## Connecting Incentives, Preferences and Monotonicity Criteria.

Rodrigo Pinto \*

November 3, 2017

## Abstract

Monotonicity criteria have long being used by economists to identify causal effects in choice models of multiple treatments and categorical instrumental variables. It imposes restrictions on the counterfactual choices that heterogenous agents may take as the instrument varies. Economists have also use revealed preference analysis to model the choice behavior of economic agents. This paper investigates the connection between revealed preferences and monotonicity criteria. I use a simple choice model in which instruments induce choice incentives that are combined with choice axioms to generate monotonicity criteria. Two patterns of IV-induced incentives are of particular interest: *Monotonic Incentives* imply the unordered monotonicity condition of Heckman and Pinto (2017a) while *Supermodular* incentives imply the ordered monotonicity of Imbens and Angrist (1994).

*Keywords:* Choice Axioms, Revealed Preferences, Causal Inference, Monotonicity, Instrumental Variables.

JEL codes: H43, I18, I38. J38.

<sup>&</sup>lt;sup>\*</sup>I thank Moshe Buchinski, Stephane Bonhomme, Magne Mogstad, Azeem Shaikh, Melissa Tartari, Thibaut Lamadon, Christopher Taber, Jens Ludwig, Bernard Salanie, Yuichi Kitamura, Adriana Lleras-Muney, Dora Costa, Flavio Cunha, Maurizio Mazzocco, Orazio Attanasio, Richard Blundell, Andrew Chesher, and Amanda Agan for helpful comments. I am specially grateful to Professors James Heckman and Steven Durlauf. I also benefit from useful comments on presentations at University College London (UCL), Yale, Columbia, University of Pennsylvania, University of Wisconsin-Madison, University of California at Los Angeles, University of Chicago (Economics and Public Policy Departments), Getulio Vargas Foundation (EPGE), Washington University, Emory University and University of Southern California (Schaeffer and CSSR Institutes). All errors are my own.