

# RESILIENCE AMONG KENYAN MANUFACTURING FIRMS

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## ABSTRACT

*Academic and practitioners have recently discovered resilience as a core topic of interest. It is widely viewed as a potential solution to organizations' challenges posed by the current Covid-19 pandemic and other disasters. While the concept of resilience is increasingly becoming popular, empirical research on resilience organizations is quite rare. In this study, we examined the relationship between organization resources, organization innovative climate culture, restructuring, and transformational leadership style on organization resilience Among Kenyan manufacturing firms. We measured resilience as the firm's ability to return to normal after adversity and as the firm's ability to bounce back better than before. Our sample population is 122 manufacturing firms in Kenya. Our findings show that organizational resources have a significant effect on Resilient both on the ability to return to normalcy and the ability to bounce back better. However, an organization's innovative environment significantly affects firms' ability to return to normalcy in operations but has an insignificance effect on the ability to bounce back better than before. Transformation leadership style and organization restructuring had a significant impact on the ability to bounce back better but an insignificance effect on maintaining normalcy in operations.*

**Keywords:** Kenya Resilience, Resources, Transformational Leadership, Innovative Culture Restructuring.

## INTRODUCTION

Organizations inevitably face adversity that threatens their functioning and performance. The myriad forms of threats organizations today face include severe global economic downturns, an increasing number of climate downturns, natural catastrophes, industrial accidents, devastating product recalls, information breaches and data security violations, and threats of terrorism (Duchek, 2020; Williams et al., 2017). The frequent occurrence of these environmental shocks and the recent COVID-19 outbreak have heightened concerns about the limited capacity of organizations to anticipate every challenging event that could arise (Duchek, 2020; Duchek et al., 2020; Teng-Calleja et al., 2020). Mainly since coping with more frequency extremes lies beyond the range of previous experiences (Linnenluecke et al., 2012). As a result, scholars have sought to explain both the nature and impact of crises and how organizations effectively prepare to respond to and overcome their various forms and degrees. To preserve performance, recover, or prevent decline even failure (Williams et al., 2017) and bounce back better (Lengnick-Hall et al., 2011; Lengnick-Hall & Beck, 2016). This has also led to a search for new conceptual

foundations of how organizations can deal with and possibly thrive under adverse conditions that pose potential existential threats to their health (Duchek, 2020; Linnenluecke et al., 2012). Organization resilience concepts help understand why organizations survive in complex environments with unpredictable, non-linear, and non-incremental changes (Linnenluecke et al., 2012).

Although academic interest in organization resilience has grown steadily in recent years, the conceptualization of the complex construct is still in its infancy (Duchek, 2020; Williams et al., 2017). Moreover, empirical studies on organization resilience are scarce, if not none (Boin & van Eeten, 2013). There is no consensus on what resilience means and which elements it contains. It is unclear what resilience organizations can do and how organizations can achieve it in practice (Duchek, 2020). An assessment of strategy and organizational theories reveals a sparse conceptual foundation for understanding effective organization responses to adversities.

While the literature on organization adaptation to environmental pressure is extensive, it deals primarily with incremental adjustments to continuous environmental changes. Environmental changes are assumed to be carried out in either current strategic scanning or crisis management (Linnenluecke et al., 2012). Organizational research needs to understand better and map effective corporate responses to environmental discontinuity and shocks. There is a need to know why some organizations survive while others fail in times of crisis, hence the need to understand resilience and how organizations build resilience when faced with such adversity. Various scholars (Denyer, 2017; Lengnick-Hall et al., 2011; Lengnick-Hall & Beck, 2009; Williams et al., 2017) have emphasized the role of organizational capabilities in building resilience. However, there is a lack of empirical evidence on how various organizational capabilities can facilitate interaction with the environment and enable adjustment to adversity. Before adversity, the capabilities actors possess shape their capacity for positive adjustment and represent the first prominent theme in resilience literature (Williams et al., 2017). Capabilities such as knowledge, skills, and abilities facilitate access to and manipulation of resources (Collis, 1994; Teece et al., 1997). Empirical evidence also shows that the availability of slack resources and sensemaking processes (Meyer, 1982) enhances organization resilience. Our study contributes to resilience literature by examining how resource capabilities and innovative organizational culture lead to organizational resilience.

Secondly, we contribute to leadership and organization resilience literature by considering the role of leadership style in building resilience. We argue that organizational resilience effectively reflects the leaders, cognition, values, and behavior. Therefore, leadership style and behaviour are vital to building organizational resilience. Leaders' behavior that enables quicker recognition and resolutions of potential disruptions fuels resilience before a crisis occurs (Williams et al., 2017). Transformational leaders' behavior idealized influence, inspirational motivation, intellectual stimulation, and individual consideration (Bass, 2000) create possible antecedents to organization resilience. Transformational Leaders are proactive and model employees to be proactive (den Hartog & Belschak, 2012; Schmitt et al., 2016; Yang et al., 2019). Therefore, it helps organizations prepare for, adjust to, and respond to adversity and build endowments that promote greater resilience, thereby avoiding triggering events and the need for crisis management. Transformational leaders' idealized influence and inspirational motivation encourage a better understanding of how their organization interprets and interacts with the environment to promote greater resilience. We argue that transformational leaders' behavior is closely linked to organizational resilience. Transformational leaders' behaviour by senior

executives is more likely to be effective in a dynamic environment and promote both exploitative and learning in which the status quo is challenged (Vera & Crossan, 2004). Organizational learning is vital to building organizational Resilience (Denyer, 2017).

Thirdly, our study responds to calls by various scholars (Lewin & Välikangas, 2021; Raetze et al., 2019) and growing literature on Covid 19 effects on firms and Organizational Resilience. The recent outbreak of the novel coronavirus (COVID-19) pandemic seriously affected health care, the economy, transportation, and other fields in different industries and regions. The population mobility dropped due to the quarantine policy, which weakened spending power and a stagnant economy; the pandemic caused the worst global recession at the macro level. Many countries suffered from severe corporate bankruptcies and job losses (Shen et al., 2020). At the firm level, the pandemic caused disruptions in supply chains, reduced consumer demand for their products and services, and tightened the provision of credit (WorldBank, 2020). Firms faced environmental shock that heavily weighed on their performance by breaking down their operations, triggering performance setbacks. While some firms collapsed, firms with resilience capacity could adequately react to unexpected events and capitalize on possibilities that could threaten an organization's survival (Lengnick-Hall et al., 2011) and bounce back better than before. Covid 19 pandemic affected most businesses in both developed and developing economies as well. However, research on organization resilience at the individual and organization level is scant, more so in developing economies. This is problematic given the prevalence of adversities-induced setbacks in today's environment. Scholars and practitioners in developing economies can benefit from understanding how organizations bounce backs from setbacks differ from those that crumble under pressure and the relative Knowledge of how leadership styles lead to resilience. Given the scarcity of resources and low income among consumers, the effects of the pandemics were felt more in developing economies than developed countries. Hence, it is essential to understand how organizations in developing economies like Kenya build resilience.

## LITERATURE REVIEW

While other organizations find it hard to cope with such environmental shocks, resilient organizations absorb unexpected shocks and somehow emerge from a crisis without damage (Boin & van Eeten, 2013). The idea of a resilience organization offers the promise of an intuitive, plausible, attractive, and seemingly viable strategy to prepare for and deal with various types of adversities. Organization resilience refers to the organization's ability to absorb disturbance and reorganize while changing to retain the same function, structure, identity, and feedback. Resilience also relates to the ability to bounce back from adversity-induced process loss; this includes the loss of critical members of the organizations and the loss of key suppliers (Alliger et al., 2015).

There are many definitions of resilience found in a wide field of academics, including psychology, sociology, ecology, organization theory, public administration, and political science (Boin & van Eeten, 2013). Resilience is the ability to effectively absorb, develop situation-specific responses, and ultimately engage in transformational activities to capitalize on disruptive surprises that potentially threaten organizational survival (Lengnick-Hall et al., 2011). Organization resilience, therefore, enables organizations to maintain or restore an acceptable level of functioning despite perturbations and failures and recover after disturbances and return to a normal state (Lengnick-Hall et al., 2011; Duchek, 2020) or bounce back better than before. It

may also refer to the firm's ability to recover from impacts that exceed its boundaries. Resilience organizations will maintain a high level of performance even when environmental pressures mount, threats arise, and uncertainties deepen (Boin & van Eeten, 2013). Research in high-reliability organizations shows that critical aspects of resilience are the continuous identification, understanding, evaluating, monitoring, and revising unexpected situations and interventions before the effects escalate (Linnenluecke et al., 2012). Other perspectives of organizational resilience are less concerned with avoiding the escalation of unforeseen problems but instead focus on how organizations can absorb the impacts of extreme external events and quickly restore their performance to a more favorable or pre-impact state. Resilience in this context consists of two dimensions, impact resistance that is the capacity of an organization to withstand a damaging impact as it occurs, and rapidity the ability of an organization to quickly recover and restore to a pre-disturbance or even an improved state after experiencing a detrimental impact (Linnenluecke et al., 2012). Building on the process-based resilience research (Duchek, 2020) defines resilience in three successive stages anticipating, coping, and adaptation.

Similarly, Boin and van Eeten (2013) conceptualize resilience into three: precursor resilience can be defined as the ability to accommodate change without catastrophic failures or a capacity to absorb shocks gracefully. It prevents budding problems from escalating into fully blown crises or breakdowns. The second type refers to recovery resilience, which can be defined as responding to singular or unique events bouncing back to normalcy. The third type is when an organization or city miraculously arises from the ashes of crisis or disaster. Two elements typically return in the definition of resilience; after surprising danger manifests itself, the organization manages to restore order bounces to an acceptable state of normality. Return to previous order but more robust than before, infusing resilience with learning (Boin & van Eeten, 2013).

## Hypothesis

Resilience requires improvement in overall capability, a generalized capacity to investigate, learn, and act. Resource constrain is considered a key inhibitor to resilience, while its availability can also be a potential enabler (Pal et al., 2014). Capabilities are skills, knowledge, abilities, and processes that facilitate access to and manipulation of resources (Teece et al., 1997). Better Capabilities enable organizations to be more efficient, learn, adapt to change, and renew over time, recognize the intrinsic value of other resources, or develop novel strategies before competitors. The actor's various capabilities can facilitate interaction with the environment that enables adjustment to adversity. Different resource endowments are likely to influence positive adjustment to challenges (Williams et al., 2017). Resilience results from processes that help organizations retain resources in a flexible, storable, convertibles, and malleable form to avert maladaptive tendencies and cope positively with the unexpected (Gittell et al., 2006). Therefore, resource endowment facilitates resilience by enabling adaptability, providing for positive coping, and offering means by which an actor interprets and responds to new challenges in a positive way (Williams et al., 2017). Resilience requires knowledge retention through a flexible workforce, strategic thinking, and top management support (Pal et al., 2014).

Before adversity, the resource endowments actors possess shape their capacity for positive adjustments (Williams et al., 2017). Financial reserves in the form of low debts levels serve as supplementary coping resources for organizations by giving room to maneuverer in the

face of crisis. However, lack of financial reserves makes an organization vulnerable to adversity (Gittell et al., 2006). There is a need for stockpiling resources (slack resources) in anticipation of crisis (Bradley et al., 2011; Williams et al., 2017). Financial and material resources positively contributed to organizational resilience. At the same time, deep Knowledge and expertise help groups and organizations apply and manage what they know in the face of adversity to maintain or resume functioning (Lengnick-Hall et al., 2011). Therefore, we argue that organizational resources have a positive effect on organization resilience.

*H<sub>1a</sub>: Organizational resources have a positive effect on organizational resilience (maintain normalcy in operation)*

*H<sub>1b</sub>: Organizational resources have a positive effect on organizational resilience (Bounce back better than before)*

In today's business environment, the rapid production of Knowledge and innovation is critical to organizational survival. An organization's design, structure, processes, and activity configurations that facilitate the processing and sharing of information, work tasks, and so forth enhance organization resilience capabilities. Behavioral resilience comprises the established behaviors and routines that enable a firm to learn more about a situation, implement new routines and fully use its resource's under adverse conditions (Lengnick-Hall et al., 2011). Diversity in organizational members' analytical perspectives about the organization's technology or production processes, a willingness to question what is happening rather than feign understanding and more significant usage of respectful interaction to accelerate and enrich the exchange of information and capability to process (Schulman, 1993) enhances organization resilience. Increasing the number of perspectives available for identifying the problem to be solved fosters efficacy and growth through a willingness to question inherited knowledge and value new perspectives (Sutcliffe et al., 2003). These actions and activities allow organizations members to respond collaboratively to environmental threats and challenges in ways that facilitate a more robust and competent firm. Behavioral resilience results from a dynamic tension between behaviors that foster creativity and unconventional actions and familiar and well-rehearsed routines that keep a firm grounded and provide the platform for inventiveness (Lengnick-Hall & Beck, 2009). Innovations that involve creative problem solving and learning have been critical to building organizational resilience. Organizations, therefore, need to engage in adaptive change that involves experiments, discoveries, and inventions from numerous places in the organization or community. A fundamental premise of innovation is that the future is not an extrapolation of the past. There are different pathways, differing start points, and differing trajectories (Denyer, 2017). Adaptive innovation and organizational learning are, therefore, key to building organization resilience capabilities (Denyer, 2017; Pal et al., 2014). Smaller firms are more creative than large firms, and these creative actions helped maintain positive action during downtown (Williams et al., 2017). Therefore, we argue that the firm's adaptive capability enhances its resilience; it's learning and innovative culture enhances this adaptive culture; thus, its culture is positively related to its resilience. Hence we theorize that creative culture is essential in building organizational resilience capabilities.

*H<sub>2a</sub>: Organizational innovative culture has a positive effect on organizational resilience (maintain normalcy in operation)*

*H<sub>2b</sub>: Organizational innovative culture has a positive effect on organizational Resilience (Bounce back better than before)*

Resilient organizations recognize early crisis signals and respond quickly and thus avoid escalation (Duchek, 2020). Cognitive endowments enable peoples and organizations to rapidly notice and make sense of potential disruptions, use critical insights in creative and flexible ways, and combine and deploy knowledge and repertoires of actions to resolve the problems at hand (Lengnick-Hall et al., 2011; Lengnick-Hall & Beck, 2009). This way, organizations can stop small things from growing bigger. The ability to quickly assimilate new information helps individuals interpret and navigate the altered environment and is crucial in directing attention (Williams et al., 2017). Adversity can shatter fundamental assumptions about oneself, the background, and one's belief in cause-effect relationships. The difference between triumph and adversity lies in the leader's ability to make sense of the dynamic context in which it is embedded. The leader's ability to observe internal and external development, identify critical development and potential threats, and prepare for unexpected events enable the organization to bounce back from adversity. Transformational leaders tend to be visionary and proactive, improve work, and be future and goal-oriented (den Hartog & Belschak, 2012; Schmitt et al., 2016; Yang et al., 2019). Therefore, these leaders can sense the unexpected faster than others and react to it while others wait and see. Transformational leaders also act as role models, and their proactive behaviour is likely to be imitated by other employees (den Hartog & Belschak, 2012; Schmitt et al., 2016). They stimulate and empower employees to question the status quo and to think outside the box. Hence employees are more likely to be proactive to further goals they care about. Because of their proactive nature, these leaders and followers enable their organizations to anticipate a crisis or respond faster before it escalates.

In addition to the anticipation of and preparation for critical events, resilience also means coping with unanticipated dangers after they have become manifest (Duchek, 2020; Williams et al., 2017). Dealing with unknown hazards, responding productively to significant change, or designing and implementing positive adaptive behaviors matched immediately. Coping with unexpected events involves accepting the problem and developing and implementing solutions (Duchek, 2020; Geier, 2016). This solution involves adaptive innovations, creating, inventing, and exploring new markets and new technologies (Denyer, 2017). Transformational leaders are closely linked with organization and individual creativity (Cheung & Wong, 2011; Eisenbei & Boerner, 2013; Khalili, 2016). Experimentation and creativity arise from increased self-confidence and willingness to challenge present realities that transformational leaders inspire in followers. Through intellectual stimulation, transformation leaders promote exploration by augmenting team members' self-esteem, understanding their individual needs, and encouraging them to speak up and express their opinions. Through inspirational motivation and idealized influence, transformation leaders enhance collective self-construct and self-efficacy, as the leader's behaviors are strongly related to inclusive, supportive, and championing behavior (Nemanich & Vera, 2009). This enables to adjust and improvise during adverse situations. The leader's ability to convert followers' self-interests to collective interests, as part of working together towards a common goal, the positive interpersonal relationship among team members develops and becomes the micro-context in which people share existing knowledge and create new knowledge. More robust bonds and social relationships are an essential driver to organization resilience (Lengnick-Hall & Beck, 2009)

*H<sub>3a</sub>: Transformational leadership style has a positive effect on organizational resilience (maintain normalcy in operation)*

*H<sub>3b</sub>: Transformational leadership style has a positive effect on organizational Resilience (Bounce back better than before)*

Organizational processes can lead to either a functional or dysfunctional response to the environment (Meyer, 1982; Staw et al., 1981). A key to sustainable profitability is recombining and reconfiguring assets and organization structure as the environment changes (Teece, 2007), maintaining asset orchestration, and corporate renewal, including redesigning routines and systems. An organization structure provides a foundation within which the organization functions. Organizational structure determines the activities of people within the organization hence influence individual behavior within an organization. Organizational resilience depends on the relationship between people and groups within the organization (Lengnick-Hall & Beck, 2009). Therefore, organization restructuring, and reconfiguration not only create efficiency but also affect the organization's relationship. Meyer's (1982) Cases suggest that whereas the impacts of jolts are influenced by strategies and absorbed by resources, the reaction to jolts is shaped by ideologies and constrained by structures. Organizational structure and institutionalized interdependencies may constrain responses to jolts (Meyer, 1982). A more centralized and formalized structure may create rigidities that make it difficult for the organization to respond to the environment.

In contrast, a decentralized and flexible structure will increase organization responsiveness to change. A decentralized structure with high autonomy for individual branches has been emphasized as key to organizational resilience. It enables managers and subordinates to take responsibility for the long-term performance and survival of the organization. This structure is directly related to agility and improvisation (Andersson et al., 2019). Traditionally a combination of flexibility, improvisation, and ingenuity, group and society enables one to bounce back after a devastating event (Boin & Lagadec, 2000). Secondly, organization restructuring or reconfiguration through continuous asset orchestration, asset alignments, realignment, redeployment, business model redesign, alignment of activities, and the revamp of routines or transfer of non-traditional assets to another organization or geographical location (Teece, 2007). Increases organizational efficiency and ensures the organization maintains a strategic fit with the environment hence enables its survival. The radical change caused by adversities in the environment may mandate to completely revamp the organization and create an entirely new break-out structure, within which an entire set of structures and procedures are established. Research shows that firms that lack resources and capabilities attempt to build resilience through strategic and operational readiness or rapidity, positive adjustment, or knowledge creation (Pal et al., 2014). Therefore, we argue that organizational restructuring has a significant effect on organization resilience by increasing efficiency and influencing organization responsiveness to adversities through employee behaviour.

*H<sub>4a</sub>: Organizational restructuring have a positive effect on organizational resilience (maintain normalcy in operation)*

*H<sub>4b</sub>: Organizational restructuring have a positive effect on organizational Resilience (Bounce back better than before)*

## METHODS

There is no consensus on what resilience means and which elements it contains. Moreover, empirical studies on organization resilience are scarce, if not none. Resilience is treated as an outcome. We considered organization resilience in two forms: organizations' ability

to maintain or restore an acceptable level of functioning despite perturbations and failures and recovery after disturbances and return to a normal state. Secondly, as the ability to bounce back better than before. First, we asked the respondents if their organization had survived the pandemic and maintained the normal state of operation. Second, we wanted to establish if their profit and turnover had increased. This enabled us to develop the level of organizational resilience.

## Measurements

Our main objective was to establish how different factors lead to organizational resilience. These include resource/capabilities, Innovative culture, and leadership style. Resource capability has been emphasized by (Lengnick-Hall & Beck, 2009;2016; Pal et al., 2014; Williams et al., 2017) as a source of organizational resilience. We considered the availability of different resources. These included highly skilled and motivated human resources capabilities, adoption of current technology in the production of goods, and slack resources in the form of physical assets and financial resources and reserves. We also considered the organization's ability to mobilize resources through networking, a professional industry association.

According to Denyer (2017) mindful actions is essential in building organizational resilience. To capture these, we considered the leadership style adopted within an organization. We regarded transformational leadership style characteristics, idealized influence, inspirational motivation, individual consideration, and intellectual stimulation (Bass, 1985). We argued that transformational leaders enabled followers' reaction to threats and responded to effectively unfamiliar or challenging situations. We also considered the organization's ability to continually improve, refine and extend existing competencies, enhance ways, and exploit current technologies to serve present customers and markets. We also considered innovations and exploration of unknown markets and new technologies (Denyer, 2017).

There is no consensus on what resilience means and which elements it contains. Moreover, empirical studies on organization resilience are scarce, if not none. Resilience is treated as an outcome when an organization performs well during a crisis or bounces back from adversity. To measure resilience, we considered the organization's ability to maintain its sales, survive Industry turndown, improve efficiency in operations, and maintain or increase profitability. We measured resilience using two variables. The ability of the firm to maintain its operations, however, we did not take into consideration the firm's financial health. Secondly, we considered the firm's ability to bounce back better than before. Here we considered an increase in profitability and turnover (increase sales, generate new and keep old customers and manage cashflows)

We controlled for firm ownership. We considered two types of firms those owned by the government and those owned by the private sector. We argued that firms owned by the government are likely to be more stable. They will be more stable because of their large size, and if they incur the losses government consistently leverages by investing in their operation. However, manufacturing firms that are privately owned are smaller in size; hence they are likely to be unstable, have limited access to capital, and may not survive the effects of the pandemic. We coded 2 for publicly owned enterprises and 1 for privately owned enterprises.

## Data

The target population for this study was 691 manufacturing firms that operate in Kenya. The firms were categorized into 14 sectors. We focused on all 14 sectors in processing and value additions. We used stratified random sampling due to the lack of homogeneity in the populations a total of 138 firms. We issued two questionnaires to two middle-level managers in each firm. A total of 276 questionnaires were administered. We received 242 questionnaires from 122 organizations.

## Common Method Bias

To safeguard against the possibility of a common bias method, since we had provided questionnaires to two respondents in each firm, we used the finding of the dependent variable from one respondent and the conclusions of the dependent variables from separate respondents. Second, we used to perform Harman's one-factor test by loading all indicators of the study construct into an exploratory factor analysis. The result revealed that no single factor explained more than 20.25% of the total variances in the variable. Suggesting that common method bias was unlikely to be a severe problem in this study.

## The Measure of Reliability

The VIF values ranged from 1.13 to 4.3; the values were less than five; hence multicollinearity did not exist (Table 1).

<b>Variable</b>	<b>Number of items</b>	<b>Reliability Alpha</b>
Resources	4	0.856
Innovative environment	5	0.793
Leadership	4	0.908

Table 2A & Table 2B present correlation analysis and descriptive statistics for the variables under study.

## Hypothesis Testing

Table 3A & Table 3B shows the hierarchal linear regression analysis results, with the dependent variable of firm survival during covid 19 (the ability to maintain business operations, survive industry downturn, economic crisis). Model 1 includes the control variable firm category, in the form of ownership, if it's a public owned company or a private enterprise. The results in Table 3A & Table 3B shows ( $R^2=0.002$ ,  $\Delta R^2=0.003$ ,  $F\text{-change}=0.278$ ) are insignificant. Hence the firm ownership (category size and ownership) did not influence Kenyan firms' Resilience during Covid 19 pandemic.

	<b>Mean</b>	<b>Std.</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>
Category	1.09	0.288	1							
High skilled human resource	4.58	0.528	0.033	1						

Physical resources	4.57	0.53	0.096	0.705**	1					
Financial resources	4.6	0.525	0.078	0.523**	0.735**	1				
Knowledge	4.63	0.517	0.003	0.460**	0.586**	0.576**	1			
Risk taking culture	4.33	0.552	-0.084	0.219*	0.208*	0.173	0.224*	1		
Diversification	4.34	0.54	-0.144	0.207*	0.226*	0.189*	0.240**	0.515**	1	
Learning culture	4.45	0.562	0.002	0.195*	0.247**	0.227*	0.349**	0.399**	0.532**	1
New products development	4.35	0.574	0.006	0.218*	0.236**	0.282**	0.330**	0.258**	0.522**	0.733**
support for innovations	4.28	0.549	-0.056	0.263**	0.249**	0.277**	0.219*	0.268**	0.267**	0.500**
Individualized consideration	4.93	0.262	0.089	-0.045	-0.054	-0.097	-0.141	-0.117	0.001	-0.109
Idealized influence	4.92	0.275	0.094	-0.067	-0.076	-0.058	-0.156	-0.148	-0.147	-0.186*
Inspirational motivation	4.92	0.275	0.094	-0.01	-0.019	-0.058	-0.098	-0.0202*	-0.036	-0.133
Intellectual stimulation	4.94	0.234	0.078	0.005	-0.003	-0.122	-0.04	-0.109	-0.108	-0.179*
maintained operation	4.37	0.563	0.048	0.273**	0.320**	0.310**	0.329**	0.139	0.296**	0.384**
Increase turnover and profit	4.7	0.528	0.018	0.372**	0.352**	0.392**	0.494**	0.117	0.042	0.269**
Restructured and laying off	4.3	0.746	-0.086	0.022	0.201*	0.284**	0.263**	0.205*	0.142	0.212*
Efficiency in its operations	4.7	0.509	-0.155	0.275**	0.256**	0.202*	0.305**	0.200*	0.123	0.353**

Note: \*\*. Correlation is significant at the 0.01 level (2-tailed). \*. Correlation is significant at the 0.05 level (2-tailed).

Category	9	10	11	12	13	14	15	16	17	18
High skilled human resource										
Physical resources										
Financial resources										
Knowledge										
Risk taking culture										
Diversification										
Learning culture										
New products development	1									
support for innovations	0.341**	1								
Individualized consideration	-0.1	-0.085	1							
Idealized influence	-0.0234**	-0.066	0.602**	1						
Inspirational motivation	-0.129	-0.175	0.716**	0.564**	1					
Intellectual stimulation	-0.156	-0.068	0.739**	0.697**	0.697**	1				
maintained operation	0.464**	0.199*	0.13	-0.07	0.037	0.037	1			
Increase turnover and profit	0.192*	0.237**	0.076	0.055	0.112	0.126	0.268**	1		
Restructured and laying off	0.199*	0.201*	0-.141	-0.042	0-0.042	-0.044	0.191*	0.187*	1	
Efficiency in its operations	0.274**	0.208*	0.083	0.180*	0.121	0.134	0.210*	0.525**	0.209*	1

Note: \*\*. Correlation is significant at the 0.01 level (2-tailed). \*. Correlation is significant at the 0.05 level (2-tailed).

**Table 3A**  
**RESILIENCE CAPABILITIES (MAINTAINING BUSINESS OPERATIONS)**

	Model 1				Model 2				Model 3			
	Unstandardized Coefficients		Standardized Coefficients		Unstandardized Coefficients		Standardized Coefficients		Unstandardized Coefficients		Standardized Coefficient	
	B	Std. Error	Beta	Sig.	B	Std. Error	Beta	Sig.	B	Std. Error	Beta	Sig.
(Constant)	4.266	0.201		0.000	2.097	0.546		.000	1.207	0.623		0.055
Category	0.094	0.179	0.048	0.599	0.058	0.170	0.030	0.733	0.067	0.163	0.034	0.680
High skilled human resource					0.083	0.130	0.078	0.525	0.061	0.124	0.057	0.622
Availability of physical resources					0.081	0.166	0.077	0.626	0.100	0.157	0.094	0.527
Financial resources					0.108	0.141	0.101	0.444	0.058	0.136	0.054	0.671
Knowledge					0.207	0.121	0.190	0.089	0.095	0.117	0.087	0.420
Encouraged to take risks culture									-0.060	0.100	-0.059	0.549
Diversification									0.071	0.114	0.068	0.536
Learning culture									0.068	0.139	0.067	0.628
New products									0.315	0.124	0.321	0.013
Management support for innovations									-0.017	0.100	-0.017	0.862
R		0.048				0.375**				0.525**		
R <sup>2</sup>		0.002				0.141**				0.276**		
R <sup>2</sup> change		0.003				0.130**				0.127**		
Adjusted R <sup>2</sup>		-0.006				0.104**				0.211**		
F- Change		0.278				3.803**				4.231**		

Note: \*\*. Correlation is significant at the 0.01 level (2-tailed).

\*. Correlation is significant at the 0.05 level (2-tailed).

**Table 3B**  
**RESILIENCE CAPABILITIES (MAINTAINING BUSINESS OPERATIONS)**

	Model 4				Model 5			
	Unstandardized Coefficients		Standardized Coefficient		Unstandardized Coefficients		Standardized Coefficient	
	B	Std. Error	Beta	Sig.	B	Std. Error	Beta	0Sig.
(Constant)	-0.0370	1.265		0.770	-0.475	1.273		0.710
Category	0.037	0.162	0.019	0.819	0.067	0.168	0.034	0.692
High skilled human resource	0.062	0.123	0.058	0.614	0.095	0.128	0.089	0.458
Availability of physical resources	0.078	0.158	0.073	0.621	0.062	0.159	0.059	0.695
Financial resources	0.090	0.142	0.084	0.528	0.066	0.144	0.061	0.648
Knowledge	0.112	0.120	0.103	0.353	0.094	0.122	0.087	0.441
Encouraged to take risks culture	-0.046	0.102	-0.045	0.656	-0.067	0.104	-0.065	0.523
Diversification	0.033	0.116	0.032	0.775	0.044	0.119	0.042	0.712
Learning culture	0.087	0.141	0.087	0.536	0.081	0.144	0.081	0.576
New products	0.307	0.126	0.312	0.016	0.293	0.127	0.298	0.023
Management support for innovations	-0.019	0.101	-0.018	0.852	-0.031	0.102	-0.030	0.761
Individualized consideration	0.622	0.288	0.290	0.033	0.688	0.294	0.321	0.021
Idealized influence	-0.207	0.245	-0.101	0.398	-0.230	0.252	-0.113	0.364
Inspirational motivation	-0.139	0.264	-0.068	0.600	-0.180	0.267	-0.088	0.501
Intellectual stimulation	0.035	0.370	0.015	0.924	0.014	0.372	0.006	0.970
Restructured and laying off					0.083	0.068	0.110	0.228
Efficiency in its operations					0.023	0.108	0.021	0.831
R		0.566				0.575		
R <sup>2</sup>		0.320				0.331		
R <sup>2</sup> change		0.055				0.017		

Adjusted R <sup>2</sup>	0.232			0.229	
F-Change	3.604			3.241	

Note: \*\*. Correlation is significant at the 0.01 level (2-tailed).

\*. Correlation is significant at the 0.05 level (2-tailed).

H<sub>1a</sub> suggests that organizational resources are positively related to organization resilience (survival-the ability to maintain the business operations). The results in Table 3 Model 2 suggest organization capabilities; High skilled human resource, physical resource, financial resource, and Knowledge management practices have a significant positive effect on organization resilience ( $R^2=0.141$ ,  $\Delta R^2=0.104$ , F-change=3.802,  $P=0.003$ ). The regression weights for the specific variable are as follows High skilled human resource ( $\beta=0.078$ ,  $P=0.525$ ), physical resource ( $\beta=0.077$ ,  $P=0.626$ ), financial resource ( $\beta=0.101$ ,  $P=0.444$ ), and Knowledge management practices ( $\beta=0.190$ ,  $P=0.089$ ).

H<sub>2b</sub> suggests that the organization's innovation environment had a significant effect on organization resilience. The result from Table 3A, model 3, suggests a positive relationship between innovative culture and organization resilience. An organizational culture that encourages employees to take risks, solve problems, develop or enter new markets, Diversification, Learning, develop new Products, and Management support for innovations significantly affect organization resilience. ( $R^2=0.276$ ,  $\Delta R^2=0.127$ .,  $P=0.000$ , F-change=4.231,  $P=0.002$ ). Thus, H<sub>2</sub> is supported. The regression weight for specific variables in the model shows that organization innovative culture variables, risk-taking culture ( $\beta=-0.056$ ,  $P=0.549$ ), diversification ( $\beta=0.068$ ,  $P=0.536$ ), organization learning culture ( $\beta=0.067$ ,  $P=0.628$ ), and management support for innovation ( $\beta=0.017$ ,  $P=0.862$ ) had insignificant effects on organization resilience. However, the development of new products and the introduction of new products significantly affected firms' resilience during covid 19. These new products (sanitizers, masks, hospital equipment, and other essential items during COVID 19 pandemic) significantly affected organization resilience and the ability to keep business operations running.

H<sub>3a</sub> suggests that the transformational leadership style has a significant effect on organization resilience capabilities. The finding in Table 3B model 4 suggest there was no significant relationship between leadership style characteristic (Individualized consideration, Idealized influence, inspirational motivation, and Intellectual stimulation) and organization Resilience in the form of the ability to keep business operations ongoing ( $R^2=0.320$ ,  $\Delta R^2=0.055$ ., F-change =3.604,  $P=0.134$ ). Therefore, H<sub>3</sub> is not supported. The regression weight for specific variable is as follows; Individualized consideration ( $\beta=0.290$ ,  $P=0.033$ ), Idealized influence ( $\beta=-0.101$ ,  $P=0.398$ ), inspirational motivation ( $\beta=-0.068$ ,  $P=0.600$ ), and Intellectual stimulation ( $\beta=0.015$ ,  $P=0.924$ ). This shows that individual consideration has a significant positive effect on organization resilience while the other variables (Idealized influence, inspirational motivation, and Intellectual stimulation) have insignificant effects.

H<sub>4a</sub> Suggests there is H<sub>4a</sub> suggests that Organization restructuring has a significant positive effect on organization resilience. The findings in Table 3B Model 5 shows cost control measures (Restructured and lying off and Efficiency in its operations) ( $R^2=0.331$ ,  $\Delta R^2=0.017$ , F-change=3.241,  $P=0.278$ ). Thus, H<sub>4</sub> is not supported

Our second definition and measure of resilience was the organization's ability to bounce back from adversity. We measured these using the firm's ability to increase its profitability and turnover during COVID 19. The findings are presented in Table 4.

Table 4A & Table 4B show the hierarchal linear regression analysis results, with firm Resilience during Covid 19 (the ability to bounce back better, increase profits and turnover) as the dependent variable. Model 1 includes the control variable firm category, in the form of ownership, if it's a public owned company or a private enterprise. The results in Table 4 shows ( $R^2=0.000$ ,  $\Delta R^2=0.000$ ,  $F\text{-change}=0.041$ ) are insignificant. Hence the firm ownership (category size and ownership) did not influence Kenyan firms' Resilience during Covid-19 pandemic.

	Model 1				Model 2				Model 3			
	Unstandardized Coefficients		Standardized Coefficients		Unstandardized Coefficients		Standardized Coefficients		Unstandardized Coefficients		Standardized Coefficients	
	B	Std. Error	Beta	Sig.	B	Std. Error	Beta	Sig.	B	Std. Error	Beta	Sig.
(Constant)	4.66	0.189		0	1.778	0.467		0	1.831	0.564		0.002
Category	0.034	0.168	0.018	0.842	0.021	0.146	0.011	0.886	-0.024	0.148	-0.013	0.87
High skilled human resource					0.209	0.111	0.208	0.064	0.217	0.112	0.216	0.056
Availability of physical resources					-0.144	0.142	-0.144	0.315	-0.142	0.143	-0.142	0.321
Financial resources					0.165	0.121	0.164	0.176	0.168	0.123	0.167	0.175
Knowledge					0.397	0.103	0.389	0	0.0369	0.106	0.361	0.001
Encouraged to take risks culture									-0.001	0.091	-0.001	0.995
Diversification									-0.183	0.104	-0.187	0.08
Learning culture									0.213	0.126	0.227	0.093
New products									-0.068	0.113	-0.074	0.548
Management support for innovations									0.049	0.09	0.051	0.587
R			0.018				0.532**				0.57	
R <sup>2</sup>			0				0.283**				0.325	
R <sup>2</sup> Change			0				0.283**				0.042	
Adjusted R <sup>2</sup>			0.008				0.252**				0.264	
F- Change			0.04				11.441**				1.38	

Note: \*\*. Correlation is significant at the 0.01 level (2-tailed). \*. Correlation is significant at the 0.05 level (2-tailed).

	Model 4				Model 5			
	Unstandardized Coefficients		Standardized Coefficients		Unstandardized Coefficients		Standardized Coefficients	
	B	Std. Error	Beta	Sig.	B	Std. Error	Beta	Sig.
(Constant)	0.661	1.146		0.565	-0.495	1.063		0.642
Category	-0.062	0.147	-0.034	0.673	0.099	0.14	0.054	0.482
High skilled human resource	0.206	0.111	0.205	0.067	0.156	0.107	0.156	0.147
Availability of physical resources	-0.162	0.143	-0.163	0.258	-0.197	0.132	-0.197	0.14
Financial resources	0.193	0.129	0.192	0.137	0.221	0.12	0.22	0.069
Knowledge	0.377	0.109	0.37	0.001	0.307	0.102	0.301	0.003

Encouraged to take risks culture	0.036	0.092	0.037	0.7	-0.021	0.087	-0.021	0.814
Diversification	-0.214	0.105	-0.219	0.044	-0.121	0.099	-0.123	0.225
Learning culture	0.223	0.127	0.237	0.083	0.114	0.12	0.121	0.344
New products	-0.048	0.114	-0.052	0.676	-0.101	0.106	-0.109	0.344
Management support for innovations	0.061	0.091	0.064	0.504	0.063	0.085	0.066	0.457
Individualized consideration	0.098	0.261	0.049	0.709	0.139	0.245	0.069	0.571
Idealized influence	-0.014	0.222	-0.007	0.951	-0.243	0.211	-0.127	0.251
Inspirational motivation	0.222	0.239	0.115	0.356	0.115	0.223	0.06	0.606
Intellectual stimulation	0.164	0.335	0.073	0.625	0.218	0.31	0.096	0.484
Restructured and laying off					0.015	0.057	0.021	0.797
Efficiency in its operations					0.405	0.091	0.39	0
R		0.625*				0.685**		
R <sup>2</sup>		0.391*				0.469**		
R <sup>2</sup> Change		0.071*				0.104**		
Adjusted R <sup>2</sup>		0.073*				0.388**		
F- Change		2.570*				10.255**		

Note: \*\*. Correlation is significant at the 0.01 level (2-tailed). \*. Correlation is significant at the 0.05 level (2-tailed).

H<sub>1b</sub> Suggests that organizational resources are positively related to organization resilience the ability to (bounce back better than before). The results in Table 4A Model 2 suggest that organization capabilities; High skilled human resource, physical resource, financial resource, and Knowledge management practices has a significant positive effect on organization resilience ( $R^2=0.283$ ,  $\Delta R^2=0.242$ .,  $F\text{-change}=11.441$ ,  $P=0.000$ ). The regression weights for the specific variable are as follows High skilled human resource ( $\beta=0.208$ ,  $P=0.064$ ), physical resource ( $\beta=-0.144$ ,  $P=0.315$ ), financial resource( $\beta=0.164$ ,  $P=0.176$ ), and Knowledge management practices ( $\beta=0.389$ ,  $P=0.000$ ).

H<sub>2b</sub> suggests that the organization's innovation environment significantly affected organization resilience (ability to bounce back better and increase profits and turnover). The result from table 4, model 3, suggests a positive relationship between an organization's innovative culture and resilience. an organizational culture that encourages employees to take risks, to solve problems, develop or enter new markets, Diversification, Learning, develop New Products, and Management support for innovations have a significant positive effect on organization resilience. ( $R^2=0.325$ ,  $\Delta R^2=0.042$ ,  $F\text{-change}=1.380$ ,  $P=0.140$ ). Thus, H<sub>2</sub> is not supported.

H<sub>3b</sub> suggests that the transformational leadership style has a significant positive effect on organization resilience capabilities. The finding in Table 4B model 4 suggest there was a significant positive relationship between leadership style characteristic (Individualized consideration, Idealized influence, inspirational motivation, and Intellectual stimulation) and organization Resilience in the form of the ability to keep business operations ongoing ( $R^2=0.391$ ,  $\Delta R^2=0.073$ ,  $F\text{-change}=2.570$ ,  $P=0.031$ ). Therefore, H3 is supported. The regression weight for specific variable is as follows; Individualized consideration ( $\beta=0.049$ ,  $P=0.709$ ), Idealized influence ( $\beta=-0.007$ ,  $P=0.951$ ), inspirational motivation ( $\beta=-0.115$ ,  $P=0.356$ ), and Intellectual stimulation ( $\beta=0.073$ ,  $P=0.625$ ).

H<sub>4b</sub> suggests that Organization restructuring has a significant positive effect on organizational resilience (ability to bounce back better than before inform of profitability and turnover). The findings in table 3 Model 5 shows cost control measures (Restructured and lying off and efficiency in its operations ( $R^2=0.469$ ,  $\Delta R^2=0.104$ .,  $F\text{-change} =10.255$ ,  $P=0.278$ ). Thus,

H<sub>4</sub> is supported. The regression weight for specific variable is as follows; Restructured and lying off ( $\beta = -0.021$ ,  $P = 0.797$ ) and Efficiency in its operations ( $\beta = -0.390$ ,  $P = 0.000$ ).

Understanding how organizations adjust, adapt, and reinvent their business models in an ever-changing environment before the external environment forces them is key to organization survival. We considered Organization resilience in two forms. First, we consider organizations' ability to maintain or restore an acceptable level of functioning despite perturbations and failures and recover after disturbances and return to a normal state secondly, the ability to bounce back better than before. We examined how different factors lead to the development of organizational resilience. We mainly focused on resource capabilities, innovative environment, organization restructuring, and transformation leadership as an antecedent in organization resilience. Our results showed that organization capabilities had significant positive effects on organization resilience, both in maintaining normalcy of operations and information of the organization ability to bounce back better from adversity. Various resource endowments are likely to influence positive adjustment to challenges, providing positive coping and offers means by which an actor interprets and responds to new challenges positively. Resources also enable organizations to handle the complex competing tensions between different stakeholders. Financial slack acts as a buffer for organizations during a crisis. An organization does not survive because of inner resources. Instead, it survives and thrives based on the ability to adapt and dynamically relate to the environment. Therefore, organizational Knowledge plays a crucial role in building resilience.

We established that transformational leadership style had insignificant effects on the organization's ability to maintain its operations but significantly impacted its ability to bounce back better than before. We also established that an organization's innovative culture had significant effects on its ability to maintain its normal operations but had an insignificant impact on its ability to bounce back better than before. The findings are mixed. While individual consideration positively affects organization resilience (the ability to maintain business operations), other characteristics have insignificant effects. However, concerning the firm's ability to bounce back better than before, our findings show that transformational leadership style has a significant positive effect. During adversity, it is difficult for employees to share assumptions due to uncertainty about job security. Transformational leaders demonstrate genuine concerns and feeling for the need of followers. Transformational leaders enable them to make sense of information during a crisis or adversity's throes, provide stability despite the chaos, and create a psychologically safe environment. Resilience also requires Adhoc capabilities such as improvising decision-making activities and role enactment. Identifying and mobilizing resources and establishing order through emergent communication and coordination techniques. Therefore, creating an innovative culture and transformational leaders' intellectual stimulation and support are crucial in building organizational resilience. Resilience requires team members to value proactive problem solving and believe that change is desirable for organizational survival. Willingness to embrace change in an environment of uncertainty and ambiguity requires a culture of psychological safety that provides team members with a sense of being able to show employ one self-worthy fear of negative consequences to self-image, status, or career. Low psychological safety can deter resilience by creating fear that its unanticipated outcomes may be punished. Adaptive innovations will also be limited in an environment perceived as unsafe for risk-taking.

In contrast, psychological safety is positively related to such learning behaviors as seeking information and experimenting with creative ideas. Exposure to diverse knowledge

promotes cognitive complexity and translates into a greater variety of perspectives, increasing the likelihood of innovative solutions to problems. The actions leaders take before a crisis can be influential in enabling them to navigate their organizations through a crisis successfully. Transformational leaders' proactive nature allows them to notice a sign of danger and respond to it before it becomes a triggering crisis event. Our findings also show that an innovative environment has an insignificant effect on firms' ability to bounce back better than before. This is explained by the fact that new products take a long time to commercialize and hence may not have short-term effects on firms' profitability.

We also established that organizational restructuring had significant effects on the ability to bounce back but insignificant effects on maintaining operations. A structure that enables flexibility enhances responsiveness hence allows organizations to be resilient. Organizations that can rapidly and flexibly reorganize resources and reconfigures its operations to reduce the stressors on its processes and generate novel solutions to address the changing conditions caused by adversities facilitate resilience. The organization ends up better than before. Despite the potential threats posed by adversities, competent employees, and other resources, an innovative organization climate, transformational leaders, and efficiency in its operations generate positive outcomes and facilitate a return to the status quo

The pandemic increased environmental complexity, shifting power, salient, and urgency of different stakeholders over time. The increased degree of environmental complexity challenges traditional organization mechanisms to detect, respond to, and control ongoing operations. For managers, resilience requires them to be both reactive and proactive. At the same time, it requires them to prepare for/preventing adversity and respond to triggers in their environment. Managing the increasing requires them to prepare for/preventing adversity and respond to stimuli in their environment.

### **Contribution to Theory**

The paper extends research on organization resilience in three ways, while scholars on organization resilience have established that organization resources enable firms to build Resilience (Lengnick-Hall et al., 2011; Lengnick-Hall & Beck, 2016; Williams et al., 2017). We further these theories by testing how different resource enables organization s to build resilience. We considered the role of human resources skills, knowledge management, organizations' physical assets s, and financial resources to lead to organizational resilience. Secondly, there have been calls on resilience literature to examine the role of leadership in building organizational resilience. We furthered this by examining how the transformational leadership style enhances organization resilience. Hence, we make a theoretical contribution to leadership literature. While resilience literature has emphasized the role of innovation, resourcefulness, and creativity on innovation, the organizational climate that fosters these has not been examined in the literature. We examined how management and leadership support for innovations, risk-taking culture that encourages innovation and acceptance of failure enables an organization to build its resilience capabilities through innovation capabilities. We also make a methodological contribution by examining in empirical form. Previous studies have examined resilience as case studies or have theoretical studies.

## Managerial Implications

Developing effective organizations is pertinent in today's organizations the frequency of adverse situations has increased and the managers' ability to map organization responses to these situations is key to the organization's survival in today's environment. Organizational resilience cannot be underestimated in building these environments. Understanding how a firm creates builds resilience is essential. Investing in resources and culture that enhance stability is necessary for the manager to ensure continuity and prosperity.

## CONCLUSION

The study took place in 2021. However, COVID 19 is still an ongoing pandemic; hence the findings may not be generalized as the effect of the pandemic. We focused on manufacturing firms only; we collected data from 122 firms. Further studies should be census study should be carried out to generalize the finding in all firms. The study was carried out in the Kenyan economy may not be generalized in other developing economies. Therefore, replicating this study in other setups may help extend the generalization of these study findings.

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