

Generation of Employment and Income through English

(The Case of Tourist Industry in Siem Reap, Cambodia)

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Introduction

It goes without saying that tourism is an important part of a country's gross domestic product (GDP). It is considered to be one of the world's largest industries, expected to contribute up to 9.2% of global employment and 9.6% of total global GDP by 2020 (UNWTC, 2011) and contribute receipts to industries such as hotels, guest houses, travel agencies, and restaurants. In 2005, three percent to 10 percent of GDP in developing countries was contributed by tourism (WTTC, 2011). It is recognized as an integral part of an "export-oriented growth strategy, for bringing jobs and development to the people and help in the reduction of abject poverty" (Fayissa, et al. 2007). Tourism, which belongs to hospitality businesses, usually contains the connotation of face to face interaction with tourists. As such, intercultural communication becomes necessary; intercultural communication entails not only talking. It is also a process in which people can understand a shared meaning in symbols, body language, certain cultural codes, and behavior in context. If two people are "of the same mind," or "on the same wavelength," they can have an experience of "maximum satisfaction" through a shared language, understanding of body language, and knowledge of cultural "clues."¹⁾

This paper will introduce the nature and importance of tourist industry in

1) See Reisinger, 2009, for a detailed discussion of "intercultural communication." The term "maximum satisfaction" was coined by Maung Maung Lwin, 2010.

Cambodia and our survey experience in Siem Reap, and share both qualitative and quantitative research findings regarding income, years on the job, general education, English education background, years of English education, previous income, present English study, and English proficiency. The first section of this paper explains the tourism background of Cambodia. Section two introduces the five typical representative tourist industry businesses namely, (1) Souvenir shops, (2) Restaurants, (3) Guest houses, (4) Hotels, and (5) Travel agencies of Siem Reap. They were chosen as the most likely businesses with which English speaking tourists have most contact and stand out as being tourism businesses. This section also includes an explanation of the previous survey experience, conducted in 2008, covering the same tourist businesses as mentioned above.

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The second section covers the survey philosophy and background information. The 2010 survey incidentals, including location, sample businesses, sample respondents, sample size, designing the survey questionnaire, and conducting the survey are provided in section three. Limitations in creating the questionnaire and also in conducting interviews are examined in section four. Background features of the tourist businesses is given in section five. The analyses of survey data focusing briefly on each sample tourism business separately and survey results are discussed in section six. Concluding remarks are given in section seven.

1. Tourism in Cambodia

Tourism in Cambodia around Angkor Wat has greatly expanded, specifically in Siem Reap, after opening diplomatic relations with the West. Angkor Wat was also classified as World Heritage Site in 1992 by the United Nations Educational, Scientific, and Cultural Organization (UNESCO), which boosted tourism. The boost in tourism is forecast to directly contribute KHR (Khmer Riel) 8,263.4 billion (7.9% of GDP) by 2021 from industries including transportation, Internet

cafes, photographic shops, food preparation, bars and restaurants, and construction, (UNWTC, 2011)²⁾. In addition, it incorporates many connected industries including road transportation, Internet cafes, food and alcohol distribution, and construction. Moreover, according to the Ministry of Tourism it is evident that visitors travel to Siem Reap for tourism as seen in table one, growing from 195,776 in 2002 to 704,254 in 2010 (Ministry of Tourism, 2011).

Table 1. Travelers to Siem Reap by Purpose of Visit (in number), 2002-2010

Year	Tourist	Business	Other
2002	195,776	2,670	4,345
2003	178,638	2,848	4,812
2004	297,279	2,746	9,348
2005	426,807	2,821	10,497
2006	591,474	2,778	5,423
2007	751,537	5,699	4,015
2008	656,776	7,063	4,665
2009	574,571	4,720	4,693
2010	704,254	4,658	3,760

Source: Cambodia Ministry of Tourism, 2010

Tourism can also bring stable employment to local societies. The survey, “Living Wage Survey for Cambodia’s Garment Industry,” completed in 2009 by the Cambodia Institute of Development Study revealed that the minimum wage for garment workers is US \$50 per month. Tourism, as we will see later in these research findings, can bring anywhere from US \$67 to US \$117 per month, and tourism can offer stable employment and better income. Realizing these factors, the tourism market is worth considering in the least developed country (LDC) of Cambodia. In Cambodia, there was a high amount of approved and actual foreign direct investment (FDI) between 1994 and 2004, especially around Siem Reap in hotels and restaurants. As table two displays, there was NO FDI (approved or actual) in textile or apparel from 1994 to 2004 in Siem Reap. It did, however, receive a plethora of both approved and actual FDI for hotels and restaurants reaching US \$107,317 and US \$90,354 for the period. Hotels, guest houses, restaurants, expanded together with the mass inflow of FDI, showing an

2) All values are in 2011 prices and exchange rates.

increased employment situation in these businesses and related jobs, such as waiter, receptionist, front desk clerk, concierge, host. As table two displays, hotels and restaurants in Siem Reap accounted for 25 percent, or one quarter, of the actual FDI given between 1994 and 2004.

Table 2. Comparison of Approved and Actual FDI, 1994-2004 (in US \$1,000)*

Province	textile		apparel		hotels and restaurants	
	Approved	Actual	Approved	Actual	Approved	Actual
Phnom Penh	66,877	17,201	888,690	644,663	784,660	270,954
Sihoukville	29,903	29,903	29,864	19,614	184	0
Siem Reap	0	0	0	0	107,317	90,354
Total	96,780	47,104	918,554	664,277	892,161	361,308

Source: compiled by the author from information from Cuyvers, 2010

*Reported as lump sum received between 1997 and 2004.

Table three displays the total number of hotels and guest houses nationwide in Cambodia from 1997 to 2010. This number of establishments as well as rooms has grown greatly since 1997, as the percent of change illustrates, year to year. Totally, there was increase of 94 percent in total number of guest houses, and a 40 percent increase in total number of hotels between 1997 and 2010. Total

Table 3. Total Number of Guest Houses and Hotels in Cambodia, 1997-2010.

Year	Total Number		Change(%)		Number of Rooms		Change(%)	
	Guest House	Hotel	Guest House	Hotel	Guest House	Hotel	Guest House	Hotel
1997	60	179	0	0	477	6,989	0	0
1998	147	216	145.00	20.67	1,510	8,247	216.56	18.00
1999	186	221	26.53	2.31	1,897	9,115	25.63	10.53
2000	292	240	56.99	8.60	3,233	9,673	70.43	6.12
2001	370	247	26.71	2.92	3,899	10,804	20.60	11.69
2002	509	267	37.57	8.10	6,109	11,426	56.68	5.76
2003	549	292	7.86	9.36	6,497	13,201	6.35	15.53
2004	615	299	12.02	2.40	7,684	14,271	18.27	8.11
2005	684	317	11.22	6.02	9,000	15,465	17.13	8.37
2006	742	351	8.48	10.73	9,166	17,914	1.84	15.84
2007	891	395	10.08	12.54	11,563	20,470	26.15	14.27
2008	925	398	3.82	0.76	12,180	20,678	5.34	1.02
2009	1,018	451	10.05	13.32	14,512	23,010	19.15	11.28
2010	1,087	440	6.78	- 2.44	15,321	24,393	5.57	6.01

Source: Cambodia Ministry of Tourism, 2010

number of guest house rooms increased 96 percent, and in hotels, total number of rooms increased 71 percent between 1997 and 2010.³⁾

In face to face contact with international English speaking guests, the tourism labor force needs to be able to communicate adequately because many difficulties may arise, such as incorrect word usage and unintelligible body language. With education, training, and experience, these problems can be alleviated, leading to satisfying and interesting experiences (Reisinger 2009). Table four includes 2010 data which depicts trained tour guides by language in both Siem Reap and Phnom Penh.⁴⁾ Tour guides with language ability in English have increased between 2008 and 2010 in Siem Reap, while other language trained guides have increased slightly or stayed the same. In fact, the number of English competent guides in Siem Reap showed a remarkable increase of 88 percent between 2008 and 2010. Tour guides became quite competent in other languages by 2010; Japanese language trained guides had an increase of 76 employees between 2008 and 2010. The need for slightly high number for guides trained in the German language was most likely based on an influx of German tourists. This paragraph advocates the importance of English proficiency in tourist industry of Siem Reap.

Table 4. Number of Licensed Tour Guides, 2008-2010

Year	2008		2009		2010	
	Phnom Penh	Siem Reap	Phnom Penh	Siem Reap	Phnom Penh	Siem Reap
English	129	795	133	1,081	143	1,101
Japanese	46	583	46	651	46	659
French	46	165	52	191	54	192
Chinese	48	179	60	297	64	303
Korean	2	77	2	101	2	101
Thai	9	211	9	234	9	234
German	23	71	26	87	28	89
Vietnamese	4	6	5	16	5	16

Source: Cambodia Ministry of Tourism, 2010

3) Percentage of increase calculated by Jeffrey Morrow, 2010.

4) The 2009 Cambodia Ministry of Tourism Statistical Report makes a distinction between “trained” tour guides and “licensed” tour guides (both in languages) in Cambodia and gives data for both, but the reasoning for this distinction is not made clear the annual report. Licensed tour guide data is used for this paper.

Because English is necessary in the tourist industry, the goal of conducting research was to examine tourism related businesses in Siem Reap which have contact with foreign English speaking tourists, to determine how English proficiency contributes to employment and income generation in an example of a developing country. In the past, researchers have examined English proficiency using self-reporting of the respondents' own proficiency on census data. This method is not an accurate means of determining English proficiency, as it can be over or undervalued if it is reported by oneself. Therefore, the authors created a method of quantifying English proficiency in face to face interviews which can be used to examine descriptive statistics more accurately. Siem Reap was chosen as the survey area due to its proximity to Angkor Wat and it is the only accommodation spot for travelers to Angkor Wat. It is also a typical cultural tourist destination, much like the Giza Pyramids of Egypt.

2. The Survey Work of Tourism Businesses

The authors visited Siem Reap in 2008 to conduct a preliminary survey to gather basic data and get a general idea of the tourist business environment of Siem Reap City, with the assistance of five English speaking students from Angkor University, who helped in interviews and translation. In 2010, we redesigned the survey questionnaire based on the previous survey from 2008, and adapted it to be able to find more accurate information along our goals. The purpose of the new survey was to conduct more thorough research and to gather more data on income, expenditure, general education, and English education background and also to measure the English language proficiency of the tourist industry labor force accurately, which was not done in 2008. The survey was conducted with the cooperation of Angkor University Research Center for Economic Development (AURCED), which provided us with much pre-survey data. We were able to obtain preliminary basic vital information on tourist businesses in Siem Reap in advance through AURCED, such as the total number of businesses, the number of some licensed and unlicensed businesses, and the approximate locations. We then finalized the questionnaire according to the author's research goals to be able to arrive at a precise conclusion. The questionnaire focused on background data such as marital status and age, years

of education, years of English study, frequency of English speaker visits, need with English, English proficiency level and income, and monthly general expenditure with English study expenditure, etc. We also wanted to measure English proficiency by giving face to face interviews to determine English proficiency level, rather than to rely on self-reporting. In order to make a discernible English proficiency test, an assessment from the Common European Framework of Reference for Languages, CEFR (Council of Europe, 2001), which is widely used to judge the English proficiency of European citizens, was adapted to form a new assessment by the author. A complete table containing English level and the method of assessment can be found in Appendix A.

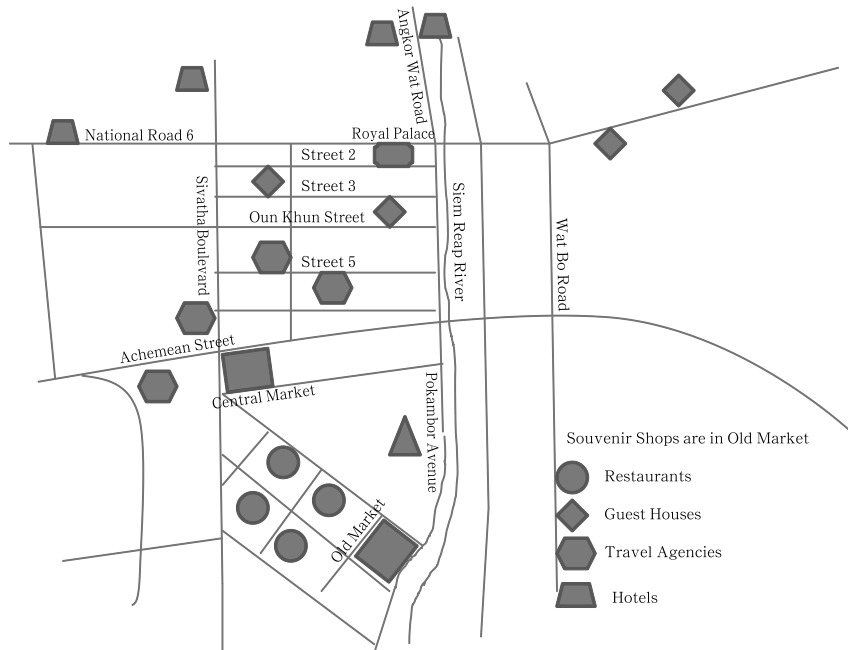
3. Survey Location, Date, Subjects, and Methodology

The survey was conducted with the assistance of the Angkor University Research Center for Economic Development (AURCED). It was conducted entirely in Siem Reap City after carefully calculating and choosing the business locations and subjects. Again, we used our modified questionnaire from 2008 and conducted face to face interviews of our subjects for life data, educational background, job history, and English proficiency. This section contains information on the survey location, survey date and subjects, sample selection, writing the the questionnaire, and conducting the survey, and limitations with our survey and procedure.

3.1 Survey Location

The main tourist area of Siem Reap City is the Old Market area on Pokamabor Avenue, and it extends to Oum Chhay Street, Sivath Blvd., and National Road Number 6. Souvenir shops were located in Old Market which runs along Pokambor Avenue, Restaurants and bars were located on Pub Street and Pub Street Alley, guest houses were located on street two, three, Oum Khun Street and near Wat Bo Road, travel agencies were located on Street five, Achemean Street, and Sivatha Boulevard, and hotels were located on National Road 6 and Angkor Wat Road (figure 1).

Map 1. Map of Survey Areas of Siem Reap City



Source: Created from survey data, 2010

3.2 Date and Subjects

The survey was conducted in Siem Reap from August 27 to August 31, 2010 in representative tourism businesses of five types stated earlier: souvenir shops, guest houses, restaurants, hotels, and travel agencies. The interviewees were those who work in these businesses. Again, the reason for the choice of these five businesses was that they have been obvious representative businesses of tourism and are involved with tourists on a day to day basis.

3.3 Sample Selection

Our survey goal was to employ cluster sampling because we wanted to examine subgroups within the entire population of tourism businesses during face to face interviews.

We examined cluster groups of example tourism businesses and stratified these into males and females within the five businesses in our survey. The sample size was determined by the formula found in the Appendix B. Table five

Table 5. Sample, 2010

Establishment	Total number of shops	Sample Size
Souvenir shops	300 (after tabulation)	74
Restaurants	120	34
Guest houses	227 (3,000 rooms)	21
Hotels	120 (8,723 rooms)	38
Travel Agencies	142	17

Source: Department of Tourism, Siem Reap. Adapted by the author, 2010

exemplifies our sample size, using a confidence level of 95 percent.

The sample size was determined for number of shops only rather than numbers of workers or amount of capital. The reason the sample size is different for each business is that we calculated using a different confidence interval for each sample business, at a 95% confidence level. Confidence interval is the parameter above or below which we are confident the majority of the population would answer similarly. In our case, the population of souvenir shops is large and we could be 95% sure that the population would answer within ± 10 , so we calculated souvenir shops with a confidence interval of 10. Restaurants and hotels were easy to find and popular, so again we were somewhat sure of answers, and used a 15 confidence interval for restaurants, and a 13 for hotels. Guest houses and travel agencies were more spread out and less known. We were not sure how the population would answer, so we used confidence intervals of 20 and 23 respectively. Fortunately, permission to enter establishments in Cambodia is not strict, and we could proceed with our survey relatively easily. In order to achieve randomness, we assigned each sample a number which was drawn blindly. One person from each shop was interviewed to gather socio-economic background data, and also to determine an English proficiency level for each through an assessment by our survey team members during interviews, using the adapted level test as a guide. At first, the sample size may seem small, but it should be remembered that our sample was calculated for shop number and not on population, so we feel we arrived at a number that would not seriously affect our results.

3.4 Designing the Questionnaire

The author wanted to obtain accurate data on all aspects of social life, education, English education/proficiency, and employment. Therefore, the questionnaire was written and revised within the spectrum of the authors' major research goals, which were:

- (1) To obtain data on socio-economic conditions of those working in tourism,
- (2) To obtain data on general education and English education background,
- (3) To obtain data on expenditure on English study,
- (4) To obtain data on past and present income, and
- (5) To measure English proficiency through face to face interviews.

The questionnaire was designed with the expectation that the content will support our objective. It was written and administered in English because English is used more widely in Siem Reap due to the influx of tourists from "inner circle"⁵⁾ countries where English is used as the main language, and because the author wanted to obtain a more accurate measure of English proficiency of tourism employees.

The survey was designed concretely to support the above goals so we could obtain accurate and useful information. The questionnaire had eight sections, comprising 50 questions total. Group one focused on general questions: age, gender, marital status, status of residence; group two were questions on years of general education, whether education helped to get a job; group three were questions on English education such as years of English education, and method of learning English. Group four were job related questions (including how many years on the job, previous salary); group five were employment and English questions such as salary with English, frequency of native English speaking visitors, and need with English. Group six contained questions on income and expenditure for learning English. Group seven questions were on future employment potential through English within the tourism industry. Group eight questions focused on business owners and managers, such as number of employees, needs of English and employees needed in the following five years.

5) "Inner circle," "outer circle," and "expanding circle" are terms developed by Kachru (1985). "Inner circle" refers to countries where English is a first language, "outer circle" are countries where English plays a major, but not official, role, and "expanding circle" are those in which English is widely used as a lingua franca.

3.5 Conducting the Survey

Five English major students from Angkor University with advanced levels of English proficiency were hired to assist in interviewing. The students were also to evaluate the English proficiency level of the respondents based on an explanation provided by the author in a pre-survey meeting. The method of surveying was to conduct face to face interviews using English one hundred percent as much as possible, but information was translated into Khmer for the respondents when problems arose. The interviewing students from Angkor University were to record the answers themselves during interviewing.

4. Limitations with the Survey Experience

Due to the lack of adequate data, especially on population in these businesses, our sample was determined for total shop number, not on total number of interviewee. For this reason, we interviewed only one person in each shop, which we could do without difficulty, but time and monetary constraints made achieving a large sample size difficult. In addition, although Siem Reap City has data on numbers of shops, it lacked initial data in other factors which could have been useful, such as prime cost, rent, electricity cost, start-up cost, etc. Little data on number of souvenir shops, items for sale, as well as sex and educational distribution of workers, also made sample calculation difficult. A lack of a detailed map which contained addresses of all the business located in Siem Reap around Old Market also made it difficult for random sampling. Limited time and budget was also a hindrance for having a larger sample size. In addition, we could find no definitive data regarding the minimum wage income in tourism businesses in Siem Reap for comparing with our survey average wage and salary results. We need total shop information in order to correctly calculate the sample size for our research, so the authors manually counted and tabulated the shops inside Old Market which proved quite difficult due to the fact that many of the shops were very small and very close to one another. This information, tabulated into a total number of shops and a floor-plan of Old Market. The total number of shops was used to determine our sample size, and the floor-plan was useful in assuring that we could achieve a certain level of randomness. We also had some difficulty in designing the questionnaire due to insufficient knowledge

of aspects of small family businesses, sole proprietorships, labor laws, rent, costs, and other information in Cambodia. These situations also caused some problems regarding examining the socio-economic situation of tourism business. Even though shortcomings existed, we were able to determine our sample by using the formula shown in Appendix B, for obtaining statistical significance. Another significant problem was that during the survey, the student assistants were hesitant to judge the English level of their fellow countrymen. However, the authors encouraged and taught them interview techniques to get relevant answers from the respondents regarding English ability.

5. A Background of the Businesses

This section will examine each business type in our survey, and give an analysis of each. The analysis will begin with souvenir shops, then to restaurants, guest houses, hotels, and travel agencies. Each section will begin with an explanation of each business type and an explanation of our classification according to size, location, and number of employees. In the case of restaurants, the number of seats was a factor in sample selection. In the case of guest houses and hotels, the number of rooms was a factor. Here, the findings from our survey are compiled to give basic socio-economic information of the workers in the five tourist related businesses under our study. The features of the particular businesses are discussed, and other basic information is also given in table six.

5.1 Souvenir Shops

Firstly, we will examine our findings from souvenir shops within Old Market. Old Market is a large, enclosed ware-house type building which runs along Pokambor Avenue, and is on the banks of the Siem Reap River (see map one). Inside Old Market, many small souvenir shops can be found selling items for tourists visiting Angkor Wat. Souvenir shops are classified as such in our survey by the fact that they sell typical small and inexpensive tourist souvenirs and sell items such as clothing (t-shirts, hats), trinkets (key rings, small statues), wall hangings (silk displays, maps, pictures), as well as jewelry, masks, larger statues, and books, near the entrance on Pokambor Avenue. One

**Table 6. General Information of Tourism Labor Force
(in number of people), Siem Reap, 2010**

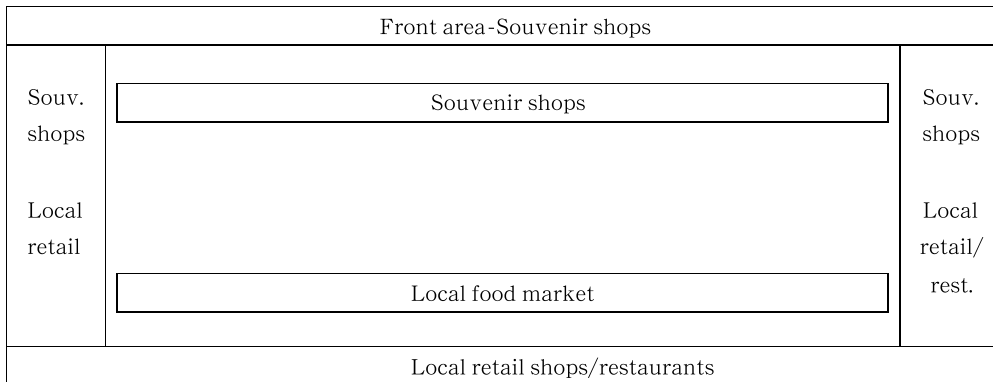
	Item	Souv/Ret.	Rest.	Guest Hse.	Hotels	Trav/Tour
Age	10-19	18	2	3	2	0
	20-29	45	31	17	30	15
	30-39	8	1	1	6	1
	40	3	0	0	0	1
<i>Total</i>		<i>74</i>	<i>34</i>	<i>21</i>	<i>38</i>	<i>17</i>
Sex	M	23	15	8	26	10
	F	51	19	13	12	7
<i>Total</i>		<i>74</i>	<i>34</i>	<i>21</i>	<i>38</i>	<i>17</i>
Province	Siem Reap	44	24	13	17	12
	Phnom Pn	5	0	3	4	0
	Other	25	10	5	17	5
<i>Total</i>		<i>74</i>	<i>34</i>	<i>21</i>	<i>38</i>	<i>17</i>
Marital	Married	23	4	4	9	1
	Single	51	30	17	29	16
<i>Total</i>		<i>74</i>	<i>34</i>	<i>21</i>	<i>38</i>	<i>17</i>
Children	Yes	19	3	4	7	1
	No	55	31	17	31	16
<i>Total</i>		<i>74</i>	<i>34</i>	<i>21</i>	<i>38</i>	<i>17</i>
Living	Alone	14	12	5	15	6
	W/Family	60	22	16	23	11
	Dormitory	0	0	0	0	0
	Other	0	0	0	0	0
<i>Total</i>		<i>74</i>	<i>34</i>	<i>21</i>	<i>38</i>	<i>17</i>

Source: Compiled from survey data, 2010

can access stores from the front, or enter long hallways lined with shops on either side. Some shops are small and specialize in one type of product such as silk; others are larger and contain paintings, wall hangings and clothing. In a large space jewelry is sold from self-run counters located in the center of the building, which each are counted as separate souvenir shops. Old Market also contains local retail stores which also sell tourist items in addition to food, sundries, and clothing. These shops were included in our survey as well. There is also a food market in a large space as one walks through Old Market where vegetables, fish, chicken, and other food items are sold which appears to be a local market. The local market was not counted in our survey. Most souvenir shops had an average of three employees, and some of these were family members of the owner/operator. The respondents in this survey totaled

74. The labor force was an average age of 25 years. In souvenir shops, however, we did find eleven respondents who were over 30, and 18 people who were 19 years or younger and only three were 40 years old. In other words, the labor force in souvenir shops is young and productive. From this we found that many family members of owners were also employed there, and that 65 percent of souvenir shop employees were female. Our survey showed 44 (59 percent) people were from Siem Reap Province, and 30 (41 percent) people were from other provinces such as Kratie, Odor Manchey, Very Veng, Bantey Mancheay, and Takeo. Five were from Phnom Penh. Totally, 51 (69 percent) were single, and 23 (32 percent) married, and of those, 19 had one or two children, while 14 live alone, while 60 live with family (mother, father or wife/husband with children), and none live in a school dormitory. Figure two depicts the floor plan of Old Market after counting the establishments.

Figure 2. Floor plan of Old Market



Source: Compiled from survey data, 2010

Through analysis, it is evident that employees earned an average income of US \$68 per month. However, the variation is quite high in both present income and previous income. Often times in souvenir/shops, the respondent did not know his or her own salary perhaps due to the fact that these were family businesses, so these samples were excluded. It is evident that the employees had an average of ten years of general schooling, where 44 people (58 percent) graduated from high school. We found that 37 people were very happy in their jobs, and 31 were somewhat happy. In addition, 22 people (36 percent) of labor

force had jobs previously; examples include waitressing, vegetable selling, tour leading, security work, farming, other shop staff work. There were 25 people (51 percent) who were able to obtain improvement in salaries and living conditions⁶⁾ from five years before, and 20 people (40 percent) believe they will have an increase in salary five years in the future.

As for English level in souvenir shops, according to our findings, employees had an average English proficiency level of two. Most studied English in school an average of four hours per week. Souvenir shop employees spent an average of US \$10 per month on studying English. Other results regarding English show that 37 people (60 percent) had a “better” salary with higher English ability. Moreover, in our results, 43 people (69 percent) said that they could find work easier with English ability. In addition, 56 respondents studied English in school; 18 of those studied three years. ? check on this 11/3

Table 7. Socio-economic Factors of Souvenir Shops, Siem Reap, 2010.

No.	Particulars	Unit of Measure
1.	Those who graduated from high school	44 people
2.	Those with previous job	22 people
3.	Those with better salaries, lifestyles, or conditions	25 people
4.	Average years of general schooling (min: 6, max: 16)	10 years
5.	Number who studied English in school	56 people
6.	Average hours of English study per week (min: 0, max: 24)	4 hours
7.	Average monthly expenditure for English study (min: 0, max: 180)	US \$10
8.	Those with better income/employment prospects with English	20 people
9.	Those who could find work easier with English	43 people
	*Number of Respondents: 74	

Source: Compiled from survey data, 2010

5.2 Restaurants

Our analysis will now examine restaurants, which were located around the Old Market area, along Pub Street, Pub Street Alley, Street 9, and Achemean

6) “Salaries” refers to a higher salary if subject had previous employment, “living conditions” refers to whether or not a subject can afford to buy more luxury items because they have work, and whether the subject can afford to pay rent or has better life conditions due to new employment.

Street. Restaurants had an average of five to six employees; employees we surveyed included only face to face service employees and no cooks, dishwashers, nor behind the scenes workers. Many along Pub Street contained inside seating, but also an outdoor front patio-style seating. Most contained seating for 30 guests; a few were larger and contained seating for up to 50 guests, with up to eight employees. Those classified in our survey were restaurants containing seating for up to 50 guests. We surveyed no food stands or stalls, nor did we survey any local food restaurants found around the perimeter of Old Market. Restaurant employees in our survey totaled 34, and were 60 percent female, and 40 percent male. Totally, 88 percent of respondents were single, and 12 percent were married; of those nine percent had one or two children. They earned an average of US \$69 per month, and were an average of 22 years old. Of our subjects, 70 percent were from Siem Reap Province, and 30 percent were from other provinces including Kampong Thom, Battambang, Takeo, and Banteay Mancheay. No respondents were from Phnom Penh. We found that 33 percent live alone, and 66 percent live with family.

Restaurant subjects studied an average of 11 years in school, and 14 people (51 percent) graduated from high school. We found that 11 people (45 percent) had jobs previously such as fast food, other restaurants, housekeeping and housecleaning, and in souvenir shops. In addition, 20 people were able to have an improvement in salaries and living conditions. Results also found that 16 people (59 percent) believe their salary will increase in five years with job experience. Moreover, 19 expect that they will be able to have a chance for promotion with English after five years. Nine people were very happy and 22 were somewhat happy in their present jobs. As for English proficiency, respondents in restaurants had an average English proficiency level of two, much like souvenir shops. Thirty studied English in school an average of 5 hours per week. Not surprisingly 20 people believe that they have a better salary with English, and 22 people (65 percent) responded that they could find work easier. Ten employees in restaurants also had some kind of English training in speaking, reading and writing, and general English grammar, for an average of one month. Another ten employees of restaurants reported that they spend an average of US \$8 per month on English study.

Table 8. Socio-economic Factors of Restaurants, Siem Reap, 2010.

No.	Particulars	Unit of Measure
1.	Those who graduated from high school	14 people
2.	Those with previous job	11 people
3.	Those with better salaries, lifestyles, or conditions	20 people
4.	Average years of general schooling (min: 6, max: 16)	11 years
5.	Number who studied English in school	30 people
6.	Average hours of English study per week (min: 0, max: 19)	5 hours
7.	Average monthly expenditure for English study (min: 0, max: 50)	US \$8
8.	Those with better income/employment prospects with English	19 people
9.	Those who could find work easier with English	22 people
	*Number of Respondents: 34	

Source: Compiled from survey data, 2010

5.3 Guest Houses

Guest houses in our survey were located on Street 2, Street 3, Sivatha Boulevard, and Pokambor Avenue. We surveyed small and medium size guest houses of 10-20 rooms. Guest houses had various numbers of employees, but with an average of five. In our survey, guest houses were categorized as those containing a common/living room with a TV, a small restaurant/bar area, and a small front desk area, and no more than 20 rooms. Also unique to guest houses was the fact that most required guests to remove shoes and leave them at the front entrance. Guest house rooms were small, simple and ranged from single rooms to double rooms, costing US \$5-12 per night. If one pays more, one can receive a TV, air conditioning, and hot water. Guest houses are a favored accommodation by many foreign travelers and “back-packers” due to their low cost, casual nature, and proximity to Siem Reap City and Angkor Wat. Many guest houses had a motorcycle tour system whereby the guest could arrange tours with the guest house staff for tours by motorcycle which can attract young travelers. Total guest house respondents numbered 21 and earned an average of US \$72 per month. Many houses were family businesses, so some employees did not know, or did not have, concrete salaries. Guest house labor force was an average age of 22, while 13 percent were from Siem Reap Province, and 32 percent were from other provinces, including Kampot Thom, Battambang, and Banteay Mancheay. Two respondents were from Phnom Penh. In our survey,

90 percent were single, and 10 percent married; 26 percent had one or two children. As for the gender demographic, 34 percent were male and 65 percent female, a ratio much like souvenir shops and restaurants with more females.

Table 9. Socio-economic Factors of Guest Houses, Siem Reap, 2010.

No.	Particulars	Unit of Measure
1.	Those who graduated from high school	15 people
2.	Those with previous job	5 people
3.	Those with better salaries, lifestyles, or conditions	4 people
4.	Average years of general schooling (min: 6, max: 16)	13 years
5.	Number who studied English in school	13 people
6.	Average hours of English study per week (min: 1, max: 10)	5 hours
7.	Average monthly expenditure for English study (min: 0, max: 40)	US \$10
8.	Those with better income/employment prospects with English	12 people
9.	Those who could find work easier with English	16 people
	*Number of respondents: 21	

Source: Compiled from survey data, 2010

The subjects in guest houses studied an average of 13 years in school; 15 people (68 percent) graduated from high school. These two values are higher than souvenir shops and restaurants. Five people (20 percent) had jobs previously and worked in jobs such as cook, driver, or receptionist, whereas 19 had no previous job; four people (33 percent) had an improvement in salaries and living conditions from five years ago, and five people (23 percent) believe that they will be able to have an increase in salary after five years. Regarding English ability, respondents had an average English level of two. We discovered that 13 people studied English in high school; 10 of these subjects studied English five hours per week for two years. The study hour per week is higher than in souvenir shops. In addition, 12 people (52 percent) stated they could receive a better salary with English ability, and 16 (69 percent) could find work easier. Interestingly, 10 of the guest house employees said they had training in English for hospitality businesses; this includes factors such as speaking/listening, and general conversation, and ranged from one week to one month. Guest house employees spent an average of US \$10 per month for studying English.

5.4 Hotels

At this juncture, the analysis will examine hotels. Hotels are interesting because they have come into existence over the past 12 years; when the authors visited Siem Reap the first time in the year 2000, hardly any luxury hotels existed at all. This is due to the fact that Siem Reap had only just before opened diplomatic relations with the west. At that time guest houses were the only available option for lodging, but in the past 12 years, Siem Reap's tourism market has grown dramatically. There were over 25 new hotels in construction in 2004. Hotels in our survey were located on National Road 6, Sivatha Boulevard, and Pokambor Avenue, which further north turns into Charles De Gaulle Road. Hotels in Siem Reap range from five stars to no rating; hotels in our survey were both five star and four star, containing over 100 rooms each. Hotels had a luxurious lobby with décor à la Angkor Wat, a large front desk, a restaurant/bar area, a business services office (with computer, Internet, and photocopy facilities), a gift shop, and a pool. Our aim was to examine front desk/concierge employees only in our research. We did not survey respondents from the kitchen, cleaning, or housekeeping departments. Total respondents for hotels in our survey were 38 and were an average of 24 years; 66 percent being male, and 34 percent being female. Our survey showed that 45 percent were from Siem Reap Province, and 55 percent were from other provinces including Svay Rieng, Kandal, Sihanoukville, and Kampot. Hotel employees earned an average of US \$104 per month, which is the second highest among the businesses.

Our respondents had an average of 12 years in schooling; however, 12 respondents studied for 16 years, including university. In addition, 27 people (71 percent) of respondents graduated from high school. More respondents in Travel Agencies graduated from high school and university. In hotels, 23 people (60 percent) had previous jobs in businesses such as bank teller, tourism, waitress, security guard, housekeeping, laundry, waiter, bellboy, and cashier. Totally, 19 people (55 percent) stated that they had improvement in salaries and living conditions than five years ago, and 19 people responded that they expect better salaries after five years. Regarding English proficiency, hotel employees had an average proficiency level of two, much like those in souvenir shops, restaurants, but less than guest houses and travel agencies. This is because in guest houses, the front desk staff has to take care of everything themselves in

English in developing countries. Respondents studied an average of seven hours per week of English; this figure is much lower than travel agencies, a fact which surprised us. Interestingly, 16 people (47 percent) of hotel employees had better salaries with English, while 18 (52 percent) had somewhat better. Not surprisingly 33 people (82 percent) reported that they were able to find work easier with English. Seventeen respondents reported they spent an average of US \$14 per month on studying English.

Table 10. Socio-economic Factors of Hotels, Siem Reap, 2010.

No.	Particulars	Unit of Measure
1.	Those who graduated from high school	27 people
2.	Those with previous job	23 people
3.	Those with better salaries, lifestyles, or conditions	19 people
4.	Average years of general schooling (min: 9, max: 16)	12 years
5.	Number who studied English in school	34 people
6.	Average hours of English study per week (min: 1, max: 26)	7 hours
7.	Average monthly expenditure for English study (min: 0, max: 40)	US \$14
8.	Those with better income/employment prospects with English	19 people
9.	Those who could find work easier with English	33 people
	*Number of respondents: 38	

Source: Compiled from survey data, 2010

5.5 Travel Agencies

We now turn our analysis to travel agencies. Travel agencies were located on National Road 6, Sivatha Boulevard, Achemean Street, and Pokambor Avenue. Travel agencies and tour operators in our survey were classified as such because they were travel and tour agencies, were listed as travel agencies, and advertized tours and travel plans on signboards at the front of their stores. They had four to five employees who worked at desks with computers and telephones in small offices on the first floor along the street. Travel agencies and tour operators offered tours around Angkor Wat, flights within Cambodia and overseas, and many also offered to grant visas to those wishing to live in Siem Reap. We conducted interviews with office staff of travel agencies who mostly communicate with English speaking tourists, rather than tour guides. The total respondents in our survey was 17; 52 percent male, and 48 percent female, a

slight change over the ratio in the last analysis we have seen, which had a larger percentage of females working. Our findings show that 72 percent were from Siem Reap Province, and 28 percent were from other provinces including Battambang, Kampong Thom, and Bantey Mancheay, with none being from Phnom Penh. As for marriage, 95 percent were single. Travel and tour employees had an average of US \$117 per month, higher than the previous four businesses we have examined. They were an average age of 26, which, for the majority, was slightly older than the other businesses.

Travel agency employees had an average of 14 years of schooling (higher than previous analysis in hotels), and 17 people (100 percent) graduated from high school, which is again, higher than the previous businesses in our research. Results found that 17 people (100 percent) had jobs previously, such as receptionist, cashier, English teacher, other travel agency, bank, hotel, and airline, and 12 people (57 percent) responded that they had better salaries and living conditions than five years ago; 13 people (59 percent) stated that they think they will receive higher incomes after five years. Regarding English proficiency, travel agency/tour operator had an average English proficiency level of three. This is also higher than the English average in the previous businesses; so too is the fact that they studied English in school an average of 11 hours per week. In fact, 11 people (52 percent) studied three years or more. Eleven people (52 percent) had a better salary with English, eight (33 percent) had somewhat better, and 15 people (85 percent) were able to find work easier with

Table 11. Socio-economic Factors of Travel Agencies, Siem Reap, 2010.

No.	Particulars	Unit of Measure
1.	Those who graduated from high school	17 people
2.	Those with previous job	17 people
3.	Those with better salaries, lifestyles, or conditions	12 people
4.	Average years of general schooling (min: 9, max: 16)	14 years
5.	Number who studied English in school	20 people
6.	Average hours of English study per week (min: 0, max: 29)	11 hours
7.	Average monthly expenditure for English study (min: 0, max: 50)	US \$12
8.	Those with better income/employment prospects with English	11 people
9.	Those who could find work easier with English	18 people
	*Number of Respondents: 17	

Source: Compiled from survey data, 2010

English proficiency. Travel agency respondents reported they spent an average of US \$12 per month on English study; an interesting fact, and also higher than the other businesses in our survey.

6. Analysis and Discussion

We will now discuss quantitative results using simple statistical analysis by calculating several statistical measures to show reliability and validity. This simple statistical method is the most appropriate for our sample size and survey situation. The variables which were used in analysis which were mentioned in respective business tables were chosen because they are the most closely associated with our objective which is to verify income, education background, English background, and English proficiency. These variables can also be measured quantifiably, and they can help us examine the question of generating employment and income through English thoroughly. The explanations of the variables are given in table twelve. *Income* is expressed as monthly salary in US dollars. *Eng level* refers to the English proficiency levels of the respondents. *Ttl school* is the total years of general schooling, *Yrs Eng Edu* refers to the total year of English study in school, and *Eng\$/mo* is the expenditure on studying English per month in US\$. *Hrs eng* is the hours per week each respondent studied English in school. *Wkng yrs* is the numbers of working years at the present job. *Prev sal* is the previous salary earned by the respondent, and *Eng/mo* is the usage

Table 12. Variables for Statistical Analysis*

Variables	Reference
Income	Income, in monthly US\$
Eng level	English proficiency levels
Ttl school	Total years of general education
Yrs Eng Edu	Total years of English education in school
Eng\$/mo	Expenditure for English study per month
Hrs eng	Hours of English study in school per week
Wkg yrs	Years working at the job
Prev sal	Salary in previous job
Eng/mo	Days per month English is used

Source: Created from survey data, 2010

*Variables in this table are used in statistical analysis.

Table 13. Variables for Covariance and Correlation*

Variables	Reference
Inc	Income, in monthly US\$
Eng lvl	English proficiency level
Yrs scho	Total years of general education
\$eng	Expenditure for English study per month
Hrs/eng	Hours of English study in school per week
Eng/mo	Days per month English is used

Source: Compiled from survey data, 2010

*Variables in this table are used for covariance analysis and correlation only.

of English in days per month by the respondent. Variables used in covariance tables are defined as: *Income*—monthly salary in \$US; *Eng lvl*—level of English proficiency; *Yrs sch*—total years of general schooling; *\$eng*—expenditure on English study monthly; *Hrs/eng*—hours per week in English study at school; *Yrs Eng*—total years of English study in school; and *Eng/mo*—number of days per month English is used. These variables are shown in table thirteen. Final values are expressed as two digits after the decimal point for simplification, and are not rounded in either direction.

The statistical measures in conjunction with the above variables in the examination are: mean, median, mode, variance, standard deviation, and coefficient of variation. To give strength to our analysis, we also measured the covariance of income with the variables in the table thirteen. Finally, we calculated Pearson’s r correlation coefficient of income with the variables in table thirteen. Before we move to our analysis, it is worthy to briefly explain the meaning of statistical measures.

Mean essentially is defined as the average, or central tendency, of a group of data. Mean is not necessarily a true indicator of central average because it is very sensitive to outliers, which are data either very far above or below the main group of data. These low or high values can skew the results. Because of this, median, the exact central point of data, and the mode, the number which occurs most often in the data set, are better indicators of central tendency. Variance, obtained by taking the square of the standard deviation, shows the level of variability and dispersion among values. We use this measure to describe variability in our analysis. Standard deviation explains how far the values are

spread from the mean, and is the square root of the variance. Being similar to variance, standard deviation can give us a better idea than variance as to the actual spread of data. Low standard deviation shows data that is close to the mean; high standard deviation indicates data farther away from the mean. Standard deviation is useful because it is expressed in similar values to the actual data. Coefficient of variation, or the standard deviation divided by the mean, is another way to determine the strength of a relationship. Often expressed as a percentage, the resulting value can help us understand the variability in a relative sense; the lower the value, the stronger the relationship because there is less variation. Coefficient of variation can be thought of as a percentage of the mean. It is useful because two different values or numbers with different units can be compared numerically; the higher the CV, the greater the dispersion of the particular variable. We performed Pearson’s r correlation test to verify the degrees of correlation among our variables used in the analysis. Theoretically, correlation coefficient results range between -1 and +1; those closer to +1 are significant, and those closer to -1 are less significant. The following tables show our results for each business type.

6.1 Statistical Analysis of Each Business

6.1.1 Souvenir Shops

Table 14. Statistical Results of Souvenir Shops

Variable	Mean	Median	Mode	Variance	SD	CV
Income	68.15	60	60	1128.24	33.58	0.49
Prev sal	40.13	35	27	54.15	7.35	0.29
Eng lvl	2	3	2	1.62	1.27	0.6
Ttl scho	10.20	12	3	7.05	2.65	0.26
Eng\$/mo	10.34	5	0	520.14	22.64	2.18
Hrs/Eng	4.04	4	6	15.86	3.98	0.98
Yrs Eng	1.78	2	3	1.20	1.09	0.61
Wkg Yrs	2.54	2	2	4.76	2.18	0.86
Eng/days	26.38	30	30	79.32	8.90	0.33

Source: Calculated from survey data, 2010

Upon examining the table, we notice some various inconsistencies. Firstly, the mean, median, and mode are different in many cases, signaling the affect of

outliers. Variance and standard deviation values are both high in income, previous salary, and English expenditure per month, indicating more dispersion, and employees who came from varied job, varied education, varied years of schooling, and varied English education backgrounds. Values in variance and standard deviation are low in English level, reflecting a similar English level in all employees. Median and mode values of income show that most made around US \$60 per month, which is consistent with our findings. Mode values for money for English per month, signifying that monthly spending on English is nearly the same for most employees. Mode value for study hours of English per week varies greatly between respondents; some studied three while some studied as many as 12. Mode value for total schooling is low at three, while median is 12. This reflects the fact that a few employees graduated from high school and most employees only attended primary school.

6.1.2 Restaurants

Table 15. Statistical Results of Restaurants

Variable	Mean	Median	Mode	Variance	SD	CV
Income	69.70	60	60	415.06	20.37	0.29
Prev sal	43.08	50	0	895.47	29.92	0.69
Eng lvl	2.32	2	2	0.77	0.87	0.37
Ttl scho	10.97	12	3	7.12	2.62	0.23
Eng\$/mo	8.35	5.5	0	155.99	12.48	1.49
Hrs/Eng	4.85	4	0	16.67	4.08	0.84
Yrs Eng	2.35	3	3	16.67	1.47	0.62
Wkg Yrs	1.45	1	1	1.00	1.00	0.68
Eng/days	29.47	30	30	9.52	3.08	0.10

Source: Calculated from survey data, 2010

In restaurants, we find a similar situation to souvenir shops; median and mode values for some variables are the same indicating little change. The same situation as souvenir shops in income applies here. In addition, there is no mode for previous salary, and variance is high. Variance and standard deviation are slightly high in income, and it is also high in monthly spending for English study. Standard deviation is high in money spent on English. However, compared to other businesses, standard deviation is lower than souvenir shops and hotels on

the one hand, it is higher than guest houses and travel agencies on the other. Interestingly, variance is lowest in income of all the businesses. We assume this to mean that wage differential is not high in restaurants due to similarity of job type, working hours, and location.

6.1.3 Guest Houses

Table 16. Statistical Results of Guest Houses

Variable	Mean	Median	Mode	Variance	SD	CV
Income	72.38	60	60	1386.54	37.23	0.29
Prev sal	51.42	50	50	1472.85	38.37	0.69
Eng lvl	2.33	3	3	1.63	1.27	0.37
Ttl scho	13.09	12	12	7.39	2.71	0.23
Eng\$/mo	10.47	7	5	122.96	11.08	1.49
Hrs/Eng	5.23	5	5	3.59	1.89	0.84
Yrs Eng	3.19	3	3	0.76	0.87	0.62
Wkg Yrs	1.78	1	1	1.46	1.02	0.68
Eng/days	22.42	30	30	13.75	11.43	0.10

Source: Calculated from survey data, 2010

The mean income of guest houses (72.38) is followed by souvenir shops (68.15) and restaurants (69.70). The median and mode values are similar to the previous two businesses, and again are slightly skewed due to outliers. This could indicate that on average, employees in souvenir shops, restaurants and guest houses all made around the same salaries, which is not surprising for those who have experience of visiting this kind of retail shop. However, variance in income, previous salary, and money spent on English monthly are all high, as in the previous businesses. This result seems to be consistent with these types of businesses; although employees in these simple retail businesses can earn at least US \$60, the wage differential among them is rather large. In addition, all the employees had an English level of 2 to 3, and all respondents in these three businesses used English 22 to 29 days per month.

6.1.4 Hotels

Hotels' values reflect somewhat similar values to the previous three businesses particularly for income and previous salary, although the mean,

Table 17. Statistical Results of Hotels

Variable	Mean	Median	Mode	Variance	SD	CV
Income	104.47	85	100	3353.77	57.91	0.55
Prev sal	56.44	50	40	2380.95	48.79	0.86
Eng lvl	2.28	2.5	3	2.31	1.52	0.66
Ttl scho	12.60	12	12	8.83	2.97	0.23
Eng\$/mo	14.52	10	10	211.87	14.55	1.00
Hrs/Eng	7.06	6	6	46.27	6.80	0.96
Yrs Eng	3.71	3	3	3.40	1.84	0.49
Wkg Yrs	2.64	2	2	2.01	48.79	0.53
Eng/days	26.28	30	30	80.31	8.96	0.34

Source: Calculated from survey data, 2010

median, and mode are very different, as well as indicating a large skew. It is needless to point out that employees in hotels are salary workers rather than wage earners, and as a result, they have more stable incomes than the previous businesses. Employees working in hotels are “moving up the ladder” in terms of higher salaries and better positions. English level is higher than restaurants and souvenir shops, but slightly lower than in guest houses. Hours of English study per week is also the highest among the previous businesses. High variance in income and previous salary indicates that employees came from different kinds of jobs in the past. The variances in money spent on English per month, English usage per month, and hours of English per week are high, except in souvenir shops. This could indicate employees coming from a varied English education background.

6.1.5 Travel Agencies

Generally in Siem Reap, as the employees in travel agencies have better salaries than the other tourism related businesses, we got the highest mean value of the income. In addition, the English level in travel agencies is also the highest. As with hotels, those who have a higher level of English, who have high monthly spending for English study, and who study English in school, all have a chance to reach the higher echelon of employment in tourist industry of Siem Reap. Variance for previous salary in travel agencies is very high. We can only surmise that employees came from many types of jobs in the past as they were working their ways to better employment and higher incomes.

Table 18. Statistical Results of Travel Agencies

Variable	Mean	Median	Mode	Variance	SD	CV
Income	117.05	100	150	1559.05	39.49	0.33
Prev sal	91.17	70	70	5607.90	74.88	0.82
Eng lvl	3.05	3	4	1.30	1.44	0.37
Ttl scho	14.47	16	16	6.63	2.57	0.17
Eng\$/mo	12.58	10	10	135.88	11.65	0.92
Hrs/Eng	8.17	6	5	50.27	7.09	0.86
Yrs Eng	5.11	6	6	1.98	1.40	0.27
Wkg Yrs	1.32	1	0.5	1.06	1.02	0.77
Eng/days	27.88	30	30	35.73	5.97	0.21

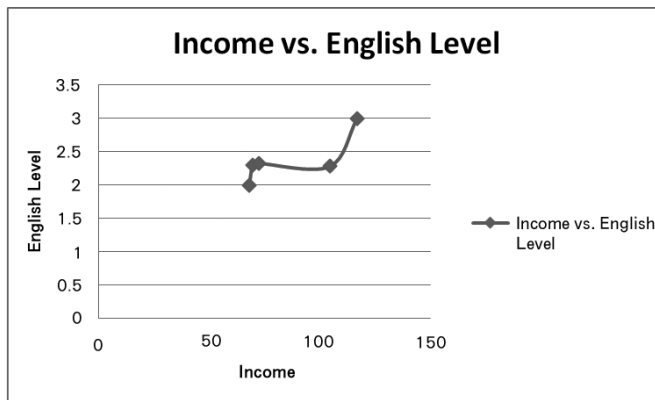
Source: Calculated from survey data, 2010

As depicted in graph one, the correlation between income and English level for all five tourist businesses, it is evident that higher income recipients in the tourist industry have higher English levels, with the exception of hotel English level, which dipped slightly. The income levels in graph one range from souvenir shops at the lowest, to travel agencies at the highest. We can assuredly say that income and with English proficiency level are positively related. In other words, those who have high English proficiency level could earn higher income. As we already found in section five, 69 percent from souvenir shops, 65 percent from restaurants, 69 percent from guest houses, 82 percent from hotels, and 85 percent from travel agencies responded that if they have a higher English ability they could find employment or jobs easier. Therefore, finally it is appropriate to conclude that having a certain level of English ability can generate employment and income opportunities in tourist industry of Siem Reap.

Our survey data contains the problems such as outliers and some values which cannot be explained, probably due to the unforeseen nature of this survey situation. However, we were able to gather data which no one could collect previously. Our study, though not as robust as we would have liked, does show a consistent income distribution among the tourist businesses, and illustrates that English background education and proficiency are necessary in obtaining stable jobs in tourism industry of Cambodia.

Covariance, which describes the relationship of movement between two variables, shows a positive relationship if the two variables move together in a positive direction; if they move in opposite directions, their relationship is

Graph 1. Income vs. English Level



Source: Calculated from survey data, 2010

negative or non-existent. We would like to choose different variables for covariance, especially income in relation to other variables. Table 19 shows that within guest houses, we can infer that there is a positive relationship between income and English level, years of school, and hours of English study in school. That is not to say one causes the other however. Other possible consistencies are income with usage of English per month, but which is more obvious in guest houses and hotels. This indicates that an English background, proficiency in English, and focus on studying English can have a positive effect on income in tourism.

Table 19. Covariance Results of Tourism Businesses, 2010.

Type of Busines	Variable				
	Inc-Eng lvl	Inc-Yrs sch (total years)	Inc-\$eng (\$per month)	Inc-Hrs/eng (Hrs per week)	Inc-Eng/mo (days per mo)
Souvenir	3.98	8.65	26.13	- 8.11	- 23.87
Restaurants	2.74	- 17.21	- 7.54	22.75	5.13
Guest Houses	23.96	22.39	8.62	28.95	71.59
Hotels	25.02	48.21	- 42.88	10.23	28.70
Travel Agencies	- 1.59	- 10.38	- 61.21	64.63	- 16.81

Source: Calculation based on survey data, 2010

Some covariance values are negative; this kind of inverse relationships are found in income and hours of English study per week, and income and usage of English per month in souvenir shops; income and money spent on English in

restaurants; income and English level, income and years of schooling, income and money spent on English per month, and usage of English per month in travel agencies. This is probably due to the small sample size, and inaccurate responses from our interviewees who could not respond adequately. However, this does not detract from our findings; it simply means that our study relies only on numerical data of income and English education not all the entire cultural situation of tourist industry in Siem Reap. All in all, the descriptive survey data and our statistical results could throw a light on the importance of English education in finding a better job and income in tourist industry of Cambodia.

We performed Pearson’s r correlation test to show validity, examined in table 20. The test correlated income with the same variables from the covariance table. Correlation coefficients range between -1 and +1; those closer to +1 are significant, and those closer to -1 are not significant, particularly for our study. As we have expected, there are positive correlations in many variables, such as souvenir shops for English level, years of schooling, monthly English expenditure, years of English study; restaurants for English level, hours of English study, English usage per month; guest houses for English level, years of schooling, monthly English expenditure, hours of English study, and English usage per month; hotels for English level, years of schooling, hours of English study, English usage per month, and years of English study; and travel agencies for monthly English expenditure, hours of English study, and years of English study. Although we didn’t expect negative correlation, it was found in souvenir shops for hours of English per month and English usage per month; restaurants for years of schooling, monthly English expenditure, years of English study; guest houses for years of English study; hotels for monthly English expenditure; and travel agencies for English level, years of schooling, and English usage per

Table 20. Correlation Results

	Eng Lvl	Yrs scho	\$ for Eng	Hrs/Eng	Eng/mo	Yrs Eng
Souvenir	0.09	0.09	0.03	- 0.08	- 0.06	0.06
Restaurants	0.15	- 0.32	- 0.03	0.28	0.08	- 0.28
Guest Houses	0.52	0.23	0.02	0.43	0.17	- 0.04
Hotels	0.29	0.28	- 0.05	0.02	0.05	0.47
Travel Agencies	- 0.03	- 0.10	0.01	0.24	- 0.07	0.01

Source: Calculating using Survey Data, 2010

month. Having a negative correlation in our results would be the same reasons as mentioned above in the covariance analysis.

6.2 Income Differential among Five Tourist Businesses

Our mean value explained that income is distributed across our tourist industry businesses in the order of highest to lowest income: 1) travel agencies, 2) hotels, 3) guest houses, 4) restaurants, and 5) souvenir shops, although we do not have such a beautiful order by using median results. Income in our research was influenced by several factors, such as age, province of birth, schooling, money spent on English per month, and high school graduation. Comparing to garments workers' income of Phnom Penh which ranges between US \$45 to US \$55 per month, tourist industry income was much higher. According to our findings, the income differential between souvenir shops (the lowest, US \$68) and travel agencies (the highest, US \$117) was 58 percent. Travel agencies make almost double what souvenir shop employees do. The reason for the inequality of income distribution in our results is probably based on the nature of the business situation, but also goes back to education, English education in school, spending money to learn English outside school, and English proficiency. It is widely accepted that the more schooling one has and the more one takes the time to learn English lead to better employment prospects and income that person will have in every country in the world. But it is worthy to note that this kind of positive correlation between study of English and having a better job and income cannot be true always.

6.3 Employment Generation

We have found that, thanks to English, people can get jobs in tourism, and can move onto a higher standard of living. Moreover, English proficiency can help maintain employment because of the tourist industry. Where a large percentage did not have jobs before tourism, they now do. It is the real fact that English proficiency can help generate jobs and higher incomes for those in Siem Reap City and the surrounding area. Those who cannot speak English are truly at a disadvantage, especially in Siem Reap City in which people their living in the tourist industry. We can only say this is true for the tourism businesses in our survey, and only for Siem Reap; however, this possibly may be the case

throughout Cambodia. All in all, English in employment does matter. The people of Siem Reap believe they need English now, and will need more English for employment promotion. Our survey result also found that almost about half of the respondents expect to have a better income in five years with the help of improved English. This is because money is spent each month learning English, which is an important contribution to human capital. Table 21 displays the mean value of English ability, the money spent on English per month, the percentage of people who believe they will have a better income in five years, and the present mean income.

Table 21. Mean Value of Some Selected Variables, 2010

Type of Business	English Ability	Monthly Expenditure for English	Better Income in Five Years (%)	Income (\$)
Souvenir	2	10.34	40%	68.15
Restaurants	2.3	8.35	65%	69.70
Guest Houses	2.33	10.47	23%	72.38
Hotels	2.28	14.52	59%	104.47
Travel Agencies	3	12.58	59%	117.05

Source: Calculation based on survey data, 2010

In addition, the tourism labor force has experienced an increase in income in their present jobs from previous incomes. Table 22 characterizes this percent of change in our five businesses. As expected, all businesses show an increase in income from previous salaries, although travel agencies' increase was the lowest at 22%. Souvenir shops and hotel employees had an increase of almost 50 percent over previous salaries.

Table 22. Percent of Change from Previous Salary, 2010

Previous employment	Previous Salary (US\$)	Present Salary (US\$)	Percent of Change
Souvenir	40.01	68.15	+41%
Restaurants	43.08	69.70	+38%
Guest Houses	51.42	72.38	+28%
Hotel	56.44	104.47	+45%
Travel	91.17	117.05	+22%

Source: Calculation based on survey data, 2010

We were also able to discover many socio-economic factors of the tourist industry situation in Siem Reap, Cambodia through our research. These can be counted as general social factors all important for human livelihood and survival. Our questionnaire for this survey was updated and designed from our previous questionnaire of 2008, and even though it was not perfect, it could reveal many concrete answers which did not take away from the final results. We can say that English education, frequency of English use per month, and English proficiency can directly contribute to better employment in the fields such as travel agencies and hotels, by allowing employees to increase their human capital skills in intercultural communication, and also by developing data processing skills in English on the computer for efficiency in working with foreign travelers and guests. English proficiency perhaps directly leads to employment in jobs such as souvenir shops, guest houses, and restaurants, through our analysis we have seen that these members of the labor force use English daily every month, have expenditures for English study monthly, and have salaries higher than previously. We can say for these businesses, too, that English proficiency may offer a stepping stone to generate better employment and higher salaries.

English education is of utmost importance in searching for, and obtaining, employment. As can be seen in the socioeconomic factors' tables, souvenir shops had the least average hours of English education per week at four, restaurant and guest house employees had an average of five each, hotels, and average of seven, and travel agencies, an average of 11. Souvenir shops had one respondent who studied a maximum of 24 hours of English per week, but this is just one respondent. Below that, the maximum was 16 hours. Maximum hours of English study per week increased steadily in restaurants (19 hours), hotels (26 hours), and travel agencies (29 hours), except guest houses (10 hours). It is evident that those who spent more hours studying English in school have more chance at receiving a stable and higher income.

Unfortunately, there is no data on applications for tourism jobs that directly stipulates the necessity of having a degree, a diploma, or a certain level of English proficiency in order to obtain a particular job. For this reason, proving the need for English proficiency concretely is difficult. However, we have seen notice boards written in English for job vacancies in front of restaurants. We have spoken directly to the labor force including shop owners and managers who

relate that they have either gotten a job with English ability, or required proficiency in their new employees. There seems to be nothing in work contracts or other literature. More English proficiency test and proficiency data need to be collected in this area of statistical research in Cambodia and other developing countries in order to truly examine English proficiency and employment and income. However, the author has begun to more fully examine obtaining a more accurate assessment of English proficiency and to connect this with the field of economic research in generating employment better employment opportunities and higher incomes.

7. Conclusion

Although our survey and the survey experience was not perfect, we could explain many factors regarding the socio-economic conditions of the existing labor force in tourism in Siem Reap, Cambodia, and generation of income and employment opportunities through English. These findings include:

- 1) Restaurant workers could continue to work if they are satisfied with similar incomes and are not concerned with job advancement or income increase. However, English ability is important in restaurants because of high frequency of visits by English speaking foreign guests.
- 2) The length of working years in hotels, a mean of 2.64 years, is the highest in our survey, and could show stability in income and employment than other businesses.
- 3) The English proficiency of travel agent respondents, a mean of 3, shows that English proficiency can assist in reaching higher income jobs.
- 4) An English background, proficiency in English, and strong desire on studying English can have a positive effect on employment and income.
- 5) The more money one spends on studying English, whether they graduated from high school, and whether they had a long job experience all appear to positively influence income in all businesses under our study.
- 6) English proficiency can help maintain employment, and thanks to the tourism industry, many who did not have jobs before now do. Therefore we came to know that English proficiency cannot only maintain the present job and income, but also generate new jobs and income for those in Siem Reap.

- 7) Generally, members of the tourism labor force use English every day, have expenditures for studying English, and as a result have improvements in salaries and living conditions.
- 8) Most of our interviewees have confidence that their job search was easier with English, and that they will need English for life. English proficiency will certainly be a stepping stone to generate better employment and higher salaries, particularly in the tourist industry.

Not only is English proficiency useful and necessary in gaining employment opportunities, years of general education and hours of English education are of great importance as well. Again, we can see that in hotels and travel agencies, the minimum number of years of schooling is nine, and the maximum is sixteen. On the other hand, the minimum years of schooling in souvenir shops, restaurants, and guest houses, is six. As our results show, those who have graduated at least high school have a good chance at obtaining full time employment, and even better chances are for those who graduated from university. Totally, 57 percent of the labor force was able to find jobs easier with a firm English background. In addition, 58 percent of the entire labor force in our survey had better prospects with English proficiency. This shows the great importance of English education in searching for jobs and obtaining employment in Siem Reap City.

Our survey revealed many shortcomings, but these did not detract from receiving relevant results. This research work has brought us closer to being able to understand what drives better employment and income for the labor force in the tourism industry of Siem Reap, Cambodia. It is hoped more research on generating employment and income opportunities through English proficiency in developing countries can contribute to a better labor market environment and growth of income with the goal of eradicating poverty.

Appendix A.

To obtain a more accurate assessment of English proficiency during survey work in Siem Reap, the author used a self-designed variation of the Common European Frame of References for Languages (CEFR), created by the Council of Europe for language education of European citizens. The system contains six reference levels and is applicable to any language. These tables show the levels

of the CEFR and the author’s variation:

CEFR Reference Levels

A1	Breakthrough or beginner - can understand familiar everyday expressions, can introduce self
A2	Waystage or elementary - can understand and use expressions within immediate relevance
B1	Threshold or pre-intermediate - can understand main points and deal with traveling
B2	Vantage or intermediate - can understand and produce ideas on concrete and abstract topics
C1	Effective operational proficiency - can get implicit meaning, can use language flexibly
C2	Mastery or advanced - can understand everything, can express spontaneously and fluently

Source: Council of Europe for Language Education, 2011

The Author’s Variation of English Proficiency Assessment

0	No or little ability - can’t communicate at all
1	Low Beginner - can only understand and use familiar everyday expressions
2	High Beginner - can understand and use expressions within everyday relevance
3	Low Intermediate - can understand many things, can produce but with many mistakes
4	High Intermediate - can understand and produce ideas but with lower confidence
5	Advanced - can understand everything and produce fluently and confidently

Source: Created by Author, 2010

Appendix B.

Sample Size Calculation

$$n \geq \frac{N}{\left(\frac{e}{k}\right)^2 \frac{N-1}{P(1-P)} + 1}$$

n = sample size

N = size of population

e = tolerance error (5%, 0.05)

k = confidence coefficient (confidence interval 95%, 1.96)

P = expected percent of respondents which are expected to respond affirmatively

The confidence coefficient, k corresponds to the degree of confidence we hope to obtain after results are tabulated. 95% confidence is the most widely accepted and used for this paper. P =the number of respondents expected to respond affirmatively. As this study was only geared towards collecting data only

for hospitality businesses, it was only relevant to collect data for those businesses. Unfortunately, the total number of souvenir shops (in Siem Reap) was unavailable, and the author could only make an attempt at counting the souvenir shops in a single area, but by no means could count city/area-wide due to time and budget constraints.

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Summary

Employment, Income and English Ability

Throughout the history of development experiences within developed and developing economies, generating employment and income opportunities has been the most important and hardest task for governments, policy makers, and economists. Accordingly, there have been numerous research works and studies, theoretical and empirical, on solving the problems of job and income on a global scale. However, studies on generating employment and income of people through English are still limited. This paper attempts to fill this gap through survey work on the tourism industry, which has greatly expanded around World Heritage Angkor Wat in Siem Reap City of Cambodia. Section (1) explores the growth of tourism industry of Cambodia in general as a background work of this paper. Section (2) briefly explains the sample survey work in Siem Reap City with the help of Angkor University Research Center for economic Development. Survey methodology, designated survey areas, types of tourism businesses under study, and the questionnaire design are provided in section (3). The limitation of our survey work as well as the nature and characteristics of tourism businesses under study are discussed in section (4) and (5) respectively. The results of statistical analysis especially on English ability, income differential, and high possibility of generating employment and income through English are examined in section (6). Finally, we provide research findings and concluding marks.