

# **ANALISIS PERBANDINGAN SISTEM KERJA JALAN TOL GT.MUKTIHARJO INDONESIA DENGAN PLAZA TOL SKUDAI MALAYSIA**

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## **Abstrak**

Pemerintah setiap negara telah membangun jalan tol sebagai solusi dan alternatif bagi masalah kemacetan. Jalan tol merupakan jalan bebas hambatan yang diperuntukkan untuk kendaraan bersumbu 2 atau lebih. Jalan tol ini dibangun sebagai solusi kemacetan, khususnya daerah ibu kota dan kota-kota besar. Pada jalan tol terdapat gardu sebagai tempat transaksi pembayaran, dimana adanya sistem kerja dan antrian dalam gerbang tol.

Tugas akhir ini menganalisis perbedaan sistem yang ada di antara kedua negara yaitu Negara Indonesia dan Negara Malaysia. Terutama pada sistem kerja, sistem antrian dan sistem pembayaran yang terdapat di GTO Muktiharjo Indonesia dan Plaza Tol Skudai Malaysia. Dalam analisa ini difokuskan pada sistem kerja jalan tol antara kedua negara tersebut. Dalam menganalisa sistem kerja ada beberapa parameter yang menjadi acuan yaitu data volume lalu lintas setiap gardu per interval waktu, data volume kendaraan setiap shift dan data jumlah rata-rata pelanggan dalam setiap waktu. Dari hasil analisa didapatkan perbandingan sistem kerja, sistem antrian dan sistem pembayaran yang diterapkan pada kedua negara.

Berdasarkan hasil analisis perhitungan tugas akhir ini, didapatkan tingkat volume kendaraan yang menjadi perbedaan pada sistem kerja jalan tol di Indonesia dan Malaysia. Jumlah kendaraan di Malaysia sebanyak 31517 kendaraan dan di Indonesia sebanyak 14791 kendaraan mempengaruhi efisiensi biaya dan efektifitas waktu pengendara selama berkendara. Kesimpulan analisa sistem kerja, sistem antrian dan sistem pembayaran di jalan tol Malaysia lebih unggul daripada sistem kerja di Indonesia. Tetapi sistem keselamatan di Indonesia lebih unggul. Sehingga ada kelebihan dan kekurangan dalam kedua negara, maka diharapkan kedua negara dapat memperbaiki kekurangan jalan tol.

Kata Kunci : Jalan Tol, Sistem, Gardu

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# COMPARISON ANALYSIS OF TOLL ROAD WORK SYSTEM GT. MUKTIHARJO INDONESIA WITH PLAZA TOL SKUDAI MALAYSIA

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## Abstract

The government of each country has built toll roads as a solution and alternative for congestion problems. Toll road is a freeway that is intended for 2 or more axle vehicles. This toll road was built as a solution to congestion, especially in the capital city and big cities. On the toll road there is a substation as a place of payment transactions, where there is a work system and queues in toll gates.

This final project analyzes the differences in systems that exist between the two countries, namely Indonesia and Malaysia. Especially in work systems, queuing systems and payment systems found in Muktiharjo Indonesia GTO and Skudai Tol Plaza Malaysia. In this analysis the focus is on the toll road working system between the two countries. In analyzing the work system there are several parameters that become a reference, namely data on traffic volume of each substation per time interval, data on vehicle volume per shift and data on the average number of customers in each time. From the results of the analysis, a comparison of work systems, queuing systems and payment systems was applied to the two countries.

Based on the results of the analysis of the calculation of this final project, it was found that the volume level of the vehicle was the difference in the toll road work system in Indonesia and Malaysia. The number of vehicles in Malaysia is 31517 vehicles and in Indonesia as many as 14791 vehicles affect the cost efficiency and effectiveness of drivers' time while driving. Conclusion analysis of work systems, queuing systems and payment systems on Malaysian toll roads is superior to the work system in Indonesia. But the safety system in Indonesia is superior. So that there are advantages and disadvantages in the two countries, it is hoped that the two countries can improve the lack of toll roads.

Keywords: Toll Road, System, Substation

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