

CITY UNIVERSITY OF HONG KONG
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**Research on Managers' Perceived Information
Systems (IS) Incompetence and Its Impact on
Team Performance**
管理者信息系統能力差距感對團隊績效的
影響機制研究

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摘要

資訊技術飛速發展及廣泛應用加速了企業的數位化轉型。企業綜合應用各類資訊系統（Information Systems, IS）對業務流程各環節進行管理和經營已成為常態。IS 的使用有利於企業快速回應市場機會、大幅縮減管理和人力成本、提升運營效率，成為企業獲取並維持競爭優勢的重要戰略資源。然而，IS 戰略價值的實現不僅僅體現在 IS 本身，更關鍵的是使用 IS 的用戶。被視為 IS 關鍵用戶之一的管理者作為企業和基層員工之間的重要橋樑，連接企業戰略規劃和實際經營狀況。IS 的廣泛使用已然改變了管理者的工作任務和管理角色，對管理者能力提出了新的要求和需求，尤其是管理者 IS 能力，即完成管理工作角色的職責和要求所需要的 IS 相關技能、知識和經驗。隨著 IS 加速反覆運算和推陳出新，管理者迫切需要同步提升自身的 IS 能力去完成管理工作。

通過系統性地梳理文獻，本論文發現以往組織行為學（Organizational Behavior, OB）文獻主要聚焦于傳統管理者工作角色所要求的三種能力維度（即概念、人際和技術能力），尚未有研究系統性探討當今數位化新情境中管理者工作任務與管理角色對 IS 相關的能力要求。已有 IS 文獻主要關注使用者 IS 使用頻率、使用意願及 IS 自我效能感等，卻鮮少探討當前數位化轉型、IS 反覆運算更新的企業新情境中，管理者如何主動評估自身 IS 能力與工作要求之間的關係，以應對數位化帶來的新型管理工作的挑戰。針對上述研究空白點，本論文提出以下研究問題：IS 相關的知識、經驗和技能是否成為管理者完成管理工作角色職責和要求的一種新型能力維度？管理者如何主動評估自身所需 IS 相關能力，並對其所帶領的團隊績效產生何種影響？

為解決上述研究問題，本論文以跨學科整合的視角，提出數位化工作新情境激發了管理者意識並重視自身在 IS 能力上的不足，獨創性地提出**管理者 IS 能力差距感**的新概念，將其定義為**管理者為完成工作要求感知到的自身所欠缺的一系列 IS 相關知識和經驗**。本論文引入並整合 OB 領域的自我調節學習理論和 IS 領域的適應結構化理論，提出管理者 IS 能力差距感影響團隊績效的兩種重要的仲介路徑：一是促進管理者 IS 學習行為（即主動學習 IS 相

關知識、技能等），二是減少管理者 IS 間接使用行為（即讓他人代替自己使用 IS 的行為）。此外，本論文提出組織學習氛圍（即管理者感知到的組織促進、獎勵和支援學習行為的組織政策和實踐）可以調節管理者 IS 能力差距感對 IS 學習行為和 IS 間接使用的影響，以及 IS 工作嵌入度（即管理者感知到的其工作職責與 IS 的緊密關聯程度）可以調節 IS 學習行為和 IS 間接使用對團隊績效的影響。本論文採用多評價源、三輪間隔時間點的問卷調查方法，通過採集中國一家大型快消品公司 491 位管理者及這些管理者的 48 位元直屬上級的調研資料，結果發現支援了本論文所提出的主要研究假設。具體而言，管理者 IS 能力差距感會促進其 IS 學習行為，抑制 IS 間接使用行為；同時，當管理者感知到組織學習氛圍高時，其 IS 能力差距感與 IS 學習行為之間的正向關係以及與 IS 間接使用的負向關係均會被增強，進而促進團隊績效。此外，當且僅當 IS 工作嵌入度高時，IS 學習行為與團隊績效正向相關。本文的主要創新工作具體如下：

第一，提出管理者 IS 能力差距感的新概念，深化了企業數位化轉型時代 IS 廣泛應用對管理者自身所需新型能力的認識和理解。OB 領域所提出的三種傳統管理者能力內涵雖反映了管理者完成管理工作職責與任務要求所需要的關鍵能力，但卻無法體現出當代以資訊化、數位化轉型為新情境特徵的企業實踐，尤其是 IS 已成為管理者完成工作角色要求的必要工具，對管理者能力提出了新要求。更為重要的是，本論文的研究發現驗證了管理者主動自我評估過程的重要理論和實踐價值，強調了管理者主動評估自身具備的 IS 能力與實際工作所需 IS 能力之間差距的重要性，拓展了已有 IS 領域研究主要圍繞 IS 行為頻次和行為意願等概念的研究。

第二，基於跨學科整合的研究視角，整合 OB 與 IS 領域的理論，系統性探討了管理者 IS 能力差距感對團隊績效的影響機制和邊界條件。提出並驗證管理者 IS 理論學習（IS 學習行為）和 IS 實踐學習（減少讓他人代為使用）作為影響管理者 IS 能力差距感和團隊績效之間關係的兩種關鍵的仲介機制，深化了管理者如何積極主動應對 IS 帶來的工作挑戰。通過發現組織學習氛圍和 IS 工作嵌入度的調節作用，生動地刻畫了管理者認知與行為過程對團隊績效產生影響的黑箱機制。

第三，通過將 OB 領域對管理者能力的積極正向影響研究轉向探究管理者自我認知能力不足的積極影響，強化行為主體自我認知對自我行為驅動的重要性，提出管理者 IS 能力差距感對團隊績效的正向作用機制和邊界條件。

以往有關管理者能力的研究主要聚焦於管理者能力所帶來的積極作用，然而關於管理者能力不足，尤其是自我認知自身能力無法滿足工作需求的現實情況卻鮮少探討。如何激發管理者主動意識到自身能力不足，促進其主動學習以彌補能力差距感是非常重要的理論和實踐問題。本論文的研究結論豐富並延展了管理者能力研究的理論視角，同時也深化了對數位化轉型實踐背景下管理者 IS 能力不足的現象認識，並提供具有針對性的實踐指導。

關鍵字：管理者 IS 能力差距感；組織學習氛圍；IS 學習行為；IS 間接使用；IS 工作嵌入度；團隊績效

ABSTRACT

The rapid development and widespread use of information technology has accelerated the digital transformation of organisations. Using information systems (IS) to manage and operate business processes is becoming normal. The use of IS facilitates organisations' quick responses to market opportunities, significantly reduces management and labour costs and improves operational efficiency, making IS an important strategic resource for gaining and sustaining competitive advantage. However, realising the strategic value of IS doesn't only depend on IS itself, but more on its users. Managers, a key group of IS users, are an important bridge between organisations and frontline employees, intermediating strategic planning and the real-life business situation. The widespread use of IS has already changed managers' work tasks and managerial roles, demanding new managerial competencies, in particular IS competence in terms of the skills, knowledge, and experience necessary to fulfil the responsibilities and requirements of managerial job roles. Given the acceleration of IS iterations and new developments, there is an urgent need for managers to synchronise their IS capabilities to accomplish managerial tasks and activities.

Organisational behaviour (OB) research has mainly focused on three traditional managerial roles, namely, the conceptual, interpersonal, and technical competencies. However, few studies have systematically explored the IS-related competencies managers require in today's new digital contexts. In parallel, the IS literature has focused on IS usage frequency, intention to use IS, and IS self-efficacy. There is scant research on how managers can proactively assess the relationship between their IS capabilities and job requirements in the new organisational context of digital transformation or how they have responded to the acceleration of IS iterations and updates to meet the new management challenges brought about by digitalisation. Accordingly, this thesis poses the following questions: Do IS-related knowledge, experience, and skills form a new dimension of managerial competence

to fulfil the responsibilities and requirements of managerial roles? How can managers proactively assess the IS-related competence necessary to fulfil managerial work demands and influence subsequent team performance?

To address these research questions, this thesis takes an interdisciplinary and integrated perspective and proposes that the new work context of digitalisation stimulates managers to be aware of and pay attention to their own deficiencies in IS competence. This thesis not only advances the novel concept of managers' perceived IS incompetence to capture the extent to which managers perceive themselves as lacking the IS-related knowledge and skills needed to fulfil their job requirements, but also synthesises adaptative structuration theory and self-regulated learning theory to construct a research model in which managers' perceived IS incompetence exerts a positive effect on their IS learning behaviour (i.e., active learning of IS-related knowledge and skills) while negatively affecting their indirect IS use (i.e., a behavioural tendency to have others use IS for them). In turn, IS learning behaviour positively affects team performance while the reverse holds true for IS indirect use. Additionally, the thesis further posits that the organisational learning climate (i.e., the extent to which managers perceive organisational policies and practices that promote, reward and support learning behaviours) reinforces the positive relationship between managers' perceived IS incompetence and IS learning behaviour, as well as the negative relationship between managers' perceived IS incompetence and IS indirect use. Conversely, IS job embeddedness (i.e., the degree to which managers perceive their job responsibilities to be closely related to IS) is postulated to moderate the positive relationship between IS learning behaviour and team performance as well as the negative relationship between IS indirect use and team performance.

The research model was validated via a multisource, three-wave survey that was completed by 491 managers and their 48 immediate supervisors in a large sales company in the dairy products industry in China. The findings provide empirical support for the proposed major hypotheses. Specifically, managers' perceived IS

incompetence promoted their IS learning behaviour and inhibited IS indirect use. In addition, when managers perceived a strong organisational learning climate, the positive relationship between perceived IS incompetence and IS learning behaviours and the negative relationship with IS indirect use were both enhanced, which in turn promoted team performance. Furthermore, IS learning behaviour was positively associated with team performance only when IS job embeddedness was high.

The main innovations of this thesis are as follows. First, the thesis proposes the new concept of managers' perceived IS incompetence, which increases awareness and deepens the understanding of the new competencies required by managers in today's era of digital transformation associated with widespread IS applications. The three traditional managerial competencies recognised by the OB field reflect the core competencies necessary to fulfil managerial responsibilities and tasks. However, they fail to reflect contemporary corporate practices characterised by IS and digital transformation, especially as IS has become a necessary tool for managers to fulfil the requirements of their job roles and has placed new demands on their competencies. More importantly, the findings validate the important theoretical and practical value of managers' proactive self-assessment, emphasising the importance of managers' proactive assessment of their own IS competence and the IS competencies required for their actual work, which expands previous IS research that mainly focuses on the frequency of IS behaviours and behavioural intentions.

Second, based on an interdisciplinary and integrated research perspective, the thesis integrates theories from OB and IS to systematically explore the underlying mechanisms and boundary conditions by which managers' perceived IS incompetence affects team performance. The introduction of managers' IS theoretical learning (IS learning behaviour) and IS practical learning (reducing others using IS for them) as two key mediating mechanisms deepens the scholarly knowledge of how managers can proactively respond to today's new digital work

challenges. The moderating roles of organisational learning climate and IS job embeddedness paint a complete picture to reveal how managers' cognitive and behavioural processes influence team performance.

Third, the thesis diverts OB scholars' attention from the positive effects of managerial competence to the positive effect of managers' perceived incompetence, highlights the importance of actors' self-perception and self-regulation, and proposes how and when managers' perceived IS incompetence enhances team performance. Previous studies of managers' competence have mainly focused on its positive effects, but scant research has explored the effects of managers' incompetence, in particular their self-awareness and perception of incompetence to fulfil managerial work demands. How to prompt managers to perceive their own incompetence and take the initiative to learn is an important theoretical and practical issue. Our findings enrich and extend the theoretical perspective of managerial competence research, deepen the understanding of managers' IS incompetence in the context of digital transformation practices and provide valuable practical suggestions and guidance.

Keywords: Managers' perceived IS incompetence; Organisational learning climate; IS learning behaviour; IS indirect use; IS job embeddedness; Team performance

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目 录

摘 要	i
ABSTRACT.....	iv
Qualifying Panel and Examination Panel.....	viii
致 謝	ix
1 緒論	1
1.1 研究背景	1
1.2 研究問題與內容	4
1.3 研究意義	7
1.4 研究方法	8
1.5 研究框架	9
圖 1-1 研究內容與結構框架圖	12
1.6 本章小結	12
2 文獻綜述與理論基礎	14
2.1 管理者工作角色要求	14
2.2 管理者能力	14
2.2.1 管理者能力的內涵	15
2.2.2 管理者能力的維度劃分	17
2.2.3 工作情境對管理者能力的要求	18
2.2.4 IS 與管理者能力	21
2.3 管理者能力差距感	24
2.3.1 管理者能力差距感的內涵與研究發現	24
2.3.2 管理者能力差距感相關研究評述	27
2.4 管理者 IS 能力差距感	28
2.4.1 管理者 IS 能力的內涵	28
2.4.2 管理者 IS 能力差距感的內涵與評述	29
2.5 IS 學習行為	31
2.5.1 IS 學習行為的內涵	31
2.5.2 IS 學習行為的研究回顧與評述	34
2.6 IS 間接使用	40
2.7 組織學習氛圍	43
2.8 IS 嵌入度	46
2.8.1 IS 嵌入度的內涵	46

2.8.2 IS 嵌入度的研究回顧與評述.....	46
2.8.3 管理者工作的 IS 嵌入度.....	48
2.9 理論基礎.....	48
2.9.1 工作設計的學習發展視角.....	48
2.9.2 自我調節理論.....	51
2.9.3 IS 相關理論基礎.....	55
圖 2-1 D&M IS 成功模型.....	56
2.10 本章小結.....	65
3 理論模型構建.....	69
3.1 概念模型構建.....	69
圖 3-1 理論研究模型.....	70
3.2 假設提出.....	70
3.2.1 管理者 IS 能力差距感對 IS 學習行為和 IS 間接使用的影響.....	70
3.2.2 組織學習氛圍的調節作用.....	71
3.2.3 IS 學習行為與 IS 間接使用對團隊績效的影響.....	73
3.2.4 管理者 IS 工作嵌入度的調節作用.....	75
3.2.5 仲介作用.....	76
3.3 本章小結.....	77
表 3-1 假設匯總表.....	77
4 研究方法.....	78
4.1 樣本與調研過程.....	78
表 4-1 有效問卷的人口統計學特徵描述性統計.....	82
4.2 變數測量.....	82
4.3 資料分析方法.....	85
4.4 資料分析結果.....	86
4.4.1 驗證性因數分析.....	86
表 4-2 變數的驗證性因數分析結果.....	88
4.4.2 相關性.....	88
表 4-3 均值、標準差、相關性與信度.....	89
4.4.3 假設檢驗.....	90
表 4-4 簡單回歸分析結果.....	92
表 4-5 間接效應檢驗結果.....	93

圖 4-1 組織學習氛圍對管理者 IS 能力差距感與 IS 學習行為關係影響的調節作用圖	94
圖 4-2 組織學習氛圍對管理者 IS 能力差距感與 IS 間接使用關係影響的調節作用圖	94
圖 4-3 管理者 IS 工作嵌入度對 IS 學習行為與團隊績效關係影響的調節作用圖	95
5 研究結論與展望	96
5.1 研究結論	96
表 5-1 假設檢驗結論一覽表	97
圖 5-1 管理者 IS 工作嵌入度對 IS 間接使用與團隊績效關係影響的調節作用圖	99
5.2 研究局限與未來研究展望	101
5.3 理論意義	102
5.4 實踐意義	105
5.5 創新點	108
5.6 論文小結	110
參考文獻	111
附 錄	142