APPLIED STRUCTURAL EQUATION MODELLING FOR RESEARCHERS AND PRACTITIONERS

Using R and Stata for Behavioural Research

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Dedicated to my parents and GOD.

Preface

Structural equation models permeate every field of research in the world. Indeed, despite its deep-rooted origins in psychology, structural equation models gained considerable attention in different fields of study such as biology, engineering, environment, education, economics and finance. The main power ingrained in these types of models pertains to their ability to cater for various levels of interactions among variables such as bi-directional causality effects and, most importantly, catering for the effects of unobserved or latent variables.

As at date, there exist some well-developed textbooks on structural equation models. However, most of them tend to address the subject mainly in a manner which may not really befit the needs of researchers who are new in this area. This is the main aim of this book, that is to explain, in a rigorous, concise and practical manner all the vital components embedded in structural equation modelling. The way the book is structured is to unleash all the vital elements in a smooth and quick to learn approach for the inquisitive readers. In essence, this book substantially leverages the learning curve for novice researchers in the area of structural equation models. Overall, this book is meant for addressing the needs of researchers who are found at the beginning or intermediate level of structural equation modelling learning curve.

LISREL and AMOS are now deemed as the workhorse for implementing structural equation models. Consequently, the book clings to two different software, namely R (a freeware) and STATA. R is used to explain the model in its lavaan package without going into too much sophistication. STATA implementation of

structural equation model is also explained. In fact, STATA 13 is now upgraded with enough power to implement structural equation models without being subject to much ado with respect to programming problems which usually characterize LISREL. In a nutshell, STATA 13 is powerful enough to perform different types of structural equation models.

This book can be used at graduate level for a one semester course on structural equation modelling. The way the book has been written is highly convenient as a self-learning tool to any interested reader.

I hope this book to be particularly useful for all researchers who are new on the path of structural equation modelling.