





Explaining the Downsizing Model of State-Owned Enterprises in Iran (Case Study: Sistan and Baluchestan Regional Electric Company)

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ABSTRACT

With the excessive expansion of governments, substantial costs have been imposed on the administrative systems and public management structures of various countries. Consequently, government downsizing has emerged as one of the primary policies and strategic programs aimed at reducing the size of government and controlling public expenditures, attracting the attention of policymakers and scholars. Therefore, the present study was conducted with the objective of explaining a downsizing model for state-owned enterprises in Iran. The research adopted a mixed-methods approach and was carried out in two qualitative and quantitative phases. In the qualitative phase, the study population consisted of academic experts and managers of state-owned enterprises who possessed either research or practical experience in the field of state-owned enterprise downsizing. Sampling was conducted using purposive sampling and theoretical saturation. Accordingly, theoretical saturation was achieved after 17 interviews, and data were analyzed using the coding method proposed by King and Horrocks. Furthermore, to validate and assess the fit of the research model, confirmatory factor analysis and structural equation modeling were employed using SPSS version 19 and SmartPLS version 3 software. The quantitative study population consisted of managers, experts, and employees of the Sistan and Baluchestan Regional Electric Company. Based on Cochran's formula, a sample size of 148 participants was determined. As a result, 24 interpretive codes identified during the thematic analysis phase were classified into six main dimensions within the framework of the proposed research model. In addition, the findings of the quantitative phase supported the study hypotheses, confirmed the adequacy of the proposed model, and demonstrated an acceptable model fit.

Keywords: Downsizing, State-Owned Enterprises, Regional Electric Company, Sistan and Baluchestan.

Introduction

Downsizing has become one of the most important organizational and public-sector reform strategies in contemporary management, especially in contexts where governments and state-owned enterprises face increasing fiscal pressure, administrative complexity, inefficiency, and demands for higher responsiveness. In its



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broadest sense, downsizing refers to deliberate managerial and policy actions aimed at reducing organizational size, workforce volume, operational scope, structural layers, or direct governmental involvement in service delivery and production. Although downsizing is often associated with workforce reduction, its managerial meaning is wider and includes outsourcing, privatization, restructuring, merger of internal units, process reengineering, decentralization, and the transfer of non-core activities to more flexible actors. In public administration, downsizing is closely linked to debates on government efficiency, administrative agility, fiscal discipline, and the reduction of bureaucratic burden. As governments expand beyond their optimal capacity, public expenditures increase, decision-making becomes slower, and state-owned enterprises may lose flexibility in responding to technological, economic, and stakeholder pressures. Therefore, downsizing is not merely a cost-cutting mechanism but a broader governance strategy aimed at redesigning the role, structure, and operational logic of public organizations (1-3).

The importance of downsizing in state-owned enterprises is particularly evident because these organizations often operate at the intersection of public accountability, economic performance, political expectations, and service obligations. Unlike private firms, state-owned enterprises are expected not only to remain financially sustainable but also to provide stable services, support national development objectives, and protect public welfare. This dual identity makes downsizing more complex, because reducing size or transferring activities may improve efficiency while simultaneously creating concerns about employment security, service quality, organizational justice, and public accountability. Research on downsizing shows that when restructuring is implemented without a clear strategic framework, it can damage employee morale, reduce organizational commitment, weaken knowledge networks, and undermine long-term performance. Conversely, when downsizing is designed through a structured model that identifies internal organizational factors, contractor capabilities, contractual conditions, operational strategies, and expected consequences, it can help organizations become more agile and economically efficient while preserving service standards (4-6).

In management literature, one of the central challenges of downsizing is the tension between short-term efficiency and long-term organizational capability. Managers often justify downsizing through cost reduction, productivity enhancement, or adaptation to environmental change. However, empirical evidence indicates that the outcomes of downsizing depend strongly on how the process is designed and communicated. Downsizing may reduce administrative costs, but it may also remove valuable human capital, disrupt social relations, and reduce employees' psychological security. For this reason, recent studies have emphasized that downsizing should not be treated as a simple reduction of personnel but as a strategic transformation process requiring careful diagnosis, stakeholder analysis, communication planning, and post-downsizing support mechanisms (7-9). This perspective is especially relevant for public utility companies, such as regional electric companies, because their activities are technically specialized, service-sensitive, and directly connected to citizens' welfare.

Human resources constitute one of the most sensitive dimensions of downsizing. Employees who remain in the organization after downsizing, often called survivors, may experience anxiety, mistrust, reduced commitment, role ambiguity, increased workload, and fear of future job loss. Studies show that downsizing can affect psychosocial well-being, depressive symptoms, safety climate, and employee performance, particularly when employees perceive the process as unfair, poorly communicated, or inconsistent with organizational values (10-13). Employee perceptions of downsizing practices are therefore critical in determining whether restructuring produces constructive adaptation or organizational resistance. When employees believe that downsizing decisions are transparent, justified, and accompanied by fair human resource practices, their commitment is more likely to be preserved;

however, when downsizing is perceived as arbitrary or purely financial, negative attitudes and behavioral withdrawal may intensify (14, 15).

The role of human resource management is therefore fundamental in any downsizing model. Human resource departments are responsible for designing fair procedures, clarifying communication, reducing safety risks, preventing human errors, supporting affected employees, and maintaining the motivation of remaining personnel. Downsizing can produce operational risk if knowledge transfer, job redesign, and communication systems are neglected. This is particularly important in technical organizations such as electricity companies, where service continuity and operational safety depend on specialized competencies and coordinated work processes. Accordingly, human resource management should not be limited to administrative implementation; rather, it should act as a strategic partner in diagnosing which activities can be outsourced, which competencies must remain internal, and which supervisory mechanisms are required after restructuring (3, 5, 16).

Another important dimension of downsizing is organizational communication. Effective communication reduces uncertainty, improves trust, and helps employees understand the necessity, scope, and expected outcomes of restructuring. Poor communication, by contrast, strengthens rumors, perceived injustice, and resistance. Research has shown that firms often attempt to manage the negative impressions associated with downsizing announcements through impression offsetting strategies; however, symbolic communication alone is insufficient if the restructuring process lacks substantive fairness and operational logic (7). For state-owned enterprises, communication must also address broader stakeholders, including employees, contractors, regulators, service users, and local communities. In the case of regional electric companies, downsizing may affect not only internal employees but also electricity subscribers, contractors, provincial distribution companies, and public authorities. Therefore, an effective model of downsizing must integrate internal transparency, external accountability, and stakeholder-oriented communication.

Contractual and outsourcing arrangements form another major component of downsizing in public enterprises. One practical strategy for reducing organizational size is the outsourcing of non-core or specialized activities to contractors. However, outsourcing cannot be successful unless the organization evaluates the technical, financial, managerial, and human resource capacities of participating contractors. Inadequate contractor selection may lead to lower service quality, higher transaction costs, weak accountability, and operational disruption. Recent research on outsourcing with a downsizing approach emphasizes that the transfer of functions must be based on the nature of activities, organizational capacity, contractor competence, monitoring mechanisms, and the alignment of outsourcing with strategic goals (17). Thus, downsizing in state-owned enterprises requires a systematic assessment of which activities are core, which activities can be transferred, and what contractual safeguards are necessary to preserve service quality.

The Iranian public sector provides a significant context for examining downsizing because state-owned enterprises have historically played an extensive role in economic administration, infrastructure development, public service delivery, and employment. In such contexts, government downsizing is often discussed not only as an economic necessity but also as an administrative reform aimed at reducing inefficiency and corruption. Research on government downsizing suggests that reducing unnecessary state involvement can contribute to lowering administrative corruption when it is accompanied by transparency, accountability, and clear institutional rules (18). At the same time, the commodification of public services and the transfer of public functions require careful governance, because excessive marketization may weaken public missions if not balanced with regulatory

oversight and social responsibility (19). Therefore, the downsizing of state-owned enterprises in Iran must be understood as both a managerial and governance issue.

The electricity industry is an especially important field for studying downsizing because it combines strategic infrastructure, technological complexity, public service obligations, and economic pressures. Regional electric companies are responsible for maintaining reliable electricity supply, managing technical operations, coordinating with distribution and generation sectors, and responding to growing demand. Any downsizing model in this sector must therefore consider not only cost reduction but also the continuity, safety, standardization, and quality of electricity services. Downsizing that removes redundant layers or transfers non-core activities may improve agility and resource optimization, but downsizing that weakens technical knowledge, monitoring capacity, or operational coordination may create risks for service reliability. Thus, the downsizing of a regional electric company must be based on a balanced model that includes internal organizational readiness, contractor capability, contract transparency, operational control, and long-term service outcomes (4, 9, 12).

Recent studies also show that downsizing affects informal organizational networks and work-related relationships. When employees leave or units are restructured, advice ties, knowledge-sharing paths, and collaboration networks may be disrupted. A longitudinal network perspective indicates that employees may reallocate advice ties after downsizing, but this process requires time and may not fully compensate for the loss of experienced personnel (20). Similarly, from a resource-acquisition perspective, downsizing may affect employees' access to instrumental and relational resources, which can in turn influence performance (9). This is a critical issue for state-owned enterprises because many operational competencies are embedded in tacit knowledge, informal routines, and accumulated experience. Therefore, a downsizing model must identify how human capital, knowledge flows, and supervisory capacities will be preserved after structural reduction.

The consequences of downsizing are multidimensional. Positive consequences may include cost reduction, increased efficiency, improved agility, optimization of resource use, technological standardization, and better responsiveness to environmental changes. Negative consequences may include psychological strain, reduced commitment, safety risks, weakened trust, and loss of institutional knowledge. The literature suggests that downsizing outcomes depend on whether organizations adopt a reactive and purely financial approach or a proactive and strategically integrated approach. Downsizing implemented as an emergency response to crisis often produces unstable outcomes, while downsizing embedded in a coherent organizational strategy is more likely to improve performance and adaptability (5, 6, 8). This distinction is essential for public-sector enterprises because they cannot evaluate success only by immediate cost savings; they must also consider service quality, social legitimacy, employee well-being, and long-term organizational capability.

In addition, labor relations and social responses to downsizing should not be ignored. Downsizing may be interpreted by employees and trade unions as a hidden strategy for redundancy, particularly when employers use ambiguous language or indirect procedures to reduce workforce size. Recent research highlights that trade union responses and employee resistance are shaped by how downsizing is framed, negotiated, and implemented (21). In state-owned enterprises, where employment often has strong social and political significance, downsizing must be managed with sensitivity to legal requirements, labor expectations, and institutional legitimacy. Therefore, any proposed downsizing model should include contractual clarity, regulatory compliance, stakeholder communication, and mechanisms for monitoring consequences after implementation.

The reviewed literature indicates that downsizing has been studied from several perspectives, including employee well-being, psychosocial safety, organizational performance, human resource management, outsourcing, restructuring alternatives, public-sector reform, and post-merger performance. For example, studies have examined the role of activist hedge funds in post-merger downsizing and performance, showing that downsizing may be linked to broader ownership and governance dynamics (22). Other studies have emphasized alternatives to downsizing during recession, suggesting that restructuring does not always require workforce reduction and that organizations may adopt more balanced approaches such as redeployment, flexible work arrangements, or operational redesign (4). These findings collectively show that downsizing is not a one-dimensional managerial action but a complex organizational intervention whose success depends on context, design, implementation, and evaluation.

Despite the expansion of downsizing literature, there remains a need for context-specific models for state-owned enterprises in developing and transitional economies, particularly in strategic public-service sectors. Many existing studies focus on private firms, recession conditions, employee outcomes, or general organizational restructuring. Fewer studies provide an integrated model that explains how internal organizational factors, participant or contractor-related factors, degree of downsizing, contractual conditions, operational strategies, and consequences interact in a state-owned enterprise. This gap is particularly evident in the Iranian electricity sector, where downsizing must be aligned with public accountability, technical reliability, economic efficiency, and regulatory requirements. Accordingly, developing a model based on expert views and validating it quantitatively can contribute both to the theoretical understanding of downsizing and to the practical management of state-owned enterprises.

Therefore, the aim of the present study is to explain and validate a downsizing model for state-owned enterprises in Iran, with specific emphasis on the Sistan and Baluchestan Regional Electric Company.

Methods and Materials

The dominant approach of the present study is mixed-methods (qualitative–quantitative). Accordingly, in the first phase, the researcher used the qualitative method of thematic analysis to present a downsizing model for state-owned enterprises in Iran. Then, with the aim of testing and fitting the obtained model, in the second phase (the quantitative phase), the model was tested in the statistical population of the Sistan and Baluchestan Regional Electric Company using the structural equation modeling method.

In the qualitative phase, in terms of the dominant research paradigm, this study is interpretive; in terms of purpose, it falls within the category of fundamental studies; in terms of outcomes, it is within the framework of applied studies; in terms of time horizon, it is classified as cross-sectional research; in terms of nature, it is a qualitative study; and in terms of research method, it is a descriptive–analytical study. Using thematic analysis, it analyzes the data obtained from interviews with research experts. Considering the purpose of the study, which was to identify the dimensions and elements of the downsizing model of state-owned enterprises with a focus on the regional electric company, the study population consisted of experts in the field of downsizing state-owned enterprises, including individuals who met criteria such as having at least five years of managerial or research experience in human resources with a focus on privatization and organizational agility, a relevant university degree, experience in managing competency projects, separation from service, and similar cases. Sampling was conducted using purposive sampling and theoretical saturation. The data collection instrument in this study was a semi-structured interview. Accordingly, no new code was extracted from interview number 14; however, to ensure theoretical saturation, the researcher continued the interviews up to interview number 17. To validate the obtained

data and determine validity, the researcher checked the accuracy of his interpretations of the interviewees' statements during the interviews by asking additional questions. Moreover, during the interview process, the researcher adopted an iterative procedure after each interview by transcribing and coding the interview texts so that any deficiencies or shortcomings could be identified and resolved. In addition, the test–retest method was used to assess the reliability of the collected data. The second phase of this study, namely the quantitative phase, was conducted to evaluate the fit of the proposed model developed in the qualitative phase. The statistical population consisted of managers, power industry experts, and employees of the Sistan and Baluchestan Regional Electric Company. Based on Cochran's formula, the sample size was determined to be 148 participants, and sampling was conducted using simple random sampling. Data were collected using a researcher-made questionnaire, the validity of which was assessed through confirmatory factor analysis, and its reliability was calculated using Cronbach's alpha coefficient. Data analysis was also conducted using structural equation modeling and SPSS version 19 and SmartPLS version 3 software.

Findings and Results

The thematic analysis method is obtained through coding. Accordingly, in this study, thematic analysis was conducted through the following stages:

Descriptive coding (open coding): identifying and highlighting sections of the interview texts that were important for answering the research questions;

Interpretive coding (axial coding): comparing and interpreting the meanings of the identified open codes in order to merge, eliminate, or organize them under one another;

Selective coding: identifying overarching themes. These themes are not only summaries of the main themes but also revealing interpretations of the events reflected in the interview texts.

These themes are then drawn in the form of a network map, showing the dominant themes at each of the three levels together with their relationships.

In the first stage, after conducting descriptive coding (open coding) for all interviews, 61 initial codes were first identified. After reviewing and screening the initial codes, including merging or eliminating some codes, a total of 49 descriptive (open) codes were identified. In the second step, in order to extract interpretive (axial) codes, the researcher classified and structured the codes after repeatedly and continuously comparing the codes extracted in the previous stage. For this purpose, several open (descriptive) codes may have been placed under one interpretive (axial) code. At this stage, after repeated reading and careful review through an iterative process between concepts and categories, selective coding was conducted, and a total of 23 interpretive codes were classified under six main selective codes (Table 1).

Table 1. Interpretive and Selective Coding of the Downsizing Model of State-Owned Enterprises (Regional Electric Company)

Selective Codes	Interpretive Codes	Descriptive Codes
Internal factors related to the company	Human capital of the company	Company goals and missions; transparency of processes and decision-making; managers' tendency toward decentralization; expected outcomes; intended levels of downsizing; employee skills (human resources); values and culture governing the organization; the degree of complexity or standardization of the processes of activities intended for outsourcing or privatization; type of equipment technology and technology used by suppliers of outsourced functions; current status of the electricity industry

Internal factors related to the company	Technology and equipment		Company goals and missions; transparency of processes and decision-making; managers' tendency toward decentralization; expected outcomes; intended levels of downsizing; employee skills (human resources); values and culture governing the organization; the degree of complexity or standardization of the processes of activities intended for outsourcing or privatization; type of equipment technology and technology used by suppliers of outsourced functions; current status of the electricity industry
Internal factors related to the company	Company structure		Company goals and missions; transparency of processes and decision-making; managers' tendency toward decentralization; expected outcomes; intended levels of downsizing; employee skills (human resources); values and culture governing the organization; the degree of complexity or standardization of the processes of activities intended for outsourcing or privatization; type of equipment technology and technology used by suppliers of outsourced functions; current status of the electricity industry
Internal factors related to the company	Dominant culture and values		Company goals and missions; transparency of processes and decision-making; managers' tendency toward decentralization; expected outcomes; intended levels of downsizing; employee skills (human resources); values and culture governing the organization; the degree of complexity or standardization of the processes of activities intended for outsourcing or privatization; type of equipment technology and technology used by suppliers of outsourced functions; current status of the electricity industry
Factors related to the participant	Financial capacity of the company		Managerial capability of the contractor company; experience and good track record; degree of mastery and awareness of laws; knowledge and skills; specialized human resources; skills of the contractor company's employees; technology and technologies used by the company
Factors related to the participant	Specialized knowledge and capability		Managerial capability of the contractor company; experience and good track record; degree of mastery and awareness of laws; knowledge and skills; specialized human resources; skills of the contractor company's employees; technology and technologies used by the company
Factors related to the participant	Technology and equipment		Managerial capability of the contractor company; experience and good track record; degree of mastery and awareness of laws; knowledge and skills; specialized human resources; skills of the contractor company's employees; technology and technologies used by the company
Factors related to the participant	Managerial capability		Managerial capability of the contractor company; experience and good track record; degree of mastery and awareness of laws; knowledge and skills; specialized human resources; skills of the contractor company's employees; technology and technologies used by the company
Factors related to the participant	Technical capability		Managerial capability of the contractor company; experience and good track record; degree of mastery and awareness of laws; knowledge and skills; specialized human resources; skills of the contractor company's employees; technology and technologies used by the company
Degree of downsizing	Proposals related to the transfer of activities		Assessment of the current status of the intended area of state ownership; degree of relationship between outsourced activities and stakeholders' interests; activities eligible for outsourcing; position of the activities or missions intended for transfer in relation to other organizational activities; required infrastructure for downsizing; external pressures for downsizing; economic conditions; market competition; degree of impact of activities on the interests of company stakeholders
Degree of downsizing	Degree of key and core nature of activities		Assessment of the current status of the intended area of state ownership; degree of relationship between outsourced activities and stakeholders' interests; activities eligible for outsourcing; position of the activities or missions intended for transfer in relation to other organizational activities; required infrastructure for downsizing; external pressures for downsizing; economic conditions; market competition; degree of impact of activities on the interests of company stakeholders
Degree of downsizing	Environmental factors		Assessment of the current status of the intended area of state ownership; degree of relationship between outsourced activities and stakeholders' interests; activities eligible for outsourcing; position of the activities or missions intended for transfer in relation to other organizational activities; required infrastructure for downsizing; external pressures for downsizing; economic conditions; market competition; degree of impact of activities on the interests of company stakeholders
Conditions and characteristics of contracts	Transparency of contracts		Transparency; scheduling; comprehensiveness and attention to all details; investment and risk regulations; identification of short-term, medium-term, and long-term consequences of downsizing; necessary strategies and actions in the event that privatization objectives are not achieved
Conditions and characteristics of contracts	Compliance of contracts with legal rules and regulations		Transparency; scheduling; comprehensiveness and attention to all details; investment and risk regulations; identification of short-term, medium-term, and long-term consequences of downsizing; necessary strategies and actions in the event that privatization objectives are not achieved
Conditions and characteristics of contracts	Compliance of contracts with		Transparency; scheduling; comprehensiveness and attention to all details; investment and risk regulations; identification of short-term, medium-term, and long-term consequences of downsizing; necessary strategies and actions in the event that privatization objectives are not achieved

	upstream laws and regulations		long-term consequences of downsizing; necessary strategies and actions in the event that privatization objectives are not achieved
Conditions and characteristics of contracts	Laws and criteria for monitoring and control		Transparency; scheduling; comprehensiveness and attention to all details; investment and risk regulations; identification of short-term, medium-term, and long-term consequences of downsizing; necessary strategies and actions in the event that privatization objectives are not achieved
Operational downsizing strategies	Outsourcing specific activities		Careful examination of mechanisms and structures; scope of duties of these companies; determining criteria and control activities considered for the post-outsourcing, merger, or privatization phase; identifying activities that are not economically viable; careful examination and identification of activities beyond the company's capacity; identifying the capacities and capabilities of organizations at the same level as the company (provincial distribution companies); identifying strengths and weaknesses of the company's supervisory departments; strengthening control and supervisory structures
Operational downsizing strategies	Contracting activities	out	Careful examination of mechanisms and structures; scope of duties of these companies; determining criteria and control activities considered for the post-outsourcing, merger, or privatization phase; identifying activities that are not economically viable; careful examination and identification of activities beyond the company's capacity; identifying the capacities and capabilities of organizations at the same level as the company (provincial distribution companies); identifying strengths and weaknesses of the company's supervisory departments; strengthening control and supervisory structures
Operational downsizing strategies	Reengineering (merger of internal structures)		Careful examination of mechanisms and structures; scope of duties of these companies; determining criteria and control activities considered for the post-outsourcing, merger, or privatization phase; identifying activities that are not economically viable; careful examination and identification of activities beyond the company's capacity; identifying the capacities and capabilities of organizations at the same level as the company (provincial distribution companies); identifying strengths and weaknesses of the company's supervisory departments; strengthening control and supervisory structures
Operational downsizing strategies	Establishing and strengthening supervisory mechanisms		Careful examination of mechanisms and structures; scope of duties of these companies; determining criteria and control activities considered for the post-outsourcing, merger, or privatization phase; identifying activities that are not economically viable; careful examination and identification of activities beyond the company's capacity; identifying the capacities and capabilities of organizations at the same level as the company (provincial distribution companies); identifying strengths and weaknesses of the company's supervisory departments; strengthening control and supervisory structures
Consequences of downsizing	Organizational agility of the company		Economic efficiency; cost reduction; increased efficiency; optimization of resource consumption; increased optimal utilization of electricity facilities; acceleration of operations for establishing connections for new applicants; supplying subscribers with electricity at standard voltage and frequency; optimal operation of power network facilities; organizational flexibility in responding to environmental and technological changes; updating and standardizing the technologies and technologies used
Consequences of downsizing	Cost reduction		Economic efficiency; cost reduction; increased efficiency; optimization of resource consumption; increased optimal utilization of electricity facilities; acceleration of operations for establishing connections for new applicants; supplying subscribers with electricity at standard voltage and frequency; optimal operation of power network facilities; organizational flexibility in responding to environmental and technological changes; updating and standardizing the technologies and technologies used
Consequences of downsizing	Improvement of service quality	of	Economic efficiency; cost reduction; increased efficiency; optimization of resource consumption; increased optimal utilization of electricity facilities; acceleration of operations for establishing connections for new applicants; supplying subscribers with electricity at standard voltage and frequency; optimal operation of power network facilities; organizational flexibility in responding to environmental and technological changes; updating and standardizing the technologies and technologies used

In the present study, the Kolmogorov–Smirnov goodness-of-fit test was used to examine the normality of the observations. The hypothesis examined in this test is as follows:

H0 = There is a difference between the observed and expected frequencies (the distribution is not normal).

H1 = There is no difference between the observed and expected frequencies (the distribution is normal). The results of this test are presented in Table 2.

Table 2. Kolmogorov–Smirnov Goodness-of-Fit Test

Variables	Mean	Standard Deviation	p	z	Test Result
Internal factors related to the company	4.309	0.539	0.127	1.515	Confirmation of the null hypothesis
Factors related to the participant	4.452	0.665	0.142	1.356	Confirmation of the null hypothesis
Degree of downsizing	4.632	0.442	0.075	1.372	Confirmation of the null hypothesis
Conditions and characteristics of contracts	3.987	0.519	0.092	1.422	Confirmation of the null hypothesis
Operational downsizing strategies	4.019	0.652	0.136	1.321	Confirmation of the null hypothesis
Consequences of downsizing	3.879	0.539	0.112	1.623	Confirmation of the null hypothesis

According to Table 2, considering the significance value (Sig.) of the data and the placement of the Z statistic within the range of +1.96 to -1.96 at the 95% confidence level and 5% error level, it can be stated that there is a difference between the observed and expected frequencies, the assumption of data normality is not met, and nonparametric statistical tests can be used.

Cronbach's alpha coefficient is a classical index for measuring the reliability of a research instrument, through which the internal correlation among indicators is determined. According to some researchers, the acceptable value of this coefficient should be greater than 0.6, while from the perspective of another group of researchers, a Cronbach's alpha coefficient above 0.7 is preferable. Accordingly, the reliability of the questionnaire constructs was calculated using Dillon–Goldstein's rho (composite reliability), where a value above 0.7 indicates stability and a value below 0.6 indicates lack of reliability.

Convergent validity in this study was calculated based on the view of Fornell and Larcker (1981), namely the average variance extracted (AVE), whose acceptable value is 0.5. All AVE values for all research variables were greater than 0.5. Based on the reported values, it can be stated that the model has desirable convergent validity. Moreover, to determine discriminant validity in PLS analysis, based on Fornell and Larcker (1981), the square root of AVE for a variable must be greater than the correlation of that variable with other research variables.

Table 3. Reliability and Validity of the Research Model

Variables	Cronbach's Alpha	Composite Reliability	Rho_A	AVE	$\sqrt{\text{AVE}}$ Convergent Validity
Internal factors related to the company	0.750	0.832	0.803	0.558	0.747
Factors related to the participant	0.866	0.904	0.870	0.653	0.808
Degree of downsizing	0.808	0.874	0.821	0.636	0.798
Conditions and characteristics of contracts	0.834	0.889	0.851	0.667	0.817
Operational downsizing strategies	0.859	0.904	0.865	0.702	0.838
Consequences of downsizing	0.764	0.864	0.793	0.681	0.825

As observed in the correlation matrix of variables (Table 4), the square root values of AVE located on the diagonal of the correlation matrix are greater than the correlation values of each variable with the other variables, indicating the appropriate discriminant validity of the model.

Table 4. Correlation Matrix of Variables

Variables	Internal Factors Related to the Company	Factors Related to the Participant	Degree of Downsizing	Conditions and Characteristics of Contracts	Operational Downsizing Strategies	Consequences of Downsizing
Internal factors related to the company	0.747					
Factors related to the participant	0.412	0.808				
Degree of downsizing	0.367	0.529	0.798			

Conditions and characteristics of contracts	0.419	0.440	0.412	0.817		
Operational downsizing strategies	0.622	0.367	0.298	0.470	0.838	
Consequences of downsizing	0.517	0.239	0.442	0.396	0.520	0.825

The cross-validated communality index is used to assess the ability of the path model to predict observable variables through the values of latent variables. All values should be positive; therefore, the model has desirable quality (Table 5).

Table 5. Cross-Validated Communality Index Test

1 - SSE/SSO	Variables
0.279	Internal factors related to the company
0.464	Factors related to the participant
0.379	Degree of downsizing
0.432	Conditions and characteristics of contracts
0.478	Operational downsizing strategies
0.362	Consequences of downsizing

The general goodness-of-fit criterion (GOF) is calculated through the geometric mean of the average communality and R²:

$$GOF = \sqrt{\text{average}(\text{Communality}) \times R^2}$$

The GOF index is used in the PLS model to examine overall model fit. This index functions similarly to covariance-based methods and is used to evaluate the validity or quality of the PLS model. This index is applicable for assessing the overall predictive power of the model and determining whether the tested model has been successful in predicting endogenous latent variables (results are shown in Table 6).

Table 6. Communality Test

Communality	Variables
0.882	Internal factors related to the company
0.892	Factors related to the participant
0.779	Degree of downsizing
0.821	Conditions and characteristics of contracts
0.875	Operational downsizing strategies
0.839	Consequences of downsizing

The communality index was calculated using the following formula:

$$\text{Communality} = 1/N \times \sum \text{Communality}$$

The communality value is 0.849.

The R² value is also equal to 0.597, which is visible in the standardized mode. Based on the GOF calculation formula, we have:

$$GOF = \sqrt{0.849 \times 0.597} = 0.551$$

According to Tenenhaus et al. (2005), GOF values of 0.01, 0.25, and 0.35 indicate weak, moderate, and strong fit, respectively. Accordingly, the value of the index between zero and one in this study (0.551) indicates the strong desirability of the research model.

The first factor considered in evaluating reflective models is the unidimensionality of the indicators. Accordingly, each indicator should load with a large factor loading on only one dimension or latent variable within the set of indicators. Moreover, factor loadings above 60% are considered acceptable (results shown in Figure 1).

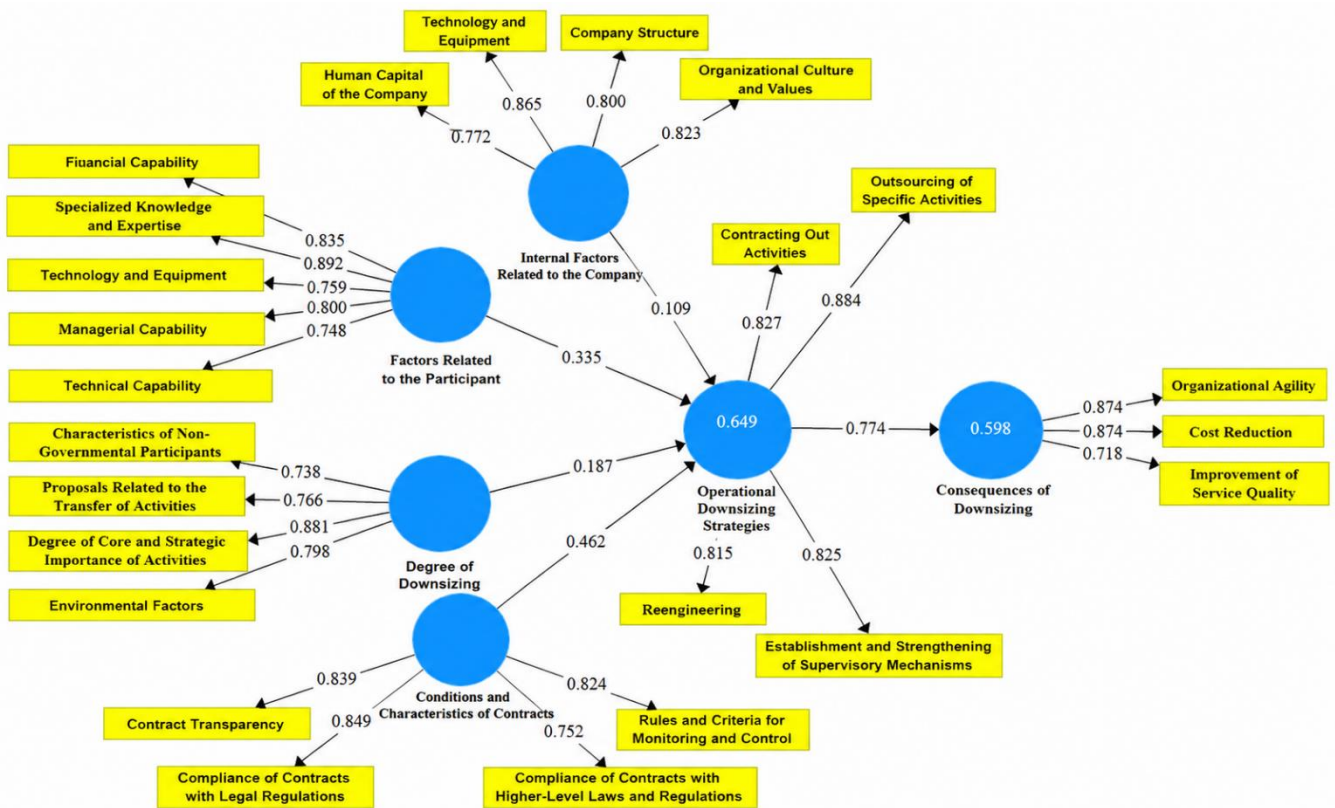


Figure 1. Research Model in the Standardized Coefficient Estimation Mode

Based on the results of factor loadings, the indicator with the highest factor loading contributes more to the measurement of the corresponding variable, while the indicator with smaller coefficients contributes less to the measurement of the related construct. In the present study, the factor loadings of the measurement model for internal factors related to the company, factors related to the participant, degree of downsizing, conditions and characteristics of contracts, operational downsizing strategies, and consequences of downsizing in the Sistan and Baluchestan Regional Electric Company were calculated using SmartPLS version 3. Figure 1 shows the standardized coefficient estimates for the main research hypotheses. According to the obtained results, all coefficients are significant at the 95% confidence level; therefore, the results obtained from the calculation of factor loadings confirm the high validity of the model (results shown in Figure 2).

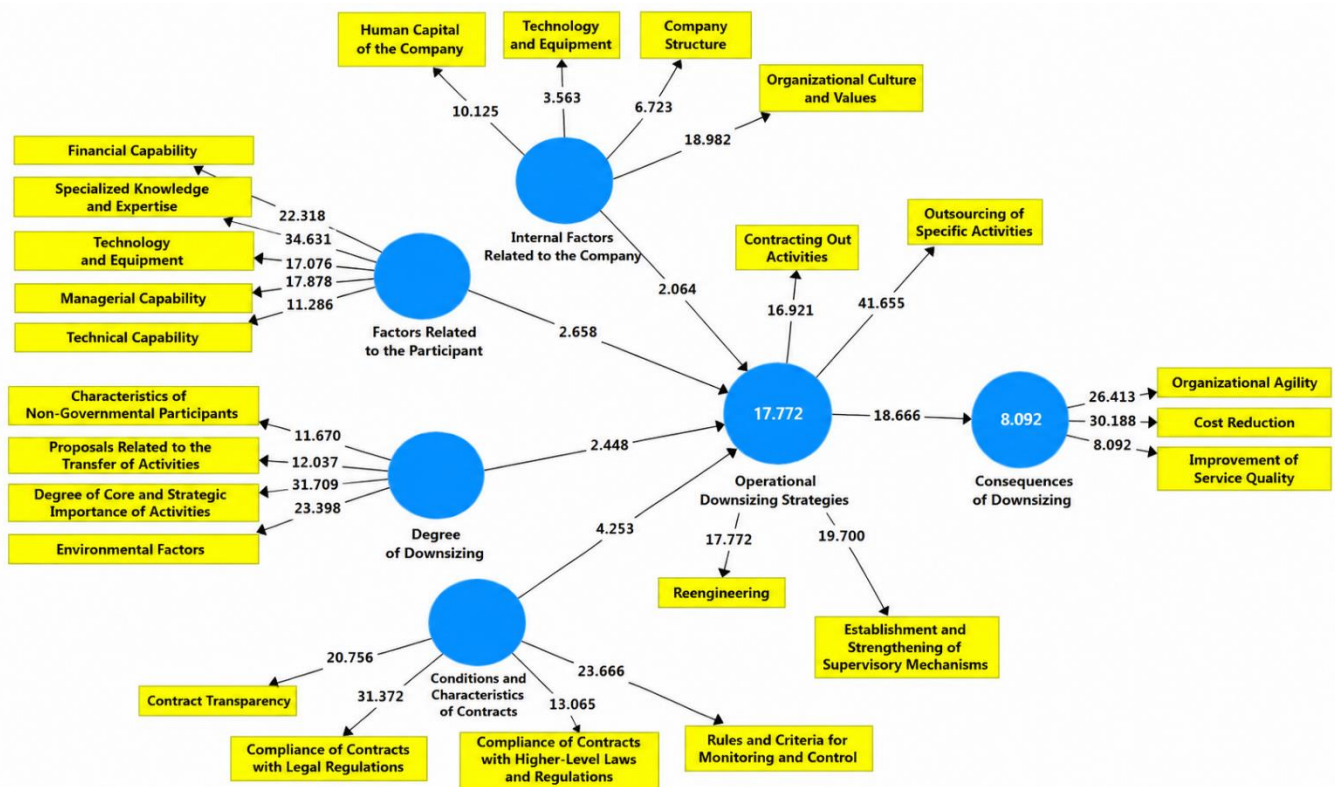


Figure 2. Significance Coefficients of the Hypotheses in the Model

Based on the results obtained from this study, the path coefficient and factor loading values are significant at the 95% confidence level. Therefore, if the t-statistic values fall outside the range of -1.96 to $+1.96$, the factor loading is significant; however, if the t-statistic value falls within this range, it is not significant.

One method for evaluating formative models is the coefficient of determination (R^2), which determines the extent to which the variance of a dependent variable is explained by the independent variable(s). This value is equal to zero for an independent variable and greater than zero for a dependent variable; the higher the value, the greater the effect of the independent variables on the dependent variable. Based on the coefficient of determination of the model, it can be stated that internal factors related to the company, factors related to the participant, degree of downsizing, conditions and characteristics of contracts, and operational downsizing strategies collectively explained 0.598 of the variance in the consequences of downsizing variable. Researchers have introduced three values, namely 0.19, 0.33, and 0.67, as the benchmark values for weak, moderate, and strong R^2 , respectively. Accordingly, it can be concluded that the model has appropriate predictive capability. The remaining value is related to prediction error and may include other factors affecting the consequences of downsizing (results shown in Figure 1).

Overall Results of Testing the Research Hypotheses

Table 7 presents the overall results of all research hypotheses:

Table 7. Overall Results of the Research Hypotheses

Hypotheses	Standardized Path Coefficient β	t Statistic	Significance	Rejection or Non-Rejection of Hypothesis
Internal factors related to the company \leftarrow Operational downsizing strategies	0.109	2.064	Sig. = 0.030	Not rejected
Factors related to the participant \leftarrow Operational downsizing strategies	0.335	2.658	Sig. = 0.000	Not rejected
Degree of downsizing \leftarrow Operational downsizing strategies	0.187	2.448	Sig. = 0.011	Not rejected

Conditions and characteristics of contracts ← Operational downsizing strategies	0.462	4.253	Sig. = 0.000	Not rejected
Operational downsizing strategies ← Consequences of downsizing	0.774	18.666	Sig. = 0.000	Not rejected

Discussion and Conclusion

The findings of the present study led to the development and empirical validation of a comprehensive model for downsizing state-owned enterprises in Iran, with a specific focus on the Sistan and Baluchestan Regional Electric Company. The qualitative phase identified six major dimensions influencing downsizing, including internal company factors, participant-related factors, the degree of downsizing, contractual conditions and characteristics, operational downsizing strategies, and the consequences of downsizing. The quantitative phase further confirmed the adequacy of the proposed model, demonstrating acceptable reliability, convergent and discriminant validity, strong goodness-of-fit, and significant structural relationships among all hypothesized variables. The results indicated that internal company factors, participant-related factors, the degree of downsizing, and contractual characteristics significantly influence operational downsizing strategies, which in turn exert a substantial positive effect on downsizing outcomes. These findings support the notion that successful downsizing is not a single managerial action but rather a multidimensional organizational process requiring alignment among structural, human, contractual, and strategic components.

One of the most important findings of this study was the significant effect of internal company factors on operational downsizing strategies. The qualitative findings revealed that dimensions such as human capital, organizational culture, company structure, technological infrastructure, transparency of processes, decentralization tendencies, and organizational missions play a central role in determining the success of downsizing initiatives. This finding suggests that organizations must first evaluate their internal readiness before implementing downsizing programs. Downsizing efforts that ignore organizational culture, employee competencies, technological capabilities, or structural complexity are unlikely to achieve their intended objectives. This result aligns with the findings of studies emphasizing that organizational restructuring should be grounded in a comprehensive understanding of internal organizational dynamics rather than being implemented solely as a cost-reduction strategy (4, 5). Similarly, Frone and Blais argued that the organizational environment and work conditions significantly influence the outcomes of downsizing, indicating that internal organizational factors shape employees' responses and overall organizational performance following restructuring (6). The current findings extend this perspective by demonstrating that internal factors not only affect outcomes but also influence the selection and effectiveness of operational downsizing strategies themselves.

The results also demonstrated a significant relationship between participant-related factors and operational downsizing strategies. In the proposed model, participant-related factors included managerial competence, technical capability, financial resources, technological capacity, specialized knowledge, and human capital of contractors or external partners. This finding highlights the importance of selecting qualified external organizations when outsourcing or transferring activities. In public organizations, downsizing frequently involves the transfer of non-core activities to external providers. Consequently, the success of such initiatives depends heavily on the capabilities of participating organizations. These findings are consistent with the arguments presented by Rastmanesh, who emphasized that outsourcing decisions based on downsizing objectives require careful evaluation of contractors' expertise, resources, and managerial competence to ensure service continuity and

effectiveness (17). Likewise, the findings support broader organizational theories suggesting that external partnerships contribute to organizational performance only when complementary resources and competencies are available among collaborating entities (9). The significance of participant-related factors observed in this study confirms that downsizing should be viewed as a networked organizational strategy rather than merely an internal restructuring exercise.

Another significant finding concerns the role of the degree of downsizing in shaping operational downsizing strategies. The qualitative findings identified factors such as the strategic importance of activities, environmental pressures, economic conditions, stakeholder interests, and the suitability of activities for outsourcing as determinants of downsizing magnitude. The quantitative results confirmed that the extent of downsizing significantly influences the selection of operational strategies. This finding suggests that managers must carefully assess which functions should be retained internally and which may be transferred, outsourced, merged, or eliminated. The result supports previous research indicating that indiscriminate downsizing may produce adverse consequences, whereas targeted and strategically guided downsizing can improve efficiency and performance (1, 2). Moreover, studies examining post-merger downsizing have shown that organizational performance improves when downsizing decisions are aligned with strategic priorities and environmental conditions rather than driven solely by financial considerations (22). Therefore, determining the appropriate degree of downsizing appears to be a critical managerial decision influencing the overall effectiveness of restructuring initiatives.

The strongest antecedent of operational downsizing strategies in the present study was contractual conditions and characteristics. The path coefficient associated with this construct was larger than those of the other antecedent variables, indicating the crucial role of contract quality in successful downsizing implementation. The qualitative findings identified transparency, legal compliance, monitoring mechanisms, risk management provisions, and alignment with higher-level regulations as essential contractual considerations. These findings suggest that downsizing initiatives are more likely to succeed when contractual arrangements clearly define responsibilities, performance expectations, accountability mechanisms, and contingency procedures. This result aligns with research emphasizing the importance of governance structures and formal agreements in organizational restructuring and outsourcing arrangements (4, 17). In state-owned enterprises, where accountability and public oversight are particularly important, contractual clarity serves as a mechanism for reducing uncertainty, ensuring compliance, and protecting stakeholder interests. The prominence of contractual conditions in the present model demonstrates that downsizing effectiveness depends not only on strategic intentions but also on the institutional and legal frameworks governing implementation.

The findings further revealed a strong positive relationship between operational downsizing strategies and the consequences of downsizing. This was the most substantial relationship identified in the structural model, indicating that operational strategies largely determine whether downsizing generates positive organizational outcomes. The operational strategies identified in the qualitative phase included outsourcing specific activities, contracting, organizational reengineering, structural integration, and strengthening supervisory mechanisms. The positive outcomes associated with these strategies included cost reduction, organizational agility, improved service quality, resource optimization, technological modernization, and increased flexibility. This finding is consistent with contemporary management literature suggesting that downsizing yields beneficial results when it is implemented as a strategic transformation process rather than a simple workforce reduction exercise (3, 4). Similarly, organizational restructuring research indicates that redesigning structures, processes, and governance

mechanisms can enhance organizational adaptability and operational performance when implemented systematically (5). The present study provides empirical support for these perspectives within the context of Iranian state-owned enterprises.

The positive consequences identified in this study are particularly noteworthy given the extensive literature documenting the negative psychological and social effects of downsizing. Research has shown that downsizing may increase stress, reduce organizational commitment, create uncertainty, and negatively affect employee well-being (10, 11). Studies have also reported adverse impacts on psychosocial work environments, safety climate, and employee morale following organizational restructuring (12). However, the present findings suggest that when downsizing is implemented through carefully designed operational strategies supported by appropriate contractual arrangements, qualified participants, and strong internal organizational foundations, positive organizational outcomes can outweigh potential negative consequences. This does not imply that negative effects disappear; rather, it suggests that effective management practices can mitigate many downsizing-related risks.

The importance of communication and human resource management identified in previous studies also provides a useful framework for interpreting the present findings. Downsizing initiatives frequently fail because employees perceive them as unfair, poorly communicated, or inconsistent with organizational values. Research has demonstrated that employee perceptions significantly influence organizational commitment during restructuring processes (14). Similarly, communication strategies play a critical role in reducing safety risks, minimizing human error, and maintaining employee engagement during organizational transitions (16). The present model implicitly incorporates these concerns through dimensions such as organizational culture, transparency, managerial competence, and supervisory mechanisms. Consequently, the findings reinforce the argument that successful downsizing requires not only structural adjustments but also attention to human and relational factors.

The results also have implications for understanding government downsizing and public-sector reform. In many developing countries, state-owned enterprises face increasing pressure to improve efficiency, reduce costs, and enhance service quality. Government downsizing has often been advocated as a means of reducing bureaucratic inefficiencies and administrative corruption (18). However, public-sector organizations differ from private firms because they must balance efficiency objectives with public accountability and social obligations. The present findings suggest that downsizing in state-owned enterprises should be implemented through comprehensive frameworks that integrate organizational readiness, stakeholder interests, contractor capabilities, legal compliance, and strategic oversight. Such an approach may enable governments to achieve efficiency gains while preserving service quality and public trust.

Another noteworthy contribution of this study lies in its integration of organizational, contractual, and environmental factors into a single explanatory framework. Previous studies have often focused on isolated aspects of downsizing, such as employee outcomes, communication practices, restructuring processes, or organizational performance (7, 8, 13). The present research demonstrates that these dimensions are interconnected and collectively influence downsizing effectiveness. Furthermore, the findings support network-based perspectives suggesting that organizational performance after downsizing depends on maintaining functional relationships, knowledge-sharing structures, and collaborative capacities (20). The emphasis on participant-related factors and supervisory mechanisms reflects the importance of preserving organizational capabilities while reducing organizational size.

Finally, the findings contribute to the broader literature on organizational adaptation and strategic transformation. Downsizing is frequently viewed as a reactive response to economic pressures or organizational crises. However, the present results support a more proactive interpretation in which downsizing serves as a strategic instrument for enhancing agility, optimizing resource allocation, improving operational efficiency, and strengthening organizational competitiveness. This perspective is consistent with studies emphasizing that downsizing should be integrated into long-term strategic planning rather than implemented as a short-term cost-cutting measure (10, 21). Overall, the validated model provides empirical evidence that effective downsizing in state-owned enterprises requires coordinated attention to internal organizational conditions, external partnerships, contractual governance, and operational implementation strategies.

One limitation of the present study is that the quantitative phase was conducted within a single regional electric company, which may limit the generalizability of the findings to other state-owned enterprises operating in different industries and institutional contexts. Additionally, the study relied primarily on self-reported perceptions of managers, experts, and employees, which may be influenced by individual biases or organizational culture. The cross-sectional nature of the quantitative phase also restricts the ability to examine long-term causal relationships among the identified variables and the sustainability of downsizing outcomes over time.

Future research should examine the applicability of the proposed model in other public-sector organizations and industries, including transportation, telecommunications, water utilities, and public healthcare systems. Comparative studies across different provinces and governmental sectors could provide valuable insights into contextual variations affecting downsizing effectiveness. Longitudinal research designs would also be beneficial for investigating how downsizing outcomes evolve over time and how organizations adapt following restructuring initiatives. Furthermore, future studies may incorporate additional variables such as leadership style, organizational trust, employee resilience, digital transformation, and institutional pressures to enrich the explanatory power of the model.

From a practical perspective, managers of state-owned enterprises should approach downsizing as a strategic transformation process rather than a simple workforce reduction initiative. Before implementing downsizing programs, organizations should conduct comprehensive assessments of internal capabilities, technological readiness, organizational culture, and stakeholder expectations. Particular attention should be given to the selection of qualified contractors, the development of transparent contractual arrangements, and the establishment of effective monitoring mechanisms. Communication strategies should be designed to reduce uncertainty and strengthen employee trust throughout the process. By adopting a systematic and evidence-based approach, public organizations can achieve greater efficiency, agility, and service quality while minimizing the potential risks commonly associated with downsizing initiatives.

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Authors' Contributions

All authors equally contributed to this study.

Declaration of Interest

The authors of this article declared no conflict of interest.

Ethical Considerations

All ethical principles were adhered in conducting and writing this article.

Transparency of Data

In accordance with the principles of transparency and open research, we declare that all data and materials used in this study are available upon request.

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References

1. Siyal S. Downsizing. *Global Encyclopedia of Public Administration, Public Policy, and Governance*: Springer; 2023. p. 3448-55.
2. Ifeoma AR, Patience NC. Downsizing: Causes, Effect, and Strategies, a Conceptual Approach. *International Journal of Scientific Research*. 2021;4:1799-804. doi: 10.47191/ijsshr/v4-i7-32.
3. Mujtaba BG, Senathip T. Layoffs and Downsizing Implications for the Leadership Role of Human Resources. *Journal of Service Science and Management*. 2020;13(2):209. doi: 10.4236/jssm.2020.132014.
4. Johnstone S. Human Resource Management in Recession: Restructuring and Alternatives to Downsizing in Times of Crisis. *Human Resource Management Journal*. 2024;34(1):138-57. doi: 10.1111/1748-8583.12512.
5. Harney B, Fu N, Freeney Y. Balancing Tensions: Buffering the Impact of Organisational Restructuring and Downsizing on Employee Well-Being. *Human Resource Management Journal*. 2018;28(2):235-54. doi: 10.1111/1748-8583.12175.
6. Frone MR, Blais AR. Organizational Downsizing, Work Conditions, and Employee Outcomes: Identifying Targets for Workplace Intervention among Survivors. *International Journal of Environmental Research and Public Health*. 2020;17(3):719. doi: 10.3390/ijerph17030719.
7. Brauer M, Vandepoele L. Managing the Downside of Downsizing: Firms' Impression Offsetting around Downsizing Announcements. *Journal of Management Studies*. 2024;61(8):3684-716. doi: 10.1111/joms.13024.
8. Patton GK, Neubert E, Neubert MJ, Rees R. Surviving, Not Thriving: The Impact of Downsizing on Team-Based Organizations. *Business Horizons*. 2024;67(3):251-62. doi: 10.1016/j.bushor.2024.02.006.
9. Moore OA, Susskind AM, Margolin D, Hanna AA. A Resource-Acquisition Perspective: Examining the Effects of Downsizing on Work-Related Relationships and Performance. *Group & Organization Management*. 2024;10596011241235692. doi: 10.1177/10596011241235692.
10. Cmiosh PII. Impact of Organizational Downsizing on Psychosocial Wellbeing of Employees. *International Journal of Research and Innovation in Social Science*. 2024;8(11):943-53. doi: 10.47772/IJRISS.2024.8110075.
11. Park Y, Oh J, Park H, Lee J, Yun B, Yoon JH. Association between Organizational Downsizing and Depressive Symptoms among Korean Workers: A Cross-Sectional Analysis. *Safety and Health at Work*. 2024;15(3):352-9. doi: 10.1016/j.shaw.2024.06.005.

12. Mathisen GE, Tjora T, Bergh LIV, Jain A, Leka S. The Differential Impact of Organizational Restructuring and Downsizing on the Psychosocial Work Environment and Safety Climate in the Petroleum Industry. *Safety Science*. 2023;166:106255. doi: 10.1016/j.ssci.2023.106255.
13. Hotak MI, ur Rehman Z, Khattak AR. The Impact of Organizational Downsizing on Employees' Performance in Private Universities of Afghanistan. *Sarhad Journal of Management Sciences*. 2024;10(1):47-58.
14. Erandika MDK, Ranasinghe VR. Impact of Employees' Perceptions of Organizational Downsizing Practices on Their Commitment. *Kelaniya Journal of Management*. 2024;13(1). doi: 10.4038/kjm.v13i1.7787.
15. Klehe U, Zikic J, Van Vianen AEM, De pater IE. Career adaptability, turnover, and loyalty during organizational downsizing. *Journal of Vocational Behavior*. 2016;79:217-29. doi: 10.1016/j.jvb.2011.01.004.
16. Ikechukwu-Cmiosh PI. Evaluating the Role of Human Resource Management and Communication Strategies in Reducing Safety Risks and Human Errors during Organizational Downsizing. *Journal of Social Sciences and Management Review*. 2024;7(6):304-23. doi: 10.37602/IJSSMR.2024.7611.
17. Rastmanesh. Presenting a Model of Human Resource Function Outsourcing with a Downsizing Approach in Hospitals and Healthcare Services. *Quarterly Journal of Management, Accounting and Economics*. 2024;2(2):40-63.
18. Ghorbani A. The Impact of Downsizing the Government on Reducing Administrative Corruption. *Legal Studies*. 2021;4(1):33-51.
19. Ghasemi R, Yousefikhah S. Higher education policy and knowledge commodification in the 2000s. *Quarterly Journal of Research and Planning in Higher Education*. 2022;28(2):97-127. doi: 10.52547/irphe.28.2.97.
20. Aalbers R, Smit A. Advice Tie Reallocation under Organizational Downsizing: A Longitudinal Network Study. *European Management Journal*. 2025. doi: 10.1016/j.emj.2025.01.009.
21. Olusegun O, Mariam GS, Tunde E. Redundancy Employers Cryptic Strategy for Organizational Downsizing and Trade Union Response. *African Journal of Entrepreneurship and Innovations*. 2025;1(1):34-58.
22. Kuvandikov A, Pendleton A, Goergen M. The Impact of Activist Hedge Funds on Post-Merger Downsizing and Performance. *British Journal of Management*. 2022;33(1):346-68.