

A Realist and Dialectical Approach to Econometrics
Abstract

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Several prominent realist commentators have argued that standard applied econometric methods are strongly linked with a flawed positivist metaphysics (Fleetwood, Lawson, Andrew Sayer, John Mingers). The impression is left that such methods should be abandoned in their entirety.

However, other realists have argued that such *tout court* rejection is unjustified and strategically disastrous since much of the discourse of the social sciences employs the discourse of classical statistical inference and econometrics. The attempt has been made to develop a realist alternative to the positivist justification of econometric techniques (Downward, Popora, responses to Mingers, Hoover) but no commonly accepted alternative to the positivist interpretation of econometrics has yet emerged.

This paper argues that a systematic alternative can be found through moving beyond, or radically adding to, realism. The alternative to be developed draws upon the method of dialectics.

The argument is primarily in terms of the general orientation towards research rather than concerning any specific case or detailed econometric methodology. The orientation towards research encouraged by critical realism is established and this is contrasted with the approach of systematic dialectics. We argue that the orientation towards research provided by systematic dialectics offers a role for econometrics (on nationally representative data sets). The same cannot be said for critical realism. We offer the example of ordered probit estimation based on the WERS dataset, comparing our dialectical approach to the critical realist critique of econometrics set out by Fleetwood and Hesketh (2006).

Though we find much in common with critical realism, in particular the concern to articulate real social structures and mechanisms, we argue that critical realism underplays and misrepresents the system-wide import of local structures and mechanisms. Lacking an adequate system-wide focus, it is not surprising that critical realism cannot find a role for econometrics and, instead, recommends case study approaches. By contrast, dialectics emphasises that local structures and mechanisms must be comprehended in terms of their system-wide functioning and, conversely, that the reproduction of the system occurs only through the unique specificities of local structures and mechanisms. Accordingly, systematic dialectics emphasises the importance of *both* econometric and case study approaches. Systematic dialectics offers a method to articulate both of these approaches, comprehending social reality as a nexus of the abstract and the concrete, of the universal and the particular.

In terms of the specific example of econometric approaches on WERS data (and any other nationally representative data) then Fleetwood and Hesketh (2006) argue that the attempt to measure econometrically the impact of HRM practices on organizational performance is in general misguided because any such practices do not relate to one another in a mechanical fashion. Instead they relate to one another organically in unique local systems, varying from workplace to workplace. Therefore

each workplace must be addressed on its own merits and it is invalid to attempt to formalise HRM practices and their impact on organizational performance. HRM practices are not mechanical parts with unique, separable impacts on performance as is assumed in the attempt to capture their impact with regression coefficients. Thus, according to the critical realist argument of Fleetwood and Hesketh, the socio-economic world is a complex, open system, with myriad local specificities, precluding analyses such as econometrics, that presuppose a 'closed' system with universal event regularities.

Our dialectical approach to econometrics agrees with the stress on local specificity and organic relations. Therefore it broadly agrees with the general sentiment expressed by Fleetwood and Hesketh regarding such concrete phenomena as HRM practices and supports the use of case-study research. However, the dialectical approach also recognises that individual workplaces have abstract aspects of commonality with one another as well as aspects of difference. Workplaces form part of a wider economic system and thus presuppose and contribute to essential system-wide phenomena such as profit making, wage labouring, exchanging commodities, monetary saving and investment, and so forth. Indeed all workplaces are likely to be involved in such practices and hence, at an abstract level, have these aspects of commonality with one another. The predominance of such practices is, according to systematic dialectics, essential for the self-reproduction of the system. As such the system as a whole is not 'open' but displays ongoing system-wide regular activities, and in this sense is 'closed' *contra* critical realism (Brown 2007). For this reason, the system-wide focus of systematic dialectics suggests that there will be many aspects of change in the workplace that are likely to co-vary across space and time. Though the presence of local specificities ensures that co-variation is never perfect at a local level, across the system as whole local specificities cancel out such that co-variation of various aspects of interest will be identifiable, driven by the system-wide activities focused upon by systematic dialectics. It is just such co-variation that econometric analysis, on nationally representative survey data, is able to pick up.

In our example, we argue that the tightness of the labour market, job security (subjectively measured) and job satisfaction (also subjectively measured) should co-vary across the system. This argument is underpinned by the comprehension of system-wide activities offered by systematic dialectics. In particular it is based upon recognition of the complex balance of conflict and consent predominant within workplaces in the capitalist system. Obviously in any one workplace contingent local factors may exist that ensure co-variation is not perfect but, given the predominance of the wage labour - capital relationship, these should cancel across the system as a whole. Econometric analysis of WERS (an ordered probit) indeed reveals that increases of job satisfaction are positively related to increases in job security and to the tightness of labour markets. In this way econometrics (in particular ordered probit analysis) based on WERS data, reveals the system-wide co-variation that is predicted when taking the perspective of systematic dialectics. It is quite true that concrete and contingent phenomena such as HRM practices may not lend themselves to econometric analysis, as Fleetwood and Hesketh point out. But Fleetwood and Hesketh's point is not a general one (*contra* the general critical realist critique to which they subscribe). Rather certain other phenomena of interest may well display system-wide co-variation, and therefore econometric analysis on nationally

representative survey data is an appropriate way to explore hypotheses at this system-wide level of research.