KAJIAN SIMULASI KE ATAS SISTEM TARUHAN
DALAM PERMAINAN ROLET
(Simulation Study on Betting System in Roulette Games)

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ABSTRAK

Penyelidikan ini dijalankan bagi mengkaji kelebihan dan kelemahan sebilangan sistem taruhan dalam permainan rolet dan mengenal pasti sama ada sistem-sistem taruhan ini dapat menjana keuntungan. Objektif utama kajian adalah untuk mengesahkan dan menguji hipotesis alternatif secara teori bahawa berjudi di kasino dengan menggunakan strategi berkenaan pun tetap akan menyebabkan kekalahan dan pembaziran wang. Model sistem taruhan dibangunkan dengan menggunakan pengaturcaraan C++ dan hasil larian simulasi dianalisis menggunakan SPSS. Hasil analisis menunjukkan bahawa selang keyakinan 95% bagi min keuntungan yang terhasil daripada kesemua sistem taruhan menunjukkan pulangan negatif. Selain itu, dengan peningkatan taruhan maksimum yang dibenarkan dan penambahan tempoh masa permainan, hampir kesemua sistem menyebabkan kerugian yang semakin tinggi. Sistem taruhan Fibonacci memberi pulangan negatif yang terendah, dan sebaliknya sistem Paroli memberi pulangan negatif yang tertinggi. Pengiraan anggaran jumlah pusingan yang dipertaruhkan sebelum mencapai kemenangan juga dilaksanakan. Walaupun pemain jarang mengalami kekalahan yang memanjang, kekerapan kekalahan jangka masa pendek tersebut sudah cukup untuk menyebabkan kerugian yang besar pada pemain. Sehubungan dengan itu, untuk menggambarkan situasi tersebut dengan lebih realistik, model simulasi juga menangani senario yang pemain bermula dengan dana permulaan yang terhad dan mempunyai sasaran keuntungan tertentu. Simulasi jelas menunjukkan bahawa, untuk suatu senario yang tipikal seperti dengan dana permulaan RM 5000, umumnya pemain gagal untuk mencapai keuntungan bersih sebanyak RM 1000 sebelum dana permulaan tersebut hangus. Berdasarkan hasil kajian ini, jelas ditunjukkan bahawa sistem-sistem taruhan kajian yang dipercayai mampu mengaut keuntungan adalah tentu sahaja tidak benar.

Kata kunci: sistem taruhan; rolet; simulasi; pengaturcaraan C++

ABSTRACT

This research is carried out to study the advantages and the disadvantages of a number of betting systems in roulette game and to identify whether those betting systems are able to generate profit. The main objective of the study is to verify and test theoretically the alternative hypothesis that gambling in the casino with such strategies would still results in a loss and a waste of money. The betting systems are modelled using C++ programming and the results from the simulation are analysed using SPSS. The analyses results from SPSS show that the 95% confidence intervals of mean profit for all the betting systems resulted in a loss. Besides that, the results show that increasing the maximum bet allowed and the period of the games, almost all the systems resulted in greater losses. The Fibonacci system leads to the lowest loss while the Paroli system leads to the greatest loss. Estimation of sequences of losses before win is also carried out. Although most of the players rarely undergo long sequences of losses, the short sequences of losses are often enough to result in a major ruin. Hence, to show such situation more realistically, the simulation model also caters for scenario where a player has a finite initial fund and aims to make a targeted profit. The simulation demonstrated that, for a typical scenario with an initial fund of RM 5000, overall the player fails to achieve a profit of RM 1000 before the fund is ruined. Based on these results, it is clear that the betting systems investigated that are believed to bring profit are definitely not true.

Keywords: betting systems; roulette; simulation; C++ programming

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