Review of "Is There Publication Selection Bias in Minimum Wage Research during the Five-year Period from 2010 to 2014?"
(Discussion Paper No. 2015-58)

General Comments: This paper is a meta-analysis of the minimum wage literature during the period 2010-2014. The two main research questions are: (i) Does publication selection bias still affect the minimum wage literature?, and (ii) Do more recent studies find an adverse employment effect from minimum wages? The meta-analysis examines a total of 45 studies containing 1552 estimates. Only studies published in refereed, academic journals are included. Estimates consist of two types: elasticities and "coefficients". The main results of the paper can be found in TABLE 4. Publication bias is found to be significant for elasticities, but not for coefficients. Overall effects are negative for elasticities, but positive for coefficients. Specific comments follow.

Specific Comments:

1. The paper lacks a compelling motivation. There are now many meta-analyses of the minimum wage literature. TABLE 1 from the paper reports six studies. While these are discussed in the literature review, it is not made clear why another meta-analysis of the subject is called for. Or to state it differently, Why did the authors do this meta-analysis given that there were already several meta-analyses published in the literature? This is a reallly important point and the authors need to address this.

Table 1. Previous meta-analysis on the employment effect of minimum wages.

	Author(s)	*Year*	Country(ies) examined	Studies in the meta-sample	Studies' time-period
1	Card and Krueger	1995	USA	15	1970-1992
2	Doucouliagos and Stanley	2009	USA	64	1972-2007
3	Boockman	2010	Industrial countries	55	1995-2009
4	Nataraj *et al.*	2014	Low-income countries	17	1991-2011
5	Leonard *et al.*	2014	UK	16	1994-2012
6	Belman and Wolfson	2014	Different countries	23	2000-2013

2. The authors divide estimates into two groups, elasticities and coefficients. However, for both elasticities and coefficients, it is very important that the respective estimates measure the same thing. What is/are the employment variables used in the original studies? Is it ln(total employment)? Is it employment rates? Is it relative employment rates? More elaboration of the underlying dependent variables needs to be provided. If the case cannot be made that the original studies are measuring the same thing, then the author needs to use partial correlation coefficients.

3. In FIGURE 2, the authors show that the range of coefficient values range from below -20 to above +20. What is the interpretation of these coefficients? What are they measuring?

4. In the third full paragraph of the Introduction, the authors state that one of the key motivations for doing this meta-analysis is to determine whether the minimum wage literature has been affected by Doucouliagos and Stanley's 2009 *British Journal of*

Industrial Relations paper (henceforth D&S). If this is intended to be a serious research question, then it should get put to an hypothesis test

How would one do that? One possibility is to divide the literature of original studies into two samples: those that cite D&S and those that do not (and maybe another category for papers that cite Card and Krueger). And then test whether the associated dummy variable is significant. The authors do not do this. I suspect they don't do it because it would be a very large task to include so many papers. Fair enough. But then I don't think they should present the D&S study, and its possible subsequent effects, as a key motivation for doing the paper because they don't put their paper in a position to directly address this question.

5. (Page 5) The authors state that they restrict their meta-sample to studies published in academic journals. They do not include unpublished papers or papers that appear in other publication outlets. I am not an meta-analysis expert, but I think it is standard practice to include unpublished research along with published research and then include a variable in the multiple MRA that tests whether these sets of studies are different. The problem with omitting unpublished research is that more recent studies will not have had enough time to make it through the publication process and appear as published studies. This is particularly problematic for a meta-analysis that is focussed on studying the most recent literature.

6. TABLE 4 reports four different estimation methodologies. This table is confusing to me. Notice that the first column reports OLS estimates. But the variables have all been weighted by SE. Thus, it is my understanding that this is WLS in the sense of Stanley and Doucouliagos (https://ideas.repec.org/p/dkn/econwp/eco_2013_1.html)? However, I am then confused about Columns 3 and 4. Are the REML and WLS estimators applied to the variables already weighted by SE? What then are the "weights" in the WLS model since the variables are already weighted by SE? It would be very helpful if the authors could explain these procedures in more detail, so the reader could have a better sense if they are appropriate.

7. Another issue has to do with different numbers of estimates per study. Across the 45 studies, some have as few as one or two estimates. One study has 258 estimates. The average number of estimates per study is 32. With such a wide diversity across studies, one has to be somewhat concerned that the results are driven by a relatively small number of studies with a disproportionately large number of estimates. Havranek and Irsova (2015) suggest in these cases that one weight by the inverse of the number of studies. The authors might give some thought as to whether this is a more appropriate way of handling unbalanced data such as theirs.

8. In TABLES 6 and 7, the authors interpret their 1/SE term as an estimate of the overall effect of minimum wages on employment. This is not correct. This is the estimated value of the effect of minimum wages on employment when all the explanatory variables take the value 0. For example, TABLE 7 is reproduced below. To recover the original equation with the estimated effect as the dependent variable, one needs to mutiply all the variables (including the constant term) by SE. Then (1/SE) "becomes" the constant term. However, the meaning of the constant term changes depending on which variables are included in the equation. Since the variables in Columns 1– 4 are different, the interpretation of the constant term is different, and thus cannot be a measure of overall effect.

Table 7. Multiple Meta-Regression-Analysis using Coefficients (Dependent variable: t-stat).

	Using General-to-Specific Methodology			
	Column 1 OLS	***Column 2 Robust***	***Column 3 REML***	***Column 4 WLS***
1/SE	-0.083*** (0.028)	-0.025*** (0.009)	-0.083*** (0.029)	-0.017*** (0.003)
Endogen/SE	-0.192*** (0.026)	-0.233*** (0.015)	-0.192*** (0.027)	-0.256*** (0.024)
USE/SE		0.035** (0.015)		
Europe/SE	0.061** (0.028)		0.061** (0.029)	
Youth/SE	-0.220** (0.111)	-0.281*** (0.042)	-0.222* (0.114)	
FE/SE	0.022*** (0.003)	0.026** (0.010)	0.022*** (0.003)	0.020*** (0.003)
Educ/SE	0.082*** (0.028)	0.027* (0.015)	0.083*** (0.029)	0.018*** (0.004)
Kaitz/SE	0.010** (0.005)		0.010** (0.005)	0.002*** (0.004)
Dummy/SE	0.345*** (0.130)	0.293*** (0.043)	0.346** (0.133)	
Retail/SE		-0.806** (0.332)		
FoodDrink/SE	-0.412** (0.189)	-0.470*** (0.046)	-0.418** (0.194)	
OtherIndustrySE	-0.338** (0.130)	-0.285*** (0.043)	-0.339** (0.134)	
Constant	0.179 (0.294)	0.305 (0.188)	0.226 (0.320)	-0.975 (0.731)
Observations	484	484	484	484
R-squared	0.477	0.468	0.461	0.522