

**Cover Page**

**MSc Business Analytics (with specialisation in Management Science)**

**MSIN0114: Business Analytics Consulting Project/Dissertation**

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**Title of Project:**

**Understanding the Intrinsic Value of Games by Accounting for Overlapping Influential Factors**

**Date: 17 Agustus 2022**

**Word Count: 11,113**

**Disclaimer:**

*I hereby declare that this dissertation is my individual work and to the best of my knowledge and confidence, it has not already been accepted in substance for the award of any other degree and is not concurrently submitted in candidature for any degree. It is the product of my own independent study except where other acknowledgement has been stated in the text.*

## Abstract

As one of the most lucrative entertainment industries, massive growth in the gaming industry has exposed businesses to tough competition to remain ahead in the market. Multiple factors affect how people engage with such games, given so many options available and the high accessibility brought by technology. Entain Group faces the challenges with no exception as one of the leading international sports betting and entertainment companies. Being the leading brand in the gambling-style gaming industry in the UK, Entain strives to continuously offer the best user gaming experience by going beyond assumptions to understand what attracts and engages its customers. **Aim:** This project is conducted to support Entain's objective by further understanding the intrinsic value of its ranges of games to derive the base value of products enabling like-for-like product comparison. **Method:** Time series multivariate regression models were trained on Coral game samples to predict the value of the game based on the game's characteristics and promotions offered for the games. The prediction is made under two circumstances; with promotion and without promotion. **Finding:** Evaluation of the predictive models shows that a Time Series Random Forest Regressor model is the best performing model to predict the game's value which is described by the average stickiness score in this analysis. The model enables prediction for the game's intrinsic value, a condition where no propositions are applied in this case. The prediction results show that proposition has an impact on increasing the game's value for most of the games.