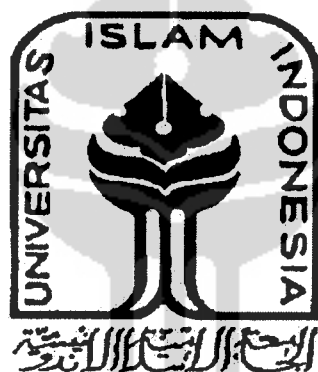


**FACTORS AFFECTING HOTEL AND RESTAURANT'S
TAX REVENUES IN PONTIANAK, WEST KALIMANTAN
YEAR 1990-2005**

A THESIS

Presented as Partial Fulfillment of the Requirements to Obtain the Bachelor
Degree in Economics Department



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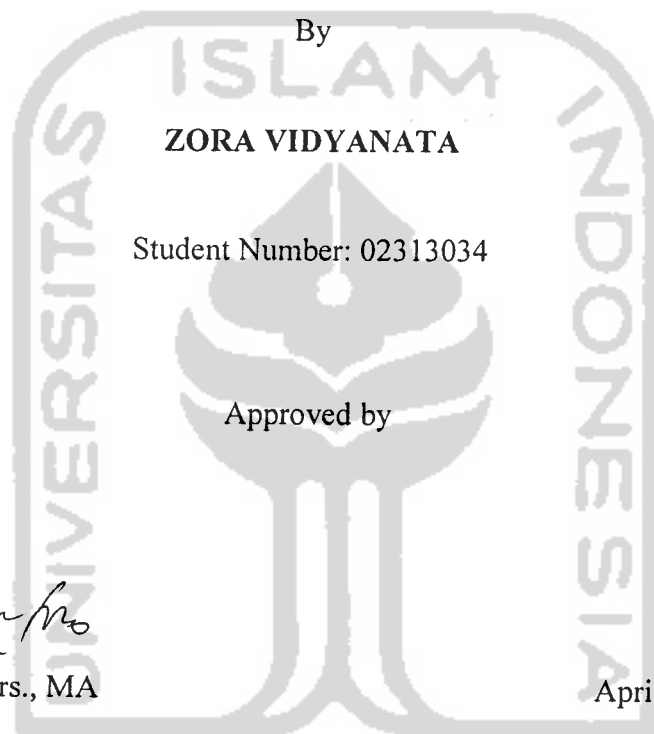
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YOGYAKARTA**

2007

**FACTORS AFFECTING HOTEL AND RESTAURANT'S
TAX REVENUES IN PONTIANAK, KALIMANTAN BARAT
YEAR 1990-2005**



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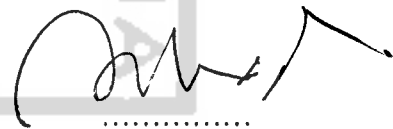
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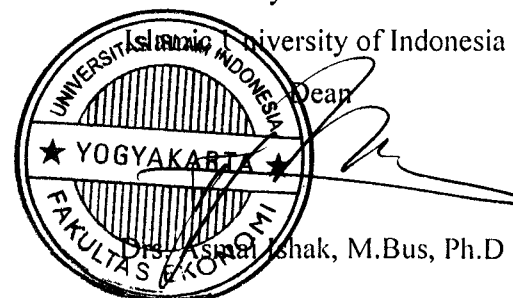
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The academic writing is composed as partial fulfillment to obtain bachelor degree in International Program, Economics Department, Faculty of Economics, Universitas Islam Indonesia. Furthermore, I chooses **“FACTORS AFFECTING HOTEL AND RESTAURANT’S TAX REVENUES IN PONTIANAK, WEST KALIMANTAN YEAR 1990-2005”** as the title of the thesis.

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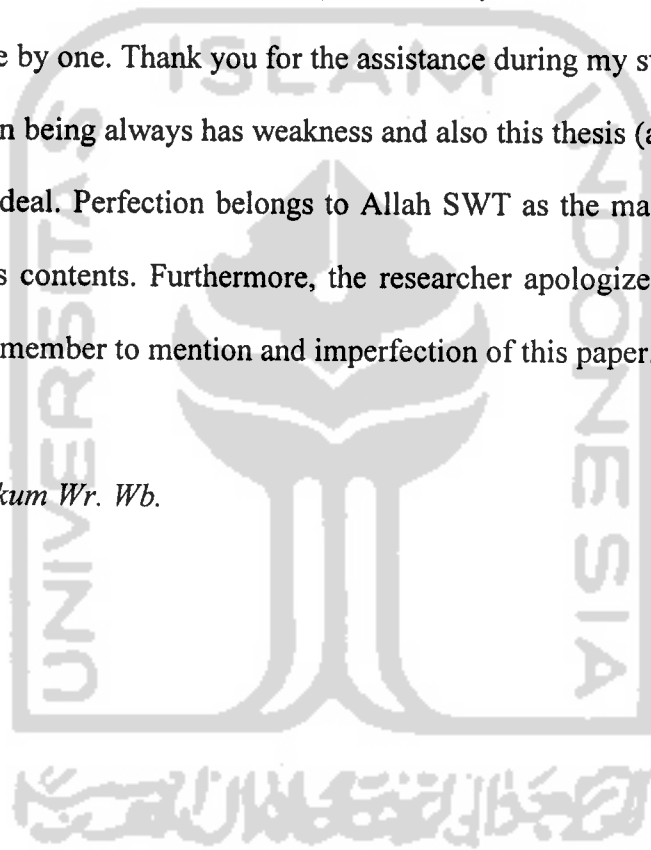
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Wassalamualaikum Wr. Wb.



Zora Vidyanata

STATEMENT FREE OF PLAGIARISM

Herein I declare the originality of this thesis; there is no other work which has ever presented to obtain any university degree, and in my concern there is neither one else's opinion nor published written work, except acknowledged quotation relevant to the topic of this thesis which have been stated or listed on the thesis bibliography.

If in the future this statement is not proven as it supposed to be, I am willing to accept any sanction complying to the determinated for its consequences.

Yogyakarta, April 25, 2007

Zora Vidyanata

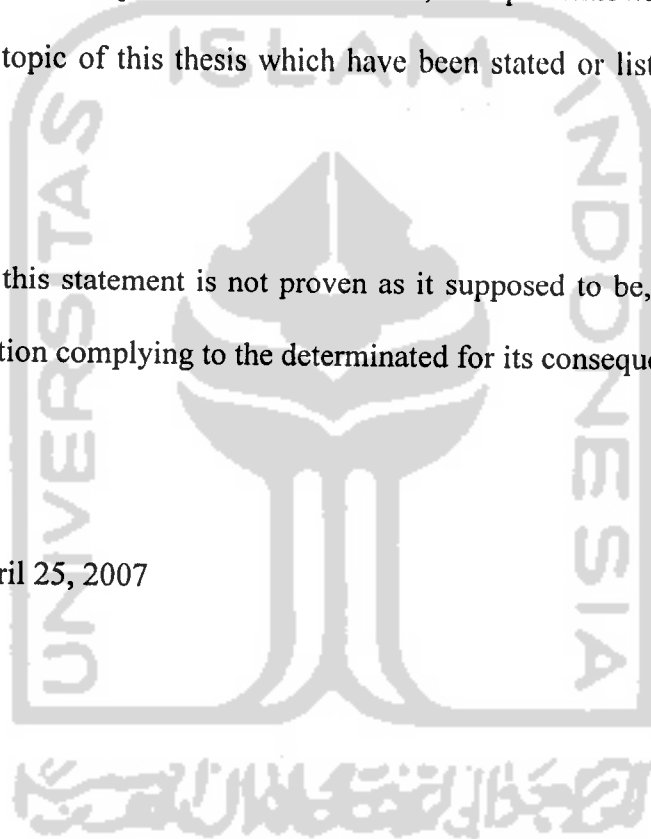


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ABSTRACT

By using three previous studies related to a region's tax revenue from hotels and restaurants (PPHR) as a literature study, this study adapts and specialize its analysis in factors in tourism sector and its effect to Pontianak's PPHR. Within the factors analyzed are numbers of domestic and foreign tourists, increase in number of restaurants, and increase in Malaysia's Gross Domestic Product (GDP) as Pontianak geographically neighbor country.

By using 16 years of time series data, a regression is performed using an Ordinary Least Square (OLS) econometric method where PPHR is the dependent variable and the tourism sector's factors as the independent variables. After an assumption violation test is conduct, it was concluded based on the OLS model produced that tourism sector's factors that have a positive and significant effect to PPHR in Pontianak are numbers of domestic tourists (WISDOM) and increase in numbers of restaurants (SREST). Meanwhile, numbers of foreign tourists (WISMAN) and Malaysia's GDP (GDPMLY) does not effect Pontianak's PPHR significantly. All test in this thesis is conduct with confidence level 95% ($\alpha=5\%$).

CHAPTER I

INTRODUCTION

1.1 Problematic Background

Tourism gives an important contribution for the economy and the people of a nation. Every visit from a tourist, international and domestic, is a contribution for the country's income in the non-oil sector. The importance of tourism for the economics of a country puts tourism as an industry that is capable of improving the development of economy, either local or international.

The importance of tourism industry towards national economy can be seen through two main processes, which is globalization and localization (also known as decentralization and regional autonomy). Indonesia as a country which has ratified agreements of GATT/WTO Uruguay Chapter in the year 1994 has a commitment to run the agreements which have been reached. The commitment of Indonesia's tourism sector for the agenda of globalization have been given in the framework of AFTA year 2002 (ASEAN Framework Agreement on Services), and GATS/WTO year 2020.¹

The tendency and implication of the regional autonomy and globalization needs to be supervised, analyzed, and attended positively by the tourism sector so that it can expand optimally. As a measure in order to maximize the tourism industry in every area of Indonesia, the government of Indonesia have also released some policies which supports the activity of local tourism, in the form of

¹ Armida S. Alisjahbana, *Regional Tourism Development in Entering the Era of Decentralization*, The paper was delivered in a panel discussion held by the Association of Hotels and Restaurants in Indonesia in the third Natinal Meeting in Bandung, February 19th, 2000.

regulations No. 22 year 1999 concerning Regional Governance and regulations No. 25 concerning the counter balance of finance of central-region as a base execution of regional autonomy which should be fully implemented in the year 2001. The presence of those two legislations is expected to develop each and every tourism potential there are in every region of Indonesia. To attend the execution of regional autonomy, it demands a charge and preparation in each sector, including the tourism sector. Besides that it demands the readiness of good attitude, capacities, and also regional government capabilities in carrying out governance and development of a region.

Pontianak as one of the capital province city in Indonesia is on target develop zonal potential in the tourism industry. Pontianak is the capital of West Kalimantan province which has long been known as an Equator City (Kota Khatulistiwa). It's location which has joint border with East Malaysia enable people from both countries (Indonesia and Malaysia) to visit one another's. It is expected that the presence of incoming tourists to Pontianak can give a contribution for the local generated income (PAD) coming from tax. Realization of The Town Government of Pontianak to draw attention of tourists are carried out by developing the entire potential which Pontianak has, such as natural beauty, culture diversity, and also other supporting facility are made tourist destination, foreign and domestic. A fact in an internet site report shows that in the year 2000 foreign tourist brought in Rp 50 million for Indonesia's income, hence in the same period domestic tourist succeeded to bring in Rp 70 million in

foreign exchange.² The data shows that domestic tourist potentials in reaching income is quite potential and doesn't have too much of an effect for global aspects.

The local generated income (PAD) from the tourism sector in fact is big enough, among others descends from hotels and restaurant operations as a supporting facility of tourism. According to information from an internet site, expenditure of tourist for both supporting facilities can reach up to 30%.³ There by, it is very logical if the rise of performance in the tourism sector will be able to increase the local generated income (PAD) through the increasing hotel and restaurant tax.

1990	361301319.5	6069	267088.00	-1	105978
1991	361,341,242.00	512	255,392.00	2	116193
1992	361,261,397.00	548	278,783.00	0	126407
1993	362,461,615.00	552	301,533.00	3	138915
1994	812,497,363.00	491	368,922.00	2	151713
1995	667,318,718.00	426	409,122.00	3	166625
1996	1,060,262,976.00	255	431,222.00	0	183291
1997	1,673,545,000.00	239	453,948.00	5	196713
1998	1,620,487,000.00	300	533,948.00	1	182236
1999	1,842,640,000.00	250	824,460.00	1	193423
2000	2,150,682,000.00	205	840,400.00	-2	210558
2001	1,956,150,000.00	226	935,625.00	-3	211228
2002	3,000,000,000.00	268	956,830.00	-1	220422
2003	3,750,000,000.00	265	975,996.00	2	232360
2004	3,650,000,000.00	265	1,243,875.00	0	248954
2005	5,750,000,000.00	342	1,306,069.00	9	240657

From the data, we can see that:

- PPHR of Pontianak City increases through years.

² <http://www.sinarharapan.co.id/feature/wisata/2003/0724/wis02.html>, "Pontianak as the host of BIM-EAGA Tourism Meeting"

³ Loc.cit

- The number of domestic tourists also increases through years, while the number of foreign tourists relatively constant through years.
- The changes in the number of restaurants shows a development through the years except in the years following Indonesia's economic crisis (2000 – 2002),

As for hotel and facility conditions, in West Kalimantan there are 32 hotels, and in Pontianak alone there are no 4-star hotels. And so it is with restaurants, where there are only 110 restaurants amounting in data.⁴ While the potential of hotel and restaurant tax is only 4 times from the realization that are able to be collected by the Town Government of Pontianak. This condition creates a challenge for the Town Government of Pontianak to be able to increase its origin income of province (PAD) through revenue from hotel and restaurant taxes as a supporting facility of tourism. Because of that, this thesis will try to analyze the effects of tourism sector towards Pontianak's tax revenue from hotels and restaurants (PPHR).

1.2 Problem Identification

The potential of PPHR in Pontianak has not yet been developed optimally, the efforts to enhance it optimally has also not been performed. The absence of four-stars hotels and the few number of restaurants that exist comes to proof such un-optimal development. This also implicitly indicates that tourism has not been developed as well, and such condition reflects the opportunity of development.

⁴ <http://www.pontianakpost.com/berita/index.asp?Berita=Utama&id=82361>, "Prepare for Inpres to Build Tourism"

To build the effective strategy in increasing PPHR, an empirical study is required regarding factors that effect Pontianak's PPHR. Therefore, this thesis will analyze factors that effect Pontianak's PPHR.

1.3 Problem Formulation

PPHR is the main object in this research, where the characteristic about its determining factors are learned. Using a simple econometrics Ordinary Least Square model, the significant determining factors will be identified. For simple, the econometric model will be constructed with the PPHR as the dependent variable, and the tourism factors will be the independent variables. Through the model, it is expected that the characteristic of PPHR, especially about its determining tourism factors, could be obtained.

1.4 Problem Limitation

The existence of limited informations and numerical data, this undergraduate thesis will limit its study with using only three variables representing the tourism sector, there are: Restourants, domestic tourist, and international tourist. As international tourists in Pontianak City are dominated by tourist from Malaysia, here we are incorporated the Malaysian economic variable – the real GDP – to find out whether there is a relation between Malaysian economic condition with Pontianak's Hotel and Restaurant Tax Revenues (PPHR).

1.5 Research Objectives

The main objective of this thesis is to acknowledge factors from tourism that will affect the PPHR of Pontianak. In specific, this thesis is written to:

- Identify the characteristics of effect from numbers of domestic tourist visits to Pontianak's PPHR
- Identify the characteristics of effect from numbers of foreign tourist visits to Pontianak's PPHR
- Identify the characteristics of effect from the changes in the number of restaurants to Pontianak's PPHR
- Identify the characteristics of effect from Malaysia's GDP to Pontianak's PPHR

1.6 Research Contribution

It is hoped that this research will have some contributions in both the world of academic and the world of practice.

- Academically, characteristic view on tax revenue from hotels and restaurants (PPHR) and factors that significantly effects it will be available. Also, the direction for each effect will be drawn (each factor effect PPHR positively).
- Practically, this research can be a material input for consideration, for the Town Government of Pontianak in specific and for the Local Government of West Kalimantan in general, in organizing regulation and policy which are related to efforts in increasing the hotel and restaurant tax revenue by encouragement of the tourism sector.

1.7 Definition of Term

Tax is an important issue for nations and societies within them. Every citizen living in a country has to deal with taxes. Some definition terms used in this thesis are:

Tax

The definition for tax may differ according to circumstances, but in reality they all have almost the same saying. A few definitions according to tax expertise are:

a. Rahmat Soemitro

Tax is the wealth transfer from citizens to the government which will be use the finance the routines government spending. Tax surplus will be use for public saving which is the main financing for public investment.

b. Smets

Tax is a normatively prestigious debt to the government which is not a voluntary payment or donation, but an enforced contribution, exacted pursuant to legislative authority can. Its purpose is to finance government spending,

c. Soeparman Soemahadidjaja

Tax is a regulative payment collected by businesses based on the normative law, in order to finance the collective production of goods and services to achieve a social prosperity.

The issue of tax revenue always catches a big attention, since from this issue will come up two aspects which flow because of the government's activity: who will pay the taxes (tax subject); and who will eventually be burden for such taxes (tax incidence, or tax object).

Tax Subjects

This aspect would not be attractive to national economist, for it is obvious in law definition. Tax subjects are individuals and institution that are obligated to pay taxes. For instance, in income taxes, the tax subject would be an individual or institution that receives income. In vehicle taxes the tax subject would be the owner from the vehicle, and in hotels and restaurants taxes the tax subject will be hotels and restaurants.

Tax Objects or Tax Incidence

Tax subject is not necessarily always the tax object, such explanation occur when tax subject hands the tax burden to other parties. For example, in hotels and restaurants a percentage of PPHR is burdened to consumers that are visiting.

In this research case, tax revenue from hotel and restaurants in Pontianak is hoped to contribute in the Regional Origin Income. PPHR is collected by Regional Income Office and sub-province government in-charge for the management of the tax. The tax incidence of PPHR is actually consumers, in this case includes domestic and foreign tourists that came to visit Pontianak.

CHAPTER II

LITERATURE REVIEW

2.1 Tourism Conditions and Potentials of Pontianak

Before exposing the theoretical basis of this thesis hypothesis, first will be given a view about tourism conditions and potentials of Pontianak.

2.1.1 Geographical Conditions

Pontianak is the capital city of West Borneo which lies in $0^{\circ} 1' 11''$ LU, $0^{\circ} 5' 2''$ LS, $109^{\circ} 18'$ BT, $109^{\circ} 27'$ BB. Because of this, Pontianak is placed along the equator. The effect of such thing is a tropical climate with high temperature around 22° C to 32° C and density 3.141 mm/year with the average of 154 rain-times/year.

Pontianak is divided by the Kapuas River, which is still used as one of the veins for water transportations throughout the villages, even though the land transportations have also cover most of the district area.

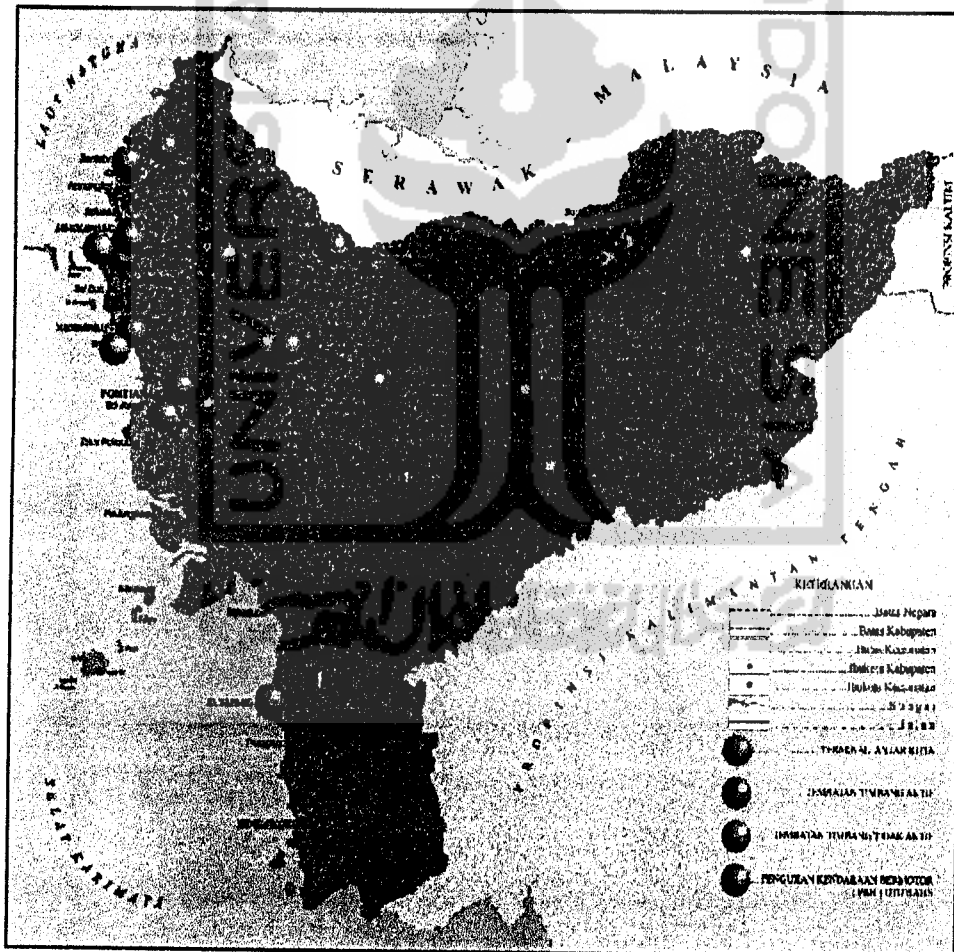
The west part of Pontinak meets the Natuna Sea, the north, south and east is bound by land limitations of Pontianak districts. The other advantage from being in Pontianak is that it's directly land-crossed to Sarawak (East Malaysia). This is also supported by land-lanes in and out a neighbor country. This lane is open for private and public vehicle through the between country highways Pontianak – Entikong – Kuching (Sarawak Malaysia) for 400 km long and usually needs 6-8 hours to be travel.

The lane connections throughout this Indonesia-Malaysia is considered to be an advantage for Pontianak is considered a local service-city nationally and

internationally, not to mention the opportunity to open trading and tourism potentials to Pontianak.

As a capital city, Pontianak has its own advantages for the key in transportations by land, sea, and air in and out West Borneo came through Pontianak. This strategic position is shown in the picture below:

Picture 1. The Area of West Borneo



2.1.2 Demographic descriptions of Pontianak

Related to the statistical data issued by the city-local government (*Pemda*) Pontianak in 2006⁵, the number of people in 2005 is 611.184. Based on the migrations and movements of people, it can be divided by 5 local areas; North Pontianak (102.786 people), West Pontianak (106.406 people), City of Pontianak (191.955 people), South Pontianak (118.194 people), East Pontianak (91.843 people).

Based on the scattering of population, the city of Pontianak has approximately 4.546 persons / km², the non-city part has approximately 110 persons / Km².

The composition of population is more less; *Melayu* Tribe with 21,97 %; followed by Chinese ethnic with 19,17 %; the native (*Dayak*) with 19,16 %; *Bugis* Tribe with 8,20 %; Javanese with 8,17 %; *Maduranese* which is around 7,78 %; *West-Sumatrean* with 5,40 %; *Sundanese* with 5,07 %; *Balinese* 3,08 %; and other tribes 2 ,00 %.

The composition for religious belief is Moslem with 65,34 %, followed by Catholic with 5,34 %, Christian with 4,07 %, Budha for 21,01 % and Hindu with 1,19 %.

Most of the people in Pontianak are trader and businessman (54,21%), and then workers for 20,01%, public employee for 9,33 %, Carpenters 9,00 %, Policemen 3,14%, Farmers 2,95 %, Retirements 1,95%, Fishermen for 0,40% and unemployed for 15,15 %.

⁵ BPS catalog of Pontianak., "*Pontianak Dalam Angka (Pontianak In Figures) 2003*", (Badan Pusat Statistik Daerah Pontianak, 2003) page. 1 – 4

2.1.3 Status and Administrative Area Descriptions

The province of West Borneo is formed by The No.25 Government Regulation in the year 1956, which claimed that West Borneo is an autonomous area with Pontianak as the capital city. This autonomous status is effective since January 1st, 1957, by so it is held as West Borneo anniversary. The anniversary of Pontianak itself is held on January 28th.

Since the announcement of regulation up until now, Pontianak had been led by nine Governors. The current Governor is H. Usman Ja'far, starting from January 13th, 2003. Recently, the governance in Pontianak is divided to 10 sub-province.

Pontianak as a special area in West Borneo has an area of 107,82 Km², consist of 5 district and 23 subdistrict. Names of the area in Pontianak can be seen in the table below:

Table 1. Numbers of Administrative Area in West Borneo

SUB-PROVINCE	DISTRICT	SUB-DISTRICT
Sub-Province Pontianak	22	317
Sub-Province Sambas	9	175
Sub-Province Bengkayang	10	111
Sub-Province Landak	10	-
Sub-Province Sanggau	22	241
Sub-Province Sintang	21	265
Sub-Province Kapuas Hulu	13	145
Sub-Province Ketapang	15	155
Sub-Province Sekatau	-	-
Sub-Province Melawi	7	-
Sub-Province Pontianak	5	24
Sub-Province Singkawang	3	-

Source: Administrative Bureau in Local Government of Pontianak, 2005

2.1.4 Tourism Site of West Borneo

Located along the equator, West Borneo is enriched by tropical forest which is functioned as the lungs and water reservation in the world. The diversity of its flora & fauna also interest people to come to Pontianak. The tourism site mapping for Pontianak is shown below:

Picture 2. Tourism Site Mapping of West Borneo



Some other tourism sites are: Palung Mountain National Park where orang utan (*Pongo Pygmaeus*) and long tailed monkeys (*Macaca Fascicularis*) live, *Betung Karihun* National Park with the view of *Kapuas* river, *Sentarum* Lake National Park where Super Red Arwana (*Scleropagesformosus*) lives, *Pasir Panjang* Beach at Singkawang, *Tebing Kelam* at Sintang, *Mananggar* Waterfall, *Samudera* Beach, and *Kura-kura* Beach. There are still others that have not been managed by the local government. Several areas above are specially characterized to West Borneo which offered the beauty of nature, giving out an exotic feeling to every tourist that visited.

2.1.5 Tourism Locations in Pontianak

Geographically, Pontianak is divided by *Kapuas* River which is known as the biggest river in Indonesia. *Kapuas* River is the longest river in Indonesia (1,143 km). This river can be cruised up to *Kapuas Hulu* Regency. *Kapuas* river branches out into three smaller rivers: *Kapuas Besar*, *Kapuas Kecil*, and *Landak*, which divide Pontianak into three parts. People can enjoy the scenery by cruising the river by wooden boat, motor boat, or speedboat. There are two bridges over the rivers: *Kapuas River Bridge* and *Landak River Bridge*.

Pontianak has several facilities for tourism, it also offers lots of tourism objects to be visited. One of those facilities that can be enjoyed is *Khatulistiwa* Monument. This monument shows that Pontianak City is passing by the equator, 0° latitude. This monument at first was built in 1928 by Astronomical Expedition Team from Dutch. In 1938, it was re-built with some improvement by Opzicter Silaban, an architect. In 1990 it was re-built again by duplicating it in a bigger

size. The size was five times bigger than the original and it was meant to protect the original statue. The monument has four poles, a sketch of world with an arrow. It was accredited on September 21, 1991. Every March 21-23 and September 21-23, at midday, the sun passes over the equator line/the culmination; therefore, it makes the shadow of that monument and every other erected things around the statue disappeared (the monument and the other things are in the position of without shadow). A unique natural phenomenon can be observed twice a year at the side of the monument. This phenomena is visible for a period of only 5 - 10 minutes. In anticipation of this special time, the Dayak and Malay ethnic groups, among others, exhibit their rich cultural heritage through traditional dance, music and handicraft displays. These twice-yearly festivals should not be missed; once witnessed, they will not soon be forgotten. This monument is located in Batulayang sub-district, North Pontianak District, the distance from the center of the town is more or less 5 km. It can be reached by land transportation such as by cars, or water transportation through Kapuas River such as by motorboats or speedboats. It is located about 3 km from Pontianak City.

Another tourism object is Kadriyah Palace and Sultan Abdurrahman Jami Mosque. The city of Pontianak was founded on 23rd October 1771 by Sultan Syarif Abdurrahman Alkadrie. Some historical inheritances of Pontianak Sultanate are Kadriyah Palace and Sultan Abdurrahman Jami Mosque. Both are located in Dalam Bugis Subdistrict, East Pontianak. It is about 1 km from downtown, and it can be reached overland or through waterways of Kapuas River.

For a shopping malls, it is available include Mal Matahari, Mal Gajahmada (Supermart), Mal Ramayana Pontianak, and Megamal A Yani. Older

shopping centres mostly established in the 1980s include Khatulistiwa Plaza, Nusa Indah and Kapuas Plaza.

The most authentic taste of Pontianak food can be found at the food district surrounding the Sudirman market, operating hours between dusk and about 9pm. Other mean areas are Gajahmada road, Tanjungpura road, Pahlawan road, and Diponegoro road. The food stalls are open-air settings, and serve many types of ethnic Chinese food. Chinese in Pontianak have introduced a tropical and spicy accent to the simple Teochew and Hakka cuisine. Well-known dishes from Pontianak include Kwe Kia Theng, Bakmie Kepiting (called Yammie or Jammien in local dialect), and He Keng(Prawn Roll).

At the end of the Islamic fasting month of Ramadan and the Chinese celebration of Cap Go Meh (Lantern Festival) at the end of the 15-day Lunar New Year festivities, the Chinese community perform a street parade of dragon and lion dances, with Malays and Dayaks performing cultural dances. In the year 2007, Cap Go Meh falls on 4 March 2007. At this year's festival, there is the longest dragon in South East Asia. Spanning 568 meters long, the King of Dragon is to be recorded by the Indonesian Museum of Records, MURI, as the longest dragon in Indonesia. Hotels and flights into the city has been pack by domestic and international tourists curious to see the creature and tens of other smaller ones parading the streets of the city from 2 - 4 March 2007. The annual event of Cap Goh Meh has been included by the Department of Tourism into its calendar of events for West Kalimantan.

The tourism locations offered in Pontianak is showed in picture below:

Picture 3. Tourism Objects Mapping of West Borneo



As the capital city of West Borneo, International Airport of Supadio lies in Pontianak. It is the main gateway for tourists, domestic or foreign, to able to visit Pontianak and West Borneo.

2.1.6 The Existence of Hotels and Restaurants in Endorsing Tourism

The existence of a tourism site and location has to be endorsed by tourism infrastructures such as hotels and restaurants. Every tourists that comes has to spend their time in food and hotels, this needs rises the opportunity to run such businesses. The saying about importance of hotels & restaurants is said by Iwan from the Directorate of Culture and Tourism Province of West Borneo:

“Tourism has to be balanced with hotels and foods for tourists that wanted to come to Pontianak. This opens business opportunity to local businessman that visited Pontianak. Even Indonesia’s neighbour country like Singapore and Malaysia are intereted ti invest here.”

(Interview with Iwan, Head of Directorate of Culture and Tourism Province of West Borneo, at the Directorate of Culture and Tourism Province of West Borneo Head Office, The City of Pontianak- August 1st, 2006)

The explanations above emphasize the importance of hotels and restaurants for tourism sector, for they are the infrastructure needed. Every tourist that is headed to see West Borneo, has to come through Pontianak, therefore is would be strategic to invest by building hotels and restaurants where they could spend their night or just loosen their time to leisure. These are the numbers of hotels and restaurants in Pontianak:

**Table 2. Numbers of Hotels in Pontianak
Period. 1991 to 2005**

No.	Tahun	Number Hotel	Number of Tourists
1.	1991	17	105.538
2.	1992	16	109.747
3.	1993	16	158.947
4.	1994	16	169.006
5.	1995	16	197.767
6.	1996	28	207.466
7.	1997	25	241.705
8.	1998	26	370.601
9.	1999	42	497.786
10.	2000	30	244.105
11.	2001	39	250.574
12.	2002	40	262.973
13.	2003	40	211.073
14.	2004	41	199.595
15.	2005	41	160.593
Total			3.387.476

Source: Bureau of Statistical (BPS) for Tourism Office of West Borneo, West Borneo 2006

The numbers of guest staying in hotels is dominated by domestic tourists with the total of 3.129.072 people for the last 15 years. The highest number happened in 1999 with 429.798 people. The interesting part happen in 1998, where the hotel numbers decreases, yet the tourists from foreign and domestic increases, this has been explained by Nurhadi as one of the managers in one of the hotels.

“In 1998, the numbers of hotels in Pontianak decreases because of the social conditions that had just been hit by a conflict. Because of that, lots of hotels have to shut down due to the fear and worries. But beyond our expectations, the numbers of tourists went up instead.. “

(interview with Nurhadi, Manager of Mahkota Hotel, at Mahkota Hotel, The City of Pontianak, August 1st 2006).

The data for restaurants in Pontianak, are:

**Table 3 Numbers of Restaurants in Pontianak
Period 1990 to 2005**

No	Year	Number of Restaurants
1.	1990	48
2.	1991	50
3.	1992	50
4.	1993	53
5.	1994	55
6.	1995	58
7.	1996	58
8.	1997	63
9.	1998	64
10.	1999	65
11.	2000	63
12.	2001	60
13.	2002	59
14.	2003	61
15.	2004	61
16.	2005	70

Source: Bureau of Statistical (BPS) for Tourism Office of West Borneo, West Borneo 2006

Table 3 shows the amount of restaurants in Pontianak increases from only 190 in the year 1991 to 422 in 2005. According to Iie, a supervisor of Saribento, a restaurant in Pontianak, the visitors of the restaurants is not only tourists, but also by local residents. The condition shows that restaurants have a good prospect in Pontianak. Iie said:

“Remembering that Pontianak is just next door to Malaysia,, sometimes groups from Malaysia just stopped by for lunch, moreover this restaurants is near by from SUPADIO AIRPORT, so lots of tourists came here”

(Interview with Iie, Supervisor of Saribento Restaurant, at the City of Pontianak August 1st 2006)

2.1.7 Foreign Tourist Visits

Pontianak can be reached through air and land. Supadio airport is the gateline for every domestic and foreign tourist that enters Pontianak through air. For those who come by land, they will have to go pass Immigration Office (TPI) at Entikong.

The numbers of foreign visits to Pontianak for the last 15 years (1995-2001) can be seen in the table below:

**Table 4 Numbers of Foreign Tourists to Pontianak
Period 1990 to 2005**

No	Year	Number of Foreign Tourists
1.	1990	6069
2.	1991	512
3.	1992	548
4.	1993	552
5.	1994	491
6.	1995	426
7.	1996	255
8.	1997	239
9.	1998	300
10.	1999	250
11.	2000	205
12.	2001	226
13.	2002	268
14.	2003	265
15.	2004	265
16.	2005	342
Total		11214

Source: Bureau of Statistical (BPS) for Tourism Office of West Borneo Province, 2006

2.1.8 Domestic Tourists Visits

The tourism in Pontianak is still dominated by domestic tourists. The numbers for domestic visitors in the last 15 years is written below:

**Table 5. Number of Domestic Tourists Visits
Period. 1991 to 2005**

No	Year	Number of Domestic Tourists
1.	1991	255.392
2.	1992	278.783
3.	1993	301.533
4.	1994	368.922
5.	1995	409.122
6.	1996	431.222
7.	1997	453.948
8.	1998	533.948
9.	1999	824.460
10.	2000	840.400
11.	2001	935.625
12.	2002	956.830
13.	2003	975.996
14.	2004	1.243.875
15.	2005	1.306.069
Total		9.292.489

Source: Bureau of Statistical (BPS) for Tourism Office of West Borneo Province, 2006

This table indicates that the number of domestic tourists increases every year. The highest one was made in 2005, where there are 1.306.069 tourists, and the lowest was on 1991 where there were 255.392 tourists.

2.2 Hotels and Restaurants Tax Revenue in Pontianak

This part contains the information of PPHR. Including, the authority of Regional Income Office towards the tax revenue from hotels and restaurants, payment mechanism, and the amount of tax gained.

2.2.1 Pontianak's Dispenda Authority to Charge Taxes

PPHR is one of the revenue gained by local government of Pontianak charged by Regional Income Office of the city of Pontianak. According to the information gained from Head of Administrative Division from Regional Income

OfficeThe City of Pontianak, Nurlela, the authority of Regional Income Office of Pontianak in charging such tax is:

“Our authority is arranged spesifically in Perda. For hotel it;s arranged in Perda nomor 2 tahun 2005, meanwhile for taxes for restaurants is arranged in Perda nomor 3 tahun 2005. Throughout those two rules, we, the Regional Income Office (Dispenda) of Pontianak has the legalized power to charge tax to every hotel and restaurant there is in Pontianak.”

(Interview with Nurlela, Head of Administrative Division from Regional Income Office-The City of Pontianak, at Regional Income Office of Pontianak, Kota Pontianak August 1st 2006)

This is supported by Ita Parwita, Head of Legal Bureau in Regional Income Office Kota Pontianak during an interview, where she stated:

“Both rules are applied and binding for every tax subject it regards. There may not be a violations, for the goal is to increase the city’s local revenue.”

(Interview with Ita Parwita, Head of Legal Bureau in Regional Income Office, at Regional Income Office Pontianak, the city of Pontianak August 1st 2006)

Penalty for such violations is judged according to the the level of violations.

“However, all we can do is issuing a warning leter. we never seem to able to give a physical penalty, for such business is taken care by the police. Sadly, the police takes a lot of time to ensure that the penalty is paid by the violators. The plan now is, Regional Income Office will form a Yudiatia Team as a Public Employee

Investigator (Penyidik Pegawai Negeri Sipil (PPNS)) in order to investigate tax violators in Pontianak. PPNS will also work with the police and Judges.” says Ita.

2.2.2 Payment Mechanism for PPHR

Taxes obtain by Regional Income Office of Pontianak has to go to a process according to the law that arranges it. In primary, the mechanism according to Nurlela are:

“Before charging, we first surveyed the tax subject. Afterwards, the data is processed in Settlements Department at Regional Income Office to then issue an Letter of Tax Statement (SKP (Surat Ketetapan Pajak)). And then, taxes are charged by the Collecting Department from Regional Income Office by using Letter of Regional tax (SPD (Surat Pajak Daerah)).”

Criteria of hotels and restaurants that have to pay taxes also according to her are:

“A hotel is every buiding that provides the facility to sleep over by charging for fee. The size and quality of the hotel is then judged by the facility offered by it. And restaurants that are obligated to pay here are every business of selling foods and beverages with a permanent building, this doesn't include catering businesses, nor the food sellers that does business down the street by moving around. For that they would only have to pay daily taxes.

” (Interview with Nurlela, Head of Administrative Division from Regional Income Office in The City of Pontianak, at Regional Income Office of Pontianak, Pontianak August 1st 2006)

Both this taxes are charged every month to the owner of business and restaurants, it is charged to customers for 10% from their amount of spending. The calculations then will be checked in the cashier.

“Taxes for restaurant are charged once a month. And its not the same every month, for the number is based on the 10% tax we added in the consumer’s bill. Every once a month, a person from Regional Income Office will come here to check the recapitulation of the tax.”

(Interview with Iie, Supervisor of Saribento Restaurant, at the City of Pontianak August 1st 2006)

To avoid any cheating action in the registry system, Regional Income Office does a random check to the tax subject once a month. This is also confirmed by business-owners. After taxes are charged, Regional Income Office will hand it to the local government to be put in the Regional Budget (APBD).

2.2.3 Tax Revenue from Hotels & Restaurants

Tourist visits produce an income to the local government trough the payments of taxes by hotels and restaurants. The tax revenue gained by Pontianak’s local government is written below:

**Table 6. Amount of Tax Revenue from Hotels & Restaurants in Pontianak
Period. 1991 to 2005**

No	Tahun	Jumlah Penerimaan Pajak Hotel & Restoran (Rp)
1.	1991	361.341.242
2.	1992	361.261.397
3.	1993	362.461.615
4.	1994	812.497.363
5.	1995	667.318.718
6.	1996	1.060.262.976
7.	1997	1.673.545.000
8.	1998	1.620.487.000
9.	1999	1.842.640.000
10.	2000	2.150.682.000
11.	2001	1.956.150.000
12.	2002	3.000.000.000
13.	2003	3.750.000.000
14.	2004	3.650.000.000
15.	2005	5.750.000.000
Total		29.018.647.311

Source: Regional Income Office of Pontianak, 2006

The total gain from PPHR is Rp. 29.018.647.311,- for the last 15 years. Every year the amount of PPHR increases from Rp 361.341.242,- in 1991 to Rp. 5.750.000.000,- in 2005. Nevertheless, they have experienced a decrease between the year 2000 – 2001 from Rp. 2.150.682.000,- to Rp. 1.956.150.000,-. This conditions does not last though, or in 2002 the PPHR increases to Rp. 3.000.000.000,-.

This increase surely is cause by the role of Regional Income Office of Pontianak whom never given up to increase the awareness of citizen to always pay their taxes, especially those who owned hotels and restaurants. The efforts have included inviting tax subject to Regional Income Office once in every few month, and to give out brochure in lanes in Pontianak. By doing so, the socialization done by Regional Income Office of Pontianak by using directing and brochure giving-out has showed its results in the last 15 years.

2.3 Theoretical Framework

From all the information explained above obviously we can see that there is a positive relation between PPHR and the tourism sector. But for assurance, a formal theoretical framework –based on before research– explaining the relationship is still needed for legitimating an undergraduate thesis. This thesis uses three studies as its basis on hypothesis:

2.3.1 Thesis: “Analysis of Factors Effects Tax Revenue from Hotels and Restaurants in Wonosobo.”

This study is performed by Wahidi Kristian Basuki analyzing factors that effects tax revenue from hotels and restaurants. In his study, the independent variable used are: Nominal Regional GDP for Wonosobo, Mid-Java, and Local Government Expenditure of Wonosobo.

The result of this research shows that:

- The regional GDP of Wonosobo has significant and positive effect to hotels and restaurants’ tax revenue.
- The regional GDP of Mid-Java has significant and positive effect to hotels and restaurants’ tax revenue.
- The local government expenditure of Wonosobo does not have a significant effect to hotels and restaurants’ tax revenue.

The second point of the research result is used as a base in inserting Malaysia’s GDP to the variable, considering that Malaysia is geographically a neighbor to Pontianak.

2.3.2 Research: Analysis for Factors that Effects Tax Revenue from Hotels and Restaurants in Yogyakarta (1984 – 1999).

This is a research by Sumanti Adi Nugroho whom also analyze the factors that effects hotels and restaurants tax revenue in Yogyakarta. The independent variables are: hotel tariffs, number of domestic tourists and number of foreign tourists.

The result of this research shows that:

- Hotel tariff does not effect hotels and restaurants tax revenue positively.
- Domestic tourist effects the tax revenue of hotels and restaurants significantly, and positively.
- Foreign tourist effects the tax revenue of hotels and restaurants significantly, and positively.

This study based the consideration to put domestic and foreign tourists variable in the equation.

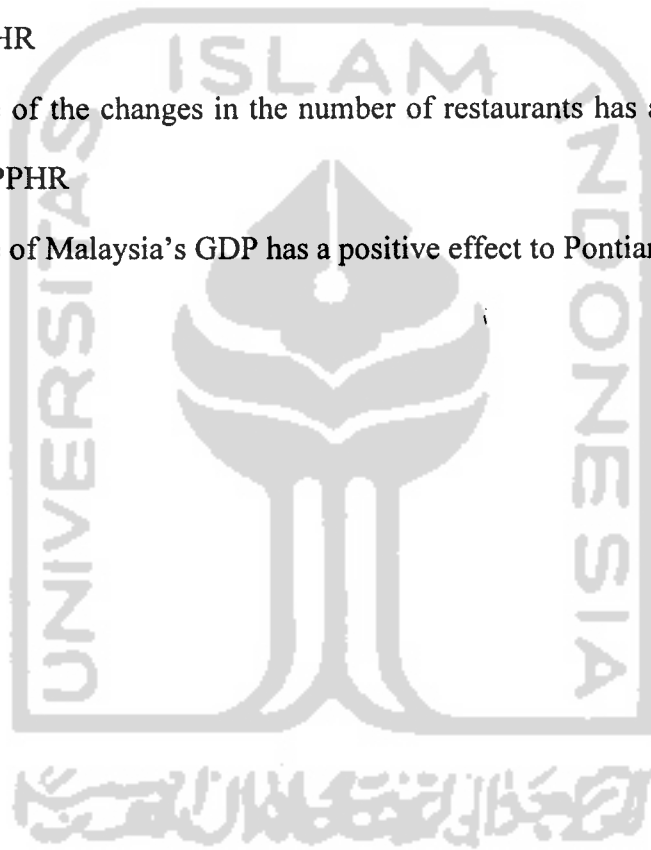
2.3.3 Research: Role of Regional Origin Income to the Regional Development in Cirebon

Is a research performed by Sunadi, which analyze factors that affects Origin Income in Cirebon. The basic reason why this reason is used as base is the existence of number of producers. In this thesis, restaurants are considered as producers for services. The results of this research conclude that Regional GDP has a significant effect to Origin Income in Cirebon.

2.4 Hypotheses Formulation

Based on the literature above, the hypothesis in this thesis are:

- Variable of the number of domestic tourists has a positive effect to Pontianak's PPHR
- Variable of the number of foreign tourists has a positive effect to Pontianak's PPHR
- Variable of the changes in the number of restaurants has a positive effect to Pontianak's PPHR
- Variable of Malaysia's GDP has a positive effect to Pontianak's PPHR



CHAPTER III

RESEARCH METHODOLOGY

3.1 Research Method

This thesis covers two types of study activity, which are literature study and empirical study. This literature study is expected to give qualitative information that is able to draw the level of potential in the tourism sector for the economics of Pontianak. The literature study which is conducted is intended to draw the conditions and potentials of tourism generally in the Province of West Kalimantan, and especially in Pontianak. The empirical study emphasize on the characteristic of relations that exists between two or more variables based on empirical evidence. The literature study has been explained in the previous chapter of this thesis, and the empirical study will be explained in this next one. In this empirical study, an econometric model will be used.

3.2 Research Subject

The subject of this research is Pontianak's hotels and restaurants tax revenue (PPHR) in its relation with tourism sector. This thesis tend to elaborate the characteristic of Pontianak's PPHR, in procedure and in its development in qualitative or literature studies, as well as in its relation characteristic investigations with factors from tourism sector in quantitative or empirical studies. Through empirical studies, it is hoped that tourism factors that significantly effect PPHR can be acknowledge.

3.3 Research Setting

The research is conducted by using data that comes from Pontianak, West Borneo. The research conducted is an empirical and a literature study, so after data and information are gathered, data processing and analyzing can be conducted anywhere. Most of the data and information used in the thesis are gathered in Pontianak.

3.4 Research Instrument

In order to keep the objectivity in the study, this theses use different approaches for each study category. In literature study, the writer is using exposition approach where the writer only expose the information collected without locating any personal opinion. In empirical study, the writer is using an econometric model namely time series ordinary least square model.

3.5 Research Variables

The thesis will use five variables, where PPHR will be the dependent variable, and the four others will be the independent variables. The four variables are representing the tourism sector in Pontianak, and they are:

- a. Foreign Tourist (WISMAN), an annual number of visit of international tourists to Pontianak City.
- b. Domestic Tourist (WISDOM), an annual number of visit of domestic tourists to Pontianak City.
- c. Restaurants (SREST), since the restaurant data is a stock data which todays number contains yesterday number, so thesis use the first difference

data. So the data is representing the amount of the changes in the number of restaurants in each year.

- d. Malaysia's Gross Domestic Product (GDPMAL), incorporated since the dominant international tourists are from Malaysia, so it is relevant to see the relation between the economic condition of Malaysia with the Hotel and Restaurant Tax Revenue (PPHR) of Pontianak City.

3.6 Research Procedures

In this thesis, literature studies are explained before the empirical one. This is because in quantitative studies, there is more details procedure than qualitative studies which only restrict the writings made. In this case, exposition is chosen as the qualitative method, causing the writer banned to write her own personal opinion in the writing.

As for the quantitative studies, Ordinary Least Square Model will be used. Before running the OLS model, we have to analyze the best fitted model (whether linear or log linear) by using MWD Test. This situation can be achieved by observing The Z value of Z_1 and Z_2 . If Z_1 is statistically significant, then the best model is log linier. On the contrary, if Z_2 is statistically significant, then the best model is linear.

The procedures of OLS are:

3.6.1 Ordinary Least Square: General Procedures

Regression models are divided to simple and multiple. Simple is the one that saw only two variable, where one is dependent and the other is independent. The relationship between the two variables can be saw visually through plots of

objects of data (*scatter plot*). Usually the plot doesn't follow the exact straight lines that connects the dependent and independent variables. The spread around the straight line reflects the power of relationship between the variables. Straight line shows the relationship in average. The status of a variable, whether it is an independent or dependent depends from the theory used.

The variable that determines or affects becomes the independent, the one that is being determined or affected becomes the dependent. Below is the form of a simple regression:

Y indicates a dependent variable or the predicted, X indicates the variable used to predict, known also as independent, ε is an *error term*, the only random component in the model, and for so represents the uncertainty in Y. β_0 is an intercept of a systematic component in a regression relationship (constant) and β_1 is the slope from independent variable. The simple regression shows the *exact* average score between the independent and dependent, in other words error=0, which can be written:

Difference between real value and expectations value of Y is explained in the random error. Mathematically written:

$$Y = E[Y_i] + \varepsilon_i$$

$$Y_i = \beta_0 + \beta_1 X_i + \varepsilon_i$$

The criteria of OLS is "*line of best fit*" in another words, the sum square of deviations between observations dots with regression line is minimum. "*Line of best fit*" is a line that has the smallest $\sum \varepsilon^2$. Related to the minimum sum square

of error, *best fitting line* is also called *least square line*. *Least square line* is determine by conting sets of observations (x,y data). The calculations then produced β_0 and β_1 . Next, the value is substitute into to obtain the equation for *least square line*.

The minimum sum square of error can be written as :

$$\min \sum \varepsilon_i^2 = \min \sum (Y_i - \hat{Y}_i)^2 = \min \sum (Y_i - \beta_0 - \beta_1 X_i)^2$$

The simple regression has several assumptions to be fulfilled in order to produce a fine estimation, known as BLUE (*Best Linear Unbiased Estimator*). These assumptions include *homocedasticity*, *no-multicollinearity*, and *no-autocorrelation*. In doing a linear estimation using an OLS method, the assumptions has to be fulfilled, it not, model will not produced a BLUE parameter. The assumptions of OLS are⁶:

1. The regression model are linear in parameter, and every variable has to be stationaire (random, and consistent from time to time) so it would not produce a biased (*spurious*) results. The method used for the stationarity test is *Unit Root-test*; where H_0 is non-stationaire, and H_a is stationaire data (Rejact H_0 if $P_{value} < \alpha$).
2. *Error term* has a normal distribution. For implications, y and the sampling regression coefficient distribution also posses a normal distribution so the expected value of error would be zero.
3. The variance of *error* is constant (*homocedasticity*).
4. There is no correlation between independent variable and *error term*.

⁶ Gujarati, Damodar N, *Basic Econometrics*, 4th edition, Singapore: McGraw Hill International, 2003, hlm 66-75.

5. There is *no-autocorrelation*, especially for *time-series* data where the possibility of correlation between ε_t and ε_{t-1} or between other *error* is bigger.
6. In the scope of multiple regressions, there is no relation between independent variables (*no-multicollinearity*), so that each coefficient from each independent really shows the effect of individual to the independent.
7. Covariance between *error-term* and independent variable is zero , or, $cov(\varepsilon_i, X_i) = 0$
8. The numbers of observations (n) has to be bigger than the number of independent variable estimated (i).

The estimation result for OLS is often called BLUE. In words, it also means:

1. efficient, means the estimation results has a minimum and unbiased varians.
2. unbiased, means estimation results equals to parameter.
3. consistent, means if sample are added without limits, then the results of estimations will resembles the population parameter.

If the assumptions of normality is fulfilled, where error is distributed normally with the average is equaled to zero and the varians is constant, then:

4. intercept β_0 will have a normal distributions.
5. the coefficient of regression will have a normal distributions.

In this matter, the assmputions of normality is very importanat to simplify the estimations of interval and hypothesis statistically

3.6.2 Procedures in Result Evaluation

There are a few criteria to say regression model is good enough. In general, there are three criteria used:

1. Economic Criteria (directions/ signs)
2. Statistic Criteria (*t-test*, *F-test* and R^2).
3. Econometric Criteria (multicollinearity, autocorrelation, heteroscedasticity test)

First, economic criteria is looking at the match of signs and value with common logic or theory. For example, if income has a positive effect on consumptions but the signs produced is negative instead, it means there is still a problem with the model.

Secondly, statistic criteria needs to be watched in evaluating a regression equation are:

1. *t-test* is a test to each coefficient from independent variable. Coefficient not equal to zero represent that there is a significant effect from independent to their dependent. ($H_0: \beta = 0$ or in significant, reject H_0 if $P_{\text{value}} \text{ from } t_{\text{stat}} < \alpha^7$).
2. *F-test* or test for overall model. It is done to see wheter all coefficient of regressions are zero, or is an overall model acceptable. This test is relevant in an *multiple regression*.
3. Determination Coefficient, R^2 or adjusted R^2 , indicates the exactness of regressions lines in explaining the variations between dependent

⁷ Alpha (α) is the level of error acceptable in a research or statistical review. The normal α level used is 5% to 15%. A researcher can determine the α level used in conducting a study based on his/her personal considerations.

variable ranged between 0-1 , the closer to one the better, represents the exactness percentage of model.

Third, econometric criteria, regarding the violations of assumptions which includes: multicollinearity, heteroscedasticity dan autocorellation. If none of these restrictions are violated, the parameter (β) can be called BLUE (*Best Linear Unbiased Estimator*).

3.6.3 Assumption Violation Identification

The best results are not usually produced during the first *running* model. The first usually tells us about the existence of assumptions violations. Still it would need further test (statistically) to confirm their existence. The identifications can be done by:

Heteroscedasticity

Heteroscedasticity may appears for outlier in the data series. This may cause the parameter to be unbiased. The way to identify it is by running a *white-heteroschedasticity test*, with H_0 is no- heteroscedasticity and H_a heteroscedasticity (reject H_0 if $P_{\text{value}} < \alpha$). If proven to be hetero, model has to be given treatment, by giving *Generalized Least Square (GLS)*. GLS is a method that transformed observations per variable in the model by giving the proportional weight for each observation variable, so then the error varians will be constant.

Multicollinearity

Multicollinearity causes parameter to be biased, in the meaning of becoming un-representative to each individual from independent variables. Statistically, multicollinearity may causes a large number of varians and covarians

from each parameter which in the end will cause the area of acceptance so wide until the possibility to accept the wrong hypothesis will be bigger. Multicollinearity also causes significant independent variable to be identified as in-significant. The ways to identify are:

- High R^2 (coefficient of determination) with many insignificant variables.
- Correlation between independent variables are very high (observable by looking at *correlation matrix*)
- Performing a simple regression to independent variable that are highly correlated (> 0.8) to make sure if they really affect the other.

Multicollinearity can be solved by adding number of observations or by excluding one of the independent variable with the problem and replacing it with other relevant data.

Autocorrelation

The classic assumptions of OLS states that each observation in each variable is random and independent from time to time, mark by the un-correlated error. When there is autocorrelation, the estimation results is vulnerable with mistakes in standard error, tend to under-estimate the real error. It causes t_{stat} ($t = \text{coef} / \text{std. error}$) for each independent variable is bigger and P_{value} becomes smaller, so that it would lead us to the wrong decision in accepting or rejecting a hypothesis.

Autocollinearity can be detected early by looking at *Durbin-Watson statistics* in the output of regression., if it has significant difference from 2, there is a big chance that there is a autocollinearity problem. However, it has to be continued with *Residual Q-test* (reject H_0 if $P_{value} < \alpha$). The model is proven to

have autocorrelation and it has to be treated by adding a *auto-regressive* (AR: variabel *lag of error-term*) factor in the model.

3.6.4 Thesis' OLS Model

The regression model which will be used for this thesis is:

$$PPHR = \beta_0 + \beta_1 WISMAN + \beta_2 WISDOM + \beta_3 SREST + \beta_4 GDPMLY + \varepsilon$$

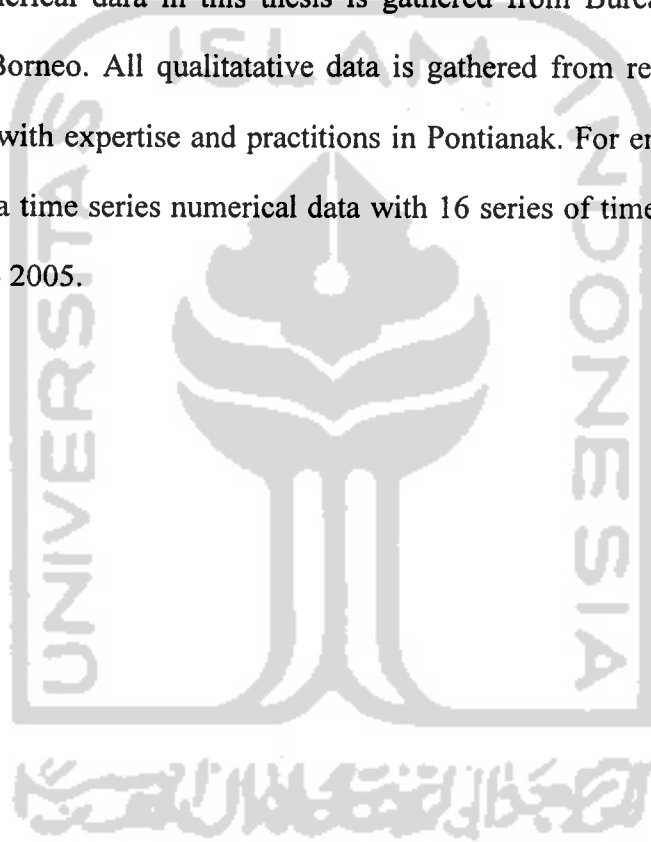
Where:

- PPHR = Pontianak's Tax Revenue from Hotels and Restaurants
(Rp. /year);
- WISMAN = Numbers of foreign tourists
(person/year);
- WISDOM = Numbers of domestic tourists
(person/year);
- SREST = The the changes in the number of restaurants in Pontianak
(Units/tahun);
- GDPMLY = Malaysia's GDP
(million Ringgit/year);
- β_0 = constanta;
- $\beta_1, \beta_2, \beta_3, \beta_4,$ and β_5 are parameters or estimated coefficients (found by OLS) that indicates the significance of each independent variables; and
- ε = error, $\exp(E)=\text{zero}$ (the model used has to fill the assumptions of BLUE).

Independents variables that has significant effects to their dependent are the one whose coefficients (β) prrofs not to be zero. Statistically, coefficient can be said efficient if they differ from zero (reject H_0) if Pvalue is smaller than α .

3.7 Data Collection

All numerical dara in this thesis is gathered from Bureau of Statistical Data in West Borneo. All qualitattive data is gathered from relevant literature and interviews with expertise and practitions in Pontianak. For empirical studies, the writer uses a time series numerical data with 16 series of time, which is from the year 1990 to 2005.



CHAPTER IV

RESEARCH FINDING AND DISCUSSION

As explained in the previous chapter, this thesis uses OLS regression method in its empirical study. With 16 time series (1990-2005), the regression is conducted with EVIEWS 4.1 economic software. The data used as input in the regression are:

Table 7 Primary Data: Input EVIEWS 4.1

1990	361301319.5	6069	267088.00	-1	105978
1991	361,341,242.00	512	255,392.00	2	116193
1992	361,261,397.00	548	278,783.00	0	126407
1993	362,461,615.00	552	301,533.00	3	138915
1994	812,497,363.00	491	368,922.00	2	151713
1995	667,318,718.00	426	409,122.00	3	166625
1996	1,060,262,976.00	255	431,222.00	0	183291
1997	1,673,545,000.00	239	453,948.00	5	196713
1998	1,620,487,000.00	300	533,948.00	1	182236
1999	1,842,640,000.00	250	824,460.00	1	193423
2000	2,150,682,000.00	205	840,400.00	-2	210558
2001	1,956,150,000.00	226	935,625.00	-3	211228
2002	3,000,000,000.00	268	956,830.00	-1	220422
2003	3,750,000,000.00	265	975,996.00	2	232360
2004	3,650,000,000.00	265	1,243,875.00	0	248954
2005	5,750,000,000.00	342	1,306,069.00	9	240657

The regression model estimated is:

$$PPHR = \beta_0 + \beta_1 WISDOM + \beta_2 dWISMAN + \beta_3 SREST + \beta_5 PDBMLY$$

4.1 Regression result for MWD Test

Ho = Linear Model

Ha = Log Linear Model

Reject Ho if $Z1 > t_{\text{value}}$ (statistically significant)

Reject Ha if $Z2 > t_{\text{value}}$ (statistically significant)

From the regression result, the $Z1$ (1.664) is less than the t_{value} (1.75), so we have to accept Ho which the best model is log linear model. The $Z2$ (0.0519) is less than the (1.75), so we have to reject Ho which the best model is linear model. Both of the model is can be used in this thesis, but since the linear model has a better result in the regression, the writer chose the linear model to regress the OLS.

4.2 Regression results with OLS

After running the model in E-VIEWS 4.1, the results are

$$\begin{aligned} PPHR = & -1.77 * 10^9 + 3285.40 WISDOM + 66987.47 WISMAN + 1.59 * 10^8 SREST + 6575.365 GDPMLY \\ & (-2.203) \quad (4.48) \quad (0.80023) \quad (4.8156) \quad (1.0185) \\ & (0.0498) \quad (0.0009) \quad (0.4405) \quad (0.0005) \quad (0.3303) \\ & (R^2 = 0.9595 ; DW - stat = 2.78 ; F_{stat} = 65.1058 ; Prob(F_{stat}) = 0.0000 \end{aligned}$$

The numbers in the captives below the equation are t_{value} from each coefficient, and another below represents probability value for each independent variable coefficient. In concluding the significance of an independent variable, we can

judge it by its t_{value} or its probability value. To clarify, here are the hypothesis in the significance test of independent variable and its rejection criteria.

Ho: variable coefficient insignificant ($\beta = 0$)

Ha: variable coefficient significant ($\beta > 0$)

Reject Ho if $t_{\text{value}} > t_{\text{stat}}$

From the results above, we can see that coefficient values of all independent variables are positive. In that so, we can say that all of them match the hypothesis - that state each independent variable has positive effect to the restaurants and hotels tax revenue of Pontianak City. But of course, each independent variable has different level of significance. The smaller the level of significance, the stronger the level of confidence is.

We know that every level of significance (α) has its own t_{stat} value that can be seen on the t distribution table; with that value then we can conclude the level of significance of each independent variables. The table below shows the level of significance of each independent variable.

Table 8 The Results of Student-t Tests

Variable	Variable Name	t-value	Significance
X1	WISDOM	4.48	0%
X2	WISMAN	0.80	48%
X3	SREST	4.82	0%
X4	GDPMAL	1.02	36%

Looking to the table above, we can conclude that the most significant variable that affects PPHR are WISDOM ($t = 4.481$) and SREST ($t = 4.8156$), where their level of significance is very close to zero; in other words, we can say with 100% level of confidence that WISDOM and SREST is significant in affecting PPHR. But WISMAN and GDPMAL are also significant, but only in a lower level of significance. WISMAN is the weakest factor in affecting PPHR, where its significance level is 48%, and GDPMAL which has 36% level of significance is the second weakest.

Before finalizing the regression results above, an assumption violation test needs to be conducted; those are the test for autocorrelation, heteroschedasticity, and multikocollinearity.

4.3 Asumption Violation Test

The test is for assuring the regression results above are free from assumption violation. If assumption violation still exists, then the regression is not final. Certain treatment needs to be performed until there is no longer assumption violation. If it is already cleared from the assumption violation, then the results would have met the BLUE: Best Linier Unbiased Estimator assumption, therefore it may be taken as the final results.

In this thesis, heteroschedasticity is detected by White-Heteroschedasticiy Test, while autocollinearity is detected through DW-stat value and then assured with the Serial Correlation LM-Test. For the case multicollinearity, regressions among independent variables were done, if there is any R^2 produced exceed the main R^2 value, so there is still multicollinearity; and vice versa.

In the case of autocollinearity identification, we may use the DW-stat category. The rules of identification with DW-stat is shown below.

DW - stat	0-----0.734-----1.935-----2.065-----3.266-----∞
	(positive autocol.) (indecisive) (no autocol.) (indecisive) (negatif autocol.)

As the DW-stat value above is 2.7798, it is clearly categorized as indecisive which mean we can not identify whether the regression contains any autocollinearity or not. So, to make sure, the Serial Correlation LM-Test is definitely needed.

The null hypotheses tested in both Serial Correlation LM-Test and White-Heteroschedasticity are that there are no autocorrelation and no heteroschedasticity. And the criteria of rejecting H_0 is if $| \text{Obs} * R\text{-squared} | > \text{Chi-Square critical value}$ (shown in the Chi-Square statistical table). All assumption-test results are summarized in the table below.

Table 9 Autocorrelation and Heteroschedasticity Test's Result^{*)}

Test	Obs*R-squared	Chi-square critical value	Conclusion
Serial Correlation LM-test	2.92172	19.67500	Accept H_0 , autocorrelation is not exist
White-Heteroschedasticity	8.9193	19.67500	Accept H_0 , heteroschedasticity is not exist

* Chi-square critical value, with $\alpha = 5\%$, and Degree of freedom = 11 ($n - k = 16 - 5$)

*) The complete and original output of EVIEWS 4.1 enclosed

From the results above, we can conclude that regression results does not have those two violations. But we can not decide if its efficient, for the test of multicollinearity has not been done. The regression amongst independent variables were executed to test the existance of multicollinearity problem, and the results are shown in the table below.

Table 10 Multicollinearity Test's Result^{*)}

Regression Amongst Independent Variables	Dependent Variable	Independent Variables	R ²	R ² in main Regression
Scenario I	WISMAN	WISDOM, SREST, GDPMLY	0.3967	0.9595
Scenario II	WISDOM	WISMAN, SREST, GDPMLY	0.8739	0.9595
Scenario III	SREST	WISDOM, WISMAN, GDPMLY	0.0017	0.9595
Scenario IV	GDPMLY	WISDOM, SREST, WISMAN	0.8959	0.9595

^{*)} The complete and original output of EVIEWS 4.1 enclosed

Clearly we can see from the results above, that there is no R² value produced in regressions amongst independent variables that is exceeding the value of R² produced in the main regression.

Now we are assured that there is no assumption violation occurring in the regression above, so we can take the final conclusion from the regression result. As we've noticed that there are only the constant and two variables that have a significant relation with Hotel and Restaurant Tax Revenue (PPHR); the variables are: International Tourist (WISMAN) and Additional Restaurant (SREST). Hence, the regression model in this thesis can be written as below.

$$PPHR = -1.77 * 10^9 + 3285.401WISDOM + 66987.47WISMAN\# + 1.59 * 10^8 SREST + 6575.365GDPMAL\#$$

Note: # means not statistically significant

4.4 Result's Interpretations

From the model extracted above, generally we can conclude and rank the factors that have significant effect to Pontianak's PPHR. From strongest to weakest, they are the change in the number of restaurants (SREST), the numbers

of domestic tourists (WISDOM), the Malaysia's GDP (GDPMAL), and the numbers of foreign tourists (WISMAN). With $R^2 = 0.9595$, it can be interpreted that model is capable of explaining 95.95% movements or variations that happened in its dependent variable which is PPHR. The percentage of this R^2 is excellent enough since it is exceeding 90% level.

In seeing model significance in general, $\text{Prob}(F_{\text{stat}})$ is also applicable, if $\text{Prob}(F_{\text{stat}}) < \alpha$ then model as a whole has a significant effect in explaining PPHR. $\text{Prob}(F_{\text{stat}})$ in the regression above is 0.00000, which is very near to zero; so we can conclude that the model above has a significant ability to represent PPHR with almost 100% level of confidence or with 0% of level of significance.

The interpretation of model in specific in explaining the significant independent variables are:

- Coefficient for SREST = $1.59 \cdot 10^8$; this shows that each additional change in the number of restaurants - with the assumption of other variable is fixed - will contribute Rp. 159 millions to Pontianak's PPHR. The existence of a positive relation between the increase in restaurants and PPHR also fits the theory used (Sunadi, 2001).
- Coefficient for WISDOM = 3.285,401; this shows that each additional number of domestic tourist - with the assumption of other variable is fixed - will contribute Rp. 3.285,40 to Pontianak's PPHR. The approximate growth for domestic tourist in Pontianak in the last 16 years period 11.92% or 69.265 person per year. So the role of domestic tourists in increasing Pontianak's PPHR is equal to Rp.227.562.231,00 or about Rp.

228 millions. The existence of a positive relation between domestic tourists and PPHR fits the theory used (Sumantri, 2001).

- Coefficient for GDPMAL = 6575,365; this shows that each additional of 1 million of Malaysia's GDP - with the assumption of other variable is fixed – will contribute Rp. 6575,40 to Pontianak's PPHR. In last 16 years, the average growth level of Malaysia's is about 5.75% per year, or in nominal average, it is about MYR8.978,6 million additional each year. So the potential role of Malaysia's GDP in increasing Pontianak's PPHR is Rp. 59.037.886,44 or about Rp. 60 millions per year. This is relatively small compared to other potential sources above; but this is relevant with the weak significance it has in affecting Pontianak's PPHR. The existence of a positive relation between Malaysia's GDP and PPHR fits the theory used (Wutuh, 2001).
- Coefficient for WISMAN = 66987.47; number of foreign tourist – with the assumption of other variable is fixed – will contribute Rp. 66.987,47 to Pontianak's PPHR. The approximate growth for foreign tourist in Pontianak in the last 16 years period is still in the negative area that is about -1.09% or 11 person decrease per year. This findings really relevant as WISMAN is the weakest factor in affecting Pontianak's PPHR. Though this is still have a opportunity to become one of Pontianak's PPHR potential sources, if the government of the city could attract foreign tourist to visit the city and boost the number until it has a positive growth. The existence of a positive relation between foreign tourists and PPHR fits the theory used (Sumantri, 2001).

CHAPTER V
CONCLUSION AND IMPLICATION

5.1 Conclusion

The general conclusion that can be extracted from this thesis is that two factors from the tourism sector have a significant and positive relations with Pontianak's hotels and restaurants tax revenue (PPHR). Those factors are numbers of domestic tourists and the increase of restaurants.

The model of regression resulted in this thesis is:

$$PPHR = -1.77 * 10^9 + 3285.401WISDOM + 66987.47WISMAN^{\#} \\ + 1.59 * 10^8 SREST + 6575.365GDPMAL^{\#} \\ (R^2 = 0.9595) \quad ; \quad Prob(F_{stat}) = 0.00000$$

Note: # means not statistically significant

By seeing the result above, the specific conclusions can be made based on the primary hypothesis. The hypothesis and its results are:

- Hypothesis I, which states that numbers of domestic tourists (WISDOM) have a positive effect to Pontianak's PPHR, is accepted (with $\alpha=0\%$).

Where the increase of a single person can contribute Rp. 3285.40 to PPHR. Related to the result, it's highly recommended for local government of Pontianak to endorse the tourism sector by optimizing domestic tourist's potentials before targeting for foreign tourists. Besides, tourism sites in Pontianak are relatively fewer than any other city in Indonesia. So, the focus is on the facility renovation and management of tourism sector in Pontianak is fit to be prior. In short, City should do the

effort to attract more domestic tourists come to Pontianak, for example by opening Pontianak to a wider domestic transportation network and spreading information about Pontianak's tourist attractions through website.

- Hypothesis II, which states that the changes in the number of restaurants has positive effect to Pontianak's PPHR is accepted ($\alpha=0\%$). Where the increase of a single unit additional change in restaurants has the potential to increase in PPHR as much as Rp. 159 million. Related to this founding, it is necessary for Pontianak City's government to promote the restaurant sectors so its number can reach the optimal level - where restaurants do not have the incentive to increase anymore (the increase of restaurants in this level will cause in-efficiency to the market, for the profit will decrease) – in order to optimize its potential in generating tax revenue.
- Hypothesis III, which states that numbers of foreign visits (WISMAN) has a positive effect to Pontianak's PPHR. However the effect is small and less significant ($\alpha = 48\%$). Foreign tourist variable is found to be the weakest factor in affecting Pontianak's PPHR.
- Hypothesis IV, which states that Malaysia's GDP (GDPMAL) has a positive effect to Pontianak's PPHR is accepted, but also in a weaker level of significance ($\alpha = 36\%$).
- Even though the level of significant concerning foreign tourist variables (The number of foreign tourists and Malaysia's GDP) are weak, but since they already have positive impacts on PPHR, this information should give

a hint to the government of Pontianak City toward what they have to do to attract more foreign tourists, especially from East Malaysia

5.2 Weaknesses in Study

1. In general, to achieve a normally distributed data (not just assuming) is needed atleast 30 series of data, while in this study there are only 16 series of data from the year 1990 – 2005. The addition of series allows to accomplishments of a better model, with higher R^2 , or more fitted coefficients to the real conditions.
2. Restaurants is a *stock variable*, where numbers in a current period includes the numbers in the previous period. If this year 15 restaurants exists, and last year there were 10, it means there is 5 new restaurants, not 15 new ones. This causes the data to be not-stationaire, causing the need to use the addition or reduction form, which made it difficult to interpret the model. As another option, data formatting as growth can also be use to simplify the model interpretation.

5.3 Implication

1. Since the role of do.nestic tourist is very important, the government of Pontianak City should do the effort to attract more domestic tourists come to Pontianak, for example by opening Pontianak to a wider domestic transportation network and spreading information about Pontianak's tourist attractions through website.

2. Even though the level of significant concerning foreign tourist variables (The number of foreign tourists and Malaysia's GDP) are weak, but since they already have positive impacts on PPHR, this information should give a hint to the Pontianak City government toward what they have to do to attract more foreign tourists, especially from East Malaysia.



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APPENDIX I

MWD TEST

Regression Z1

Dependent Variable: PPHR
 Method: Least Squares
 Date: 04/26/07 Time: 17:01
 Sample: 1990 2005
 Included observations: 16

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-2.59E+09	8.75E+08	-2.960243	0.0143
WISMAN	183135.2	85935.14	2.131086	0.0589
WISDOM	2891.678	716.8454	4.033893	0.0024
SREST	1.68E+08	31085138	5.417416	0.0003
GDPMAL	11833.16	6695.323	1.767377	0.1076
Z1	-1.94E+08	1.17E+08	-1.664100	0.1271
R-squared	0.968327	Mean dependent var	1.84E+09	
Adjusted R-squared	0.952490	S.D. dependent var	1.54E+09	
S.E. of regression	3.35E+08	Akaike info criterion	42.37979	
Sum squared resid	1.13E+18	Schwarz criterion	42.66951	
Log likelihood	-333.0383	F-statistic	61.14442	
Durbin-Watson stat	3.025854	Prob(F-statistic)	0.000000	

Regression Z2

Dependent Variable: LPPHR
 Method: Least Squares
 Date: 04/26/07 Time: 17:02
 Sample: 1990 2005
 Included observations: 16

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-15.61145	7.857290	-1.986875	0.0750
LWISMAN	0.137627	0.129608	1.061870	0.3133
LWISDOM	0.737122	0.351407	2.097628	0.0623
SREST	0.028536	0.021043	1.356052	0.2049
LGDPMAL	2.148530	0.942322	2.280037	0.0458
Z2	-1.35E-11	2.60E-10	-0.051951	0.9596
R-squared	0.962642	Mean dependent var	20.96623	
Adjusted R-squared	0.943963	S.D. dependent var	0.931064	
S.E. of regression	0.220403	Akaike info criterion	0.093279	
Sum squared resid	0.485775	Schwarz criterion	0.383000	
Log likelihood	5.253765	F-statistic	51.53591	
Durbin-Watson stat	2.355453	Prob(F-statistic)	0.000001	

APPENDIX II

Regression result

Dependent Variable: PPHR				
Method: Least Squares				
Date: 04/03/07 Time: 12:28				
Sample: 1990 2005				
Included observations: 16				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-1.77E+09	8.05E+08	-2.20293	0.0498
WISDOM	3285.401	733.2098	4.480847	0.0009
WISMAN	66987.47	83710.38	0.800229	0.4405
SREST	1.59E+08	33062853	4.815617	0.0005
GDPRMLY	6575.365	6456.18	1.018461	0.3303
R-squared	0.959473	Mean dependent var	1.84E+09	
Adjusted R-squared	0.944736	S.D. dependent var	1.54E+09	
S.E. of regression	3.62E+08	Akaike info criterion	42.50128	
Sum squared resid	1.44E+18	Schwarz criterion	42.74271	
Log likelihood	-335.0102	F-statistic	65.10582	
Durbin-Watson stat	2.779793	Prob(F-statistic)	0	

APPENDIX III

Autocorrelation result

Breusch-Godfrey Serial Correlation LM Test:				
F-statistic	1.00531	Probability	0.403588	
Obs*R-squared	2.921717	Probability	0.232037	
Test Equation:				
Dependent Variable: RESID				
Method: Least Squares				
Date: 04/03/07 Time: 12:30				
Presample missing value lagged residuals set to zero.				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-5340693	8.72E+08	-	0.9952
			0.006126	
WISDOM	-24.9624	843.0317	-0.02961	0.977
WISMAN	837.5973	85159.56	0.009836	0.9924
SREST	-280798.1	34176371	-	0.9936
			0.008216	
GDPRMLY	86.71461	7255.874	0.011951	0.9907
RESID(-1)	-0.359543	0.354733	-	0.3373
			1.013559	
RESID(-2)	0.146724	0.402834	0.364229	0.7241
R-squared	0.182607	Mean dependent var	-1.34E-07	
Adjusted R-squared	-0.362321	S.D. dependent var	3.10E+08	
S.E. of regression	3.62E+08	Akaike info criterion	42.54964	
Sum squared resid	1.18E+18	Schwarz criterion	42.88765	
Log likelihood	-333.3972	F-statistic	0.335103	
Durbin-Watson stat	1.899217	Prob(F-statistic)	0.90177	

APPENDIX IV

Heterocedasticity result

White Heteroskedasticity Test:				
F-statistic	1.102207	Probability	0.455448	
Obs*R-squared	8.919304	Probability	0.349149	
Test Equation:				
Dependent Variable: RESID^2				
Method: Least Squares				
Date: 04/03/07 Time: 12:29				
Sample: 1990 2005				
Included observations: 16				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-6.71E+17	1.02E+18	-	0.5323
WISDOM	9.64E+11	9.56E+11	1.009065	0.3465
WISDOM^2	-288823.7	687314.8	-0.42022	0.6869
WISMAN	1.68E+14	6.46E+14	0.260562	0.8019
WISMAN^2	-2.68E+10	9.70E+10	-	0.7903
SREST	3.66E+16	1.89E+16	1.935026	0.0942
SREST^2	-5.82E+15	3.04E+15	-	0.0972
GDPRMLY	6.11E+12	1.25E+13	0.489977	0.6391
GDPRMLY^2	-24797934	36400719	-	0.5176
R-squared	0.557457	Mean dependent var	9.00E+16	
Adjusted R-squared	0.051693	S.D. dependent var	8.93E+16	
S.E. of regression	8.70E+16	Akaike info criterion	81.1446	
Sum squared resid	5.29E+34	Schwarz criterion	81.57918	
Log likelihood	-640.1568	F-statistic	1.102207	
Durbin-Watson stat	2.8823	Prob(F-statistic)	0.455448	

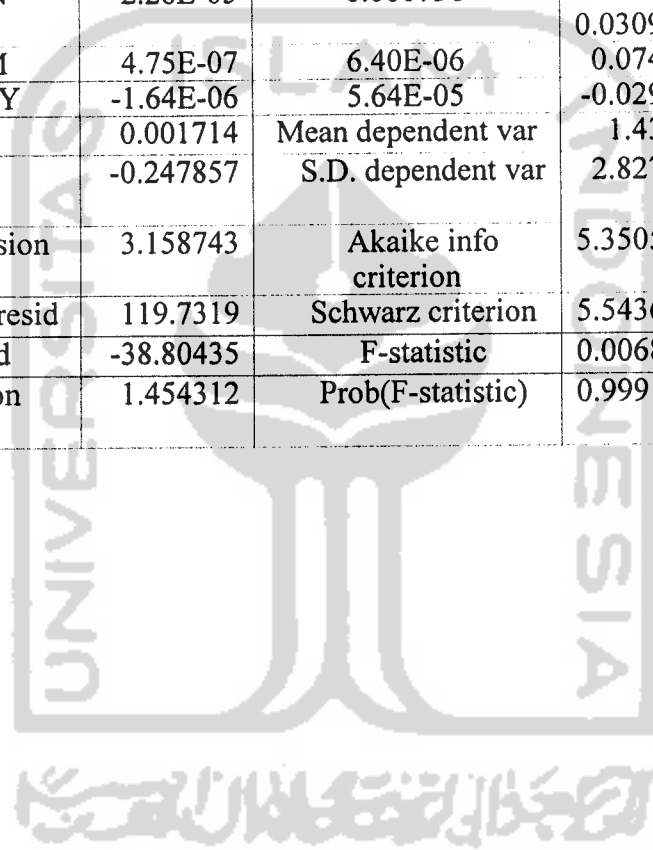
APPENDIX V

Multicollinearity result

Dependent Variable: WISMAN				
Method: Least Squares				
Date: 04/03/07 Time: 12:31				
Sample: 1990 2005				
Included observations: 16				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	6300.364	2098.54	3.002261	0.011
WISDOM	0.00368	0.002294	1.603881	0.1347
SREST	-3.528263	114.0127	-0.030946	0.9758
GDPRMLY	-0.043656	0.018354	-2.378532	0.0349
R-squared	0.396728	Mean dependent var	700.8125	
Adjusted R-squared	0.245909	S.D. dependent var	1436.692	
S.E. of regression	1247.6	Akaike info criterion	17.30815	
Sum squared resid	18678065	Schwarz criterion	17.5013	
Log likelihood	-134.4652	F-statistic	2.630504	
Durbin-Watson stat	1.556465	Prob(F-statistic)	0.097964	

Dependent Variable: WISDOM				
Method: Least Squares				
Date: 04/03/07 Time: 12:32				
Sample: 1990 2005				
Included observations: 16				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-877221.4	190772.6	-4.598257	0.0006
WISMAN	47.9686	29.90784	1.603881	0.1347
SREST	966.1806	13014.33	0.07424	0.942
G DPRMLY	8.154931	0.9588	8.505351	0
R-squared	0.873863	Mean dependent var	648950.8	
Adjusted R-squared	0.842328	S.D. dependent var	358715.2	
S.E. of regression	142438.2	Akaike info criterion	26.78352	
Sum squared resid	2.43E+11	Schwarz criterion	26.97667	
Log likelihood	-210.2682	F-statistic	27.7115	
Durbin-Watson stat	0.861764	Prob(F-statistic)	0.000011	

Dependent Variable: SREST				
Method: Least Squares				
Date: 04/03/07 Time: 12:33				
Sample: 1990 2005				
Included observations: 16				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.444523	7.018598	0.205814	0.8404
WISMAN	-2.26E-05	0.000731	-0.030946	0.9758
WISDOM	4.75E-07	6.40E-06	0.07424	0.942
GDPRMLY	-1.64E-06	5.64E-05	-0.02906	0.9773
R-squared	0.001714	Mean dependent var	1.4375	
Adjusted R-squared	-0.247857	S.D. dependent var	2.82769	
S.E. of regression	3.158743	Akaike info criterion	5.350543	
Sum squared resid	119.7319	Schwarz criterion	5.543691	
Log likelihood	-38.80435	F-statistic	0.006869	
Durbin-Watson stat	1.454312	Prob(F-statistic)	0.999172	



Dependent Variable: GDPRLY				
Method: Least Squares				
Date: 04/03/07 Time: 12:33				
Sample: 1990 2005				
Included observations: 16				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	119804.3	10018.73	11.9580326	0.0000
WISMAN	-7.34E+00	3.085604	-2.378531075	0.0349
WISDOM	1.05E-01	1.24E-02	8.505418082	0.0000
SREST	-4.30E+01	1.48E+03	-0.029060047	0.9773
R-squared	0.001714	Mean dependent var	182854.6	
Adjusted R-squared	-0.247857	S.D. dependent var	44835.39	
S.E. of regression	3.158743	Akaike info criterion	22.4328	
Sum squared resid	119.7319	Schwarz criterion	22.62595	
Log likelihood	-38.80435	F-statistic	34.41086	
Durbin-Watson stat	1.454312	Prob(F-statistic)	0.00004	