Examining The Effect of Organizational DNA on Strategic Inertia: An Evidence from The Egyptian Textiles and Garments Companies

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Abstract

This paper investigates the antecedents of strategic inertia in the Egyptian textile and garments industry. Despite the importance of flexibility in this dynamic industry, empirical evidence points out the high levels of inertia. Based on organizational ecology and institutional inertia theories, this paper argues that the nature of decision rights, information, motivators, and organizational structure significantly affects strategic inertia. The study also compares Egyptian public and private textile and garments manufacturers' DNA influence on strategic inertia. Self-administered surveys and various statistical tools were used to test the research hypotheses empirically. The results show a significant negative effect of the organizational DNA genes and cognitive, socio-cognitive, and behavioral inertia, except for the

significant positive effect of information on cognitive inertia. It is suggested that future research investigates several factors that may mediate or moderate this relationship. Finally, practical implications for senior managers and the human resource management staff are discussed at the end of the paper.

Keywords: **Organizational DNA , Strategic Inertia**

Introduction

Changes in the external organizational environment, including globalization, economic recession, competitiveness, political turbulence, and technological improvements, have forced organizations to adapt their strategies accordingly to survive. Organizations' need for change arises not only with the aim of survival, but also to develop and succeed (Volberda, Khanagha, Baden-Fuller, Mihalache, & Birkinshaw, 2021). Unfortunately, the pace of change in the environment is faster than organizations' ability to respond and adapt (Hamel & Välikangas, 2003). Consequently, organizational behavior literature indicates that due to such tremendous changes and complexity, there has been a continuous necessity to explore organizational change (Hovivyan, 2006).

Strategic management researchers claimed that for organizations to survive, decision-makers must show a continuous (re)alignment between strategies and the external environment. Forces that previously contributed to a strategy's success do not warrant future success. Thus, success no longer depends on

momentum (Hamel & Välikangas, 2003). Instead, continuous success is contingent upon the manner the organization reacts to change (Schoemaker & Laurentius Marais, 1996) and its ability to renew strategies (Hamel & Välikangas, 2003).

Organizational ecology theory indicates that organizational change is challenging, expensive, and risky and takes time. This theory implies that successful organizations are those that constantly change their routines and structures. The firm's inability to carry out such (re)alignment usually leads to inertia (Huff, Huff, and Thomas, 1992). The way renewal efforts are hindered in an organization is known as Strategic inertia (Hopkins, Mallette, & Hopkins, 2013; Huff et al., 1992; Rusetski & Lim, 2011; Mallette & Hopkins, 2013). Strategic inertia is the extent of commitment to the current strategy. This commitment would grow stronger over time as strategies become deeply embedded in an organization, regardless of the dynamic external environment.

Arguments concerning organizational inertia started with the beginning of management literature. Inertia represents the price organizations pay for stability and reproducible structures to ensure the consistency and accountability of organizations (Hannan and Freeman, 1984). Some scholars argue that inertia might be helpful if the institutional status quo is more beneficial than the emerging alternative. Nonetheless, institutional inertia theory proposes that a problem generally noticed during periods of a high need for change. Prior research suggests that profitable organizations are particularly

subject to inertia and the maintenance of the status quo for too long, hence failing to seize new opportunities (Chesbrough, 2003; Irani & Kim, 2020). Therefore, organizations must address the forces of inertia to successfully realign with the environment (Besson & Rowe, 2012).

Firms that can quickly adapt to the organizational environment are known as healthy organizations. On the other hand, unhealthy companies stutter, wither, and eventually stagnate (Hamel & Välikangas, 2003). Many scholars agree that organizational health cannot be accomplished by firing or hiring a manager who will be the sole person in charge of organizational performance. Organizational health is more challenging to achieve than most think. It results from employees' everyday decisions and actions (Besson & Rowe, 2012).

Booz Allen Hamilton consulting company researchers distinguish between healthy and unhealthy organizations based on specific genetic codes. They used the term "Organizational DNA" as a biological metaphor to describe organizations' strengths and weaknesses, predict employees' behavior and performance, facilitate the dissemination of knowledge, promote decision-making, and support sustainability (Booz-Allen- Hamilton, 2005). The organizational DNA theory can help organizations transform from unhealthy to healthy firms through organizational genetic reengineering (Neilson & Fernandez, 2006). According to them, the specific genetic code of healthy companies seems to skillfully

activate their best capabilities to meet unforeseen changes in their external environment. In contrast, unhealthy companies seem immobilized by such challenges and incapable of responding well (Booz-Allen- Hamilton, 2005).

Scholars were keen on investigating the genes of change with different concepts. For instance, Rashid & Challab (2007), Thomas (2007), Govindarajan & Trimble (2005), and Al-Moaz & Shahein (2019) indicated that organizational DNA had a significant relationship with innovation performance. Similarly, prior research shows that organizational DNA has a positive effect on the healthcare quality dimensions (Aamina & Hadjer ,2021), organizational comparative and internal performance (Abedini, Feiziz, Sarlak, and Gramipour, 2020), Organizational Performance (Nafei, 2014), institutional excellence (Elsakaan, Ragab, El-Gharbawy, & Ghanem, 2021), and pioneering performance (Nawahda & Al-Sarayrah, 2022).

Despite strategic inertia's impact on organizations' survival, the factors influencing this phenomenon are not fully understood. In other words, no prior research tested the effects of organizational DNA on strategic inertia. Hence, this paper tackles the problem of strategic inertia, how organizational DNA can influence this issue, and how strategic inertia is affected by the different genes of an organization. Furthermore, authors hope to increase knowledge about factors that make organizations more agile and resilient. This paper would benefit both practitioners and scholars

in the textile and garment industry to find ways to renew their strategies and exploit beneficial opportunities, which can help them stay ahead of the competition.

The Egyptian Textile Manufacturing Industry is forecasted to show a compound annual growth rate of over 4% between 2022 and 2027. The apparel sector represents 3% of the country's GDP, with a share of 25% for the textile manufacturing industry (The Egyptian State Information System, 2022). The Egyptian sector Textile Manufacturing Industry is a field characterized by instability and dynamics, which makes it particularly interesting for this paper.

Literature review

Organizations are open systems that cannot survive apart from their external environment. Indeed, Singh and Lumsden (1990) showed that organizational inertia significantly affects organizational performance. Inertia is a common problem in organizations, where vital information is often suppressed, rules are inflexible, and employees are overly committed to their ways, preventing valuable changes from taking place (Boyer & Robert, 2006).

Organizational adaptation and flexibility are essential to overcome the problem of strategic inertia. In organizational behavior literature, inertia and flexibility are two conflicting concepts (Al-Moaz & Shahien, 2019). Flexibility positively affects organizational efficiency (Moradi, Jafari, Doorbash, & Mirzaei, 2021), while inflexibility prevents the organization and

its employees from adapting to environmental changes. Hence, it leads to individual stagnancy and, therefore, inertia.

Haag (2014) attempted to determine the indicator variables of strategic inertia and presented five types. She introduced inertia to include behavioral, cognitive, socio-cognitive, economic, and political aspects (Polites and Karahanna, 2012; Besson and Rowe 2012; Haag 2014).

All five types imply that decision-makers intentionally continue adopting current systems and procedures regardless of realizing the existence of more effective and efficient alternatives. However, each type of inertia happens for different reasons. For example, cognitive inertia stems from their desire to maintain the status quo and their satisfaction with current results (Polites and Karahanna 2012, Rumelt, 1995). As for behavioral inertia, it is manifested due to the power of habit and how decision-makers are accustomed to the current system. In addition, employees resist change due to Socio-cognitive inertia caused by their desire to abide by the collective organizational activities due to their inability to change values and norms.

This paper focuses on the first three types of inertia identified at the organizational level and shows parallels at the individual level as they are generally perceived in decision-makers' behavior. Finally, the economic and political types of inertia are irrelevant to this research due to their focus on stakeholders' and organizations' expenses (Huff et al., 1992; Hannan and Freeman, 1984).

The experience gained using specific systems and fixed operating procedures creates inertia as organizations decide to change (Huang, Lai, Lin, and Chen, 2013). Furthermore, according to Moradi and colleagues (2021), while deciding on organizational strategy changes, the decision makers' behaviors are influenced by previous effective strategic practices creating strategic inertia.

Decision-making rights is the first gene of organizational DNA. Decision-making rights represent the primary mechanism and the main methods of making decisions. It involves the precise definition of responsibility and authority for decision-making (Nafei, 2014; Abdel-Rahim and Saad, 2019; Hamilton, 2005; Qabaja, 2018). Specified decision rights are necessary for effective organizational performance (Bordia, Kronenberg, & Neely, 2005); therefore, organizations must have constitutions that clearly state the decision rights of all employees (Neilson, Pasternack, & Mendes, 2003). It is also what organizations need to strengthen when facing challenges (Daft, 2000).

Essentially, all employees within an organization are involved in decision-making, challenged by the complexity of the tasks, unknown alternatives, and an environment of uncertainty (Neilson et al., 2003). When decisions are made in an environment of uncertainty, decision-makers are forced to follow rules of heuristics and stereotyping, resulting in inertia (Kahneman, 2001; Bartling, Fehr, & Herz, 2014). This implies

that the more decisions and authority employees enjoy in turbulent environments, the more inert decisions are.

In contrast, scholars implied that employees learn when confronted with demanding and challenging situations, especially when given a chance to exercise their decision-making skills. With enough decision rights, the individual can decide the best approach to handle a new problem showing creativity (Mikkelsen, Saksvik, Eriksen, & Ursin, 1999). Furthermore, if the new behavior response was effective, it is more likely to be learned as a coping strategy. Therefore, high levels of decision authority and more learning opportunities should result in less inertia. Under such conditions, solutions to problems and new learning are predetermined (Mikkelsen et al., 1999).

Several scholars supported such conclusions; they proposed that decision-making autonomy offered to middle managers leads to flexibility and responsiveness to changes (Mallette & Hopkins, 2013; Hopkins et al., 2013). Karasek and Theorell (1990) also stated that decision authority facilitates adjustment to demands. A particularly interesting paper by Mallette & Hopkins (2013) proposed that the more autonomy managers are given, the less likely they engage in strategic inertia. However, this proposition has not been empirically proven, and it is safe to conclude that scholars have no consensus about whether decision rights increase or decrease inertia. Hence, this paper attempts to test the effect of decision rights on different forces of strategic inertia to fill this gap.

According to Mallette & Hopkins (2013), top management can influence employees' perceptions about how they should behave and whether they have the autonomy to act. Furthermore, as the context changes and with a lack of practical knowledge, employees turn to the past to make assumptions about the future leading to inertia (Kaplan & Henderson, 2005).

The previous discussion about decision rights has focused on the individual level, but the literature shows that group decision rights are crucial determinants of organizational performance. While Bourgeois and Eisenhardt (1998) argue that organizations in dynamic environments can benefit from a fast-decision-making process, group decisions are complex and slow to reach. They proposed that in such environments, there is compiling need for both a rapid and high-quality decision-making process. Bourgeois and Eisenhardt (1998) suggested that when organizations are overloaded with too many decision-makers, it often results in inaction and inertia (Mallette & Hopkins, 2013; Neilson et al., 2003; Qabaja, 2018).

Empirical research stresses the importance of context influence on decision quality (Thomadsen et al., 2017) and that organizational structure is critical for strategic decisions (Papadakis, Lioukas, & Chambers, 1998). Organizational structure is the second gene of organizational DNA. It is the formal system comprising authority and responsibility relationships as well as methods of communication. These relationships aggregate and unify the

activities and events that workers engage in to attain organizational goals (AbdelRaheem and Saad, 2019)

Since Chandler's paper entitled "Strategy and Structure" in 1962, scholars have started extensively discussing the need for organizations to align strategy, structure, and the environment (Rantakari, 2011). According to Neilson et al. (2003), an organizational structure is frequently the first thing organizations pursue to adjust in their attempts for better organizational per-formance. Scholars have previously recognized the association between environmental stability or instability and mechanistic and organic organizational structures. Mechanistic structures are suitable in stable environments and are presumed to be non-innovative, while organic structures are best for unstable environments and are presumed to be innovative (Damanpour, 1991; Nicholson, Rees, & Brooks-Rooney, 1990). On the contrary, Bordia and colleagues (2005) argue that the best structure for innovative firms does not exist. Diverse structures can be effective under different circumstances. They concluded that organizational structure alone could not predict how an organization will behave. Their observations show that some organizations appear to skillfully organize their best capa-bilities to cope with unexpected changes in their external environments regardless of their organizational structures.

In addition, several studies have demonstrated that decentralization can inspire employees to enhance decision-making effectiveness and

facilitate fast response to uncertain environments (Rantakari, 2011). However, Lou & Zhu (2021) research results indicate that adequate centralization is beneficial to improving a group's innovation performance. Once again, despite scholars' interest in the topic, there is no consensus on the relationship between organizational structure, performance, and innovation. Moreover, no scholar tackled the effect of structure on forces of strategic inertia; thus, this paper investigates this relationship.

Scholars who argued that centralized structures might lead to inertia; attributed this conclusion to the cognitive overload caused by the need to concurrently attend to various demands and problems (Eppler & Mengis, 2004; Khanna, Jones, & Boivie, 2013; Castellaneta & Zollo, 2015). For example, Cyert and March (1963) argued that decision-makers' ability to devote their attention to a particular decision depends on the number of decisions and issues handled simultaneously. Hence, to deal with such cognitive overload, decision-makers narrow their search and ignore available information relying on heuristics, causing inertia.

A recent study by Asghar & Obloj (2022) indicated that centralizing decisions is expected to cause a more significant cognitive load due to aggregating demands and greater information processing needs. This agrees with the suggestion that if an organization is vigorously searching for new knowledge, it may focus on ideas reflecting proximate knowledge, settling for familiar alternatives and solutions (Piezunka & Dahlander, 2015; Boudreau, Lacetera, & Lakhani, 2016).

This discussion leads to the third organizational DNA gene, information. Information is data processed to effectively make decisions, communicate realities and perceptions, and increase employees' knowledge. This gene also includes the speed of information flow among the different administrative levels and between the employees at the same administrative level. Scholars demonstrate that information is the key to organizational performance. As a result, the quality of information involves all activities to boost the reliability and relevance of information (Neilson et al., 2003).

Scholars and practitioners have attempted to examine knowledge sharing in organizational contexts to define contextual enablers and obstacles to employee creativity (Hur et al., 2017; Lim & Ok, 2021). Mannucci & Yong (2018) revealed that employee creativity is mainly influenced by many contextual elements, such as depth and width of knowledge. Moreover, employees communicate knowledge enabling managers to create several changes in work routines, which was proven to effectively reduce inertia (Kim & Lee, 2006). Knowledge-donating actions and approaches can deviate the organization from the inertial state into an incentivized zone that motivates creativity (AlKayid, Selem, Shehata, & Tan, 2022). Through knowledge-donation, new cognition possibilities and opportunities arise, leading to new incentives for change and creativity, contributing to the motive of breaking away from inertia (Losh, 2008; Kaplan, 2015).

The primary purpose of communication in organizations is to disseminate more information and knowledge (O'Reilly and Tushman, 2008). However, Hutchison-Krupat, (2018) proved that seniors' communication only impacts actions when there is enough uncertainty surrounding a situation. Further, many innovation studies have focused on communication (Rogers, 1962). Fidler and Johnson (1984) showed the centrality of communication in implementing innovation. Since the level of knowledge sharing and communication are closely related to change and innovation, this paper tests the effect of information as a DNA gene on strategic inertia sources.

Communication and incentives are essential methods used by leaders to effectively implement strategic plans and initiatives (Loch and Tapper, 2002; Loch, 2008, O'Reilly and Tushman, 2011). Hutchison-Krupat (2018) paper demonstrated how leaders utilize communication and incentives to attain organizational goals. Rewards and incentives instill a sense of achievement and recognition, and organizational behavior studies capitalize on rewarding employees to motivate specific behaviors (Neilson et al. 2003; Gibson, Ivancevich, John, Donnelly, & James, 2000). Thus, given the considerable importance of motivation, the scholars from Booz Allen enclosed motivators, sometimes called incentives, as the fourth and last gene of the organizational DNA (Neilson et al. 2003). Hutchison-Krupat (2018) research showed that incentives could bring potentially opposing decision makers'

interests more in line with one another. Further, According to Bartling, Fehr, & Herz (2014), most employees treasure their decision rights intrinsically and extrinsically due to their instrumental benefits. Therefore, careful adjustments to organizational incentive systems are crucial to catch up with the dynamic external environment (Kaplan and Henderson, 2005). Such systems are designed to stimulate innovation; however, many organizations face difficulties in designing new incentive systems to match the changes in their environment (Gavetti, Greve, Levinthal, & Ocasio, 2012). Hutchison-Krupat (2018) suggested that managers are usually unaware of what the scheme should be like or find it challenging to form relational contracts that employees perceive as reliable.

Additionally, employees use an incentive-related process to learn about behaviors that would qualify them for a reward. Kaplan & Henderson (2005) suggest that resistance to organizational change is cognitive and incentive-related (Hutchison-Krupat, 2018). According to Hutchison-Krupat (2018), cognitive frames and incentives are closely related, and any effort to modify one must be supported by a change in the other. This paper investigates how cognitive inertia, as well as the other types, are affected by organizational motivators.

Finally, as mentioned before, the problem of strategic inertia is more dominant in dynamic, challenging environments. The textile and garment industry is not only central to the Egyptian economy but also full of challenges and external pressures that compel manufacturers to change and adopt. The textile and garment industry in Egypt employs around one-third of the industrial labor force and annually exports worth about $2.6bn, which is 15% of the country's nonpetroleum exports year 2021 (Hamzawy, 2021).

Recently, this industry has faced various challenges, such as the global recession, unfavorable trade policies, and the high energy cost. In addition, trade between nations has flourished due to improved transportation systems, technology, and government collaboration, leading the industry to high globalization and aggressive competition. Pressures in the public sector are somehow similar to the private sector. However, the government's recent initiative of opening the world's largest textile manufacturing facility in El Mahalla El Kubra city has put the sector in a critical state where strategic inertia is fatal (The Egyptian State Information System, 2022). Scholars consider the larger the organization, the more challenging it is to adopt. The public sector now has the largest textile manufacturers and process routinization, a long history of success and failure, all of which contribute to more inertia (Hannan & Freeman, 1984; Rungtusanatham & Salvador, 2008). On the one hand, the public sector is now facing changes in

consumers' preferences as well as intense competition from the private sector. On the other hand, the private sector needs to adjust to the low labor costs and efficient operations methods adopted by their public competitors. Such environmental changes for both sectors require flexibility and fast response systems. Therefore, it was necessary to determine the difference between both sectors' DNA and its effect on strategic inertia.

Research hypotheses

Based on the above discussion the research hypotheses and sub-hypotheses are as follows:

Hypothesis 1: Organizational DNA has a significant effect on Cognitive inertia.

H1.a: Decision Rights has a significant effect on Cognitive inertia

H1.b: Information has a significant effect on Cognitive inertia

H1.c: Organizational Structure has a significant effect on Cognitive inertia

H1.d: Motivators has a significant effect on Cognitive inertia

Hypothesis 2: Organizational DNA has a significant effect on Behavioral inertia.

H2.a: Decision Rights has a significant effect on Behavioral inertia

H2.b: Information has a significant effect on Behavioral inertia

H2.c: Organizational Structure has a significant effect on Behavioral inertia

H2.d: Motivators has a significant effect on Behavioral inertia

Hypothesis 3: Organizational DNA has a significant effect on Socio-cognitive inertia.

H3.a: Decision Rights has a significant effect on Socio-cognitive inertia

H3.b: Information has a significant effect on Socio-cognitive inertia

H3.c: Organizational Structure has a significant effect on Socio-cognitive inertia

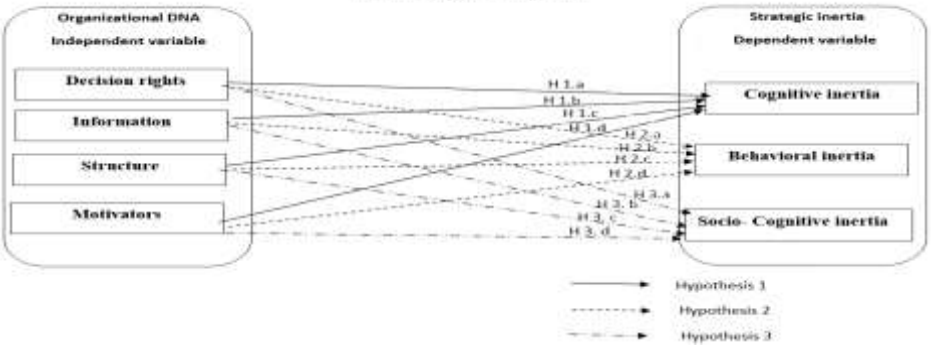
H3.d: Motivators has a significant effect on Socio-cognitive inertia

Hypothesis 4: There is no significant difference in the effect of Organizational DNA on strategic inertia between the public and private sectors.

Figure 1 shows the research variables and the research hypotheses excluding hypothesis 4

Source: Developed by the researchers

Figure 1: Research Model



Measures

This study used a Likert scale questionnaire, that was divided into two parts. The first part measured strategic inertia, it consists of 15 statements (5 statements for each dimension; cognitive, behavioral, and socio-cognitive inertia). Strategic inertia measure was adopted from Haag (2014). The reliability scores for the scale ranged from .80 to .96, exceeding the .707
threshold. The second part of the questionnaire measures organizational DNA, the measure is adopted from Qabaja (2018). To test the different DNA genes, 24 statements were used. Coefficient Cronbach's Alpha for this his measure was 0.971, which is within the acceptable range (Sekaran, 2003).

The population and surveyed sample

The population in the present research will be employees working in the apparel retail

A stratified random sample was used to validate the measures and test the research hypothesis, as the sample was selected from public and private sector.

A sample of 358 as determined by statistical sample size shown in Table (1; Sekaran, 2003). The following table presents the sampling distribution:

Table (1) Population and sampling distribution responsiveness

Sector	Population	Sample	Response	Percentage
Public	4068	285	255	89.5%
Private	1039	73	65	89%
Total	5107	358	320	89.4%

Following this, a sample of 358 distributed in the companies was randomly selected from to test reliability of the questionnaire constructs before distributing the questionnaire among the whole research population. Then, the questionnaire versions (Arabic and English) were e-mailed to the companies. E-mails and phone calls were conducted to the non-respondents after one month as a reminder to check if there are any problems or contact difficulties occurred.

320 questionnaires for the survey were returned from the surveyed sample. This represents a 89.4 percent response rate. The goodness and validity of response data is accomplished through conducting Reliability Test using the Cronbach's Alpha (Sekaran, 2003). The SPSS (26) reliability analysis was performed separately for the indicators of each scale Table(2).

Table (2) – Reliability analysis for CRM dimensions and performance dimensions

Scale	No of items	Cronbach's alpha
Cognitive inertia	5	0.824
Behavioral inertia	5	0.812
Socio-cognitive inertia	5	0.709
Decision rights	5	0.739
Information	6	0.711
Motivators	8	0.782
Organizational structure	5	0.702

Generally, reliability coefficients (Cronbach's alpha) of 0.6 or higher are considered adequate (Sekaran, 2003). As illustrated in table (2), since the calculated Cronbach's alpha values range between 0.702 and 0.824 and the overall reliability coefficient for this paper are reliable.

Descriptive analysis

In order to investigate the feel of the measured data, basic descriptive statistics were conducted to ensure that the distortion of the questionnaire responses outputs was negligible. The descriptive analysis results Table (3) illustrated that the standard deviation is not large which revealed that there is only a weak distortion of the collected data for all variables. These results imply the homogeneity of the surveyed sample.

Table (3) – Descriptive analysis

Items	Mean	Std. Deviation	cv%	Relative Importance %
X11	3.688	0.977	26.51%	73.75%
X12	3.691	0.990	26.81%	73.81%
X13	3.697	0.926	25.05%	73.94%
X14	3.619	0.923	25.49%	72.38%
X15	3.931	0.744	18.92%	78.63%
X21	3.850	0.880	22.85%	77.00%
X22	3.509	0.923	26.31%	70.19%
X23	3.309	1.118	33.77%	66.19%
X24	3.306	1.077	32.57%	66.13%
X25	3.331	1.098	32.97%	66.63%
X26	3.803	1.235	32.47%	76.06%
X31	3.556	1.019	28.64%	71.13%
X32	3.547	1.197	33.76%	70.94%
X33	3.509	1.166	33.24%	70.19%
X34	3.984	0.858	21.54%	79.69%
X35	3.091	1.101	35.61%	61.81%
X36	3.541	0.943	26.62%	70.81%
X37	3.413	1.023	29.96%	68.25%
X38	3.594	0.988	27.48%	71.88%
X41	3.844	0.903	23.50%	76.88%
X42	3.941	0.845	21.45%	78.81%
X43	3.306	1.136	34.37%	66.13%
X44	3.791	1.839	48.52%	75.81%
X45	3.488	0.845	24.24%	69.75%
Y11	3.381	0.979	28.94%	67.63%
Y12	3.391	0.976	28.80%	67.81%
Y13	3.388	0.992	29.29%	67.75%
Y14	3.513	0.856	24.38%	70.25%
Y15	3.584	0.940	26.22%	71.69%
Y21	3.631	0.954	26.28%	72.63%
Y22	3.516	0.970	27.58%	70.31%

Y23	3.378	1.087	32.19%	67.56%
Y24	3.606	0.951	26.37%	72.13%
Y25	3.450	0.975	28.26%	69.00%
Y31	2.766	1.149	41.56%	55.31%
Y32	3.400	1.126	33.13%	68.00%
Y33	3.031	1.091	35.99%	60.63%
Y34	3.266	1.036	31.73%	65.31%
Y35	3.478	0.933	26.83%	69.56%
Decision rights X1	3.725	0.635	17.03%	74.50%
Information X2	3.518	0.679	19.31%	70.36%
MOTIVATORS X3	3.529	0.580	16.43%	70.59%
Organizational Structure X4	3.674	0.689	18.74%	73.48%
Cognitive inertia Y1	3.572	0.574	16.08%	71.43%
Behavioral inertia Y2	3.517	0.648	18.42%	70.34%
Socio-cognitive inertia Y3	3.290	0.612	18.59%	65.81%
Organization DNA X	3.612	0.486	13.46%	72.23%
strategic inertia Y	3.460	0.535	15.47%	69.19%

Verifying Hypotheses

Hypothesis 1 Organizational DNA has a significant effect on Cognitive inertia

H1.a: Decision Rights has a significant effect on Cognitive inertia

H1.b: Information has a significant effect on Cognitive inertia

H1.c: Organizational Structure has a significant effect on Cognitive inertia

H1.d: Motivators has a significant effect on Cognitive inertia

Regression model (1.1) Analysis

Multiple linear regression analysis used to investigate the effect of elements of organizational DNA on the cognitive inertia the results are listed below:

Table (4) Model (1.1) Summary

Model	R	R Square	Adjusted R Square	Durbin-Watson
1.1	.841[a]	.707	.703	1.885

a. Predictors: (Constant), Organizational structure , Decision rights , Information , Motivators

b. Dependent Variable: Cognitive inertia

As shown in the model summary Table (4) the model coefficient of determination (R-square) equals 70.7% which means that the Organizational structure, Decision rights , Information , Motivator are explain 70.7% from the changes on the Cognitive inertia.

Table (5) – ANOVA for Model (1.1)

Model		Sum of Squares	df	Mean Square	F	Sig.
1.1	Regression	74.438	4	18.609	190.136	.000[b]
	Residual	30.830	315	.098		
	Total	105.268	319			

a. Dependent Variable: Cognitive inertia

b. Predictors: (Constant), Organizational structure , Decision rights , Information , Motivators.

The ANOVA table (5) discuss model 1.1, assessing the overall statistical significance of the model revealed that model (1.1) is significant as sig < α = 0.05 (Healey, 2009).

Table (6) Coefficients table for Model (1.1)[a]

Model		Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.
1.1	(Constant)	.042	.133		.312	.755
	Decision rights	-.495	.032	-.547	-15.641	.000
	Information	.053	.032	.063	1.686	.093
	Motivators	-.220	.038	-.223	-5.783	.000
	Organizational structure	-.196	.030	-.235	-6.559	.000

a. Dependent Variable: Cognitive inertia

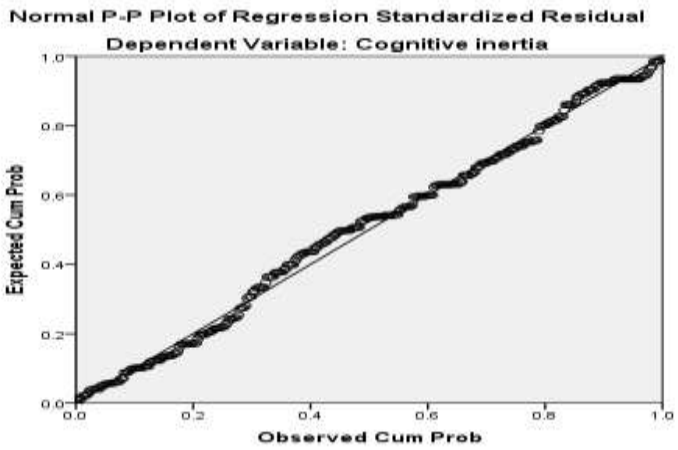
Table (6) presents the Coefficients for Model (1.1) and it was shown that the variables Organizational structure, Decision rights , Motivators has a significant effect on cognitive inertia as element of strategic inertia since sig < α = 0.05 (Healey, 2009) and the unstandardized coefficients sign is negative so there is a negative relation between Organizational structure , Decision rights , Motivators and cognitive inertia.

Checking model (1.1) assumptions

With respect to the assumption of independence of the residuals regarding residuals distribution, Durbin-Watson and normality tests were performed. The results showed that the Durbin-Watson computed value was 1.885 while the table upper limit value at 5% significance is DU=1.609 and the lower limit is 1.632 (Freund, et al., 2006). That is, the computed value is between the

two tabulated values (DU and 4-DU) implying that we haven't the problem of autocorrelation. Moreover, the following graph shows the normal probability distribution plot of the residuals

Graph (1.1)



From graph (1.1) it seen that the residuals have a standard normal distribution.

Model (1.1) discussion

Finally, it could be concluded that a multiple linear regression is calculated. The results provide an empirical evidence for verifying the hypothesis (H1) which supports that the **organizational DNA has a significant effect on** Cognitive **inertia**.

Hypothesis 2 Organizational DNA has a significant effect on Behavioral inertia

H2.a: Decision Rights has a significant effect on Behavioral inertia

H2.b: Information has a significant effect on Behavioral inertia

H2.c: Organizational Structure has a significant effect on Behavioral inertia

H2.d: Motivators has a significant effect on Behavioral inertia

Regression model (1.2) Analysis

Multiple linear regression analysis used to investigate the effect of elements of organizational DNA on the Behavioral inertia the results are listed below:

Table (7) Model (1.2) Summary

Model	R	R Square	Adjusted R Square	Durbin-Watson
1.2	.771[a]	0.595	0.59	1.918

a. Predictors: (Constant), Organizational structure , Decision rights , Information , Motivators

b. Dependent Variable: Behavioral inertia

As shown in the model summary table (7) the model(1.2) coefficient of determination (R-square) equals 59.5% which means that the Organizational structure , Decision rights , Information , Motivator are explain 59.5% from the changes on the Behavioral inertia.

Table (8) – ANOVA for Model (1.2)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	79.641	4	19.910	115.711	.000[b]
	Residual	54.202	315	.172		
	Total	133.843	319			

a. Dependent Variable: Behavioral inertia

b. Predictors: (Constant), Organizational structure , Decision rights , Information , Motivators

The ANOVA table (8) is discussed model 1.2, which assesses the overall statistical significance of the model revealed that model (1.2) is significant as sig < α = 0.05.

Table (9) Coefficients table for Model (1.2)[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	.084	.176		.477	.633
	Decision rights	-.209	.042	-.205	-4.987	.000
	Information	-.501	.042	-.525	-11.946	.000
	Motivators	-.165	.051	-.147	-3.257	.001
	Organizational structure	-.085	.040	-.090	-2.134	.034

a. Dependent Variable: Behavioral inertia

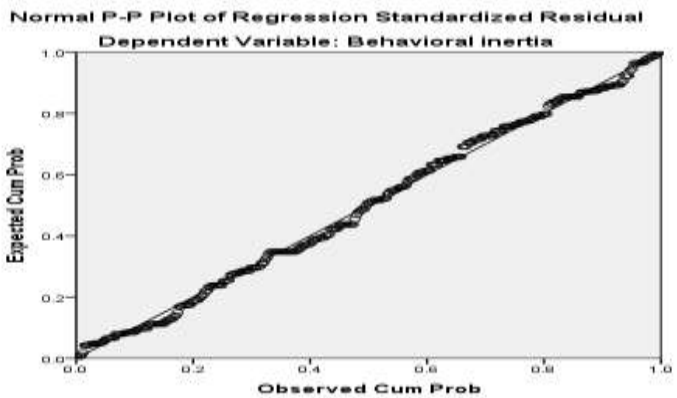
Table (9) presents the Coefficients for Model (1.2) and it was shown that the variables Organizational structure, Decision rights, Information and Motivators has a significant effect on Behavioral inertia as element of strategic inertia since sig < α = 0.05 (Healey, 2009) and the unstandardized coefficients sign is negative so there is a negative relation between Organizational

structure, Decision rights, Information, Motivators and Behavioral inertia.

Checking model (1.2) assumptions

With respect to the assumption of independence of the residuals regarding residuals distribution, Durbin-Watson and normality tests were performed in model (1.2). The results showed that the Durbin-Watson computed value was 1.918 while the table upper limit value at 5% significance is DU=1.609 and the lower limit is 1.632 (Freund et al., 2006). That is, the computed value is between the two tabulated values (DU and 4-DU) it is implying that we can say that we haven't the problem of autocorrelation. Moreover, the following graph shows the normal probability plot of the residuals for model (1.2)

Graph (1.2)



From Graph (1.2), it is evident that the residuals have a standard normal distribution.

Model (1.2) discussion

Finally, it could be concluded that multiple linear regression is calculated in Model (1.2). The results provide empirical evidence for verifying the hypothesis (H2), which supports that the organizational DNA has a significant effect on Behavioral inertia.

Hypothesis 3 Organizational DNA has a significant effect on Socio-cognitive inertia

H3.a: Decision Rights has a significant effect on Socio-cognitive inertia

H3.b: Information has a significant effect on Socio-cognitive inertia

H3.c: Organizational Structure has a significant effect on Socio-cognitive inertia

H3.d: Motivators has a significant effect on Socio-cognitive inertia

Regression model (1.3) Analysis

Multiple linear regression analysis was used to investigate the effect of elements of organizational DNA on the Socio-cognitive inertia the results are listed below:

Table (10) Model (1.3) Summary

Model	R	R Square	Adjusted R Square	Durbin-Watson
1.3	.758[a]	0.575	0.569	1.729

a. Predictors: (Constant), Organizational structure, Decision rights, Information, and Motivators

b. Dependent Variable: Socio-cognitive inertia

As shown in the model summary table (10) the model(1.3) coefficient of determination (R-square) equals 57.5% which means that the Organizational structure, Decision rights, Information, and Motivator explain 57.5% from the changes on the Socio-cognitive inertia.

Table (11) – ANOVA for Model (1.3)

Model		Sum of Squares	df	Mean Square	F	Sig.
1.3	Regression	68.630	4	17.157	106.452	.000[b]
	Residual	50.770	315	.161		
	Total	119.400	319			

a. Dependent Variable: Socio-cognitive inertia

b. Predictors: (Constant), Organizational structure, Decision rights, Information, and Motivators

The ANOVA table (11) discussed model 1.3, which assesses the overall statistical significance of the model revealed that model (1.3) is significant as sig < $\alpha = 0.05$.

Table (12) Coefficients table for Model (1.3)[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1.3	(Constant)	.053	.171		.309	.757
	Decision rights	-.094	-.041	-.098	-2.315	.021
	Information	-.035	.041	-.039	-.873	.383
	Motivators	-.630	.049	-.597	-12.876	.000
	Organizational structure	-.147	.038	-.165	-3.831	.000

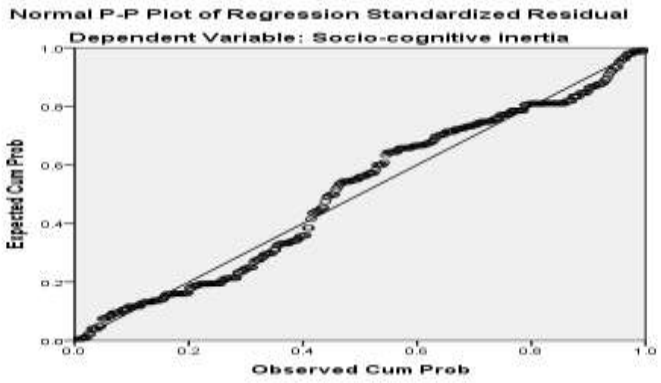
a. Dependent Variable: Socio-cognitive inertia

Table (12) presents the Coefficients for Model (1.3). It was shown that the variables Organizational structure, Decision rights, and Motivators have a significant effect on Socio-cognitive inertia as an element of strategic inertia. Since sig < $\alpha = 0.05$ and the sign of the unstandardized coefficients is negative, there is a negative relation between Organizational structure, Decision rights, information, Motivators, and Socio-cognitive inertia.

Checking model (1.3) assumptions

Durbin-Watson and normality tests were performed in model (1.3) concerning the assumption of independence of the residuals regarding the distribution of the residuals. The results showed that the Durbin-Watson computed value was 1.729, while the table upper limit value at 5% significance is DU=1.609, and the lower limit is 1.632. That is, the computed value is between the two tabulated values (DU and 4-DU), implying that we can say that we do not have the problem of autocorrelation. Moreover, the following graph shows the normal probability plot of the residuals for model (1.3)

Graph (1.3)



From Graph (1.3), it is seen that the residuals have a standard normal distribution.

Model (1.3) discussion

Finally, it could be concluded that multiple linear regression is calculated in the model (1.3). The results provide empirical evidence for verifying hypothesis (H3), which supports that the organizational DNA has a significant effect on Socio-cognitive inertia.

Hypothesis 4 There is no significant difference in the effect of Organizational DNA on strategic inertia between the public and private sectors.

Analysis of covariance (ANCOVA) was used to test the differences between public and private sectors of the effect of Organizational DNA on strategic inertia; the results are listed below:

Table (13) Tests of Between-Subjects Effects ANCOVA

Dependent Variable: strategic inertia

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	64.325[a]	2	32.163	376.228	.000	.704
Intercept	.077	1	.077	.901	.343	.003
X	64.322	1	64.322	752.417	.000	.704
Sector	.022	1	.022	.252	.616	.001
Error	27.099	317	.085			
Total	3921.614	320				
Corrected Total	91.425	319				

a. R Squared = .704 (Adjusted R Squared = .702)

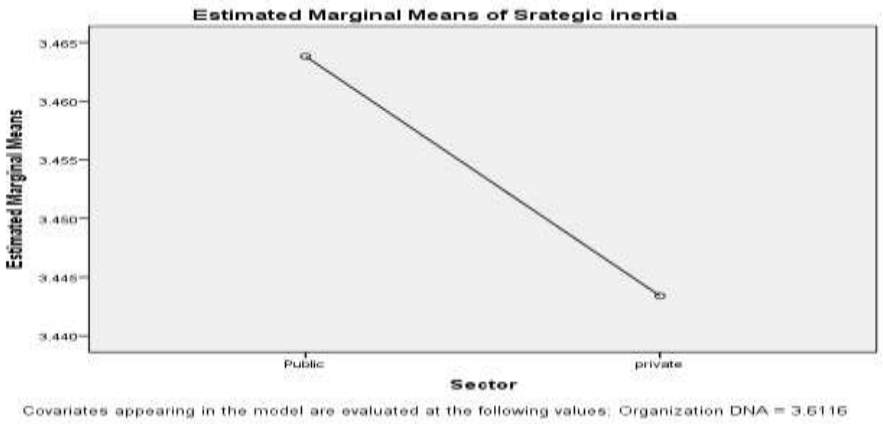
From Table (13) it was found that:

1- Since the sig < α = 0.05 about testing the effect of organizational DNA on strategic inertia, we can say that there is a significant effect of organizational DNA on strategic inertia overall (public in general and private).

2- Since the sig< α = 0.05 about the comparison between the public and private sectors of the effect of organizational DNA on strategic inertia, we can conclude that there is a significant difference in the effect of organizational DNA on strategic inertia between the public and private sectors.

3- To show the differences between the public in general and the private sector, Graph (1.4) explain the differences:

Graph (1.4)



The above analyses also prove that the effect of organizational DNA on strategic inertia in the public sector is more than in the private sector. Results also prove the existence of strategic inertia in the public sector rather than in the private.

Discussion

Previously, researchers have attempted to investigate strategic inertia antecedents and consequences; nonetheless, the majority of such research was not empirically tested, also no research tackled organizational DNA and strategic inertia (Moraes Carvalho et al., 2018; Mallette & Hopkins, 2013; Chung-An Chen, 2014). Consequently, this study intends to fill the gap by proposing a model to help Egypt's textile sector grow and advance. Based on the evolutionary ecological and structural inertia theories, we have made the case that overcoming strategic inertia is the result of all organizational genes.

This study found a significant relationship between organizational DNA and strategic
inertia. The statistical results in the above section prove the first hypothesis. Furthermore, it indicates a significant effect of all organizational genes on cognitive inertia. In other words, cognitive inertia is reduced with more decision rights. Employees with clear decision rights and autonomy can recognize the need to change the status quo. This result is inconsistent with Jung, Erdfelder, Bröder, & Dorner (2019) conclusions showing that the lack of decision autonomy increased suboptimal decisions in general but decreased the tendency to repeat the previous decision and change course.

Additionally, the organizational structure has a significant negative effect on Cognitive inertia. This result means that the flatter and more flexible an organizational structure is, the less cognitive inertia among employees. The organizational structure has traditionally been highlighted as a determinant of how organizations change (Burns & Stalker, 1961; Mintzberg, 1979). This finding is concurrent with previous research showing the effect of organization structure on cognitive inertia mediated by organizational identity. Organizational identity determines organizational structures (Klammer, Grisold, & Gueldenberg, 2019). Because employees consider organizational identity to be the most unique fundamental, and lasting aspect of organizations, it works as a force of inertia, constraining their perceptions of the

necessity for change (Reger & Huff, 1993). Organizational structures can allow employees to apply their talents by adopting new mental models and adjusting to new knowledge structures (Klammer et al., 2019).

Cognitive inertia was also found to be reduced through motivators structures in organizations. Services and offerings provided to employees to ensure their well-being has been found to alter their mental models about maintaining the status quo. Designing proper incentive systems is commonly recognized as a vital part of enabling organizational change (Kaplan and Henderson, 2005). Motivators and perceptions are theoretically different concepts but practically connected. Thus, any change in one must be supplemented with change in the other (Kaplan and Henderson, 2005).

On the other hand, our statistical analysis shows a significant positive relationship between information and cognitive inertia. This result means that the more accurate the information and its availability, the more cognitive inertia among employees. The higher the amount and quality of information available may cause employees to seek information consistent with their previous decisions due to their inability to process such lumpsum information. In order to reach a decision, there is a need to analyze a barrage of information, to filter irrelevant information to help goal attainment. Such a process helps minimize the efforts and costs of decision-making, especially when such

information is abundant. However, individuals would be prone to errors and traps of disregarding relevant information and maintaining the status quo, causing inertia (Turner et al., 2020)

The second type of strategic inertia source is behavioral inertia, which was also found to have a significant negative effect on all organizational genes tested. The clarity of decision rights distribution and freedom to choose can significantly reduce the effect of acting out of habit. Individuals behave differently and make decisions based on their habits (Thunholm, 2004). The more decision rights an individual enjoys, the more readably the reliance on habit (Thunholm, 2004).

Information has a significant negative effect on behavioral inertia. Liao, Shsien, Fei, & Liu (2008) research supports this notion. They implied that in an attempt to find solutions for problems, individuals rely on their previous knowledge and experience, which is called knowledge inertia. According to Osei-Bonsu (2014), knowledge inertia mediates the relationship between organizational learning and organizational innovation. However, this process is limited to providing adequate information (Osei-Bonsu,2014). Therefore, the availability of adequate information facilitates organizational learning reducing behavior inertia.

Further, Organizational Structure has a significant negative effect on Behavioral inertia. This result is also supported by previous research about group structures. Gersick & Hackman (1990) research implied that a group's structure could act as a

motivator for reconsidering and perhaps reconfiguring the routines members use in carrying out their work **(**Gersick & Hackman, 1990**).** Organizational structural flexibility creates varying perspectives about habitual routines previously taken for granted **(**Gersick, & Hackman, 1990**).** Additionally, Lou & Zhu (2021) proposed that moderate centralization is beneficial for improving innovation performance.

Motivators, as one of the organizational genes, have a significant negative effect on behavioral inertia. This finding is in line with several scholars finding about Job satisfaction's effect on employees' behaviors aiming at change. For instance, Cordery *et al*. (1993) described low levels of extrinsic job satisfaction as linked to negative attitudes toward change.

The results also prove the third hypothesis proposing that all Organizational DNA genes have a significant negative effect on Socio-cognitive inertia**.** This means that employees with clear decision rights have less desire to abide by the collective organizational activities. Decision rights support employees to overcome strong organizational values and norms when change is needed. Employees with a sense of power and authority are more daring in risk-taking and facing rigid values **(**Klammer et al., 2019).

Information has a significant negative effect on Socio-cognitive inertia. However, prior research demonstrated that adequate information flow through vertical communication could aid organizations in altering cultural rigidity (Karthika,

2021). Thus, enhancing communication among members of the organization can encourage new behaviors inconsistent with the organizational culture (Osei-Bonsu, 2014).

Socio-cognitive inertia can also be reduced by ensuring high employee participation, even with decentralized governance approaches (Ertl, Setzke, Böhm, & Krcmar, 2020).

This is shown in our results, proving the negative effect of organizational

structure with socio-cognitive inertia. According to our results, Socio-cognitive inertia can also be reduced using proper motivators**.** Lawler (1990) suggests that culture is supported and strengthened using appropriate compensation strategies. Therefore, good motivators can be used to encourage behaviors to alter organizational culture.

Finally, the last hypothesis testing showed a significant difference between the effect of Organizational DNA on strategic inertia between the public and private sectors, where the **e**ffects in the public sector are more compared to the private sector. Therefore, it can be concluded

that the public textile sector suffers from strategic inertia. This result is

expected since the public organization's DNA profile could be named an

Overmanaged Organization. According to Booz-Allen- Hamilton (2005), there are seven types of organizations categorized based

on their DNA, namely Passive-Aggressive, Fits-and-Starts, Outgrown, military, just in time, resilient, and Overmanaged. Overmanaged Organizations have tall structures with several organizational levels. Tall organizational structures hinder information sharing and limit decision rights at the top of the hierarchy. Motivators in this kind of structure are represented in job security and status. Such organizations progress slowly and reactively, often pursuing opportunities later or less vigorously than their competitors. According to Neilson, Pasternack, Mendes, & Tan (2004), these organizations, which are frequently bureaucratic and highly political, tend to frustrate self-starters and results-oriented individuals. As our statistical results indicate, these features result in all types of inertia.

This finding is also supported by previous research uncovering that the nature of ownership with public or private moderators the relationship between group centralization and innovation performance (Lou & Zhu, 2021).

Recommendations

Senior managers in the textile and garment industry need to clearly define decision rights and distribute decision authority according to the workflow. Such efforts would reduce all sources of strategic inertia discussed, namely cognitive, behavioral, and socio-cognitive inertia. It is essential for management to enhance information availability through horizontal and vertical communication and the adoption of information technology. Such a procedure should enhance change by reducing strategic inertia. However, our statistical results show that the more the availability of information, the more cognitive inertia among employees. Consequently, managers must enhance employees' capability to handle information overload to avoid filtering out important information that may lead to necessary change. The HR team can help in this issue by offering training on information analysis and filtering.

The HR team should design incentive systems and use motivators effectively to nurture change attitudes among employees. Reducing inertia can be done by encouraging employees to voice their creative opinions and compete in implementing such changes. In addition, managers should pay extra attention to offering services centered on employees' well-being. Finally, the HR team and senior management are required to design a flexible organizational structure, ensuring all employees understand how they fit and ensure harmony of the various organizational tasks to

overcome strategic inertia. The designed structure should be a reflection of the current organizational strategy.

Limitations and future research

This section refers to a few limitations in this paper and suggestions for further research. A critical weakness of our study is the self-reported questionnaires that might result in a biased dataset. Future research should handle this problem by conducting 360-degree questionnaires. In addition, other factors may mediate or moderate the relationship between organizational DNA and strategic inertia. Future research could explore the roles of such variables (e.g., other organizational learning, quality of the organizational environment, leadership styles, personality traits) in the relationships between strategic inertia and organizational DNA.

In addition, adopting change management concepts may significantly affect how organizational DNA influences inertia; therefore, it is suggested that scholars explore such relationships.

Examining political and economic inertia is also recommended to provide a fuller picture of the construct. It may also be beneficial to conduct a comparative analysis between developing and developed countries to assess public and private organizational DNAs and their effect on inertia. Ultimately, it is essential to investigate how to avoid cognitive inertia that can be reduced when information is abundant and excessively available.

Finally, the data analyzed were collected in 2022, which might influence the generalization of the study results to some extent,

as the economic conditions and consequences of the Russian Ukraine war may have changed over time.

Conclusion

The present study concludes that proper organizational DNA should be adopted, especially for public textile and garment manufacturers, to improve responses needed to face change and avoid strategic inertia. This study's findings also support the notion that Neilson et al. (2004) proposed, stating that specific organizational genes favor enhanced performance and flexibility. Organizations with more decision rights and information, defined structures, and good motivators respond to risks and opportunities more readily. However, information is the only gene that showed an increase in cognitive inertia. This result may be attributed to the cognitive limitations of some employees who are confused when faced with information overload, leading to thoughts of sustaining the status quo. The study also compared organizational DNA and strategic inertia among public versus private textile and garment manufacturers. The study concludes that inertia is very prominent in public organizations due to their DNA genes, which influence the different sources of inertia. This study fills the theoretical and practical knowledge gap about organizational DNA's effects on different strategic inertia sources. In addition, the study offers practical implications for managers and the HR staff.

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