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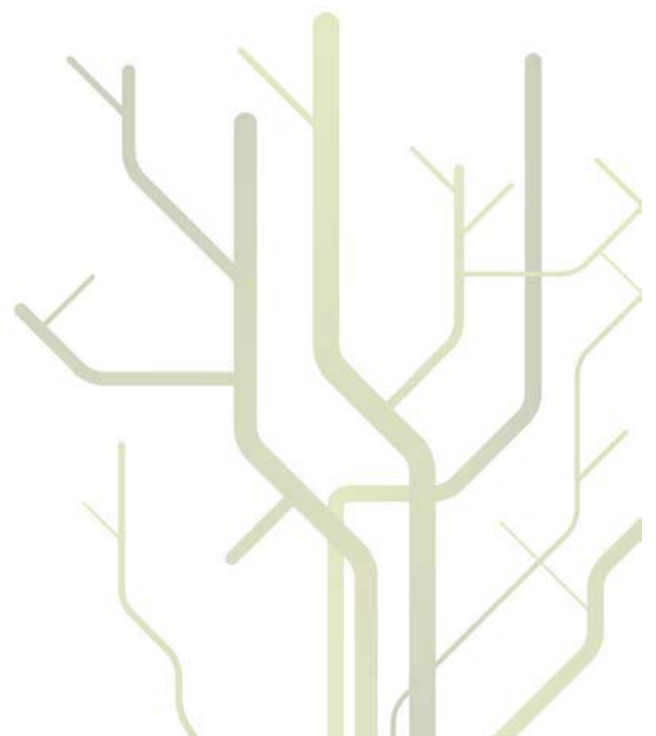
Modelling tourism demand, travel mode choice and destination loyalty

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ABSTRACT

This dissertation has three simultaneous purposes: (1) to investigate the effects of both economic and non-economic factors on the domestic tourist flow to Khanh Hoa province in the long term and the short term; (2) to examine how the characteristics of domestic tourists and the attributes of travel modes influence tourists' choice of travel mode to Nha Trang, Khanh Hoa; and (3) to investigate how satisfaction and switching barriers influence destination loyalty. To achieve the first purpose, the dissertation has used the general-to-specific approach; for the second purpose, the multinomial probit model has been applied, and structural equation modelling has been used to accomplish the third purpose.

For the first purpose, the findings reveal that weather variables have a significant effect on the tourism demand in both the short term and the long term. Furthermore, a positive effect from the lagged dependent variable suggests that word-of-mouth recommendation to potential tourists has good effects for the Khanh Hoa tourism industry. Also, the demand from Vietnamese tourists seems to be highly sensitive to tourism costs. Meanwhile, in the study on travel mode choice, travel time and cost, mode quality, and income are key elements in explaining the tourists' behaviour. Tourists with a lower income tend to be more sensitive to change in the per-kilometre cost; high-income tourists are much more likely to choose a plane or train rather than a coach. Finally, in the study on tourists' loyalty behaviour, the findings indicate that both satisfaction and switching barriers have significant effects on this behaviour. Of the multi-components of switching barriers, interpersonal relationships and switching costs have positive impacts, while lack of attractiveness of other destinations has a negative effect on destination loyalty. Furthermore, all three dimensions of tourist satisfaction and overall satisfaction have positive effects on destination loyalty.

Understanding domestic tourism demand as well as modal choice behaviour may help tourism companies to develop appropriate marketing strategies. Furthermore, tourism managers should concentrate not only on how to improve tourists' satisfaction but also on how to develop hindrances to switching by tourists, in order to enhance their destination loyalty.

PART I. INTRODUCTION

1. Background and research purposes

In Vietnam, Khanh Hoa province is known as one of the most important tourism destinations. It is a province of the South Central Coast with much wonderful scenery, nearly 100 km of fine white sand, about 200 islands of various sizes and many pools and bays. The climate has sunshine almost all year and it is less affected by heavy rainstorms. Furthermore, the province is located on national transport arteries including the National Highway 1A, the national railroad, and Highway 26 connecting to the central highlands provinces. Khanh Hoa has an international airport and four important international seaports. These all link Khanh Hoa province to other parts of Vietnam and the world. The above-mentioned factors are favourable conditions for Khanh Hoa province to develop its tourism industry. Therefore, over several years, Khanh Hoa has been selected as one of ten national tourism centres of Vietnam, and Nha Trang Bay, one of three bays in Khanh Hoa, has been recognised since 2003 as one of the most beautiful bays in the world.

The Khanh Hoa tourism industry has recently developed very strongly and its achievements have been very impressive. The number of both domestic and foreign tourist arrivals in Khanh Hoa has continuously risen throughout the years. In the period 2002–2011, the average growth rate of total tourist arrivals and tourism receipts was around 17% and 25%, respectively. However, the annual average growth rate of domestic tourists to Khanh Hoa was greater than that of foreign tourists (20% for domestic tourists and 9% for international tourists). At the same time, the number of arrivals in Khanh Hoa has been mainly domestic tourists, who have made up over 70% of the total number of tourist arrivals in the province in the past years. On the other hand, the crucial role of tourism in the economy has also been recognised. The tourism industry has contributed considerably to the growth of the gross domestic product, accounting for around 10% of the GDP of Khanh Hoa province. Furthermore, tourism is a labour-intensive sector that directly employs over seven thousand employees. It is also an extremely crucial activity for Khanh Hoa province, since one of the important sources of tax collection is sprung from this sector.[1]

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[1] All the economic data on Khanh Hoa are from the *Statistical handbook of Khanh Hoa province,* 2002-2011.

Despite the economic importance of tourism, little work has been conducted to determine what are the most relevant factors to explain domestic tourism demand in Khanh Hoa, what kind of travel modes domestic tourists choose for holidays in Khanh Hoa, and why domestic tourists wish to return to Khanh Hoa for their holidays. Better knowledge of the domestic tourism demand, travel mode choices of tourists, and factors affecting destination loyalty could be of great assistance to marketers in planning growth strategies for both tourist retention and attracting new tourists, and contributing to promoting sustainable development of the Khanh Hoa tourism industry. For these reasons, the purposes of this thesis include: (1) to investigate the effects of various factors on the domestic tourist flow to Khanh Hoa province; (2) to examine how the characteristics of domestic tourists and attributes of travel modes influence the tourists' choice of travel mode to Khanh Hoa province for holidays; and (3) to explore how satisfaction and switching barriers influence destination loyalty.

To achieve the first purpose, this thesis focuses on the two main problems of investigating the effects of certain variables on the domestic tourist flow to Khanh Hoa province, and how to model the domestic tourism demand function based on the variables investigated. On the analysis of tourism demand in general, several review papers indicate that tourism demand modelling and forecasting mainly focus on economic factors such as income, price and substitute price (Li, Song, & Witt, 2005; Lim, 1999; Song & Li, 2008). However, non-economic factors might also be important variables that have an impact on tourism demand (Goh, 2012; Morley, 1992). Among these non-economic factors, climate and weather conditions may be key variables for domestic tourism demand (Eugenio-Martin & Campos-Soria, 2010; Maddison, 2001). Although the impact of climate and weather change on tourist flows is high, only a few quantitative studies have considered their role in tourism demand analysis and destination choice (Paper 1). The reasons for this problem may be the limited availability of data and a lack of variation in climate over the years (Amelung, Nicholls, & Viner, 2007). This gap in the study of the effects of climate change on the tourism demand has only recently been filled (Bujosa & Rosselló, 2012). On the other hand, Song and Witt (2003) show that modelling tourism demand using a general-to-specific approach has more benefits than using a specific-to-general approach. The general-to-specific begins with a general dynamic model including all the potentially influential variables with a sufficient lag structure. Afterwards, a procedure of reducing the explanatory variables is implemented from the estimated general model. This procedure retains only the underlying influencing variables based on both the economic and statistical significance of the estimated parameters

associated with these variables. With this approach, the specific model is thus less complicated than the initial dynamic model. In addition, because all data on a dynamic model must be differenced, the problem of non-stationary data can be removed. Furthermore, this method simultaneously provides evidence not only on the long term but also on short-term relationships (Garín-Muñoz & Montero-Martín, 2007; Garín-Muñoz, 2007; Song & Witt, 2003).

To achieve the second purpose, the thesis concentrates on examining potential explanatory variables that can influence the travel mode choice process and function form in order to model the choice process. Unlike the variables in the first purpose, the independent variables reflect how both the characteristics of domestic tourists and the attributes of travel modes influence the tourists' choice of travel mode to Khanh Hoa province for holidays. However, the nature of the modal choice decision-making process amongst multiple modes is a discrete choice analysis (Dow & Endersby, 2004; Train, 2009), based on the economic theories of random utility, assuming that a traveller chooses the mode with the highest utility (Bhat, 1998; Bolduc, 1999; Train, 2009). Since discrete choice analysis was first introduced to solve transportation-related problems, hundreds of studies have applied it in various fields (Bolduc, 1999). In the case of tourists' modal choice, data on a dependent variable fall into one of several mutually exclusive and unordered alternatives. Such data are normally modelled through the multinomial logit (MNL), nested MNL (NMNL), and multinomial probit (MNP) models, amongst others (Swait & Adamowicz, 2001).

Of the above models, the MNL is the simplest and most popular (Baltas, 2007; Horowitz, 1991; Train, 2009). However, this model still has limitations in practical application because the assumption that the random components of the utility of various alternatives are independently and identically distributed is often violated (Daganzo & Sheffi, 1977; McFadden, 1974). To overcome part of this limitation, researchers have proposed an application of the NMNL model in which the random components of the utility function are correlated within each of the groupings (McFadden, 1978; Williams, 1977). Nevertheless, in situations where there is panel data with unobserved heterogeneity or situations with random preference variation, the NMNL model cannot be applied (Horowitz, 1991). Conversely, the MNP model partially overcomes the above-mentioned problems. This model assumes that the random components of utility functions have a multinomial normal distribution with zero mean and non-zero covariances between alternatives (Chintagunta, 1992; Train, 2009). These

assumptions allow a much more flexible pattern of error correlation, do not require the specification of a nesting structure, and are therefore more realistic (Dow & Endersby, 2004). Thus, the MNP has become increasingly popular in studies on individuals' choice behaviour, such as brand choice (Chintagunta, 1992; Paap & Franses, 2000), modal choice for working trips (Bolduc, 1999; Johansson et al., 2006), and electoral research (Alvarez & Nagler, 1998; Dow & Endersby, 2004). In this study, the MNP model was chosen to examine how characteristics of domestic tourists and attributes of transportation means affected the tourists' modal choices. In fact, using the MNP model for the modal choice of tourists to a destination has not so far been given much attention by researchers, to the author's knowledge.

The third purpose of this thesis is to discuss and test the effects of satisfaction and switching barriers on destination loyalty. Visitor loyalty has become a key part of destination marketing and management research (Lee, Graefe, & Burns, 2007). Retention of loyal customers brings several benefits for a destination: first, the marketing costs needed to attract repeat visits are normally lower than those to recruit new tourists (Lindgreen et al., 2000; Oppermann, 1998); second, tourists returning to a destination are a positive sign of those tourists' satisfaction (Oppermann, 1998); third, repeat visitors form a stable tourist market; and fourth, they also provide free advertising in the form of word-of-mouth recommendations to other potential tourists (Anderson & Mittal, 2000; Bowen & Chen, 2001; Lau & McKercher, 2004; Oppermann, 2000; Reid & Reid, 1993). Because of the importance of loyal visitors for a destination, both academics and practitioners have attempted to explore the most prominent antecedents of tourist loyalty in order to increase the likelihood of repeat visits. Among the antecedents, researchers find that tourist satisfaction is important for a successful destination because it affects tourists' choice of destination, consumption of products and services, and the decision to return to the destination (Kozak & Rimmington, 2000). Positive effects of tourist satisfaction on destination loyalty are reflected in the tourists' intention to repeat visits to that destination, and their willingness to recommend it to other potential tourists (Beeho & Prentice, 1997; Hallowell, 1996; Kozak & Rimmington, 2000; Lee, & Lee, 2005; Prebensen, Skallerud, & Chen, 2010; Ross, 1993). Satisfaction would concern for effective tourism marketing programs (Yang & Peterson, 2004). However, the relationship between satisfaction and loyalty often shows considerable variability (Ranaweera & Prabhu, 2003). As a result, many researchers are suspicious of the existence of this relationship (Evanschitzky & Wunderlich, 2006; Jones & Sasser, 1995; Reichheld,

1996). Empirical evidence shows that good attributes at the destination and high overall satisfaction do not always automatically lead to higher loyalty (Matzler, Füller, & Faullant, 2007); dissatisfied customers do not necessarily transfer to another service supplier (Jones, Mothersbaugh, & Betty, 2000; Jones & Sasser, 1995); and some of them do not wish to break the relationship with their providers because of inhibiting factors of switching. These emphasize the possibility that tourists' loyalty may be contingent on additional factors such as switching barriers. In other words, tourist satisfaction is actually not a strong enough factor to attract and retain tourists, especially loyal tourists "staying" with a destination. Thus, apart from tourist satisfaction, tourists' loyalty may depend on perceived switching barriers.

Over the past decade, numerous researchers have investigated the role of switching barriers in determining customer loyalty behaviours (e.g., Lee, Lee, & Feick, 2001; Liu, Guo, & Lee, 2011; Kim, Park, & Jeong, 2004; Valenzuela, 2012; Ranaweera & Prabhu, 2003; Woisetschläger, Lentz, & Evanschitzky, 2011). Ranaweera and Prabhu (2003) demonstrate that for a given level of customer satisfaction, the higher the level of perceived switching barriers, the greater the customer retention. Switching barriers factors can be applied easily in continuous service situations such as electricity supply, mobile telephone contracts, and bank services, since there are a range of tangible and intangible costs and relations associated with shifting to another supplier. Conversely, in the tourism context many tourists go on holiday infrequently and look for different experiences, and the nature of the tourist service is non-continuous. Thus, theories such as switching barriers developed to explain tourist behaviour will hardly be applicable. However, in fact some empirical studies in similar non-continuous service circumstances such as hotels, restaurants, and airlines indicate that switching barriers are still crucial influencing factors in customers' future behaviour (see, Chang & Chen, 2007; Han, Back, & Barrett, 2009; Han, Kim, & Hyun, 2011). Han, Kim, and Hyun (2011) show that switching barriers have a critical role in reducing the probability of visitors switching to other providers, especially in the hotel industry. Tourists may stay with a destination due to obstacles reflecting the costs or hindrances of moving, such as loss of the economic benefits for loyal tourists, because other destinations might not meet their demand, or due to further costs arising when shifting to new destination. Based on the above discussion, this study attempts to investigate the role of switching barriers and satisfaction in relationships related to tourists' destination loyalty in order to better understand the formation of that loyalty.

2. Theoretical model and variables

In this part, this thesis discusses and specifies theoretical backgrounds related to modelling demand and the travel mode choice of domestic tourists. In addition, the relationships between the pairs of the concepts (i.e., satisfaction and destination loyalty; switching barriers and destinations) in a theoretical framework and research hypotheses are also discussed. In the papers constituting this thesis, firstly domestic tourism demand modelling is approached using ageneral-to-specific method. Secondly, a multinomial probit model is adopted to model the travel mode choice behaviour of domestic tourists. Lastly, the structures of the antecedents of destination loyalty as well as the associations amongst them based on the relevant studies are presented in the third paper.

2.1. Domestic tourism demand modelling

The proposed domestic tourism demand model for Khanh Hoa can be written as follows:

$$DT_t = f(AT_t, RF_t, SH_t, SI_t, CPI_t, TPI_t) \quad (1)$$

where DT_t is the domestic tourism demand in quarter t; AT_t is the quarterly average temperature in Khanh Hoa (in degrees Celsius); RF_t is the quarterly average rainfall in Khanh Hoa (in millimetres); SH_t is the number of quarterly average sunshine hours in Khanh Hoa (in hours); SI_t is the Vietnamese stock index in quarter t; CPI_t is the Vietnamese consumer price index in quarter t; and TPI_t is the Vietnamese transportation price index in quarter t.

In this model, the dependent variable, the domestic tourism demand for Khanh Hoa, is measured by the number of Vietnamese tourist arrivals in Khanh Hoa.

Weather variables: Numerous tourism studies show that non-monetary factors such as weather change indicators are also likely to play an important role in explaining travel decision-making (Crouch, 1994; Goh, 2012; Lyons, Mayor, & Tol, 2009). Among the factors measuring weather change, temperature is the variable most commonly used in explaining tourism decisions (Álvarez-Díaz & Rosselló-Nadal, 2010; Rosselló-Nadal, Riera-Font, & Cárdenas, 2011). Apart from temperature, other weather variables like rainfall, cloud cover, humidity, sunshine and wind speed can be found in the literature. In this study, the three weather factors of temperature, rainfall and sunshine are considered as proxy variables of weather change in Khanh Hoa. Since their effects on tourism demand are investigated

simultaneously in the model, a test for multicollinearity between the variables is implemented.

Income level: In the analysis of both domestic and international tourism demand, income is the most important determinant affecting the decision to travel (Athanasopoulos & Hyndman, 2008; Li, Song, & Witt, 2005; Lim, 1997; Lyons, Mayor, & Tol, 2009). It is included in most tourism demand models and has a positively significant influence on choosing destinations. However, it is difficult to obtain data on this with sufficiently high frequency. Vietnam is a case in point. Vietnamese GDP is only published at an annual frequency. This study, therefore, uses the stock index as a proxy variable of income. The two reasons for doing this: (1) an auxiliary regression between the Vietnamese GDP and the stock index using data on annual observations from 2002 to 2011 and diagnostic tests were conducted. It was concluded that using the stock variable to replace GDP in the tourism demand model is possible. (2) Using the stock index might be superior to the stock return because the other economic variables in the model are level.

*Tourism costs***:** Elements of tourism costs normally include the costs of travel to destinations and the cost of living at the destination, such as the prices of tourist accommodation, recreation and restaurants (Seddighi & Shearing, 1997). In this study, the transportation price index is used as a proxy of the travel cost, while the tourism consumer price is measured by the Vietnamese consumer price index.

Functional form: In this model, only the economic variables are transformed into nature logarithms. The weather variables, temperature, rainfall and sunshine, are not transformed into nature logarithms, but are adjusted in order to remove seasonality of data in two steps. First, the variables were converted to absolute deviation from the ideal level. Second, as weather data, of course, contain seasonal variations, these variables were seasonally adjusted by subtracting their quarterly means. Thus, the proposed demand functional form for domestic tourism demand in Khanh Hoa is semi-log. Equation (1) is now rewritten as Equation (2) below:

$$LDT_t = \alpha + \beta AT_t + \gamma RF_t + \delta SH_t + \theta LSI_t + \vartheta LCPI_t + \pi LTPI_t + \varepsilon_t \quad (2)$$

where α, β, γ, δ, θ, υ and π are coefficients to be estimated; LDT_t is the log of the number of domestic tourist arrivals in Khanh Hoa in quarter t; LSI_t is the log of the Vietnamese stock index in quarter t; $LCPI_t$ is the log of the Vietnamese consumer price index in quarter t; $LTPI_t$

is the log of the Vietnamese transportation price index in quarter t; and ε_t is a mutually uncorrelated white noise error term. The remainders have the same meaning as those in Equation (1). A positive sign is expected for the coefficients of β, δ and θ, and a negative sign for the coefficients of γ, υ and π.

The general dynamic model in which all explanatory variables are taken as first difference can thus be written as follows:

$$\Delta LDT_t = \sum_{i=1}^{p} \alpha_i \Delta LDT_{t-i} + \sum_{i=0}^{p} \beta_i \Delta AT_{t-i} + \sum_{i=0}^{p} \gamma_i \Delta RF_{t-i} + \sum_{i=0}^{p} \delta_i \Delta SH_{t-i}$$

$$+ \sum_{i=0}^{p} \theta_i \Delta LSI_{t-i} + \sum_{i=0}^{p} \vartheta_i \Delta LCPI_{t-i} + \sum_{i=0}^{p} \pi_i \Delta LTPI_{t-i} + \Delta \varepsilon_t \qquad (3)$$

where p is lag value; Δ is the first difference operator, which means $\Delta LDT_t = LDT_t - LDT_{t-1}$ and, analogously, for the other variables. The remainders have the same meaning as those in Equations (1) and (2).

From Equation (3), a general-to-specific procedure developed by Hendry, Pagan, and Sargan (1984) can be applied to reduce the number of independent variables in the generated dynamic model. The final specific model would be most appropriate for policy analysis and forecasting purposes (Song et al., 2010). Once the final specific model has been identified, the estimated coefficients are short-term elasticities. Long-term elasticities of the variables can be obtained based on the final specific model by taking the coefficients of the explanatory variables divided by $(1-\alpha_1)$ (Garín-Muñoz & Montero-Martín, 2007; Garín-Muñoz, 2007).

2.2. Travel mode choice modelling

Based on the studies by Dow and Endersby (2004), Geweke et al. (1994), and McFadden (1974), the utility that tourist i ($i=1,..., n$) obtains from mode j in the set may be written as follows: $$U_{ij} = \beta' X_{ij} + \gamma'_j Z_i + \varepsilon_{ij}$$

where U_{ij} is the tourist i's utility for the mode j; X_{ij} is a vector of observed attributes relating to the travel mode j as perceived by the tourist i and Z_i is a vector of traits of the tourist i. The

coefficients of β and γ_j are vectors of fixed parameters of the variables X_{ij} and Z_i respectively, and the prime denotes transposition. The final component, ε_{ij}, is an unknown term.

Tourists will choose the mode that provides the greatest utility. The probability that tourist *i* will choose mode *m* is the probability that the utility of mode *m* exceeds the utility of all other available modes in the set. Therefore, $p_{im} = P(U_{im} > U_{i1}, U_{im} > U_{i2}, ..., U_{im} > U_{ip})$

Dependent variable: In this model, the dependent variable is a discrete variable that represents a choice from a set of modal choices. This set is limited to coach, train, and plane. Other modes, such as car and motorbike, were not included in the choice set.

 Independent variables:

- City dummies: Distance probably has an important effect on the traveller's modal choice. Specifically, one would expect a traveller from a distant city to be less likely to choose coach than plane or train. In this model, the dummies are mainly measuring the effect of distance.

- Travel time per kilometre: In this model, travel time is divided into on-mode and out-of-mode travel time. On-mode travel time is "the sum of the time spent travelling, and dwell time during which all passenger boardings and alightings occur" (Zorn et al., 2012, p. 757), while out-of-mode travel time is the time not spent inside the mode, including access time, waiting time, and egress time (Koppelman & Bhat, 2006). In the empirical studies on modal choice behaviour, several studies indicate that on-mode and out-of-mode travel time in particular, and travel time in general, have important effects on the modal choice decision of travellers (e.g., Bolduc, 1999; Commins & Nolan, 2011; Johansson et al., 2006; Habib, 2012; Swait & Ben-Akiva, 1987). However, in order to compare travel time across different modes for different cities, travel time is normalized by distance. Such a normalization also removes potential multicollinearity between travel time and the city dummies. Since slow transport is usually considered a disadvantage, the expected sign of this variable is negative.

-       Per-kilometre travel cost to income ratio: Travel cost is also a variable widely used in modal choice models (Kraft & Kraft, 1974; Lave, 1969; Quarmby, 1967). Transportation costs are closely connected to distance. Thus, in order to easily compare travel cost between cities, travel cost is also normalized by distance. In addition, the cost of a mode appears very differently for a person with high income. Hence, costs are represented as a fraction of the

budget by dividing it with income. High costs are normally considered a disadvantage, so the expected sign for this variable is negative.

- Modal service quality and price attributes: The modal service quality and the reasonability of the travel price are normally rated subjectively through travellers' experience or perception of modes' service attributes. These attributes include safety, comfort, convenience, punctuality, reliability, and others (Johansson et al., 2006; Koppelman et al., 1993; Litman, 2008). Although these variables play an important role in explaining the individual's mode-choice behaviour, the effects can be different in different situations. In this study, the attributes that measure modal service quality and price are comfort, safety, punctuality, price/quality, and luxury.

- Income: In behavioural research on modal choice, income is the most frequently used variable and has been found to be a strong significant correlate of travellers' modal choice (Barff et al., 1982; Lave, 1969). Higher income travellers may be more willing to pay an extra premium to satisfy their preferences than lower income travellers are. They are more likely to accept a higher travel cost for their trip to benefit from the additional convenience afforded by a particular mode relative to other modes. In contrast, those who have a low-income level commonly choose travel modes with low prices like coach.

- Demographic variables: Many demographic variables such as gender, age, occupation, and education level of individuals are also examined in modal choice models. They have been found to have statistical significance in some cases, but they are often more useful for analysing market segmentation (Barff et al., 1982). In this study, three demographic variables were used, namely age, gender, and occupation.

2.3. Effects of switching barriers and satisfaction on destination loyalty

- Effects of switching barriers on destination loyalty

Tourist switching barriers can be defined as factors that prevent tourists from changing their vacation destinations later, even in the cases of tourists who are unsatisfied with their existing destination (Paper 3). In this study, tourist switching barriers might include interpersonal relationships, perceived switching costs, and the lack of attractiveness of other destinations.

The causal relationship between destination loyalty and switching barriers has never been examined in the tourism context, although several researchers have affirmed switching barriers to be an important determinant of repeat purchase intentions (e.g., Kim, Park, & Jeong, 2004; Liu, Guo, & Lee, 2011; Tsai & Huang, 2007; Woisetschläger, Lentz, & Evanschitzky, 2011). Many studies show that switching barriers may have a positive influence on customer loyalty/retention (Julander & Söderlund, 2003; Lee & Feick, 2001; Ranaweera & Prabhu, 2003). Nevertheless, some recent studies indicate that switching barriers (i.e., switching costs and a lack of attractive alternatives) have negative impacts determining customers' future behaviour (Han, Back, & Barrett, 2009; Han, Kim, & Hyun, 2011; Valenzuela, 2012). Therefore, it is expected that switching barriers will have a significant influence on destination loyalty, but that their signs can be negative or positive. Thus, the following hypotheses will be tested:

H1a: Interpersonal relationships will positively and directly affect destination loyalty.

H1b: Switching costs will directly and significantly affect destination loyalty.

H1c: The attractiveness of alternatives will directly and significantly affect destination loyalty.

- Effects of satisfaction on destination loyalty

Effect of satisfaction with destination attributes on overall satisfaction

A number of studies have confirmed that satisfaction has a significant positive relationship with customer loyalty/retention (Anderson & Sullivan, 1993; Cronin, Brady & Hunt, 2000; Taylor & Baker, 1994). Many studies show that satisfaction with various components of the destination attributes leads to overall satisfaction; attribute satisfaction has significant, positive, and direct effects on overall satisfaction and indirect influences on customer loyalty (Alegre & Cladera, 2009; Alegre & Cladera, 2006; Chi & Qu, 2008; Kozak & Rimmington, 2000; Oliver, 1993). In this study, the three dimensions of satisfaction with destination attributes, namely satisfaction with tourist infrastructure, prices, and products and services will be examined. Hence, the following hypotheses will be tested:

H2a: Satisfaction with tourist infrastructure will positively and directly influence overall satisfaction.

H2b: Satisfaction with prices will positively and directly influence overall satisfaction.

H2c: Satisfaction with tourism products and services will positively and directly influence overall satisfaction.

H3a: Satisfaction with tourist infrastructure will positively and indirectly affect destination loyalty.

H3b: Satisfaction with prices will positively and indirectly affect destination loyalty.

H3c: Satisfaction with tourism products and services will positively and indirectly affect destination loyalty.

Effect of overall satisfaction on destination loyalty

In the case of satisfaction with a destination, tourists assess the level of pleasurable fulfillment of their needs and expectations after using services and activities offered by the destination (Hernández -Lobato et al., 2006; McDowall, 2010). A number of studies assert that satisfaction is one of the most crucial factors in tourist behaviour research to predict tourist choice behaviour, because it influences tourists' destination choice, consumption of tourist products and services, and the decision to return to the destination (Cole & Crompton, 2003; Kim, Park, & Jeong, 2004; Kozak & Rimmington, 2000; Lee, 2009; Um, Chon, & Ro, 2006). In studies on tourist behaviour, overall satisfaction is either a mediating factor or an antecedent of destination loyalty. Overall satisfaction generally leads to repeat visits and positive recommendations to other potential tourists, which are the main indicators of destination loyalty (Chi & Qu, 2008). Many tourism and leisure studies find that overall satisfaction positively affects behavioural intention and recommendaion of the destination to other people (Assaker, Vinzi, & O'Connor, 2011; Bigne, Sanchez, & Andreu, 2009; Chi & Qu, 2008; Huang & Hsu, 2009; Lee, 2009; Quintal & Polczynski, 2010; Um, Chon, & Ro, 2006). Highly satisfied tourists are more likely to revisit the same destination, and to share their positive experiences with their friends and relatives. Thus, the following hypothesis will be examined:

H4: Overall satisfaction will positively, significantly and directly affect destination loyalty.

Based on the literature review presented above, a theoretical research model is proposed as shown in Figure 1. In the model, satisfaction acts as a mediator between destination attributes and destination loyalty, while switching barriers are only an antecedent of destination loyalty.
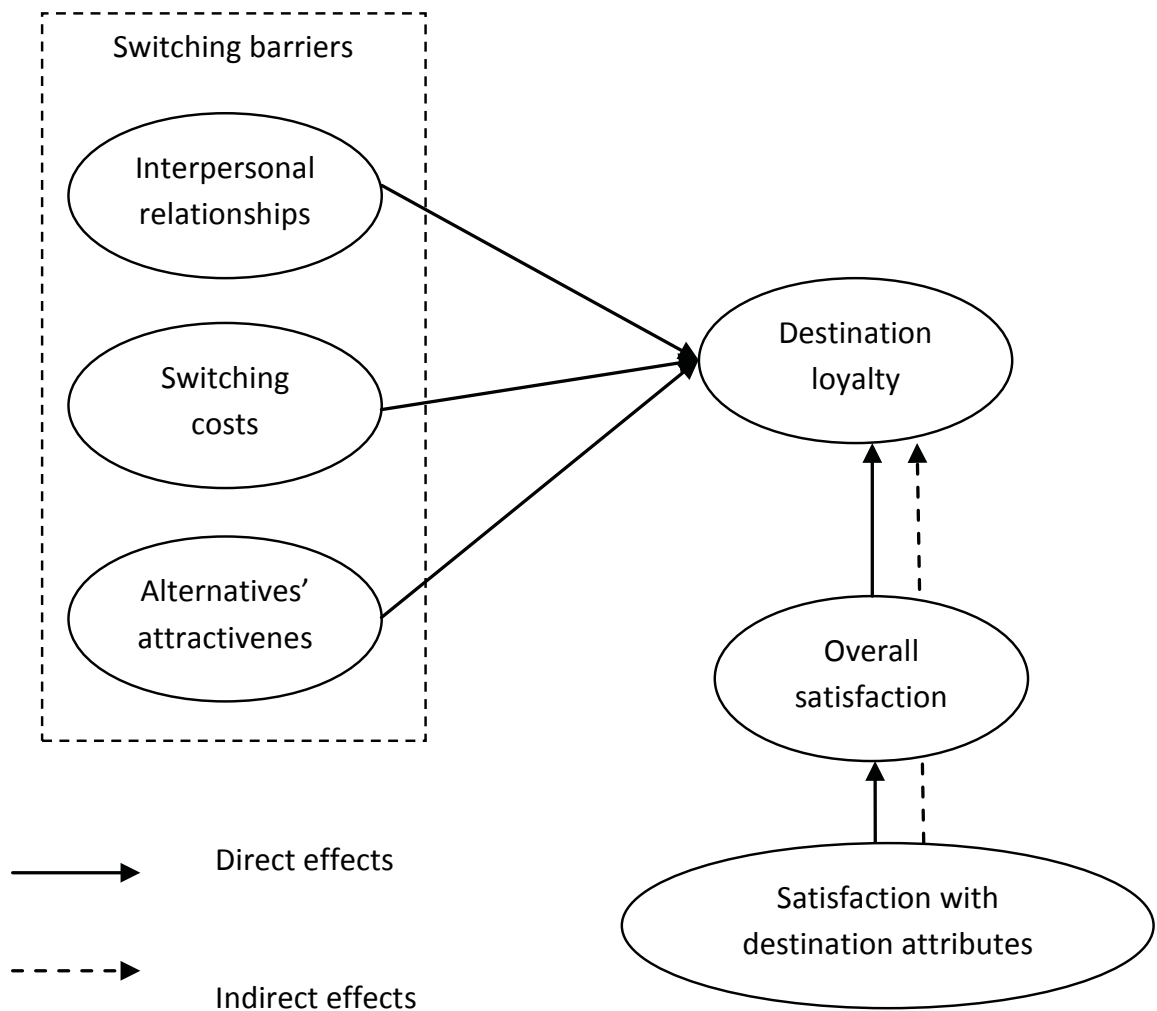
Figure1. The proposed theoretical model

3. Research methods

The three papers in this thesis investigate behaviours of the destination choice (i.e., tourism demand), travel mode choice, and destination loyalty of Vietnamese tourists. Thus, the thesis uses different research designs, data sources, and analytical procedures to examinine the proposed hypotheses. A summary of the designs, data, and procedures is presented in the following sections.

3.1. Research designs

Paper 1 models and examines the variables that affect the domestic tourist arrivals in Khanh Hoa. In this paper, based on the literature review, secondary data on the relevant variables from the Vietnam and Khanh Hoa statistics offices and Ho Chi Minh stock exchange were used. Papers 2 and 3 focus on investigating travel mode choice behaviour and the relationships between switching barriers and satisfaction with destination loyalty, respectively. Therefore, different survey designs were applied. Because the object of this study is domestic tourists, the questionnaires for Papers 2 and 3 were designed in Vietnamese.

In the survey questionnaire for Paper 2, a set of modal choices for the tourists consisted of three alternatives: coach, train, and plane. Each tourist must choose one, and only one, of the three travel modes and coach is chosen as the reference alternative. With regard to alternative-specific regressors, the on-mode travel time, total travel time, and travel cost of both the chosen mode and the competing modes in the set were all included in the questionnaire. In addition, based on the studies by Johansson et al., (2006), Koppelman et al., (1993), and Litman (2008), the attitudinal variables for mode quality, namely safety, comfort, punctuality, price/quality, and luxury, were included in the questionnaire. The tourists were only asked about the mode that they chose for these five variables. The attributes of the rival modes would be inferred from those tourists' responses. All five mode-service attributes were measured using a two-point scale to agree or disagree with the statements in the instrument. As case-specific regressors, monthly individual income, age, gender, occupation, and departure place of the tourist (Hồ Chí Minh city, Đà Nẵng, and Hà Nội) were included.

In the survey questionnaire for Paper 3, all observation items were slightly modified to ensure their appropriateness in the tourism situation. To capture various aspects of the respondents' perception of tourism switching barriers in Nha Trang, based on the studies by Han, Kim, and Hyun (2011) and Jones, Mothersbaugh, and Betty (2000), a list including ten items related to switching barriers was generated. Given the studies by Alegre and Cladera (2009) and Chi and Qu (2008), a destination attributes list encompassing fourteen items was judged to reflect the specific attributes in Nha Trang. On the other hand, a single scale of overall satisfaction containing three items based on the work by Alegre and Cladera (2009), Han, Kim, and Hyun (2011), Huang and Hsu (2009), and Lee, Graefe, and Burns (2007) was used in this study. The last variable, destination loyalty, was generated based on the literature

by Chi and Qu (2008), Hernández-Lobato et al. (2006), and Lee, Graefe, and Burns (2007). This variable is also a single scale with five items, reflecting attitudinal loyalty. All of the items within each factor were constructed using a seven-point Likert scale ranging from one (strongly disagree) to seven (strongly agree).

3.2. Sampling and surveying methods

For Paper 1, the data on domestic tourist arrivals in Khanh Hoa, temperature, rainfall and sunshine hours in the province were obtained from the annually published *Statistical handbook of Khanh Hoa province* (2002–2011). The data on the Vietnamese stock index were from the Ho Chi Minh stock exchange (www.hsx.vn), while the data on Vietnamese consumer and transportation price indexes were from the General Statistics Office of Vietnam (www.gso.gov.vn).

For Paper 2, the data collection method was implemented through face-to-face interviews. Only individuals were interviewed. For tourists travelling as part of a tour or group, including households, only one decision-making person was interviewed, and only the monthly income of that decision-making individual was asked for (not the tourists group). Tourists from Hồ Chí Minh city, Đà Nẵng and Hà Nội were chosen for interviewing because on the one hand these are the three key tourist markets of Nha Trang, and on the other hand all these cities have the same modal choice set. The survey was conducted in March 2011 in Nha Trang city.

For Paper 3, the data collection method was implemented by directly distributing a questionnaire to domestic tourists staying in hotels in Nha Trang. However, the survey was only implemented at the time when the tourists had just finished their vacations and before they left the hotels in order to enhance the accuracy of the assessment. Each respondent received a small gift for completing the questionnaire. The survey was carried out in November 2012 in Nha Trang city.

3.3. Diagnostic test of model specifications

For modelling the domestic tourism demand, using the general-to-specific approach, the final specific model is used for assessment and suggestion of managerial policy. However, before using the model, diagnostic tests should be implemented, as follows: test of the goodness-of-fit on the data of the specific model using R-squared and adjusted R-squared coefficients of determination; the residuals' normal distribution is tested by applying the

Jarque-Bera normality test; the Breusch-Godfrey and LM test are used to test autocorrelation in the residuals; the RESET test is applied to test the correct specification of the model. On the other hand, a test of multicollinearity amongst the independent variables is conducted through testing variance inflation factor (VIF) values. Furthermore, the test for parameter constancy in the model using the cumulative sum of recursive residuals (CUSUM) and the CUSUM of squares (CUSUMSQ) is applied.

For the MNP model, the travel mode choice model, the following tests are applied: a frequency analysis and the Mahalanobis distance method are used to detect outliers and numerical problems that may occur in the multivariate analysis. Furthermore, a test of multicollinearity amongst the independent variables is also conducted through testing of tolerance and VIF values. To measure the goodness-of-fit of the model with sample data, indicators of the Wald Chi square, probability of Chi square, and log simulated-likelihood are tested.

Unlike the above two models, an explanatory factor analysis (EFA) and confirmatory factor analysis (CFA) are used. In the EFA step, the criterion for determining the number of factors is the extracted eigenvalue being greater than 1.0. The benchmark to include items in a factor is that the factor loading of each item is over 0.4 (Huang & Hsu, 2009; Yoon & Uysal, 2005). Furthermore, to assess sampling adequacy, the Kaiser-Meyer-Olkin (KMO) statistics and variance-explained criterion are also used. If the KMO overall is higher than .60 and the variance-explained criterion of each factor requested is greater than 0.5 (Gerbing & Anderson, 1988), the EFA is suitable.

In the CFA step, the following criteria are commonly applied. The Chi-square statistic is a crucial criterion that needs to be tested. However, a ratio of Chi-square on degree of freedom has been suggested to replace the Chi-square statistic (McDonald & Ho, 2002). The suitable ratio is less than 3 (Carmines & MacIver, 1981). In addition, other important statistical indicators are also used to test model fitness: goodness-of-fit index (GFI), adjusted goodness-of-fit index (AGFI), comparative fit index (CFI), normed fit index (NFI), root mean square error of approximation (RMSEA) and root mean square residual (RMR). A measurement model is acceptable when GFI, AGFI, CFI, and NFI all exceed the threshold level of 0.9 (Bollen & Long, 1989), and both RMR and RMSEA are lower than 0.05 (Hu & Bentler, 1999). In addition, to ensure the measurement model fit for the analysis, the measures of

individual reliability, construct reliability, convergent validity, and discriminant validity for all the factors need to be tested (Liu, Guo, & Lee, 2011).

4. Results

4.1. Data analysis

In Paper 1, the study used quarterly data on the Vietnamese tourist arrivals, temperature, sunshine, rainfall, Vietnamese stock index, Vietnamese consumer index, and transportation price index. The sampling period is from 2002:q1 to 2011:q4, corresponding to 40 observations.

In Paper 2, of the 554 cases interviewed, only 402 (corresponding to 402 x 3 = 1206 observations) can be used for the study, giving a sample rate of 72.56%. Of the 402, the number of Hồ Chí Minh tourists occupied the highest market share (53.2%), followed by the Hà Nội tourists (26.1%), and finally the Đà Nẵng tourists (20.6%). On the other hand, the demand of modal choice for tourism travel amongst the tourists in the three markets has an interestingly obvious difference. While the Hồ Chí Minh tourists seem to prefer coach, the Đà Nẵng tourists seem to prefer train, and the Hà Nội tourists seem to prefer plane for their trip to Nha Trang.

In Paper 3, of the total of 320 questionnaires delivered, 296 were returned. However, only 278 of the 296 fitted reasonably with the sampling requirements, giving a sample rate of 94%. The remainder were rejected due to missing values, outliers, and for other reasons. Of the 278 respondents, about 65.5% had never visited Nha Trang city before, and the remainder had visited this destination at least once. The survey also showed that the most important information resource that the tourists mentioned investigating before travelling to Nha Trang was friends and relative, while newspapers and magazines, television or broadcasts, and others scored relatively low. Thus, loyal tourists act as free positive WOM advertising agents who recommend a product or service to other potential tourists (Shoemaker & Lewis, 1999).

4.2. Diagnostic test of model specification

First, the domestic tourism demand model is tested. The results of the diagnostic tests indicate that the goodness-of-fit of the data of the specific model is good. The residuals are normally distributed, and show no evidence of autocorrelation or problems of

autoregressive conditional heteroscedasticity. The model has a correct specification and there is no multicollinearity problem amongst the independent variables in the model. Furthermore, there is no evidence of any significant structural instability during the period of investigation (Paper 1).

Second, the travel modal choice model is tested. The findings of the diagnostic tests reveal that there are no outliers or numerical problems. Furthermore, since the tolerance values of all the independent variables are close to 1 and the VIF values of these variables are quite small, at less than 3.0, this suggests that there is no multicollinearity amongst the independent variables in this study. In addition, the relationship between the modal choice variable and the set of independent variables is significant. The MNP model is much better than only a constant model and the MNP model fits the sample data well (Paper 2).

Third, before testing the proposed structural equation model, assessment of the scale reliability and confirmatory factor analysis are conducted. The result of the 26-item scale reliability is 0.92, and the Cronbach's alpha for the eight factors ranged from 0.79 to 0.92, indicating that these scales have a high reliability and the EFA of each factor in the model is suitable. Furthermore, the results of the CFA indicated that the measurement model adequately fits the data (χ^2: 356.84; df: 271; p-value: 0; χ^2/df: 1.32; RMR: 0.043; GFI: 0.913; NFI: 0.928; CFI: 0.981; RMSEA: 0.034.)[2] (Bollen & Long, 1989; Carmines & MacIver, 1981; Hu & Bentler, 1999; Kline, 2005; McDonald & Ho, 2002). The individual reliability of each item is significant. All of the constructs in the measurement model had high reliability as well as acceptable convergent and discriminant validity. It can therefore be reported that the results of the tests supported the fitness of the measurement model. In tests of the structural model, the findings indicate that most of the goodness of fit indices exhibited adequate fits for all measures (χ^2: 390.56; df: 277; p-value: 0.00; χ^2/df: 1.41; RMR: 0.65; GFI: 0.91; NFI: 0.92; CFI: 0.98; RMSEA: 0.038), except RMR which was larger than 5%. Therefore, this model is used to test the proposed hypothetical model (Paper 3).

4.3. Main results and implications

The main findings and managerial implications are discussed in turn for each of the three research objectives. This section of the thesis will indicate which factors affect the tourism

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[2] χ^2: Chi-square; df: degree of freedom; GFI: goodness-of-fit index; CFI: comparative fit index; NFI: normed fit index; RMSEA: root mean square error of approximation; RMR: root mean square residual.

demand (Paper 1) and travel mode choice (Paper 2) of Vietnamese tourists to Nha Trang and what kinds of model are suitable for modelling the tourism demand (Paper 1) and choice of travel mode of domestic tourists (Paper 2). In addition, factors that affect destination loyalty are explored and confirmed in this thesis (Paper 3)

- *Modelling factors that influence domestic tourism demand using the general-to-specific approach.*

Of the different tourism demand modelling approaches, the general-to-specific approach used with a general dynamic model is found to be the most appropriate (Paper 1). The results of estimation show that persistent habit is one of the most important factors explaining domestic tourism demand in Khanh Hoa. An increase in demand from Vietnamese tourists is partly due to the positive influence of this factor. This is a good signs for Khanh Hoa's tourism industry. A destination offering tourism service quality, a natural environment and more should therefore be maintained and developed through tourism promotion activities. Tourism suppliers should continue to improve their service quality, and/or provide tourism products and services with a variety of highly desirable characteristics to increase their competitiveness.

In addition, the demand for domestic tourism in Khanh Hoa is strongly dependent on the weather characteristics. In particular, Vietnamese tourists are more likely to pick Khanh Hoa as a tourist destination because the temperature and the number of hours of sunshine are increasing in both the short and long term. Conversely, greater rainfall could lead to a decline in tourists arriving in Khanh Hoa. These findings are in line with many previous studies such as those by Lyons, Mayor, and Tol (2009) and Maddison (2001). Tourism operators should thus provide weather and climate information in their tourism brochures for Vietnamese tourists.

With regard to the influence of the stock index, the domestic tourist demand is also affected positively by changes in stock prices, as expected. However, changes in securities prices on the security market have only a small effect on tourism demand. The result of the estimation shows that a rise in the stock index would imply an increase in domestic tourists. Contrary to the influence of the stock index, tourism costs have a very strong effect on domestic tourism demand, whereas the effect of living costs is ambiguous. The findings suggest that when transportation costs increase, the domestic tourism demand drops

substantially. Thus, tourism transportation suppliers should be careful to offer an attractive pricing policy in order to maintain the competitiveness of their transport services. Furthermore, to attract more Vietnamese tourists to Khanh Hoa, tourism operators should ensure affordable prices for both products and services, and design many different attractively priced holiday packages, as well as offering special financial deals such as discounts or bonuses for loyal tourists.

- *Modelling the travel mode choice of domestic tourists using the MNP model.*

In Paper 2, the MNP model was chosen to examine how characteristics of domestic tourists and attributes of transportation means affected the tourists' modal choices. The findings of the regression model reveal that the coefficients of both the out-of-mode per kilometre and the on-mode travel time per kilometre are negative and statistically significant, as expected. However, the effect of the out-of-mode travel time on the choice of travel mode is much stronger than that of the on-mode travel time. Alternatively, the results also confirm that cost is important for modal choice. The utility of a mode and the probability that it will be chosen decreases as the per-kilometre cost to income ratio of that mode increases. These results suggest that tourism transport firms can attract tourists by shortening travel time, and especially the waiting time outside of mode, and offering a reasonable price policy. The shorter the out-of-mode travel time, the more attractive that mode is. We can already see this happening with coaches that pick up and drop off tourists at their own homes.

Furthermore, the results also indicate that the service quality variables actually have important effects on the modal choice of tourists. Except for the luxury variable, the remaining variables, namely comfort, punctuality, safety, and price against quality are statistically significant and their signs are consistent with the expectation, suggesting that the utility of tourists is increasingly important in modal service quality. Therefore, to augment potential demand from tourists, transport companies should consider promoting a safe, comfortable, and punctual image of tourism travel modes.

The survey's results of the monthly average income of tourists revealed that differences in monthly income may lead to differences in the modal choice decision. Tourists with a higher income seem to prefer to travel by plane or train than by coach when going on holiday. The results of the MNP regression further supported this conclusion. In particular, an increase in the income of the tourists could lead to an increase in the choice probability of plane or train

relative to coach. Moreover, after analysing the marginal effect of a change in income on the modal choice probabilities, the results continue to support the above explanation. Therefore, the tourists' modal choice decision largely depends on their monthly income, and tourists with a higher income are more likely to choose plane or train for their trip.

Meanwhile, gender is found to be a significant predictor of modal choice. The findings suggest that female tourists prefer to travel by coach rather than by plane. In addition, considering the 18–30 and 31–45 age groups, only the latter has a significant effect on modal choice, suggesting that this group prefers to travel by train rather than by coach. On the other hand, as regards occupation, the business group is not found to have a significant effect on the modal propensity. Conversely, the state-employed group has significant effects on both the modal choice equations. Tourists who work in the state sector are more likely to choose plane or train for their tourism journey. With respect to cities, only Hồ Chí Minh has a significant impact on the train/coach alternative, while the effect of the Đà Nẵng variable is insignificant on both of the equations. Hồ Chí Minh tourists prefer coach to train for their trip, which is not surprising, as the city is closest to Nha Trang.

- *Modelling factors affecting destination loyalty applying SEM.*

To measure the causal relationships amongst the constructs proposed in the research model, SEM is applied. The results confirm that both overall satisfaction and switching barriers have significant effects on destination loyalty. However, the effect of overall satisfaction was stronger than that of switching barriers.

In Paper 3, switching barriers were seen to have both significantly negative and positive effects on destination loyalty. Switching barriers arising from interpersonal relationship and switching costs have a directly significant impact on destination loyalty in a positive direction. The interpersonal relationship reflects tourists' desire to maintain and develop their individual relationship with the destination. Thus, tourism service providers should offer measures to further improve interpersonal relations between the providers and tourists, such as creating a friendly and open atmosphere that gives the tourists confidence. In addition, tourists may revisit the same destination since they do not want to spend a lot of time and effort looking for other destinations, or lose the economic benefits that they can receive from the destination. For example, some tourism places in Nha Trang are applying a discount policy for regular tourists. Besides, the negative sign of the alternatives' attractiveness

implies that the existence of more attractive destinations in the marketplace will decrease the destination loyalty of tourists. In other words, the association between destination switching and loyalty diminishes as the perceived attractiveness of alternatives is low. This result is consistent with studies by Anderson and Narus (1990), Han, Back, and Barrett (2009). Generally, tourism service providers at a destination need to create various switching barriers (financial, psychological, and interpersonal) to retain the loyalty of tourists. Such barriers are very important in preventing competitors from successfully attracting prospective switching tourists (Han, Kim, & Hyun, 2011), as well as being a better way to defend against the desire to switch and to enhance tourist loyalty (Jones, Mothersbaugh, & Betty, 2000; Han, Back, & Barrett, 2009; Liu, Guo, & Lee, 2011).

With regard to overall satisfaction, the findings show that this is directly and positively affected by satisfaction with destination attributes. On the other hand, this study confirmed that overall satisfaction has a strongly significant and direct influence on destination loyalty in a positive direction. This emphasized that overall satisfaction plays a crucial role in influencing tourists' future behaviour. Therefore, satisfaction is considered to be a good predictor of the destination loyalty of tourists. The above empirical results are consistent with plenty of previous studies (e.g. Alegre & Cladera, 2009; Assaker, Vinzi, & O'Connor, 2011; Chi & Qu, 2008; Huang & Hsu, 2009; Lee, 2009; Quintal & Polczynski, 2010; Um, Chon, & Ro, 2006). In this paper, overall satisfaction is partly an antecedent of destination loyalty, and partly a mediating factor between tourist satisfaction and destination loyalty. It can be said that if tourists' past travelling experiences in a destination are more satisfying, they are more likely to recommend that destination to potential tourists; they themselves will also be more willing to revisit that destination in the future. As a result, if the tourism industry knows how to reinforce and improve this positive image, it will make tourists more satisfied, and therefore, they will form an affectionate attitude towards a destination. With such a favourable attitude, they will be more likely to revisit the destination as well as to share their positive experiences with other tourists. Thus, managers and marketers need to focus on preserving the natural beauty, guaranteeing tourists' safety, and producing further new and exotic tourist products/services at reasonable prices in order to enhance not only tourist satisfaction but also the competitiveness of the destination.

5. Conclusions and contributions

In summary, this thesis has modelled and tested the factors affecting domestic tourism demand and travel mode choice. The relationships between switching barriers and destination loyalty and between overall satisfaction and destination loyalty have also been explored and tested. The findings addressed the three main objectives. First, important factors that affect the domestic tourism demand have been identified. Apart from the influence of economic variables on tourism demand (i.e., the Vietnamese stock index, the Vietnamese transportation price index and the Vietnamese consumer price index), the effects of non-economic variables including temperature, sunshine, and rainfall on tourism demand have also been confirmed in this empirical study. However, the effects of these variables on the behaviour of Vietnamese tourists' choice of destination are different in both the long term and the short term.

Second, the critical factors affecting the tourists' modal choice have been explored and examined. These factors include both travel mode attributes and the characteristics of tourists. In particular, out-of-mode and on-mode travel time per kilometre, per-kilometre travel cost to income ratio, safety, comfort, punctuality, price/quality, and income are the variables that make an important contribution to explaining tourists' modal choice decision. In addition, some of the categorical variables such as tourists' gender, age, and occupation, as well as distance, also have certain important effects on this decision. The results of the regression indicate that shorter per-kilometre travel time, especially out-of-mode travel time, as well as lower per-kilometre travel cost of a specific mode will increase the tourists' demand. In addition, the service quality of the mode is also a key element influencing the modal choice, and tourists with a higher income tend to choose plane or train. These findings might help tourism transportation firms to offer strategies that are more relevant to tourists' modal choice demand. This study has in addition contributed to the knowledge of the travel modal behaviour of tourists in tourism marketing.

Finally, the thesis has further supplied a quite comprehensive picture of the factors affecting destination loyalty. Both overall satisfaction and switching barriers have been examined simultaneously, which has never been undertaken before in studies of tourism behaviour. The present study contributes to the further exploration of the effect of switching barriers on destination loyalty. In this empirical study, switching barriers have both significantly negative and positive effects on destination loyalty. Switching barriers arising from interpersonal relationship and switching costs have directly significant impacts on

destination loyalty in a positive direction, while the lack of attractive alternatives has a significant effect in a negative direction. Destination switching barriers are very important elements in effectively preventing a shift to rival destinations and in enhancing tourist loyalty.

Overall satisfaction had been explained by satisfaction with destination attributes in three dimensions: tourist infrastructure factors, prices, and tourism products and services. The higher the tourists' level of overall satisfaction with a destination, the more likely they are to revisit that destination and to recommend it to others, while switching barriers make tourists feel that they want to revisit that destination again. In Paper 3, both overall satisfaction and switching barriers have confirmed significant effects on destination loyalty. In general, the effect of overall satisfaction was stronger than that of switching barriers. This again emphasized that overall satisfaction plays a crucial role in influencing tourists' future behaviour.

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PART II. PAPERS

Paper 1. **Effects of economic and non-economic factors on domestic tourism demand – A general-to-specific approach.**

Author: Vo Van Can

Journal: *Tourism Management* (Submitted)

Paper 2. **Estimation of travel mode choice for domestic tourists to Nha Trang using the multinomial probit model.**

Author: Vo Van Can

Journal: *Transportation Research Part A: Policy and Practice*

Volume (Issue), year, pages: 49, 2013, 149–159.

Paper 3. **Destination loyalty as a consequence of satisfaction and switching barriers.**

Author: Vo Van Can

Journal: *Tourism Analysis* (Submitted)

Paper 1

Paper 2

Paper 3

Appendix A

Preface

Dear madam/sir,

*My name is Vo Van Can, a PhD student at Tromso University, Norway. I am currently conducting a study of the **destination loyalty behaviour of tourists** to Nha Trang – Khánh Hòa. The results will enable academics and practitioners focusing on tourism to Nha Trang – Khánh Hòa to realize **why tourists choose Nha Trang city as a destination**. Based on these findings, the tourism organizations generate reasonable investment strategies in order to supply better tourist services for your trip to Nha Trang.*

*Because of your expertise I would like to invite you to share your opinions by stating **how much you agree with the statements that have been offered in the questionnaire**. This questionnaire is anonymous. Therefore it will avoid any unnecessary fears of the respondent. And I assure you that all the information provided will only be used for the purposes of scientific research in the framework of research subjects.*

I would like to thank you for your contributions. Your participation in this survey is greatly appreciated, and your opinion and comments will be of great value for my research results.

Sincerely,

Vo Van Can

QUESTIONNAIRE

1. Province/city: ………...…………..   **2. Age:** ……….………..

3. Gender: ☐ Male   ☐ Female

4. Marital status   ☐ Married/partnership   ☐ Unmarried

5. Occupation   ☐ Full/part-time job   ☐ No job

6. How much is your total monthly income? (Please choose **only one of** the following answers)

Under 10 million VND	From 10 – under 20 million VND	Over 20 million VND
☐	☐	☐

7. Have you ever visited Nha Trang before this trip?

☐ Yes   ☐ No

8. Please tell me how you know Nha Trang as a tourist destination (You may pick **more than one** item).

Friends/ relatives	Television/ broadcasts	Newspapers/ magazines	Travel agents/ tourist offices	Internet	Others
☐	☐	☐	☐	☐	☐

9. Below is a list of statements assessing your perception of Nha Trang as a travel destination. Please choose only one and tick the number chosen (*1=strongly disagree, 2=disagree, 3=somewhat disagree, 4=neither/nor, 5=somewhat agree, 6=agree, 7=strongly agree*).

1=strongly disagree ➔ *7=strongly agree*

	Destination switching barriers			
SB1	Interaction with staff was like interacting with friends.	1	…	7
SB2	Staff paid special attention to my requests.	1	…	7
SB3	I feel like there is an invisible bond between this place and myself.	1	…	7
SB4	I would miss some of the benefits from this place if switching to a new destination.	1	…	7
SB5	It would take a lot of time and effort to change destinations.	1	…	7
SB6	For me, the costs in time, money and effort to switch destinations are high.	1	…	7
SB7	In general, it would be a hassle switching to another destination.	1	…	7
SB8	Compared to Nha Trang, there are not many other places that would be satisfactory.	1	…	7
SB9	If I need to switch, there are not many good destinations to choose from.	1	…	7
SB10	All destinations are the same.	1	…	7
	Satisfaction with destination attributes		…	
DA1	Beautiful landscape, especially beaches	1	…	7
DA2	Good weather for outdoor activities	1	…	7
DA3	Clean public environment	1	…	7
DA4	Safe and secure place for holiday	1	…	7
DA5	Variety of hotels	1	…	7
DA6	Quality network of tourist information	1	…	7
DA7	Convenience of local transportation	1	…	7
DA8	Reasonable price of accommodation	1	…	7
DA9	Reasonable price of meals	1	…	7
DA10	Reasonable price of leisure services	1	…	7
DA11	Diversity of relaxing and rest services	1	…	7
DA12	Variety of night-time recreations	1	…	7
DA13	Variety of types of food, especially seafood	1	…	7
DA14	Variety of cuisine	1	…	7
	Overall satisfaction		…	
OS1	I thoroughly enjoyed my visit to visit Nha Trang.	1	…	7
OS2	My trip to Nha Trang was well worth the money I spent to take it.	1	…	7
OS3	Overall, I am satisfied with the decision to choose the destination.	1	…	7
	Destination loyalty		…	
DL1	Nha Trang means a lot to me.	1	…	7
DL2	I enjoy recreating at Nha Trang more than any other place.	1	…	7
DL3	I would tell other people positive things about Nha Trang.	1	…	7
DL4	I would recommend Nha Trang to my friends and relatives.	1	…	7
DL5	I would visit Nha Trang again for my next holiday.	1	…	7

Thank you very much for your cooperation and valuable time! Have a great journey!