

**Sudan University of Science and Technology  
Collage of Graduate Studies**



**ROLE OF IT RESOURCES ON POSITIONAL ADVANTAGE  
A STUDY ON INSURANCE AND BANKING SECTOR IN SUDAN**

**دور موارد نظم المعلومات في الميزة الموقفية  
دراسة في قطاعي البنوك والتأمين بالسودان**

**Thesis**

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**By  
Anwar Yahia Shams Eldin**

**Supervisor:**

**Dr. Abdel Hafiez Ali Hasab Allah**

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# **DEDICATION**

To the memory of my father, Yahia.

To my mother, Afaf Mustafa Behiria.

## ملخص الدراسة

السودان مثل معظم البلدان النامية لم يستفد تماماً من كل الفرص التي توفرها تكنولوجيا المعلومات لإحداث تغيير في عمل المنظمات وكذلك في هيكل الصناعة والتي تمكن من خلق ميزة موقفية. من ناحية أخرى، فإن الآلية التي من خلالها تؤثر نظم المعلومات على الميزة الموقفية تم تناولها بشكل محدود في الأدبيات. من أجل توضيح دور تكنولوجيا المعلومات على الميزة الموقفية هدفت هذه الدراسة علي تسليط الضوء على اثر موارد تقنيه المعلومات على ميزة الموقف من خلال التحقق من الدور الوسط لمقدرات المنظمة، تحديدا المقدرات الدينامكية ومقدرات تقنيه المعلومات بالإضافة الى الدور المعدل للعوامل البيئية التي تؤثر على العلاقة مابين مقدرات المنظمة وميزة الموقف بالنسبة لقطاعي التامين والبنوك السودانيين. صمم نموذج لتقييم اثر موارد التقنيه المعلومات على ميزة الموقف، مستندا على مدخل القيمة التجارية لتقنيه المعلومات، نظرية الموارد، ومدخل ديناميكية المقدرات. جمعت البيانات من خلال منهج الحصر الشامل. للإجابة علي اسئلة البحث صممت عدة فرضيات لهذه الدراسة هدفت للنظر في العلاقة بين موارد تكنولوجيا المعلومات وقدرات المنظمة (تشمل القدرات الدينامكية وقدرات تكنولوجيا المعلومات)، كذلك تم تصميم فرضيات للنظر في العلاقة بين قدرات المنظمة والميزة الموقفية و قدرات المنظمة ودورها الوسيط في العلاقة بين الموارد التنظيمية والميزة الموقفية، وكذلك فرضيات لبحث الدور المعدل للعوامل البيئية في العلاقة بين القدرات التنظيمية والميزة الموقفية . جمعت البيانات الاولية عن طريق استبيانين. الاستبيان الاول تم جمعه من المدراء الوظيفيين لقطاعي التامين والبنوك السودانية. صمم الاستبيان للحكم على موارد ميزة الموقف ومقدرات المنظمة الدينامكية بالإضافة الى العوامل البيئية. جمع الاستبيان الثاني من كبار العاملين في مجال تقنيه المعلومات في قطاعي التامين والبنوك. صمم الاستبيان للحكم على موارد ومقدرات نظم المعلومات. استخدمت عدة طرق لتحليل البيانات: التحليل الوصفي وتحليل الثبات، والانحدار المتعدد والهرمي. توصلت الدراسة الى ان تقنيه حوسبة المؤسسة تؤثر على مقدرات تقينه المعلومات. وتوصلت أيضاً إلي أن مقدرات تقينه المعلومات لا تؤثر على ميزة الموقف وأن مقدرات المنظمة لا تتوسط العلاقة بين موارد تقينه المعلومات وميزة الموقف. وخلصت الدراسة إلى أن العوامل البيئية تقوم بدور المعدل بين مقدرات المنظمة الدينامكية وميزة الموقف. أوصت الدراسة المؤسسات البنكية والتأمينية للاستفادة من كل موارد تقنيه المعلومات لدعم مقدرات المنظمة الدينامكية وميزة الموقف. بالإضافة لذلك قدمت مناقشة تفصيلية لنتائج والتوصيات. كما تم تسليط الضوء على الاتجاهات المستقبلية المقترحة لبحث.

## **ABSTRACT**

Sudan like most developing countries has not yet completely benefiting from all the opportunities that may be provided by information technology (IT) to create changes in the organization work as well as the industry structure which enables them to create positional advantage. On the other hand, the mechanism through which IT affects positional advantage has limitedly conceptualized in the literature. The study aims to clarify the role of IT on positional advantage by identifying the impact of IT resources on positional advantage through investigating the mediating role of some organization capabilities, specifically dynamic capability and IT capability, and the moderating effect of the environmental factors on the Sudanese banking and insurance sectors. A model was designed to evaluate the impact of IT resources on positional advantage based on IT business value, resource base view and dynamic base view. The main hypotheses of this study are: There is a positive relationship between IT resources and organization capabilities; there is a positive relationship between organization capabilities and positional advantage; organization capabilities mediate the relationship between organization resource and positional advantage; the relationship between organization capabilities; and positional advantage is positively related to environmental factors. The primary data were collected through comprehensive survey techniques by questionnaires. The data of the first questionnaire, which were collected from the functional managers, has been designed to assess the positional advantage, the organizational dynamic capabilities and environmental factors. The data of the second questionnaire, which is collected from the senior IT staff, has been designed to judge the IT resources and capabilities. Various data analysis procedures were applied including reliability analysis, descriptive analysis, multiple and hierarchy regression analysis. The findings of study indicated that enterprise computing technology influence IT capabilities, the IT capabilities does not moderate the relationship between IT resources and positional advantage and the organizational dynamic capabilities affect the positional advantage. The findings also revealed that environmental factors moderate the relationship between organizational dynamic capability and positional advantage. The study recommended that banking and insurance institutions should focus on how to benefit from all IT resources in order to support the organizational dynamic capability and positional advantage. Detailed discussion and recommendations were provided and future research directions had been highlighted.

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