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Strategic Cognitive Model for Preoccupying the Market of SPORT in KOREA

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Abstract

This study suggests strategic approaches to the sport market by analyzing the effects of sport participants' personality on motivations participated in sport activities and the interrelation of personality, participation motivation and decision factors in purchasing sport products.

A total of 737 effective responses over 15 years old, living in the capital city in Korea were chosen by using convenience sampling technique. The data were analyzed using SPSS 20 and Amos 20.

The personality of sport and leisure participants seems to have a positive effect on introverted motives for participation in sport activities. In addition, their personalities have a positive effect on extroverted motives for participation in sport activities. Sport and leisure participants' personalities also have a positive effect on product factor and have a positive effect on the image factor in purchasing sport products.

On the other hand, sport leisure participants' personalities do not seem to have a positive effect on external factors in purchasing sport products directly. It was also found that sport leisure participants' introverted motives do not affect the product factor in purchasing sport products positively. Similarly, sport leisure participants' introverted motives do not affect image factor in purchasing sport products. In addition, their introverted motives do not affect external factors in purchasing sport products. Sport and leisure participants' extroverted motives also do not seem to affect the product factor or the image factor in purchasing sport products. However, extroverted motives affect the product factor in purchasing sport products positively.

Through the study, it is possible to see the potential value of sport activities in the sport market. Further study on the interrelationship between various personalities of sports and leisure consumers and the decision factors in their purchases is expected to be helpful for leading consumer market in sport industry.

[Keywords] Sport Market, Cognitive Model, Motivational Factor, Sporting Behavior, Personality

1. Introduction

Usually, sporting behavior is considered as a direct or indirect participation in sport-related activities and as the consumption of sport-related products. As sport facilities, events, services, or manufacturers have been increased in Korea[1], the expansion of sporting behavior has led us to see the economic and potential values of the sport-related consumption. In accordance with the expansion of sporting behaviors, sport market and sport consumption became more important than

ever and sport enterprises and their owners started to focus on the consuming trend of consumers. Sport consumers have attempted to fulfill their needs and wants through sport behaviors and they also became more eager for better services[2][3]. Thus, sport marketers today are required to focus on making consumer-centered strategies that can meet their needs and wants. Providing consumer-centered products is the most important factor in the intensely competitive market in these days[4]. It demonstrates the study on understanding consumer behavior focusing

more on personal emotional experiences and personality.

Individual personality can generate differences in brand preference and consumption pattern among consumers. In order to understand their needs and wants, the study to analyze their private activities, interests and opinions that represent their life styles as well as their behaviors and the style of expression was needed[5][6]. As all consumers have different their own consuming patterns, the relevant business can use these patterns to make effective marketing strategies for better profits.

The previous studies on the relationship between personality and consumer behavior have some weak points. The subjects were limited to young people in their 20's or 30's although the studies aim to demonstrate general consumer trends. The limited age group may represent certain trends of the group. Also, most of studies on certain industry sectors aim to determine general consumer trends or find out how personality affects on purchase of certain items and researchers are inclined to refine or generalize the purpose of their studies. In other words, it is not that easy to demonstrate that personality may act as a significant parameter as it varies depending on the category of the goods and there are only a few referable comparative studies[7].

Meanwhile, recognition of various motivating factors is recommended as a strategic approach to understand the consumers. Consumer motivating is a basic target to execute a successful marketing. If one can define motivating factors of sport participants to purchase a product or service that would be the decisive factor of a success[8].

This study is to determine the cause-and-effect relationship between the participation motive and sporting good purchase by analyzing how the personalities of sport participants affect on participation and purchase of the relevant products in the sport market.

For the purpose, this study suggest a conceptual model for interrelation of the variables and clarify it in a positive way. In partic-

ular, this study aims to suggest a strategic approach to sport market through the analysis of a structural model for interrelationship of variables. By understanding personality of sport participants, marketers can properly deal with their needs and wants. A study on personality and customer satisfaction can be used to categorize a market by marketers and also for promotion events to attract sport participants. If the cognitive side is fully studied and adjusted to marketing, the sport market is expected to achieve a significant growth by promoting sport participants' understanding and raising connectedness and royalty.

Therefore, the purpose of this study is to provide a new paradigm to preoccupy a dominant position in sport market by analyzing the participation motives and consumption patterns of sport participants.

In this study, three hypotheses were established in order to clarify the cause-and-effect relationship among major factors such as the participant's personality, sport participation motivation, and purchase decisive attribute.

Hypothesis 1. Cause-and-effect relationship between personality and participation motive

1-1. The personality factor of a sport-leisure participant will have a positive effect(+) on the inner participation motivation.

1-2. The personality factor of a sport-leisure participant will have a positive effect(+) on the external participation motivation.

Hypothesis 2. Cause-and-effect relationship between personality and purchase decisive factor

2-1. The personality factor of a sport-leisure participant will have a positive effect(+) on the purchase decisive factor.

2-2. The personality factor of a sport-leisure participant will have a positive effect(+) on the image factor of the purchase decisive attribute.

2-3. The personality factor of a sport-leisure participant will have a positive effect(+) on the external factors of the purchase decisive attribute.

Hypothesis 3. Cause-and-effect relationship between participation motivation and purchase decisive attribute

3-1. The inner sport participation motive will have a positive effect(+) on the product factor of the purchase decisive attribute.

3-2. The inner sport participation motive will have a positive effect(+) on the image factor of the purchase decisive attribute.

3-3. The inner sport participation motive will have a positive effect(+) on the external factors of the purchase decisive attribute.

3-4. The external sport participation motive will have a positive effect(+) on the product factor of the purchase decisive attribute.

3-5. The external sport participation motive will have a positive effect(+) on the image factor of the purchase decisive attribute.

3-6. The external sport participation motive will have a positive effect(+) on the external factors of the purchase decisive attribute.

2. Methodology

2.1. Subjects

Total 737 subjects over 15-year-old, living in the capital city of Korea and regularly participating in sport activities were used to analyze the result for this study. <Table 1> shows the general information of the subjects for this study.

Table 1. General information of the samples.

Feature	Classification	N	%
Sex	Male	1431	63.9
	Female	807	36.1
Age	Under 20	261	11.7
	20~29	795	35.5
	30~39	699	31.2
	40~49	291	13.0
	50~59	141	6.3
	Over 60	51	2.3
Marriage status	Not married	1416	63.3
	Married (no child)	183	8.2
	Married (have a child)	639	28.6

Occupation	Agriculture, Fishery	30	1.3
	Self-employed	114	5.1
	Sales, Service	258	11.5
	Technician	117	5.2
	Office worker	384	17.2
	Administrator	66	2.9
	Professional	243	10.9
	Housewife	117	5.2
	Student	747	33.4
	Unemployed	33	1.5
	Others	129	5.8
Average monthly income	Less than 1million won	261	11.7
	1~1.99 million won	360	16.1
	2~2.99 million won	582	26.0
	3~3.99 million won	408	18.2
	4~4.99 million won	297	13.3
	Over 5 million won	330	14.7
Education degree	High school graduate	411	18.4
	College student	705	31.5
	University graduate	822	36.7
	Master / Ph.D.	243	10.9
	Others	57	2.5
Housing	Own	1275	57.0
	Rent	498	22.3
	Monthly	312	13.9
	Others	153	6.8

2.2. Measurement tool

For the research of personality of sport participants, HEXACO-60 personality test was used[9]. Total 60 questions about personality of sport participants are divided into two groups of 6 personality factors and 24 sub-factors.

A refined version of questionnaire that was formed based on SMS-28(sport motivation scale)[10] and LIM(liesure intrinsic motivation)[11] was used for the research on the participation motives of sport participants[12]. There are 12 questions in relation to introverted motives of sport participants and 13 questions in relation to extroverted motives of sport participants.

For the research on purchase determination attribute of sport goods, a refined and reorganized version of the questionnaire was

used[13]. The questionnaire is mainly divided into three parts related to the product factor(design, color, function), image factor(trend, advertisement, brand), and external factor(price, service, location).

2.3. Data analysis

For this study, frequency analysis was conducted to examine characteristics of sport participants and sample data. Exploratory factor analysis was also conducted to verify construct validity of their personalities and sport participation motives and the purchases of sport goods and then Cronbach's α was used to verify reliability and consistency among questions. To secure independence of measurement variables, confirmatory factor analysis based on analysis of covariance was conducted for each factor and reliability, discriminant validity and convergent validity were secured through analysis on model fit statistics, concept reliability, average variance extracted, correlation between latent variables and stationarity confirmation. Verification of study hypothesis was decided based on t-value($t > 1.96$) of path-coefficient between theoretical variables that were suggested in covariance structure analysis of study model. Finally, Structural Equation Modeling(SEM) was used to clarify the effects of a sport participant's personality on introverted or extroverted motives for participation, sport products purchase, image, and other external factors.

3. Result

3.1. Confirmatory factor analysis

For this study, confirmatory factor analysis(CFA) was conducted on measurement variables to examine conformity of variable structure with empirical data and stability of endogenous structure for each variable as well as verify convergent validity[14].

The results of model suitability test through maximum likelihood method showed

306.838 in χ^2 value, 137 in df value, .972 in CFI value, .966 in TLI value and .041 in RMSEA value, which means the model is suitable and confirmatory factor analysis is valid.

After the evaluation of model suitability, reliability and validity of latent variables was evaluated. Theoretically construct reliability over .7 and average variance extracted over .5 somewhat guarantee reliability of latent variables. For this study, construct reliability and average variance extracted of all latent variables meet the standard, which means reliability and convergent validity were secured. Also, values of construct reliability and average variance extracted for all factors were bigger than critical ratio. It is considered that reliability of latent variables is secured theoretically. As shown in <Table 2>, construct reliability and average variance extracted values are over critical ratio, which suggests reliability and convergent validity were secured.

Along with suitability by confirmatory factor analysis to verify connection between these measurement variables and latent variables, standardized factor coefficient estimation about properties of sport activities, sport participation motivation and purchase determination of sport goods is presented in <Figure 1>.

3.2. Testing study hypothesis

Hypothesis testing about connection among personalities of sport participants, sport participation motives and the purchases of sport goods produced results shown in <Table 3> presenting Path-coefficients among variables. The analysis results of this study model are schematized in <Figure 2> showing the path diagram and non-standardized estimate of path coefficient from analysis of the structural equation model. The rectangle shows measurement variables, the oval expresses latent variables and error terms are from e01 to e19.

Table 2. The result of factor analysis and reliability analysis for study model.

Potential parameter	Identified parameter	Estimate	Estimated standardization error	CR	AVE
Personality	Honesty-humility	.442	.805	.789	.508
	Emotionality	Eliminated	-		
	Extraversion	.902	.186		
	Agreeableness	Eliminated	-		
	Conscientiousness	.891	.206		
	Openness to experience	.480	.770		
Intrinsic motivation	Enjoyment	.816	.334	.895	.740
	Skill development	.905	.181		
	Achievement	.857	.266		
Extrinsic motivation	Condition	.661	.563	.806	.584
	Affiliation	.865	.252		
	Health & fitness	.752	.434		
Product	Design	.806	.350	.858	.669
	Color	.795	.368		
	Function	.851	.276		
Image	Trend	.995	.010	.762	.548
	Advertisement	.718	.484		
	Brand	.372	.862		
External	Price	.967	.065	.809	.596
	Service	.697	.514		
	Location	.605	.634		

Note: CR: Construct Reliability, AVE: Average Variance Extracted.

Figure 1. Standardized coefficient estimation of cognitive properties recognized by a sport participant.

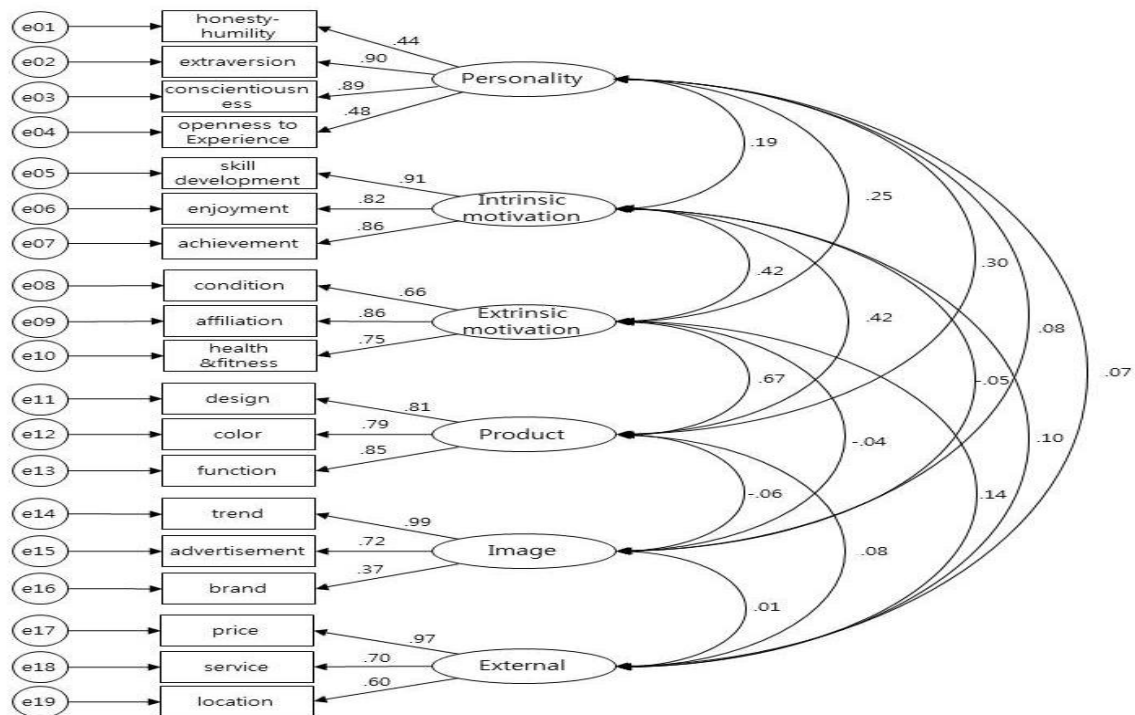
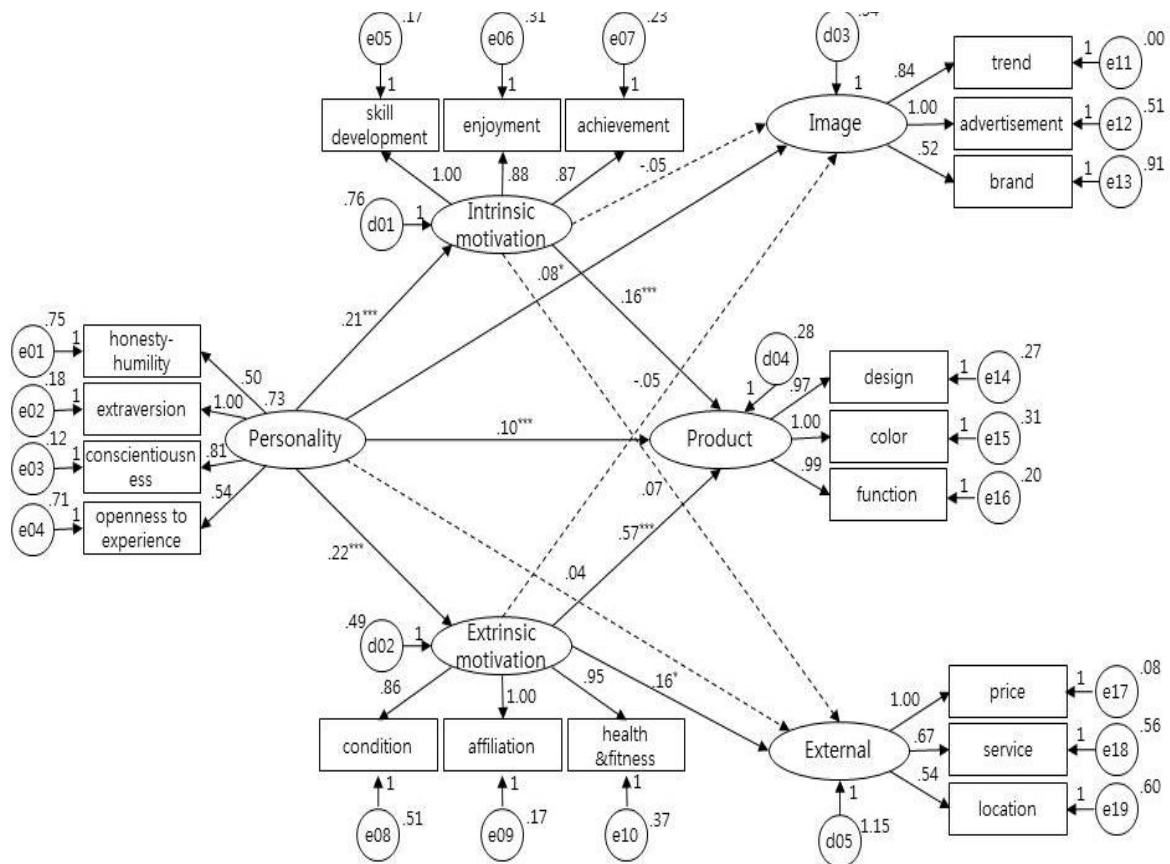


Table 3. The result of parameter estimation using maximum likelihood method of study model.

Theory/Route			Standardization	Non-standardization	S.E.	C.R.	P	Hypothesis tested
H1-1	Intrinsic	← Personality	.200	.209	.042	4.920	***	Adopted
H1-2	Extrinsic	← Personality	.256	.219	.036	6.083	***	Adopted
H2-1	Product	← Personality	.125	.104	.031	3.351	***	Adopted
H2-2	Image	← Personality	.098	.084	.037	2.290	.022	Adopted
H2-3	External	← Personality	.029	.037	.054	0.685	.493	Rejected
H3-1	Product	← Intrinsic	.203	.162	.028	5.673	***	Adopted
H3-2	Image	← Intrinsic	-.059	-.049	.033	-1.475	.140	Rejected
H3-3	External	← Intrinsic	.056	.068	.049	1.373	.170	Rejected
H3-4	Product	← Extrinsic	.581	.567	.043	13.122	***	Adopted
H3-3	Image	← Extrinsic	-.044	-.045	.043	-1.058	.290	Rejected
H3-4	External	← Extrinsic	.105	.157	.064	2.459	.014	Adopted

Note: ***p<.001

Figure 2. The result of non-standardization of structural formula model test.



Note: *p<.05, **p<.01, ***p<.001, → adopted, → rejected

4. Discussion

4.1. Relationship between personality factor and participation motivation

As shown in the results, personality of sport participants has positive(+) influence

on internal and external participation motivation. Therefore results of this study model support the hypothesis.

According to the research on relationship between sport activities and sport attitude of youth, frequency of youth sport activities influences their sense of justice. The more youth participate in leisure activities, the bigger their sense of justice becomes[15]. The previous study showed correlation between factors to form sport activities preference including individual sport preference, team sport preference, interest in health, direct, game watch, indirect game watch, challenging sport and exercise time and five personality factors[16].

There are 2 researches[17][18] explained that strong recognition about leisure motivation reduces restriction on leisure participation and becomes an important factor to decide direction intensity and persistence of certain leisure behaviors. These researches partially support the results of this study.

Therefore, sport instructors need to meet various kinds of needs of sport participants, provide them adequate goals continuously so that participants do not have difficulties or boredom in sport activities and help them have pleasant and healthy life. Furthermore, it is considered that the participation motives can work as a strategic variable in marketing to draw new participants

4.2. Relationship between personality and purchase determination

The result of this study showed that personality of sport participant and the product factor of sport goods have positive(+) influence on each other. Moreover, personality and the image factor have positive(+) influence on each other. Therefore the testing results of this study model support the set hypothesis.

According to the previous study on sport shoes purchase of teenagers, what makes customers feel satisfied about products greatly is color and design, which means that outlook of products is important[19]. A research[20] reported that people with high

conscientiousness tend to make more careful and cautious decisions than others.

It suggests that when sport participants with various personalities purchase sport goods design, color and function of sport goods become purchase determination factors. It also suggests that when sport participants with different personalities purchase sport goods, the image factor such as trend, advertisement and brand works as purchase determination factors.

From the result of this study, it was found that personality of sport participant has no positive(+) influence on external factors of sport good purchase. The result of this study model failed to support the set hypothesis.

The study about influence of sport marketing mix factors on brand asset and consumption behaviors explains that location, a sub-factor of sport marketing, influences on perceived quality[21]. However, purchase location among purchase determination factors doesn't have significant influence on all sub-factors among brand assets[22]. These results fail to support the results of this study.

Although some previous study shows no connection between product purchase by sport participants with various personalities and the product factor in relation to purchase of sport goods such as price, service and location, other advanced researches suggest that there might be connection between them.

These results were produced possibly because increase of owner-driven cars or transformational development made it much easier for people to buy sport goods. Due to active marketing campaign customers take good service for granted and personalities of purchasers do not greatly influence on product price because of their brand loyalty. However, price is still very important when customers buy products. Therefore it is necessary to understand connection among personalities of sport-leisure participants, image factor in relation to purchase determination of sport goods and price, service and location of products for better marketing strategy.

4.3. Relationship between participation motives and purchase determination

This study showed that introverted participation motives have a positive(+) effect on the product factor and it supports the hypothesis. In the study about influence of sport participation factors on product purchase and consumption behaviors[23], sport participation motives influence on product purchase and consumption behaviors, which means that the participation motives are an influential variable. Frequent social exchange and high self-realization increased interest in product purchase and unhealthy condition of a body lowered pleasure and self-expression. High stress factors of sport participants greatly influenced on pleasure. It is considered social exchange and sense of belonging provide people more pleasure of sport good purchase. Self-expression was high in self-realization and stress groups. Healthiness of body showed negative(-) influence on self-expression and it could mean that low healthy index brings low self-expression in product purchase. These research results partially support the result of this study.

In relationship between various introverted motives of sport participants and sport good purchase, product factor such as design, color, function, trend and advertisement become purchase determination factors.

Participants with the introverted motives engage themselves in sport activities due to technology development, pleasure and sense of accomplishment. Since they intend to satisfy their desire for pleasure and sense of accomplishment through product purchase, it is required to invest on functional development of products for steady sales.

Introverted motive factors have no positive(+) influence on the image factors and external factors. Therefore, the results of this study model fail to support the hypothesis.

The previous study on amateur golfers' participation motives, club selection and repurchase possibility through PLS path model analysis shows that only function of golf club has significant influence on repurchase and other factors including A/S and brand name do not have influence on repurchase[24]. It supports the results of this study.

The study suggests that in purchase of sport goods, various participation motives of sport participants fails to show relation to the image factor of sport goods including advertisement, trend and brand. Various participation motives of the participants also fails to show relation to external factors of sport goods including price, service and location in purchase of sport goods.

One possible reason for this is that exiting sport participants purchase products in wide and various ways both on-line and off-line, which means there is no locational restriction about purchasing products. Unlike existing consumption patterns, a lot of purchase is conducted through on-off line. Therefore, purchase location is not a problem when customers purchase sport goods. However, mood of purchase location and assessment on the place influence on brand image[25]. Sport shops and agencies that sell sport goods are different from other stores because they also provide service. Sport shop is a place that stimulates customers' brains and neuron data, so that atmosphere, interior and kindness of staff in a shop become very important factors to form image of the brand in the shop. So it is recommended for sport companies and managers to understand sport shops, stores and agencies as a space to communicate with customers and pay attention to atmosphere and interior of their shops to give customers confidence in their brands[22].

5. Conclusion & Recommendation

In this study, the cognitive side of sport participants through scientific and objective methods is considered. The personalities of sport participants were categorized by the motives, participants' personalities with decisive purchase factors, and participants' motives with decisive purchase factors.

The sport participants' personalities seem to affect the introverted motives in participating in sport activities positively. In order to utilize different personality of the sport participants, sport leaders and sport marketers need to use the motives such as technical development, pleasure, and accomplishment strategically.

This study aimed to find connection along personality of sport participants, motivation for sport participation and purchase of sport goods, which had not been a major issue in existing studies. However it showed several theoretical and empirical limits and here comes some suggestion for next studies.

This study only presented demographic and general characteristics of subjects with no comparative analysis of various factors. More various data based on comparative analysis of demographic and general characteristics of study subjects should be presented for sport trainers and marketers.

Motivation for sport only showed partial direct and indirect effect on personality of sport participants and purchase determination in this study leaving room for questions and necessity of further studies. Also it is required to examine multiple mediator effect model that included other variables in relation to cognition of sport participants and find out various important factors between human cognition and sport by inputting more factors based on this study for in-depth and continuous study.

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