# Residents' Support for Tourism: Testing Alternative Structural Models

# RESIDENTS' SUPPORT: TESTING ALTERNATIVE STRUCTURAL MODELS


## ABSTRACT

Social exchange theory (SET) has made significant contributions to research on residents' support for tourism. Nevertheless, studies are based on an incomplete set of variables and are characterized by alternative, yet contradictory, yet theoretically sound research propositions. Using key constructs of SET, this study develops a baseline model of residents' support and compares it with four nested models. Each nested model contains the terms of the baseline model and additional relationships reflecting alternative theoretical possibilities. The models were tested using data collected from residents of Niagara Region, Canada. Results indicated that in the best fitted model, residents' support for tourism was influenced by their perceptions of positive impacts. Residents' power and their trust significantly predicted their life satisfaction and their perceptions of positive impacts. Personal benefits from tourism significantly influenced perceptions of positive and negative impacts. The study provides valuable and clearer insights on relationships among SET variables.



Keywords: residents' attitudes and support; social exchange theory; alternative model; structural equation modeling

# INTRODUCTION

The diffusion of sustainability principles in tourism has lead researchers to emphasize on the requirements for sustainable tourism. Residents' support for tourism development is seen as a prerequisite for sustainability (Gursoy, Chi, & Dyer, 2010; Sharpley, 2014). This is based on the premise that sustainable tourism should address the fundamental needs and concerns of local communities in development. Consequently, research in this area has attracted significant attention from scholars. Nunkoo, Smith, and Ramkissoon (2013) retrieved 140 articles published on this topic between 1984 and 2010 from three major tourism journals alone. They noted that while early studies on residents' attitudes were of an atheoretical nature, research has "evolved from being low on methodological sophistication and theoretical awareness to being high on both aspects" and has "reached a stage of active scholarship in theory development followed by empirical testing" (p. 5).

Social exchange theory (SET) has been the most widely used theory to investigate residents' support for tourism (Nunkoo et al., 2013; Sharpley, 2014). Ap (1992) defined SET as "a general sociological theory concerned with understanding the exchange of resources between individuals and groups in an interaction situation" (p. 668). Exchanges take place between and among actors embedded in the groups, networks, organizations, and institutions that exist in society (Cook, Cheshire, Rice, & Nakagawa, 2013). In tourism, researchers have mostly utilized SET in the context of an exchange relationship between local communities and the tourism industry in an attempt understand how such relationships shape residents' reactions to tourism development. SET "outlines the processes by which residents become involved in tourism exchanges, continue these exchanges, and become disengaged from the exchanges (Ap, 1992, p. 669).

While virtually all contemporary tourism researchers believe that a healthy relationship between residents and the tourism industry is important for mutually beneficial exchanges, studies conceptualize social exchanges in various ways by using different variables, reflecting one or more dimensions of SET. The majority of researchers measure the outcome of an exchange relationship as residents' level of support for tourism development which indicates their willingness to enter an exchange relationship with the industry (e.g. Boley, McGehee, Perdue, & Long, 2014; Gursoy & Rutherford, 2004; Stylidis & Terzidou, 2014). The value attributed to the elements of the exchange, often conceptualized as residents' perceptions of the positive and negative impacts of tourism in several studies, influence the ways in which they react to tourism development (Andriotis & Vaughan, 2003). Drawing from other conceptualizations of social exchanges, some other studies demonstrate that a mutually beneficial exchange relationship depends on the level of trust between social exchange actors (e.g. Nunkoo, Ramkissoon, & Gursoy, 2012; Nunkoo & Smith, 2013), distribution of power between actors and their knowledge (Andereck, Valentine, Knopf, & Vogt, 2005; Látková & Vogt, 2012; Nunkoo & Ramkissoon,, 2012), and personal benefits an actor derives from the exchange (e.g. Andereck & Nyaupane, 2011; Ko & Stewart, 2002).

While there is much to learn from existing research on residents' support for tourism, two major problems can be identified. First, studies are 'fragmented theoretically' because they fail integrate together the various perspectives of SET to study residents' support for tourism. For example, trust, power, and knowledge which are core variables of SET and should therefore be studied jointly in any research that deals with the world of social relations (Cook et al., 2013), have yet to be considered simultaneously for a more accurate prediction of residents' support. Second, existing studies informed by SET are based on conflicting, yet theoretically sound

research propositions, leading to confusion among tourism scholars. For example, Nunkoo and Ramkissoon (2011) predict residents' perceptions of tourism impacts from their trust in government actors while in other studies, the contrary was found to be true (Nunkoo & Ramkissoon, 2012, Nunkoo & Smith, 2013). Likewise, while some studies found tourism impacts to predict personal benefits (e.g. Andereck & Nyaupane, 2011), the opposite was confirmed in other research (e.g. Ko & Stewart, 2002).

The different ways in which SET has been conceptualized and the conflicting theoretical propositions which exist in existing literature on residents' support for tourism stem from the multitude of approaches on which SET is built. Social exchange does not involve a single conceptual model, but it is developed upon a family of related theoretical frameworks. While all social exchange theorists agree on the reciprocal nature of social exchanges, each model has its own approach to and contextualization of social exchange (Mitchell, Cropanzano, & Quisenberry, 2012). For example, Thibaut and Kelley (1959) discussed how actors in an exchange relationship weigh the benefits of the exchange relation against the costs; Emerson's (1962) work related to the concept of power between actors involved in an exchange relationship; Blau (1964) emphasized social interaction as an exchange process, distinguishing between economic exchange relationships and social exchange relationships. Blau's (1964) research also highlighted the importance of trust between social actors, an idea further elaborated by Deutsch (1973).

The diverse approaches used to understand social exchanges explain the different ways in which researchers have operationalized SET to understand residents' support for tourism, sometimes leading to conflicting theoretical propositions among studies. As Emerson (1976)

himself admitted, SET contains "sparks of controversy" (p. 335). However, Mitchell et al. (2012) argued that the different social exchange paradigms "can reinforce one another by being combined into specific theoretical positions" (p. 114). Therefore, there is a need for research that recognizes the different theoretically plausible relationships and includes the core variables of SET derived from the various approaches to social exchanges. This will ensure that the full potential of the theory in explaining residents' support for tourism is achieved.

This paper attempts to fill these literature gaps by bringing together the ideas underlying social exchanges in a single study and empirically testing the different theoretical possibilities offered by SET. A technique particularly useful in situations where various theoretically possible approaches exist to study a given phenomenon is the alternative a priori model approach. Comparing multiple a priori models is based on the scientific principle that the data "do not confirm a model, they only fail to disconfirm it, together with the corollary that when the data do not disconfirm a model, there are many other models that are not disconfirmed either (Cliff, 1983, p. 116-117). To this end, we develop a baseline model (BM) of residents' support for tourism and compare it with four competing nested models ($CM_1$-$CM_4$) using structural equation modeling (see Figure 1). Nested models contain all the terms of a BM and at least one additional term (Anderson & Gerbings, 1988). Each nested model presented here has a legitimate status in the literature as it reflects alternative theoretically plausible relationships. Such a practice uncovers the model that is the best fit to the data (MacCallum & Austin, 2000) and leads to a theoretically and methodologically robust study because they "increase the alignment of modeling results with existing knowledge and theories" (Shah & Goldstein, 2006, p. 162) and lend "protection against a confirmation bias" which happens when researchers favor information that confirms their hypotheses (MacCallum & Austin, 2000, p. 217). Testing alternative models

in a single study also enables researchers to uncover new relationships among variables and is useful for theoretical development (Nunkoo, Ramkissoon, & Gursoy, 2013).

INSERT FIGURE 1 ABOUT HERE

## LITERATURE REVIEW

### *Residents' Support for Tourism*

Existing studies suggest that locals perceive several positive and negative impacts from tourism development (Nawjin & Mitas, 2012; Nunkoo & Ramkissoon, 2010). The industry provides economic benefits such as employment for local people, development of small businesses, and investment opportunities (Kim et al., 2013; Nunkoo & Smith 2013). Tourism also leads to preservation of environmental resources, promotion of environmental awareness among local residents, and revival of local arts and culture (Kim et al., 2013). On the negative side, tourism is a source of environmental pollution, traffic congestion, and litter problems (Nunkoo & Smith, 2013; Nunkoo & Ramkissoon, 2012). In other cases, the industry has been found to modify traditional culture and create inflationary pressures on local economies (Gursoy et al., 2010; Nunkoo & Ramkissoon, 2007; Nunkoo & Smith, 2013). In support of SET, a number of studies empirically demonstrate that residents' support for tourism (SFT) is positively related to their perceptions of the positive impacts of tourism (PI) but inversely related to perceived negative impacts (NI) (e.g. Gursoy & Rutherford, 2004; Gursoy et al., 2010; Nunkoo & Gursoy, 2012; Nunkoo & Ramkissoon 2011, 2012; Nunkoo & Smith, 2013). These paths are proposed in the BM and $CM_1$-$CM_4$ (PI → SFT; NI → SFT).

*Satisfaction with Quality of Life*

Use of SET in residents' attitudes studies appears to shed light mainly on economic value domains conditioning an exchange relationship (Wang & Pfister, 2008). However, less tangible resources also influence social exchanges considerably (Cook, Hardin, & Levi, 2005; Woo, Kim, & Uysal, 2015). Of particular interest here, is residents' satisfaction with their quality of life (SQL). The definition of quality of life remains contentious in the literature. For example, Andereck and Nyaupane (2011) contend that there are more than 100 definitions of the concept. This research defines quality of life as "one's satisfaction with life and feelings of contentment or fulfillment with one's experience in the world" (Andereck & Nyaupane, 2011, p. 248). The premise quality of life studies is that while it is important to study how well a community is doing from an objective perspective (i.e. the actual circumstances related to residents economic, social, environmental, and health well-being), understanding it from a subjective human response perspective (i.e. residents' satisfaction with quality if life) is also of value (Uysal, Sirgy, & Perdue, 2012).

Research on quality of life has been driven by the need to study the impacts of tourism development on local communities (Uysal et al., 2012; Uysal, Woo, & Singal, 2012). Positive economic, socio-cultural, and environmental impacts of tourism development improve residents' SQL while the adverse consequences of tourism decrease SQL (Kim, Uysal, & Sirgy, 2013; Moscardo, 2009; Woo et al., 2015). Although such assumptions have been made, to-date, the majority of research on SQL has focused on the tourists at the neglect of local communities (Nawjin & Mitas, 2012). Few studies explicitly investigate the theoretical relationships between residents' perceptions of tourism impacts and their satisfaction with quality of life (Kim et al., 2013; Nawjin & Mitas, 2012). Kaplanidou et al.'s (2013) study reported a positive relationship

between positive impacts and satisfaction with quality of life. However, the researchers were unable to establish a statistically significant relationship between negative impacts of tourism and satisfaction with quality of life. Similar conclusions can be derived from other studies (e.g. Kim et al., 2013; Nawjin & Mitas, 2012). Our BM and $CM_1$-$CM_4$ propose similar relationships (PI → SQL; NI → SQL).

While the majority of research treats residents' satisfaction with quality of life as a dependent variable influenced by the impacts of tourism (e.g. Andereck & Nyaupane, 2011; Chancellor, Yu, & Cole, 2011), it is only recently that quality of life has been considered as an antecedent of residents' support for tourism development (e.g. Woo et al., 2015). If impacts of tourism improve residents' quality of life, they will be more likely to enter an exchange with the industry and support the industry's development or one can also expect residents to be less supportive of tourism if it disrupts their quality of life - a premise based on SET. Thus, improved quality of life through tourism development can be regarded as a resource positively valued by local communities. The relationship between quality of life and support for tourism development has been validated by a few recent studies (e.g. Kaplanidou et al., 2013; Woo et al., 2015). We therefore propose similar paths in the BM and $CM_1$-$CM_4$ (SQL → SFT).

*Personal Benefits from Tourism*

Benefits are value domains which help actors make decisions about the subjective worth of a social exchange relationship (Emerson, 1987). In tourism, personal benefits (PBT) are value domains (i.e. various economic, social, and cultural benefits) that residents personally derive from an exchange relationship with the tourism industry (Wang & Pfister, 2008). According to SET, personal benefits residents derived from tourism is an important variable conditioning their

perceptions of the impacts of tourism development because actors react according to the subjective expected personal utility they derive from an exchange relationship (Emerson 1987). Ko and Steward (2002) found personal benefits to be a strong determinant of residents perceived positive impacts, but an insignificant predictor of their perceived negative impacts, contradicting the results of Perdue, Long and Allen (1990) who found personal benefits to significantly predict negative impacts. Perdue et al., (1990) also reported that after controlling for personal benefits, residents' perceptions of tourism were unrelated to their demographic characteristics. More recently, Látková and Vogt's (2012) study found personal benefits to significantly predict both positive and negative impacts. The BM and $CM_1$-$CM_4$ propose similar paths (PBT → PI; PBT→ NI).

*Knowledge of Tourism*

Residents' knowledge of tourism (KW) is central to the sustainability and good governance of the sector (Moscardo, 2005). Here, knowledge refers residents' understanding of tourism development issues and of the role of local government in the industry. Knowledge is an important resource for an actor and determines its position in a social exchange network, making it an important construct of SET (Cook et al., 2013). Some studies investigate the influence of residents' knowledge of tourism on their attitudes to the perceived impacts of the industry. Residents who are knowledgeable about tourism are most likely to recognize the benefits and costs of development (Andereck, Valentine, Knopf, & Vogt, 2005). However, results are far from conclusive. Davis, Allen, and Cosenza (1988) found that "haters" of tourism included residents who generally had poor knowledge of tourism. Andereck et al.'s (2005) study indicated that residents who were knowledgeable about tourism were more likely to report positive impacts while Nunkoo (2015) reported a significant relationship between knowledge

and perceived negative impacts only. Contrary to these findings, Látková and Vogt (2012) found knowledge to be an insignificant predictor of positive and negative impacts. Based on these results, our BM and $CM_1$-$CM_4$ include similar relationships (KW → PI; KW→ NI).

*Power in Tourism*

Central to SET is the concept of power (PW) which exists in a set of specific relationships, where actors are positioned within this network of power relations (Emerson, 1962). In social exchanges, power is defined as the ability of one actor to influence the behavior of another actor (Wrong, 1979). In tourism, power provides a basis for understanding residents' reactions to the impacts of development. Power is usually asymmetrically distributed among tourism actors and in particular, local communities are often the least powerful in tourism development compared to other stakeholder groups (Moscardo, 2011; Saufi, O'Brien, & Wilkins, 2014). This, according to Ap (1992), adversely influences residents' perceptions of tourism development, while he argues that positive reactions from residents are associated with high level of power. This is confirmed by some studies (e.g. Nunkoo & Ramkissoon, 2011, 2012), although empirical findings are inconclusive to-date (see for e.g. Látková & Vogt, 2012; Nunkoo & Smith, 2013). Based on the preceding discussion, our BM and $CM_1$-$CM_4$ attempt to test such relationships (PW → PI; PW→ NI). Power also influences the ability of an actor to benefit from an exchange because as Ap (1992) argues, "power is usually viewed as the capacity to attain ends" (p. 679). Power brokers have considerable influence on the benefits of tourism development (Smith, 1996). Empowerment allows communities to benefits more from and to take advantages of the opportunities of tourism development (e.g. Moscardo, 2011; Saufi et al., 2014; Scheyvens, 1999). $CM_4$ proposes an additional relationship between residents' power and personal benefits residents derived from tourism (PW → PBT).

The concept of perceived power is highly akin to the general psychological notion of locus of control (Rotter, 1966) which is considered as one of the most important psychological variable contributing to improved quality of life among residents (Diener, 1984). Research conducted across various contexts and situations consistently shows that perceived power to influence or perceived personal control over events in one's environment leads to improved life satisfaction (e.g. de Quadros-Wander, McGillivray, & Broadbent, 2014; Hofmann, Luhman, Fisher, Vohs, & Baumeister, 2014). Likewise, Grzeskowiak et al.'s (2003) study demonstrated that individuals' power to influence local institutions was positively correlated with their satisfaction with their life and the community. Analogously, one could argue that residents' power to influence tourism development should be positively related to their satisfaction with quality of life. However, tourism researchers have remained insensitive to a potential causal association between power and quality of life. Thus, $CM_1$ proposes to investigate such a relationship (PW → SQL).

*Trust in Government Actors*

Trust is one of the most important variables of SET (Blau, 1964). It is defined as "a psychological state comprising the intention to accept vulnerability based upon positive expectations of the intentions or behavior of another" (Rousseau, Sitkin, Burt, Camerer, 1998, p. 395). Trust is important in social exchanges because exchange of benefits is neither contractual nor happens on a quid pro quo basis, but on a voluntary basis. The persistence of a social exchange relationship depends on implicit trust between actors (Konovsky & Pugh, 1994). In tourism, while government cannot oblige local communities to display positive attitudes towards the industry, it requires favorable reactions from them to ensure sustainable development. Residents' trust in government actors (TG) involved in tourism planning conditions the ways in

which they react to the impacts of tourism. This is because trust affects public attitudes to government policies and outputs (Easton, 1965; Heatherington & Husser, 2012). Empirical research suggests that public trust positively influences benefits but is inversely related to risks associated with an activity (e.g. Bronfman, Vazquez, & Dorantes, 2009). Corroborating these results, Nunkoo and Ramkissoon (2011) found that residents' trust in tourism institutions significantly predicted their perceptions of the positive and negative impacts of tourism. Similar paths are proposed in the BM and $CM_1$ - $CM_4$ (TG → PI; TG→NI).

SET also posits that trust influences a partner's commitment to an exchange relationship (Blau, 1964). In tourism, residents demonstrate such commitment by supporting development. Government needs local support for its policies to flourish (Caldeira & Gibson, 1992). Unlike the research of Nunkoo and Ramkissoon (2011), in subsequent studies, Nunkoo et al. (2012), Nunkoo and Ramkissoon (2012), and Nunkoo and Smith (2013) found residents' trust in government actors to be a strong predictor of their support for tourism. $CM_3$ therefore proposes this additional relationship (TG → SFT). Trust in other social actors is also essential to a successful life. A culture of mistrust is related to the belief that others are dishonest, self-seeking, and looking out for their own good, victimizing others in pursuit of their own goals (Mirowsky & Ross, 1983). Research in psychology and sociology suggests that trust is positively related to an individual's quality of life (Di Tella, MacCullouch, & Oswald, 2003; Helliwell, 2003; Ross, 2003). However, existing research in tourism has so far failed to consider the influence of residents' trust in government actors on their quality of life. $CM_1$ proposes this additional relationship (TG → SQL).

Interestingly, some other studies treat trust as an outcome rather than an independent variable (e.g. Nunkoo, 2015). According to SET, trust between actors develops through reliable performance, i.e. by reciprocating for benefits received from others, where such benefits comprise of economic and non economic values (Blau, 1964; Whitener, Brodt, Korsgaard, & Werner, 1998). However, the influence of personal benefits residents derive from tourism on their level of trust has rarely been studied in tourism. Based on this, $CM_2$ proposes such a additional relationship (PBT→ TG). Familiarity is another important preconditioned for development of trust (Luhman, 1979). Although a government meets the attributes of trustworthiness, it does not necessarily mean that citizens will possess sufficient knowledge to believe that it would act in their interests. This, according to Hardin (1998) and Levi and Stoker (2000) hinders residents' trust in government, lending support to Simmel's (1978) argument that trust involves a degree of cognitive similarity with the object of trust that is somewhere between total knowledge and total ignorance. Recent studies (e.g. Grimmelinkhujsen, 2012) validate a positive relationship between citizens' knowledge of government processes and political trust. However, such evidence is largely lacking in tourism studies. $CM_2$ proposes such an additional relationship (KW→ TG).

In social exchanges, trust and power complement one another to inform social actors' behaviors (Blau, 1964; Emerson, 1962). They should therefore be studied jointly in any study (Cook et al., 2005; Oberg & Svenssoon, 2010). Although the relationship between remains to be well understood, power is usually considered a pre-condition for development of trust because it influences an exchange partner's evaluation of the relative worth of a relationship (Bachmann, Knights, & Sydow, 2001; Farrell, 2004). Power asymmetries among social actors create grounds for distrust and block the possibility of trust (Cook et al., 2005; Farrell, 2004). Institutions face

lack of trust from citizens if their political processes marginalize community members, rendering them powerless in influencing policy decisions (Gabriel, Kunz, Rossdeutscher, & Deth, 2002). Some studies in political science (e.g. Oberg & Svensson, 2010; Oskarsson, Svensson, & Oberg, 2009) and tourism (e.g. Nunkoo et al., 2012; Nunkoo & Ramkissoon, 2012), validate a significant positive relationship between power and trust although results are contradictory (see for e.g. Nunkoo & Smith, 2013). $CM_2$ hypothesizes an additional relationship between power and trust (PW→ TG).

## RESEARCH METHODOLOGY

### *Research Context*

The Niagara Region, Canada, was chosen as the research site. Tourism is one of the most important industries of the region, providing various socio-economic benefits to residents. Despite such contributions, tourism adversely affects local neighborhoods and alters the socio-cultural fabrics of the region. Development of tourism has also led to a number of environmental problems, including the overuse of natural resources (Nunkoo & Smith, 2013). Authorities have been criticized for their top-down and corporatist approach to tourism planning, for marginalizing local communities in the development process, and for inadequate tourism (Graveline, 2011; Nunkoo & Smith, 2013). However, local government has expressed its commitment to sustainability through greater involvement of local communities in tourism development.

### *Survey Method and Sample Size*

Data were collected from local residents using an online panel provided by TNS Global Marketing Research, Canada. An online panel "consists of people who have registered to

occasionally take part in web surveys" (Goritz, 2004, p. 411). Although online panels have some limitations, they produce reliable data and do not suffer from higher sample bias than traditional methods (Callegaro et al., 2014). Consequently, their increasing use in tourism research is not surprising (see for e.g. Chung & Petrick, 2013; Dolnicar, Yanamandram, & Cliff, 2012; Nunkoo & Smith, 2013). The requirements in terms of sample frame and size were provided to TNS. The online survey was open to residents who were at least 18 years of age. Four hundred of eight responses were obtained. Seventeen questionnaires were eliminated as a result of missing data, resulting in a usable sample of 391 respondents, satisfying the minimum sample requirement of 200 for effective use of structural equation modeling (Anderson & Gerbing, 1988).

*Measurement of Constructs*

Items used to measure the various constructs are presented in Table 1 and were derived from existing literature. SFT, PI, NI, and PBT were operationalized using items borrowed from Nunkoo and Ramkissoon (2011), Latkova and Vogt (2000), and Wang and Pfister (2008). TG was measured using scales derived from Luhiste (2006) and Shi (2001). Items to measure PW were borrowed from Hung, Sirakaya-Turk, and Ingram (2011) and Madrigal (1993). Scale to measure KW was derived from Hung et al. (2011) and Grimmelikhuijsen (2012). SQL was operationalized using items borrowed from Andrew and Withey (1978) and Sirgy and Cornwell (2001). A recent study by Kim et al. (2013) also made use of the same scale items to measure SQL. Where necessary, items were slightly modified to suit the particular context of tourism development in Niagara Region. Such modifications were contextual rather than conceptual.

# RESULTS

## *Sample Profile and Non Response Bias*

Of the 391 respondents, 65.7% were female and 12.5% were between 18 and 35 years, with 68.5% between 35 and 65 years, and 18.9% over age 65 years. In terms of annual household income, 34.4% of the sample earned under $35,000, 41.5% earned between $35,000 and $80,000, and 24% earned over $80,000. With respect to the highest education level completed, 18.4% of the respondents had university degrees, 33% had attended college, and 6.6% had apprenticeship or trade certificates. To assess non response bias, we adopted the Armstrong and Overton's method (1977), whereby early respondents (top 5%) with late respondents (bottom 5%) were compared on their demographic variables (e.g., gender, marital status, education, and income) and the measurement items. The chi-square tests indicate no significance differences ($\alpha = .05$) between early and late respondents in terms of respondent characteristics. In addition, the *t* tests results show that responses to the measurement scales were not significantly different ($\alpha = .05$) between early and late respondents. Therefore, non response bias was not evident in this study.

## *Common Method Variance*

Given that this study collected information via the same method (self-administered online surveys), common method variance may introduce bias to the relationships among the constructs. Various techniques can be used to assess common method variance (e.g., Harman's single-factor test, confirmatory factor analysis (CFA) test, and the marker variable technique), each having its advantages and limitations (Malhotra, Kim, & Patil, 2006). In this study, we conducted a CFA test to examine whether a single factor can account for all of the variance in the data (Baldauf, Cravens, Diamantopoulos & Zeugner-Roth, 2009). A CFA with all 30 items loading onto a

single common factor was estimated. A chi-square difference test was then performed to compare the results of the common factor model with the CFA results of the proposed measurement model, which included the eight latent factors. The results show that the proposed measurement model fits significantly better than the common factor model ($\Delta \chi^2 = 4935.91$, $df = 30$, $p < .001$). The results of the analysis indicated that common method variance was not a major issue in this study.

*Structural Equation Modeling*

Data were analyzed with structural equation modeling (SEM) using the two-step approach (Anderson & Gerbing, 1988). To evaluate the performance of the measurement model, we conducted a CFA on the sample data ($N = 391$) using AMOS 21 with the eight constructs modeled simultaneously as correlated first-order factors with maximum likelihood estimation. As this estimation method relies on data normality, the distribution of the collected data was examined. Normality is attributed to both skewness and kurtosis. While skewness tends to impact analysis of means, it is kurtosis that severely influences tests of variances and covariances which is the basis for SEM. Therefore, the kurtosis of all items was evaluated. According to West Finch, and Curran (1995), a rescaled value of greater than 7 is indicative of early departure from normality. Using this threshold as a guide, an inspection of the kurtosis values produced by AMOS suggests that no item was substantially kurtotic, therefore satisfying the assumption underlying maximum likelihood estimation of SEM.

INSERT TABLE 1 ABOUT HERE

The measurement model resulted in a significant chi-square value of 816.85 ($df$ = 377, $p$ < .001), which is known to be highly sensitive to sample size. However, the ratio of the chi-square to degrees of freedom ($\chi^2/df$ = 2.17) is below the recommended cutoff point of 3 (Bagozzi & Yi, 1988). Overall, the measurement model achieved a good fit to the data, with Comparative Fit Index (CFI) = .94, Tucker-Lewis Index (TLI) = .93, Standardized Root Mean Square Residual (SRMR) = .0502, and Root Mean Square Error of Approximation (RMSEA) = .055 (Table 1). Convergent validity was evidenced with statistically significant ($p$ < .01) item factor loadings (Anderson & Gerbing, 1988) as shown in Table 1. Discriminant validity was tested by comparing all pairs of constructs in two-factor CFA models (Anderson & Gerbing, 1988), where each model was estimated twice, with one constraining the correlation between the constructs to be one and the other allowing free estimation of the parameter. According to Bagozzi and Phillips (1982), discriminant validity is achieved if a significantly lower chi-square value is obtained for the model in which the correlation is not constrained to unity. The analysis shows that all combinations resulted in a significantly higher value ($\chi^2$ > 3.84 at $\alpha$ = 5%) for the constrained model, indicating discriminant validity (Jöreskog, 1971, see Table 2). Scale reliability was achieved because the composite reliability and average variance extracted values exceeded 0.70 and 0.50 respectively (Hair, Black, Babin, Anderson & Tatham, 2006).

INSERT TABLE 2 ABOUT HERE

*Baseline Model versus Alternative Models*

Once the above steps were performed, the hypothesized BM was tested using AMOS 21 with the maximum likelihood estimation method. Results indicated a good model fit with $\chi^2$ = 889.24, $df$ = 386, $\chi^2/df$ = 2.79, $p$ < .05, CFI = .934, TLI = .926, SRMR = .071, and RMSEA

= .058. The structural path coefficients of the BM suggested that of the 13 hypothesized paths tested, eight were found to be significant. Following this, each competing model was estimated individually with all the exogenous variables being assumed to be correlated. The comparison first involved the assessment of the overall model fit of the models. As Table 3 shows, all four competing models exhibited good model fit. If all competing models exhibit a reasonable fit to the data and explain similar outcome variables, the researcher must apply other criteria to identify the most appropriate model (Rust, Lee & Valente, 1995). Specifically, when comparing nested models, such as those tested in this study, a chi-square difference test is considered appropriate to determine the best model (Anderson & Gerbing, 1988; Rust et al., 1995). Results suggested that both $CM_1$ ($\Delta \chi^2 = 11.70$, $df = 2$, $p < .01$) and $CM_3$ ($\Delta \chi^2 = 4.41$, $df = 1$, $p < .05$) were significantly better fitted models than the BM, whereas $CM_4$ ($\Delta \chi^2 = 23.92$, $df = 2$, $p < .001$) was shown to be significantly worse than the BM. Both the BM and $CM_2$ were equivalent models, which produced the same predicted correlations or covariances, but with a different configuration of paths among the same observed variables (Kline, 2011).

INSERT TABLE 3 ABOUT HERE

According to Kline (2011), equivalent models have equal values of fit statistics. As such, comparison of the two models through a chi-square difference test or fit statistics was not possible. Selecting the best model from equivalent models should be based on both theoretical grounds (Kline, 2011) as well as quantitative criteria (Hershberger, 2006). As the literature review offers theoretical support for the three additional paths contained in $CM_2$, (PBT → TG, KW → TG, PW → TG), these were tested and found to be statistically significant, collectively accounting for 17% of the variance in TG. On this basis, we concluded that $CM_2$ was superior to the BM. Further comparison of $CM_1$, $CM_2$, and $CM_3$ suggested that $CM_1$ was the best fitted

model. Furthermore, goodness-of-fit measures that take parsimony as well as fit into account such as the Akaike Information Criterion (AIC) (Akaike, 1987) and the Browne–Cudeck criterion (BCC) (Browne & Cudeck, 1989) can also be used regardless of whether models can be ordered in a nested sequence or not. On the basis of the AIC and BCC values, we again concluded that $CM_1$ was the best fitted and parsimonious model.

## DISCUSSION

Results of the best fitted model (i.e. $CM_1$) are presented in Figure 2. Nine of the 15 path relationships proposed in the model were supported. Residents' perceptions of the positive impacts of tourism were found to predict their support, corroborating results of existing studies (e.g. Lee, 2012; Nunkoo & Ramkissoon, 2011; Nunkoo & Smith, 2013). Perceived negative impacts were not found to exert a significant influence on support. This is similar to some previous research (e.g. Gursoy and Kendall, 2006; Gursoy et al., 2002; Nunkoo & Ramkissoon, 2012). Residents' satisfaction with quality of life did not influence their support for tourism. This result contradicts Kaplanidou et al.'s (2013) study on quality of life and support for a mega event. Such contradiction may be due to the different types of development studied. Mega events are obtrusive types of tourism and are more likely to impact on community life and to cause emotional and cognitive reactions among residents than other types of development (Prayag, Hosany, Nunkoo, & Alders, 2013). Residents' experiences with mega events are more conspicuous, making them more reactive to such developments (Gursoy & Kendall, 2006). Thus, it is not surprising that Kaplanidou et al. (2013) found residents' quality of life as impacted by a mega event to significantly influence their support, contrary to our findings. Our results demonstrate that while positive impacts of tourism significantly influenced satisfaction with life, negative impacts did not. Kaplanidou et al. (2013) and Kim et al. (2013) also found similar

evidence. Our results imply that when it comes to their quality of life, residents place more emphasis on the positive consequences of tourism than on the negative ones. This is not surprising given that tourism is usually viewed as an industry that significantly improves quality of life of communities (Andereck & Nyaupane, 2010; Kim et al., 2013).

INSERT FIGURE 2 ABOUT HERE

Personal benefits from tourism positively influenced perceptions of positive impacts but were inversely related to perceived negative impacts. These findings lend support to other empirical studies suggesting that residents' attitudes to tourism impacts are conditioned by the extent to which they personally benefited from development (e.g. Látková & Vogt, 2012; Perdue et al., 1990; Wang & Pfister, 2008). Support for this relationship aligns with SET which suggests that residents' attitudes toward tourism are based on an exchange for something of value attributed by tourism. Here, such value domains include the economic, social, and cultural benefits residents' personally derive from tourism development. Residents' knowledge of tourism was found not to predict their perceptions of the positive impacts. These results support that of Látková and Vogt (2012) who did not find a significant relationship between knowledge and perceptions of positive impacts, but contradict the findings of Davis et al. (1998) who found knowledgeable respondents to be more appreciative of tourism. Our result also indicate that higher knowledge of tourism among residents were associated with stronger perceptions of the negative impacts. This is because knowledge gives rise to "critical citizens" and produces more critical attitudes toward development (Christensen & Laegreid, 2005).

Corroborating result of Nunkoo and Ramkissoon (2011), our study suggests that residents who are more trusting of government actors involved in tourism development are more likely to

view the impacts of the industry positively. The theoretical rational of such a finding is that trust is a cognitive habit that allows the trustee to interpret the behavior of the trustor as honest, and supportive, and benevolent (Cook et al., 2013). Here, the physiological consequence of residents' trust in local government is that it allows them to view the impacts of tourism positively. Contrary to our theoretical expectations and existing research (e.g. Nunkoo and Ramkissoon, 2011), trust was not found to be significantly related to perceptions of negative impacts. This finding suggests that the adverse consequences of trust are felt by everyone, irrespective of their level of trust in local government.

Interestingly, residents' who were more trusting of local government in tourism reported better quality of life. In fact, among the various determinants of quality of life incorporated in the model, residents' trust exerted the strongest influence. This result confirms the centrality of trust in society, where human are social beings and trust is seen as a core element in the social setting (Helliwell & Wang, 2011). Trust is therefore seen as a "central ingredient in the healthy personality" (Rotter, 1967, p. 651). Thus, it is not unexpected that like ours, several other studies suggest that positive psychological factors such as trust lead to a better life (Ashleigh, Higgs, & Dulewicz, 2012; Helliwell, 2011; Helliwell & Wang, 2011; Ward & Meyer, 2009). Carried out in a context similar to ours, Widgery's (1982) and Grzeskowiak et al.'s (2003) study reported a significant positive relationship between residents' trust in government and their life satisfaction.

Residents' power in tourism was found to significantly predict perceptions of positive impacts, lending support to SET and to existing studies (e.g. Madrigal, 1993; Nunkoo & Smith, 2013). However, power did not predict perceptions of negative impacts, corroborating results of Nunkoo and Smith (2013) and Latkova and Vogt (2012). The latter findings suggest that the

negative consequences of tourism are borne by everyone, irrespective of their level of power in tourism. Like trust, residents' who perceived they had the power to influence tourism were most likely to report better quality of life. Such result confirms long-standing evidence in psychology suggesting that individuals capable of influencing their environment to suit their needs and desires are able to maintain a positive and stable life (de Quadros-Wander et al., 2014). This is why some studies found that individuals who are able to influence their local institutions experience higher life satisfaction (Diener, 1984; Grzeskowiak et al., 2003). Thus, it expected that residents who have the power to influence tourism development outcomes experience improved life satisfaction.

## CONCLUSION

Residents' support for tourism is one of the most systematically documented areas in tourism. Research has reached a stage of active scholarship in theory development followed by empirical testing. While SET has largely influenced such studies, several of them are based on an incomplete use of the theory. In addition, although each study contributes in its own way to researchers' understanding of residents' support, the combined knowledge-base is characterized by conflicting, yet theoretically plausible relationships among variables, potentially creating confusion and hindering future theoretical developments. This study addresses these gaps by comparing four competing models of residents' support for tourism against a baseline model, where each model is developed following an in-depth review of existing literature. The premise is that as other unexamined models reflecting other approaches to social exchanges may fit the data as well or better, an examination of theoretically rival or competing models is recommended to rule out equivalent or even better fitted models (MacCallum & Austin, 2000). Indeed,

relationships uncovered in the best fitted model makes some important theoretical contributions to literature.

So far, existing literature suggests that residents' satisfaction with their quality of life in a destination is influenced primarily by the impacts of tourism development (Kaplanidou et al., 2013; Kim et al., 2013). While our study further confirms this, unlike previous research, it also provides some new theoretical evidence on other determinants of quality of life. Interestingly, residents' trust in government and their level of power in tourism development were the two strongest determinants of quality if life (even stronger than perceived positive impacts of tourism). While most existing studies adopt a "self-help approach", focusing on what individuals can do to improve their quality of life, our results suggest that "others", in particular, tourism institutions, can also influence quality of life of residents. It is probably for these reasons that Helliwell (2011) considers institutions as "enablers of wellbeing" (p. 255). Thus, residents' power in tourism and their trust in government are not only institutional variables impacting on the formulation of tourism policies, but they also have health consequences on communities. Trust and power in tourism development underpin a social system that plays a role in the development and maintenance of a healthy society.

Previous research proposes various antecedents of residents' perceptions of tourism impacts (see for e.g. Sharpley, 2014). Within such literature, residents' trust in government actors involved in tourism development has rarely been considered as a determinant of impact perceptions. On the contrary, some few studies consider residents' trust as an outcome variable influenced by perceptions of tourism impacts (e.g. Nunkoo & Smith, 2013). While this remains plausible, our study found the opposite to be equally possible theoretically, confirming a bi-

directional relationship between trust and perceptions of tourism impacts. Therefore, the study makes a contribution to this domain as well. Overall, we found residents' trust and their level of power to be intimately connected to their quality of life and their perceptions of tourism impacts. Therefore, there are benefits for theory development by including power and trust concurrently in a single theoretical model predicting residents' support for tourism. Indeed, Cook et al. (2005) note that these two constructs "cannot be assumed away in any theory that deals with the world of social relations and social institutions" (p. 40).

Results also have implications for tourism planning and management in Niagara Region. Planners should note that residents would be willing to enter an exchange process by supporting tourism development if they perceive that the industry results in positive impacts. Such benefits may be of an economic (e.g. business opportunities in tourism for local residents), socio-cultural (e.g. cultural exchange), and environmental (e.g. local environmental improvement) nature. It is also important for planners to ensure that tourism benefits are shared across individuals from all social spectrums and communities. While tourism development should have positive consequences for the whole community, policy-makers should also ensure that residents derive direct and personal benefits from tourism (Hung et al., 2011). As our findings suggest, higher personal benefits are associated with more tolerant attitudes to tourism. Results indicate that residents' trust is also closely associated with positive perceptions of tourism as well as higher satisfaction with quality of life. Thus, it is important that residents' trust local government institutions involved in tourism.

Local authorities can build trust by ensuring that tourism policies are fair and transparent. Tourism planning should be driven by community needs rather than by self-interests of

politicians and commercial interests. Trust can also be built if government authorities provide accurate and reliable information about tourism development to local residents. Empowering local residents in tourism is another effective strategy for fostering positive attitudes and improving quality of life. Local government should adopt a participatory approach, with the aim of making residents central to tourism development by encouraging beneficiary involvement interventions that affect them and over which they had limited influence. Planners should implement a comprehensive strategy of social integration and participation where people from different social groups/backgrounds are involved in tourism development. Authorities should consider democratizing the tourism sector in Niagara Region which at present seems to be controlled by society elites. Education and training of local residents to work in the tourism sector are other important sources of local empowerment.

Regardless of the implications of the research, it has certain theoretical and methodological limitations. The study used an overall measure of quality of life. Research suggests that residents' quality of life comprises of various domains such as material, community, emotional, and health and safety, personal relationships, and community connectedness (de Quadros-Wander, 2014; Kim et al., 2013). Likewise, power was also considered as a uni-dimensional construct. Boley, McGehee, Perdue, and Long (2014) provide evidence that power is a multidimensional construct comprising of psychological, social, and political empowerment. Thus, future studies should consider the multi-dimensional nature of these variables to clarify theoretical relationships further. From a methodological standpoint, use of an online panel for data collection may introduce an element of bias in the results. Respondents of online panels are usually politically more active than those of traditional survey methods (Duffy, Smith, Terhanian, & Bremer, 2005). Thus, readers should interpret the findings taking this into account. Despite

these limitations, insights revealed by the study have made relationships among SET constructs clearer for researchers and provide a basis for further theoretical developments in future studies.

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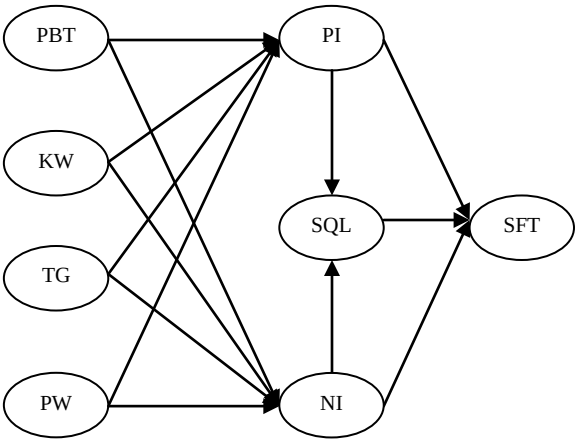



Figure 1a. Baseline Model (BM)

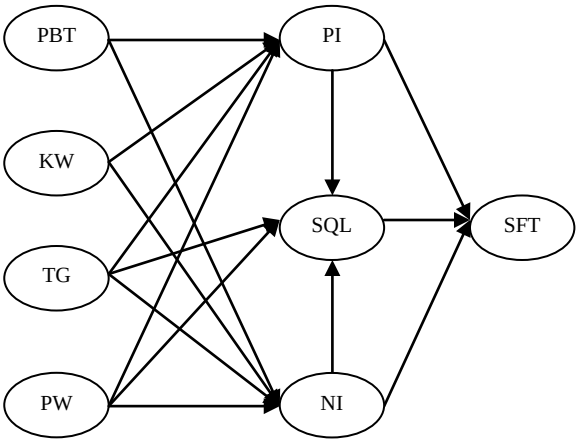



Figure 1b. Competing Model 1 ($CM_1$)

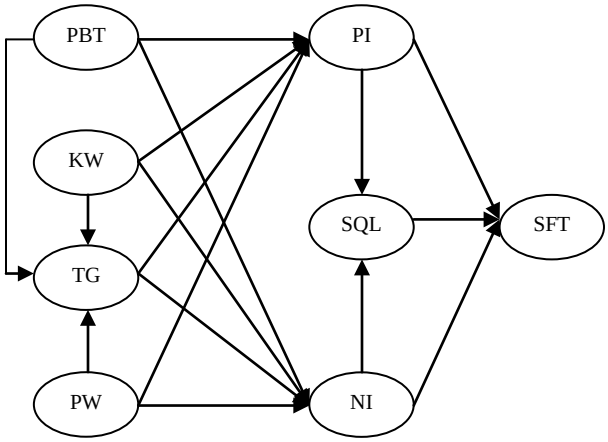



Figure 1c. Competing Model 2 ($CM_2$)

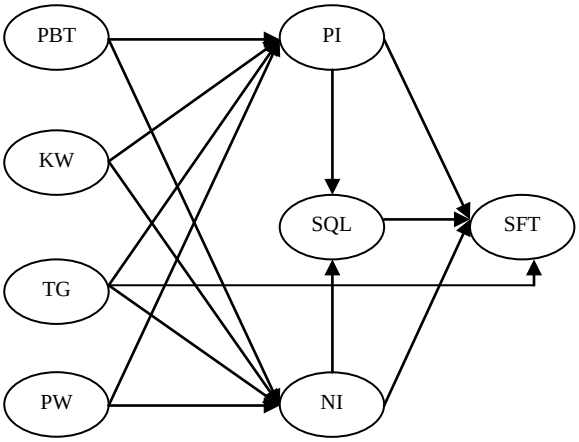



Figure 1d. Competing Model 3 ($CM_3$)

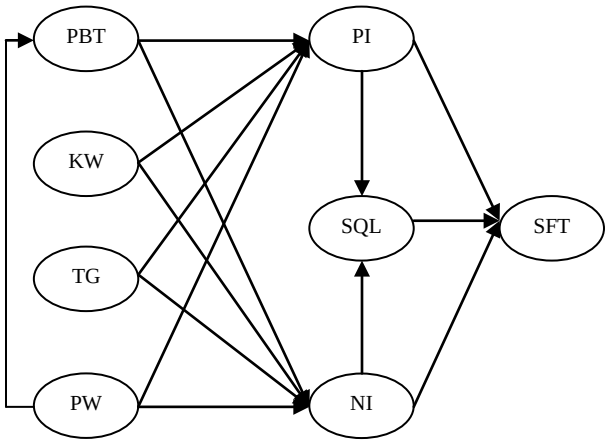
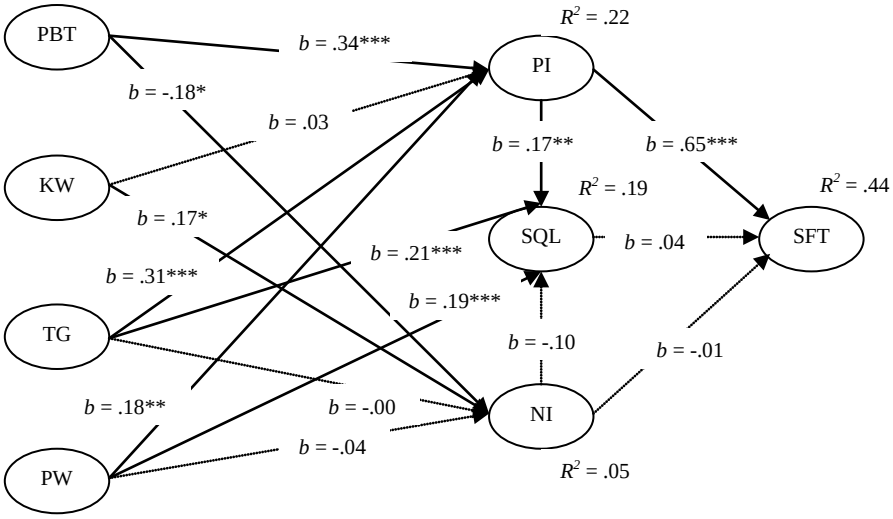



Figure 1e. Competing Model 4 ($CM_4$)

*Note – PBT: Personal benefits from tourism; KW: Knowledge of tourism; TG: Trust in Government; PW: Power in Tourism; PI: Positive impacts; NI: Negative impacts; SQL: Satisfaction with quality of life; SFT: Support for tourism*

Figure 1. Baseline model and competing structural models of residents' support.




Notes: *$\chi^2 = 877.53_{(384)}$; CFI = .94; TLI = .93; RMSEA = 0.06; SRMR = 0.07; AIC = 1039.53; BCC = 1053.52; *Significant p < .05; ** Significant p < .01; *** Significant p < .001; Broken lines indicate insignificant paths*

Figure 2. Best fitted model ($CM_1$) of residents' support tested.

Table 1. Results of measurement model.

| Constructs & Measurement Items | SL | CR | R | AVE |
|---|---|---|---|---|
| *Support for Tourism (SFT)*[a] | | | 0.92 | .062 |
| Tourism is one of the most important industries for my community | 0.75 | N/A | | |
| Tourism helps my community grow in the right direction | 0.84 | 17.31 | | |
| I am proud that tourists are coming to my community | 0.76 | 15.27 | | |
| Tourism continues to play an important economic role in my community | 0.76 | 15.27 | | |
| I support the development of tourism as it is vital to my community | 0.89 | 18.40 | | |
| My community should attract more tourists | 0.83 | 16.93 | | |
| Trust in Government (TG)[b] | | | 0.95 | 0.82 |
| Trust in local elected officials to make the right decisions in tourism | 0.88 | N/A | | |
| Trust in local government to do what is right in tourism | 0.92 | 27.45 | | |
| Trust in local government to look after the interests of the community | 0.91 | 26.89 | | |
| Trust in tourism decisions made by local government | 0.91 | 27.03 | | |
| Positive Impacts of Tourism (PI)[a] | | | 0.88 | 0.66 |
| Employment opportunities | 0.90 | N/A | | |
| Opportunities for local businesses | 0.91 | 25.03 | | |
| More investment in public development | 0.75 | 18.35 | | |
| Incentives for development of nature parks | 0.66 | 15.12 | | |
| Negative Impacts of Tourism (NI)[a] | | | 0.86 | 0.60 |
| Traffic problems | 0.73 | N/A | | |
| Litter | 0.88 | 15.84 | | |
| Increase in prices of goods and services | 0.64 | 11.96 | | |
| Environmental pollution | 0.84 | 15.51 | | |
| Knowledge of Tourism (KNW)[a] | | | 0.82 | 0.54 |
| I know about tourism development in my community | 0.81 | N/A | | |
| I have knowledge about tourists in my community | 0.82 | 15.58 | | |
| I know the possible impacts of tourism | 0.68 | 13.28 | | |
| I understand the role of local government in tourism | 0.62 | 11.92 | | |
| Power in Tourism (PWR)[a] | | | 0.84 | 0.72 |
| I have some influence over tourism planning and development | 0.84 | N/A | | |
| I have the opportunity to participate in tourism planning and development | 0.86 | 12.72 | | |
| Satisfaction with Quality of Life (SQL) | | | 0.89 | 0.73 |
| Satisfaction with your life[c] | 0.94 | N/A | | |
| Satisfaction with the way you are spending your life[c] | 0.92 | 24.74 | | |
| Which one of the following best describes how you feel?[d] | 0.68 | 16.08 | | |
| Personal Benefits from Tourism (PBT)[e] | | | 0.83 | 0.63 |
| Economic | 0.60 | N/A | | |
| Social | 0.90 | 12.35 | | |
| Cultural | 0.86 | 12.28 | | |
| *Model Fit Indices:* $\chi^2$ = 816.85 ($p$<0.05, *d*.f. = 377*);* $\chi^2$/d.f. = 2.17; CFI = .94; NFI = 0.90; TLI = .93; RMSEA = 0.055; PCLOSE = 0.066; SRMR = 0.0502 | | | | |

*Notes: [a]1 = strongly disagree, 5 = strongly agree; [b]1 = do not trust at all, 5 = trust completely; [c]1 = very dissatisfied, 5 = very satisfied; [d]1 = much worse than most people, 5 = much better than most people; [e]1 = none, 5 = a lot; SL = standardized loadings; CR = critical ratio; R = composite reliability; AVE = average variance extracted.*

Table 2. Discriminant validity results

| Comparisons | | Unconstrained Model | | Constrained Model | | Chi-Square Difference | | Discriminant Validity |
|---|---|---|---|---|---|---|---|---|
| | | $\chi^2$ | *df* | $\chi^2$ | *df* | $\Delta\chi^2$ | $\Delta df$ | |
| PBT | KW | 46.61 | 13 | 237.73 | 14 | 191.12 | 1 | Yes |
| | TG | 33.96 | 13 | 164.43 | 14 | 130.47 | 1 | Yes |
| | PWR | 4.12 | 4 | 117.49 | 5 | 113.37 | 1 | Yes |
| | PI | 75.46 | 13 | 258.05 | 14 | 182.59 | 1 | Yes |
| | QOL | 7.90 | 8 | 163.43 | 9 | 155.53 | 1 | Yes |
| | NI | 30.27 | 13 | 356.37 | 14 | 326.10 | 1 | Yes |
| | SFT | 150.97 | 26 | 312.46 | 27 | 161.49 | 1 | Yes |
| KW | TG | 58.39 | 19 | 262.73 | 20 | 204.34 | 1 | Yes |
| | PWR | 23.00 | 8 | 167.29 | 9 | 144.29 | 1 | Yes |
| | PI | 111.13 | 19 | 349.42 | 20 | 238.29 | 1 | Yes |
| | QOL | 33.11 | 13 | 215.20 | 14 | 182.09 | 1 | Yes |
| | NI | 36.41 | 19 | 266.40 | 20 | 229.99 | 1 | Yes |
| | SFT | 183.36 | 34 | 346.66 | 35 | 163.30 | 1 | Yes |
| TG | PWR | 29.81 | 8 | 103.23 | 9 | 73.42 | 1 | Yes |
| | PI | 115.04 | 19 | 221.09 | 20 | 106.05 | 1 | Yes |
| | QOL | 38.35 | 13 | 148.66 | 14 | 110.31 | 1 | Yes |
| | NI | 55.21 | 19 | 282.50 | 20 | 227.29 | 1 | Yes |
| | SFT | 198.13 | 34 | 297.20 | 35 | 99.07 | 1 | Yes |
| PWR | PI | 81.55 | 8 | 247.38 | 9 | 165.83 | 1 | Yes |
| | QOL | 33.11 | 13 | 215.20 | 14 | 182.09 | 1 | Yes |
| | NI | 16.20 | 8 | 259.03 | 9 | 242.83 | 1 | Yes |
| | SFT | 145.17 | 19 | 317.07 | 20 | 171.90 | 1 | Yes |
| PI | QOL | 83.64 | 13 | 228.73 | 14 | 145.09 | 1 | Yes |
| | NI | 92.95 | 19 | 1101.04 | 20 | 1008.09 | 1 | Yes |
| | SFT | 229.06 | 34 | 317.55 | 35 | 88.49 | 1 | Yes |
| QOL | NI | 26.71 | 13 | 283.92 | 14 | 257.21 | 1 | Yes |
| | SFT | 157.89 | 26 | 296.90 | 27 | 139.01 | 1 | Yes |
| NI | SFT | 177.25 | 34 | 472.57 | 35 | 295.32 | 1 | Yes |

Table 3. Results for model comparison.

| Model | $\chi^2$ | *df* | $\Delta\chi^2$ | *Δdf* | CFI | TLI | RMSEA | SRMR | AIC | BCC |
|---|---|---|---|---|---|---|---|---|---|---|
| Baseline | 889.24 | 386 | Base comparison | - | .934 | .926 | .058 | .071 | 1047.237 | 1060.880 |
| CM1 | 877.53 | 384 | 11.70 | 2 | .935 | .927 | .057 | .068 | 1039.533 | 1053.522 |
| CM2 | 889.24 | 386 | N/A | N/A | .934 | .926 | .058 | .071 | 1047.237 | 1060.880 |
| CM3 | 884.83 | 385 | 4.41 | 1 | .935 | .926 | .058 | .070 | 1044.829 | 1058.645 |
| CM4 | 913.15 | 388 | 23.92 | 2 | .931 | .923 | .059 | .080 | 1067.152 | 1080.450 |