THE EFFECTS OF TOURIST'S EXPENDITURE ON MALAYSIA'S ECONOMY

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ABSTRACT

The tourism industry has various impacts on the economy. It contributes to sales, profits, employment, tax revenue, and income. Tourism is fast becoming Malaysia's second-largest foreign exchange earner, after the manufacturing sector. Tourism receipts contributed 46% to total services receipts between 2002 and 2008, generating a surplus in the services account of Malaysia's balance of payments. This paper focuses on changes in the output of and imports and value added to the economy resulting from the tourism industry in Malaysia. An open input-output model of tourist impact analysis will be adopted to determine the multiplier effects of each Ringgit Malaysia spent on the output of and imports and value added to the economy. This paper attempts to prove that differences in the expenditure profile among classes of tourists and the changing composition of tourists arriving in Malaysia have important implications for possible policy responses to the economy.

Keywords: Tourism industry, Malaysian economy, input-output model, multiplier effects, tourist expenditures.

However, due to the September 11 attacks and global uncertainties, Arab visitors from Middle Eastern countries to Malaysia have been increasing in number, changing the composition of the tourists' profile. Due to this noticeable shift, Malaysia has initiated a major promotional push in Middle Eastern countries. By 2008, the number of visitors from Middle Eastern countries increased by 7.8%, as compared with 2007. Middle Eastern tourists are the highest per capita spenders, spending about RM5,000 on a 10-day visit (Bashir & Rashid, 2004).

Table 2: Tourist Arrivals by Country to Malaysia, 2000/2008 (%)

Country of Origin	2000	2008
ASEAN	70.3*	75.1
Japan	4.5	2.0
China	4.2	3.4
Taiwan	2.1	0.9
Hong Kong	0.7	0.5
India	1.3	2.5
Australia	2.3	1.9
United Kingdom	2.3	1.7
USA	1.8	1.0
Others	10.5	11.0

Note: *Excluding Myanmar, Laos, Vietnam, and Cambodia.
Source: Malaysian Tourism Promotion Board (2009).

The tourism industry also helps to create both backward and forward linkages in the economy through the input and output requirements of the hotel and restaurant industry. As shown in Table 3, another link can be seen in the tourist expenditure pattern, whereby, on average, almost 85% of the expenditure between 2003 and 2006 was on accommodation, shopping, food and beverages, and local transportation. In terms of tourist expenditure patterns, accommodation still remained the highest component, comprising 34.4% of the total expenditure, followed by shopping at 25.3%, with food and beverages at 17.8%, in 2008 (Ministry of Finance Malaysia, 2008).

Table 3: Components of Tourist Expenditure, 2003–2006 (%)

Expenditure/year	**2003**	**2004**	**2005**	**2006**
Accommodation	31.2	31.2	33.5	35.4
Shopping	22.4	22.4	20.8	25.7
Food & Beverages	17.4	17.4	19.9	18.7
Local Transportation	9.8	9.8	11.6	10.1
Entertainment	6.2	6.2	4	3.7
Domestic Airfare	5.3	5.3	3.9	3.1
Sightseeing	4.3	4.3	3.2	2
Other	3.4	3.4	3.1	1.3

Source: Tourism Malaysia (2009).

Literature Review

Input-Output Analysis and Tourism Impact Studies

Studies of the impacts of tourism cover a wide spectrum. However, most have concentrated on the impact of tourism on employment and income generation and, via backward and forward linkages (economic interdependence), its consequences for the level of economic activity displayed by other industries (Tisdell, 2000). These studies illustrated the economic impact of tourism either at the sub-regional or national level. In general, all these studies contributed significantly to the existing literature from both developed and developing economies. There is no doubt about usefulness of input-output (I-O) analysis to tourism economic impact assessment. Most of the researchers in the field concluded that I-O analysis provides detailed information on the direct, indirect, and induced effects of visitor spending on all economic measures for different industries in the local economy (Pao, 2005). Therefore, no other viable alternative method exists for a country that wishes to examine in detail both the economic impact of tourism and the way that tourism fits into the country's economic structure. The types of multipliers that an I-O model produces are detailed and should be interpreted correctly (Fletcher, 1989). Although tourism has become a conspicuously large and fast-growing industry, pertinent economic analyses have been somewhat limited, possibly because it is not a single industry, but, rather, comprises businesses from numerous industrial classifications (Tooman, 1997). However, most of the studies since the 1980s have, in particular, measured the impact of tourism operations on employment, income, or overall economic activity.

Frechtling and Horvath (1999) used the regional I-O modeling system to model the economic impact of tourism on the economy of Washington, DC. The study found that the use of direct-effect (or ratio) multipliers is more appropriate than final-demand (or normal) multipliers. The tourism sector generated normal earnings levels, but employment multipliers were higher than three-quarters of those of other local industries. Their magnitudes suggest that the tourism sector is more highly linked to local suppliers than the average industry or that its employees tend to spend more of their earnings locally or a combination of both. The multipliers for Washington, DC were relatively low as compared to other U.S. cities. This makes sense given the small geographic size of Washington, DC, which is situated in a highly integrated metropolitan area. Therefore, many earnings and employment leakages exist. Steinback (1999) examined the regional economic impact of marine party and charter boat fishing in Maine. The study provided a starting point for establishing consistent and defensible techniques for conducting regional economic impact assessments of recreational fisheries and exploring appropriate uses for economic impact assessment outputs as they relate to the growing needs of natural resource managers. This is important, as most studies only report final impacts, without describing the interdependencies that produced the impacts or the way that the results should and should not be used to guide management decisions. Stynes (1999) provided a review of the field of tourism economic impact analysis. The study distinguished economic impact analysis from other types of economic analysis that might be carried out in tourism research. Specifically, economic impact analysis traces the flows of spending associated with tourism activity in a region to identify changes in sales, tax revenues, income, and jobs due to tourism activity. The principal methods adopted are spending surveys, analyses of secondary data from government economic statistics, economic base models, and I-O models and multipliers. Gamage and King (1999) used I-O analysis to compare the initial and flow-on economic effects of tourism spending by two different types of tourists from Australia to Sri Lanka. This analysis revealed that different expenditure priorities are evident between the two groups. Non-expatriate tourists were found to constitute only a small proportion of the total number of tourists. This group spent more on food and beverages with relatively higher flow-on effects. Expatriate expenditures focused on the retail and wholesale sector and on local transportation with relatively lower flow-on effects. The mean expenditure incurred by migrants was more than twice that of non-migrants. The results indicate that small markets like Australia merit close scrutiny by the Ceylon Tourist Board and that travel by expatriates generally merits closer examination.

West and Gamage (2001) used a modified, non-linear I-O model to assess the economic impacts of tourism in the state of Victoria in Australia. Responding to the tendency of I-O models to overestimate multiplier effects, this study develops a marginal household income coefficient model, which allows for substitution between primary factors of production. The study concluded that day-trippers contributed the largest amount to gross state product and employment, followed by interstate, intrastate, and, least of all, international visitors. However, if substitution expenditure effects by residents are taken into account, interstate tourism contributed the largest amount to gross state product and employment, followed international tourism. Chhabra et. al. (2003) used I-O analysis to estimate the economic impact of visitor expenditures at two Scottish festivals in rural North Carolina. While the local restaurants and lodging and festival vendors and sponsors benefited from substantial visitor expenditures, the multipliers were relatively small, and, hence, the total economic impact of the festivals represents only a small percentage of the economic activity in the two regions considered. Lodging expenditures have the greatest impact on regions with a single-day festival, while expenditures on food and beverages have the greatest impact on regions with a single-day festival. The magnitude of the economic impact depends on the characteristics of both the festival (number of days) and the local economy (other attractions and linkages). Sun (2005) studied the economic impacts of the Taiwan tourism policy under three scenarios. Each scenario specified a distinct international visitor volume and hotel capacity, simulating alternate conditions of the supply and demand of tourism activities in Taiwan. A national I-O model with fixed and varying economic ratios and multipliers was established to evaluate the impacts of tourism policy. The assumption of constant ratios of jobs and income in the standard I-O framework was tested by examining the firm-level time-series data of tourist hotels in Taiwan from 1999 to 2003.

Relevant Literature on Malaysian Tourism

A number of impact studies have been conducted on Malaysian tourism including that of tourist travel and expenditure profiles, which have not only provided the necessary information for policy making but also established guidelines to improve the industry and related sectors. Shahwahid et al. (1991) investigated the effect of the travel and expenditure pattern on the Malaysian economy based on a survey conducted in 1990. They found that tourist arrivals tend to come from East Asian countries. Their study compared and contrasted travel and spending behavior among the domestic, Singaporean, and other foreign tourists

as well as between regions of countries. Their results showed that there were some differences in the pattern of tourist expenditures according to geographical regions and local and import content of purchased items. The highest amount of expenditures on shopping by domestic tourists occurred in the central region, whereas that by Singaporean and other foreign tourists occurred in the southern and northern regions, respectively. Rashid and Shahwahid (1991) carried out an impact analysis study on the tourism industry based on the questionnaire method. They evaluated the impact of tourist expenditures on gross output, employment, and imports. Their results highlighted a number of strategic sectors of the tourism industry and, at the same time, focused on other sectors that benefit from tourist expenditure through indirect and induced income and employment generated.

Kayat (2002) undertook a study among the residents on Langkawi Island, Malaysia to explore the utility of a combination of social exchange and power theories to explain residents' attitudes toward tourism and examine how residents' evaluation of the impact of tourism influences their attitudes. In-depth, semi-structured interviews were conducted with 46 residents. The study concludes that the combination of social exchange and power theories is more useful than social exchange theory alone in understanding residents' attitudes concerning the impact of tourism. However, residents' general values, dependence on tourism, and ability and willingness to adapt moderate the influence of power on residents' evaluation of the impact of tourism. Bashir and Rashid (2004) studied the economic impacts of the changing tourist profile in Malaysia between 2001 and 2002. They demonstrated that tourism activities in Malaysia appear to be favorable to not only the external account but also local value added and tax revenue. They found that tourists from West Asia, mostly from Muslim and Arab countries, spent a relatively higher proportion on wholesale and retail trade. The expenditure pattern of tourists from West Asia is favorable to the economy in terms of having a remarkable proportion of their expenditure on items that have a considerable multiplier effect on output and value added and that are friendly to external demand (Bashir & Rashid, 2004). The most relevant study was conducted by Bashir and Ahmad (2005a) based on impact analysis and a survey questionnaire. Their findings revealed that foreign tourists spent a substantial proportion of their total expenditure on hotels and restaurants, but some of them spent a marked proportion on wholesale and retail trade. West Asian tourists spent a relatively higher proportion of their total expenditure on wholesale and retail trade than others. In addition, their results showed that industries or sectors that enjoy greater economic benefits from tourism are

hotels and restaurants, entertainment, wholesale and retail trade, and business services, as reflected by the large contribution in total output and the generation of greater income and employment. Other sectors, such as transportation and recreation, have a strong capacity to generate direct and induced income and employment.

The most recent study was also conducted by Bashir and Ahmad (2005b) on repeat visitors to Malaysia from West Asia. The study analyzed the socioeconomic characteristics and travelling and expenditure patterns of repeat visitors from West Asia in order to capture reasons for repeat visitations. The empirical analysis depended on a survey questionnaire distributed at various locations in Klang Valley based on purposive sampling in mid 2004. The findings showed that West Asian repeat visitors were well-travelled single males with high incomes in the 20-40 age group. Age group and occupation were significant factors influencing repeat visitations. The travelling and expenditure patterns on repeat visitors to Malaysia from West Asia were quite similar to those of first-time visitors.

In summary, the examination of the economic impact of tourism has occupied a central place in research on tourism, and, subsequently, the multiplier effects of tourist spending constitute one of the most researched issues (Johnston & Moore, 1993; Sinclair, 1998). Most of the previous empirical studies of the economic impact of tourism have concentrated on estimating multiplier values for different countries using I-O analysis. One of the key advantages of I-O analysis is its stress on interdependence, an important feature of an economic system (Augusztinovics, 1995, Lahiri, 2000). However, the examination of multiplier estimates for tourism offers limited understanding of the extent to which the expansion of tourism enhances the overall objective of increasing economic growth.

Methodology and Data Sources

The I-O Model

The most common application of I-O tables is impact analysis. I-O models are now widely used to examine the economic impact of tourism. This is because it provides a concise and accurate means for articulating the interrelationships among industries. Further, the industry detail of I-O models not only provides a consistent and systematic approach but also more accurately assesses multiplier effects of changes in economic activity. I-O analysis measures the changes in output (i.e., production), employment, and income in all industries as a consequence of known demand changes in the output of some particular industries in the economy or a new activity or industry not identified in the I-O table. Specifically, economic impact analysis traces the flows of spending associated with tourism activity in a region to identify changes in sales, tax revenues, income, and jobs. The I-O model is most widely used to trace the effects of changes in final demand through the economy. There are two commonly used versions of the I-O model, namely open and closed. The open I-O model captures only the direct and indirect effects of changes in final demand, while the closed version incorporates the household sector into the first quadrant of the common I-O table. By treating household income and expenditure as endogenously determined, the model allows researchers to capture induced effects as well as direct and indirect effects. In this study, a closed I-O model is used with respect to the household sector. Then, an open I-O model is utilized to determine multiplier effects in the selected sectors.

The I-O method analyzes the effects of tourism by charting the movement of initial visitor expenditure through different sectors of the economy. Examining the impact of change in the final domestic consumption generated by the tourism sector on the economy will be based on the I-O framework. Tourist demand's changing by one RM will generate changes in output, income, and employment. The effect on output can calculated as follows:

$$X = (I-A)^{-1} F_t \qquad (1)$$

where:

X = vector of sectoral output
(I-A)-1 = Leontief inverse
I = an identity matrix
A = the matrix of technical coefficients
Ft = vector of final demand (the direct purchase by tourists in year t).

A detailed explanation of the multiplier formulas and impacts will be discussed below.

Multiplier Formulas

The matrix formula used for calculating the output multipliers is given in equation (2) below. Similar equations apply to the other multipliers; for details, see Archer (1982) and Miller and Blair (1985). We assume that the national economy is subdivided into n sectors. When we consider the household sector as the n+1th sector added to the first quadrant, the closed I-O model where (I-A*)-1 represents the Leontief inverse of the matrix with households treated as an endogenous variable is constructed. An augmented A* matrix is conceptually similar to the A matrix, except that each round of economic reaction now incorporates both an addition to household income and an increase in the output of the local sectors to satisfy the requirements for the local expenditure of the additional household income. Thus, the inverse of the closed model includes an income multiplier and consumption effects. By using matrix notation, this can be written as follows:

$$I+A^{*2}+A^{*3}+\ldots+A^{*n} =(I-A^*)^{-1} \quad (2)$$

The formulas to calculate output, income, and employment multipliers can be written as follows:
Output multiplier effects:

$(I-A^*)^{-1}$ (3)
Income multiplier effects:
$c(I-A^*)^{-1}$ (4)
Here, c represents the labor income of industry
Employment multiplier effects:
$e(I-A^*)^{-1}$ (5)
where e is a vector of industry employment

Multipliers' Impacts

Tourism not only creates jobs in the tertiary sector but also encourages growth in the primary and secondary sectors. This is known as the multiplier effect, which in its simplest form is how many times money spent by a tourist circulates through a country's economy. The multiplier coefficients demonstrate the ability of any given sector to generate output, income, and employment from any given change in the demand for its output. The multiplier values can be used to show

the impact on the national economy as a result of a given change in any of its final demands. These impacts can be subdivided into three categories:

1. Direct Effects

Direct effects are those brought about directly in those sectors that are subject to the change in final demand. Therefore, the restaurant industry, which is directly involved in the production of food products, will be directly affected by a change in the level of activity of the farming products industry.

2. Indirect Effects

When there is a change in final demand for a sector's output, the sector that produces that output will have input demands of its own. For instance, the transport industry may need to purchase additional lubrication services or other financial services from industries within its sector and supporting services related to, say, energy services.

3. Induced Effects

Whenever a good or service is produced, some income is accrued as wages, salaries, profit, rent, or interest. Therefore, from direct and indirect effects, income is accrued as a result of the initial change in final demand. When that income is re-spent, it triggers another round of economic activity. This additional round generates output, income, and employment. The economic effects of the re-spending of accrued income are known as induced effects. The multiplier ratios allow for the determination of the full effects resulting from any change in final demand. Depending upon the multiplier, these full effects may be direct plus indirect effects or direct plus indirect plus induced effects.

Secondary Data Sources

Secondary data are gathered from I-O tables. Data on I-O coefficients were obtained from the 2000 I-O tables for Malaysia published by the Department of Statistics Malaysia (2006). The availability of I-O tables during the study period influenced the selection of the table for 2000. Employment figures used to derive sector labor coefficients were estimated from data provided by the Department of Statistics Malaysia. Data on household figures were estimated from national account statistics. In order to reveal the real changes in the variables, the nominal 2006 and 2000 I-O tables have been transformed into 1978 constant prices, making all the data and tables comparable and aggregated to six sectors. The multiplier derived from the closed model represents the output required to

produce one RM of final demand plus the additional consumption induced by the additional income generated. Using the tourists' expenditure in 2006, an estimation of the impact on sector output can be performed by multiplying the tourists' demand vector by the Leontief inverse matrix. The income generated is based on the labor income coefficient (i.e., the ratio of wages to gross output of each sector). The impact on employment is based on the labor-output ratios.

Results and Discussion

Impact Analysis Results

Derived from the technical and interdependent intermediate coefficient information for the I-O system, the total output, income, and employment multipliers have been calculated for selected tourism sectors. Tables 3, 4, and 5 show the empirical results for direct, indirect, induced, and initial effects for selected tourism sectors.

The total output multiplier consists of direct, indirect, and induced-consumption effects. Direct effects represent the first-round purchases made by each sector from all other intermediate sectors per every RM1 worth of output. Indirect effects reflect a series of indirect purchases as waves of second-, third-, and subsequent-round effects make their way into the local economy. These ripple effects spread throughout the local economy, each succeeding round becoming smaller and less significant and eventually becoming small enough to be of no analytical interest. The induced-consumption output effect is actually the column total of the inverse matrix (excluding salaries and wages) for the closed I-O system. The total output multiplier is the summation of direct, indirect, and induced-consumption effects.

As shown in Table 3, the hotel and restaurant industry's total output is the highest, followed by that of the entertainment sector. The total output multiplier for the hotel and restaurant industry is RM1.1, which constitutes RM0.49 from direct effects, RM0.28 from indirect effects, and RM0.31 from the induced-consumption effect. Therefore, the flow-on effect for the hotel and restaurant sector is RM1.07 for every RM1 increase in the final demand.

Table 3: Output Multipliers for Selected Tourism Sectors

Sectors	Direct	Indirect	Induced	Total
Wholesale and retail trade	0.257307	0.110507	0.421411	0.78923
Hotel and restaurant	0.490430	0.275951	0.305206	1.07159
Transportation	0.321253	0.169109	0.232527	0.72289
Business services	0.297604	0.137703	0.305056	0.74036
Entertainment	0.400115	0.190112	0.434040	1.02427
Recreation	0.155348	0.065741	0.195751	0.41684

The household income multiplier explains the income effects of the change in output of the final demand. It is actually an attempt to translate, in one way or another, the impact of final demand spending changes into changes in income received by households, rather than translating the final demand changes into sector output (Miller & Blair, 1985).

Table 4 presents the income multiplier for the hotel and restaurant and related tourism industry sectors. The entertainment sector ranks first among the tourism-based industries. The total income multiplier for the entertainment sector is RM0.75, which constitutes RM0.50 from direct effects, RM0.01 from indirect effects, and RM0.14 from the induced-consumption effect. The flow-on effect from the entertainment industry is estimated to be RM0.32. Additionally, the wholesale and retail sector actually has the highest total income multiplier after the entertainment sector, which is estimated to generate an income of RM0.73 for every RM1 increase in final demand.

Table 4: Income Multipliers for Selected Tourism Sectors

Sectors	Direct	Indirect	Induced	Total
Wholesale and retail trade	0.072871	0.008226	0.143854	0.224951
Hotel and restaurant	0.173378	0.030160	0.104186	0.307724
Transportation	0.116422	0.000112	0.079376	0.19591
Business services	0.092387	0.015147	0.104135	0.211669
Entertainment	0.127059	0.046720	0.148165	0.321944
Recreation	0.043964	0.009083	0.066822	0.119869

The employment multiplier will enable us to estimate the amount of employment generated for every RM1,000 increase in the final demand for all sectors in the economy, including the sectors related to tourism. Table 5 shows employment multipliers for these sectors. The hotel and restaurant sector has the highest total employment multiplier. It is expected to generate employment by 0.054 persons for every RM1,000 increase in final output. These are followed by transportation (0.051 persons) and entertainment (0.03 persons).

Table 5: Employment Multipliers for Selected Tourism Sectors

Sectors	Direct	Indirect	Induced	Total
Wholesale and retail trade	0.003302	0.002099	0.015930	0.021331
Hotel and restaurant	0.026637	0.016304	0.011537	0.054478
Transportation	0.03952	0.003203	0.008790	0.051513
Business services	0.006992	0.003150	0.011531	0.021673
Entertainment	0.010871	0.004576	0.016407	0.031854
Recreation	0.007343	0.001918	0.007400	0.016661

Concluding Remarks and a Discussion of Implications for Policy Responses

Tourism is vital to the economic growth of Malaysia and is the country's second-largest industry. It is a clean industry and a source of stable employment. Tourism aggressively promotes Malaysia as a premier travel and tourism destination in Southeast Asia. The industries, or sectors, that enjoy greater economic benefits from tourism are the hotel and restaurant sector, the entertainment industry, the wholesale and retail trade, and the business services sector, as reflected by the large contribution in total output and the generation of greater income and employment. Other sectors, such as transportation and recreation, have a strong capacity to generate direct and induced income and employment, so tourism policy should place more emphasis on their development. Foreign tourists spend a substantial proportion of their total expenditure on hotels and restaurants, but some of them do spend a marked proportion on wholesale and retail trade. West Asian tourists spent a relatively higher proportion of their total expenditure on wholesale and retail trade than others. Therefore, efforts encouraging tourists to spend more on shopping should be enhanced because shopping generates less imports. The increasing trend of tourist arrivals from West Asia is encouraging because a remarkable proportion of their expenditure has a considerable multiplier effect on the output of and value added to the economy. The multiplier for the hotel and restaurant industry can be improved through improvement in inter-industrial linkages. This paper recommends that authorities should persuade existing tourists to spend more on shopping or increase the proportion of West Asian tourists, who like shopping more than

other tourists. To enhance the distinct appeal of Malaysian tourism products and services, the government continues to promote the country's traditional advantages, namely its cultural and natural heritage. Other tourism products include shopping, leisure, and sports-related activities, as well as business-related events. Tourism products can help to promote new investments in the country while providing increased employment opportunities. The growth of Malaysian tourism should contribute positively to the country's economic development and quality of life. In addition, tourism plays a crucial role in helping low-income groups improve their livelihood through involvement in tourism-related activities, such as rural home stay programs, eco and agro-tourism, tour guide activities, and handicraft industries.

In order to accelerate the momentum of the tourism industry, thereby enabling it realize its full potential, Malaysia should continue to enhance its position as an international tourist destination and promote the domestic travel and tourism industry. The focus should also be on improving accessibility through improved air and surface transportation including hassle-free travel with other facilities. Private sector participation in the development of innovative products and services should be further enhanced through improved incentives and adequate funding. A holistic and integrated approach that leverages the innovation and vitality of the private sector, the hospitality, courtesy, and civic-consciousness of the public, and the support of the government is essential to elevate the tourism industry to a higher level of achievement.

Furthermore, the research identified a number of key imperatives as being critical to the development of the tourism industry in Malaysia. First, new reasons must be created for visitors who have been here, but are not inclined to revisit. The tourism industry must explore tourists' emotional and experiential side so that those not inclined to revisit will find reasons to do so. A new global brand identity for Malaysia could be based on its unique culture. What uniquely constitutes Malaysia must be promoted to keep the inbound visitors coming. Batik is a unique feature of Malaysia that has that potential. Another potential area to be developed is the its internationally recognized educational system. Education can generate additional income for the tourism sector. West Asian tourists have shown particular interest in postgraduate studies in Malaysia. Third, the tourism industry must identify the key short- and long-term tourism markets, now and in the future. However, the long-term success of tourism in Malaysia hinges on the country's ability to develop sustainable tourism and attract new visitors. Both require the existence of a quality workforce that

is attuned to the highest international standards, yet steeped in our culture, traditions, and heritage. Excellent customer service will also ensure that our guests look forward to returning to Malaysia again and again. The greatest needs of the hospitality and tourism industry in terms of human capital are recruitment of a quality workforce, retention, and retraining. Institutions and hospitality and tourism organizations can work together on these areas to their mutual benefit. Investing in human capital pays off in new and repeat visitors and increased profitability.

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