

Simultaneous equations

A Bayesian approach

R. HARKEMA

1

o

Rotterdam University Press / 1971



Contents

1.	INTRODUCTION	1
2.	A TRACTABLE CLASS OF PRIOR DISTRIBUTIONS	11
2.1.	Introductory Remarks	11
2.2.	The Linear Simultaneous Equations System	12
2.3.	A Tractable Prior Distribution on the Space of the Structural Parameters	16
2.4.	Some Distribution-Theoretical Results in Multivariate Analysis	22
3.	A LIMITING APPROACH	27
3.1.	A Double Sequence of Prior Distributions	27
3.2.	The Corresponding Sequence of Posterior Distributions of the Reduced Form Coefficients	31
3.3.	The Limiting Precision Matrix of the Reduced Form Coefficients	33
3.4.	Limiting Values of the Other Parameters of the Posterior Distribution of the Reduced Form Coefficients	38
	Appendices to chapter 3	43
4.	SPECIFICATION OF PRIOR INFORMATION FOR KLEIN'S MODEL I	49
4.1.	Klein's Model I	49
4.2.	Klein's Model and the Dutch Economy	53
4.3.	Prior Information about the American Economy	59
4.4.	Specification of the Parameters of the Prior Distribution	64
	Appendix to chapter 4	76
5.	POSTERIOR ANALYSIS OF KLEIN'S MODEL I	79
5.1.	Introduction and Computation Recipe	79

5.2. The Numerical Values of the Parameters of the Limiting Posterior Distribution	81
5.3. An Application to a One-Period Decision and Prediction Problem	87
5.4. Some Sensitivity Analysis	97
5.5. Concluding Remarks	103
REFERENCES	105
INDEX	107