In my opinion, the reduced-form approach is not truly atheoretical as many of its proponents claim. However, the structural estimation approach is not without caveats.

First and foremost, the reduced-form approach's claim that it does not require theories or assumptions is invalid. On the contrary, its reliance on theories and assumptions is implicit. For example, in Angrist's research, the adverse effect of military experience on earnings could have a broad range of potential explanations absent a series of assumptions. Only when the author assumes that schooling and experience is uncorrelated to the draft lottery results can the author draw the intended conclusion. Despite the fact that Angrist did not make this assumption explicit, it is a crucial implicit assumption to support the research's conclusions.

Second, instrumental variables used in reduced-form approach may be difficult to interpret even though researchers make implicit assumptions about the instrumental variables. For example, in the paper on the maternal contact time, the handy instrumental variable has no obvious implications without more in-depth theories and assumptions to interpret it.

Third, high-grade quasi-experiments are rare in reality. In a paper discussing welfare programs to single mothers, the author makes a strong implicit assumption that mothers with old children behaves similarly like mothers with young children so that the implementation of the welfare program can be regarded as a quasi-experiment. This assumption is dubious given the empirical results, yet the research fails to discuss it. To address the problem of dissimilar groups in quasi-experiments requires an extensive use of theory.

While the structural estimation approach has many advantages over the reduced-form approach, it also has its own caveats. I believe a crucial problem is that researchers used too many assumptions, which sometimes leads to a model of little empirical use. Keane's article has failed to sufficiently address this problem. For example, in research literature that review banks' costs of gaining compliance to a new regulation, structural researchers would naturally try to come up with a cost function, such as a beautiful Cobb-Douglas cost function (Benston, 1975). Because the regulatory cost data is generally unavailable, the researcher has to make many assumptions as to how a regulatory cost would show on bank's regulatory filings and how the cost from a new regulation relates to the cost from existing regulations. As the result of a long list of assumptions on function forms of costs and other regulatory cost factors, the resulting estimated costs are "not statistically significant and unreasonably high." (Elliehausen, 1998) This leads to a dangerous consequence that the structural model is "garbage in, garbage out."

In short, while the reduced-form approach has its caveats, the structural estimation approach also has rooms for improvement. Neither of the two approaches is a panacea for

economics research.

Reference

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Elliehausen, G. (1998). The cost of bank regulation: a review of the evidence. Fed. Res. Bull., 84, 252. Chicago