



UNIVERSITI PUTRA MALAYSIA

***ECONOMIC VALUATION OF INTEGRATED SOLID WASTE
MANAGEMENT IN KOTA BHARU, KELANTAN, MALAYSIA***

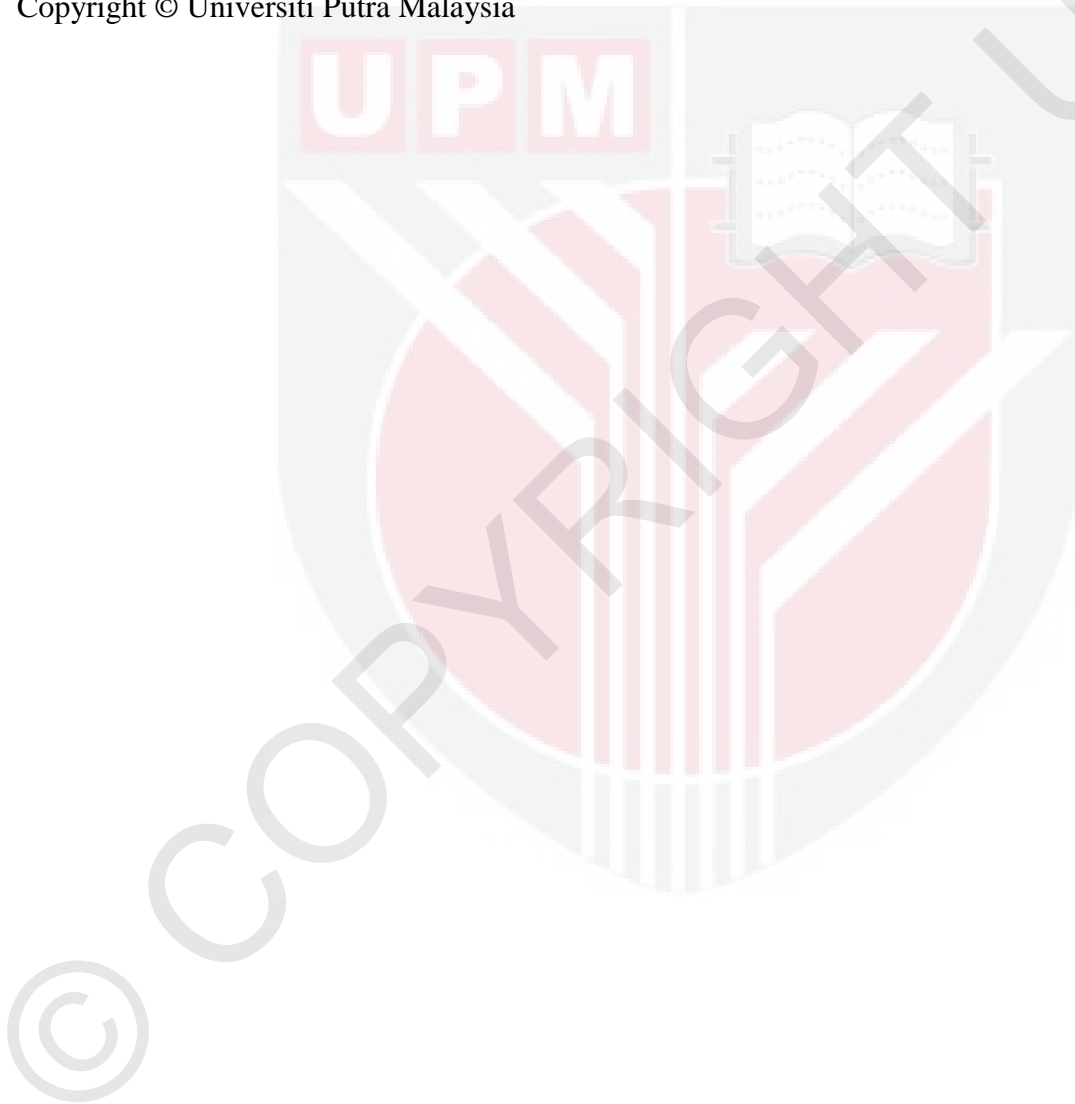
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This thesis is dedicated to my beloved parents, husband and son.

Abstract of thesis presented to the Senate of Universiti Putra Malaysia in fulfilment
of the requirement for the degree of Master of Science

**ECONOMIC VALUATION OF INTEGRATED SOLID WASTE
MANAGEMENT IN KOTA BHARU, KELANTAN, MALAYSIA**

By

NIK NOR RAHIMAH BINTI NIK AB RAHIM

February 2013

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Solid waste management in Kota Bharu is under responsibility of local authority, known as, *Majlis Perbandaran Kota Bharu* (MPKB). Solid waste management is a critical issue in Kota Bharu due to amalgamation of dwindling financial resources and population growth. These situations result in incompetency in controlling and handling excessive solid waste generation, giving rise to adverse effects on environment and public health. Introducing a new policy approach, integrated solid waste management can help to enhance condition of solid waste management in terms of reducing the waste generated, efficient services and sanitary waste disposal in Kota Bharu.

The objective of this study was to determine economic value of integrated solid waste management in Kota Bharu, Kelantan. Choice modelling method was used to determine the communities' preferences for services in integrated solid waste management and their willingness to pay for these services. A total of 300 respondents were interviewed face-to-face for data collection, representing the communities in Kota Bharu.

Multinomial logit models were defined to analyze the collected data. The results implied that the communities agreed with integrated solid waste management by inclusion of implementation of waste segregation, provision of adequate waste container, regularity in waste collection and execution of sanitary landfill waste disposal. In measuring their willingness to pay, the marginal value for each service in integrated solid waste management was positive. It indicated their willingness to pay for services in integrated solid waste management.

The results of this study can be helpful for policy makers and authorities in their decision-making for solid waste management improvement. The suggestion for integrated solid waste management in this study is coherent with enacted Act 672 to promote waste reduction, implement waste recovery and enhanced waste disposal. Therefore, the encouraging results can aid the authorities' interventions for introducing integrated solid waste management in Kota Bharu, Kelantan.

Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia
sebagai memenuhi keperluan untuk ijazah Master Sains

**PENILAIAN EKONOMI PENGURUSAN SISA PEPEJAL BERSEPADU DI
KOTA BHARU, KELANTAN, MALAYSIA**

Oleh

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Februari 2013

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Pengurusan sisa pepejal di Kota Bharu adalah di bawah tanggungjawab pihak berkuasa tempatan, dikenali sebagai, Majlis Perbandaran Kota Bharu (MPKB). Pengurusan sisa pepejal merupakan isu kritikal di Kota Bharu kerana masalah sumber kewangan dan pertambahan penduduk. Keadaan ini menyebabkan ketidakcekapan dalam mengendalikan sisa pepejal yang berlebihan, sekaligus menimbulkan kesan buruk terhadap alam sekitar dan kesihatan awam. Pendekatan dasar baru iaitu pengurusan sisa pepejal bersepadu dapat membantu meningkatkan keadaan pengurusan sisa pepejal dari segi pengurangan sisa, perkhidmatan yang cekap dan pelupusan sisa secara sanitari di Kota Bharu.

Objektif kajian ini adalah untuk menentukan nilai ekonomi dalam memperkenalkan pengurusan sisa pepejal bersepadu di Kota Bharu, Kelantan. Kaedah “Choice Modelling” telah digunakan untuk menentukan pilihan masyarakat bagi perkhidmatan dalam pengurusan sisa pepejal bersepadu dan kesanggupan mereka untuk membayar perkhidmatan ini. Sebanyak 300 responden yang mewakili masyarakat di Kota Bharu telah ditemubual secara langsung bagi pengumpulan data.

Model logit multinomial digunakan untuk penganalisan data. Keputusan menunjukkan bahawa masyarakat bersetuju dengan pelaksanaan pengasingan sisa, peruntukan bekas sisa yang mencukupi, pemungutan sisa secara tetap dan pelaksanaan tapak pelupusan sanitari di dalam pengurusan sisa pepejal bersepadu. Dalam mengukur kesanggupan mereka untuk membayar, nilai positif ditunjukkan bagi setiap perkhidmatan dalam pengurusan sisa pepejal bersepadu. Ini menunjukkan kesanggupan masyarakat untuk membayar bagi perkhidmatan dalam pengurusan sisa pepejal bersepadu.

Hasil kajian ini boleh membantu pembuat dasar dan pihak berkuasa dalam membuat keputusan untuk meningkatkan kualiti pengurusan sisa pepejal. Cadangan untuk pengurusan sisa pepejal bersepadu dalam kajian ini adalah selari dengan penggabalan Akta 672 bagi menggalakkan pengurangan sisa, melaksanakan pemulihan sisa dan pelupusan sisa secara sanitari. Dengan itu, keputusan daripada kajian ini dapat membantu pihak berkuasa untuk memperkenalkan pengurusan sisa pepejal bersepadu di Kota Bharu, Kelantan.

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I certify that an Examination Committee has met on **28th February 2013** to conduct the final examination of Nik Nor Rahimah binti Nik Ab Rahim on her Master of Science thesis entitled "Economic Valuation of Integrated Solid Waste Management in Kota Bharu, Kelantan, Malaysia" in accordance with the Universities and University College Act 1971 and the Constitution of the Universiti Putra Malaysia [P.U.(A) 106] 15 March 1981. The Committee recommends that the student be awarded the relevant degree.

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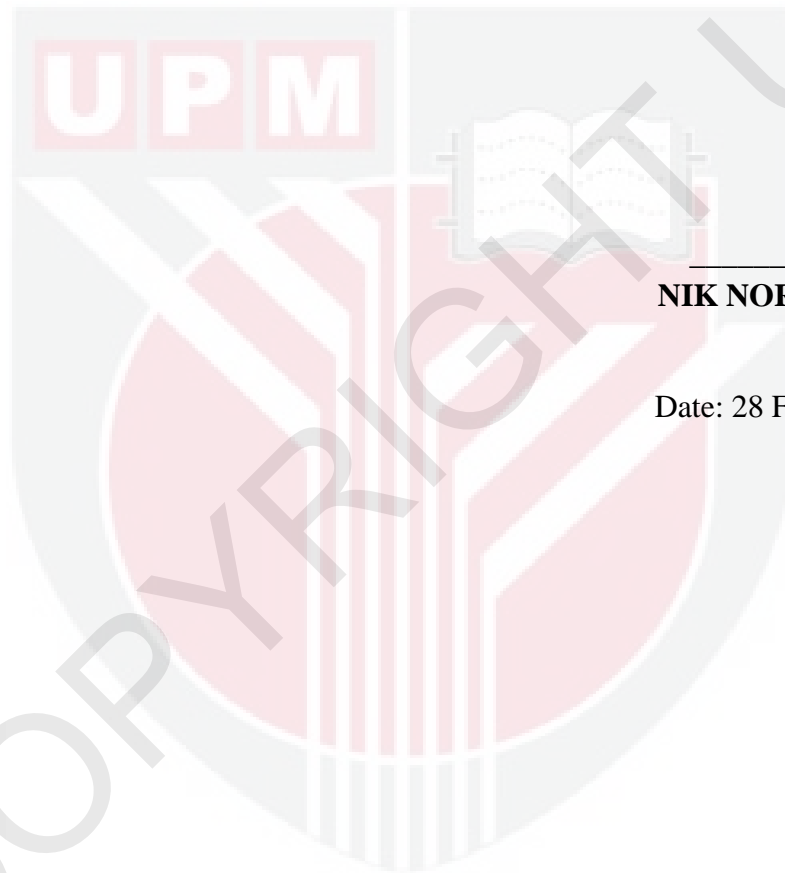
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DECLARATION

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 Universiti Putra Malaysia or other institution.



NIK NOR RAHIMAH

Date: 28 February 2013

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