

國立聯合大學

經營管理學系碩士班

碩士論文

臺灣電競產業經營效率分析

—兩階段網路資料包絡分析法的應用

**Business Performance Evaluation of Taiwan Esports
Industry : An Application of Two-Stage Network Data
Envelopment Analysis**

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摘要

新冠肺炎疫情陸續在全球蔓延，各國政府接連實施社交距離，迫使人們活動範圍受限，讓宅經濟(Stay-at-Home Economy)等市場需求劇增，意外地使電子競技(Electronic Sports，簡稱 esports)產業在 2020 年備受矚目。根據遊戲產業權威市調機構 Newzoo 發布《全球電競市場報告》，2020 年全球電競產值已超過 11 億美元，預估在 2023 年時全球電競產值將突破 18 億美元。

2017 年我國公布《運動產業發展條例》部分條文第 4 條修正，正式將電子競技業納入運動產業之範疇。這不僅代表了我國政府對電競產業的正名，也勾勒出未來電競產業將可以得到相關法律的支持，更加提升企業對於電子競技產業的投入意願。如何在快速發展競爭激烈的電子競技產業中脫穎而出，完善的經營績效評估已成為電競業者不可或缺的管理重點。

本研究應用兩階段網路資料包絡分析法，探討 2015 至 2020 年臺灣電競產業上市櫃 24 家公司在獲利力、市場力與整體效率的表現。結果顯示：在 2017 年政府對電競產業正名後，電競公司整體獲利力與市場力效率值逐年上升。本研究期望藉由資料包絡分析法評估各家的經營績效，從中尋找此產業經營績效良好的企業，評估結果可作為國內電子競技業者於內部管理績效改善之參考。

關鍵詞：宅經濟、電競產業、資料包絡分析法、經營績效

ABSTRACT

COVID-19 has been spread around the world, and governments have implemented the policy of Social Distances. People are forced to limit the range of movement, so the market demand has increased such as Stay-At-Home Economy. Unexpectedly, the electronic sports (referred to as e-sports) industry has attracted attention in 2020. According to the "Global E-sports Market Report" released by Newzoo which is an authoritative market research agency in the game industry, the value of the global e-sports output in 2020 has exceeded 1.1 billion U.S. dollars, and it is estimated that the value will exceed 1.8 billion U.S. dollars by 2023.

In 2017, the government of Taiwan announced the amendments to Article 4 of some provisions of the "Sports Industry Development Ordinance", officially incorporating the e-sports industry into the sports industry. This is not only the rectification of the name of the e-sports industry by the government of Taiwan, but also represent that the e-sports industry will be supported by relevant laws in the future, which will further increase the willingness of enterprises to invest them. How to stand out in the fast-developing and fiercely competitive e-sports industry, perfect the evaluation of business performance has become an indispensable management focus for e-sports operators.

This study uses the two-stage network data envelopment analysis (DEA) to explore the profitability, marketability, and overall efficiency of the 24 listed companies in the e-sports industry in Taiwan from 2015 to 2020. The results show that after the government rectified the name of the e-sports industry in 2017, the profitability, marketability, and overall efficiency of the e-sports companies have increased yearly. This study expects to evaluate the business performance of each company with DEA and find which companies perform well in this industry, and the results of evaluation can be as a reference for domestic e-sports operators to improve their internal management performance.

Keywords : Stay-at-Home Economy, E-sports industry, DEA, Operating performance