

and description of this narrative will become civilization's champions for the next decades, if not centuries.

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Babones, S. J.,

Methods for Quantitative Macro-Comparative Research.

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Reviewed by Stuart Birks

This was a very enjoyable book to read. Don't be fooled by the title. It is more than a 'to do' book. Babones defines quantitative macro-comparative research (QMCR) as, 'the application of regression analysis to country data' (p.4). Although useful for researchers undertaking QMCR, the perspectives and insights are of value to a much wider audience. Written in a suitably sceptical tone, it is a cautionary description of the way people can be drawn into formulaic, mechanical applications of a technique. The result in the case of QMCR has been the development of a self-sustaining and self-contained literature following its own accepted conventions. These can bring academic success for its practitioners, but the work is increasingly removed from reality as more complex and questionable requirements develop. Moreover, 'some of the research norms have become so widely accepted as to have become invisible' (p.78). Does this sound familiar?

Babones challenges and strongly critiques much that is taken as gospel in quantitative methods courses, the use of which often results in misleading research. Both in the general approach that he takes and in specific practical advice, there are many cautionary messages. His concluding recommendation is for broad-based analyses that bring together many perspectives. He sees the need for both quantitative and qualitative research, with the latter able to give more recognition to

political, institutional and social dimensions and better suited to deriving meaning from research results.

At the same time, he recognises the reality for QMCR researchers. They face perverse incentives whereby individual studies using prevailing processes can give the biggest rewards. This is not entirely surprising. Incentive structures that result in methodological constraints have been observed elsewhere in academia.

A major constraint with QMCR is the small, fixed body of data with a limited number of variables. Much economic and social data relates to nations. However, there are at best about 200 countries, many of which have only emerged as independent states since World War II, and national accounts data are equally recent. Countries are not compositionally independent in that, for many of them, their fortunes are linked. Consequently we have 'a barren soil of meagre data' (p.4). The ground has been worked over many times. Many variables, such as Durkheim's 'social facts' (e.g. social norms, religious beliefs and familial obligations) are fixed or change only slowly, so multiple observations involve a high degree of replication. Research therefore often equates to putting 'old wine in new bottles', such as the 'recycling of 'trade' as 'globalisation'' (p.5). With the single data base, there is a 'one-world problem', it is not possible to experiment or try to replicate on other data.

There are other problems with the use of country data. Babones describes the arguments for and against treating every country equally. With no country weighting, the EU countries are given collectively 27 times the weight of the US, despite having roughly similar land area, population and economy. On the other hand, weighting according to population effectively turns cross-country regressions into analyses of China, India and the United States. There are many gaps in the data, with some countries having more complete records than others. Consequently, if a study requires longitudinal national income data, most of the included countries are high income or in Africa, hence many QMCR analyses largely represent comparisons between Europe and Africa.

There is some useful discussion on operationalization of data, as in attempting to construct meaningful measures of inequality, poverty, or globalisation. These are highly politically sensitive issues, and so it is important to recognise how poorly measured they are for the purpose of quantitative analysis. A common 'solution' is to follow the crowd,

adhering to some measure or index that has been adopted in other published studies. Some data seem to have achieved a high level of acceptance simply because they fill a gap. Babones illustrates this when he describes indices used to represent political rights or democracy, arguing that they reflect the interests of the NGOs that provide them.

The discussion on lagged relationships and causality includes points that are not widely appreciated, contending that treatment should differ according to the nature of the study. Many of the variables used to describe countries vary only slowly, so the use of a lagged variable may not really demonstrate direction of causality. Similarly, use of several years' data may increase the sample size, but only through a high degree of replication, thus artificially inflating the apparent significance of results. Given potential measurement error with annual data, Babones suggests that more accurate results may come with averaging over, say, five years. It may not look as impressive, but it could be more meaningful.

Statistical significance is also covered. Rather than using the fallacy of the transposed conditional as stressed by McCloskey, Babones describes the early days of significance tests, at which time the details were still under debate. It is a salutary lesson as to how something can come to be a *sine qua non* while being misused and bearing little relation to the original concept.

While use of control variables is supported, they still come under criticism. Hence, 'Observational data...are rife with dependency structures...No one variable can meaningfully be 'held constant' while others are allowed to vary' (pp.123-4).

While more frank than many books on research methods, some critical points could have been further developed. For example, there is a recurrent problem in empirical analyses that functional forms are often loosely specified by theory and casually addressed. Hence, 'Raw data are routinely transformed into more or less normally distributed variables in order to make them better behaved' (p.53). In other words, data are transformed to suit statistical requirements, with little thought as to whether the resulting relationships are economically meaningful. Estimation of linear models assumes that each (possibly transformed) explanatory variable has a fixed impact on the dependent variable in the specified time period and regardless of its value or the values of all the other explanatory variables. All the observations are assumed to be of the

same structure, and so the effects are also fixed for, in this case, all countries. This is far more restrictive than most theories would specify. Nevertheless, poor explanatory power for an equation is put down to either measurement error or omitted variables. Inappropriate or imprecise specification of the relationships would be an equally serious concern.

Babones acknowledges that choice of data and forms is heavily constrained by availability of data series and estimation methods:

Social science models in general, and QMCR models in particular, are not directly formulated based on explicit theories of the functional forms of the relationships among variables. Linear, additive effects with independent errors are postulated not because we believe them to best represent the relationships among our variables, but because they are assumed in the model types we can most conveniently estimate (p.192).

But what does this really give us, and how credible are the estimated relationships as a basis for policy?

While causality is critically discussed, claims are still made such as: 'If two variables are uncorrelated, it is extremely unlikely that they are causally related' (p.143). Correlation is a measure only of linear association between the data series. There are numerous other possible causal patterns that could be observed, such as a threshold effect (drowning and depth of water), or a viable range (survival in relation to temperature), not to mention INUS conditions. (INUS conditions refer to situations where an event can occur when a set of conditions arises, and there may be several such sets that produce the same effect. Consider 'causes' of car accidents, workplace deaths, or rises in income, for example). Consequently, these and other models estimated using these techniques only cover a small subset of possible relationships.

In summary, this is a very worthwhile book that challenges many established conventions. It opens up debate on important issues and challenges the perceived authority of dominant research methods. In doing so, it illustrates the sort of critical methodological debate that should be ongoing if we are to regularly remind ourselves of the limitations that we face as social scientists.

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