Predicting the mediating effect of resource orchestration on the relationship between leadership strategy and the resilience of Kenyan Listed Banks

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Abstract

The objective of this study was to quantitatively assess the mediating effect of resource orchestration on the relationship between leadership strategy and organisational resilience of banks listed in the Nairobi Securities Exchange with an objective to contribute to knowledge production in the Global South using Kenya as the vantage point. The study applied a correlation research design, and data was gathered from a stratified random sample of 184 senior managers drawn across the 12 listed banks, wherein Likert-scale questionnaires were administered to the research participants online. Partial Least Squares Structural Equation Modelling was deployed for data analysis using SmartPLS software. Results showed that the mediated path explained 79.1% of the variance in organisational resilience ($R^2=0.791$). The results were validated with a Sobel test that found a significant partial mediation in the model with $Z=6.380$ ($p<0.05$). The study inferred a strong and statistically significant mediation power of resource orchestration in the leadership strategy-organisational resilience nexus. Resource Orchestration Pecking Order was proposed as an outcome of the empirical analysis, and future research directions were suggested.

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Introduction

Several macroeconomic and systemic risk factors continue to pose external threats to the banking system worldwide. In the last two decades, banks worldwide have experienced over 170 systemic disruptive shocks of different magnitude and intensity (Reinhart & Rogoff, 2011). The situation is especially aggravated in the Global South, where the financial architecture is relatively rudimentary. For instance, multiple political upheavals in many Global South countries have continued destabilising their economies. In 2015, political violence engulfed Yemen, paralysing its economic infrastructure (Compaore et al., 2020). Similar violence was witnessed in Mali (Bleck et al., 2016) and Egypt, with debilitating ramifications on their respective financial health (El-Faham, 2020; Helmy & Wagdi, 2016; Mohieldin et al., 2019). Recently, the Covid-19 outbreak shut down the global economy with systemic reverberations felt in many countries. In Ethiopia, the banking system’s asset quality fast depreciated owing to high default rates (Leilissa, 2020).

Banks’ contingent balance sheets make them more susceptible to various risks (Bersch et al., 2020). As a result, the systemic disruptive shocks have triggered considerable scholarly interest in banking sector resilience (Bersch et al., 2020). The picture painted about macro-environmental volatility in the Global South offers a backdrop against which a case of sensemaking can be advanced for resource orchestration at the intersection of leadership strategy and organisational resilience. A resource is any factor of production employed to generate value (Arrighetti et al., 2018). A wide range of input factors falls within the definitive meaning of resource, typically assigned into two broad classifications: human resource and material resource. Material resources are further subclassified into tangible and intangible resources (Ahuja & Chan, 2017; Almeida & Coelho, 2017; Su & Linderman, 2016).
Organisational resilience literature, however, characterises resources in terms of their availability, recoverability and potentiality in times of distress, whereby resources that rate high on these dimensions is collectively referred to as slack resources (Gao et al., 2017; Karacay, 2017; Kiss et al., 2018; Navarro-García et al., 2018; Vanacker et al., 2017). From a financial perspective, resource slack, by definition, means the extra capital or solvency that would come in handy in navigating disruptive shocks (Karacay, 2017; Omar et al., 2020). Typically, such resource slack includes cash and cash equivalents (available slack), unused credit lines (potential slack) and accounts receivables/prepayments (available slack) (Nguyen et al., 2019; Vanacker et al., 2017). Such resource slack is at the heart of organisational resilience because they act as a cushion against and facilitate rapid response to environmental jolts (Rafailov, 2017). On the same token, some scholars differentiate resources in terms of their dynamism, whereby resources that are easily movable, transferable or convertible are called dynamic resources and those that are not referred to as static resources (Ahmed et al., 2021a).

The different taxonomy of resources notwithstanding, the orchestration of resources results from an effective leadership strategy that counts during systemic disruptions (Nguyen et al., 2019). Resource orchestration is the configuration and deployment of resource sets to achieve desired organisational aims (Berseck, 2018). Resource orchestration is thus a likely differentiating factor between resilient and non-resilient organisations (Furnival et al., 2019). It is the action taken by strategists to optimise organisational capabilities through the reconfiguration and combination of resources at disposal to create new, more superior capabilities to take on market opportunities and confront environmental volatility (Ahuja & Chan, 2017). This entails structuring and restructing the mix of production factors, bundling and leveraging them to compete effectively in the marketplace (Berseck, 2018). This also involves decisions that respond to how, when and where questions related to resource classification and deployment (Boon et al., 2018, p. 49).

In the perspective of Berseck (2018), resource orchestration is a multi-dimensional process of resource structuring, resource bundling, resource leveraging and resource synchronisation.

Within the East African region, Kenya is an economic powerhouse, and its banking system acts as the region’s financial hub, which spotlights its sensitivity to disruptive shocks and places a heavy responsibility on its resilience to macroeconomic shocks (Kajirwa & Katherine, 2019). A vast quantity of literature has been generated on various dimensions of its robustness and performance, including stock performance, market value, solvency, asset quality and turnover (Keasey et al., 2015; Orlitzky et al., 2016; Sporta et al., 2017) as well as operational and corporate governance challenges (Stokes et al., 2018).

A multiplicity of macroeconomic dynamics have tested the resilience of Kenya’s banking industry, of which the Covid-19 pandemic is just but the latest (Osoro & Josea, 2019). Over the years, Kenya’s banking system has been scarred by various episodes of disruption since independence (Muhindi & Ngaba, 2018). However, it has shown resilience to disruptive shocks during the last two decades, most notably the 2007 global financial crisis that lasted for close to 5 years and the worst post-election violence in Kenya’s history in the same period (Nwuke, 2017). This resilience has primarily been attributed to the vigilance of the Central Bank of Kenya and the limited exposure to the vagaries of the global financial system (Ochieng & Daniel, 2019). As with the rest of the world, the Covid-19 pandemic negatively impacted Kenya’s banking system, with reports indicating that some banks experienced a steep erosion in stock value barely a day after the first Covid-19 case in the country was made public (Ozili, 2020). Rosauer (2020) documented that banks in Kenya incurred losses amounting to KSh.19.48 billion within less than six months, with banking sector profitability recording a drop of over 30 per cent due to non-performing loans. Although most of the world’s economies are on the path to recovery from the adverse effects of the pandemic, the emergence of new variants continues to worry bank executives (Ozili & Arun, 2020). As macroeconomic and industry turbulence continue to mount pressure on banks, many banks have collapsed while others chart a sustainability path (Koskei, 2020).

The Covid-19-induced shocks seem to have had a disproportionate impact on banks (Jacob, 2020; Njambi & Karuki, 2018). According to Ellis (2019), shocks witnessed in the financial sector have disproportionate effects on banks depending on their capacity to absorb shocks. An example is the global financial crisis that began in 2007 and climaxed in 2008, severely hitting unprepared banks more than those that deployed active response strategies (Palmi et al., 2018). The present study investigated the mediating role of resource orchestration on the relationship between leadership strategy and organisational resilience. It makes a distinct contribution to organisational resilience literature by introducing systemic disruptive shocks using Kenya as the vantage point to analyse the explanatory power of resource orchestration as a mediating element in a non-western context.

**Literature Review**

Multiple scholarly works signify the interest in orchestrating resources to realise various organisational outcomes. For instance, Carletti et al. (2020) conducted a multiple-case analysis to make sense of banking sector resilience in the wake of the Covid-19 pandemic. Their study offered salience to the role of technological resource orchestration in aiding firms to survive the pandemic. However, the case analyses did not include experiences in resource-constrained economies such as Kenya. This potentially frustrates efforts to relate the case analyses to the Kenyan scenario, thus constraining the relevance of their study to emerging economies.

Flammer and Ioannou (2015) investigated how the United States adjusted their investments in essential strategic resources during the global financial crisis from 2007 to 2009. They established that companies significantly reduced their workforce and capital expenditures, suggesting that they pursued a divestment strategy. However, companies compensated for this with investments in research and corporate responsibility initiatives, suggesting that such orchestration options contribute towards firms’ ability to...
maintain their competitiveness during (and post) recessionary times. The study offered a few empirical evidences linking firm resources to organisational resilience against systemic shocks. Therefore, it provides valuable insights into conceptualising the path through which leadership strategy influences organisational resilience, namely, resource orchestration. The study was conducted across many sectors and hence did not consider industry-specific dynamics that potentially play a role in organisational resilience outcomes. Further, the study was conducted in a highly developed world; therefore, it does not represent the realities that firms in resource-constrained nations experience.

Karacay (2017) examined how firms adjust their slack resources in response to a financial crisis in the European manufacturing sector. The study established that slack-performance has a positive, albeit curvilinear association, with resilience outcomes. Specifically, firms preferred to use more strategic slack than operating slack resources during the financial crisis. However, firms began to focus more on operating slack resources than strategic slack resources after the financial crisis. The study offers a focused analysis of firm resources, centring on organisational slack necessary for organisational resilience in systemic crises. By distinguishing between organisational resources and slack resources, the study delineates circumstances under which firm resources contribute to organisational resilience. This is important for advancing research on the nexus between resource orchestration and enterprise resilience. However, the research scope was limited to the manufacturing sector; thus, the results may not be readily relatable to the banking sector.

Within the Kenyan context, Ahmed et al. (2021b) drew insights from in-depth discussions with owners and managers of six SMEs from a broad range of non-essential service sectors worst hit by the Covid-19 pandemic. These were event service sector, transport education, professional service sector, hospitality, and publishing sector. Results generated six salient resilience themes, including pre-Covid diversification, slack finance, collaboration, self-reinvention, positive psychology, and ICT leverage. The study demonstrated that possession and orchestration of dynamic resources differentiated highly resilient SMEs from non-resilient ones. The study effectively drew out salient determinants of resilience to systemic disruptions in Kenya’s SME sector. However, it is unclear whether such drivers played out in the large corporates that listed banks in Kenya represented.

Other attempts to explain the path to organisational resilience through resource orchestration were implied in the works of Kabue and Kilika (2016). They advanced a unified theoretical model for making sense of the relationship between firm resources, core competencies and organisational sustainability. Their study underscored that sources of sustainability are generated from resources, meaning that a firm must first possess those resources. The study’s salient perspective is that those resources must be orchestrated to keep imitation at bay.

Ndewga et al. (2018) studied the mediation mechanism between resource extraction and competitive sustainability of the banking sector examined with organisational competencies in perspective. Findings showed that organisational competencies had mediation power on the relationship between the two variables. However, there were inherent ambiguities in the operationalisation of resources, thus making it difficult to make sense of the research findings in context.

Gitahi and K’Obonyo (2018) examined the contribution of organisational resources and performance outcomes of listed companies in Kenya. A significant impact was found in terms of nonfinancial metrics such as stakeholder delight, market power, and staff retention. The research was contextually relevant to the present study as the target population was listed banks in Kenya. The study, however, did not distinguish which class of resources had the most explanatory effect on performance outcomes, and neither did it identify the resource orchestration dimensions which were at play.

As the literature review shows, multiple gaps were apparent in the extant literature that built a case for the present study. Generally, knowledge production on the concept of resource orchestration is still nascent. Both theoretical and empirical works are dominated by western viewpoints, with limited application to the Global South. Within Kenya specifically, the present study represents one of the early attempts to make sense of the mediating effect of resource orchestration at the intersection of leadership strategy and organisational resilience in the banking sector.

**Theoretical Framework**

This study was anchored on Resource Orchestration Theory. This theory has its roots in the Resource-based View that Penrose first put forward in the 1950s and further developed by Barney (Chukwuemeka & Onuoha, 2018; Fallon-Byrne & Harney, 2017; Furnival et al., 2019; Helfat et al., 2009). The anchor theory was advanced by Helfat and Peteraf (2003), who came up with a resource-performance model in 2007 and later polished the concept in 2009, though the modern version of the theory may be credited to Ndofo et al. (2015). The classification of firm resources distinguishes the two views (Hutton et al., 2021; Teece, 2018). Resource Orchestration Theory (ROT) indicates dynamic and higher-order resources and propagates managerial actions as a higher-order resource that marionettes the dynamic resources to generate value in disruptions (Chadwick et al., 2015). Therefore, while RBV is concerned with harnessing valuable, rare, inimitable and non-sustainable resources to attain market power, ROT centres on their artful configuration as the differentiating factor for navigating environmental volatility (Leiva, 2018).

Resource Orchestration Theory suggests that a firm is an amalgam of production factors, including tangible and intangible assets, capacities and capabilities, systems and processes, knowledge and information, synergies and levers that generate output (Li & Jia, 2018). When configured, bundled, and deployed, these input factors facilitate value creation (Stewart & Brown, 2011). This draws attention to the significant role of managerial action at the centre of resource orchestration thinking (Lanza et al., 2016) and constitutes
the primary building block of ROT on RBV (Badrinarayanan et al., 2019). To this end, Duchek (2019) propagated capability-based sensemaking of input factors by decomposing and transforming resources into anticipative, copying and adaptive capabilities. Anticipative orientation fosters risk foresight that triggers preparedness actions to neutralise potential disruptions. Risk foresight is characterised by managerial activities related to environmental scanning, detecting critical developments and potential exposures, and initiating a response strategy. Coping capabilities reflect response strategies and improvising solutions where none exist. Adaptive capabilities point to organisational learning and transformation necessary to navigate and triumph through disruption.

Extant literature characterises resource orchestration as a multi-dimensional concept comprising various strategy-oriented leader actions (Berseck, 2018; Carnes et al., 2017). Ahmed et al. (2021a) drew from various scholarly works to demonstrate the nexus between resource orchestration and organisational resilience. They assert that organisational resilience accrues from firms that orchestrate a mix of static resources with dynamic ones. This led to their development of a dynamic resource orchestration framework for guiding strategic actions in times of disruption. Berseck (2018) provided a comprehensive description of three overarching elements of resource orchestration processes and capabilities. The first element is structuring, whose inherent capabilities entail acquiring, accumulating and divesting. The second element is bundling, which is a function of stabilising, enriching and pioneering. The third element is leveraging, typically broken down into mobilising, enriching and pioneering. These elements build on prior efforts by Rouwmaat (2012), who proposed a framework that equated resource orchestration with a mix of structuring, accumulating, divesting, stabilising, enriching and pioneering. Koentjoro and Eliyana (2015) later enriched these elements by adding asset selection, deployment and innovation into the metrics. These resource orchestration dimensions have inspired a growing body of scholarly contributions. In the present study, the theory was selected for explaining the path from leadership strategy to organisational resilience in Kenya’s banking sector.

**Conceptual Framework**

In this study, resource orchestration was conceived as a mediating variable that mediates the impact of leadership strategy on organisational resilience. Resource orchestration is measured by four composite or 1st-order constructs: slack resources (available, recoverable, and potential slack resources), resource structuring (acquiring, accumulating, divesting), resource bundling (enriching, pioneering), and resource leveraging (fertilising, deploying). Organisational Resilience was the dependent variable represented by nine dimensions: pre-crisis preparedness, within-crisis avoidance, agility, adaptation, cohesion, robustness and, post-crisis restoration, transformation, prosperity. The conceptual framework is reported in Figure 1.

**Research Hypotheses**

The following null hypotheses were tested:

H01: There is no significant mediating effect of slack resources on the relationship between leadership strategy and organisational resilience of commercial banks listed in the Nairobi Securities Exchange.

H02: There is no significant mediating effect of resource structuring on the relationship between leadership strategy and organisational resilience of commercial banks listed in the Nairobi Securities Exchange.

H03: There is no significant mediating effect of resource bundling on the relationship between leadership strategy and organisational resilience of commercial banks listed in the Nairobi Securities Exchange.
H04: There is no significant mediating effect of resource leveraging on the relationship between leadership strategy and organisational resilience of commercial banks listed in the Nairobi Securities Exchange.

**Research and Methodology**

**Research Design**

Research design facilitates the determination of the relationship between research variables (Gravetter & Forzano, 2018). Accordingly, a quantitative correlational design was adopted in this research as it was the perfect design for the present study in light of the objective that sought to establish resource orchestration’s interaction effect between leadership strategy and organisational resilience. Data was gathered from a stratified random sample of 184 senior managers drawn across 12 banks listed in the Nairobi Securities Exchange as of 2021. This sample size was well within the minimum threshold required to conduct Partial Least Squares Structural Equation Modelling (PLS-SEM) (Memon et al., 2020).

**Method**

Questionnaires were administered online to the research participants using the SurveyMonkey tool. The instrument was tested for reliability by computing Cronbach alpha values (Dempster & Hanna, 2015; Easterby-Smith et al., 2021). Reliability was reflected in scores higher than 0.7 (Taber, 2018). Table 1 presents the reliability statistics. The table demonstrates that all the variables and dimensions yielded alpha values greater than 0.7, implying that the instrument was reliable. The item was developed after a thorough review of extant literature to ascertain that all dimensions and items representing the breadth and depth of the construct are reflected in the tool (Mohamad et al., 2015; Shirali et al., 2018). Hypotheses were then tested using the PLS approach in SmartPLS The structural equations modelling technique was used as a tool for the statistical inference where Standardised Root Mean Square Residuals (SRMSR) were obtained for model fit and estimates.

The study complied with the ethical procedures throughout the research cycle. This included obtaining institutional permissions from University’s Ethical Review Committee and the Kenyan National Commission for Science, Technology, and Innovation (NACOSTI), seeking informed consent, and signing confidentiality agreements (Ferreira & Serpa, 2018). Respondents participated voluntarily and reserved the right to decline in case of discomfort with the study. Those who participated did so anonymously. Furthermore, the research instituted measures to ensure the non-traceability of the research results back to the individual participants.

**Table 1: Reliability Statistics**

| 2nd Order Constructs | 1st Order Constructs | Cronbach’s alpha ≥0.7 | Composite Reliability ≥0.7 | AVE ≥0.5 |
|----------------------|----------------------|------------------------|---------------------------|----------|
| Leadership strategy  | 0.969                | 0.971                  | 0.584                     |
| Resource orchestration | 0.936               | 0.952                  | 0.560                     |
| Slack Resources      | 0.933                | 0.948                  | 0.751                     |
| Structuring          | 0.756                | 0.791                  | 0.507                     |
| Bundling             | 0.920                | 0.944                  | 0.807                     |
| Leveraging           | 0.868                | 0.910                  | 0.717                     |
| Organisational resilience | 0.951            | 0.959                  | 0.604                     |
| Pre-crisis           | 0.886                | 0.921                  | 0.746                     |
| Within-crisis        | 0.916                | 0.935                  | 0.705                     |
| Post-crisis          | 0.846                | 0.895                  | 0.616                     |

The confirmatory factor loadings for resource orchestration are reported in **Table 2**.

**Table 2: Confirmatory Factor Loadings for Resource Orchestration**

| Factor | Loading | p-Value | Factor | Loading | p-Value |
|--------|---------|---------|--------|---------|---------|
| Available slack 1 | 0.834 | 0.000 | Acquiring 1 | 0.720 | 0.000 |
| Available slack 2 | 0.917 | 0.000 | Acquiring 2 | 0.551 | 0.000 |
| Recoverable slack 1 | 0.936 | 0.000 | Accumulating 1 | 0.754 | 0.000 |
| Recoverable slack 2 | 0.824 | 0.000 | Accumulating 2 | 0.456 | 0.000 |
| Potential slack 1 | 0.833 | 0.000 | Divesting 1 | 0.839 | 0.000 |
| Potential slack 2 | 0.851 | 0.000 | Divesting 2 | 0.859 | 0.000 |
| Enriching 1 | 0.882 | 0.000 | Fertilisation 1 | 0.836 | 0.000 |
| Enriching 2 | 0.900 | 0.000 | Fertilisation 2 | 0.863 | 0.000 |
| Pioneering 1 | 0.926 | 0.000 | Deploying 1 | 0.814 | 0.000 |
| Pioneering 2 | 0.885 | 0.000 | Deploying 2 | 0.873 | 0.000 |

The table shows that all item loadings for resource orchestration were greater than 0.50 and statistically significant (p<0.05). Therefore, all the 20 indicators of resource orchestration are confirmed as valid factors for the construct of resource orchestration and its four components.
Results and Discussion

The study hypothesised that there is no significant mediating effect of resource orchestration on the relationship between leadership strategy and organisational resilience of listed banks in Kenya. Four sub-hypotheses were tested in line with the resource orchestration dimensions thus: no significant effect of slack resources, no significant effect of resource structuring, no significant effect of resource bundling, and no significant effect of resource leveraging on the relationship between leadership strategy and organisational resilience among listed banks in Kenya. Composite indices were generated to represent both the 1st and 2nd order constructs.

Inference of Slack Resources and Organisational Resilience

The study hypothesised H01 as follows: there is no significant mediating effect of slack resources on the relationship between leadership strategy and organisational resilience of listed banks in Kenya. The test results show that empirical data fitted the model satisfactorily and had substantial predictive power given that all three model fit criteria were satisfied, as reported in Table 3.Error! Reference source not found.

| Fit Criteria       | Model Score | Comment |
|--------------------|-------------|---------|
| SRMSR              | 0.033 (<0.08) | Fit     |
| NFI                | 0.980 (>0.90) | Fit     |
| GoF                | 0.771 (0<=GoF<=1) | Fit     |
| Sobel test         | Z=6.380 (p<0.05) |         |

The Sobel test and bootstrapping results found a positive path coefficient between leadership strategy and slack resources ($\beta=0.691$) and a positive path coefficient between slack resources and organisational resilience ($\beta=0.451$). Both paths are statistically significant with p<0.05, indicating that slack resources partially mediated the path between leadership strategy and organisational resilience, but the direct path has a higher coefficient than the indirect path (0.516 vs 0.451). With R2=.791, the mediated path explains 79.1% of the variance in the dependent variable. The results were validated with a Sobel test that found a significant partial mediation in the model with Z=6.380 and p<0.05. With these results, the study rejected the null hypothesis and inferred that there is a significant effect of resource orchestration’s slack resources on the organisational resilience of listed banks in Kenya. Model test coefficients and other relevant statistics for resource orchestration are depicted in Figure 2 and Figure 3, respectively.
The test results further suggest that recoverable and available slack are more critical for an organisation passing through a crisis than potential slack. Available and recoverable slack represent available and recoverable resources classified by time order. Thus, liquidity, convertible assets, credit lines, and shareholder financial support are critical for immediate relief when organisations need fast cash to meet their maturing obligations.

**Inference of Resource Structuring and Resilience**

The study hypothesised H02 as follows: there is no significant mediating effect of resource orchestration’s resource structuring on the relationship between leadership strategy and organisational resilience of listed banks in Kenya. The test results show that empirical data fitted the model satisfactorily and had substantial predictive power given that all three model fit criteria were satisfied, as reported in Table 4. The Sobel test and bootstrapping results found a positive path coefficient between leadership strategy and resource structuring ($\beta=0.709$) and a positive path coefficient between resource structuring and organisational resilience ($\beta=0.415$), both paths are statistically significant with $p<0.05$, indicating that resource structuring partially mediated the relationship between leadership strategy and organisational resilience.

**Table 4: Model Fit and Path Coefficients for Resource Structuring**

| Fit Criteria      | Model Score     | Comment |
|-------------------|-----------------|---------|
| SRMSR             | 0.032 (<0.08)   | Fit     |
| NFI               | 0.982 (>0.90)   | Fit     |
| GoF               | 0.626 (0<GoF<1) | Fit     |
| Sobel test        | Z=5.111 (p<0.05) |         |
| Model Path        | $\beta$, $M$, Std Dev, t-Statistics, p-Values |
| LeadStra -> OrgRes| 0.534, 0.520, 0.074, 7.135, 0.000   |         |
| LeadStra -> ResoStruct | 0.709, 0.714, 0.044, 15.498, 0.000 |         |
| ResoStruct -> OrgRes | 0.415, 0.427, 0.077, 5.284, 0.000   |         |

With $R^2=0.772$, the mediated path explains 77.2% of the variance in the dependent variable. The results were validated with a Sobel test that found a significant partial mediation in the model with $Z=5.111$ and $p<0.05$. With these results, the study rejected the null hypothesis and inferred that there is a significant effect of resource orchestration’s resource structuring on the organisational
resilience of listed banks in Kenya. Model paths and other relevant statistics for resource structuring are depicted in Figure 4 and Figure 5, respectively.

**Figure 4: Model path Coefficients of Resource Structuring**
The results suggest that divesting and acquiring decisions are prioritised during a crisis. This could perhaps be because divesting and acquiring decisions have an immediate impact compared with accumulation decisions. Hence, decisions such as staff retrenchment, closing loss-making operations, and freezing asset acquisition plans are taken as quick remedial actions to reverse a declining trend in performance during turbulent times.

**Inference of Resource Bundling and Resilience**

The study hypothesised H03 as follows: there is no significant mediating effect of resource bundling on the relationship between leadership strategy and organisational resilience of listed banks in Kenya. The test results show that empirical data fitted the model satisfactorily and had substantial predictive power given that all three model fit criteria were satisfied, as reported in Table 5. The Sobel test and bootstrapping results found a positive path coefficient between leadership strategy and resource bundling (β=0.845) and a positive path coefficient between resource bundling and organisational resilience (β=0.443); both paths are statistically significant with p<0.05, indicating that resource bundling mediated the relationship between leadership strategy and organisational resilience. With R2=0.742, the mediated path explains 74.2% of the variance in the dependent variable. Results are reported in Figure 6 and Figure 7.

**Figure 5:** Mode t-Statistics of Resource Structuring

![Diagram showing resource structuring](image)

**Table 5: Model Fit Criteria for Resource Bundling**

| Fit Criteria | Model Score | Comment |
|--------------|-------------|---------|
| SRMSR        | 0.047 (<0.08) | Fit     |
| NFI          | 0.968 (>0.90) | Fit     |
| GoF          | 0.774 (0≤GoF≤1) | Fit     |

| Sobel test   | Z=5.078 (p<0.05) |

| Model Path               | β    | M    | Std Dev | t-Statistics | p-Values |
|--------------------------|------|------|---------|--------------|----------|
| LeadStra->OrgRes         | 0.454 | 0.450 | 0.085   | 4.918        | 0.000    |
| LeadStra->ResoBund       | 0.845 | 0.843 | 0.028   | 32.442       | 0.000    |
| ResoBund->OrgRes         | 0.443 | 0.449 | 0.086   | 5.140        | 0.000    |

The results were validated with a Sobel test that found a significant partial mediation in the model with Z=5.078 and p<0.05. Accordingly, the study rejected the null hypothesis and inferred that there is a significant effect of resource orchestration’s resource bundling on the organisational resilience of listed banks in Kenya.
The research hypothesised H04 as follows: there is no significant mediating effect of resource orchestration’s resource leveraging on the relationship between leadership strategy and organisational resilience of listed banks in Kenya. The test results show that empirical data fitted the model satisfactorily and had substantial predictive power given that all three model fit criteria were satisfied, as reported in Table 6.

The Sobel test and bootstrapping results found a positive path coefficient between leadership strategy and resource leveraging ($\beta=0.780$) and a positive path coefficient between resource leveraging and organisational resilience ($\beta=0.522$); both paths are statistically significant with $p<0.05$, indicating that resource leveraging mediated the path between leadership strategy and organisational resilience. With $R^2=0.792$, the mediated path explains 79.2% of the variance in the dependent variable. The results were validated with a Sobel test that found a significant partial mediation in the model with $Z=7.301$ and $p<0.05$. With these results, the study rejected the null hypothesis and inferred that there is a significant effect of resource orchestration’s resource leveraging on the organisational resilience of listed banks in Kenya.
Figure 8: Model Path Coefficients of Resource Leveraging

Figure 9: Mode t-Statistics of Resource Leveraging

Inference of Resource Orchestration and Resilience

The study hypothesised H0 as follows: there is no significant mediating effect of resource orchestration on the relationship between leadership strategy and organisational resilience of listed banks in Kenya. The test results show that empirical data fitted the model satisfactorily and had substantial predictive power given that all three model fit criteria were satisfied, as reported in Table 7.
Table 7: Model Fit Criteria for Aggregate Resource Orchestration

| Fit Criteria | Model Score | Comment |
|--------------|-------------|---------|
| SRMSR        | 0.044 (<0.08) | Fit     |
| NFI          | 0.976 (>0.90) | Fit     |
| GoF          | 0.683 (0<=GoF<=1) | Fit     |
| Sobel test   | Z=9.228 (p>0.05) |         |

| Model Path               | β     | Mean | Std Dev | t-Statistics | p-Values |
|--------------------------|-------|------|---------|--------------|----------|
| LeadStra->OrgRes         | 0.268 | 0.269| 0.069   | 4.223        | 0.000    |
| LeadStra->ResoOrch       | 0.824 | 0.824| 0.031   | 27.677       | 0.000    |
| ResoOrch->OrgRes         | 0.679 | 0.677| 0.069   | 10.759       | 0.000    |

The Sobel test and bootstrapping results found a positive path coefficient between leadership strategy and resource orchestration (β=0.824) and a positive path coefficient between resource orchestration and organisational resilience (β=0.679); both paths are statistically significant with p<0.05, indicating that resource orchestration mediated the path between leadership strategy and organisational resilience. With R²=.834, the mediated path explains 83.4% of the variance in the dependent variable. The results were validated with a Sobel test that found a significant partial mediation in the model with Z=9.228 and p<0.05. In light of these results, the study rejected the null hypothesis and inferred that resource orchestration significantly affects the organisational resilience of listed banks in Kenya. The model further reveals that slack resources are the first line of defence during the crisis, followed by resource structuring, resource leveraging, and resource bundling. This conclusion validates the responses obtained from the questionnaire that during a crisis, firms recourse to the immediately available resources (slack), then move to explore how they can reconfigure other attainable resources by restructuring their portfolio of assets, leveraging on existing relationships to raise funding and, finally, venture into new resource-generating activities.

Figure 10: Model Path Coefficients of Aggregated Resource Orchestration
Summary of Findings

The study showed that a partial but strong mediation path existed for resource orchestration between leadership strategy and organisational resilience, meaning that when leaders effectively orchestrate resources, organisational resilience is assured. This means that an effective leadership strategy actively structures, bundles, and leverages the set of resources at the firm’s disposal. Therefore, the study has affirmed resource orchestration as a solid theory for clarifying the path through which leadership strategy determines resilience outcomes. This is in alignment with the notion of resource orchestration as the advancement of the resource-based perspective, and dynamic capabilities view as fronted by numerous scholars (Ahuja & Chan, 2017; Berseck, 2018; Boss, 2014; Lanza et al., 2016; Peuscher, 2016; Rouwmaat, 2012; Sirmon et al., 2011). It is implied in the findings that resource orchestration not only provides a framework for evaluating the resources-performance nexus but also a concrete theory for explaining the mechanism through which leadership strategy impacts organisational resilience. In keeping with the perspectives advanced in multiple scholarly works (Al-Balushi, 2019; Rodríguez-Sánchez et al., 2021; Sawayerr & Harrison, 2019), the theory’s currency in linking leadership strategy to organisational resilience through management optimisation of resources during challenging times is affirmed.

Slack resources have existential importance for firm survival through disruptive events. This is in line with earlier research by Ahmed et al. (2021a), which offered a hierarchy of resource slack. This necessitates portfolio quality vigilance as part of the leadership strategy necessary for achieving resilience in the banking sector. By extension, the results signify the salience of resource structuring as an orchestration dimension through the maintenance of a sound asset book. Similarly, the study has proved that resource structuring via mergers and acquisitions fosters value preservation. On the same token, the empirical analysis has suggested that resource bundling takes place through pioneering and fertilising human and material input factors with positive results in terms of bank resilience. In effect, purposeful human resource development and strengthening teams by integrating new talents bolster the banking sector’s resilience.

The study results disclosed the fundamental function of slack resource accumulation as the immediate shield against disruptive shocks. More importantly, the study demonstrated that resource slack’s dynamic elements are crucial for leadership strategy considerations over and above their mere slackness. To this end, solvency potentially uncovered banks to liquidity challenges in moments of disruptions, particularly upsetting small banks more than large ones, which boasted strong liquidity positions. This portends differential organisational resilience outcomes. The finding reinforces the view that excess liquidity is necessary to cushion enterprises from unanticipated shocks. It is noteworthy that leveraging is possible when firms own or have access to input factors. It thus behoves leadership strategy to build strong net assets position and reputational capital to enable banks secure potential resources during times of distress.
Conclusions

The study established the mediating role of resource orchestration in the relationship between leadership strategy and organisational resilience among commercial banks listed on the Nairobi Securities Exchange (NSE). The study has contributed to organisational resilience literature by using systemic disruptive shocks in Kenya’s banking sector as the vantage point. The conclusion was drawn that resource orchestration is a robust mediator of leadership strategy-organisational resilience relationship. This makes effective resource orchestration central to leadership strategy. Without resource orchestration, leadership strategy generates sub-optimal results as far as bank resilience is concerned. This necessitates gearing leadership dimensions towards the effective structuring, bundling, leveraging, and consolidation of resource slack into one united front against disruptive shocks.

The study demonstrated differential explanatory power of resource orchestration dimensions, with resource leveraging taking the first position, followed in rank order by slack resources, resource structuring, and resource bundling. In as much as all the manifestations of resource slack are crucial, liquidity-friendly working capital and credit worthiness emerge as the most critical aspects of resource slack that warrant prioritisation for manoeuvering through systemic shocks. This underlines the significance of cash and, thus, the strategy that sustains its availability and access in times of disruption carry the potential to navigate an organisation successfully through disruptive jolts. In addition, the effect of good relations with lenders signifies the importance of both slack credit and reputational slack. Both sub-dimensions of resource slack are dependent on the organisational track record in the eyes of its stakeholders. The study has elevated resource orchestration to the centre of leadership strategy-organisational resilience modelling.

The study also demonstrated that slack resources form a critical component of pre-crisis preparedness that leaders should strategically orchestrate to build organisational resilience. This involves taking measures to safeguard the liquidity position of the enterprise and building social capital by forging solid relationships with key stakeholders.

In light of the study results, cost containment strategies are crucial in crises. Therefore, executive leadership is urged to engage in resource re/structuring through investments rationing, dividend suspension, and loan restructuring to stabilise an enterprise through shocks. However, while considered by managers as an easy way out potential, human resource retrenchment is the least sound cost-containment strategy and should be used as the last line of defence. This is in line with the study’s findings related to the relative salience of fertilising and enriching as practical policy tools during a crisis, implying that instead of applying asset retrenchment policies, leaders should endeavour to increase asset application during a crisis to increase relative asset output at each unit of asset acquisition cost.

Opportunity for boosting organisational resilience is inherent in resource bundling. This draws the attention of senior management to centre on policies that bolster capabilities through digital advancement and talent enhancement. Such policies have the potential to create grounds for product and market pioneering. Focusing on value creation through the configuration and deployment of resources promises optimal resilience outcomes.

**Proposition of Resource Orchestration Pecking Order (ROPO)**

Propagating enterprise-wide resource orchestration practice through an artful mixing of its various dimensions provides the best bet for surviving and thriving in disruption. In this mixing, resource leveraging and resource slack should take precedence as they possess the highest concentration of shock-absorbent properties such as liquidity cushion and redeployment fluidity in the moment of a crisis. Next in line for consideration is resource bundling through pioneering and enrichment. A leadership strategy that fosters the deployment of human and material resources into value-adding activities through the skilful recombination of input factors already at hand is likely to propel positive enterprise-wide transformation. This may potentially manifest through, among others, asset productivity renewal and relative cost reduction. For example, resources could be concentrated on mission-critical investments. Only when necessary, should leaders engage in resource structuring via resource divestments. Even then, attention should be drawn to divesting non-core assets, releasing unproductive staff, and closing loss-making departments. However, these should be activated only as a last resort as they connote a survival-for-the-fittest posture when other resource orchestration options fail to effectively turnaround the organisation from a path of total collapse.

The framework illustrated in Figure 12 error! Reference source not found. connotes a pecking order of resource orchestration dimensions based on each dimension’s effect size on organisational resilience, as evidenced by the weights assigned to each dimension from the structural equation outcomes. Coming first in the pecking order is resource leveraging and resource slack, meaning that these two dimensions of resource orchestration are potentially supreme for the realisation of organisational resilience. This means leadership strategy should focus on the deployment and coordination of resources at disposal during systemic disruption. It is reiterated here that resource slack is an enabling factor that acts as a cushion against disruptive shocks and powers the activation of leadership strategy for navigating through disruption. Firms endowed with available, recoverable, and potential slack have the best opportunity to take advantage of disruption through fertilisation and deployment of such resources. Such slack, however, is the outcome of an intentional leadership strategy focused on building strategic resource fluidity.

These propositions are diagrammatically illustrated in Figure 12.
Resource bundling is second in line with the pecking order, which means enriching and pioneering should be the next policy option. Enriching and pioneering products and services in volatile environments characterise adaptive firms. To this end, innovation and creativity take centre stage, and leadership strategy effectiveness is demonstrated through calculated risk-taking and time-to-market agility.

Finally, resource structuring through the acquisition, accumulation and divestment of resources should be orchestrated in that order, with divestment being the banks’ last line of defence to be activated when other orchestration strategies fail to deliver. These typically characterise surviving firms, with leadership strategy reduced to a do-or-die policy choice.

Directions for Future Research
The notion of ROPO is a novel contribution of this study to organisational resilience theory and practice. However, the ROPO model and its inherent elements should be subjected to validation in subsequent studies. For instance, the present study was conducted exclusively in the banking sector. This means that the application of the model to other business sectors may be limited. As such, the model could be tested in other sectors of the economy to evaluate its universality.

For the purpose of this article, the literature review was conducted exclusively for resource orchestration. Evidently, the limitation of the study in terms of geographical and industrial scope and the restrictions imposed on sample size call for additional research to validate the empirical findings on other contexts and expand the factor space to potentially aggregate a robust inventory for measuring resource orchestration universally, as this inventory is hitherto non-existent.

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