Eyes on casino gaming in China: Residents' attitudes towards pre-casino development in Sanya

Omar Moufakkir, Ph.D.
Dallen J. Timothy, Ph.D.

Abstract

While Macau offers world class casinos, casino gaming is not legalized in Mainland China. Current media reports, however, indicate a growing interest by the Chinese government in establishing casinos in the Hainan Province. This study assesses the perceptions of residents about potential gaming development in their community. Resident attitude surveys have been used by planners and policymakers in order to gain local support for tourism projects and initiatives. A series of hypotheses were tested. In particular, the study evaluates the difference in perception between tourism workers and non-tourism workers, residents who live in the city center where the casino development project is planned and those who live outside the city center, and short-term residents and long-term residents. The biggest divide in perception exists between recent and long-time residents. Slight differences also appear between tourism workers and non-tourism workers. Only minor differences were recorded between city-dwellers and those who live outside the city. Recent residents and tourism workers appear to be more optimistic than the other groups. A discriminant analysis was used to find out which of the perceptions variables discriminate the most between the sample groups. Implications for planning and communication are given.

Keywords: Residents' attitudes, gaming, casinos, China, Sanya

Omar Moufakkir, Ph.D.
Hospitality Business School
Saxion University of Applied Sciences
Handelskade 75, Deventer
the Netherlands
Email: omar.moufakkir@gmail.com

Dallen J. Timothy, Ph.D.
Arizona State University
College of Public Programs
411 N. Central Ave., Suite 550
Phoenix, AZ 85004
USA
Email: dtimothy@asu.edu

Introduction

Casino gaming has been touted as a means of stimulating the tourism economy (Goodman, 1994; Piner & Paradis, 2004; Henderson, 2006). Nevertheless, controversial issues arise whenever and wherever casino development is considered (Janes & Collison, 2004; Kang et al., 2008; Moufakkir, 2002; Roehl, 1999; Vong, 2008). Advocates argue that gambling brings in much-needed regional income and jobs, while

opponents argue that it harms communities, families and individual lives (Wan, 2012).

Over the past three decades, gambling has grown rapidly and gained popularity all over the world. Despite the proliferation of casinos, gambling is still a controversial activity in many places, including China. Although the Chinese are known for their propensity for gaming (Blaszczynski, Huynh, Dumlao, & Farrell, 1998), casino gaming is illegal in Mainland China (Mainland China does not include Hong Kong, Macau and Taiwan). Thus, Chinese wishing to play in casinos are required to travel abroad or to Macau. Recently, however, Hainan province is exploring gaming as a potential revenue source by bringing more tourists to the region and keeping gaming expenditures at home in China (e.g., What's on Sanya, 2013; echinacities, 2013; Reuters, 2013).

Gaming as a source of entertainment and leisure has existed in Asia for centuries. In many Asian cultures, betting-type games are an integral part of people's lives. Asian countries are awakening to the potential of commercial gaming and finding innovative models to attract players from across Asia and the globe, as many countries believe gambling to be a lucrative source of revenue. Traditional gambling in Asia included sports betting, animal races, cards, and cockfights. Asians used to gamble at home, on the streets, and in some traditional simplified versions of casinos (Hsu, 2006). For instance, Macau has a gaming history dating back to the 19th century and was a monopoly-based jurisdiction with Stanley Ho's company holding the sole concession for casino gaming from 1962 to 2002. The first casino opened in South Korea in 1967. Following this, the market was dominated for many years by the Paradise Group. Malaysia opened its Genting Highlands casino in 1971. The Philippines created a regulatory framework for casinos under President Marcos in 1976, despite having a grey casino market since the 1930s (Ashton & Korpi, 2008).

According to Koh (2004), the Asian share of world revenue from gaming was 22.4 percent in 2004. It was 29.2 percent in 2010, and it is forecast to reach 43.4 percent in 2015 (Global Gaming Outlook, 2015). Gambling has become an important part of the tourism economies of several Asian countries since 1999, including South Korea, Cambodia, Malaysia, the Philippines, Myanmar, Nepal, India, Sri Lanka, Singapore, Vietnam, and Macau, with several more countries considering adopting casinos as a way of drawing foreign tourists (Ashton & Korpi, 2008; Kang & Hsu, 2000). The American Gaming Association estimated that casino gambling revenues in Asia will likely surpass those in the USA in the next several years, measuring in the billions of dollars annually (Blume, 2008).

At the time of writing, Macau is the only place in China where casinos are legal. In 2002 Macau had 11 casinos; it counts 35 casinos today (Gaming Inspection and Coordination Bureau, 2013). The lack of gaming opportunities in other parts of China has stimulated the growth of casinos in Myanmar and Vietnam near the borders of China. Taiwan, too,

where gambling is still illegal on the mainland but legislative maneuvers are beginning to allow it on the peripheral islands (Baldacchino & Tsai, 2014), earlier considered building casinos offshore on its Penghu Islands to attract players from China (Timothy & Tsai, 2008), although a 2009 public referendum in Penghu voted down the plan (Baldacchino & Tsai, 2014). New support (2012-2013) in Taiwan's Matsu Islands for the development of a casino there may result in the establishment of a large-scale casino, and there are other options being mulled around for casino development on Taiwan's peripheral islands and near the international airport (China Post, 2013). Nearby Japan, one of the most popular foreign destinations for Chinese tourists, is also considering changing its laws banning casinos and other forms of gambling as a means of improving the country's tourism economy. Casino gaming can be viewed as an economic development in different guises (Felsenstein & Freeman, 1998). Casino establishment in neighboring countries not only means greater competition for gamers' dollars in the region (Moufakkir, 2002), but also the likelihood for casinos to serve only local demand. In such a case instead of having the envisaged expansionary economic effect, gaming might result in a redistributive effect with a limited contribution to the local economy (Felsenstein & Freeman, 1998).

In 2010, Macau attracted 27 million visitors, of which about 75% were from mainland China and Hong Kong, many of whom go for gaming purposes. Owing largely to the potential threat of neighboring states and territories allowing large-scale casino gaming, the Chinese government is considering allowing limited casino development in well-established resort areas, such as Hainan. Since early 2013, 'cashless casinos', where winnings cannot be cashed but can be traded for goods (e.g. jewelry, artwork) or services (e.g. meals, accommodation), have operated on Hainan Island, with operators arguing they have the government's blessing, while the government maintains they are illegal and have cracked down on them on more than one occasion. "Going forward, Macau and Singapore will continue to fuel growth in Asia Pacific during the next few years, while other countries in the region may look to encourage growth in casino gaming to gain tourism and tax dollars. By 2015, the Asia Pacific market will reach $79.3 billion from $34.3 billion in 2010, an 18.3 percent compound annual increase" (Global Gaming Outlook, 2015).

In China, overt gambling is often associated with evil, although China used keno-like lottery games to fund the building of the Great Wall (O'Flahertie, 1995). Despite its illegality and moral stigma, Chinese are aggressive risk takers and eager gamers (Casino City, 2002; Hsu 2006; Timothy & Tsai, 2008; Wong & Rosenbaum, 2012). The only form of legal gambling is the increasingly popular lottery. In May 2011, the Chinese media reported lottery sales of some USD $5.07 billion during the first quarter of 2010, an increase of 24.5% compared to the equivalent period a year earlier. In the same period, the gross revenue of Macau casinos was

USD $5.13 billion, a 57.3% increase from the previous year (Kareem, 2011).

Given the Chinese interest in gaming and increased travel abroad to gamble, the government has been assessing the feasibility of allowing casinos in a few locations in China besides Macau. Planners and investors are exploring ways to allow gaming for tourism development on the holiday island of Hainan. Because of its natural, geographical and cultural advantages, Sanya City is considered the most desired destination for gaming and therefore a potential competitor for Macau. It is the southernmost city on the Chinese island, neighboring Macau and Hong Kong (Figure 1).

Figure 1. The location of Hainan Island and Sanya City

Excerpts from the media (example in Box 1) support this claim.

Box 1. Eyes on casino gaming in Sanya: Making the case

First Mainland "Cashless Casino Concept" Opens in Sanya Resort

The Casino Bar recently opened at the Mangrove Tree Resort in Sanya Bay. The bar is 30,000 sq. m, designed to look like a casino and features the same licensing practices and rules as casinos in Macau. However, for the time being, gamblers do not win cash prizes; their winnings can only go toward their stay in the hotel or purchase of luxury goods at the hotel store. Gambling is currently only open to hotel guests, however locals will be allowed to gamble too once the project is completed. The local government is very supportive of the project, and is in the process of making changes to the current regulations that prohibit gambling. The Casino Bar marks the first time the Chinese government has experimented with developing a gambling industry in the mainland (Source: eChinacities).

While the Chinese government does not permit casinos in the country outside of Macau, Zhang - ranked by Forbes as one of the country's 300 richest people in 2012 with $600 million - said Hainan could become an exception. The casino bar, with 50 gaming tables now, is currently open only to hotel guests, but when the resort is completed, local residents will be allowed in. When players win, they receive "Mangrove" points that can be used to buy products available in the casino such as an iPad 3G or a Rimowa suitcase. Once luxury brands open outlets within the resort, customers will be able to spend their points in those stores. Art work from Zhang's Beijing art gallery is also available for purchase. China is positioning Hainan as an international tourist destination, approving the construction of 15 large resorts and 63 five-star hotels as part of the country's five-year plan. As Chinese spend their money in new casinos across Asia from the Philippines to Vietnam, pressure is growing on Beijing to keep more gamblers at home. "To some extent, the approval of gaming on Chinese soil is inevitable," said Gary Pinge, analyst at Macquarie Group in Hong Kong. "With regional markets already vying for a share of the Chinese gambling wallet, unless China brings gaming onto its own shores, it will not only lose tax revenues to other countries, but also the 'multiplier effect' from the consumption spend (Source: Reuters, 2013).

Consequently there is a need to find out how local residents think about such a controversial development in their backyard. Residents' attitude surveys have been widely used in tourism to assess residents' attitudes towards tourism development (Davis, Allen & Cosenza, 1988; Garrod & Fyall, 1998; Jurowski, 1994; Sheldon & Abenoja, 2001).

Studies on residents' attitudes toward tourism have identified factors that influence resident support for tourism. These include: the

potential for economic gain, environmental attitudes, socioeconomic status, feelings held about the community, extent of the use of the tourism resource base, perceptions of the ability to control the development of tourism, length of residence, and perceptions of the impact of tourism on the quality of life (Ap, 1990; Carmichael, 2000; Faulkner & Tideswell, 1997; Jurowski, 1994; Jurowski, Uysal & Williams, 1997; Lankford & Howard, 1994; Liu, Sheldon & Var, 1986; McCool & Martin, 1994; Prentice, 1993; Um & Compton, 1987). A few researchers have indicated that resident attitudes toward tourism could be impacted by the distance between their place of residence and tourism activities (Murphy, 1981; Mason & Cheyne 2000; Sheldon & Var, 1984). Harill (2004) identified socioeconomic factors, special factors, economic dependency, residents and community typologies as important factors that provide basis for explaining how resident attitudes towards the impacts of tourism development are formed.

This study examined the perceptions of Sanya residents about the proposed casino development and broader plans for gaming in their community. In particular, the study evaluates the difference in perception between tourism workers and non-tourism workers, effects of proximity to the proposed casino location, and community members' length of residence in Sanya on their perceptions of the development. Results may help planners and policymakers with their decisions. Given the negative and positive impacts of casinos, it is certain that communities considering gaming would have some concerns about its influences. According to Murphy (1985), "the degree to which a community's attitude and perception seem favorable is the degree to which they can be expected to be supportive of tourism development (p. 85)". Community support is critical to the success of tourism because it uses the destination as part of the product.

Literature Review

Resident perceptions of gambling and tourism

Understanding resident attitudes toward tourism is valuable because the community can either be supportive or antagonistic (Getz, 1994). Community support is vital to tourism's success because tourism uses the destination environment and culture as a resource, and the people are an important part of the product (Murphy, 1985; Timothy 1999; 2007). It is crucial, therefore, that residents are empowered in decision making and that their perceptions and attitudes about tourism are well understood by planners and destination managers. In response, there is a growing literature on destination residents' perceptions of tourism. Most studies examine different endogenous variables that might affect resident views, including age, income, gender, education, and ethnicity (Andereck & Vogt, 2000; Easterling, 2004; Harrill, 2004; McGehee & Andereck, 2004).

Other researchers have studied the influence of inhabitants' length of residence in the destination and whether or not they are employed in tourism on their perceptions of tourism development. Several

studies have found that, the longer residents live in a place, the more they oppose tourism (Harrill, 2004; Lankford & Howard, 1994), although some studies in different contexts have found different results (McGehee & Andereck, 2004). Research has also shown that people who work in tourism are more likely to support its development than other residents in the same community because it provides jobs, investment opportunities and ownership potential (Fredline & Faulkner, 2000; Haralambopoulos & Pizam, 1996; McGehee & Andereck, 2004). These two variables and where inhabitants live in relation to the city are important variables in the context of Sanya City and are examined in this study. Most resident surveys about gaming have been conducted after the establishment of casinos in a community. This study aims to take a pre-emptive approach to survey the situation before casinos are built. In short, successful tourism development depends on the cooperation of local communities (Lankford, 1994; Murphy, 1985). Resident attitude surveys can enlighten policy and development decisions (Harril, 2004).

The Effects of Gaming on Destination Communities

As noted earlier, casinos are becoming a more important part of the tourism economy, but the development of casino gaming is not without controversy (Moufakkir & Holecek, 2012). Therefore, it is important to understand residents' attitudes toward gambling from the perspective of both benefits and costs to the destination. Legalized casinos are widely viewed as a viable economic development tool (Hsu, 2006; Perdue, Long, & Kang, 1995) and can effect economic, environmental and socio-cultural changes in the destination community. All three types of changes can be viewed as negative or positive outcomes in the context of gambling tourism, and attitudes towards gambling will depend on whether those changes are going to improve or deteriorate one's quality of life (Harrill, Uysal, Cardon, Vong & Dioko, 2011).

One of the most obvious negative economic outcomes is leakage, where money earned by casinos leaks out of the destination economy. The profits of foreign-owned casinos are often directed back to parent corporations in other countries. Likewise, in many countries, casinos are staffed by foreign workers, many of whom send their earnings home as remittances. In the case of the United States, many casino employees live in neighboring states (Chhabra, 2007a), so their earnings and taxes are often leaked out as well. Other forms of "illegal leakage" also exist, such as tax evasion and money laundering (Eadington, 1999).

Hyperinflation is another undesirable economic outcome of casino-based tourism. Living costs increase for tourists and residents (Vong & MacCartney, 2005). Property values sometimes increase so much that it results in the displacement of locals who can no longer afford to buy land or pay their property taxes (Marshall & Rudd, 1996; Wiley & Walker, 2011). 'Casino cannibalism' may also result as casinos begin to dominate

the local economy, driving out established lodging, food and entertainment facilities with their own monopolies on these services, creating 'sink holes' rather than growth poles (Carmichael, 2001).

Like all forms of mass tourism, gambling tourism can result in environmental problems, such as ecological degradation and pollution (Lee, Kang, Long & Reisinger, 2010). Increased traffic associated with casino clusters in Las Vegas has created pollution levels far above the maximum standards set by the US Environmental Protection Agency (York & Lee, 2010). In many small gambling communities, tourist traffic exceeds local traffic during high seasons, resulting in thick congestion, driving hazards, noise and increased air pollution (Perdue et al., 1995).

The social costs of gaming tourism can be summed up as "a reduction in social real wealth. The term wealth is not only money, it is the individual value. The sum of amounts of real wealth reduced is the cost for those who are harmed" (Walker, 2007, p. 88). One of the most common community perceptions regarding gambling is that it results in increased crime rates, and there is some research evidence to support this (Grinols & Mustard, 2006; Reece, 2010). However, other studies suggest that not all gaming destinations experience higher levels of crime than non-gaming destinations (Moufakkir, 2005; Park & Stokowski, 2011).

Gambling addictions are frequently to blame for social deterioration, breakdown of families, loss of employment, drug and alcohol use, prostitution, deterioration of mental and physical health, and suicide (Blaszczynski & Farrell, 1998; Chhabra, 2007b; Phillips, 2007; Wan 2012). Some people re-mortgage their homes, get loans, or liquidate their retirement funds to feed gaming addictions (Goldman, 2006).

Despite these negative outcomes, many observers have noted the potential positive economic outcomes of casino-based tourism, including employment and tax revenue (Carmichael, 2001; Lee, 2011). Casino jobs are often associated with higher salaries than other service-sector jobs, and gaming taxes are seen as a "painless" way of increasing taxes with less local opposition than increases in general sales tax (Walker, 2007, p. 10). Gaming can also help stimulate entrepreneurial activity within the destination community. Casinos are well-known magnets for other businesses that open to cater to the needs of gamers (Walker, 2007; Moufakkir, 2002). Arguments have also been made that legalized gambling helps stem the flow of money out of the economy, as locals will remain at home to play rather than spending their money elsewhere (Gazel, 1998).

While social problems may follow casino gaming, there are a few positive social elements as well. One is increased community pride among residents and the preservation of local customs (Vong & MacCartney, 2005). Although some critics argue that indigenous people performing their rituals and dances at resorts and casinos degrades the cultural value of heritage traditions, others have noted how such activities can help build solidarity and community esteem within a native society (Mattern,

1996). Gambling tourism also has the potential to develop recreational and cultural opportunities for community members, improve educational and health-care facilities, and preserve heritage sites and living cultures through the economic benefits of gaming (Braunlich, 1996; Browne & Kubasek, 1997).

Study Hypotheses

Harrill (2004) proposed three ways of understanding people's attitudes towards casino development. The first approach is "community-attachment", which refers to an extent or pattern of social participation and integration in community life (McCool & Martin, 1994). The second approach comes from "growth machine" theory where gambling is regarded as a driving force for a community's economic growth. This approach holds that individuals who do not directly receive economic benefits from gambling are not expected to support further tourism development (Harrill, 2004; Kaltenborn, Andersen, Nellemann, Bjerke & Thrane, 2008; Oviedo-Garcia, Castellanos-Verdugo & Martin-Ruiz, 2008). The third approach is "social exchange theory", which focuses on resource exchanges between individuals and groups. It suggests that if people receive more benefits than costs from an exchange, they will more likely be involved in it. Residents support for tourism development will depend on their perception of the benefits and costs resulting from this activity (Ap, 1990; 1992). Piazam (1978), among others (Andereck & Vogt, 2000; Caneday & Zeiger, 1991; Jurowski et al., 1997; Milman & Pizam, 1988; Perdue, Long & Allen, 1990; Mazón, Huete & Mantecón, 2009), found that residents working in the tourism industry were more likely to support tourism development than those who do not work in the industry. Nevertheless, Mazón et al. (2009) found that respondents whose work was linked to tourism were also more critical about tourism development than their counterparts, because the former have a deeper knowledge of the potential negative impacts of tourism in general, in addition to their economic dependency on this economic base.

Jarowski and Gursoy (2004) studied resident attitudes in relation to distance from tourist attractions and found that residents who live close to the tourism resource base have a negative perception of the benefits of tourism and are not likely to support tourism development, probably because of fear that their ability to use the recreational resources may be impaired by tourist crowds. They then propose that tourism planners should take measures to protect the use of the resource base for the locals or enhance the ability to use it. They also found that those who live far from the tourism attraction were more concerned with the negative environmental impacts of the attractions. As with the McCool and Martin study, old-timers in the present study are generally less favorable toward tourism development, and conversely, newcomers are more supportive of tourism it.

The findings of this study suggest that residents are likely to react differently depending on their length of residency. Gambling studies show that socio-demographic characteristics, community attachment, length of residence, and home ownership influence people's attitudes and perceptions of gambling and their support for it (Roehl, 1999; Vong, 2008; Kang, Lee, Yoon & Long, 2008; Kassinove, 1998). This study seeks to examine whether there are differences in perceptions between tourism workers and non-tourism workers, city center dwellers and those who live outside the city center, and long-term residents and short-term residents. Accordingly, the following hypotheses were tested in this study:

H1: There is a difference in perception about gaming development between tourism workers and non-tourism workers.

H2: There is a difference in perception about gaming development between residents who live in city center close to the location of the proposed casino and those who live outside the city-center.

H3: There is a difference in perception about gaming development between short-term residents and long-term residents.

Method

Previous studies on resident perceptions of tourism and gaming development have identified economic, social, and environmental dimensions using measurement scales consisting of 10 to 30 items (Pizam 1978; Liu & Var 1986; Perdue et al., 1990; Ap & Crompton, 1993; Giacoppacssi, Stitt & Nichols, 2001; Spears & Boger, 2003; Lee, Kim & Kang, 2003; Kwan & McCartney, 2005). The present instrument was based on 25 attitude items gleaned from the resident attitude and gaming literature, largely derived from a comprehensive list of gaming impact issues used by Lee, Kim and Kang (2003). These studies reinforce previous research findings and support the reliability and validity of the instrument in measuring residents' attitudes toward gaming. In addition, Cronbach's Alpha for the present study is .825, which also validates the reliability of the instrument used. The survey also elicited information about demographic characteristics, participants' length of residence, and whether or not respondents reside in the city center (including the bay resort areas) where the gaming development project was proposed. The questionnaire was written in English and back translated to Mandarin Chinese. The questionnaire was piloted on 13 respondents.

Respondents were asked to rate their opinions of perception statements on a 5-point Likert-type scale with 1 representing strongly disagree and 5 strongly agree. The questionnaires were randomly collected from July to September 2011. Street surveys took place in mornings and afternoons. Respondents (residents) were randomly intercepted by

the interviewer in the streets, parks, hotels, restaurants and at tourist attractions, and asked to participate in the study. The questionnaire was administered by a trained interviewer. After completion of a questionnaire the interviewer would intercept the next person in the way. This allowed the interviewer to acquire a sizable sample of people who work and do not work in tourism. Respondents were asked whether or not they were employed in tourism. Once screened, they were briefly introduced to the research topic and told the purpose of the study. The interviewer made it clear that the statements were hypothetical. It should be noted that during data collection tourism workers demonstrated more interest in this study than did other residents.

The sample consists of 711 cases. As Table 1 indicates, most respondents were between 18 and 45 years old. More than half (51.6%) were single, while 34.4% were married. Some 59.1% were childless, and most were university graduates. Just over half (52.2%) claimed to be relatively new residents in Sanya City, while the remainder had lived in there for five years or longer. 61.1% resided in the city center; the rest lived outside the city center.

Data were processed with SPSS 20. First, a series of independent t-tests were computed to check for differences between groups. The dependent variables in this study are the 25 perception statements and are based upon tourism workers v. non-tourism workers, city-center dwellers v. non-city center dwellers, and longtime residents v. short-time residents. In addition, the paper aims to identify which perceptions diverge most between sample groups. Discriminant Analysis was used to investigate differences between groups on the basis of the attributes of the cases, indicating which attributes contribute most to group separation (Hair, Anderson, Tatham & Black, 1998).

Table 1

Overall Sample Demographic Characteristics (N=711)

Gender		**Have children**	
Male	52.0%	Yes	40.9%
Female	48.0%	No	59.1%
Years lived in Sanya		**Where they live**	
Less than 5 years	52.2%	City center	61.1%
5 years longer	47.8%	Outside city center	38.9%
Education level		**Marital status**	
High school or less	15.6%	Single	51.6%
Junior college	18.1%	Married	34.4%
Bachelor	46.1%	Divorced	10.0%
Postgraduate or over	13.4%	Widowed	3.9%
Other	6.8%		
Age		**Monthly income**	
Below 18	5.3%	Less than RMB 3,000	49.8%
18-25	35.6%	RMB 3,000-5,000	24.2%
26-35	23.6%	RMB 5,001-7,000	15.0%
36-45	20.7%	RMB 7,001-10,000	5.9%
46-55	9.1%	Over 10,000	5.1%
56-75	5.2%		
Over 75	0.4%		
Occupation			
Student	21.1%		
Skilled worker	8.9%		
Marketing & sales	12.0%		
Administrative mgt	7.9%		
Technical staff	8.3%		
Public servant	9.1%		
Professional	12.1%		
Unemployed	1.1%		
Other	19.5%		

Results

Generally, resident attitude studies have identified factors that influence perceptions of tourism. These include the potential for economic gain, environmental concerns, socioeconomic status, feelings about the community, extent of their use of tourism resources, and perceptions of the impacts of tourism on quality of life (Carmichael, 2000; Lankford & Howard, 1994; McCool & Martin, 1994; Um & Crompton, 1987). As already noted, the purpose of this study was to test a series of hypotheses from the literature, and to find out which of the perception variables

are strong predictors between the sample groups. First, the perceptions of Sanya residents about the potential of gaming development in their community is presented.

Resident perceptions about gaming development

Respondents were asked the generic question "to what extent do you agree or disagree with casino development in the city?" The results indicate that the greatest majority agrees while about one-fourth were undecided. More precisely, 15.6% strongly disagree, 18.8% disagree, 30.5% agree, 9% strongly agree, and 26% are undecided. A detailed analysis in Table 2 suggests that there is a belief that this development base would very likely benefit the community economically, but will have a negative impact socially and environmentally. The literature argues that differences in perception exist between resident groups.

Table 2

Residents' Attitudes towards Casino Development in Sanya

	$\bar{x}$
Positive impacts	
Increase tourist spending	3.69
Increase employment	3.83
Increase tax revenues	4.10
Improve infrastructure	3.35
Improve working conditions	2.91
Increase income of residents	3.43
Improve quality of life	2.86
Preserve local custom and culture	2.58
Increase pride of local residents	2.78
Increase recreational opportunities	3.70
Negative impacts	
Increase use of pawn shops	3.86
Increase occurrence of crime	3.68
Increase addiction to gambling	3.65
Increase destruction of family	3.52
Increase occurrence of prostitution	3.72
Increase occurrence of divorce	3.40
Increase bankruptcy	3.64
Increase alcoholism and drug abuse	3.61
Making living cost higher	3.77
Increase visitors crowding	4.17
Increase quantity of littering	3.87
Increase level of traffic congestion	3.78
Destroy natural environment	3.67
Increase noise levels	3.83
Increase water pollution	3.64

Note: 1= Strongly disagree, 5= Strongly agree

Perceptions of casino development—tourism workers and non-tourism residents

Previous studies suggest that residents who work in tourism are more likely than other residents in the same community to support tourism because of its potential economic benefits (Fredline & Faulkner, 2000; Haralambopoulos & Pizam, 1996; McGehee & Andereck, 2004). This is because the industry provides economic benefits to them directly. As Table 3 shows, there was no statistical significance in economic perceptions between tourism workers and other locals. However, while both mean scores tend to show support for the social perception statements, the means of non-tourism workers were higher. Non-tourism residents were more likely to agree that casinos would increase crime ($\bar{x}$ =3.85 compared to $\bar{x}$ =3.48, t = 16,809, p = .001), gambling addiction, divorces, and bankruptcies. However, tourism workers were more likely to think that gaming would increase community pride ($\bar{x}$ =2.92, t = 7,847, p =.005). While both groups seem to agree on the negative externalities attributed to gaming development, non-tourism residents were more likely to support this activity as it might potentially improve working conditions, public utilities and infrastructure linked to tourism, and increased recreational opportunities for locals.

Table 3

Perceptions of Tourism Workers and Non-tourism Workers towards Gaming Development in Sanya

	Tourism workers	*Non-tourism workers*	*Total*	*t-test*	*p-value*
Positive impacts					
Increase tourist spending	3.60	3.76	3.69	2.779	.096
Increase employment	3.78	3.88	3.83	1.257	.263
Increase tax revenues	4.02	4.16	4.10	2.863	.091
Increase resident income	3.41	3.44	3.43	.119	.730
Improve quality of life	2.90	2.83	2.86	.519	.472
Preserve local customs & culture	2.64	2.52	2.58	1.751	.186
Increase community pride	2.92	2.67	2.78	7.847	.005
Improve infrastructure	3.20	3.48	3.35	9.239	.002
Improve working conditions	2.64	3.12	2.91	27.774	.001
Increase recreational opportunity	3.81	3.61	3.70	5.520	.019
Negative impacts					
Increase use of pawn shops	3.87	3.86	3.86	.009	.924
Increase cost of living	3.73	3.80	3.77	.841	.359
Increase crime	3.48	3.85	3.68	16.809	.001
Increase gambling addiction	3.51	3.76	3.65	7.251	.007
Increase family dissolution	3.42	3.60	3.52	4.468	.035
Increase prostitution	3.72	3.72	3.72	.001	.976
Increase divorce rate	3.31	3.48	3.40	3.880	0.49
Increase bankruptcies	3.42	3.81	3.64	20.863	.001
Increase alcoholism & drug use	3.54	3.66	3.61	2.033	.154
Increase visitor crowding	4.20	4.15	4.17	.387	.534
Increase litter	3.90	3.84	3.87	.477	.490
Increase traffic congestion	3.77	3.79	3.78	.037	.848
Destroy natural environment	3.66	3.68	3.67	.066	.797
Increase noise	3.84	3.83	3.83	.014	.906
Increase water pollution	3.64	3.65	3.64	.023	.880

Perceptions of casino development—city center and exurban residents

Other studies suggest that resident attitudes about tourism may be affected by the distance between their homes and the main tourism activities (Murphy, 1981; Mason & Cheyne 2000). The hypothesis was based on the assumption that respondents who reside in the city center, where gaming development is proposed, were more likely to express negative perceptions of casinos because of the potential negative and

positive attributes that are associated with tourism development in general. Table 4 shows that while all respondents appear to be positive about the potential economic benefits of gaming, there were no statistically significant differences between the two sample groups. With regard to the social statements, both sets of respondents believe this type of tourism development would create negative social costs, such as increased use of pawn shops, crime, gambling addiction and prostitution. Positive attributes, including improved quality of life, preservation of local culture, or increased community pride, all scored lower.

The only difference, although not strong, that exists between the two groups relates to their opinion about the preservation of local customs and culture, where those who live in the city center scored higher than their counterparts ($\bar{x}$ =2.68 compared to $\bar{x}$ = 2.50, with, t = 3,960, p =.047). Furthermore, of the nine other perception items that are more linked to environmental issues, city center dwellers supported more the statement that tourism development would destroy the physical environment ($\bar{x}$ =3.75, $\bar{x}$=3.58, t = 4,499, p = .034).

Table 4

Perceptions of Residents who Live in the City Center and Residents Living Outside the City toward Gaming Development in Sanya

	City center	*Outside city*	*Total*	*t-test*	*p-value*
Positive impacts					
Increase tourist spending	3.67	3.71	3.69	.140	.708
Increase employment	3.80	3.89	3.83	1.206	.272
Increase tax revenues	4.12	4.06	4.10	.603	.438
Increase resident income	3.36	3.53	3.43	3.550	.060
Improve quality of life	2.83	2.90	2.86	.479	.489
Preserve local customs and culture	2.50	2.68	2.58	3.960	.047
Increase community pride	2.77	2.80	2.78	.133	.715
Improve public infrastructure	3.32	3.41	3.35	,999	.318
Improve working conditions	2.84	3.01	2.91	3,346	.068
Increase recreational opportunities	3.69	3.72	3.70	,091	.763
Negative impacts					
Increase use of pawn shops	3.90	3.81	3.86	1.254	.263
Increase cost of living	3.75	3.79	3.77	.284	.594
Increase crime	3.65	3.72	3.68	.573	.449
Increase gambling addiction	3.69	3.59	3.65	1.199	.274
Increase family dissolution	3.54	3.49	3.52	.244	.621
Increase prostitution	3.70	3.75	3.72	.398	.528
Increase divorce	3.42	3.39	3.40	.118	.731
Increase bankruptcies	3.61	3.67	3.64	.381	.537
Increase alcoholism & drug use	3.62	3.60	3.61	.035	.851
Increase visitor crowding	4.22	4.11	4.17	2.099	.148
Increase litter	3.93	3.79	3.87	2.985	.084
Increase traffic congestion	3.84	3.70	3.78	2.973	.085
Destroy natural environment	3.75	3.56	3.67	4.499	.034
Increase noise	3.86	3.79	3.83	.664	.415
Increase water pollution	3.69	3.58	3.64	1.433	.232

Perceptions of casino development—short-time and longtime residents

Some studies find the longer residents live in a destination the more they oppose tourism (Lankford & Howard, 1994; McCool & Martin, 1994; Harrill, 2004). McGehee and Andereck (2004), however, argue that the relationship between community attachment and its influence on resident attitudes is not yet conclusive. The hypotheses here posited that residents who had been living in Sanya for five years or longer were less likely to be positive about gaming development than more recent residents. Table 5 suggests that while both groups seem to agree on the potential economic benefits, recent residents tend to agree more with the statement that residents' income would probably increase from casino development (x= 3.51 compared to x= 3.34, with, t = 3,847, p =.050). On the other hand, longtime residents believe more strongly that casinos would increase the cost of living ($\overline{x}$= 3.86 compared to $\overline{x}$= 3.65, with, t = 8,487, p =.004).

Confirming the results of other studies as noted above, short-time residents scored the positive social aspects slightly higher than their counterparts did (e.g., improve quality of life ($\overline{x}$=2.97 compared to $\overline{x}$= 2.74, with, t = 6,391, p = .012). The negative items scored higher among longtime residents, including an increase in alcoholism and drug use, where longtime inhabitants scored a mean of 3.71 compared to 3.51 among the others (t = 6,130, p = 0.14). The case for other perception items is also similar, in that short-time residents seem to score higher on statements with positive connotations than those that support a negative externality (see Table 5).

Table 5

Perceptions of Recent and Longtime Residents towards Gaming Development in Sanya

	Recent residents	*Longtime residents*	*Total*	*t-test*	*p-value*
Positive impacts					
Increase tourist spending	3.71	3.66	3.69	.258	.612
Increase employment	3.83	3.84	3.83	.010	.922
Increase tax revenues	4.09	4.11	4.10	.063	.803
Increase resident income	3.51	3.34	3.43	3.847	.050
Improve quality of life	2.97	2.74	2.86	6.391	.012
Preserve local customs &culture	2.70	2.45	2.58	7.740	.006
Increase community pride	2.80	2.76	2.78	.210	.647
Improve public infrastructure	3.33	3.38	3.35	.287	.593
Improve working conditions	3.02	2.79	2.91	6.041	.014
Increase recreational opportunities	3.81	3.59	3.70	6.740	.010
Negative impacts					
Increase use of pawn shops	3.86	3.87	3.86	.027	.870
Increase cost of living	3.65	3.89	3.77	8.487	.004
Increase crime	3.62	3.75	3.68	2.010	.157
Increase gambling addiction	3.60	3.70	3.65	1.176	.278
Increase family dissolution	3.46	3.58	3.52	1.705	.192
Increase prostitution	3.66	3.78	3.72	2.072	.150
Increase divorce	3.36	3.45	3.40	.967	.326
Increase bankruptcies	3.60	3.68	3.64	.830	.362
Increase alcoholism &drug use	3.51	3.71	3.61	6.130	.014
Increase visitor crowding	4.07	4.28	4.17	7.732	.006
Increase litter	3.74	4.01	3.87	10.267	.001
Increase traffic congestion	3.64	3.93	3.78	12.043	.001
Destroy natural environment	3.51	3.84	3.67	15.526	.001
Increase noise	3.72	3.96	3.83	7.547	.006
Increase water pollution	3.48	3.82	3.64	14.718	.001

Discriminant Analysis

A Discriminant Analysis (DA) was also conducted. One of the purposes of DA is to investigate differences between groups on the basis of case attributes, indicating which attributes contribute most to group separation. This descriptive technique successively identifies the linear combination of attributes known as canonical discriminant functions (equations) which contribute maximally to group separation. In this case, we are interested in learning which of the variables discriminate the most between tourism workers and non-tourism workers, between those who live in the city center and those who live outside the center, and between longtime residents and short-time residents. The results are presented in the structure matrix table. The SPSS output is enormous, so only the most relevant information is indicated here.

Table 6 provides one way in the DA results of indicating the relative importance of the predictors. Many researchers use the structure

matrix correlations because they are considered more accurate than the Standardized Canonical Discriminant Function Coefficients (Agresti, 1996). Wilks' Lambda is the ratio of within-groups sums of squares to the total sums of squares. This is the proportion of the total variance in the discriminant scores not explained by differences among groups. A lambda of 1.00 occurs when observed group means are equal (all the variance is explained by factors other than difference between those means), while a small lambda occurs when within-group variability is small compared to the total variability. A small lambda indicates that group means appear to differ (Hair et al., 1998). The associated significance value indicates whether the difference is significant. Here, the Lambda of 0.847, 0.940, and 0.914 are large, which suggests that the group differences are small. These significant values indicate that the group means appear to differ (Table 6).

Table 6
Wilks' Lambdas for Discriminant Analyses

Test of Function(s) 1	*Wilks' Lambda*	*Chi-square*	*df*	*Sig.*
Tourism workers v. non-workers	.847	115.722	25	.000
City-center v. non city center dwellers	.940	43.326	28	.032
Longtime residents v. recent residents	.914	62.664	28	.000

The structure matrix table (Table 7) shows the corelations of each variable with each discriminant function. These Pearson coefficients are structure coefficients, or discriminant loadings. Generally, like factor loadings, 0.30 is seen as the cut-off between important and less important variables (Hair et al., 1998). The table identifies the largest absolute correlations associated with each discriminant function.

Thus, overall only a few variables in the model appear to be important discriminators between the groups, with only three for tourism workers versus their counterparts, namely improve working condition, increase bankruptcy, and increased crime, and two for city and non-city center dwellers. There are, however, more variables that discriminate between longtime and short-time residents, with destroy natural environment, increase water pollution, and increase congestion as the strongest discriminators.

Table 7

Structure Matrices Table for Discriminant Analyses

	Structure Coefficient
Tourism workers v. non-tourism workers	
Improve working condition	.466
Increase bankruptcy	.403
Increase occurrence of crime	.362
City center dwellers v. non-city center dwellers	
Opportunity to gamble at casino in Sanya	.323
Destroy natural environment	.314
Longtime residents v. short-time residents	
Destroy natural environment	.482
Increase water pollution	.469
Increase level of traffic congestion	.424
Increase quantity of littering	.392
Making living cost higher	.356
Preserve local custom and culture	-.340
Increase visitors crowding	.340
Increase noise level	.336
Increase opportunity for using recreational facilities	.317
Improve quality of life	.309
Increase occurrence of alcohol and drug abuse	.303
Improve working conditions	.301

Note: Pooled within-groups correlations between discriminating variables and standardized canonical discriminant functions. Variables ordered by absolute size of correlation within function

Summary of results and conclusion

The results of this study support the literature (e.g., Carmichael, 2000; Eadington, 1986; Caneday & Zeiger, 1991) that, generally, residents are somewhat ambivalent towards casino-based tourism development. Support for gaming development depends on perceived economic, social, and environmental benefits and costs (Canaday & Zeiger, 1991; Carmichael, 2000). In this study, support for the potential economic impacts is recognized by residents, while they also seem to hold more negative perceptions regarding the social and environmental impacts of casino gaming. In an exploratory study about Macao residents' perceptions

of the impact of gaming development (Kwan & McCartney, 2005), perception items with the highest score are similar to those in this study, and relate to economic benefits; whereas those with a lower score relate to environmental and social costs.

Not all residents hold the same perceptions. It has been recognized that tourism development is usually justified on the basis of perceived benefits and costs. Perceptions are influenced by socio-demographic characteristics (Spears & Boger, 2003), the length and place of residence (Sheldon & Var, 1984), and personal factors (Pizam, 1978; Kwam & McCarthy, 2005). This study found differences in perception between groups, and these need to be taken into consideration for enlightened and strategic decision-making.

Tourism workers believe that gaming would increase community pride, and increase recreational opportunities in the community. Comparatively, non-tourism workers think that casino establishment would increase crime, addiction, family dissolution, divorce, and bankruptcy rates. The variables which discriminate the most between these two groups are 'improve working conditions', 'increase bankruptcy', and 'increase occurrence of crime'.

Recent residents believe that casinos would increase income, preserve culture, improve employees working conditions, increase recreational opportunities, and improve quality of life. Long-time residents, however, think that the opening of casinos would increase the cost of living in the community, alcohol and drug-use, visitor crowding, litter in the streets, traffic congestion, noise and pollution levels, as well as destroy the natural environment. The most discriminating variables between these two groups are 'destroy natural environment', 'increase water pollution', 'increase traffic congestion', and ''increase littering'. The Discriminant Analysis shows that only a few variables discriminate between the sample groups. Results suggest that more attention should be given to the environmental aspects of casino gaming.

Implications

The literature is divided on the socio-economic benefits and costs a casino brings to a community (Moufakkir & Holecek, 2012). The rationale for undertaking resident attitude surveys during or after tourism development in general or for a specific tourism development strategy is to assess the perceived benefits and costs of the strategy with the objective of controlling its direction towards a more favorable outcome (Kwan & McCartney, 2004). The purpose for conducting such a survey prior to the proposed development is either to adopt the strategy as a benefit to the community or reject it and select a more favorable one. While such an evaluation for a tourism development proposal is difficult because of different local variables (Pizam, 1978; Liu & Var, 1986; Sheldon & Var; 1984; Perdue, Long, & Allen, 1987; Ayres, 2000), the case with

casino gaming development is even more problematic because so many controversies revolve around gambling (Moufakkir & Holecek, 2012; Timothy & Tsai 2008).

Gambling-based controversies can help destination planners and managers learn from the mistakes and successes of others. Resident attitude surveys are crucial in providing decision-making data about the feelings of residents. Sanya residents seem to be undecided, or unconvinced, although this might have little relevance to the reality of economic and political life on the ground. In China, these results bear unique and interesting implications. For the most part, decisions are made not at local levels, but rather at national and provincial levels and typically imposed on lower-order governments and communities (Ensereink & Koppenjan, 2007; He, 2003). Much participatory planning and development in China has been, and continues to be, tokenistic with higher-order officials 'consulting' residents and lower-order administrators without seriously taking their concerns to heart, although this appears to be on the cusp of change (Bao & Sun, 2007; Timothy, 2007). In light of this change, national and provincial leaders ought to heed the concerns of local residents, even though there is a tradition in Chinese culture and under communism of conformity with ruling classes (Farh, Zhong & Organ, 2004). Utilizing local concerns and recommendations by the people who live in the destination will build goodwill and help tourism to develop in ways that are in line with local mores and social networks.

Promoting tourist destinations rarely finds success without the support of local residents (App, 1992). Support for gaming depends on how the host population perceives the impacts of casino development (Giacopassi et al., 2001). If the concern is gaining support for gaming, then pro-development campaigns should target citizens who do not work in tourism. The focus of these should be how gaming will contribute to the working conditions of tourism employees and how crime and other social ills will be mitigated. Given the results for people living near the proposed development versus the others, as well as long-term residents, urban planners should consider environmentally-friendly, casino-based facilities and amenities. Planners and managers should be sensitive to the environmental concerns of those residents and should communicate what they are doing to minimize the impact of development on the environment to reduce opposition based on environmental concerns.

Positioning casino gaming development in the minds of residents does not necessarily mean that it will be a success. Despite the proliferation of casinos and the popularity of gaming, casino gaming remains a contested economic development activity. The American National Gambling Impacts Study Commission (NGISC, 1999) unanimously acknowledged the complexity of gambling issues, and noted that "along with the real benefits of gambling come equally undeniable and significant costs" (p. 72). These impacts need to be monitored.

Gaming communities differ from one another and from non-gaming communities. Their success may depend on whether local casinos constitute a "destination casino", which offers gambling within a mega-resort context with accommodations, retail, meeting facilities, and dining and entertainment opportunities. Not all casinos are equally successful business ventures, and not all casino developers keep their promises to the community (Moufakkir, 2005).

Besides residents' attitudes, the successes or failures of casinos may be determined by management practices, marketing activities, competition, and government regulations. The case for supporting gaming will then rest on enlightened decisions and policies based not only on the benefits and costs of the proposed gaming development, but also on the consideration of other economic alternatives. Residents' attitudes may change following the life cycle and development stage of the economic activity or destination, as well as its successes or failures. If further development produces apparent benefits, residents' attitudes might also change. If more costs become apparent, then optimists or reserved optimists about the proposed development might change into skeptic residents (Kwan & McCartney, 2005). Therefore more research is continuously needed to anticipate change and foresee the consequences.

Limitations and suggestions for future research

We were not able to provide a response rate to judge the representativeness of the sample. A residents' attitude study about gaming impact in Macau by (Kwan & McCartney, 2005) resulted in a response rate of 74.6%. Sanya's population is more than 524,000 comprising some 20 nationalities, including Han, Li, Miao, and Hui. Different populations may have different perceptions. Also, as stated earlier, tourism workers were more responsive to the questionnaire than their counterparts, and therefore responses may suffer from social desirability. Respondents, however, were assured confidentiality and anonymity, a strategy that reduces social desirability bias. A self-administered questionnaire, mail, or Internet survey, or a combination of survey modes may offer less contaminated results (Nederhof, 1985). More research is needed among different stakeholders on Hainan Island, including people in the resort areas and in other parts of the island where tourism is not well developed, to understand broader community perspectives on gambling and its future potential.

Kwan and McCartney (2005) have developed clusters based on residents' beliefs about gaming in Macao. They pointed out that concerned residents can be categorized into *optimists*, *reserved optimists*, *neutral*, and *skeptics*. Identifying these can help in decision-making. A similar study profiling clusters by demographic variables "could help authorities and casino operators label various stakeholder groups at various stages of gaming development" (p. 185). This can help in selecting appropriate

marketing or educational strategies targeting different stakeholders, with the objective to reinforce or alter perceptions.

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