"Demographic factors affecting Chinese tourists traveling to Thailand in the post-Covid-19 era"

NUMBER OF REFERENCES	NUMBER OF FIGURES	NUMBER OF TABLES
42	**1**	**13**

BUSINESS PERSPECTIVES

Haiying Fu, Ph.D. Student,
Chakrabongse Bhuvanarth
International Institute for
Interdisciplinary Studies, Rajamangala
University of Technology Tawan-ok,
Thailand. (Corresponding author)

Chonlavit Sutunyarak, Head of
Academic Affairs, Chakrabongse
Bhuvanarth International Institute for
Interdisciplinary Studies, Rajamangala
University of Technology Tawan-ok,
Thailand.

Haiying Fu (Thailand), Chonlavit Sutunyarak (Thailand)

DEMOGRAPHIC FACTORS AFFECTING CHINESE TOURISTS TRAVELING TO THAILAND IN THE POST-COVID-19 ERA

Abstract

Chinese tourists contribute significantly to the development of the tourism industry in Thailand. However, only some studies have systematically discussed the role of demographic factors in developing Thai international tourism. The study aims to research the behavior of Chinese citizens traveling to Thailand in the post-Covid-19 era based on combining the behavioral dynamics, the push-pull theories and demographics. 432 Chinese travelers who have visited Thailand participated in the survey. The scale included four parts: international tourism development in Thailand (A1-A8); pushers (B1-B9); pullers (C1-C8); demographic variables: gender, age, occupation, income, education level, marital status, and location. The study used exploratory factor analysis, confirmatory factor analysis, correlation, and variance analyses with SPSS 26.0. Therefore, exploratory factor analysis identified for this study three factors: F1 (5 items), F2 (3 items), and F3 (4 items). The correlation between F1 and F2 is 0.8, between F1 and F2 is 0.87, between F2 and F3 is 0.79. The findings of the analysis of demographic variables indicate that: gender does not affect tourists' perceptions and changes; age has a significant impact on the three constructs; monthly income should be considered in the development of inbound tourism strategies; undergraduate and postgraduate visitors showed higher scores for research constructs; there is no need to consider the marital status of tourists. The study suggests that the Thai tourism department pay attention to the push and pull factors that motivate Chinese citizens to choose Thailand to expand international tourism.

INTRODUCTION

The Covid-19 pandemic has severely affected the development of global tourism. Since 2020, outbound tourism in many tourism countries has suffered unexpected impacts (Zhang et al., 2021). However, the outbound tourism has ushered in new opportunities for world tourism development in 2022 (Higgins-Desbiolles, 2022). The tourism industry will become the driving force of the global economic recovery and will create nearly 126 million new jobs in the next decade, accounting for one-third of the new jobs. The tourism industry in the Asia Pacific region will recover significantly, creating nearly 77 million new jobs from 2022 to 2032. The industry's contribution to GDP is expected to grow at an average annual rate of 8.5%, more than twice the 4% growth rate of the region's overall economy (Breaking Travel News, 2022).

Chinese tourists have occupied the most vital position in Thailand's tourism market, creating enormous benefits for Thailand's tourism development since 2015 (Hess, 2019). Thailand has welcomed many foreign tourists, including from Europe, the United States, India, Malaysia, Singapore, and other countries that have fully opened

up since 2022 (Jaiwilai & Kunaviktikul, 2022). The Thai government has launched some tourism promotion policies to accelerate the sustainable growth of tourism (Jaiwilai & Kunaviktikul, 2022). The global Covid-19 resistance made a significant breakthrough in 2022 (Servellita et al., 2022).

This study aims to identify what type of Chinese tourists prefer traveling to Thailand. There are still some gaps in the prediction of the essential market. Moreover, transportation convenience, a safe destination, natural scenery, shopping place, and nightlife play an essential role in tourism development (Zhang, 2012). The Thai government should identify the push and pull factors for Chinese citizens traveling to Thailand. Many studies have explored the factors influencing Chinese tourists (Xu et al., 2020). In post-Covid-19 era, Chinese tourists will have more opportunities to return to Thailand (Jia & Zhao, 2021). However, research needs to systematically interpret and predict the need to develop international tourism based on the results of quantitative studies and determine the pushers and pullers for Chinese citizens traveling to Thailand.

1. LITERATURE REVIEW

Behavioral dynamics theory describes how human behavior is promoted and maintained (Wongmonta, 2021). Consumer and destination decision-making behavior gradually mature with the support of behavioral dynamics theory. Push-pull research inspires consumer behavior in the tourism industry. Many factors, such as the quality of tourism products, destination image, and cultural background, may lead people to make different decisions on tourism consumption (Wu & Liang, 2020).

The study of outbound travel behavior has also received wide attention in recent years. Transportation, consumption level, accommodation, and publicity of overseas travel destinations also affect tourists (Gu, 2022). Behavioral dynamics theory is more mature in Europe, and the discussion of student behavior is widely used in psychology and education (Short, 2021). This study introduces the behavioral dynamics theory into overseas tourism to illustrate the pushers and pullers for Chinese tourists and discover the necessity of developing international tourism in Thailand.

The push-pull theory is one of the classic population migration theories. It holds a push-pull force in both inflows and outflows of the population (Piras, 2021). The former is a negative factor that pushes the floating population outward. Education level and the length of migration distance affect the push-pull force on the migrant population. System factors also restrict migra-

tion. Urban development, work pressure, environmental problems, and the high push force of tourism consumption affect Chinese tourists, resulting in many factors promoting tourists' outbound travel (Shi et al., 2020).

Racing force refers to positive factors in places where people flow and are conducive to outbound travel (Zhang et al., 2020). These positive factors can improve tourism development, better meet the needs that tourists are not satisfied with the services provided in their countries, and thus improve the overall efficiency of overseas travel. The push-pull theory is used in tourism behavior and motive. Travel behavior and motive are the main factors that define the form of tourism (Bayih & Singh, 2020). The study on travel behavior and motive will help to understand tourists, subdivide tourists, help tourism marketers to allocate scarce tourism resources more effectively, and develop the tourism sector (Grilli et al., 2021).

The decline in tourism between 2020 and 2021 cost the global economy more than $4 trillion (Haryanto, 2020). Thailand is clearly among the most injured as a well-known tourist country in Southeast Asia, so it has done everything possible to revitalize its tourism industry (Haryanto, 2020). The Thai government is eager to open its borders to accelerate tourism recovery and boost the economy. The lifeblood of Thailand's economy (tourism) accounted for about 21% of the country's GDP (before 2019). After the outbreak, Thailand lost 3.7 billion dollars in tourism last year due to the sharp drop in in-

ternational tourists (Boonyasana & Chinnakum, 2021). Therefore, it is indispensable to develop tourism in Thailand.

Thailand is rich in natural and cultural resources. There are many scenic spots in central and northern Thailand: temples, palaces, and Sukhotai historical and cultural parks (Riddhagni & Taylor, 2019). In addition, many world-famous island resorts are located in southern Thailand. As a tourist country, Thailand enjoys a warm climate and is suitable for traveling all year round. Foreign tourists are attracted to Thai cultural forms, festivals, and religions (Ghosh & Anjum, 2022).

Most people in Thailand believe in Buddhism, which has a long history in Thailand and has a profound impact on the life and culture of the Thai people. Thailand is located in the center of Southeast Asia and has convenient transportation to many surrounding countries (Punyaratabandhu & Swaspitchayaskun, 2018).

As a tourist country, Thailand has driven the real estate industry and attracted investment worldwide (Montezuma & McGarrigle, 2019). Thai tourism professionals also promote the development of international schools in Thailand, with a substantial increase in annual income of 10%~20% (Jia & Zhao, 2021). Healthcare and old age tourism also promote the development of related industries in Thailand, where most doctors have studied abroad to receive high qualification (Wongboonsin et al., 2020). Moreover, Thai hospitals are star-rated hotels with complete facilities and comfortable medical experiences. Thus, the development of international tourism is of great significance to the development of the Thai economy.

Push factors, or pushers, are personal and social factors that drive tourists away from their places of residence (Salisu et al., 2022). Economic and self-factors have become pushers for Chinese tourists to travel abroad. China's urbanization process is rapid, which has increased the consumption of Chinese residents (Guan et al., 2018). Tourists' psychological factors also affect their choice to travel to Thailand and enjoy life, and consumerist values have changed the tra-

ditional definition of tourism (Fan et al., 2020). Cultural differences have made more Chinese interested in Thai culture, life, and historical sites. While Chinese tourists seek relaxed tourism, they are often eager to see a different culture (Wen et al., 2018). After Covid-19, when China's long-term anti-Covid-19 pandemic policy has been relaxed, Chinese tourists may have a more robust demand for overseas travel (Amighini, 2021). Therefore, the central pushers for Chinese tourists to Thailand are the motivation and ideas of tourists and China's political, economic, and educational development.

Pull factors, or puller, are characteristic of desirable destinations (Masiero et al., 2022). Traditionally, Thailand has convenient and affordable visa policy for Chinese tourists. In addition, with the development of the world economy, fewer and fewer countries rely on foreign exchange for tourism to boost their economy (Manzoor et al., 2019). Therefore, Thailand has just seized this opportunity as an essential tourist country (Suharko et al., 2018). In addition, Thailand's own natural and cultural landscape is a vital tourist resource. While preventing the Covid-19 pandemic, Thailand has gradually improved its tourism industry during this extraordinary period (Uğur & Akbıyık, 2020). E-visa, automated travel services, and smart hotels are gradually developing. After Covid-19, the pullers for Chinese tourists to visit Thailand are one of the main issues that should be concerned.

Based on the behavioral dynamics and push-pull theories, this study aims to reveal the need for developing international tourism in Thailand and study demographic factors that drive and promote Chinese-based tourism in the post-Covid-19 era.

2. METHODOLOGY

This study collected data through online questionnaires filled by 432 tourists from all parts of China who have previously visited Thailand. The first part of the scale uses Boonyasana and Chinnakum's (2021) suggestions on international tourism development in Thailand. Eight rewritten items are used to measure the need to

develop international tourism (A1-A8). Pushers and pullers are the second and third parts, and Sastre and Phakdee-Auksorn's (2017) findings help to analyze the behavior patterns of foreign tourists in Phuket based on the push-pull theory.

Pushers include nine statements (B1-B9), and pullers have eight (C1-C8). The fourth part measures demographic variables: gender, age, occupation, income, education level, marriage, and location. First, SPSS and AMOS are used for data analysis. Then, descriptive statistics sort out sample and statement information (Amrhein et al., 2019). Next, reliability and validity analysis identified the feasibility of the research framework and questionnaire. After that, the constructs of the need to develop international tourism, pushers, and pullers of Chinese citizens traveling to Thailand were determined based on exploratory factor analysis and validation factor analysis. Finally, with the support of variance and correlation analyses, the effects of demographic variables on the three research constructs (need to develop international tourism, pushers, and pullers) were verified.

Table 1 introduces a large gap between the proportion of men and women in the sample: 243 were males, accounting for 56.3%, and 189 were females, accounting for 43.8%. The dominant age groups are 21-30, 31-40, and 41-50 years old. Among the respondents, 85 are employees, accounting for 19.7%, 79 are private owners, 58 are teachers, 57 are professionals and technicians, 46 are freelancers, 38 are of other professions, 28 are civil servants, 25 are students, and 16 are retired. Considering education, undergraduate tourists account for 58.8%; the total number of undergraduate tourists is 90, and there are 71 with master's degree, while doctor's degree comprises only 17 respondents. Next, 222 respondents were married, accounting for 51.4%. More than half of them were in a relationship (24.5%), 69 were single, 26 were divorced, and nine were separated. To sum up, the study sample is diverse, which can more effectively demonstrate the necessary conditions for the development of tourism in Thailand and the impact of the push and pull factors on Chinese tourists who prefer visiting Thailand.

Table 1. Demographics of the sample

Characteristics		Frequency	Percent
Gender	Female	189	43.8
	Male	243	56.3
Age	Below 20	10	2.3
	21-30 years old	133	30.8
	31-40 years old	116	26.9
	41-50 years old	95	22.0
	51-60 years old	45	10.4
Occupation	Enterprise employee	85	19.7
	Private owner	79	18.3
	Teacher	58	13.4
	Professional	57	13.2
	Freelancer	46	10.6
	Others	38	8.8
	Civil servant	28	6.5
	Student	25	5.8
	Retiree	16	3.7
Income	>$4000	105	24.3
	$3000-$4000	146	33.8
	$2000-$3000	102	23.6
	$1000-$2000	46	10.6
	$500 -$1000	19	4.4
	<$500	14	3.2
Education level	Under bachelor's degree	90	20.8
	Bachelor's degree	254	58.8
	Master's degree	71	16.4
	Doctor's degree	17	3.9
Marriage statue	Married	222	51.4
	In relationship	106	24.5
	Single	69	16.0
	Divorced	26	6.0
	Separated	9	2.1
Location	East China	107	24.8
	South China	92	21.3
	North China	74	17.1
	Southwest China	69	16.0
	Central China	47	10.9
	Northwest China	25	5.8
	Northeast China	18	4.2

3. RESULTS

To meet the needs of this study, SPSS v.23 was used for reliability testing. Table 2 shows that Cronbach's α is 0.933 (> 0.8), indicating that the questionnaire is reliable and the data collected are valid for further analysis.

Table 2. Reliability statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.933	.932	25

Table 3 shows the KMO value of 0.942, higher than 0.6. Through Bartlett's test of sphericity, the chi-square is 5248.026, the degree of freedom is 300; the p-value is 0 (< 0.05), which conforms to the standard. The variables are somewhat independent, indicating that the original questionnaire data variables are correlated. Thus, the data are suitable for factor analysis.

Table 3. KMO and Bartlett's test

Kaiser-Meyer-Olkin measure of sampling adequacy.		.942
Bartlett's test of sphericity	Approx. Chi-Square	5248.026
	df	300
	Sig.	.000

Twenty-five questions were divided into three dimensions by exploratory factor analysis. Table 3 suggests the KMO value = 0.942 (> 0.6), meaning the data are valid. Meanwhile, the cumulative variance explanatory rate after rotation = 51.63% (> 50%), indicating that the amount of information in the study items can be extracted effectively. However, after the first validity analysis, the variances of common factors A1, A6, and C8 were 0.248, 0.349, and 0.360, respectively. Therefore, these three items cannot be extracted effectively.

After the second validity analysis, A-dimension obtains A2, A3, A5, A7, and A8 in relation to F1 factor. These five items are related to F1 of A-dimension, indicating that the information from these five options can be extracted effectively, which meets

the criteria of factor analysis. As for B-dimension (F3), B1, B3, B5, and B7 do not match the expected values; the study deletes these items. The remaining B2, B6, and B8 options are associated with F3 of B-dimension, indicating that the information from these three studies is suitable for factor analysis. The C-dimension correlation to F2 results in deleting the C3 option and remaining C1, C4, C5, and C7 options; this indicates that the information from these three statements can be extracted effectively.

Table 4 shows multiple exploratory factor and validity analyses. The standard degree of all items is more than 0.4, the KMO value is 0.932 (0.6), the significance p-value is 0.00, and the items meet the expected correspondence. Therefore, exploratory factor analysis identified three factors for this study.

F1 stands for the need to develop international tourism construct and has five external variables. It refers to the construction of transportation facilities, improvement of essential equipment, standardization of tourism laws, regulations, and policies, and promotion of economic development through the development of the tourism industry.

F2 indicates that the pusher construct has three potential variables: the motivation for consumers to meet their spiritual needs by enhancing their awareness and interest in tourism and being attracted to local natural landscapes and cultural customs.

Table 4. Exploratory factor analysis

Items	F1	F2	F3	Common Factor Variance
A2	0.62	0.29	0.41	0.640
A3	0.72	0.38	0.23	0.716
A5	0.81	0.20	0.16	0.726
A7	0.63	0.33	0.35	0.635
A8	0.70	0.42	0.15	0.690
B2	0.29	0.29	0.72	0.690
B6	0.16	0.06	0.78	0.632
B8	0.19	0.37	0.67	0.621
C1	0.32	0.69	0.18	0.610
C4	0.29	0.70	0.23	0.629
C5	0.29	0.70	0.13	0.599
C7	0.25	0.70	0.28	0.633
KMO	0.932			-
Bartlett's test of sphericity	2484.798			-
df	66.000			-
p	.000			-

Note: F1 = Need to develop international tourism construct; F2 = Pusher construct; F3 = Puller construct.

F3 stands for the puller construct, with four potential variables: rich destination tourism products, low travel costs, a wide variety of natural landscapes and cultural atmosphere, and a choice of hotels and food. Therefore, 12 items can continue to be analyzed by validating factor analysis.

After AMOS analysis, the CMINDF value is more than 0.3, RMSEA is 0.068, and the goodness of fit is low. Using MI to adjust and modify the model, e1 and e2, e2 and e3, and e5 and e6 correction indicators are highly correlated. After adjustment and AMOS analysis, CMINDF is 2.399 (< 3), RMSEA is 0.057 (< 0.08); Table 6 concludes the excellent model fit.

The convergence of the potential variables of F1 and the five observed variables are 0.80, 0.82, 0.73, 0.75, and 0.77, respectively, which all exceed 0.5, indicating that the five observed variables have high conver-gence validity and are suitable for validation factor analysis. The convergence of potential variables of F2 and three observation variables are 0.8, 0.53, and 0.70, respectively, which are more significant than 0.5, indicating that these variables have good convergence validity, which is suitable for validation factor analysis. The convergence of potential variables of F3 and four observation variables is 0.71, 0.72, 0.67, and 0.72, indicating that they have good convergence validity. The correlation among the three potential variables, F1, F2, and F3, is also very high. The correlation between F1 and F2 is 0.8, between F1 and F2 is 0.87, between F2 and F3 is 0.79, greater than 0.5, and all exceed 0.7, indicating that the correlation among the three potential variables is very high and there is a significant correlation. Figure 1 shows the results of the confirmatory factor analysis.

Table 5 shows that the AVE of F1 is 0.6 (> 0.5), indicating that the effectiveness of F1 is outstand-
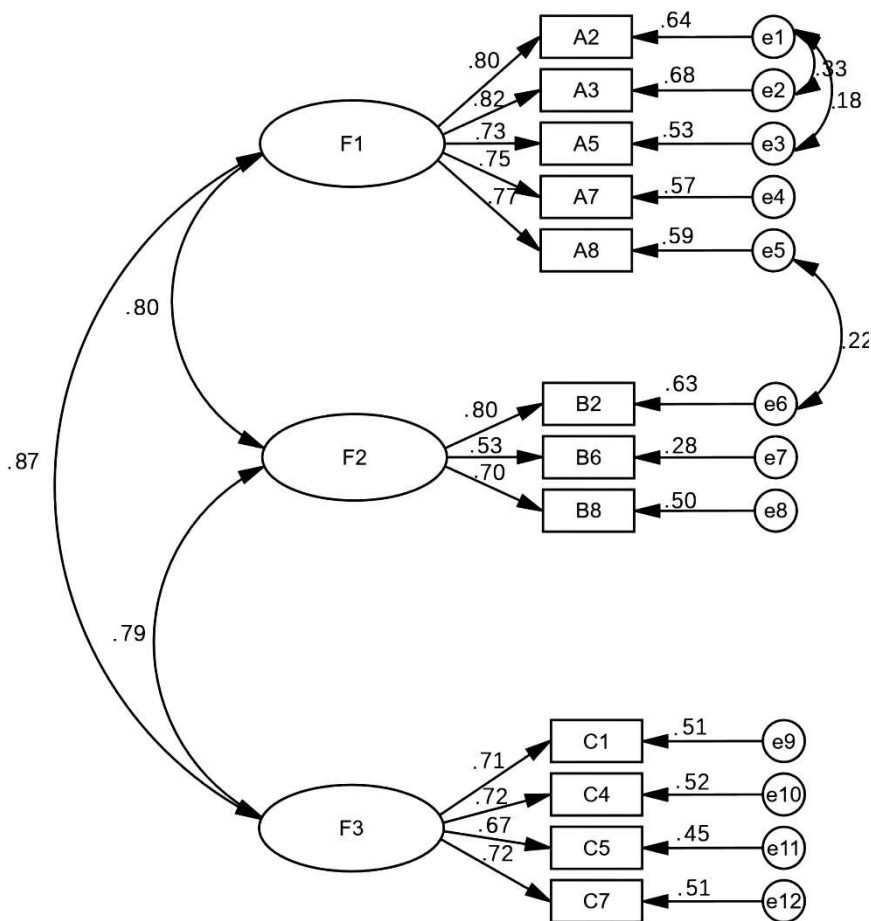
Note: F1 = Need to develop international tourism construct; F2 = Pusher construct; F3 = Puller construct.

Figure 1. Confirmatory factors analysis

Table 5. Validation of convergence: AVE and CR

Path			Estimate	S.E.	C.R.	P	AVE	CR
A2	←	F1	0.801					
A3	←	F1	0.824	0.053	16.379	***		
A5	←	F1	0.731	0.048	14.915	***	0.60	0.88
A7	←	F1	0.752	0.047	16.416	***		
A8	←	F1	0.766	0.045	16.708	***		
B2	←	F2	0.796					
B6	←	F2	0.529	0.048	10.178	***	0.47	0.72
B8	←	F2	0.704	0.053	13.529	***		
C1	←	F3	0.711					
C4	←	F3	0.723	0.076	13.645	***		
C5	←	F3	0.672	0.076	12.752	***	0.50	0.80
C7	←	F3	0.717	0.07	13.542	***		

Note: F1 = Need to develop international tourism construct; F2 = Pusher construct; F3 = Puller construct.

Table 6. Model fitting overall appropriate index

Index	x2/df	GFI	AGFI	TLI	NFI	CFI	RMSEA
Evaluation index	1-3	>0.8	>0.8	>0.9	>0.9	>0.9	>0.08
Test result	2.399	0.957	0.93	0.962	0.954	0.973	0.057

ing. The AVE of F2 is 0.47, between 0.36 and 0.5, reaching the target, and still showing some validity, indicating that F2 has a high convergence validity and reliability. The AVE of F3 is 0.5, equal to 0.5, is an acceptable range, and the convergence validity is reliable. The composite reliability value of F1 is 0.88 (> 0.8), which indicates that F1 has high reliability. The composite reliability of F2 is 0.72 (> 0.6), indicating that the composite reliability of F2 is quite reliable, and that of F3 is 0.8 (> 0.6), indicating that the convergence validity of F3 is highly reliable.

3.1. Analysis of demographic variables

The average number of views on the necessity of Thailand developing international tourism, pusher, and puller constructs of different visitors was tested gender-based by an independent T-test. Table 7 shows no significant individual difference between tourists based on their gender.

Table 7 proves that the t-values of the need to develop international tourism, pusher, and puller

constructs are 1.64, −0.64, and −0.96, and p-values are 0.1, 0.52, and 0.34, respectively ($p > 0.05$), which are not statistically significant. Therefore, there is no significant difference based on gender between the research constructs. Gender does not affect tourists' perceptions and changes. Thus, in developing outbound tourism in Thailand, there is no need to consider these three constructs based on gender.

Through multiple comparisons, the study found that the average score of tourists aged 31-40, 41-50, 51-60, 61 and over was higher, among which the average score of need to develop international tourism, pusher, and puller constructs was higher among tourists aged 51-60.

Table 8 shows significant differences in the views of the need to develop international tourism, pusher, and puller constructs among different age groups. F = 6.32, 11.26, and 9.19, respectively, with p = 0.00 ($p < 0.05$), reaching highly significant levels. It shows that age has a significant impact on the three constructs. Therefore, in developing in-

Table 7. Gender difference analysis

Constructs	Male	Female	T	P
Need to develop international tourism construct	1.89±0.78	1.76±0.86	1.64	0.1
Pusher construct	1.63±0.85	1.68±0.85	−0.64	0.52
Puller construct	1.82±0.82	1.90±0.88	−0.96	0.34

Note: N = 432.

Table 8. Age difference analysis

Constructs	<20	21-30	31-40	41-50	51-60	>61	F	P
Need to develop international tourism construct	1.70±0.82	1.56±0.61	1.90±0.88	1.87±0.82	2.2±0.82	2.15±1.00	6.32	0.00
Pusher construct	1.50±0.53	1.31±0.58	1.62±0.95	1.81±0.83	2.22±0.93	1.97±0.85	11.26	0.00
Puller construct	1.60±0.70	1.5±0.66	1.87±0.91	2.12±0.99	2.22±0.74	2.06±0.83	9.19	0.00

Note: N = 432.

Table 9. Location difference analysis

Constructs	Northeast	North	East	South	Central	Southwest	Northwest	F	P
Need to develop international tourism construct	1.61±0.98	2.00±0.92	1.66±0.76	1.74±0.82	2.04±0.72	1.94±0.73	1.92±0.81	2.53	0.02
Pusher construct	1.39±0.98	2.12±0.83	1.49±0.85	1.36±0.60	1.68±0.81	1.81±0.97	1.76±0.66	7.68	0.00
Puller construct	1.67±1.03	2.23±0.82	1.73±0.86	1.59±0.63	1.96±0.96	1.90±0.93	2.08±0.95	4.94	0.00

Note: N = 432.

ternational tourism in Thailand, the age differences of Chinese tourists need to be considered.

The average score of tourists in North China, Southwest China, and Northwest China is relatively high. Among them, Thailand's average score of the need to develop international tourism, pusher, and puller constructs is higher in North China than in other areas. On the other hand, the average scores in Northeast, East, South, and Central China are relatively low (Table 9).

Table 9 describes significant differences in the need to develop international tourism, pusher, and puller constructs among Chinese tourists from different regions. F = 2.53, 7.68, and 4.94, and P = 0.02, 0.00, and 0.00 (p < 0.05), reaching highly significant levels. Therefore, the tourism department needs to consider location when discussing research constructs.

Professional technicians scored higher on average on research constructs than tourists who indicated other professions. The lowest average score is for enterprise employees. For the pusher construct, the scores of civil servants and professional technicians are higher, 2.12 and 2.35, re-

spectively. The lowest average score is for enterprise employees and other professions, with 1.26 and 1.03. For the puller construct, the average scores of civil servants, professional technicians, and teachers are higher, with 2.29, 2.30, and 2.0, respectively. The lowest average score is for enterprise employees and other professions, with 1.51 and 1.39.

Table 10 indicates no significant difference in research constructs among different professions. F = 1.89, p = 0.06 (p > 0.05). There are significant differences in the views of pusher and puller constructs, F = 15.00, 7.19, and p = 0.00, p = 0.00 (p < 0.05), reaching an extremely significant level. Therefore, in the development of outbound tourism, there is no need to consider the need to develop international tourism construct. However, occupation considerations are required in discussing pusher and puller constructs.

Table 11 illustrates that tourists with monthly incomes ranging from $500 to $2000 have higher average scores, while those with incomes less than $500 have the lowest average score. Visitors with different monthly incomes had significant differences in the need to develop international

Table 10. Occupation difference analysis

Constructs	Enterprise employees	Civil servant	Private owners	Professionals	Teacher	Student	Freelancer	Retiree	Others	F	P
Need to develop international tourism construct	1.67±0.75	1.86±0.89	1.89±0.86	2.18±0.78	1.79±0.81	1.72±0.74	1.83±0.93	1.81±1.11	1.74±0.50	1.89	0.06
Pusher construct	1.26±0.64	2.12±0.83	1.71±0.87	2.35±0.86	1.62±0.75	1.52±0.71	1.74±0.91	1.44±0.81	1.03±0.16	15.00	0.00
Puller construct	1.51±0.77	2.29±0.94	1.95±0.92	2.30±0.89	2.00±0.92	1.68±0.80	1.91±0.76	1.56±0.51	1.39±0.55	7.19	0.00

Note: N = 432.

Table 11. Income difference analysis

Constructs	<$500	$500 -$1000	$1000- $2000	$2000- $3000	$3000- $4000	>$4000	F	P
Need to develop international tourism construct	1.57±0.76	1.79±1.08	1.98±0.86	1.98±0.851	1.71±0.73	1.74±0.76	2.31	0.04
Pusher construct	1.29±0.61	1.84±0.69	1.89±1.1	1.85±0.87	1.68±0.85	1.21±0.58	7.92	0.00
Puller construct	1.79±0.98	1.58±0.69	2.02±1.00	2.11±0.93	1.82±0.99	1.51±0.68	6.94	0.00

Note: N = 432.

Table 12. Education level difference analysis

Constructs	Under bachelor's	Bachelor's	Master's	Doctor's	F	P
Need to develop international tourism construct	1.71±0.74	1.91±0.82	1.79±0.89	1.65±0.79	1.71	0.17
Pusher construct	1.36±0.59	1.69±0.87	1.90±0.97	1.71±0.85	6.03	0.00
Puller construct	1.56±0.66	1.92±0.92	2.03±0.88	1.76±0.66	5.14	0.00

Note: N = 432.

tourism construct, with F = 2.31, 7.92, and 6.94, and p = 0.04, 0.00, and 0.00 (p > 0.05), reaching highly significant levels. Visitors with different monthly incomes have different views on research constructs. Therefore, monthly income should be considered in the development of inbound tourism strategies.

Table 12 shows F = 01.71, p = 0.17 (p > 0.05) for the need to develop international tourism construct, with no significant difference, whereas F in the pusher and puller construct = 6.03, 5.14, and p = 0.00 (< 0.05), reaching highly significant levels. Undergraduate and postgraduate visitors showed higher scores for research constructs. Lower average scores for undergraduate and doctoral students asserted that among Chinese tourists, the need to develop international tourism, pusher, and puller constructs are more important than among those with bachelor's or master's degrees.

Visitors with different marital statuses showed no significant difference in research constructs; F = 0.67, 1.66, and 1.66, p = 0.61, 0.16, and 0.16, respectively (p > 0.05), reaching insignificant levels. Specifically, in developing outbound tourism, there is no need to consider the marital status of tourists from different locations in China.

4. DISCUSSION

The study combines behavioral dynamics and push-pull theories to analyze the need to develop international tourism, pushers, and pullers for Chinese citizens traveling to Thailand. It also assessed the impact of demographic variables on these constructs.

Economic income and academic qualifications are essential in developing and promoting international tourism in Thailand (Pholphirul et al., 2022). However, the Thai tourism market should grasp the needs of tourists with undergraduate and master's degrees. The influence of the need to develop international tourism, pushers, and pullers constructs is insignificant for travelers with a bachelor's degree or above. The education level of tourists is inseparable from their comprehensive qualities. Rich knowledge and experience will lead to deeper considerations.

The individual's level of knowledge is inseparable from the individual's view of things and choice of things, not just their academic qualifications (Reay, 2022). It is also related to time and economic income. Tourists below the undergraduate level have a limited cultural level, relatively limited

Table 13. Marital status difference analysis

Constructs	Single	In relationship	Married	Divorced	Separated	F	P
Need to develop international tourism construct	1.74±0.78	1.80±0.77	1.87±0.84	1.81±0.94	2.11±0.60	0.67	0.61
Pusher construct	1.51±0.74	1.56±0.87	1.72±0.88	1.77±0.71	2.00±0.87	1.66	0.16
Puller construct	1.67±0.78	1.79±0.87	1.94±0.92	1.81±0.63	211±0.60	1.66	0.16

Note: N = 432.

economic income, less desire for outbound tourism, and less attention to the conditions and promotion factors of outbound tourism (Wu et al., 2000).

In addition, from the perspective of tourism consumers, teachers, civil servants, professional, and technical personnel account for an essential proportion of tourism in Thailand. Attention should be paid to the tourism needs of such consumer groups. Freelancers are increasingly interested in traveling to Thailand because of the nature of their work. Students have lower or no financial income, and their parents pay their daily expenses, so the proportion of travelers is smaller. Retired people have a prosperous time and pension, but because of their age, poor physical health, or low energy, they do not find it convenient to travel far.

The potential of the elderly in tourism consumption is indeed impressive. Due to the rapid development of society, innovative technology penetrates all occupations. On the other hand, the acceptance, absorbability, and sensitivity of intelligent products are relatively low for middle-aged and older people, so they are worried about all kinds of difficulties when traveling. The number of travelers is relatively tiny, and retired older people worry about language communication barriers, leading to fewer travelers. Nevertheless, the retired elderly group enjoys a prosperous time, pension, and high purchasing power. The tourism market should pay attention to this group and design more suitable tourism products for the elderly.

Chinese tourists from North China, Southwest China, and Northwest China are particularly interested in visiting Thailand. The Thai tourism department may spend more resources to maintain closer cooperation with these areas and promote the package jointly. Authorities should pay more attention to the content and emphasize Thai tourism's comfort and cultural history to attract more tourists from these areas.

Civil servants, professional technicians, and teachers have a more pronounced influence on the three factors of research and discussion. Thai tourism-related departments pay attention to their holidays and develop their vacation activities as much as possible. These three occupational groups have stable and highly educated status in China. Therefore, in the post-Covid-19 period, they should continue to cap-ture their consumption capacity and cultivate their outbound travel behavior.

Although Thai international traveling agencies mainly focus on the Chinese market, during the period of Covid-19, tourists from Europe, America, India, Malaysia, and Singapore once became an important source of tourism revenue (Amighini, 2021). Even for a long time, they may become a significant force (Grilli et al., 2021), but the survey results on Chinese tourists may not be suitable for tourists from other regions who intend visiting Thailand. Therefore, cross-cultural and cross-regional comparative research can enrich the theory and provide perfect suggestions for Thai tourism development.

The push-pull theory mainly emphasizes the push and pull factors (Wang et al., 2020). It is challenging to endlessly verify every theoretical dimension and topic of tourism behavior research. More behavioral research theories can be combined with push-pull theory to discover new theories.

The study is only a fundamental prediction of the need to develop international tourism, pushers, and pullers constructs after Covid-19, as well as the factors that may affect travel behavior. It does not model the relationship between these three constructs. A preliminary study means that a large amount of data may be needed to support the value and significance of the study in the future, and there is more room for exploration. It is also necessary to build the model under the push-pull theory.

This paper only observes the necessity of developing international tourism in Thailand from the perspective of tourists and markets. Many factors affect the development of international tourism, and the digital economy and the Covid-19 pandemic give more clues to future research. Therefore, future studies can assess the opportunities and possibilities of international tourism development in Thailand from a broader perspective. In addition, this study targeted Chinese tourists. Therefore, this study encourages scholars to explore this gap in the future to clarify the impact of contextual and demographic factors on need to develop international tourism. Finally, the conclusions are only relevant to travelers from China. However, Thailand has a wide range of international tourists, and there may be different results in the survey of European and American tourists.

CONCLUSION

This study discussed the need to develop international tourism, pushers, and pullers constructs for Chinese citizens traveling to Thailand after Covid-19. The study confirmed Thailand's need to develop international tourism based on political, economic, and cultural premises. Data for the analysis was on-line questionnaires filled by 432 tourists from all parts of China who have previously visited Thailand. Exploratory factor analysis included three factors: need to develop international tourism construct (F1), pusher construct (F2) and puller construct (F3). 12 items were selected for analysis: the construction of transportation facilities (A2), improvement of essential equipment (A3), standardization of tourism laws (A5), regulations, and policies (A7), promotion of economic development through the development of the tourism industry (A8); the motivation for consumers to meet their spiritual needs by enhancing their awareness and interest in tourism (B2) and being attracted to local natural landscapes (B6) and cultural customs (B8); rich destination tourism products (C1), low travel costs (C4), a wide variety of natural landscapes and cultural atmosphere (C5), a choice of hotels and food (C7). The correlation among the three potential variables, F1, F2, and F3, is very high.

The results reveal that the research constructs' differences were significant in age, location, occupation, education level, and monthly income but not in gender and marital status. The results conclude that tourists over 30 are more likely to choose Thailand as a tourism destination ($F = 6.32, 11.26, 9.19$; $p = 0.00$ ($p < 0.05$). Tourists from North China, Southwest China, and Northwest China visit Thailand the most ($F = 2.53, 7.68, 4.94$; $p = 0.02, 0.00, 0.00$). Respondents with bachelor's or master's degrees contribute more to international tourism in Thailand ($F = 01.71, 6.03, 5.14$; $p = 0.17, 0.00, 0.00$). In addition, civil servants, teachers, and professional technicians constitute the most significant part of Chinese tourists who visit Thailand ($F = 1.89, 15.00, 7.19$; $p = 0.06, 0.00, 0.00$). Higher-income groups also pay more attention to visiting Thai tourist attractions ($F = 2.31, 7.92, 6.94$; $p = 0.04, 0.00,$ and 0.00).

In summary, the study emphasizes the impact of different demographic characteristics the need to develop international tourism, pushers, and pullers constructs for Chinese citizens traveling to Thailand. It implicates the tourism market and departments to focus on different tourism life and needs groups. Personalized customization of tourism and tourism care has become an essential task of Covid-19, and the improvement of the quality of tour guides and the intellectualization of tourism services should be gradually put on the agenda.

AUTHOR CONTRIBUTIONS

ACKNOWLEDGMENT

REFERENCES

1. Amighini, A. (2021). *China after Covid-19: Economic revival and challenges to the world* (ISPI Report). Retrieved from https://www.ispionline.it/en/publication/china-after-covid-19-economic-revival-and-challenges-world-30780

2. Amrhein, V., Trafimow, D., & Greenland, S. (2019). Inferential statistics as descriptive statistics: There is no replication crisis if we don't expect replication. *The American Statistician, 73*(sup1), 262-270. https://doi.org/10.1080/00031305.2018.1543137

3. Bayih, B. E., & Singh, A. (2020). Modeling domestic tourism: Motivations, satisfaction and tourist behavioral intentions. *Heliyon, 6*(9), e04839. https://doi.org/10.1016/j.heliyon.2020.e04839

4. Boonyasana, P., & Chinnakum, W. (2021). Developing the tourism sector for poverty reduction and inclusive sustainable growth in Thailand. In *Poverty reduction for inclusive sustainable growth in developing Asia* (pp. 57-76). Springer. Retrieved from http://cmuir.cmu.ac.th/jspui/handle/6653943832/75931

5. Breaking Travel News. (2022, April 22). *WTTC reports resurgent international travel at Global Summit 2022.* Retrieved from https://www.breakingtravelnews.com/news/article/wttc-reports-resurgent-travel-at-global-summit-2022/

6. Fan, K. H. F., Chang, T., & Ng, S. L. (2020). The Batek's dilemma on indigenous tourism. *Annals of Tourism Research, 83,* 102948. https://doi.org/10.1016/j.annals.2020.102948

7. Ghosh, R., & Anjum, I. (2022). Tourism events, festivals and technology application in Asia: Directions for future research. In A. Hassan (Ed.), *Technology application in tourism fairs, festivals and events in Asia* (pp. 391-412). Springer. https://doi.org/10.1007/978-981-16-8070-0_23

8. Grilli, G., Tyllianakis, E., Luisetti, T., Ferrini, S., & Turner, R. K. (2021). Prospective tourist preferences for sustainable tourism development in Small Island Developing States. *Tourism Management, 82,* 104178. https://doi.org/10.1016/j.tourman.2020.104178

9. Gu, S. (2022). Research on mountain atmospheric environmental impact and tourism consumer decision-making model based on edge computing. *Frontiers, 3*(6). https://doi.org/10.6981/FEM.202206_3(6).0049

10. Guan, X., Wei, H., Lu, S., Dai, Q., & Su, H. (2018). Assessment on the urbanization strategy in China: Achievements, challenges and reflections. *Habitat International, 71,* 97-109. https://doi.org/10.1016/j.habitatint.2017.11.009

11. Haryanto, T. (2020). COVID-19 pandemic and international tourism demand. *JDE: Journal of Developing Economies, 5*(1), 1-4. http://dx.doi.org/10.20473/jde.v5i1.19767

12. Hess, J. S. (2019). Thailand: Too popular for its own good. In R. Dodds & R. Butler (Eds.), *Overtourism* (pp. 111-124). De Gruyter Oldenbourg.

13. Higgins-Desbiolles, F. (2022). The ongoingness of imperialism: The problem of tourism dependency and the promise of radical equality. *Annals of Tourism Research, 94,* 103382. https://doi.org/10.1016/j.annals.2022.103382

14. Jaiwilai, W., & Kunaviktikul, W. (2022). Wellness tourism in ASEAN countries among aging travelers before and during the COVID-19 era: Thailand's perspectives. *Journal of ASEAN PLUS Studies, 3*(1), 53-66. Retrieved from https://so06.tci-thaijo.org/index.php/aseanplus/article/view/255955

15. Jia, R., & Zhao, M. (2021). Data research on Chinese tourists to Thailand in the digital era. *The Sixth International Conference on Information Management and Technology.*

16. Manzoor, F., Wei, L., Asif, M., ul Haq, M. Z., & ur Rehman, H. (2019). The contribution of sustainable tourism to economic growth and employment in Pakistan. *International Journal of Environmental Research and Public Health, 16*(19), 3785. https://doi.org/10.3390/ijerph16193785

17. Masiero, L., Hrankai, R., & Zoltan, J. (2022). The role of intermodal transport on urban tourist mobility in peripheral areas of Hong Kong. *Research in Transportation Business & Management,* 100838. https://doi.org/10.1016/j.rtbm.2022.100838

18. Montezuma, J., & McGarrigle, J. (2019). What motivates international homebuyers? Investor to lifestyle 'migrants' in a tourist city. *Tourism Geographies, 21*(2), 214-234. https://doi.org/10.1080/14616688.2018.1470196

19. Pathomsirikul, Y. (2019). Marketing strategies affecting Chinese tourists' decision making and loyalty toward medical and wellness tourism in Thailand. *UTCC International Journal of Business & Economics, 11*(2). Retrieved from http://www.ijbejournal.com/images/files/9069787955d560d6083d87.pdf

20. Pholphirul, P., Rukumnuaykit, P., Charoenrat, T., Kwanyou, A., & Srijamdee, K. (2022). Service marketing strategies and performances of tourism and hospitality enterprises: Implications from a small border province in Thailand. *Asia Pacific Journal of Marketing and Logistics, 34*(5), 887-905. https://doi.org/10.1108/APJML-01-2021-0064

21. Piras, R. (2021). Migration flows by educational attainment: Disentangling the heterogeneous role of push and pull factors. *Journal of Regional Science, 61*(3), 515-542. https://doi.org/10.1111/jors.12519

22. Punyaratabandhu, P., & Swaspitchayaskun, J. (2018). The political economy of China–Thailand development under the one belt one road initiative: Challenges and opportunities. *The Chinese Economy, 51*(4), 333-341. https://doi.org/10.1080/10971475.2018.1457326

23. Reay, D. (2022). Lessons from abroad: how can we achieve a socially just educational system? *Irish Educational Studies, 41*(3), 425-440. https://doi.org/10.1080/03323315.2022.2085766

24. Riddhagni, N., & Taylor, K. (2019). *Cultural tourism and architecture heritage: Question of authenticity.* Silpakorn University.

25. Salisu, U. O., Fasina, S. O., Akanmu, A. A., & Sanni, S. M. (2022). Household waste management logistics practice in Lagos Metropolis, Nigeria. *KIU Journal of Social Sciences, 8*(2), 229-241. Retrieved from https://www.ijhumas.com/ojs/index.php/kiujoss/article/view/1489

26. Sastre, R. P., & Phakdee-Auksorn, P. (2017). Examining tourists' push and pull travel motivations and behavioral intentions: The case of British outbound tourists to Phuket, Thailand. *Journal of Quality Assurance in Hospitality & Tourism, 18*(4), 437-464. https://doi.org/10.1080/1528008X.2016.1250242

27. Servellita, V., Morris, M. K., Sotomayor-Gonzalez, A., Gliwa, A. S., Torres, E., Brazer, N., Zhou, A., Hernandez, K. T., Sankaran, M., Wang, B., Wong, D., Wang, C., Zhang, Y., Reyes, K. R., Glasner, D., Deng, X., Streithorst, J., Miller, S., Frias, E., … Chiu, C. Y. (2022). Predominance of antibody-resistant SARS-CoV-2 variants in vaccine breakthrough cases from the San Francisco Bay Area, California. *Nature Microbiology, 7*(2), 277-288. https://doi.org/10.1038/s41564-021-01041-4

28. Shi, Y., Shao, C., & Zhang, Z. (2020). Efficiency and driving factors of green development of tourist cities based on ecological footprint. *Sustainability, 12*(20), 8589. https://doi.org/10.3390/su12208589

29. Short, D. N. (2021). What is Ericksonian therapy: The use of core competencies to operationally define a nonstandardized approach to psychotherapy. *Clinical Psychology: Science and Practice, 28*(3), 282-292. https://doi.org/10.1037/cps0000014

30. Suharko, S., Khoiriati, S. D., Krisnajaya, I., & Dinarto, D. (2018). Institutional conformance of Halal certification organisation in Halal tourism industry: The cases of Indonesia and Thailand. *Tourism: An International Interdisciplinary Journal, 66*(3), 334-348.

31. Uğur, N. G., & Akbıyık, A. (2020). Impacts of COVID-19 on global tourism industry: A cross-regional comparison. *Tourism Management Perspectives, 36,* 100744. https://doi.org/10.1016/j.tmp.2020.100744

32. Wang, S., Wang, J., & Yang, F. (2020). From willingness to action: Do push-pull-mooring factors matter for shifting to green transportation? *Transportation Research Part D: Transport and Environment, 79,* 102242. https://doi.org/10.1016/j.trd.2020.102242

33. Wen, H., Josiam, B. M., Spears, D. L., & Yang, Y. (2018). Influence of movies and television on Chinese tourists perception toward international tourism destinations. *Tourism Management Perspectives, 28,* 211-219. http://dx.doi.org/10.1016/j.tmp.2018.09.006

34. Wongboonsin, P., Aungsuroch, Y., & Hatsukano, N. (2020). The ageing society and human resources to care for older people in Thailand. In Y. Tsujita & O. Komazawa (Eds.), *Human resources for the health and long-term care of older persons in Asia* (pp. 104-135). Jakarta: ERIA. Retrieved from https://www.ide.go.jp/library/English/Publish/Reports/Ec/pdf/202011_ch04.pdf

35. Wongmonta, S. (2021). Post-COVID 19 tourism recovery and resilience: Thailand context. *International Journal of Multidisciplinary in Management and Tourism, 5*(2), 137-148. https://doi.org/10.14456/ijmmt.2021.12

36. Wu, B., Zhu, H., & Xu, X. (2000). Trends in China's domestic tourism development at the turn of the century. *International Journal of Contemporary Hospitality Management, 12*(5), 296-299. https://doi.org/10.1108/09596110010339652

37. Wu, G., & Liang, L. (2020). Examining the effect of potential tourists' wine product involvement on wine tourism destination image and travel intention. *Current Issues in Tourism.* https://doi.org/10.1080/13683500.2020.1828310

38. Xu, R. H., Wong, E. L.-y., Lu, S. Y.-j., Zhou, L.-m., Chang, J.-h., & Wang, D. (2020). Validation of the Toronto Empathy Questionnaire (TEQ) among medical students in China: Analyses using three psychometric methods. *Frontiers in Psychology, 11.* https://doi.org/10.3389%2Ffpsyg.2020.00810

39. Zhang, H., Song, H., Wen, L., & Liu, C. (2021). Forecasting tourism recovery amid COVID-19. *Annals of Tourism Research, 87,* 103149. https://doi.org/10.1016/j.annals.2021.103149

40. Zhang, W., Chong, Z., Li, X., & Nie, G. (2020). Spatial patterns and determinant factors of population flow networks in China: Analysis on Tencent Location Big Data. *Cities, 99,* 102640.

41. Zhang, X. (2012). *The factors effecting Chinese tourist revisit Thailand destination.* University of the Thai Chamber of Commerce.

42. Zhu, J.-S. (J.), Airey, D., & Siriphon, A. (2022). Chinese outbound tourists as international consumer in Northern Thailand – A dynamic mobility perspective. *Journal of Consumer Culture, 22*(3), 692-710. https://doi.org/10.1177/1469540521994318