

**A CASE STUDY ON THE IMPACT OF INDUSTRIAL DEVELOPMENT  
ON URBAN LANDUSE IN AYUTTHAYA, THAILAND**

**By**

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**Thesis Submitted to the School of Graduate Studies, Universiti Putra Malaysia,  
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In the past decade, rapid growth of Thailand's economy has affected the pattern of land usage in Ayutthaya city. Large agricultural land areas had become golf courses, garden homes, housing areas and industrial estates. This is a result of booming land prices between 1985 to 1990 which has encouraged land owners to sell their land at prices higher than the real value. In addition, from 1991, an industrial development policy has made Ayutthaya as an industrial area and this move has affected the pattern of land usage, land utilization and bring about problems such as national forest reserve encroachment, demolition of historical heritage, environmental pollution, transportation as well as social problems.

This study focuses on the impact of industrial development on urban land usage in Ayutthaya, Thailand. The study aims to investigate the pattern of land usage, analyse the rate of change on land utilization and determine the effect of industrial development on land usage and quality of life. The data were collected using questionnaires and

secondary resources. The study covered Ayutthaya province in three areas; Phra Nakhon Si Ayutthaya, Sena and Uthai. The sample frame includes people who are involved in agricultural and industrial sectors in Ayutthaya. The sample size included members from 500 households. The data were analysed using SPSS program and statistical analysis such as ANOVA, regression, chi-square, and t-test were used for hypotheses testing.

The findings showed that land were used in two different ways in Ayutthaya; (1) farm holding land which is used for agriculture and rearing livestock, and (2) land which is used for residential, business, commercial, and industrial activities. The rate of change for land utilization indicated that the amount of agricultural areas are decreasing due to the establishment of industrial estates, increasing number of factories and changes to the land usage pattern. Lastly, industrial development is also affecting the lifestyles of the surrounding population.

Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia  
Sebagai memenuhi keperluan untuk ijazah Doktor Falsafah

**KAJIAN KES IMPAK PEMBANGUNAN INDUSTRI KE ATAS GUNATANAH  
BANDAR DI AYUTTHAYA, THAILAND**

Oleh  
**LAKANA JANYA**

**Julai 2004**

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Sedekad yang lalu, perkembangan ekonomi Thailand yang pesat telah mempengaruhi corak penggunaan tanah di bandar-bandar utama. Sebahagian besar tanah pertanian telah menjadi padang-padang golf, rumah-rumah taman, kawasan perumahan, dan kawasan industri. Ini adalah ekoran daripada peningkatan harga tanah di antara tahun 1985 sehingga ke tahun 1990 yang telah menggalakkan pemilik-pemilik tanah untuk menjual tanah-tanah mereka pada harga yang lebih tinggi dari harga sebenar. Di samping itu, dari tahun 1991, polisi pembangunan industri telah menjadikan Ayutthaya sebagai kawasan perindustrian dan ini telah mempengaruhi pola penggunaan tanah dan telah mengakibatkan masalah-masalah seperti pencerobohan pada hutan simpan negara, masalah pengangkutan, masalah sosial, kemusnahan pada peninggalan sejarah, dan pencemaran alam persekitaran.

Fokus kajian ini adalah untuk melihat impak pembangunan perindustrian terhadap penggunaan tanah di bandar-bandar dalam daerah Ayutthaya, Thailand. Kajian ini mengkaji pola penggunaan tanah, menganalisa kadar perubahan penggunaan tanah yang menunjukkan pengaruh pembangunan industri ke atas penggunaan tanah dan juga kualiti taraf hidup. Data dikumpulkan menggunakan kaedah soal selidik dan sumber-

sumber sekunder. Kajian ini dilakukan di tiga kawasan dalam daerah Ayutthaya iaitu Phra Nakhon Si Ayutthaya, Sena, dan Uthai. Rangka sampel merangkumi penduduk di daerah Ayutthaya yang terlibat dalam bidang pertanian dan perindustrian. Saiz sampel melibatkan 500 ahli isi rumah. Data dianalisis menggunakan pakej SPSS dan beberapa analisis statistik seperti ANOVA, regresi, khi-square dan ujian-t.

Hasil analisis menunjukkan bahawa tanah di Ayuthaya digunakan bagi dua tujuan;

(1) tanah ladang digunakan bagi tujuan pertanian dan perladangan, dan tanah

(2) untuk perumahan, perniagaan, tujuan komersial dan

aktiviti perindustrian. Kadar perubahan bagi kegunaan tanah menunjukkan yang jumlah kawasan pertanian telah berkurangan dengan pembukaan ladang-ladang perindustrian, bertambahnya pembinaan kilang-kilang, dan perubahan kepada pola penggunaan tanah. Akhir sekali, perkembangan perindustrian didapati telah mempengaruhi gaya kehidupan para penduduk.

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I certify that an Examination Committee met on 7th July 2004 to conduct the final examination of Lakana Janya on her Doctor of Philosophy thesis entitled “A Case Study on the Impact of Industrial Development on Urban Land Use in Ayutthaya, Thailand” in accordance with Universiti Pertanian Malaysia (Higher Degree) Act 1980 and Universiti Pertanian Malaysia (Higher Degree) Regulations 1981. The Committee recommends that the candidate be awarded the relevant degree. Members of the Examination Committee are as follows:

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## DECLARATION

**I hereby declare that the thesis is based on my original work except for quotations and citations which have been duly acknowledged. I also declare that it has not been previously or concurrently submitted for any other degree at UPM or other institutions.**

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LAKANA JANYA

**Date: 7 October, 2004**

## LIST OF TABLES

Table		Page
1	Number of Factories in Thailand between 1969-2002	3
2	<i>Expansion of Thai Industries</i>	54
3	Number of Polluting in Thailand	63
4	Emission from Major Polluting Industries	64
5	Water Quality in Thailand's Major River	66
6		67
7	<i>Type and Volume of Hazardous Waste</i>	94
8	Area, Number of Sub-districts, Villages and Dwelling by Districts	95
9	Monthly Rainfall, Temperature, and Relative Humidity of Ayutthaya in 1992	96
10	Monthly Rainfall, Temperature, and Relative Humidity of Ayutthaya in 2001	99
11		101
12	Number of Water Resources by Type of Water Resource and District in 1993	105
13	Number of Water Resources by Type of Water Resource and District in 2001	108
14		109
15	Land Use in Ayutthaya, 2001	110
16	Type of Land Utilization in Ayutthaya, 2001	114
17	Land Tenure in Ayutthaya, 2001	115
	Number of Farm Holder by Total Size Holding in 2001	
	<b>Number of Industrial Factories, Capital, and Workers of</b>	

18	<b>Industrial Type of Ayutthaya in 1992</b>	115
19		116
	Distribution of Factories in Ayutthaya in 2001	
20		124
21		131
22	Size of Factories in Ayutthaya, 2001	139
23	Type, Number of Factories, Capitals, and Number Workers of Industrial Factories of Ayutthaya in 1992	140
24		141
25	The Study Area	142
26	Levels of Attitude	144
27	Population: Number by District from 1992-2001	144
28	The Density of Population by District from 1993-2002	145
29	Household's Members of the Samples	146
30	<b><i>Household Size of the Sample</i></b>	146
31		147
32	<b><i>Education Level of the Population in the study Area</i></b>	147
33	Age Range of the Samples	148
34	Type of Occupation of the Samples	148
35	Employment Status	149
36	<b><i>The Starting Year of the First Job</i></b>	149
37	<b>The First Employment After Educated</b>	150
38	Present Employment Status	151
39	Types of Employment	151

40	Type of Employment by Number and Percentage in 1992	152
41	Type of Employment by Number and Percentage in 2001	152
42	Type of Organization Office in 1992	153
43	Type of Organization Office in 2001	153
44	Availability of Water Supply	154
45	The Year of Water Supply to the Home	154
46		155
47	Source of Water for Washing and Drinking in 1993	155
48	Source of Water for Washing and Drinking in 2001	156
49	Source of Water Supply	156
50	Effect about the Use of Water	157
51	The Problems of Water Supply Using before 1993	157
52	The Problems of Water Supply Using in 2001	158
53	Problems of Domestic Water's Use	158
54	Expenditure of Water Supply Connection	159
55	Fee of Water Supply Using per Month	159
56	Having Electricity to Use	160
57	Source of Electricity Supply	160
58		161
59	<i>Expenditure for Electricity Supply Using</i>	161
60	<i>The Problems from Electricity Supply</i>	162
61	Type of Vehicles Use for Travelling to Specific Place	163
62	The Problems from Transportation in 2001	163

63	Time Use for Going to the Market in 2001	164
66	Time Used for Going to Health Service	164
65	Time Use for Going to the Government Office	164
66	Time Use for Going to Work	164
67	Domicile Place of Population in Ayutthaya	165
68	The Reasons of Migration at Ayutthaya	165
69	Own House of the Sample	165
70	House's Acquisition of the Samples	165
71	Characteristics House of the Samples	167
72	Having the Fence House	168
73	The Utility of House before 1993	170
74	The Utility of House in 2001	174
75		178
	<b><i>Characteristics of Residence</i></b>	
76		181
	Present Residence of the Samples	
77		183
	Reason for Living in Ayutthaya	
78	Number of Medical Establishment: Fiscal Year 2002	186
79	Number of Death Rates by Leading Cases of Deaths	188
	Land Utilization: 1984-2001	
80		193
	Type of Agricultural Land by Crops Year: 1992/93-2001/02	
81		194
	Planted Area of Field Crops by Crops Year: 1992/93-2001/02	
82		195
	Planted Area by Type of Crops in Crop Year: 1992/93-2001/02	
	<b><i>Planted Area of Field Crops by Crop Year: 1992/93-2001/02</i></b>	
	Planted Area of Vegetable Crops by Type of Vegetable Crops:	

83	by Crop Year 1992-2001	197
84	<b>The Number and Types of Livestock in Ayutthaya</b>	
85	<i>The Rate of Change on Urban Land Use in Ayutthaya: 1984-2001</i>	198
86	<i>The Rate of Change on Urban Land Use in Ayutthaya: 1990-1998</i>	200
87		201
88		202
89	Land Use Change 1988-2001	203
90	The Number of Industrial Establishment, Capital and	204
91	the Number of Employees in Ayutthaya : 1991-2001	204
92		208
93		209
94	The Number of Industrial Establishment by Type of Industry	209
95	in Ayutthaya : 1991-2001	210
96	<b>The Industrial Development and Migration</b>	211
97	The Correlation of Factory and Migration	212
98	The Results of Regression between Factory and Im-migration	212
99	The Results of Regression between Factory and Out-migration	214
100	Crosstabs between Factory and Im-migration	215
101	Crosstabs between Factory and Out-migration	216
102	<i>The Industrial Development and Resident</i>	217
	The Correaltion of Factory and Resident (Houses)	219
	The Results of Regression between factory and House (Resident)	
	Crosstabs between Factory and House (Resident)	

103	Crosstabs between Agriculture Land and House (Resident)	220
104	Crosstabs between Factory and House (Resident)	221
105	Crosstabs between Farm Holding Land and House(Resident)	221
106	<b>The Industrial Development on Urban Land Use</b>	222
107	The Industrial Development and Agricultural Land Area	224
108	The Industrial Development and Farm Holding Land	224
109	<b>The Results of Regression between Factory and Agricultural Land</b>	225
110	The Results of Regression between Factory and Agricultural (FAL 1)	226
111	<b>The Results of Regression between Factory and Other Land(FAL2)</b>	227
112		228
113		228
114	<b>Crosstabs between Factory and Agriculture (FAL 1)</b>	230
115	Crosstabs between Factory and Other Land (FAL 2)	231
116	The Industrial Development and Agricultural Land Area	232
117	The Correlation of Factory and Farm Holding Land1	233
118	<b>Correlation of Factory and Farm Holding Land 2</b>	234
119	<b>The Results of Regression between Factory and Total Farm Holding Land (FAHO)</b>	236
120		237
121	Results of Regression between Factory and Total Farm Holding Land for agriculture (FAHO1)	238
122		239
	<b>Results of Regression between Factory and Farm Holding Land for Agriculture (FAHO 2)</b>	

123	Crosstabs between Factory and Agriculture Land (FAHO)	
124	Crosstabs between Factory and Planting Area (FAHO1)	240
	Crosstabs between Factory and Other Land (FAHO 2)	242
	The Industrial Development and Rice Planting Area	
	The Industrial Development and Rice Production	
	The Correlation of Factory and Employment	
	The Results of Regression between Factory and Employment	
	Crosstabs between Factory and Employment	
	Number of Motor Vehicles by Type	
	The Industrial Development and vehicles	
	The Correlation of Factory and Vehicles	
	The Results of Regression between Factory and Vehicles	
	Crosstabs between Factory and Vehicles	
	Effect of Land Use Changes on the Way of Life	



