



Digital Transformation in Capital Construction Projects

A Case Study in the Digital Transformation of Saudi Arabia,
Eastern Region

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التحول الرقمي في إدارة مشاريع البناء الحديثة

دراسة حالة التحول الرقمي في المملكة العربية السعودية المنطقة الشرقية

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- Research Population & Sampling methods & Technique:

This section provides information about the [Digital Transformation in Capital Construction Projects](#).

The population includes all entities and individuals involved in capital construction projects where digital transformation initiatives are being implemented.

- But We will Take [SAUDI ARAMCO](#) as the most important and largest company that relies on Digital Transformation in its project's.

- Research Population ([SAUDI ARAMCO](#))

- AS one of the world's largest integrated energy and chemicals companies, Aramco seeks to create value across the hydrocarbon business chain, while driving economic and societal development in communities around the world that depend on our energy supplies.
- We are committed to pioneering the energy transition and embrace our responsibility to help the world achieve a net-zero economy, with our employees constantly working to help find solutions to sustainability challenges.
- AS we continue to strengthen our position at the forefront, we will remain the supplier of choice for our customers, and continue to deliver long-term value to our shareholders, with our ambition to supply communities around the world with reliable, more sustainable and affordable energy.
- [SIZE OF STUDY \(73,000 +\)](#)

JOB LEVEL	# OF ELEMENTS
TOP MANAGEMENT	20
MIDDLE MGT.	270
LOWER MGT.	4000
SUPERVISORS	8000
EMPLOYEES	60,710
TOTAL	73,000

- RESEARCH SAMPLE

According to Table of Krejci & Morgan the Size of Study is 73,000 and the size of sample 382

JOB LEVEL	# OF ELEMENTS	# OF SAMPLE
TOP MANAGEMENT	20	4
MIDDLE MGT.	270	54
LOWER MGT.	4000	80
SUPERVISORS	8000	116
EMPLOYEES	60,710	128
TOTAL	73,000	382

- SAMPLING METHOD & TECHNIQUES

- In this Research we used Probability Sampling Techniques.
- And the method is Stratified random Sampling.

- DATA COLLECTION METHOD

- QUESTIONER.

- TAPES OF DATA

- Primary Data
Data Collected from Questioner.
- Secondary Data
Data collected from Research (Saudi Aramco Website).

- DATA ANALYSIS METHODS & PROCEDURES

After collecting data, it is essential to analyze the information gathered to draw meaningful conclusions. As, the Statistical Package for the Social Sciences (SPSS), specifically version 28, were used to analyze the collected data.

The sample profile test was conducted, via descriptive analysis, to gain insights into the characteristics of the sample population. It helps researchers understand the demographics, preferences, and other relevant information about the individuals involved in the study.

Validity and reliability tests are crucial in ensuring that the data collected is accurate and consistent. Validity tests (Exploratory factor analysis) to determine if the research instruments measure what they are intended to measure, while reliability tests (Cronbach's Alpha test) assess the consistency of results over time.

And we conducted descriptive statistics for the research variables, that provide a summary of the main characteristics of the data collected. It includes measures such as mean, median, mode, standard deviation, and variance, which help in understanding the distribution and patterns within the dataset.

In order to test the research hypotheses, simple and multiple linear regression tests were employed to test research hypotheses and examine the relationships between variables. These tests help researchers determine the extent to which one variable predicts another, providing valuable insights into the research questions at hand.

By utilizing these various statistical analyses within SPSS version 28, researchers can effectively analyze their data and derive meaningful interpretations to advance their research objectives.

- CONCLUSION

- The research was applied to Saudi Aramco through Probability Sampling Techniques and Stratified random sampling Method.
- Size of population is 7,3000 and Size of sample is 382.