**Quantitative Analysis Report Structure**

Title: A concise and descriptive title that reflects the main focus of the research.

1. **Introduction**

Provides an overview of the research topic, objectives, research questions (normally 3), and the significance of the study. It also includes a brief literature review and establishes the context for the research.

1. **Methodology**

**Research Design:** Describes the research design, including the approach (e.g., experimental, survey), data collection methods, sample size, and any relevant ethical considerations.

**Data Collection:** Explains how the data was collected, including details about the survey instrument, experimental protocol, or other data collection techniques employed.

**Data Analysis**: Provides an overview of the data analysis techniques used, including any statistical methods, software, or algorithms utilized. It also describes any data cleaning, transformation, or preprocessing steps undertaken.

1. **Results**

For Smart PLS

**Notes on SEM and PLS-SEM:**

Structural equation modeling is a multivariate statistical analysis technique that is used to analyze structural relationships. This technique is the combination of factor analysis and multiple regression analysis, and it is used to analyze the structural relationship between measured variables and latent constructs.

PLS-SEM is a “flexible” technique capable of estimating complex models (many constructs, many variables, many causal relationships between constructs – arrows – and formative models).

**PLS-SEM assumptions:**

Multivariate normal distribution: The maximum likelihood method is used and assumed for multivariate normal distribution. Small changes in multivariate normality can lead to a large difference in the chi-square test.• Linearity: A linear relationship is assumed between endogenous and exogenous variables.• Outlier: Data should be free of outliers. Outliers affect the model significance.• Sequence: There should be a cause and effect relationship between endogenous and exogenous variables, and a cause has to occur before the event.• Non-spurious relationship: Observed covariance must be true.• Model identification: Equations must be greater than the estimated parameters or models should be over identified or exact identified. Under identified models are not considered.• Sample size: Most of the researchers prefer a 200 to 400 sample size with 10 to 15 indicators. Asa rule of thumb, that is 10 to 20 times as many cases as variables.• Uncorrelated error terms: Error terms are assumed uncorrelated with other variable error terms.• Data: Interval data is used.

Specifying the path model and data:

* All main variables are called latent variables.
* All items reflecting or forming the latent variables are called measures or indicators
* Arrows represent the relationships between latent variables and orindicators
* Independent variables are called exogenous variable (arrows exit from these variables)
* Dependent variables are called endogenous variables (arrows are drawn into these variables).

Two main components of models are distinguished in SEM:

* The structural model showing potential causal dependencies between endogenous and exogenous variables, and
* The measurement model showing the relations between latent variables and their indicators.

**What to report:**

1. Measurement models assessment (done through calculate – algorithm model)

* Outer loadings
* Construct reliability and validity
* Discriminant validity (one of the tests is enough)
* Collinearity statistics (VIF)

1. Structural Model

* Show the model image
* Model fit
* R-square

1. Bootstrapping – hypotheses testing (calculate – bootstrapping)

* Show the table with path coefficients (achieved after boostrapping) – here you can see which hypotheses are rejected or confirmed.

For SPSS (if you prefer to use SPSS instead of SmartPLS)

Descriptive Statistics: Presents descriptive statistics (e.g., means, frequencies, proportions) summarizing the main variables of interest. This can be done through tables, charts, or graphs.

Inferential Statistics: Reports the results of inferential statistical analyses, such as t-tests, ANOVA, regression models, or other appropriate tests. It includes relevant statistical values (e.g., p-values, confidence intervals) and interprets the findings in relation to the research objectives and hypotheses.

1. **Discussion**

**Interpretation of Findings:** Provides a detailed interpretation and discussion of the results obtained. This includes relating the findings to the research questions, theoretical framework, and previous research. It may involve identifying significant patterns, relationships, or trends in the data.

**Limitations:** Acknowledges any limitations or potential biases in the study, such as sample size limitations, data quality issues, or other factors that may impact the validity or generalizability of the findings.

**Implications:** Discusses the implications of the findings for theory, practice, or policy. It may highlight practical recommendations or suggestions for future research based on the results.

1. **Conclusions**

Summarizes the main findings of the study and restates the research objectives and their implications. It also discusses the overall contribution of the research and suggests avenues for future research.

**References**

Provides a list of all cited references, following the appropriate citation style (e.g., APA).

**Appendices**

Includes any additional supporting materials, such as data collection instruments (questionnaire draft), coding schemes, or detailed statistical analyses that are not included in the main report.