

## Theory of Regulatory Compliance Models

Richard Fiene, Ph.D.

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Three models are presented here which depict the theory of regulatory compliance as it has evolved over the past four decades. Initially, it was thought that there was a linear relationship between regulatory compliance and program quality as depicted in the first line graph below (see Figure 1). As compliance increased a corresponding increase in quality would be seen in the respective programs.

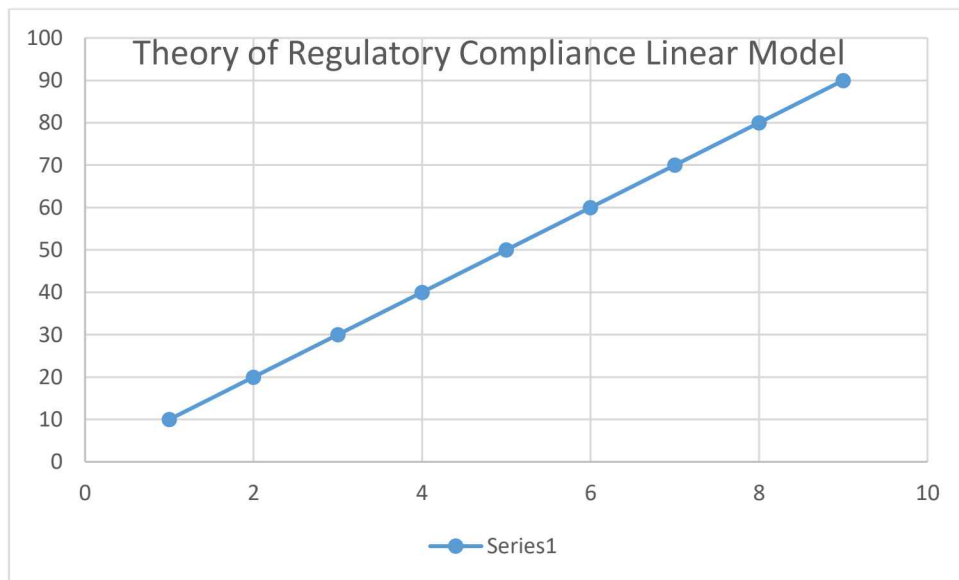


Figure 1

This initial graphic needed to be modified because of various studies conducted in order to confirm this regulatory compliance theory. It was discovered that at the lower ends of regulatory compliance there still was a linear relationship between compliance and quality. However, as the compliance scores continued to increase to a substantial level of compliance and then finally to full (100%) compliance with all rules, there was a corresponding drop off in quality as depicted in the second line graph below (see Figure 2).

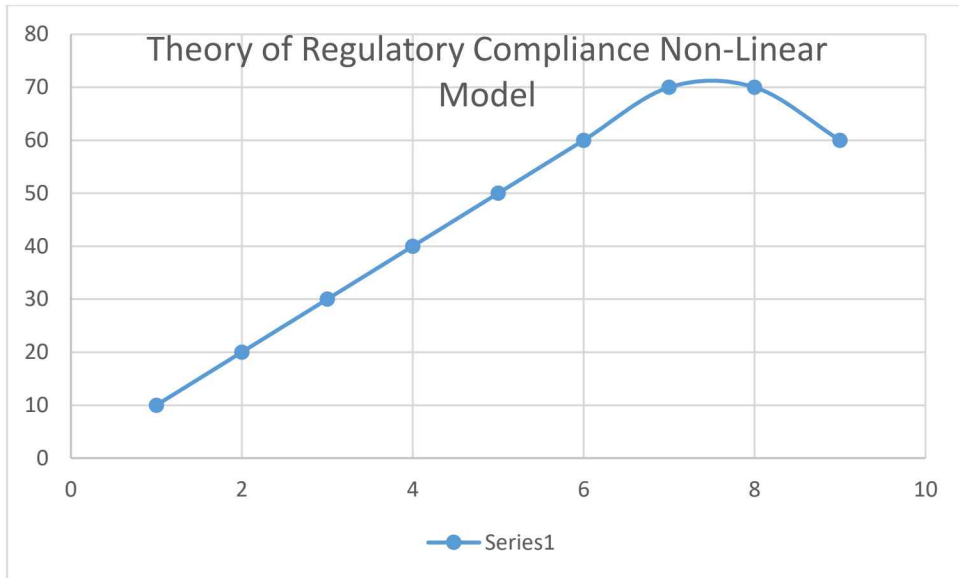


Figure 2

This Non-Linear Model has worked well in explaining the Theory of Regulatory Compliance and the studies conducted for the past three decades. However, the most recent studies related to the theory appear to be better explained by the latest proposed model in Figure 3 which suggests using a Stepped or Tiered Model rather than a Non-Linear Model. The Stepped/Tiered Model appears to explain more fully how certain less important rules can be significant predictors of overall compliance and quality.

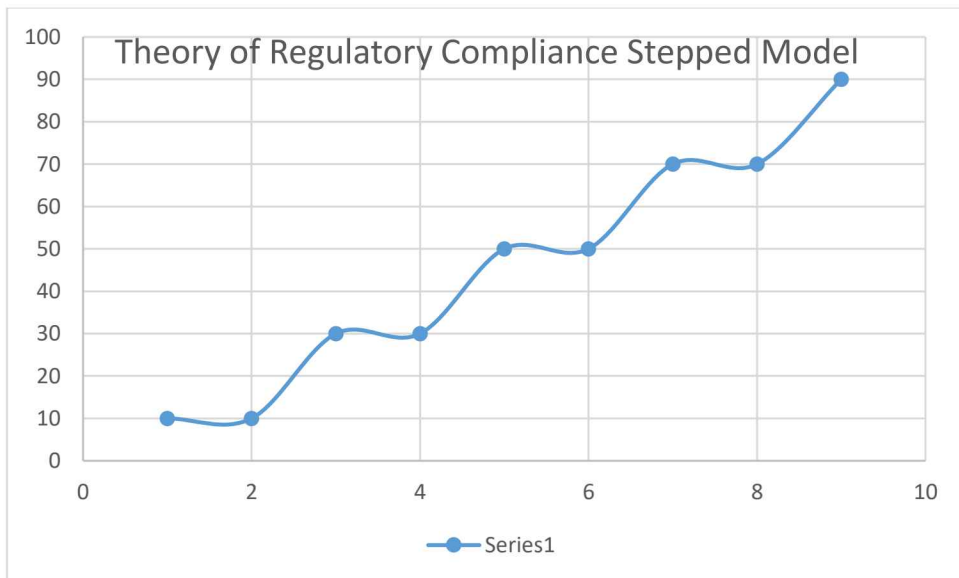


Figure 3

This last model (Stepped/Tiered) has more flexibility in looking at the full regulatory field in attempting to find the “predictor” or right rules that should be selected as key indicators. It is about identifying those key indicator rules that move the needle from one step/tier to the next rather than focusing on the plateau. So rather than having just one plateau, this model suggests that there are several plateaus/tiers.

Mathematically, the three models appear as the following:

- 1)  $PQ = a (PC) + b$  (Linear)
- 2)  $PQ = a (PC)^b$  (Non-Linear)
- 3)  $PQ = a + ((b - a) / (1 + (PC / b)^b))$  (Stepped/Tiered)

**Where PQ = Program Quality; PC = Regulatory Program Compliance; a and b are regulatory constants**

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*Richard Fiene, Ph.D., Research Psychologist, Research Institute for Key Indicators (RIKILLC); Senior Research Consultant, National Association for Regulatory Administration (NARA); and Professor of Psychology (ret), Penn State University.*