**Understanding post-pandemic travel behaviours – China’s Golden Week**

# Highlights

* Provides a prompt understanding of a real time pandemic (coronavirus Covid-19)
* Evaluates differences between travel intentions and actual travel behaviours
* Provides a taxonomy of post-pandemic domestic tourist behaviours

# Introduction

Travel and tourism have been among the hardest-hit sectors by the Covid-19 pandemic (UNWTO, 2021). In 2020, international tourist arrivals decreased by 72%, returning to levels not seen for 30 years (UNWTO, 2021), though domestic tourism has begun to stage a tentative recovery (OECD, 2021; UNWTO, 2021). China, where the Covid-19 outbreak originated, was one of the first countries to bring the pandemic under control (Burki, 2020) to a point whereby domestic tourism has largely returned to pre-Covid-19 levels (UNWTO, 2021). In this context, 1st-8th October 2020 “Golden Week” was effectively China’s first multi-day national holiday following on from a long national lockdown with severe restrictions on domestic travel. During this week, 637 million people engaged in domestic tourism (PRC State Council, 2020).

Whilst domestic tourism is staging a tentative recovery, the same cannot be said about the behaviours of those travelling. Recent studies have found that inter-pandemic planned travel behaviours are likely to change due to heightened perceptions of risk and fear of travel (Li *et al.*, 2020; Zheng *et al.*, 2021). However, this has not been validated yet. Additionally, while the majority research relevant to tourist behaviours during/post pandemic focused on intentional behaviour (e.g. Li et al., 2020; Isaac & Keijzer, 2021; Xie, Zhang, Morrison, & Coca-Stefaniak, 2021), there is a discrepancy between the intentional and actual behaviours (Sultan *et al.*, 2020; Lanzini & Khan, 2017). Thus, this research builds on earlier studies (Li *et al.*, 2020) to to highlight this gap in the context of the pandemic. In line with this, a survey of travel behaviours was carried out during China’s Golden Week holiday, including decisions in favour or against travel, motivations, means of travel, as well as changes in terms of travel duration, travel distance and spending. Moreover, it is widely acknowledged that travellers have differing behaviours and perceptions and thus segmenting them into subgroups helps provide a deeper and more focused understanding of their behaviours as well as to tailor marketing, products and services (Wedel & Kamakura, 2012). A taxonomy is developed here for post-pandemic domestic travel behaviours to understand factors influencing these behaviours, including perceived risk, anxiety, trust and financial constraints (Reisinger & Mavondo, 2006; Wang *et al.*, 2019).

# Data and methodology

The data for this study was collected using a self-administrated online questionnaire launched during China’s Golden Week holiday. Overall, 667 responses were received, of which 627 were useable questionnaires. The data was then analysed using SPSS.

Following on from this, a cluster analysis was performed on the data to segment the respondents (see methodological details in Appendix). Guided by the EFA results as well as the theoretical framework adopted, 5 cognitive variables were used: Perceived Risk, Trust, Financial Control, Motivation, and Anxiety.

Respondents’ demographics information was collected in the survey. Those variables provide insights for identifying the distinct features and characteristics of the segments. Therefore, the following hypothesis are proposed: The segments are significantly different in terms of Age (H1), Gender (H2), Household size (H3), Living with dependents (H4), Education level (H5), and Household Income (H6). On this front, Chi-square tests were adopted to examine the differences amongst the segments.

The cognitive variables were examined in One-way analysis of variance (ANOVA) amongst the segments in order to identify whether the segments display significant difference in Perceived Risk (H7), Trust (H8), Financial Control (H9), Motivation (H10), Anxiety (H11), and Intention to engage domestic travel further (travellers only, H12).

Within this sample, 312 respondents (49.8%) reported engaging in domestic tourism during the Golden Week, whilst the rest (50.2%) decided not to travel. This ratio is broadly in line with what the Chinese government reported – 637 million domestic visitors (44% of China’s population) during Golden Week (PRC State Council 2020).

# Results

A study of this same population during China’s nation-wide lockdown in January-February 2020 (see Li *et al.*, 2020), presented as “study 1” in Table 1 below, reported a variety of planned travel behaviour intentions elicited through the use of the Theory of Planned Behaviour (TPB) as a theoretical framework. According to TPB, human intention to perform behaviour can be predicted with high accuracy from attitudes toward the behaviour, subjective norms, and perceived behavioural control (Ajzen 1991). During the lockdown, the modified TPB model from study 1 explained 71.9% of variances of post-pandemic travel intention (Li *et al.*, 2020). Although earlier studies have found gaps between intended and actual behaviours within the TPB model, indicating that intentions do not always materialise into actual behaviours (e.g. Sultan *et al.*, 2020; Lanzini & Khan, 2017), none of these studies have ever been carried out in the context of a global pandemic. The post-pandemic data gathered here, shown in Table 1 as “study 2”, represents a follow-on from Li *et al.* (2020), and investigated actual post-pandemic travel behaviours in order to address this gap between intended (study 1) versus actual (study 2) travel behaviours in the context of a global pandemic.

[Insert Table 1 here]

Whilst 60.6% of respondents stated that they intended on travelling once the Covid-19 outbreak was brought under control with 39.4% deciding against travel (study 1), only 49.8% actually ended up engaging in travel several months later during the Golden Week holiday (study 2). In this respect, levels of Educational attainment (*χ*2 =34.32 p<0.05) and Household income (*χ*2 =24.49 p<0.05) were the most important variables in study 1 to distinguish travel respondents intent on travelling from those with no plans to travel. Study 2 echoed this finding: travellers and non-travellers were significantly different with regards to their education (*χ*2 =20.36 p<0.05) and household income (*χ*2 =19.15 p<0.05). Gender was also a major factor – only 42.1% of female respondents travelled (study 2) versus the 63.2% who expressed this intention originally (study 1). Also, 36% of all travellers (study 2) were respondents from smaller households (1-2 people) compared to 23.8% expressing an intention to travel (study 1). Age was also important, with only 4.0% of those under the age of 25 intending on travelling (study 1), whilst paradoxically this group accounted for 20.5% of actual travellers (study 2). Similarly, whilst 45.8% of people planned to reduce the duration of their next long holiday (study 1), only 27.6% actually did so (study 2). Also, only 31.4% of respondents reduced their travel distance and 25.0% reduced their spending. These differences between planned and actual behaviours could be explained by the travel craving concept researched by Mitev & Irimiás (2020), though further research is required for a better understanding of the factors involved. These findings echo Sultan *et al.* (2020) and Lanzini and Khan (2017) and confirm the gaps between intended versus actual travel behaviours, particularly in the context of uncertainly such as a global pandemic. Additionally, some demographic characteristics, including age, gender, number of household members, significantly illustrate these gaps.

In terms of transport (see Table 2), private car travel experienced a rise from 41.2% of respondents intending on using their car (study 1) to 53.2% of them actually using it (study 2). Public transport use declined compared to inter-pandemic intentions. Aeroplane travel also dropped from 28.2% (intention) to 13.1% (behaviour). These differences intended and actual use of modes of transport may have been influenced by physical distancing requirements and a general avoidance of crowded places (WHO, 2021).

[Insert Table 2]

In order to create a taxonomy of post-pandemic domestic tourist behaviour, a two-step cluster analysis was employed, leading to an optimal 3-cluster solution (see Table 3). ANOVA and Chi square analyses were also used to explore the characteristics of these 3 clusters, including cluster 1 (anxious ponderers), cluster 2 (laid back travellers) and cluster 3 (young free spirits). The test of significance amongst the three clusters showed the hypotheses were partially supported, where Age (H1, p<0.05), Living with dependents (H4, p<0.05), Education level (H5, p<0.05), and Household Income (H6, p<0.05).

in Perceived Risk (H7, p<0.05), Trust (H8, p<0.05), Financial Control (H9, p<0.05), Motivation (H10, p<0.05), Anxiety (H11, p<0.05), and Intention to engage domestic travel further (travellers only, H12, p<0.05). On the other hand, Gender (H2, p=0.67) and Household size (H3, p=0.90) showed not difference across the three clusters.

 These clusters displayed distinctive demographic characteristics and travel behaviours, where the anxious ponderers were mostly non-travellers with the highest level of anxiety and perceived risk, the laid back travellers were with the strongest level of travel motivation and the most valuable segment for tourism recovery, and the youngest cluster, i.e. the young free spirits, were those who did not change in travel spending as well as travel distance. The detailed discussion on the characteristics and behaviours of these clusters together with the comparison is provided below.

[Insert Table 3 here]

**Cluster 1 (anxious ponderers)** consisted of 147 respondents (23.4% of total sample). This cluster contained the greatest proportion of non-travellers (72.1%), but interestingly it demonstrated the strongest motivation to travel (4.42) among the three clusters. At the same time, this cluster showed a high level of anxiety related to travel (4.34), perceived a high level of risk (4.04), though with a relatively high level of trust in public authorities. Despite this, this cohort perceived a low level of financial constraint for taking holiday (4.00), with 47% of respondents’ annual household income in this cohort lower than 80k RMB. Also, notably more than half of the respondents in this cohort did not hold tertiary education qualifications, with the lowest average education attainment level in the three clusters.

**Cluster 2 (laid back travellers)** was the largest cohort (38.4% of total sample) and the most valuable segment for analysing post-pandemic tourism recovery. This cohort demonstrated the lowest levels of anxiety (1.99) and perceived the lowest risk (1.92) of all three cohorts. Yet, individuals in this cluster had high levels of travel motivation (4.34), they trusted public authorities (4.47) and displayed low levels of financial constraint (4.35). A significant number of respondents in this segment were between 30 and 39 years of age (36.1%) and most lived with a dependent (60.2%). By comparison, this age group represented less than 30% of the population in the other two segments. Notably the average education level in this segment was very high, with 66.0% of individuals in this cohort holding a university degree. Also, only 18.7% reported an annual household income less than 80k. A large proportion of this segment was represented by what has been referred to as China’s “post-80s generation”, born during the country’s contested One Child policy. This cohort enjoyed better education opportunities and living standards than earlier generations due in part to a national reforms to China’s economy and education (Cheng & Foley, 2018). This segment had the largest proportion of travellers (74.3%). They also took longer holidays, with only 23.5% reducing the duration of their holiday. However, 28.5% of travellers in this segment reported spending less money compared to the previous (pre-pandemic) long holiday. This proportion is higher than travellers from other segments, despite a low level of significance.

**Cluster 3 (young free spirits)** included 239 respondents (38.1% of total sample). This cluster showed the lowest levels of trust in public authorities (3.39) and the lowest motivation for post-pandemic travel (3.39). Similarly, they displayed the highest perception levels of financial constraints (2.83) of all three clusters. However, this was offset by relatively low levels of anxiety (2.75) and low perceptions of risk (2.72). The profile of this cohort is among the youngest across all three clusters, with 51% younger than 30 years of age. Crucially, more than half (52%) of respondents in this segment did not live with dependents. Although the average education level was lower than for cluster 2, this may be due to this group’s younger age. As many as 44.9% reported an income level that was lower than 80k per annum, which would explain this segment’s high level of perceived financial constraints. Despite this, of those who decided to travel, 81.5% reported not spending less than during their last (pre-pandemic) long holiday, which represented the highest proportion among all three clusters. Also, 69.6% of travellers from this segment claimed they did not reduce their travel distance compared to their previous long holiday – a proportion also higher than the other two clusters.

# Discussion and conclusions

Although some of the clusters in this taxonomy bear some similarities with those of a recent study of travellers in Europe (Neuburger and Egger, 2020), the taxonomy developed in that study relied on inter-pandemic planned behaviours, not actual ones. Similarly, although the research by Neuburger and Egger (2020) used different scales, that study’s laid-back travellers segment was dominated by older and more experienced travellers. Conversely, in this China-based study of post-pandemic actual travel behaviours the same segment was dominated by younger travellers with lower risk perceptions and lower levels of anxiety. Additionally, while the anxious group in Neuburger and Egger (2020) accounted for 65% of their sample, our anxious ponderers were less than 23.4% of the sample. This could be explained by the fact that Neuburger and Egger’s (2020) study was conducted at the beginning of the pandemic (March, 2020), whereas this one was carried out at a stage when the pandemic was under control in China.

All in all, the issues affecting our understanding of the gap between intended behaviours versus actual ones remain a complex field of inquiry likely to attract attention from scholars in the future. This is perhaps particularly pertinent to the effects of global pandemics on tourism, particularly given our still deficient understanding of the pathogen’s mutations and contagion mechanisms. It also remains to be established to what extent these gaps in our scientific knowledge about the virus may affect society’s level of trust in government advice, which would result in variances between inter-pandemic travel intentions and actual post-pandemic behaviours. Inevitably, the implications of these knowledge gaps for policy making in tourism and beyond are considerable at a time when post-pandemic economic recovery is a priority for most countries.

This study was conducted in a single context, i.e. China, when the COVID-19 outbreak was under control within the country (i.e. October 2020), yet the pandemic was still happening in most parts of the world. While this context provides a valuable and early example of the post-pandemic travel, its unique situation may limit the generalization of its findings. Future studies on other contexts where and when the pandemic is under control are highly recommended and comparisons would be made to provide a more comprehensive understanding of the taxonomy as well as the intention – behaviour gap. Additionally, studies on international travel behaviours could also contribute significantly to this area of knowledge.

## **References**

Ajzen, I. (1991). The theory of planned behavior. Organizational Behavior and Human Decision Processes, 50, 179–211.

Burki, T. (2020), “China's successful control of COVID-19”, *The Lancet Infectious Diseases*, 20(11), pp. 1240-1241.

Cheng, M. & Foley, C. (2018), "Understanding the distinctiveness of Chinese Post-80s tourists through an exploration of their formative experiences", *Current Issues in Tourism*, https://doi.org/10.1080/13683500.2017.1406462

Hair, J. F., Black, W. C., Babin, B. J. & Anderson, R. E. (2013), *Multivariate Data Analysis*, New York: Pearson (New International Edition)

Lanzini, P. and Khan, S.A. (2017), "Shedding light on the psychological and behavioral determinants of travel mode choice: A meta-analysis", *Transportation Research Part F: Traffic Psychology and Behaviour*, *48*, pp. 13-27.

Li, J., Nguyen, T.H.H. and Coca-Stefaniak, J.A. (2020), “Coronavirus impacts on post-pandemic planned travel behaviours”, *Annals of Tourism Research*, <https://doi.org/10.1016/j.annals.2020.102964>

Isaac, R.K. and Keijzer, J. (2021), "Leisure travel intention following a period of COVID-19 crisis: a case study of the Dutch market", International Journal of Tourism Cities, <https://doi.org/10.1108/IJTC-08-2020-0158>

Mitev, A. Z. & Irimiás, A. (2020), "Travel craving", *Annals of Tourism Research*, 103111

Neuburger, L. and Egger, R. (2020), "Travel risk perception and travel behaviour during the COVID-19 pandemic 2020: a case study of the DACH region", *Current Issues in Tourism*, pp. 1-14.

OECD (2021), *Rebuilding tourism for the future: COVID-19 policy responses and recovery*, Retrieved 20 Jan 2021 from <http://www.oecd.org/coronavirus/policy-responses/rebuilding-tourism-for-the-future-covid-19-policy-responses-and-recovery-bced9859/>

PRC Sate Council (2020), *Domestic tourism recovering during China's National Day holiday*, Retrieved 31 Jan 2021 from <http://english.www.gov.cn/statecouncil/ministries/202010/08/content_WS5f7f0a7fc6d0f7257693d2f2.html>

Reisinger, Y. & Mavondo, F. (2006), “Cultural differences in travel risk perception”, *Journal of Travel & Tourism Marketing*, 20:1, pp. 13-31

Sarstedt, M., & Mooi, E. (2011). *A Concise Guide to Market Research: The Process, Data, and Methods Using IBM SPSS Statistics*. Springer-Verlag Berlin Heidelberg. https://doi.org/10.1007/978-3-642-12541-6

Sultan, P., Tarafder, T., Pearson, D. & Henryks, J. (2020), “Intention-behaviour gap and perceived behavioural control-behaviour gap in theory of planned behaviour: moderating roles of communication, satisfaction and trust in organic food consumption”, *Food Quality and Preference*, 81, 103838.

UNWTO (2021) *Impact assessment of the COVID-19 outbreak on international tourism.* Retrieved 20 Jan 2021 from <https://www.unwto.org/impact-assessment-of-the-covid-19-outbreak-on-international-tourism>

Wang, J., Liu-Lastres, B., Ritchie, B. W. & Pan, D-Z (2019), “Risk reduction and adventure tourism safety: An extension of the risk perception attitude framework (RPAF)”, *Tourism Management*,74, 2019, pp. 247-257.

WHO (2021) Coronavirus disease (COVID-19) advice for the public. Retrieved 22 January 2021 from <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/advice-for-public>

Wedel, M., & Kamakura, W. A. (2012). Market segmentation: Conceptual and methodological foundations. New York, NY: Springer Science & Business Media

Xie, X., Zhang, J., Morrison, A. M., & Coca-Stefaniak, J. A. (2021) The effects of risk message frames on post-pandemic travel intentions: the moderation of empathy and perceived waiting time, Current Issues in Tourism, DOI: 10.1080/13683500.2021.1881052

Zheng, D., Luo, Q. and Ritchie, B.W. (2021), “Afraid to travel after COVID-19? Self-protection, coping and resilience against pandemic ‘travel fear’”, *Tourism Management*, *83*, p.104261.

Table 1. Demographic analysis of respondents in pre/intra-pandemic survey (study 1) versus post-pandemic survey (study 2) with same population.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|   | **Study 2** |  |   |  |   |   |   |   | **Study 1** |  |   |  |   |   |   |
|   | **Non-Traveller** | **%** | **Traveller** | **%** |  | **F or χ2 value** | **P value** |  | **Non-Intender** | **%** | **Intender** | **%** |  | **χ2 value** | **P value** |
| **Gender** |   |   |   |   |   | 12.77 | 0.00 |   |   |   |   |   |   | 1.42 | 0.23 |
| Male | 147 | 46.7% | 190 | 60.9% |   |   |   |   | 178 | 61.4% | 254 | 57.0% |   |   |   |
| Female | 168 | 53.3% | 122 | 39.1% |   |   |   |   | 112 | 38.6% | 192 | 43.0% |   |   |   |
| **Household size** |   |   |   |   |   | 14.26 | 0.03 |   |   |   |   |   |   | 10.79 | 0.10 |
| 1 | 26 | 8.3% | 26 | 8.3% |   |   |   |   | 23 | 7.9% | 24 | 5.4% |   |   |   |
| 2 | 59 | 18.7% | 89 | 28.5% |   |   |   |   | 43 | 14.8% | 82 | 18.4% |   |   |   |
| 3 | 90 | 28.6% | 96 | 30.8% |   |   |   |   | 75 | 25.9% | 142 | 31.8% |   |   |   |
| 4 | 71 | 22.5% | 59 | 18.9% |   |   |   |   | 66 | 22.8% | 89 | 20.0% |   |   |   |
| 5 | 36 | 11.4% | 23 | 7.4% |   |   |   |   | 46 | 15.9% | 75 | 16.8% |   |   |   |
| 6 | 22 | 7.0% | 14 | 4.5% |   |   |   |   | 22 | 7.6% | 20 | 4.5% |   |   |   |
| 7 or more | 11 | 3.5% | 5 | 1.6% |   |   |   |   | 15 | 5.2% | 14 | 3.1% |   |   |   |
| **Live with dependent** |   |   |   |   |   | 2.41 | 0.12 |   |   |   |   |   |   | 0.34 | 0.56 |
| No | 136 | 43.2% | 154 | 49.4% |   |   |   |   | 116 | 40.0% | 188 | 42.2% |   |   |   |
| Yes | 179 | 56.8% | 158 | 50.6% |   |   |   |   | 174 | 60.0% | 258 | 57.8% |   |   |   |
| **Age** |   |   |   |   |   | 22.34 | 0.02 |   |   |   |   |   |   | 9.64 | 0.47 |
| 18 and under | 14 | 4.4% | 5 | 1.6% |   |   |   |   | 9 | 3.1% | 9 | 2.0% |   |   |   |
| 18-24 | 73 | 23.2% | 59 | 18.9% |   |   |   |   | 16 | 5.5% | 9 | 2.0% |   |   |   |
| 25-29 | 59 | 18.7% | 64 | 20.5% |   |   |   |   | 80 | 27.6% | 125 | 28.0% |   |   |   |
| 30-34 | 50 | 15.9% | 50 | 16.0% |   |   |   |   | 65 | 22.4% | 99 | 22.2% |   |   |   |
| 35-39 | 40 | 12.7% | 57 | 18.3% |   |   |   |   | 51 | 17.6% | 88 | 19.7% |   |   |   |
| 40-44 | 23 | 7.3% | 37 | 11.9% |   |   |   |   | 20 | 6.9% | 32 | 7.2% |   |   |   |
| 45-49 | 36 | 11.4% | 20 | 6.4% |   |   |   |   | 16 | 5.5% | 22 | 4.9% |   |   |   |
| 50-54 | 9 | 2.9% | 9 | 2.9% |   |   |   |   | 16 | 5.5% | 28 | 6.3% |   |   |   |
| 55-59 | 5 | 1.6% | 3 | 1.0% |   |   |   |   | 11 | 3.8% | 17 | 3.8% |   |   |   |
| 60-64 | 2 | 0.6% | 5 | 1.6% |   |   |   |   | 5 | 1.7% | 14 | 3.1% |   |   |   |
| 65-69 | 0 | 0.0% | 2 | 0.6% |   |   |   |   | 1 | 0.3% | 3 | 0.7% |   |   |   |
| 70+ | 4 | 1.3% | 1 | 0.3% |   |   |   |   | 0 | 0.0% | 0 | 0.0% |   |   |   |
| **Education** |   |   |   |   |   | 20.36 | 0.00 |   |   |   |   |   |   | 34.32 | 0.00 |
| Junior high school or under | 27 | 8.6% | 5 | 1.6% |   |   |   |   | 25 | 8.6% | 13 | 2.9% |   |   |   |
| Senior high school | 52 | 16.5% | 46 | 14.7% |   |   |   |   | 76 | 26.2% | 86 | 19.3% |   |   |   |
| College | 75 | 23.8% | 63 | 20.2% |   |   |   |   | 70 | 24.1% | 115 | 25.8% |   |   |   |
| University degree | 120 | 38.1% | 146 | 46.8% |   |   |   |   | 103 | 35.5% | 155 | 34.8% |   |   |   |
| Master or above | 41 | 13.0% | 52 | 16.7% |   |   |   |   | 16 | 5.5% | 77 | 17.3% |   |   |   |
| **Income** |   |   |   |   |   | 19.15 | 0.00 |   |   |   |   |   |   | 24.49 | 0.00 |
| Under 30k | 41 | 15.4% | 20 | 7.1% |   |   |   |   | 49 | 19.3% | 56 | 14.2% |   |   |   |
| 30-80k | 73 | 27.3% | 59 | 20.8% |   |   |   |   | 85 | 33.5% | 89 | 22.6% |   |   |   |
| 80-150k | 89 | 33.3% | 99 | 35.0% |   |   |   |   | 73 | 28.7% | 118 | 29.9% |   |   |   |
| 150-800k | 56 | 21.0% | 88 | 31.1% |   |   |   |   | 45 | 17.7% | 112 | 28.4% |   |   |   |
| 800k-2m | 6 | 2.2% | 13 | 4.6% |   |   |   |   | 2 | 0.8% | 17 | 4.3% |   |   |   |
| More than 2m | 2 | 0.7% | 4 | 1.4% |   |   |   |   | 0 | 0.0% | 2 | 0.5% |   |   |   |
| **Cognitive** |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Financial Constraints | 3.45 | 19.8% | 3.92 | 23.0% |   | 30.46 | 0.00 |   |   |   |   |   |   |   |   |
| Trust | 3.84 | 22.0% | 4.14 | 24.3% |   | 19.18 | 0.00 |   |   |   |   |   |   |   |   |
| Anxiety | 3.20 | 18.4% | 2.45 | 14.4% |   | 65.41 | 0.00 |   |   |   |   |   |   |   |   |
| Motivation | 3.84 | 22.0% | 4.16 | 24.4% |   | 25.41 | 0.00 |   |   |   |   |   |   |   |   |
| Perceived Risk | 3.09 | 17.7% | 2.36 | 13.9% |   | 74.40 | 0.00 |   |   |   |   |   |   |   |   |

Table 2. Intra-pandemic versus post-pandemic travel behaviour comparison.

|  |  |  |  |
| --- | --- | --- | --- |
|   | Actual behaviour before the pandemic (study 1) | Intention during the lockdown(study 1) | Actual behaviour post pandemic(study 2) |
| Rail/Bullet train | 38.5% | 25.4% | 26.6% |
| Aeroplane | 28.5% | 28.2% | 13.1% |
| Car | 25.4% | 41.2% | 53.2% |
| Coach | 7.1% | 4.3% | 6.7% |
| Ferry | 0.5% | 0.9% | 0.3% |

Table 3. Cluster characteristics

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Clusters** | **Cluster 1 -****Anxious Ponderers** | **Cluster 2 -****Laid back travellers** | **Cluster 3 –****Young free spirits** |  | **F or χ2 value** | **p-value** |
| **Gender** |   |   |   |   | 0.81 | 0.67 |
| Male | 77 | 135 | 125 |   |   |   |
| Female | 70 | 106 | 114 |   |   |   |
| **Household size** |   |   |   |   | 18.94 | 0.90 |
| 1 | 16 | 21 | 15 |   |   |   |
| 2 | 27 | 62 | 59 |   |   |   |
| 3 | 42 | 77 | 67 |   |   |   |
| 4 | 28 | 51 | 51 |   |   |   |
| 5 | 22 | 17 | 20 |   |   |   |
| 6 | 7 | 11 | 18 |   |   |   |
| 7 or more | 5 | 2 | 9 |   |   |   |
| **Live with dependent** |   |   |   |   | 7.15 | 0.03 |
| No | 70 | 96 | 124 |   |   |   |
| Yes | 77 | 145 | 115 |   |   |   |
| **Age** |   |   |   |   | 53.17 | 0.00 |
| 18 and under | 6 | 2 | 11 |   |   |   |
| 18-24 | 33 | 45 | 54 |   |   |   |
| 25-29 | 34 | 31 | 58 |   |   |   |
| 30-34 | 32 | 32 | 36 |   |   |   |
| 35-39 | 12 | 55 | 30 |   |   |   |
| 40-44 | 14 | 27 | 19 |   |   |   |
| 45-49 | 10 | 27 | 19 |   |   |   |
| 50-54 | 4 | 11 | 3 |   |   |   |
| 55-59 | 1 | 3 | 4 |   |   |   |
| 60-64 | 0 | 6 | 1 |   |   |   |
| 65-69 | 0 | 1 | 1 |   |   |   |
| 70+ | 1 | 1 | 3 |   |   |   |
| **Education** |   |   |   |   | 28.12 | 0.00 |
| Junior high school or under | 12 | 6 | 14 |   |   |   |
| Senior high school | 36 | 26 | 36 |   |   |   |
| College | 34 | 50 | 54 |   |   |   |
| University degree | 52 | 111 | 103 |   |   |   |
| Master or above | 13 | 48 | 32 |   |   |   |
| **Income** |   |   |   |   | 55.72 | 0.00 |
| Under 30k | 22 | 9 | 30 |   |   |   |
| 30-80k | 38 | 31 | 63 |   |   |   |
| 80-150k | 40 | 83 | 65 |   |   |   |
| 150-800k | 29 | 79 | 36 |   |   |   |
| 800k-2m | 0 | 10 | 9 |   |   |   |
| More than 2m | 0 | 2 | 4 |   |   |   |
| **Cognitive** |   |   |   |   |   |   |
| Financial Constraints | 4.00 | 4.35 | 2.83 |   | 199.87 | 0.00 |
| Trust | 4.17 | 4.47 | 3.39 |   | 133.16 | 0.00 |
| Anxiety | 4.42 | 4.34 | 3.39 |   | 163.62 | 0.00 |
| Motivation | 4.04 | 1.92 | 2.72 |   | 354.28 | 0.00 |
| Perceived Risk | 4.34 | 1.99 | 2.75 |   | 369.27 | 0.00 |
| **Intention** |   |   |   |   |   |   |
| INT 1 domestic holiday again | 4.17 | 4.46 | 3.65 |   | 24.43 | 0.00 |
| INT 2 (rev) reduce frequency  | 2.37 | 3.92 | 3.30 |   | 32.71 | 0.00 |
| INT 3 domestic holiday even oversea travel is open | 4.49 | 4.34 | 3.65 |   | 13.21 | 0.00 |
| **Behaviour** |   |   |   |   |   |   |
| Non-Traveller | 106 | 62 | 147 |   | 98.19 | 0.00 |
| Traveller | 41 | 179 | 92 |   |   |   |
| Duration not reduced | 25 | 137 | 64 |   | 4.58 | 0.10 |
| Duration reduced | 16 | 42 | 28 |   |   |   |
| Spending not reduced | 31 | 128 | 75 |   | 3.26 | 0.20 |
| Spending reduced | 10 | 51 | 17 |   |   |   |
| Travel distance not reduced | 27 | 123 | 64 |   | 0.18 | 0.91 |
| Travel distance reduced | 14 | 56 | 28 |   |   |   |