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**Influence of Effective Planning of Work Process on Competitive  
Advantage of Numerical Derivative Industries. A Critical Literature  
Review**



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## **Influence of Effective Planning of Work Process on Competitive Advantage of Numerical Derivative Industries. A Critical Literature Review**

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### **Abstract**

**Purpose:** Adaptive capability is defined as a firm's ability to identify and capitalize on emerging market opportunities. The overall objective of this study was to examine influence of effective planning of work process on competitive advantage of numerical derivative industries. A critical literature review

**Methodology:** The paper used a desk study review methodology where relevant empirical literature was reviewed to identify main themes and to extract knowledge gaps.

**Findings:** The study also concluded that organizational transformation affects competitive advantage in the numerical machining industries positively. The study showed that new performance measures enhance sustained profitability and revised compensation and training strengthens customer loyalty. The study further revealed that continuous improvement determines brand recognition.

**Unique Contribution to Theory, Policy and Practice:** The study recommends that management in firms should engage with emerging markets more closely. This can be done through planning and determining the cost advantages as well as the operational costs in order to keep itself competitive. The study recommends that international business participant should have an understanding of economics, finance, marketing and strategy, a social understanding of culture and managing across culture. The Numerical Machining industries should plan and launch next generation line extensions with precision and advice from physicians and patients. The study recommends that the patent protection should have lapsed and the corporation set up a defined strategy.

**Keywords:** *Influence, Effective Planning, Work Process, Competitive Advantage, Numerical Derivative Industries.*

## INTRODUCTION

Today, many institutions struggle to envision how they would apply management capabilities in order to offer the best to the market and remain competitive. This struggle is understandable, given that increased proper resource utilization is key to the companies' survival (Sapienza & Teece, 2014). The management capabilities view of sustained competitive advantage has focused on the capabilities that give industrial firms the competence of adapting to change in their environment and competitive position (Tripas, 2015). Since the industrial firms' environment has become very competitive, the managerial competences need to change constantly. With the capabilities concept, the value of industrial firms may hold is the ability to alter its resource base (Maina, 2022). Thus, its competitive advantage can be increased by the creation, integration, recombination and realization of resources. A reflection of the view on resources and capabilities, brings to the fore the importance of industrial firms being able to learn with each relationship internal and external, with different stakeholders. A common topic in contemporary managerial capabilities, result to persistent competitive advantage differences among firms (Aryeetey, 2012)

Kuria (2015) indicates that for an organization to attain competitive advantage over others, coordination must be a continuous process. It must not be a one-time action. The procedure of coordination must start when the association begins, and it must proceed until the point that the association exists. Coordination must be done consistently amid the administration procedure. It must be finished amid arranging, sorting out, coordinating and controlling. As indicated by Gilham (2018), for an association to accomplish an upper hand, coordination must begin at a beginning time in the administration procedure.

As per Faccio (2016), co-appointment was fruitful just within the sight of a successful communication. Great communication must be available between all divisions, inside workers themselves and even amongst supervisors and their subordinates. All communication obstructions and holes must be kept away from and settled. Great communication stays away from mistaken assumptions in the association. As per Muhura (2022), Coordination was effective just if there exists a shared regard all through the association. All chiefs working at various levels (best, center or lower) must regard each other. Communication, all workers must demonstrate an agreeable state of mind and should regard each other amid cooperation's. Firms trying to adjust amid turbulent circumstances can't compel change through absolutely specialized methodologies, for example, rebuilding and reengineering. They require another sort of administration ability to reframe problems, reinterpret choices, and change operations and to do as such ceaselessly (Lawson & Price, 2019).

Ambrosini (2019) investigated how the abilities of firms may represent the development of differential firm upper hand inside an industry. Incorporating bits of knowledge from both vital and hierarchical hypothesis, four upper hand applicable qualities of capacities are proposed: timing of ability organization, impersonation as a component of the scan for elective asset setups, cost of

capacity sending, and figuring out how to convey capacities. Ebers and Delfmann (2012) did an examination on the estimation of abilities for vital administration. The concentration of this observational examination was determined to the specialty unit level of extensive organizations from different businesses working in Germany. Inside the field period of three months the survey was sent to 626 firms. While demonstrating that the measure of capacities is decidedly identified with the advancement of operational abilities, the outcomes additionally obviously exhibit that these are two particular builds. By just applying measures for ability advancement as intermediary for capacities, we hazard to disregard elective clarifications for watched relations. When intermediaries are connected for measuring capacities when testing for their belongings (e.g. on firm upper hand) we hazard to attribute qualities or impacts to capacities which really identify with an alternate develop.

Alvarez (2018) in his study on the application of capabilities approaches in commercial banks in Kenya stressed that firms need to focus on customer demands, market trends, company mission and vision as the main factors to enhance their capability approaches in their businesses. Manufacturing companies in Kenya can therefore, focus on how their expansion strategy is affecting their competitive advantage, and how globalization is affecting their competitive advantage. This will enable manufacturing companies to attain the full benefit of the application of capability approaches. Ogina (2014) reviewed the capability activities that most service companies in Kenya greatly implemented such as, integrating resources, leveraging knowledge, market positioning, networking and information gathering.

### **Statement of the Problem**

Locally, several studies regarding effects of capabilities have been done. For instance, Omangi (2010) focused on Cooperative Bank of Kenya Limited, in light of the findings the study recommends that since most of the commercial banks in Kenya have been successful in the application of dynamic capability approaches so far, there is need to focus on how their expansion strategy is affecting their competitive advantage, and how globalization is affecting their competitive advantage. Kanake (2011) evaluated strategic capabilities as a strategic tool in Commercial Bank of Africa and recommended that the process of capitalizing on strategic capabilities should be supported by the top management. Similarly, Ngugi (2011) conducted a research on strategic capabilities at BBC and asserted that success of any organization requires alignment of strategic capabilities and resources to the needs of the markets and those needs must be defined in a clear manner. Muhura (2022) evaluated the use of organization capabilities at Airtel as a source of competitive advantage. The study revealed that capabilities can be safeguarded through mechanisms such as; issuing a confidentiality agreement to the staff and partners, establishing strict policies on company assets and using firewalls on information technology infrastructure among others to achieve a sustained competitive advantage. Therefore, while studies on the relationship between strategic capabilities and competitive advantage have been done in

different industries in the market. These studies looked at influence of effective planning of work process on competitive advantage of numerical derivative industries.

### **Objective of the Study**

The overall objective of this study was to examine influence of effective planning of work process on competitive advantage of numerical derivative industries. A critical literature review.

### **Significance of the Study**

The study would be beneficial to researchers and academicians as they would be able to understand the area of study on competitive advantage in the numerical derivative industries. The findings of this study would be a source of empirical literature for future studies besides suggesting areas for further studies where they can study. This way, the study would be a source of additional information to the existing literature on managerial capabilities and competitive advantage of numerical derivative industries. It will add insight to top management and strategic planning managers, as it would help them apply managerial capabilities for value addition, business growth and enhancing competitive advantage. They would also be equipped with relevant knowledge on how to operate competitively in the competitive market by designing managerial capabilities. The study would also help government policy makers, to utilize the findings to regulate the manufacturing industry by coming up with customized regulatory policies that promote growth of the manufacturing companies and set up fair competition in the market. The policy makers in addition, would align the existing regulation in manufacturing industry to fit the dynamic organizational changes. These policies would help manufacturing companies get equipped with relevant knowledge on how to operate competitively in the competitive market by designing managerial capabilities.

### **THEORETICAL REVIEW**

This study will benefit from the dynamic capability theory proposed by Teece (1997) and resource based theory created by Grant (1996).

Dynamic abilities hypothesis analyzes how firms coordinate, form, and reconfigure their interior and outside firm-particular skills into new capabilities that match their turbulent condition (Teece, Pisano & Shuen, 2010). The hypothesis accepts that organizations with more noteworthy capacities will outflank firms with littler abilities. The point of the hypothesis is to see how firms utilize abilities to make and maintain an upper hand over different firms by reacting to and making natural changes (Teece, 2007). Abilities are an accumulation of abnormal state, scholarly, designed, dreary practices that an association can perform better with respect to its opposition. Hierarchical capacities are called 'zero-level' abilities, as they allude to how an association procures a living by proceeding to offer a similar item, on a similar scale, to similar clients (Winter, 2013) The idea of capacities emerged from a key inadequacy of the asset based perspective of the firm. The RBV has been censured for disregarding factors encompassing assets, rather accepting

that they just "exist". Contemplations, for example, how assets are created, how they are incorporated inside the firm and how they are discharged have been under investigated in the writing (Teece, 2007).

Abilities, for example, great coordination of administrative procedures endeavor to connect these holes by receiving a procedure approach. With dynamic capacities, supported upper hand originates from the association's administration capacity to use and reconfigure its current skills and resources in ways that are significant to the client however troublesome for different contenders to mirror (Teece, 2007). This capacity puts a premium on senior administration's capacity to finish two basic assignments. A key component of this dynamic capacity see is the coordination and combination to advancement, i.e., the scale to which an association's administrative and specialized abilities, mechanical design, social and subjective structure, culture, and qualities are adjusted to and upheld.

As per Pavlou and Sawy (2006), dynamic abilities 'help firms reconfigure existing practical capacities so they can fabricate items that better match rising client needs and exploit innovative leaps forward. Coordination and reconciliation of authoritative capacities are the hierarchical schedules and work rehearses that, in blend with certain socio-subjective auxiliary properties (for instance favored communication and sense-production approach), give the hierarchical 'paste' that backings the essential hidden action required for dynamic ability arrangement and development. market situating is crucial to advertising technique, particularly for new and creative items. In new item improvement, advertisers can advance by including novel capacities, or they can develop by modifying the physical type of the item to build stylish or hedonic interest. The trouble is that creative changes in shape are frequently incongruent with purchaser desires (Farjoun, 2010).

### **Resource-Based View Theory**

The asset based view (RBV) created by Grant (1996) has turned out to be a standout amongst the most persuasive and referred to hypotheses ever. The asset based perspective of the firm (RBV) is in this way a compelling hypothetical system for seeing how upper hand inside firms is accomplished and how that preferred standpoint may be supported after some time (Teece et al, 1997). This point of view concentrates on the inward association of firms, as is a supplement to the conventional accentuation of methodology on industry structure and vital situating inside that structure as the determinants of upper hand Specifically, RBV accept that organizations can be conceptualized as groups of assets that those assets are heterogeneously appropriated crosswise over firms, and that asset contrasts continue after some time (Amit & Schoemaker, 2003). The distinguishing proof of specific procedures as unique abilities has a few ramifications. For one, it opens up RBV thinking to a huge, substantive assemblage of experimental research that has regularly been dismissed inside the worldview. This exploration on abilities, for example, item advancement and partnership development reveals insight on these particular procedures, as well as on the summed up nature of dynamic capacities. Along these lines, as opposed to the feedback

that dynamic capacities need observational establishing (Waburi, 2009), dynamic abilities as particular procedures frequently have broad experimental research bases and administration pertinence. High-speed markets are a limit condition for RBV, a truly necessary expansion to the hypothesis (Priem & Butler, 2013). In such markets, the company's administration must adapt to the outside test of rivalry, as well as with the inward test of conceivably crumbling dynamic capacities. An association must have the capacity to change, through adaptable, inventive, and versatile hierarchical procedures and instruments keeping in mind the end goal to remain an important contender by utilizing its extraordinary inborn assets. This infers associations must create components that guarantee soundness and consistency while likewise empowering flexibility and strength, which may suggest contending destinations.

### **EMPRICAL REVIEW**

Makau (2018), conducted a study to find out the influence of classroom learning environment on lower primary school pupils' performance in social studies in lower primary schools in Kibwezi zone in Makueni County, Kenya. The study employed descriptive survey design. Data was analyzed using descriptive statistics. Results showed that a number of variables in this study were influencing classroom learning environment which contributed to poor performance in social studies in Kibwezi zone. It was recommended that parents be sensitized to participate in forums which could help primary schools get funded for teaching /learning materials and facilities by funding organizations and government agencies such as CDF and county Government. It was also recommended that TSC should employ more qualified teachers to reduce pupil-teacher ratio. More so, the Government should increase the Free Primary School funding to enable schools buy more teaching /learning materials and build more physical facilities. The study presented a methodological gap as it focused on descriptive survey while our study will focus on desktop review approach.

Kimathi (2015) conducted a study on ought to establish the effect of union wages on management staff wages. Time series data for the period 1968 to 2013 was used. The results revealed that number of management staff, gross profit before tax, previous period wage of management staff and wage of unionisable staff were statistically significant determinants of management staff wages. The other variables were found to be statistically insignificant. The study confirms the need of coming up with a way to measure labour productivity that is acceptable to all the players in the banking industry. It also revealed the need to ensure that management staff wages do not lag behind as the wages of unionisable staff rise. The study however presented a conceptual gap as it focused on the effect of union wages on management staff wages. Time series data for the period 1968 to 2013 was used while our study will focus on influence of effective planning of work process on competitive advantage of numerical derivative industries.

Kamande (2015), conducted a study on investigating the macroeconomic variables and stock market return in Nairobi securities exchange limited. Regression analysis was done using ADF

test for unit root and Johansen for co integration. Toda and Yamamoto Granger causality was applied to establish the causal relationship between the set of macroeconomic variables and the NSE 20 share index while Power Garch model was employed to determine the volatility. Diagnostic test showed that all the variables are integrated of order one. The co integration test confirmed presence of long run relationship between the NSE stock market 20 share index and the selected macroeconomic variables. The analysis revealed a uni-directional relationship which runs from the NSE stock market index to the inflation rate, a uni directional relationship from foreign exchange rate to NSE index and a bilateral causality between oil price and the stock market return. Presence of arch effects was noted and that the results of the power Garch model show that the magnitude of shocks has a significant impact on volatility of stocks. The study showed that exchange rate contributes greatly and significantly to volatility of stock returns at Nairobi securities exchange. The study however presented a contextual gap as it focused on macroeconomic variables and stock market return in Nairobi securities exchange limited while our study will focus on influence of effective planning of work process on competitive advantage of numerical derivative industries.

Mbogho (2012), conducted a study to investigate the role that compensation plays in motivating employees and ensuring their job satisfaction, and thus uncovering the existing relationship between compensation and employee performance at KPA. Both descriptive and inferential statistics were adopted with a focus on both qualitative and quantitative characteristics and status of compensation and employee performance at KPA. The result revealed that other than basic pay staff are offered house allowance, mileage allowance and mobile allowance. Further study findings indicated that staff is to a large extent dissatisfied with pay offered. Promotion and pension were highlighted as not contributing to improving KPA's performance. This result reveals that there is a statistically significant, direct and positive relationship between compensation and job satisfaction and motivation. In addition, the result indicates that there is a statistically significant, direct and positive relationship between compensation and organizational performance. Therefore, this study confirms that a total compensation management programme, which includes payment or compensation, benefits and informal recognition is required to optimise the motivation and satisfaction levels of staff which would result in increased organizational performance. Thus, the Authority could benefit by focusing on the compensation factors that positively impact employee motivation and job satisfaction. The study was done in KPA presenting a contextual gap, our study will be done in numerical derivative industries.

## **METHODOLOGY**

The study adopted a desktop literature review method (desk study). This involved an in-depth review of studies related to influence of effective planning of work process on competitive advantage of numerical derivative industries. Three sorting stages were implemented on the subject under study in order to determine the viability of the subject for research. This is the first



stage that comprised the initial identification of all articles that were based on influence of effective planning of work process on competitive advantage of numerical derivative industries. The search was done generally by searching the articles in the article title, abstract, keywords. A second search involved fully available publications on the subject on influence of effective planning of work process on competitive advantage of numerical derivative industries. The third step involved the selection of fully accessible publications. Reduction of the literature to only fully accessible publications yielded specificity and allowed the researcher to focus on the articles that related to influence of effective planning of work process on competitive advantage of numerical derivative industries which was split into top key words. After an in- depth search into the top key words (influence, effective planning, work process, competitive advantage, numerical derivative industries), the researcher arrived at 4 articles that were suitable for analysis. This were findings from:

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## SUMMARY, CONCLUSION AND RECOMMENDATIONS

### Conclusion

The study also concluded that organizational transformation affects competitive advantage in the numerical machining industries positively. The study showed that new performance measures enhance sustained profitability and revised compensation and training strengthens customer loyalty. The study further revealed that continuous improvement determines brand recognition.

### Recommendations

The study recommends that management in firms should engage with emerging markets more closely. This can be done through planning and determining the cost advantages as well as the operational costs in order to keep itself competitive. The study recommends that international business participant should have an understanding of economics, finance, marketing and strategy, a social understanding of culture and managing across culture. The Numerical Machining industries should plan and launch next generation line extensions with precision and advice from physicians and patients. The study recommends that the patent protection should have lapsed and the corporation set up a defined strategy.

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