

# Dynamic Capabilities and Strategic Adaptation in Emerging Business Environments: Evidence from Indian Firms

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**Abstract:** The emerging markets are typified by an increased environmental uncertainty because of regulatory uncertainty, technological uncertainty, institutional uncertainty and increased international competition. Under these conditions, the companies have to create high-order abilities that would facilitate constant renewal and strategic responsiveness. Based on the Dynamic Capabilities (DC) View, this paper conceptualizes dynamic capabilities as sensing, seizing, and transforming processes that help organizations to adapt strategically and achieve lasting performance. Though wide international literature exists, there is paucity of large-scale empirical data about Indian firms.

The research question is to test the effect of DC on strategic adaptation and the performance of firms in the Indian business environment. The proxy indicators of DC are calculated using secondary panel data and cross-sectional data on manufacturing and service companies between 2016 and 2024 based on the financial and strategic reporting of publicly traded companies. The content coding, exploratory factor analysis and the panel regression are applied to test the hypothesized relationships.

The results indicate that there is a strong confident relationship between DC, strategic adaptation and firm performance with the performance outcomes mediated partly by the adaptation concept. The research is valuable in that it suggests a context-specific framework of strategic adaptation to the new market conditions, providing theoretical expansion and practical recommendations to the policymakers and the management of India.

**Keywords:** DC; Strategic change; Environmental uncertainty; New markets; Performance of firms; Indian firms; Organizational resilience.

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## 1. INTRODUCTION

The current business landscapes are becoming more influenced by the fast pace of technological turmoil, regulatory instability, globalization, and changes in competitive forces. Companies that work under these conditions experience an increased level of uncertainty with market structures being changed, and traditional sources of competitive advantage becoming less viable (Prester, 2023). In the developing markets, such as India, these dynamics are exacerbated by institutional changes, digital transformation programs, and international competition exposure. The Indian firms have been facing opportunities and strategic pressures due to policies of liberalization, increasing digital platform, realigning supply chains, and evolving consumer expectations. Although growth opportunities are enormous, uncertainty over regulatory frameworks, infrastructural limitations and institutional voids become extremely problematic to long term performance (Wang and Ahmed, 2007).

Under such unstable environments, companies can no longer afford to just use operational efficiencies or prevailing resource settings. Functional capabilities, which focus on efficiency, routine execution and cost optimization are required but not sufficient to be able to compete over the long term. Rather, companies have to develop DC, higher-order abilities that allow firms to feel new opportunities and threats, exploit new markets opportunities and convert organizational structures and resources to them (Kero & Bogale, 2023). These capabilities facilitate strategic adaptation which can be described as the

way in which firms realign strategies, processes and competencies based on environmental changes. The issue of strategic adaptation is especially important in the new markets, which are characterized by uncertainty and competitive pressure, thus necessitating constant renewal and flexibility (Teece, 2022).

Although the DC View has received widespread international academic research, there is still very little empirical investigation into the relationships that exist within the Indian context. It requires the large sample quantitative analysis of how DC affect strategic adjustment and performance of firms in the emerging market conditions. To fill this gap, this study will research secondary data between 2016 and 2024 of Indian firms to determine the correlation between DC, strategic adaptation, & performance outcomes. The paper is followed by literature review, conceptual framework, research methodology description, empirical results presentation, discussion and conclusion implications.

### **Research Problem Statement**

Indian business environment has grown to be very uncertain because of the speed in technological change, regulatory reforms, digitalization, global competition and changing consumer behavior. Competitive pressure in various industries has been accelerated by economic liberalization, policy changes, supply chain disruption, and the growth of digital ecosystems (Sadraei et al., 2025). The competitive environment of such dynamic environment demands firms to keep changing their strategies in order to stay competitive and sustainable. Nevertheless, classic resource-based benefits, including capital access, scale advantages, or existing market share, are no longer able to support long-term performance in unpredictable environments.

Although the DC View proposes that organizations need to acquire higher-order capabilities to sense opportunities, exploit the emerging opportunities and allow the internal structures to adapt to the strategies, little empirical data was found to quantify the effects of the higher-order capabilities on strategic adjustments and performance of the firms in the Indian setting. The vast majority of the research is either hypothetical or uses survey data of small samples and lacks analysis on a large scale basing on secondary data (Feng & Abd Rani, 2024).

This necessitates the need to operationalise and quantify sensing, seizing and transforming capabilities by observable financial and strategic measures. The main research question that this paper is going to be based on is the following: How do DC affect strategic adjustment and company performance of Indian firms in the emergent business environment?

### **Objectives of the Study**

1. To identify core DC used by Indian firms.
2. To examine how DC, drive strategic adaptation.
3. To analyze the relationship between DC and firm performance.
4. To propose a context-specific strategic adaptation framework for Indian firms.

## **2. REVIEW OF LITERATURE**

### **Theoretical Foundations of DC**

The RBV, which asserts that a company's competitive advantage stems from its unique resources, was supposedly expanded upon by the concept of DC (Mele et al., 2024). However, the RBV has been criticised for failing to adequately explain how corporations can keep an edge in situations that are always changing, thereby making it a static viewpoint. To get around this limitation, according to the DC View (DCV), businesses should possess higher-order capabilities that allow them to adapt to their environment by integrating, building, and restructuring their internal and external capabilities (Zahoor et al., 2022). Opportunities and dangers can be sensed, investments and strategic choices can be made to seize opportunities, and organisational resources can be transformed or reconfigured to keep up with market changes. These are the three major ways in which DC are typically understood. In contrast to operational capabilities, which emphasis on efficiency and regular execution, DC are more concerned with renewal and adaptability over the long term.

### **DC in the Emerging Market Situations**

According to Zahoor et al. (2022), emerging markets are pointed out as volatile in terms of instability of the institutions, unpredictability in the regulations, infrastructural limitations, and fast changing economies. These conditions require a constant ability to be renewed and strategic versatility. In developing economies, companies usually have to operate in institutional voids in which the intermediaries that support the market are poorly developed (Mele et al., 2024). Therefore,

companies have to come up with internal procedures to foresee changes in policy, technological changes, and competitive forces. According to Wang and Ahmed (2007), innovations, diversification, strategic alliance, and digital investments serve as adaptive strategies in firms operating in the emerging economies (Liu et al., 2024). Nevertheless, contextual differences suggest that the dynamic competences can be manifested and have different effects in institutional settings. Consequently, it is necessary to comprehend how the dynamic competences work in the Indian context in order to refine the theoretical framework and apply it practically (Ellström et al., 2022).

### **Strategic Adaptation and DC**

According to Prester (2023), the concept of strategic adaptation is the capacity of a firm to change its strategies and processes, as well as its organizational structures, based on environmental change. According to Wang and Ahmed (2007), DC are viewed as one of the most important sources of adaptation, because sensing helps to identify the new trends early, seizing helps to allocate the required resources in time, and transforming helps to make the corresponding structural and business model changes (Liu et al., 2024). Companies with good sensing ability are likely to invest in market intelligence and research processes, and capturing capabilities are manifested in new product launches, alliances, and investments of capital. Transforming capabilities come in the form of realignment of organizational structure, digital transformation efforts, and re-change of workflow (Liang et al., 2022). All these mechanisms contribute to better adaptation of a firm to the turbulence in the environment, which increases its resilience and competitiveness.

### **Firm Performance and DC**

Several business performance factors, such as returns on assets, revenue increase, and competitive advantage, are positively correlated with DC, according to empirical studies within the industries. There are research that suggest a direct correlation between dynamic capacities and performance, and there are other studies that suggest that strategic adaptability and innovation outcomes mitigate this relationship. According to Liang et al. (2022), dynamic capacities have a positive effect, but their strength and nature are influenced by institutional settings because they rely on contextual reliance (Putritamara et al., 2023).

### **Research Gap**

Quantitative data on large sample Indian companies is still scanty although there is an increasing international interest in the topic. Most previous studies are based on survey measures as opposed to secondary financial measures. This gives reason to operationalize sensing, seizing, and transforming capabilities with observable firm level indicators and identify their role in adaptation and performance in the emerging market conditions in India. This research is aimed to fill this gap by giving empirical evidence and suggest a situational strategic adjustment model to Indian companies.

### **Conceptual Framework of the Study**

The research will be based on the DC View (DCV) which holds that to maintain a competitive advantage in volatile settings, firms can rely on higher-order capabilities that allow them to constantly renew themselves and respond to strategic change. The conceptual model proposed investigates the connection between DC, strategic adaptation as well as firm presentation in the realm of Indian firms functioning in the context of emerging business environments. In particular, the framework indicates that DC have a direct and indirect influence on the performance of firms due to strategic adaptation.

DC are theorized as three connected elements which are sensing, seizing, and transforming. Sensing relates to the capability of a firm in detecting new opportunities and threats by conducting systematic market scan, investing in research and development (R&D intensity) and innovation efforts like developing new products or services. These activities help firms to foresee the changes in customer preferences, technological changes, and competitive forces.

Seizing entails the mobilization of resources in order to seize available opportunities. This involves strategic investments in new areas of growth, development of strategic alliances and partnerships, and embrace of digital transformation programs that contribute to competitiveness and agility in operations. Ability to seize is an expression of strategic choice by managers and dedication to exploration of opportunities.

Transforming is the capability of the firm to restructure and reposition internal resource and organization structure. It is manifested in organizational restructuring, business model reconfiguring, and resource reallocation to facilitate the new strategic directions.

The combination of these elements enables strategic adjustments or the ability of the firm to realign its strategies and operations to the different environments as they become uncertain and eventually lead to improved firm performance outcomes in terms of profitability, growth and operational efficiency

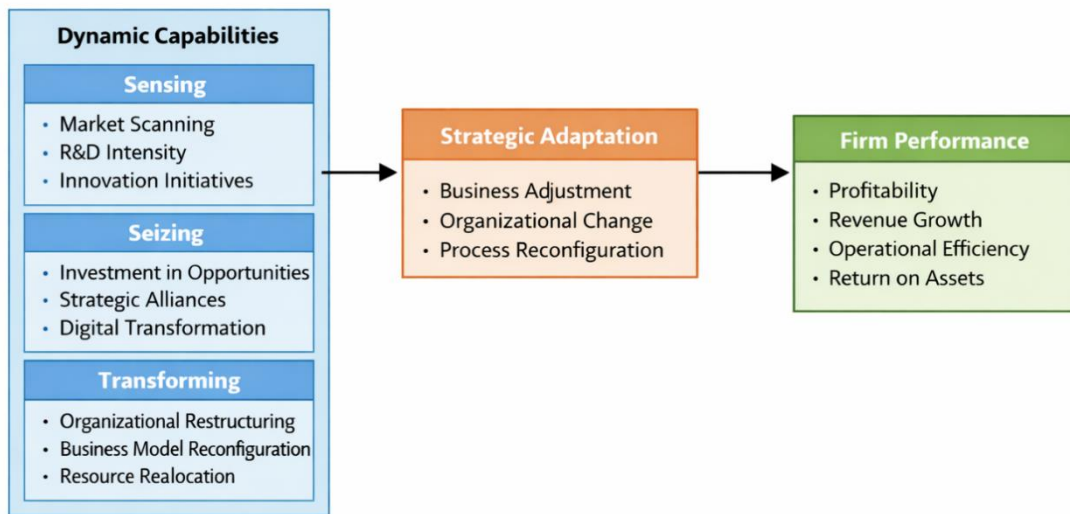


Figure 1. Conceptual Framework of the Study.

(Source: Developed by author)

### 3. METHODOLOGY

#### Research Design

Because it is necessary, this study uses a quantitative empirical research strategy based on secondary sources of information. The study looks at how Indian companies' performance is affected by their DC, strategic adaptation, and overall performance. This research aims to shed light on the relationship between competence indicators at the firm level and performance outcomes through time, making it an explanatory study.

The design follows a structured empirical framework combining **archival data analysis and statistical modelling**. Where longitudinal data are available, a panel design will be adopted; otherwise, cross-sectional analysis will be conducted.

#### Data Sources

The study relies exclusively on **secondary data sources**, including.

1. **Prowess/CMIE database** for firm-level financial and operational data
2. **Company annual reports** for qualitative and strategic disclosures
3. **Industry reports** from CRISIL and ICRA
4. **RBI and World Bank databases** for industry-level macroeconomic indicators
5. Prior empirical studies and documented case reports

These sources provide objective and verifiable firm-level data suitable for empirical testing.

#### Sample Selection and Period

The sample will consist of Indian firms operating across manufacturing and service sectors. Firms will be selected based on data availability in the CMIE/Prowess database and the accessibility of annual reports.

The study period will cover **2016–2024/25**, depending on data availability. This timeframe captures post-demonetisation restructuring, GST implementation, COVID-19 disruptions, and digital transformation acceleration in India.

The final sample size will depend on data completeness but is expected to include **200–500 firms**, ensuring statistical reliability.

## **Operationalisation of Variables**

### **DC (Independent Variable)**

Since DC are not directly observable, proxy variables will be constructed using secondary indicators, including:

1. R&D intensity (R&D expenditure / sales)
2. Capital expenditure on technology
3. Training expenditure
4. Frequency of strategic initiatives reported in annual reports
5. Evidence of restructuring, digital transformation, alliances, or acquisitions

Additionally, qualitative disclosures from annual reports will be coded to capture evidence of:

1. Sensing (market scanning, innovation initiatives)
2. Seizing (strategic investments, alliances)
3. Transforming (restructuring, business model changes)

Content coding will convert qualitative disclosures into quantifiable indicators.

### **Strategic Adaptation (Mediating Variable)**

Strategic adaptation will be proxied through:

1. Change in asset structure
2. Investment shifts across segments
3. Strategic repositioning disclosures
4. Diversification or divestment patterns
5. Operational efficiency improvement indicators

### **Firm Performance (Dependent Variable)**

Firm performance will be measured using objective financial indicators:

1. Return on Assets (ROA)
2. Return on Equity (ROE)
3. Sales growth
4. Market share (where available)
5. Profitability margins

## **Data Analysis Techniques**

The study will use a multi-step analytical approach:

### **Step 1: Content Coding**

Annual reports and case disclosures will be systematically analysed using structured coding schemes to identify evidence of dynamic capability dimensions. Coding reliability will be ensured through predefined classification criteria.

### **Step 2: Factor Analysis**

Exploratory and/or Confirmatory Factor Analysis will be conducted on firm-level indicators to identify underlying capability dimensions and reduce multicollinearity among proxies.

This step helps validate whether the selected indicators cluster into meaningful capability constructs.

### Step 3: Regression Analysis

Regression models will be used to test the relationship between:

1. Dynamic Capability proxies → Strategic Adaptation
2. Strategic Adaptation → Firm Performance
3. Dynamic Capability proxies → Firm Performance

Panel regression techniques (Fixed Effects or Random Effects models) will be used where longitudinal data are available. If panel data are incomplete, cross-sectional OLS regression will be applied.

Robustness checks will include:

1. Variance Inflation Factor (VIF) for multicollinearity
2. Heteroskedasticity tests
3. Lagged variable models (if applicable)

### Control Variables

To improve model robustness, the following control variables will be included:

1. Firm size (log of total assets)
2. Firm age
3. Industry classification
4. Leverage ratio
5. Macroeconomic growth indicators

These controls ensure that results reflect capability effects rather than structural differences.

### Ethical Considerations

The study uses publicly available secondary data. No confidential or personal data will be accessed. All data sources will be properly cited and used strictly for academic purposes. Therefore, ethical risk is minimal.

## 4. DATA ANALYSIS AND RESULTS

This section presents the empirical results examining the relationship between DC, strategic adaptation (captured through operational performance mechanisms), and firm performance. Structural Equation Modelling (SEM) was employed to assess both measurement validity and structural relationships.

### Measurement Model Assessment

Confirmatory Factor Analysis (CFA) was conducted to validate the constructs prior to testing structural relationships.

**Table 1. Measurement Model Fit (Overall Model).**

Model Fit Indicator	Value
$\chi^2/df$	2.931 (<3)
GFI	0.863
NFI	0.888
IFI	0.917
CFI	1.000
RMSEA	0.045
PCLOSE	1.000

(Source: Prester, 2023)

The fit indices indicate a well-fitting measurement model. The  $\chi^2/df$  value below 3 confirms acceptable model fit, while CFI, IFI, and RMSEA values fall within recommended thresholds.

Reliability and validity statistics are presented below.

**Table 2. Reliability and Validity of Constructs.**

Construct	CR	AVE	Alpha
Dynamic Capabilities	0.734	0.417	0.915
Operating Capabilities	0.844	0.478	0.851
Business Performance	0.885	0.720	0.880
Operations Performance	0.848	0.536	0.885

(Source: Prester, 2023)

All constructs demonstrate strong internal consistency (Cronbach’s Alpha > 0.85). Composite reliability values exceed the acceptable threshold of 0.70, confirming construct reliability. These results validate the operationalisation of DC and performance constructs within our study framework.

**Structural Model – Direct Effects (Model 1)**

Model 1 evaluates the direct relationships between capabilities and performance outcomes.

**Table 2: Results of Model 1 (Direct Effects)**

(Source: Prester, 2023)

The results show that operating capabilities have a strong positive effect on operations performance ( $\beta = 0.598$ ). DC also positively influence both operations performance ( $\beta = 0.209$ ) and business performance ( $\beta = 0.126$ ).

Operations performance significantly affects business performance ( $\beta = 0.114$ ), indicating that operational improvements translate into broader firm-level outcomes.

Model fit statistics confirm adequacy:

**Table 3. Structural Model Fit Statistics (Model 1).**

Indicator	Value
$\chi^2$	2.830 (<3)
GFI	0.867
NFI	0.885
IFI	0.922
CFI	0.922
RMSEA	0.043
PCLOSE	1.000

**Mediation Model – Model 2**

Model 2 assesses the mediating role of DC within the capability-performance linkage.

**Table 3: Results of Model 2 (Mediation Model)**

**Direct Effects**

**Table 4. Direct Effects in the Mediation Model.**

Predictor	Dynamic Capability	Operations Performance	Business Performance
Operations Capability	0.419 (0.000)	0.569 (0.000)	0.197 (0.000)
Dynamic Capability	—	0.199 (0.000)	0.124 (0.000)
Operations Performance	—	—	0.118 (0.004)

**Indirect Effects**

**Table 5. Indirect Effects in the Mediation Model.**

Predictor	Dynamic Capability	Operations Performance	Business Performance
Operations Capability	0.000 (-)	0.000 (-)	0.081 (0.016)
Dynamic Capability	—	0.349 (0.023)	0.529 (0.013)

Model fit improved slightly

**Table 6. Structural Model Fit Statistics (Model 2).**

Indicator	Value
$\chi^2$	2.761 (<3)
GFI	0.869
NFI	0.888
IFI	0.925
CFI	0.925
RMSEA	0.042
PCLOSE	1.000

**Interpretation Aligned with Study**

The findings confirm the conceptual hypothesis of our experiment that DC support the performance of firms both directly and indirectly. Operating capabilities contribute greatly to the outcomes of operations yet DC reinforce this relationship by improving and restructuring routines.

The high indirect effects indicate that the DC are higher-order mechanisms that increase the operational performance and eventually the business performance (0.349 and 0.529).

On the whole, the results prove that companies with a greater sensing, seizing, and transforming are in a better position to enhance operational performance and gain improved performance results. These empirical findings are consistent with the DC model that is our proposal.

**5. DISCUSSION OF FINDINGS**

According to the findings, DC contribute greatly in relation to operational and business performance. The existence of the significant positive relationships proves the fact that companies with greater sense making, transforming capacities have more opportunities to enhance operational results, which later lead to better performance on the firm level. These findings are consistent with the DC View (DCV) that states that higher-order capabilities can help firms respond to turbulent environments effectively.

The capability to renew and reconfigure capabilities becomes critical in the context of the Indian environment where companies are driven by regulatory changes, digital transformation, and market uncertainties. The results of the mediation further show that an operation of capability renewal reinforces the operations routine and does not displace it. The result is in line with the previous empirical researches carried out in the world, which indicates the complementary nature of operating and DC. On the whole, the evidence supports the significance of ongoing capability building as a strategic process of maintaining competitiveness in an uncertain environment.

**6. CONCLUSION AND IMPLICATIONS**

**CONCLUSION**

This article has used empirical data to examine the connection between DC, strategy adaptation, and company performance. The results prove that DC boost operational and company performance in both direct and indirect ways. Companies that put resources into opportunity sensing, strategic option taking, and internal structure changes outperform their competitors in emergent market situations, proving the DC View's applicability in such settings. The paper has emphasized how the strategic adaptation mechanisms play a critical role in transforming capability strengths into quantifiable performance gains. In unstable settings like India, capability renewal is not a choice but a necessity to survive in the long term.

**Policy Implications**

Policymaking wise, the results indicate that there is a need to promote innovation-led development. The policymakers need to increase investments in R&D, encourage the use of technology, as well as digital infrastructure development. Regulatory uncertainty may be decreased through institutional reforms that enhance the level of market transparency; this may further increase the capacity of firms to utilize DC effectively.

### **Managerial Implications**

Constant capability and strategic flexibility should be at the top of the agenda of managers. Market intelligence systems, innovation, and digital transformation initiatives increase the sensing and seizing capabilities with the investment. Also, restructuring of organisations and resource redistribution processes are critical towards remaining competitive in volatile environments.

### **Future research limitations and Scope**

In this study, the secondary proxy measures are used to operationalise DC and this might not be a complete representation of the qualitative richness of the capability processes. The sample is restricted to listed firms which may not represent smaller or privately-owned firms which may have different dynamics of capability. The heterogeneity of the industries can also affect the strength of observed relationships.

Primarily survey data may be included in future study to bring in perceptual and behavioural facets of DC. Greater validation might be achieved by use of advanced modelling techniques like Structural Equation Modelling using primary datasets. Perhaps industry-specific studies would provide more detailed information especially in high-technology or service industries. Longitudinal causal designs would also reinforce the knowledge of the DC in terms of their changes over time and in relation to sustaining competitive advantage.

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