



### Annotated Summary of:

Doll, William J., Weidong, Xia, and Gholamreza Torkzadeh (1994), “A Confirmatory Factor Analysis of the End-User Computing Satisfaction Instrument.” *MIS Quarterly* 18(4): 453–61.

#### Chapter 11: SEM – Confirmatory Factor Analysis *Multivariate Data Analysis, Sixth edition*

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The authors employ a rigorous cross-validation examination of the multifaceted construct, end-user computing satisfaction (EUCS), using confirmatory factor analysis. Prior research has proposed that user satisfaction is a single construct. From a sample of 409 computer end users, the authors specify and test four hypothesized measurement models. Based on comparisons of model-data fit, the authors chose one model as best representing the dimensionality of the construct in a parsimonious manner. Additionally, the authors assess the reliability of the factors and indicators. From their results, the authors provide researchers and practitioners with a standardized instrument for measuring user satisfaction that is both empirically and conceptually reliable and valid.

Each model is derived from prior research and is comprised of 12 items. The models are assessed using several goodness-of-fit indexes (chi-square, NFI, GFI, AGFI, and RMSR). Model 1, a hypothesized one first-order factor model, consists of all 12 items summed into one construct. Models 2 and 3 each contain five first-order factors to represent end-user satisfaction—content, accuracy, format, ease of use, and timeliness. In Model 2 the factors are uncorrelated, whereas in Model 3 they are correlated. Model 4 consists of five first-order factors, which form a single second-order factor. Results, based on the fit indices indicate that Models 3 and 4 provide satisfactory representations of the underlying data; however, by reducing the number of indicators from 12 to 5, Model 4 is a more parsimonious representation. The authors recommend that future researchers improve upon the construct (i.e., additional tests of reliability and validity) and examine its antecedents and consequences.

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