:** Marketing Strategy of Power Quality Products in the Chinese Market

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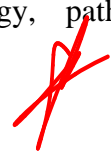
### ABSTRACT

Chinese companies have significantly changed their marketing strategies, and proper product branding strategies and marketing mix are the key to success. Manufacturers need to create a profitable and marketable business by setting appropriate branding strategies and evaluating channels to enter the market with proper channel strategies. Distributors should implement a competitive advantage to help manufacturers achieve higher sales and improve channel performance.

The power quality product industry is one of the world's most famous power electronics industries. The compatibility of power quality products and power electronics technology can create momentum in China's power distribution market. With the rapid development of power quality products and fierce competition, manufacturers should work with distributors for a high-profit margin to bring the brand strategy and marketing mix into play. To achieve high-profit margins, manufacturers should work with channel operators to implement brand strategy and marketing mix to create high brand performance. This study used a theoretical framework of brand strategy and marketing compound developed through the literature, integration of past scholars' works, related research, and the study of consumers in China's electric energy quality industry. The study found that brand strategy significantly impacts brand performance through a variety of channel strategies and promotion strategies. The research found that brand strategy had a positive impact on both channel strategy and promotion strategy, and channel strategy had a positive effect.

This study used the power of quality product distributors as the empirical object to explore the relationship between variables and develop marketing strategies for the industry's reference, hoping to contribute to brand and channel strategies and channel strategy formulation.

**Keywords:** brand strategy, pathway strategy, promotion strategy, pathway performance



## Declaration

*I, Li Yuan, hereby certify that the work embodied in this independent study entitled “Marketing Strategy of Power Quality Products in the Chinese Market” is result of original research and has not been submitted for a higher degree to any other university or institution.*



(Li Yuan)  
Jan 5, 2022



## **ACKNOWLEDGEMENTS**

I have been associated with marketing since I was in college, and I am glad that I can continue to learn and absorb information in the field of marketing in graduate school. During these two years of graduate school, I have gained a deeper understanding of the actual marketing knowledge and had the opportunity to learn a lot of practical knowledge. In addition, I have learned to think logically and thoroughly, which is a priceless asset to me.

I am very fortunate to have a group of good friends to share my joys and sorrows with and to cheer me on during my two years at Siam University.

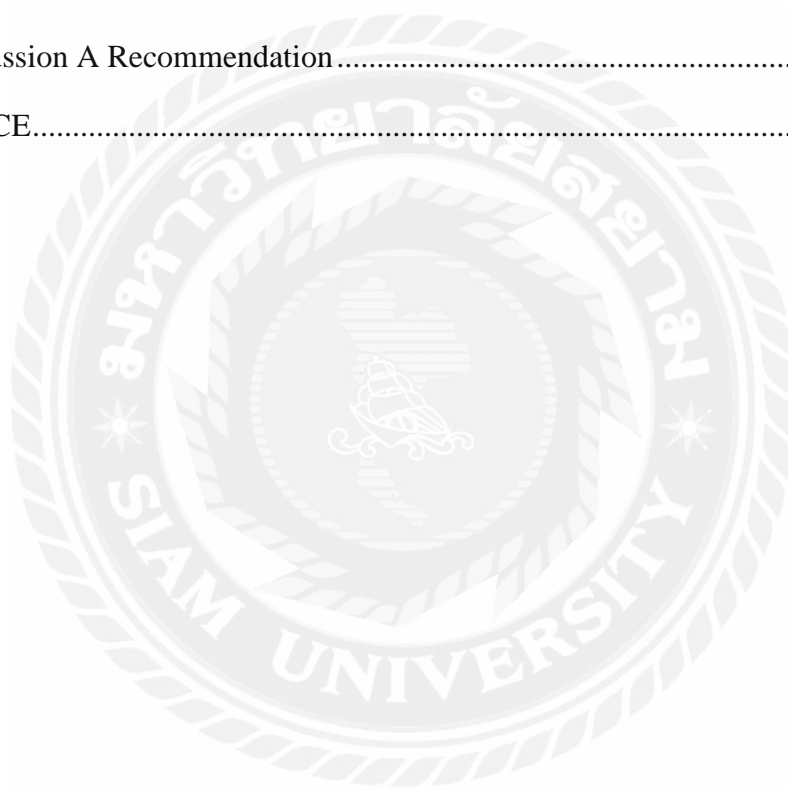
I want to express my special thanks to my wife, Wang Wei, who has been my spiritual and financial pillar, giving me endless hope and affirmation from the beginning to the end, giving me the courage to face challenges at all times, and providing the best support so that I can swim in the sea of studies without worries, as well as the care and support of my two children, Li Mu Xuan and Li Mu Chen, who has been my I would like to express my deepest gratitude for the care and support of my two children, Li Mu Xuan and Li Mu Chen, who has been my relief during the lonely period abroad, and who have enabled me to complete my studies.

Finally, I dedicate this document to all my family, teachers, and friends who care about me.

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# **1. Introduction**

## **1.1 Research Background**

Power quality refers to the quality of the power supplied to the customer's end of the grid, which can be assessed by frequency, voltage, waveform, current, and other parameters (Han, 2008). Generally speaking, the ideal power should have a proportional voltage and current with a phase difference of  $120^\circ$ , equal amplitude, and a single constant frequency, as the industry specifies. However, due to the power system's instability and disturbing loads, it often triggers the imbalance of the power load, and its impact will produce a three-phase voltage of unequal amplitude and distorted waveform. At the same time, natural lightning damage, grounding influence, and other external factors can also interfere with the power system, resulting in several power quality problems. Currently, the common issues in power applications include voltage fluctuation and flicker, noise, voltage dips, interruptions, harmonics, waveform distortion, voltage deviation, etc (Peng & Li, 2022). Poor quality electrical energy is not only detrimental to the operation of the power grid but also brings huge economic losses to power users. In 2018, the relevant departments researched the power quality and user behavior of nearly 100 enterprises in 32 industries in China, and the results showed that almost half of all the enterprises suffered economic losses of up to 200 million yuan caused by power quality problems. In foreign countries, low power quality has also caused substantial financial losses, the annual financial losses caused by power quality problems in the United States are as high as 20 billion dollars, and the annual economic losses caused by power quality problems in the European Union are about 140~180 billion euros(Wang, 2004).. The improvement of power quality requirements on the power user side, from affordable electricity to good electricity, improving the quality of power supply to improve the efficiency of power utilization, reduce the economic loss caused by poor quality electricity, will play a significant role in promoting China's energy saving and emission reduction strategy, power quality management is imminent.

In recent years, the state has been vigorously promoting new energy vehicles and encouraging the integration of renewable energy generation into the power grid (Duan, Dai & Zheng, 2022). Meanwhile, with the acceleration of the construction of rail transportation and electrified railroad and the use of various precision electronic products, the awareness of power quality management in multiple industries has gradually increased, and the power quality management market has also shown a trend of steady growth (Wan, 2002). Relevant experts predict that the future demand for power quality management in China will see a spurt of development, and the industry scale will maintain rapid and stable growth (Wu, 2021).

## **1.2 Research Problems**

This study will examine the relationship between brand strategy, channel strategy,

promotion strategy, and channel performance, using power quality products as empirical evidence, in an attempt to understand whether brand strategy affects channel performance through different channel strategies and promotion strategies (Wei, 2014). This study will examine the relationship between brand strategy, channel strategy, promotion strategy, and channel performance to understand whether brand strategy affects channel performance through different channel strategies and promotion strategies (Fynes, & Burca, 2005).

This study uses a theoretical framework and an empirical questionnaire to explore the impact of the channel, promotion, branding, and branding strategy on developing a new product.

The relationship between channel strategy and channel performance. Therefore, this study attempts to establish a conceptual framework between channel strategy (Huang, 2020), promotion strategy, brand strategy, and channel performance by accomplishing the following objectives conceptual framework (Wang, & Bai, 2013).

1. Explore the relationship between brand strategy and channel strategy.
2. The study of the relationship between brand strategy and promotion strategy.
3. Explore the relationship between channel strategy and promotion strategy.
4. Explore the relationship between channel strategy and channel performance.
5. Explore the relationship between promotion strategy and channel performance.

### **1.3 Objective of the Study**

From the research mentioned earlier report, we can see that the market of power quality products industry continues to expand, the consumers' requirements for products are also increasing, and the top two manufacturers in the Chinese market have a share of nearly 70% (Peng & Li, 2022), which shows that in the future the trend of the power quality market (Xue, 2020), in addition to price competition, is bound to move towards a brand, quality-oriented, and service-oriented market. It is even a high-tech product with comprehensive solutions(Luo, 2022). However, in the current competitive market, many companies have found that they are only competing on price cuts without their brands. The only way to gain a foothold in the market is to develop a clear brand strategy and choose through a channel and promotional strategies.

### **1.4 Scope of the Study**

The scope of the study is limited; this study only involves the electrical energy quality industry, and other electrical components industry is not in the area of this study; this study only focuses on the channel strategy, promotion strategy, and brand strategy. The target of the investigation is mainly the distributors of power quality in China; for other regions, other demand customers such as government agencies, large enterprises, and other direct sales objects and general consumers have specific differences; this study is not included in the consideration.

The sample size of statistical measurement is not sufficient because the power quality industry is a niche industry, the number of distributors is small, and the author's investigation ability is limited, the distributors of power quality products have some resistance to the survey, the number of statistical samples is small, tentatively set at 360.

## **1.5 Research Significance**

China's current research on power quality is still focused on identifying problems and solving them. It is a very realistic research topic to realize the market expansion of enterprises and their growth under the favorable external environment and development situation (Zhang, 2022).

Applying brand and channel theory to the information product market: This study establishes a research framework to explore the relationship between brand strategy, channel strategy, promotion strategy, and channel performance through practical observation and theoretical discussion (Xue, 2020). This study will help to establish a research framework to explore the relationship between brand strategy, channel strategy, promotion strategy, and channel performance and to propose hypotheses and empirical evidence.

## **2. Literature Review**

### **2.1 Brand strategy**

Brand strategy can vary greatly depending on whether it is a functional brand image brand or an empirical brand (Kotler, 2005). When consumers buy a functional brand to satisfy their functional needs such as shaving, washing clothes, or relieving headaches. Image brands make it more difficult to differentiate a product or service, or to assess its quality and communicate its opinion clearly to the user. Experiential brands mean that consumers are not only interested in acquiring products, but are also influenced by exposure to people, events, and objects related to such brands (Zhang, 2022). The brand-related strategy starts with the brand building strategy, and includes brand provider strategy, brand name strategy, brand strategy strategy, and brand repositioning strategy. And brand repositioning strategies (Liu, 2022).

The brand strategy is divided into five strategies: product line extension, brand extension, multi-brand, new brand, and co-brand (Kotler, 2005).

1. Line extension: It refers to the addition of new flavors, forms, colors, package sizes, and added ingredients to the same brand name and product categories. Compared to new branded products, line extensions have a better chance of survival (Ma, 2022). However, line extensions may also cause the original brand name to lose its unique meaning. In a study conducted by Reddy, Holak, & Bhad, strong brands, symbolic brands, brands with strong advertising and promotional support, and brands that are

early entrants into a product category are more likely to be successful in product line extensions. In addition, the size of the company and its marketing capabilities are also key factors (Wang, 2004).

2. Brand extension: This is the extension of an existing brand name to a new product in another category. It has the same benefits as the product line extension strategy, but when the new product disappoints the buyer, it may destroy the customer's original impression of the brand's other products (Zhao, 2019). In addition, over-extension of a brand name may lose its special positioning in the minds of customers, which may lead to brand dilution (Yang, 2020).

3. Multibrands: The purpose of adding new brands to the same product category is to establish different attributes or trigger different purchasing motives (Andrew, Clayton & Charles, 2002); in addition, the multi-brand strategy also allows companies to On the other hand, if a company retains the original brand name of the acquired company after the merger, it can capture the loyal customers of the original brand (Chen, 2020). On the other hand, if a company retains the original brand name of the acquired company after the acquisition, it can capture the loyal customers of the original brand. However, the main pitfall of this strategy is that the market share of each brand is very small and none of the brands are particularly profitable. It is also worth noting that companies should avoid crowding out their own brands and aim to remove competitors in a particular product category (Cronin, & Taylor, 1994). However, in the unfortunate event of crowding out, at least ensure that the profits generated by a multi-brand strategy outweigh the costs of crowding out.

4. New brands: A new brand strategy can be used when a company believes that an existing brand name is not suitable for a newly developed product category. However, developing a new brand can be expensive, for example, launching a new brand in the US mass market can cost between \$50 million and \$100 million (Dai, 2020).

5. Cobrands: also known as dual branding, refers to the combination of two or more well-known brands (Fynes & Burca, 2005). The co-branding strategy has various forms, including component cobranding - for example, Volvo cars emphasizing that they use Michelin tires; same-company cobranding - for example, Volvo cars emphasizing that they use Michelin tires. Company cobranding-such as General Mills promoting its Trix and Yoplait yogurt; joint venture cobranding-such as GE and Hitachi in Japan, and multiple-sponsor cobranding (Ge, 2020).

## **2.2 Channel strategy**

Channel strategy is the choice and application of a company's approach to deliver ownership to distributors or end users. Rosenbloom defines channel strategy as the choice between the four dimensions of diversity, directness, density, and innovation that a manufacturer expects to achieve in its target market. Rosenbloom defines channel strategy as the obvious principles by which a manufacturer expects to achieve its distribution goals for its target market. The channel strategy is closely related to other

marketing decisions, and the only way to obtain the maximum marketing effectiveness is through the overall marketing operation (Ge, 2020). In the book *Integrated Marketing Communications Strategies*, the channel marketing is considered as a strategic way of marketing products, and it has a special meaning of guiding the marketing operation at the strategic level with the marketing decision. (Percy & Trans., 2000), the concept is that through a collaborative approach, the manufacturer develops a specific plan to meet the needs of the retailer, and at the same time provides funding and practical implementation assistance to obtain the plan. In strategic marketing, the manufacturer controls the entire process, providing complete integration and production services to the retailer, while at the same time providing a more specific support from the intermediary (Liu, 2019). In strategic marketing, the manufacturer controls the entire process, providing complete integration and production services to the retailer while expanding its control over brand support at the intermediary level. The distribution channel focuses on the choice of channel structure and the selection and management of intermediaries (Ge, 2020). Since what a manufacturer markets is not only the product, but also the distribution rights and the distribution techniques implied by the distribution rights are equally important, the ideal distributor is the common target for all competing manufacturers to strive for. When the manufacturer does not have its own channel, the channel dealer who controls the channel plays an important role, so the manufacturing supplier's channel strategy must include the appropriate channel type and the selection of the partner (Huang, 2020). The channel strategy of the manufacturing supplier must include the selection of the appropriate channel type and cooperation target, and these distribution work for the supplier is part of its channel strategy. The channel strategy should be part of the overall corporate strategy, analyze the current situation, and assess the key forces affecting future operations by evaluating the internal and external forces. The key forces that will affect future operations are measured by evaluating the current situation and the internal and external forces (Anderson & Kumar, 2006).

### **2.3 Promotion strategy**

Sales promotion is marketing communication mix also known as promotion mix one of the promotion mix and sales promotion confused as the same, in fact, it is not. The so-called promotion mix (promotion mix) generally contains four main elements: advertising, publicity, personal selling, sales promotion each element has many different promotional tools (Magid & Dena, 2006). For example, display, print advertising, giveaways, discount coupons.... etc. They cover a wide range of aspects, while promotional activities differ in the degree of interpretation due to the different perspectives defined by scholars. Promotion strategy is an important marketing tool for manufacturers, which can be divided into two types: push and pull. "Push" refers to the promotion of products to the channels through advertisers, and then to the end customers; "pull" refers to the promotion of products to the channels through

advertisements and personnel sales to attract customers to buy (Romaniuk & Sharp, 2003). The "pull" means that the manufacturer attracts customers to buy from the channel through advertising and sales staff, and then the channel will ask the factory to buy the products when it finds that the customers have demand (Gilbert & Frazier, 1999).

The following are the definitions of these four promotional tools from the American Marketing Association (AMA).

1. Personnel promotion: face-to-face communication with one or more people by means of verbal descriptions for the purpose of achieving sales.

2. Advertising: Any person who is paid by a specific provider to express and promote ideas and goods or services through non-personal means.

3. Sales promotion: In the marketing field, activities that are different from personnel sales advertising and public relations, but have the effect of stimulating consumer purchases and increasing the effectiveness of the distributor, such as displays, exhibits, demonstrations or other non-routine activities. Sales promotion: In the field of marketing, it is different from personnel sales advertising and public relations activities, but has the effect of stimulating consumers to buy and improving the effectiveness of the dealership, such as display, display, demonstration or other non-routine, different types of sales efforts.

4. Public relations: The publication of relevant and important business news in the print media, or the securing of strong testimonials on radio, television and the stage, so that the provider does not have to pay to stimulate demand for a product or service in a non-personal way (Brady & Cronin, 2001).

## **2.4 Channel performance**

The goal of business operations is to achieve the goals of survival and growth, and performance refers to the extent to which an organization achieves specific goals. The measurement of channel performance allows organizations to evaluate the efficiency and effectiveness of their resource utilization and can effectively guide the future allocation of resources based on past experience and shortcomings (Wang, 2005). Manufacturers can also consider improving the operation of declining channels to help them improve their performance. From time to time, they help distribution channels to run promotions and provide suggestions for modifying stores, mainly to help stores maintain competitiveness (Gorchels & Marschall 1996). Regardless of the future channel towards e-commerce or other non-store channels, a product must be far-sighted when choosing a marketing channel and be able to foresee the future sales environment, which is the key to business success. This study will discuss the definition of channel performance, the measurement of channel performance, and the factors affecting channel performance. Channel performance measurement allows organizations to evaluate the efficiency and effectiveness of their resource utilization and to effectively guide the future allocation of resources based on past experiences

and shortcomings (Asare & Brashear, 2006).

Once inter-organizational management is achieved, effective channel performance can be achieved and resources can be efficiently allocated to all channel members (Hu & Sheu, 2005). Channel performance is the extent to which the supplier-distributor relationship can assist the distributor to achieve the goals set by the supplier, i.e., the degree to which members contribute to the channel (Gaski & Nevin, 1985).

Improvements in purchasing processes, production processes, IT innovations, and B2B offerings all have the opportunity to improve the performance of channel members in the supply chain (Zahaty & Griffin, 2004). Manufacturers can establish penetration indicators based on the business situation of all distributors, through which they can inform distributors to improve or further dissolve the relationship. For channel measurement, three dimensions are used to measure the results of channel operations (Fisher & Nevin 1996), namely satisfaction, performance, and willingness to continue working together (Gorchels & Marien, 2003).

## **2.5 Research Relevant**

Research on reactive power compensation and harmonic management in China began in the 1990s (Li, 2019). The first edition of *Harmonic Suppression and Reactive Power Compensation*, edited by Wang Zhao, Yang Jun, Liu Jinjin, and Wang Yue, was released in 1998. It is a relatively early monograph on power quality.

With the overall improvement of everyone's awareness of power quality, Chinese scholars and practitioners have gradually started to research the development of the industry. Among them, the representative ones include "The industrial development of power quality in China and the coincidental issues that should be paid attention to (Xu, 2022)," published by Lin Haixue of China Electric Power Research Institute in 2005, which gives an overview of the development of power quality management equipment and testing instruments in China, points out the broad prospect and vast market of power quality management industry, and points out the issues that should be paid special attention to this market, such as supporting the application of static reactive power compensation (SVC) devices, implementing the relevant provisions of the Electricity Law, and formulating relevant standards for industrialization (Lin, 2019). It is pointed out that special attention should be paid to this market, such as supporting the application of static reactive power compensation (SVC) devices, implementing the relevant provisions of the Electricity Law, and formulating relevant standards for industrialization.

In 2009, Tiantian Lu of ICT Research published "The Current Situation and Analysis of China's Power Quality Management Products Market." Starting from the concept of power quality, the article illustrated the current situation of China's power quality management market and analyzed the market scale and trends in the world and China. The article focuses on the product, price, channel, and service strategies and



gives the manufacturers suggestions for the development (Wan, 2002).

At the same time, the research on marketing and brand marketing in the industry has also made some progress. Yao Lei from Beijing Jiaotong University, in his paper "Research on marketing strategy of reactive power compensation products in South China," used STP theory to analyze and study the market segmentation factors in the industry and then conducted market segmentation of users through cluster analysis, clarified the target market of the company, determine the market positioning, and put forward the marketing strategy interacting with the implementation of STP strategy.

In his thesis "Research on the marketing strategy of S & C Electric Power Quality Tatami Products Division in China," Jiahua Chen from Lanzhou University illustrates how S & C's high-capacity power quality products, through market research, combined with marketing environment analysis, STP strategy, and 4P marketing mix, are implemented and finally accomplish the business development goals under various unfavorable situations. The presentation of the integrated marketing communication strategy is a good summary of the marketing communication that may be used in the industry.

In his paper "Research on the sales strategy of harmonic control equipment in the intelligent building industry," Zhang Limin from North China Electric Power University analyzed the marketing environment in which harmonic control equipment is also found in intelligent buildings. Then the SWOT tool is used to analyze its strengths, weaknesses, opportunities, and threats in combination with the actual case of his company, and based on this; suggestions are made on the marketing strategies to be adopted. The article concludes that the company should use its technology and services strengths to compensate for its brand awareness and management weaknesses and seize market opportunities (Su, & Yang, 2021). At the same time, the company should keep an eye on customers' changing needs, manage customer relationships well and share the benefits with customers.

In their book "B2B Brand Management", Philip Kotler and Waldemar Pfoertsch systematically analyze and explain branding strategies in the B2B industry (Kuang, 2022).

In the study "Branding of B2B enterprises in China", Liu and Jiang firstly introduced the current situation of branding of B2B enterprises, then analyzed the reasons why such enterprises ignore branding, then analyzed the significance of branding, and finally focused on how B2B enterprises develop branding strategies (Liu, 2012).

## 2.6 Conceptual Framework

In this study, the relationship between brand strategy, channel strategy, promotion strategy, and channel performance is mainly discussed. In this study, channel strategy and promotion strategy are considered as mediating variables, and brand strategy will affect channel performance through channel strategy and promotion strategy. In this study, the relationship between channel strategy and promotion strategy is considered as a mediating variable.

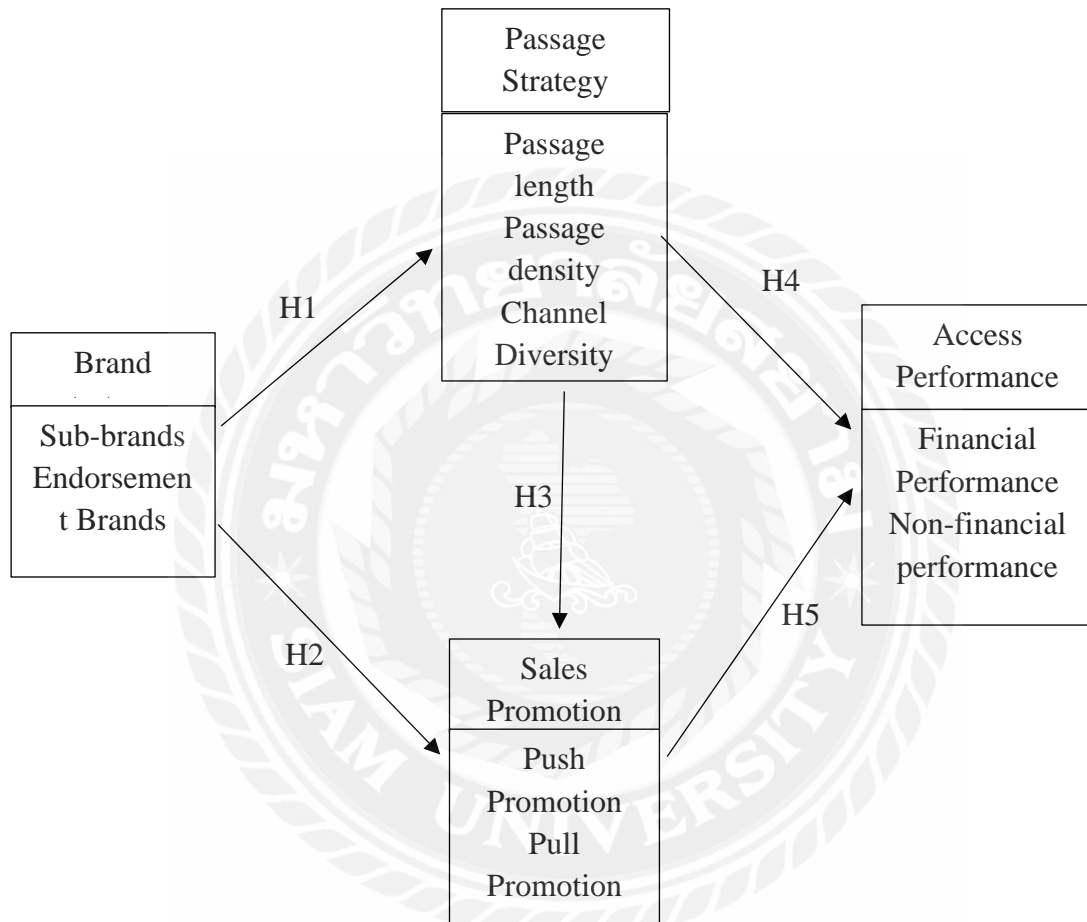


Figure2. 1 Operational architecture diagram

## 3. Research Methodology

### 3.1 Introduction

This study is based on the power quality industry as an example, and is an analysis of the problem to be solved with the help of an example, so that objective research conclusions can be obtained and the theory to be studied can be confirmed, effectively supporting the persuasiveness of the theoretical part (Han, 2017). Through the previous paper, the relevant theoretical studies were sorted out, the questions were asked and the corresponding theoretical hypotheses were made, and the relevant research models were established (Yan, & Chun, 2016).

Through the use of questionnaires, a self-administered questionnaire was used, which was distributed mainly using the Internet. In this chapter, the questionnaire will be designed according to each research variable, the corresponding research data will be obtained, and the collected samples will be statistically organized and tested to lay the foundation for validating the research model in the later section (Wang, & Bai, 2013). The empirical research process is, for example, divided into the following steps: first, design and distribute questionnaires according to the concept and research dimensions of each variable, and conduct descriptive conditioning, reliability and validity tests on the collected data; second, use regression analysis to establish the mathematical and theoretical models of the respective variables and the dependent variable, and verify each hypothesis involved in each mathematical and theoretical research model; based on the verification results of regression analysis on the electrical energy quality industry Based on the results of the regression analysis, the quantitative analysis of brand strategy, channel strategy, promotion strategy and channel strategy in the power quality industry is conducted to propose reasonable development strategies for the development of enterprises and further improve the research findings(Yan, & Chun, 2016).

Therefore, quantitative research methods are used in the study. According to the analysis of classical theories such as transaction cost theory theory, behavioral science management theory theory, and 4P theory, quantitative research methods are used in the process of these theoretical studies and combined with theoretical models to propose research hypotheses, conduct sampling surveys by means of questionnaires, collect data for quantitative research, and test hypotheses by analyzing data to determine correlation coefficients. In this study, the same research method of scales was used in the research process to construct the research model, and the research hypothesis was verified through questionnaire research samples and quantitative analysis of the relationship between the variables through SPSS (Wang, 2015). The relevant scales were slightly modified in the model construction as the measurement indicators of this study (Zhao & Xu, 2022). The variables in this paper mainly include brand strategy (sub-brand, endorsement brand), channel strategy (channel length, channel density, channel diversity, channel innovation), promotion strategy (push promotion, pull promotion), and channel performance (financial indicators, non-financial indicators), where the dependent variable is channel performance, the independent variable is brand strategy, and channel strategy and promotion strategy are used as mediating variables. The quantitative analysis method will enhance the validity, scientificity and rationality of the whole study, and will facilitate the verification of each hypothesis and provide sufficient support for the later analysis (Luo, 2022).

In the electric energy quality industry, the relationship between brand strategy, channel strategy, promotion strategy and performance is mainly studied by qualitative research, such as using STP strategy, 4P marketing mix or Porter 5 force analysis for qualitative analysis, and less quantitative research, through the method of quantitative

analysis using questionnaire method is an innovation of this study (Su, & Yang, 2021). The study of the four constructs can be reflected more intuitively through data.

### **3.2 Hypothesis**

The research structure of this study was designed from the literature and research questions, and a research hypothesis was developed to explore the relationship between brand strategy, channel strategy, promotion strategy, and brand performance. This research hypothesis can be divided into five aspects.

1. The relationship between brand strategy and channel strategy.
2. The relationship between brand strategy and promotion strategy.
3. The correlation between channel strategy and promotion strategy.
4. The relationship between channel strategy and channel performance.
5. Relationship between promotion strategy and channel performance.

According to the above five aspects, the corresponding hypothesis is:

**H1: When the supplier's brand strategy is more effective, the supplier's channel strategy is more effective.**

**H2: When the supplier's brand strategy is more effective, the supplier's promotion strategy is more effective.**

**H3: When the supplier's channel strategy is more extensive, the supplier's promotion strategy is more effective.**

**H4: The broader the supplier's channel strategy, the higher the channel performance.**

**H5: The more promotional strategies a supplier has, the higher the channel performance.**

### **3.3 Definition and measurement of variables**

The contents of the questionnaire were revised according to the characteristics of the electric energy quality industry and the relevant literature to conform to its actual status (Zhao, Zhao, & Li, 2020). Each variable is measured on a five-point scale, ranging from "strongly disagree" to "strongly agree". Respondents were asked to circle their level of agreement (Bai, 2011) .

### **3.4 Sample Size Sample size**

This study proposed distributing 360 questionnaires to obtain the research data. SPSS analyzed the data obtained from the survey, and if the sig obtained from the analysis is not significant, it means that the sample can respond to the actual data, which means that the sample is representative of the parent.

After the questionnaires were collected and initially sorted, if there were only a single scale of arbitrary responses or if any part of the questionnaire had missing blanks and was not filled in, it was considered The questionnaire was considered invalid. A

total of 360 questionnaires were sent out, 352 were returned, and 16 invalid questionnaires were excluded, resulting in a total of 336 valid questionnaires, with a valid return rate of 93.3%.

Table 3. 1 Questionnaire recall statistics

Total Sample	Recycling samples	Rewind rate	Valid questionnaire	Invalid documents	Effective rewind rate
360	352	97.7%	336	16	93.3%

### 3.5 Reliability and validity analysis of the scale

In this study, 360 questionnaires were distributed in the pre-test stage, and 353 were returned, of which 336 were valid, so the validity rate of the pre-test was about 93.3%. The reliability analysis was conducted using SPSS v17.0 statistical software, and the overall Cronbach's alpha value was 0.838. Therefore, the content of the first draft questionnaire did not have any deletion, and the results of the reliability test were as follows.

Table 3. 2 Reliability statistics

Cronbach's Alpha	Number of items
.883	22

After factor analysis of the questionnaire in this study, the KMO value was 0.868; Bartlett's spherical test was 2314.184;  $P < 0.001$ . The test result of the KMO value was more significant than 0.7 and  $P < 0.001$ , which means that this sample data is suitable for factor analysis.

The overall analysis of this study is shown below.

Table 3. 3 KMO and Bartlett's test

The Kaiser-Meyer-Olkin metric of sampling adequacy.		.868
Bartlett's sphericity test	Approximate cardinality	2314.184
	df	91
	Sig.	<.002

## 4. Results of the Study

### 4.1. Description of statistical variables

In this study, descriptive statistical analysis will be conducted by selling brands, business forms, sales locations, establishment time, correspondence time, sales time, annual turnover and number of employees in order to facilitate the measurement of the

overall characteristics. The minimum, maximum, mean, and standard deviation of the statistical analysis through SPSS 17.0 software are shown below.

Table 4. 1 Statistical variables

	Brand s Sold	Busines s Form	Sales Locations	Establish ment time	Travel time	Sales time	Annual Turnov er	Number of employ ees
N Effective	336	336	336	336	336	336	336	336
Missing	0	0	0	0	0	0	0	0
Average value	5.71	3.05	3.29	3.00	2.33	1.86	3.45	1.76
Median value	6.00	3.00	3.00	3.00	2.00	2.00	3.00	2.00
Standard deviation	2.550	1.431	1.274	1.269	1.183	.952	1.310	.726
Minimal value	1	1	1	1	1	1	1	1
Maximum value	10	5	5	5	5	4	5	3

## 4.2 Pearson correlation coefficient analysis

In this study, the results of the two-tailed Pearson correlation coefficient analysis were tabulated, in which it was found that the structure's brand strategy, promotion strategy, channel strategy, and performance all reached a highly significant level  $p < 0.01$  (Han, 2008). As follows.

Table 4. 10 Correlation

		Brand Strategy	Promotion Strategy	Passage Strategy	Achievements
Brand Strategy	Pearson correlation	1			
	Significance (bilateral)				
	N	336			
Promotion Strategy	Pearson correlation	.446	1		
	Significance (bilateral)	.693			
	N	336	336		
Passage Strategy	Pearson correlation	.489	.461	1	
	Significance (bilateral)	.955	.702		
	N	336	336	336	
Achievements	Pearson correlation	.314	.226	.238	1
	Significance (bilateral)	.643	.870	.810	
	N	336	336	336	336

### 4.3 Regression analysis of the hypothesis

This study uses regression analysis to examine the causal relationship between brand strategy, channel strategy, promotion strategy, and channel performance. A simple linear regression with a test probability (Sig value) of  $\text{Sig} < 0.05$  indicates influence, and a T-value reflects the importance of the effect of each independent variable; the absolute value of T should be greater than 1.96(Cheng, 2014). Suppose the T-value of an independent variable is less than 1.96. In that case, the independent variable has little influence on the equation and should be removed from the equation as much as possible. The value of the judgment coefficient R-squared is between 0 and 1. The closer the value is to 1, the lower the proportion of residuals, i.e., the better the fit of the regression equation, the closer the regression value can be to the observed value, and the better it can reflect the inner law of the observed data. In general

applications, an R-squared more significant than 0.6 indicates that the regression equation has good quality.

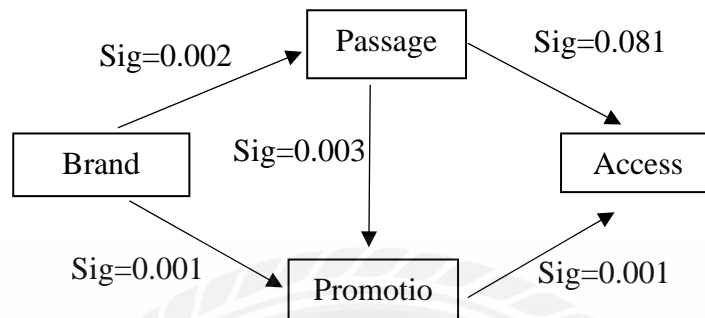


Figure 4. 1 Overall pattern path

## 5. Conclusion and Recommendation

### 5.1 Conclusion

This study focuses on the marketing channels of power quality manufacturers and examines the impact of suppliers' branding strategies, channel strategies, and promotional strategies on overall performance. Based on the above analysis, we propose appropriate recommendations for the reference of power quality manufacturers in formulating their marketing strategies. The results of the hypothesis validation are listed in the table.

Table 5. 1 Study hypothesis validation results

Research Hypothesis	Conclusion
H1: When the supplier's branding strategy works better, the supplier's channel strategy is more effective	Support
H2: When the supplier's branding strategy is more effective, the supplier's promotion strategy is more effective	Support
H3: When the supplier's channel strategy is more extensive, the supplier's promotion strategy is more effective	Support
H4: The broader the supplier's channel strategy, the higher the channel performance	Not supported
H5: The more promotional strategies a supplier has, the higher the channel performance	Support

### 5.2 Discussion A Recommendation

This study found that under the competitive market, power quality suppliers have

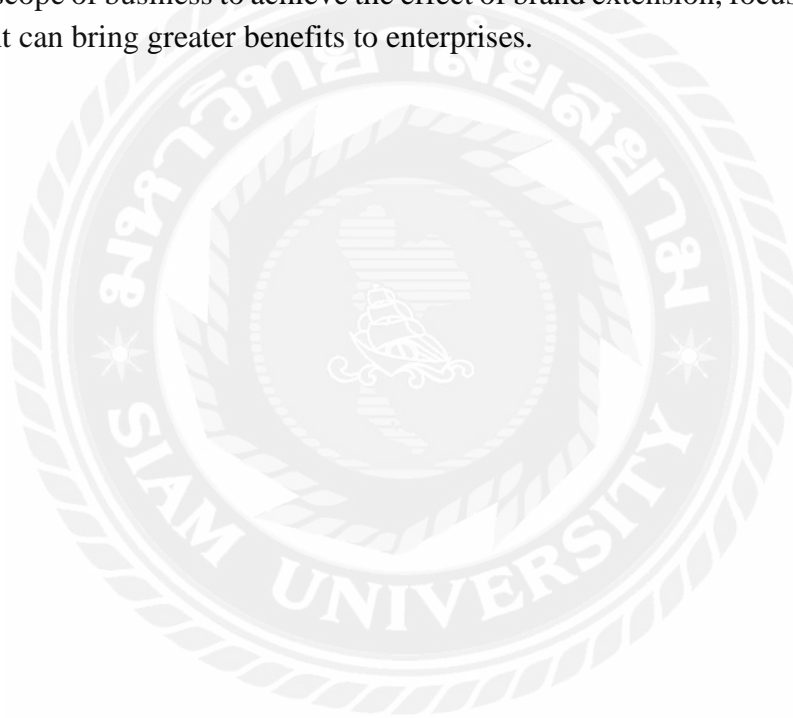


to expand their market coverage, brand awareness and profitability through branding strategies that emphasize differences.

Suppliers need to use promotional strategies to win in the competitive market, however, whether push or pull promotional strategies, through the distributor's channel strategy to make it easier for consumers to To achieve the effect of improving channel performance.

Suppliers should be under the brand strategy, with multiple marketing strategies, try to avoid only a single strategy, so as not to cause ineffective strategy, and through the branding, and then affect the Overall channel performance.

Brand suppliers in addition to the quality of electrical energy products to push the new, but also through the linkage of technology to develop new information products, but also through the increase in brand equity, the use of brand to sell other products, expand the scope of business to achieve the effect of brand extension, focusing on brand management can bring greater benefits to enterprises.



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