



UNIVERSITI PUTRA MALAYSIA

**SHORT-RUN AND LONG-RUN DETERMINANTS OF
VIOLENT AND PROPERTY CRIMES IN MALAYSIA
BASED ON NATIONAL AND STATE LEVEL DATA**

TAN KEAT SIANG

FEP 2011 7

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**DOCTOR OF PHILOSOPHY
UNIVERSITI PUTRA MALAYSIA**

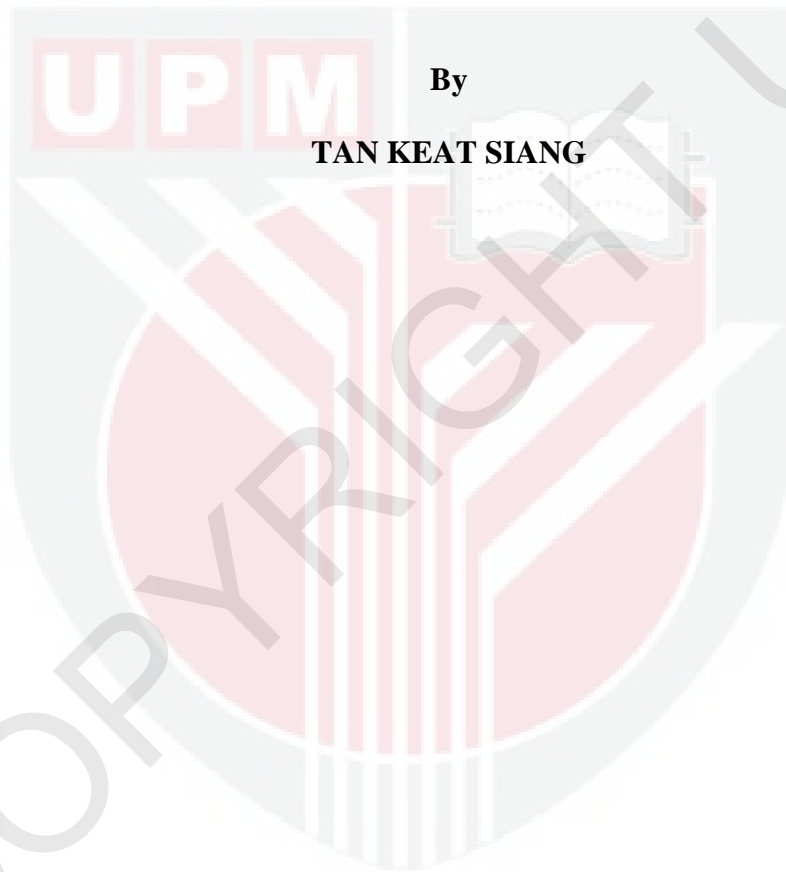
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**SHORT-RUN AND LONG-RUN DETERMINANTS OF VIOLENT AND
PROPERTY CRIMES IN MALAYSIA BASED ON NATIONAL AND STATE
LEVEL DATA**

By

TAN KEAT SIANG



**Thesis Submitted to the School of Graduate Studies, Universiti Putra Malaysia,
in Fulfillment of Requirements for the Degree of Doctor of Philosophy**

August 2011

DEDICATION

**DEDICATED TO MY MOTHER AND MY FATHER
MY WIFE, MY DAUGHTER AND MY SONS
MY FRIENDS
THOSE WHO HAVE CONTRIBUTED SOMETHING INTO MY LIFE
HOWEVER TRIVIAL IT MAY SEEM**



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Abstract of thesis presented to the Senate of Universiti Putra Malaysia in fulfilment of the requirement for the degree of Doctor of Philosophy

SHORT-RUN AND LONG-RUN DETERMINANTS OF VIOLENT AND PROPERTY CRIMES IN MALAYSIA BASED ON NATIONAL AND STATE LEVEL DATA

By

TAN KEAT SIANG

August 2011

Chairman: Professor Muzafar Shah Habibullah, PhD

Faculty: Economics and Management

This study aims to provide a systematic investigation of the socio-economic causes of crime offences in Malaysia for national and state levels. Two empirical analyses, time series and panel data analysis have been used to examine the interactions between different categories of crime and four explanatory variables namely: police size, unemployment rate, higher education level, and real GDP per capita. The econometric modeling adopted in this study is ARDL bound testing method for time series analysis and PMG estimating technique for panel data analysis, to examine both the long-run and short-run effects of socio-economic determinants on various categories of crime listed in the Malaysian crime index. The main findings of the study can be summarized as follows: First, the results have constantly shown that, for both the national and state level, except for higher education level, all socio-economic variables considered have more significant effect on property crimes than violent crimes in the long-run. However, the effect of higher education level on crime is different because it has more effect on violent crimes than property crimes. All socio-

economic variables considered do not affect or is less influential on most categories of the crime in the short-run. Second, the influences of the socio-economic factors on crime at the national and state level are slightly different. At the state level, the socio-economic variables considered have a significant effect on the most categories of property and violent crimes, especially in the long-run. The results are mixed with negative and positive correlation or even insignificant and show up most strongly for property crimes than violent crimes. However, their effects are different at the national level where police size, unemployment rate and higher educational level generally do not affect violent crime rate whether in the short-run or long-run. They do affect the property crime; however, police size and higher education level play a limited influence on this type of crime. Third, real GDP per capita and unemployment rate are the most important factors that influence property and violent crime for both at the national level and at the state level in the long-run. Therefore, our results are consistent with most of empirical studies in the economics of crime which suggests that economic conditions play an important role influencing particularly property crimes.

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

**PENENTU JENAYAH KEGANASAN DAN HARTA BENDA UNTUK
JANGKA PENDEK DAN JANGKA PANJANG DI MALAYSIA
BERDASARKAN DATA PERINGKAT NASIONAL DAN NEGERI**

Oleh

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Ogos 2011

Pengerusi: Profesor Dr. Muzafar Shah Habibullah, PhD

Fakulti: Ekonomi dan Pengurusan

Kajian ini bertujuan untuk menyediakan penyiasatan yang sistematik bagi penyebab berlakunya jenayah di Malaysia di peringkat nasional dan negeri. Dua analisis empirikal telah digunakan iaitu analisis siri masa dan analisis data panel untuk menganalisa hubungan antara berbagai kategori jenayah yang berbeza dan empat pembolehubah bebas iaitu saiz polis, kadar pengangguran, tahap pendidikan tinggi dan Keluaran Dalam Negara Kasar (KDNK) benar per kapita. Model ekonometrik yang telah digunakan dalam kajian ini ialah kaedah ujian ARDL untuk analisis masa dan teknik anggaran PMG untuk analisis data panel, untuk menganalisa kesan jangka panjang dan jangka pendek bagi penentu sosio ekonomi terhadap berbagai kategori jenayah yang disenaraikan dalam Index Jenayah Malaysia. Dapatan utama kajian boleh diringkaskan seperti berikut: Pertama, hasil kajian secara tetap menunjukkan bagi peringkat nasional dan negeri, kecuali tahap pendidikan tinggi, semua pembolehubah sosio ekonomi yang diambilkira lebih mengesani jenayah harta benda berbanding jenayah kekerasan untuk jangka panjang. Bagaimanapun, kesan tahap

pendidikan tinggi terhadap jenayah adalah berbeza kerana ia lebih mengesani jenayah kekerasan berbanding jenayah harta benda. Semua pembolehubah sosial ekonomi yang diambilkira tidak mengesani atau kurang mengesani jenayah dalam jangka pendek. Kedua, ada sedikit perbezaan di antara pengaruh faktor sosial ekonomi terhadap jenayah di peringkat nasional dan negeri. Di peringkat negeri, pembolehubah sosial ekonomi yang diambilkira mempunyai kesan yang nyata terhadap kebanyakan kategori jenayah harta benda dan kekerasan, terutamanya untuk jangka panjang. Hasil kajian menunjukkan wujudnya kesan yang bercampur-campur dengan korelasi negatif dan positif ataupun tidak signifikan. Kajian mendapati kesannya lebih kukuh untuk jenayah harta benda berbanding jenayah kekerasan. Namun, kesannya berbeza di peringkat nasional di mana saiz polis, kadar pengangguran dan tahap pendidikan tinggi secara umumnya tidak mengesani kadar jenayah kekerasan samada dalam jangka pendek atau jangka panjang. Sebaliknya ia mengesani jenayah harta benda, cuma saiz polis dan tahap pendidikan tinggi memainkan peranan yang agak terhad dalam mengesani jenayah jenis ini. Ketiga, KDNK benar per kapita dan kadar pengangguran merupakan faktor utama yang mengesani jenayah harta benda dan jenayah kekerasan samada di peringkat nasional mahupun di peringkat negeri dalam jangka panjang. Oleh itu, hasil kajian ini adalah konsisten dengan kebanyakan kajian empirikal dalam ekonomi jenayah yang menjelaskan bahawa keadaan ekonomi memainkan peranan penting dalam mempengaruhi jenayah terutamanya jenayah harta benda.

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I certify that a Thesis Examination Committee has met on 23 August 2010 to conduct the final examination of Tan Keat Siang on his thesis entitled “Short-run and Long-run Determinants of Violent and Property Crimes in Malaysia Based On National and State Level Data” in accordance with the Universities and University Colleges Act 1971 and the Constitution of the Universiti Putra Malaysia [P.U.(A)106] 15 March 1998. The Committee recommends that the student be awarded the Doctor of Philosophy.

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DECLARATION

I declare that the thesis is my original work except for quotations and citations, which have been duly acknowledged. I also declare that it has not been previously, and is not concurrently, submitted for any other degree at Universiti Putra Malaysia or other institutions of higher learning.

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Date: 23 AUGUST 2011



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