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## Plan Overview

*A Data Management Plan created using DMPonline*

**Title:** An Investigation into the Impact of Leadership Styles on Organisational Culture in the Nigerian Hospitality Industry.

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**Template:** DCC Template

### Project abstract:

This research looks at how different leadership styles affect organisational culture, which in turn affects employee motivation, job satisfaction, and intentions to leave, using the Nigerian hotel industry as a case study. A quantitative technique was used to collect survey data from industry employees. According to the findings, transactional leadership is the most common style, followed by transformational and laissez-faire approaches. Cultural factors, especially power distance and individualism-collectivism, interact strongly with leadership styles. These interactions account for a large portion of the variation in employee outcomes, including 47% of the variation in motivation, 57% in work satisfaction, and 44% in intentions to leave. Nevertheless, despite transactional leadership's dominance, the study found that transformational leadership had unrealised potential for better employee outcomes. Recommendations include putting in place culturally sensitive leadership development programs, progressively introducing employee empowerment initiatives, and improving performance management systems to balance transactional and transformational features. These results provide useful information for improving the efficiency of leadership in the Nigerian hotel industry.

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### Copyright information:

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# An Investigation into the Impact of Leadership Styles on Organisational Culture in the Nigerian Hospitality Industry.

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## Data Collection

### What data will you collect or create?

Primary data would be collected from 200 employees working in the Nigerian hospitality sector, which includes establishments like hotels, restaurants, tour operators, event planners, and others. A self-administered questionnaire would be implemented by the researcher to collect the primary data using Google Forms. Online surveys were chosen because it would make respondents feel more anonymous, which could encourage them to open up more, particularly when asked about delicate issues like company culture and leadership. This format also enables sharing and long-term access to the data.

### How will the data be collected or created?

Data would be collected by means of a survey approach.

Primary data will be collected using a questionnaire distributed to 200 participants from the hospitality sector in Nigeria. The questionnaire will be created and distributed using Google Forms, ensuring ease of access and data collection. The questionnaire will be designed following best practices in survey methodology, including clear and concise questions, appropriate response scales, and logical flow. The researcher will adhere to the FAIR (Findable, Accessible, Interoperable, Reusable) data principles to ensure our data is easily discoverable and usable by others in the future.

#### Folder and File Structure:

- A clear folder hierarchy will be implemented:  
/Project\_Name|-- /Raw\_Data|-- /Processed\_Data|-- /Analysis |-- /Documentation  
|-- /Questionnaire
- Files will be named using a consistent convention:  
YYYYMMDD\_ProjectName\_DataType\_Version.extension  
(e.g., 20240910\_HospitalityNigeria\_RawData\_v1.csv)

**Version Control:** For the questionnaire and analysis scripts, we will use Git for version control, maintaining a repository on a platform like GitHub or GitLab. For datasets, we will use semantic versioning (e.g., v1.0.0) and maintain a changelog documenting changes between versions.

Moreover, the questionnaire will be peer-reviewed by colleagues in the field to ensure clarity and relevance of questions. A pilot test will be conducted with a small sample (10-15 participants) to identify and rectify any issues before full-scale distribution. Google Forms will be configured to require responses for all mandatory questions, reducing missing data. Where applicable, response validation will be set up (e.g., ensuring numerical responses fall within expected ranges). All analysis scripts will be peer-reviewed to ensure accuracy of methods and interpretations. Results will be cross-checked using multiple statistical software packages (e.g., R and SPSS) to verify consistency.

#### Documentation:

- A detailed data dictionary will be created, defining all variables, their possible values, and their meanings.
- All data processing and analysis steps will be documented in a README file, ensuring reproducibility.
- Any data cleaning or transformations will be logged, maintaining a clear audit trail from raw to final data.

**Ethical Considerations:** The questionnaire and data collection process will be reviewed and approved by the appropriate ethics committee. Informed consent will be obtained from all participants, and their data will be anonymized during the processing stage.

**Data Storage and Security:** Raw data will be stored securely with password protection and regular backups. Access to the data will be restricted to authorized team members only. The data collection process would involve several steps:

- Potential participants would be initially contacted via email, professional networking sites, and through industry associations.
- A link to the online survey would then be provided, along with information about the study's purpose and ethical considerations.
- Two reminder emails would be sent at one-week intervals to non-respondents to boost participation rates.
- Data collection period: The survey would remain open for a period of six weeks to allow for maximum participation.
- By implementing these methodologies and processes, we aim to ensure the collection of high-quality, reliable data that adheres to best practices in data management and research integrity.

## Documentation and Metadata

## What documentation and metadata will accompany the data?

Documentation and Metadata:

### 1. Basic Metadata:

- Creator: [Your Name/Research Team Name]
- Title: "Survey on [Specific Topic] in the Nigerian Hospitality Sector"
- Date of Creation: [Start Date] to [End Date of Data Collection]
- Access Conditions: [e.g., "Available for academic use with proper attribution"]
- Contributors: [List of team members, advisors, etc.]
- Project Description: A brief abstract describing the research objectives

### 2. README File:

A comprehensive README.md file will be created, containing:

- Project overview and objectives
- Data collection methodology
- File structure explanation
- Data processing steps
- Variable definitions
- Analysis procedures
- Software and tools used (including versions)
- Instructions for replication

### 3. Data Dictionary: A detailed data dictionary in CSV format will be provided, including:

- Variable names
- Variable descriptions
- Data types
- Units of measurement
- Allowed values or ranges
- Coding information for categorical variables

### 4. Questionnaire Documentation:

- A PDF version of the final questionnaire
- Documentation on the questionnaire development process
- Explanation of the theoretical framework used
- Pilot testing results and subsequent modifications

### 5. Methodological Documentation:

- Sampling methodology and rationale
- Detailed description of the data collection process
- Any assumptions made during data collection or analysis
- Known limitations or biases in the data

### 6. Data Processing Documentation:

- Step-by-step documentation of data cleaning procedures
- Explanation of any data transformations or calculations
- Code or scripts used for data processing (with comments)
- Versions of software used for processing

### 7. Analytical Documentation:

- Detailed description of statistical methods used
- Justification for choice of analytical approaches
- Code or scripts used for analysis (with comments)
- Any analytical assumptions made

### 8. Ethical and Legal Documentation:

- Copy of ethics approval (with sensitive information redacted)
  - Blank copy of the informed consent form
- Any usage restrictions or conditions

### 9. Technical Metadata:

- File formats used
- Character encoding (e.g., UTF-8)
- Software and versions needed to read the data
- Checksums for data files to ensure integrity

### 10. Preservation and Long-term Access Information:

- Details on where the data will be archived
- DOI or other persistent identifier (if applicable)
- Information on long-term preservation strategies

### 11. Machine-Readable Metadata:

- A structured metadata file in XML format following the DDI standard will be created to facilitate automated discovery and processing of the dataset.

All documentation will be provided in both PDF and markdown formats to ensure long-term readability and ease of use. The documentation will be stored alongside the data files in the project repository and will also be included with any dataset deposits in data repositories. By providing this comprehensive documentation and metadata, we aim to ensure that the data is fully understandable, replicable, and reusable by other researchers in the field.

## Ethics and Legal Compliance

### How will you manage any ethical issues?

#### Ethical Considerations and Management Plan:

##### 1. Institutional Review Board (IRB) Approval:

Before commencing the study, the researcher will submit a detailed research proposal to the university's Institutional Review Board or project supervisor. This proposal will outline the data collection methods, storage procedures, and plans for participant protection. The researcher will not proceed with data collection until we receive formal approval from the IRB.

##### 2. Informed Consent Process:

We will develop a comprehensive informed consent form that clearly explains:

- The purpose of the study
- Types of data being collected
- How the data will be used and stored
- Potential risks and benefits of participation
- Participants' rights, including the right to withdraw
- Plans for data sharing and reuse

The consent form will be written in plain language, avoiding jargon, and will be available in English and local Nigerian languages as needed. Participants will be given ample time to read, understand, and ask questions before signing. We will explicitly request permission for data sharing and reuse, with options for participants to agree or disagree with different levels of data sharing.

**3. Data Anonymisation:** To protect participants' identities, we will implement a robust anonymisation process. Each participant will be assigned a unique identifier, and all personally identifiable information (PII) will be removed from the dataset. We will use data suppression techniques for any responses that could indirectly identify an individual (e.g., unique job titles or very specific locations). We will employ k-anonymity techniques to ensure that any combination of key variables appears at least k times in the dataset, reducing the risk of re-identification.

**4. Data Security Measures:** To safeguard the collected data, we will implement stringent security measures. Raw data will be stored on encrypted, password-protected drives. Access to the data will be restricted to authorised team members only, using multi-factor authentication. We will use secure file transfer protocols when sharing data among team members. Regular security audits will be conducted to identify and address any vulnerabilities.

**5. Sensitive Data Handling:** If we collect any sensitive data (e.g., information about religious beliefs or health status), this data will be stored separately from the main dataset, with additional encryption. Access to sensitive data will require additional authorization. We will consider using secure computation techniques that allow analysis without direct access to raw sensitive data.

**6. Ethical Considerations in Data Sharing:** When preparing data for sharing or reuse, we will create a thoroughly anonymized version of the dataset for public sharing. Sensitive data or data that cannot be fully anonymized will be shared through secure, controlled access mechanisms. We will develop clear terms of use for shared data, prohibiting any attempts at re-identification.

##### 7. Participant Rights Management:

We will establish a process for participants to:

- Access their personal data
- Request corrections to their data
- Withdraw from the study and have their data removed (where feasible)

By implementing these comprehensive ethical management strategies, we aim to ensure that our research adheres to the highest standards of ethical conduct, respects participant rights and privacy, and maintains the integrity and trustworthiness of our study in the Nigerian hospitality sector.

### How will you manage copyright and Intellectual Property Rights (IPR) issues?

As the primary research team collecting data through survey questionnaires, I will retain the copyright and intellectual property rights of the collected data, subject to any institutional policies that may grant partial or full ownership to my affiliated university or research institution. I'll consult with our institution's IPR office to clarify these details. I'll review and adhere to any specific IPR policies set by the university and comply with my institution's data management and IPR policies. This may include depositing a copy of the data in the institutional repository. While participants don't retain copyright over their individual responses, we'll respect their rights and the confidentiality of their data. The consent form will clearly explain how the data will be used, shared, and licenced, informing participants that their anonymised data may be shared with other researchers or used in future studies.

If we incorporate any third-party data in our analysis or results, we'll ensure we have the necessary permissions to use and share this data and document the sources and usage rights. To protect participant privacy, all data will be anonymised before sharing, and any potentially identifying information will be removed or aggregated. If certain portions of the data are deemed too sensitive to share openly, we'll implement a controlled access procedure for those sections.

In case of potential commercial applications, I'll consult with my institution's technology transfer office to protect any patentable innovations before data publication. By implementing these measures, we aim to protect our intellectual property rights while promoting the widest possible ethical use and reuse of our research data, remaining flexible to adjust these policies as needed to comply with institutional or legal requirements while maintaining our commitment to open science principles.

## Storage and Backup

### How will the data be stored and backed up during the research?

During the research, data storage and backup will be managed through a multi-tiered approach to ensure data integrity and security. Primary storage will involve maintaining two backup copies. The first backup will be on a dedicated, password-protected external hard drive stored in a locked cabinet in the principal investigator's office. This hard drive will be updated weekly. The second backup will utilise an off-site cloud storage service, updated daily through an automated script. To mitigate risks associated with hardware failure or localised disasters, we're ensuring geographical distribution of our data. The university's storage system and the off-site cloud backup provide this distribution inherently.

For added security, all local copies of the data on researchers' computers will be encrypted and synced daily with the primary storage. Researchers will be instructed not to rely solely on these local copies for data storage. In the event of an incident, our data recovery plan involves first attempting to restore from the university's cloud storage, then the off-site cloud backup, and finally the physical backup if necessary. This strategy ensures minimal data loss and quick recovery in case of any unforeseen events.

### How will you manage access and security?

Data Access and Security Management Plan 1. Risk Assessment and Management

#### Potential Risks:

- Unauthorized access to sensitive participant data
- Data loss or corruption
- Breach of participant confidentiality
- Cyber attacks (e.g., hacking, malware)
- Physical theft of devices containing data

#### Risk Management Strategies:

- Implement robust encryption for all data storage and transfer
- Regular security audits and vulnerability assessments
- Comprehensive backup strategy
- Staff training on data security best practices
- Incident response plan for potential breaches

#### 2. Access Control Measures

- Implement multi-factor authentication for all systems containing research data
- Use role-based access control (RBAC) to limit data access based on user roles
- Maintain detailed logs of all data access and modifications
- Regular review and updating of access permissions
- Implement strong password policies

#### 3. Secure Collaboration

- Use a secure, encrypted cloud storage solution for shared access (e.g., encrypted Dropbox Business, Google Drive with advanced protection)
- Set up a Virtual Private Network (VPN) for remote access to research data
- Use encrypted communication channels for discussions about the data (e.g., Signal for messaging)
- Implement watermarking or other tracking measures for shared documents
- Require collaborators to sign data confidentiality agreements

#### 4. Data Storage and Backup

- Store data on encrypted servers or cloud services compliant with relevant data protection regulations
  - Implement a 3-2-1 backup strategy: 3 copies, 2 different media types, 1 off-site
  - Regular testing of backup restoration process
  - Use versioning in backups to protect against ransomware and accidental deletions

#### 5. Compliance and Governance

- Ensure compliance with relevant data protection regulations (e.g., GDPR, if applicable)
- Regular internal audits of data security practices
- Maintain up-to-date documentation of all security measures and processes
- Establish a data governance committee to oversee data security policies

By implementing these measures, the researcher aims to create a robust security environment that protects the integrity and confidentiality of our research data while ensuring appropriate access for authorized collaborators.

## Selection and Preservation

### Which data are of long-term value and should be retained, shared, and/or preserved?

The primary data containing sensitive information about the participants would be destroyed after the project has been marked and an award (M.A) has been given to the researcher. The researcher will develop a clear data retention policy by specifying how long different types of data will be retained (e.g., raw data, processed data, consent forms). The researcher will also outline secure methods for data destruction after the retention period, including digital data wiping and physical destruction of any hard copies.

**What is the long-term preservation plan for the dataset?**

The primary data would be stored on Google cloud since Google forms will be used, ensuring that only the primary researcher has access to the raw data

## **Data Sharing**

**How will you share the data?**

Data would be shared online using Google forms. Participants would be recruited through emails, social media, networking sites, and through snowballing techniques.

**Are any restrictions on data sharing required?**

Yes, restrictions to data sharing would be implemented due to the researcher's need to maintain the confidentiality and anonymity of participants.

## **Responsibilities and Resources**

**Who will be responsible for data management?**

The researcher alone would be responsible for the data management plan (DMP), ensuring that it is reviewed and revised as appropriate.

**What resources will you require to deliver your plan?**

Knowledge of software such as Google forms, SPSS, and so on would be required. Basic skill in data interpretation and analysis would also be required