

**Taking Reliability Seriously:  
A Critical Examination of Reliability Estimates in Public  
Administration Survey Research**

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**Abstract**

Survey research has become one of the most dominant research methodologies in the field of Public Administration. Recent research has begun to incorporate laboratory experiments in the pursuit of the development of a foundation for behavioral public administration, but survey research continues to dominate. The quality of survey research has greatly improved over the past decade as leading journals began to highlight the prevalence of threats to the validity of public administration survey research. In particular, researchers have wrestled more carefully with issues of common source bias and error structure by compiling data from multiple sources and directly modeling error structures with the use of Confirmatory Factor Analysis. However, while reliability is often addressed in name, a rich understanding of the theoretical and empirical challenges to reliability remains lacking.

Meanwhile, Psychometricians have continued to further develop their theoretical understanding and empirical approaches to reliability. As noted by the field of psychometrics, there are 4 models of estimating reliability. These models rely heavily upon the underlying assumptions of the given psychological tests (i.e. surveys). These assumptions build from the underlying error variance and the linear transformation across multiple tests. Parallel tests are the strictest models, tau-equivalent models are less strict in their assumptions of the characteristics of the multiple tests, and congeneric models as the least strict models with respect to the required assumptions. Importantly, the options available for estimating reliability, and the quality of those

reliability estimates, hinges on the model that is relied upon.

This paper provides a richer theoretical treatment of the construct of reliability and its importance for public administration survey research. This theoretical treatment also highlights the best practices for estimating reliability of measures across tests and test items. The implications are explored for how to better estimate reliability of public administration constructs that are measured from surveys. The paper will further identify several illustrative examples across leading public administration journals to highlight high-quality examples of reliability being taken seriously and other examples that would benefit from a more serious treatment of reliability

This paper strives to push forward the quality of survey research in the field of public administration. As additional methods disperse throughout the field, the overreliance upon surveys and survey data will likely decrease as methods are triangulated to give a better picture of the overall evidence to support and reject the important hypothesis that are tested in public administration research. However, the ease and relatively cheap cost of survey development, implementation, and evaluation likely ensures its place in public administration as a method of knowledge generation. Given this, it is important that the field develop a better appreciation of reliability and the developments in the field of psychometrics. This paper seeks to provide this exact link.