COMMENTS ON "AN EMPIRICAL ASSESSMENT OF THE EMPLOYEE FREE CHOICE ACT: THE ECONOMIC IMPLICATIONS." BY ANN LAYNE-FARRAR[*]

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ABSTRACT

"An Empirical Assessment of the Employee Free Choice Act: The Economic Implications" by Ann Layne-Farrar provides empirical evidence concerning the impact on the U.S. unemployment rate and employment-to-population ratio should the highly controversial Employee Free Choice Act (EFCA) become law. The paper has received widespread public attention and its analysis is being used in the debate surrounding the EFCA. This commentary raises three important questions about the empirical analysis: Are the predictions presented in the study, concerning the effects of the EFCA, realistic? Is the research design likely to identify the effects of the EFCA? Why do the data used in the analysis cover such a short time period? The discussion suggests the empirical results presented in Layne-Farrar (2009) should be viewed with considerable skepticism.

OVERVIEW AND MOTIVATION

An Empirical Assessment of the Employee Free Choice Act: The Economic Implications", by Ann Layne-Farrar, was released on the Social Sciences Research Network as an unpublished working paper in March 2009. The Employee Free Choice Act (EFCA) proposes reforms to the National Labor Relations Act that would introduce a card check union recognition procedure, permit first contract arbitration and increase penalties for unfair labour practices. This controversial legislation was passed by the House of Representatives in March 2007 and is now before the Senate. Layne-Farrar (2009) provides empirical evidence that the implementation of the EFCA would increase the unemployment rate and decrease the employment-to-population ratio. Layne-Farrar's testimony to the Senate Committee was based on this

research.[1] Results from the study have been cited in the media (for example, the Wall Street Journal,[2] In These Times[3]). Evidence from the report has been used by groups opposed to the EFCA[4] to support their position (for example, the Chamber of Commerce[5] and the National Association of Manufacturers[6]).

Layne-Farrar (2009) is not published in an academic journal and therefore has not been subject to peer-review. When a paper is reviewed, two or three scholars, familiar with the area, evaluate the research and provide comments. To ensure impartiality in the review process the author does not know the identity of the reviewers - in some cases reviewers also do not know the identity of the author. The editor of the journal uses the reviewers' assessments (and the author's response to them) to determine whether or not to publish the paper. The review process is an important component of the research cycle; it provides valuable feedback to the researcher and functions as a screen to ensure there are no major errors in the research. When a paper is accepted for publication in an academic journal it is a signal that the research is considered to be of acceptable quality. It is troubling that this paper by Layne–Farrar, which addresses an important and very controversial public policy issue and has received such widespread public attention, has not passed through a peer-review process particularly when the research has been funded by an interest group.

The purpose of these comments is to provide a critical evaluation of Layne-Farrar (2009). This parallels the review process Layne-Farrar (2009) might have undergone.[7] I focus on three questions concerning the empirical analysis. First, if we accept the empirical analysis at face value, are the predictions based on scenarios where lagged union density increases by 5 to 10 percentage points *in a single year* realistic? The answer is clearly "no" -- this means predictions based in these assumptions are of little interest. Second, is the research design of the study likely to identify the impact of changes in the legal environment associated with the passage of the EFCA on the macroeconomic variables of interest? The answer is "no" – the estimated coefficient on lagged density is unlikely to accurately reflect the impact of legislative change on the macro outcomes of interest. Therefore to interpret it as such and use it to make predictions concerning the impact of the EFCA is incorrect. Third, why do the data in the analysis cover such a short period of time? High quality data from Statistics Canada are readily available for all variables of interest to 2007 – more information is better than less, these data should be used in the analysis. I begin by providing a summary of Layne-Farrar (2009). I then proceed to discuss each question in turn.

SUMMARY OF LAYNE-FARRAR (2009)

The primary objective of Layne-Farrar (2009) [hereafter referred to as LF] is to provide empirical evidence concerning how changes in the legal

environment that would occur if the EFCA were passed are likely to affect the unemployment rate, the employment-to-population ratio and the net investment rate in the United States.

The first section of the paper describes the essential features of the Act and critiques three reasons proponents of the EFCA give for supporting the Act. The second section examines some literature on how unions affect the overall economy. The third section presents empirical evidence pertaining to the impact of the EFCA on the three macroeconomic variables of interest.

Since these comments focus on the third section of the paper I describe the empirical methodology and results in more detail. The author argues that the introduction of card check and first contract arbitration (FCA), associated with passing the EFCA, would increase union density and that changes in union density can affect the unemployment rate, the employment-to-population ratio and net investment. The author also makes a case that evidence based on Canadian experience is relevant for informing U.S. policy decisions. The empirical analysis proceeds to estimate regressions, using Canadian data, which examine the relationship between lagged union density and the three macroeconomic variables of interest. The regression results are used to make predictions about how the introduction of the EFCA is likely to affect the U.S. unemployment rate and the U.S. employment-to-population ratio and the implications for the levels of unemployment and employment.

The empirical analysis uses Canadian cross-sectional time-series data for ten provinces from 1976 to 1997. A number of control variables are included. The estimations are performed using Ordinary Least Squares (OLS), Random Effects (RE) and Fixed Effects (FE) estimation. Standard errors take into account heteroskedasticity and other error-relationships that may exist. The results show that lagged union density has a statistically significant positive effect on the unemployment rate, a statistically significant negative effect on the employment-to-population ratio and no statistically significant effect on the net investment rate. The author uses the results to predict the likely effect of a 5 percentage point or 10 percentage point increase in lagged union density (between 2007-2008) on unemployment rates, unemployment, employment rates and employment in the U.S. in 2009 [Table 6 (pp. 28)]. The predictions indicate that for these changes in lagged union density there would be very substantial increases in the unemployment rate (1.49 to 3.53 percentage points) and very substantial decreases in the employment-to-population rate (.86 to 2.27 percentage points) and corresponding detrimental effects on the levels of unemployment and job creation. The author recommends against passing the EFCA because of these effects.

ARE THE PREDICTIONS, BASED ON SCENARIOS WHERE UNION DENSITY INCREASES BY FIVE OR TEN PERCENTAGE POINTS IN A YEAR REALISTIC?

It is likely that the introduction of a card check union recognition procedure will increase union density. However it is unrealistic to expect that if the EFCA were passed union density would increase by 5 or 10 percentage points in one year.[8]

EFCA is likely to Increase union density

There is consensus in the Canadian empirical literature (Martinello (2000), Johnson (2002), Riddell (2004), Slinn (2004)) that the type of union recognition procedure has a substantial, statistically significant influence on certification success. Based on this evidence a change from mandatory votes to card check, as proposed in the EFCA, is likely to increase the probability that a union succeeds in obtaining certification and, as a result, union membership will increase and so too, union density.[9] There is some evidence that a change from mandatory votes to card check increases application rates (Johnson (2004) pp.360); this also contributes to increasing union membership and density. One might argue that the introduction of First Contract Arbitration, by increasing the probability that a union achieves a first agreement, increases the expected benefits to unions (and bargaining unit members) of unionization and therefore could result in increased application rates. There is no empirical evidence to support a link between FCA and application rates. Evidence that exists shows that FCA has no statistically significant impact on certification success rates (Johnson (2002) pp. 356). Therefore any effect on union density associated with the introduction of EFCA is more likely to operate through the introduction of card check rather than the introduction of FCA.

Increases in Union Density of 5 or 10 percentage points in a short period of time are unrealistic

It is important to recognize that application rates and certification success rates affect the *flow* of union membership and the flow in any one year is very small relative to the existing *stock* of union members. Therefore in a short period of time increases in application or success rates (even if large in magnitude) do not have a substantial impact on union density. [10] However the accumulated affect of such changes on union density, over a long period of time can be considerable.

Johnson (2004) presents simulations, based on Canadian experience, that examine how changes in union recognition procedures in Canada have affected

the Canada-U.S. union density gap. In particular simulations are presented that estimate what Canadian union density would have been if mandatory votes or if card check had been in effect in all jurisdictions from 1980 to 1998. The simulation analysis holds 'all else constant' so simulated density reflects only the difference in union recognition procedures.[11] A comparison of these simulations isolates how differences in union recognition procedures affect union density. This comparison was not made in the Johnson (2004) because that paper was addressing a different research question. The plot below shows simulated union density under each of the two recognition procedures. The plot reveals that card check is associated with higher union density; the difference in union density is initially very small and grows over time. By 1998, *under the assumption that each type of union recognition procedure has been in effect for 18 years,* simulated union density under card check is 5.97 percentage points higher than simulated union density under mandatory votes.
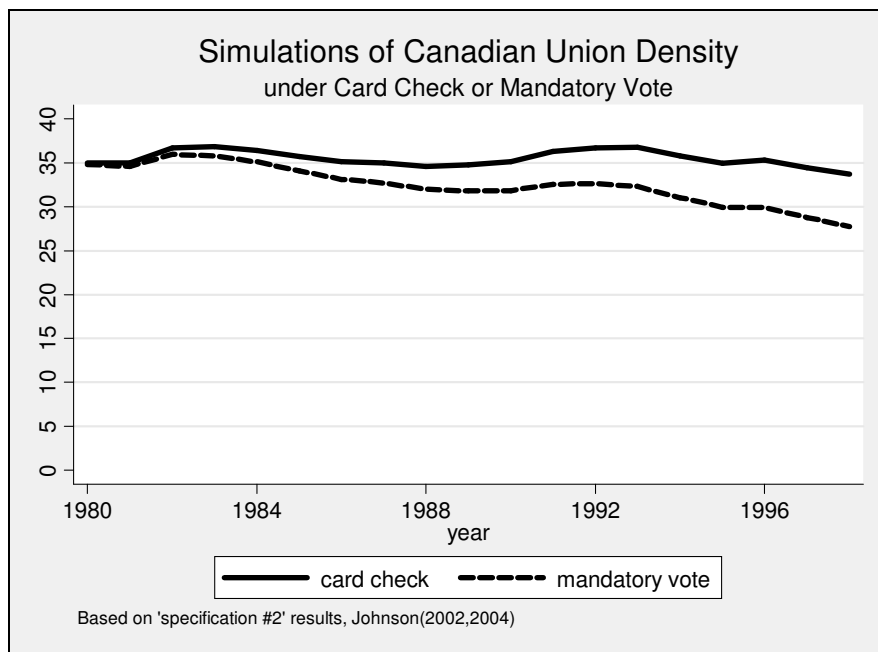

Table 1 (below) shows the difference in union density between card check and mandatory vote simulations from 1980 to 1998 and how the difference in union density changes from year-to-year. The table reveals that the largest change in union density in any single year is .44 percentage points.

Differences in labour law governing mandatory votes and unfair labour practices in Canada, compared to the changes proposed in the EFCA, mean that

these results, based on Canadian experience, likely underestimate the effect of a change from mandatory votes to card check on union density in the U.S. if the EFCA is passed.[12] The simulation results show that the change in union density, associated with the difference in union recognition procedures, in any one year is never more than .44 percentage points. Even if this were doubled, to take into account differences in labour law between the U.S. and Canada, the change in union density, would be less than 1 percentage point. It is hard to imagine that U.S. union density would increase by 5 to 10 percentage points *in a single year* in a response to the introduction of the EFCA.

Table 1:
Difference in Simulated Union Density in Canada 1980 to 1998*

Year	Cards-Vote	Difference from year-to year
1980	.16	.16
1981	.44	.28
1982	.74	.30
1983	1.02	.28
1984	1.3	.28
1985	1.65	.35
1986	1.98	.33
1987	2.28	.30
1988	2.58	.30
1989	2.93	.35
1990	3.27	.34
1991	3.71	.44
1992	4.09	.38
1993	4.46	.37
1994	4.76	.30
1995	5.02	.26
1996	5.38	.36
1997	5.69	.31
1998	5.97	.28
Total		5.97

*Based on results from Johnson (2004).

Most of the predictions of the impact on the unemployment rate and employment-to-population ratio presented in LF are based on scenarios where lagged union density increases by 5 or 10 percentage points *in a single year*. In choosing these values Layne-Farrar refers to predictions made by; Friedman –

that in response to the EFCA union density would increase by at least 5 percentage points, Sterne- that union membership would increase by 1.5 million each year for the next 10-15 years, and Carter and Lotke (2007) that union density would increase by 10 percentage points (LF, pp. 23). None of these predictions suggest that union density would increase by 5 or 10 percentage points *in a single year*. Sterne's prediction implies that by 2018 union density would have risen to 23% (based on Layne-Farrar's calculations (LF, pp. 43-44)) -- an increase of 15 percentage points over 10 years – on average 1.5 percentage points per year. Carter and Lotke's (2007) prediction is based on Johnson (2004) and therefore refers to union density comparisons after union recognition procedures have been in place for 18 years. In these simulations the largest increase in union density in a single year is .44 percentage points. Friedman's prediction does not specify a time frame.

If the EFCA is passed the introduction of card check can be expected to increase union density. However changes in union density occur slowly and any substantive increase in density would only be evident over a long period of time. Even if one accepts the author's interpretation of the empirical results, predictions of the likely impact of the change in the legal environment associated with the introduction of EFCA on the U.S. unemployment rate and employment-to-population ratio in 2009 based on scenarios where the EFCA causes union density in 2007-08 to increase by 5 to 10 percentage points are unrealistic and misleading.

IS THE RESEARCH DESIGN ABLE TO IDENTIFY THE EFFECTS OF THE EFCA ON THE MACROECONOMIC OUTCOMES OF INTEREST?

It is unlikely that the empirical analysis has succeeded in its stated goal of identifying the influence of changes in the legal environment associated with the introduction of EFCA (namely card check and first contract arbitration) on the macroeconomic variables of interest.

The author assumes that the introduction of EFCA will increase union density (which, as discussed above, is quite likely). Then lagged density is used as the key explanatory variable in order to measure the impact of changes in the EFCA 'indirectly' on each of the macroeconomic variables of interest. There are a number of serious problems with the analysis.

First, while as noted above, the legal environment may affect union density the link is not a rapid one. On an annual basis one would expect that any effects of a change in the legal environment would be dwarfed by the myriad of other factors that also affect union density – some of these are mentioned in LF - structural changes, changing attitudes toward unions and 'other' changes in the economic environment (LF, pp. 5-7).

Second, many of the other factors that influence union density may also affect the macro variables of interest. If these factors are left out of the analysis the coefficient on union density will be 'biased' -- the size/sign of the coefficient on union density will reflect not just the influence of the legislative environment but will also reflect the influence of these other factors. In an attempt to address this issue the empirical analysis includes province fixed effects and year effects and other observable variables. Even so I am not convinced that establishing that a statistically significant relationship exists between lagged union density and the various macro outcomes isolates the impact of the legislative environment on those variables. The empirical analysis does not estimate specifications that include province-specific time trends. Province-specific time trends capture unobserved factors that change gradually over time within a jurisdiction such as structural change, attitudes towards unions, or 'other economic factors' that, as noted above, have been identified as potential explanations for changes in union density and may also influence the macroeconomic variables.

Given change in the legislative environment likely has a weak influence on union density, is only one of many factors that affect union density, and the estimated coefficient on lagged union density is likely to be contaminated by omitted variable bias I find it hard to believe that the estimated coefficient on lagged union density accurately reflects the influence of change in the legislative environment on the unemployment rate, the employment-to-population ratio or the net investment rate.

Though not its stated goal, the results of this paper are also being used as evidence that increases in lagged union density have deleterious effects on unemployment and employment. Once again I am not convinced that the impact of lagged union density on these variables has been identified. The presence of omitted variable bias means that estimating the relationship between lagged union density and the dependent variable(s) is not able to isolate the effect of changes in union density on the variables of interest. Demographic change and the change in industrial structure affect employment and unemployment directly and also affect union density. These variables have not been adequately taken into account in the analysis.

WHY DOES THE EMPIRICAL ANALYSIS USE DATA FOR A SUCH A SHORT PERIOD OF TIME?

I do not understand why the analysis has been restricted to the period from 1976 to 1997 - the inclusion of lagged variables further restricts the number of years covered in some specifications. LF claims data are not available past 1997 (LF pp. 20, footnote 58). However data on all variables used in the unemployment rate and employment-to-population rate regressions are readily available from Statistics Canada for a longer period that extends at least to 2007.[13]

Annual data on union membership by province are available from *Perspectives on Labour and Income* to 2008.[14] It is odd that the data used in LF end in 1997. Data are not available from any source on union membership by province in 1996 – in order to extend the data to 1997 the author linearly extrapolates the data on union membership for both 1996 and 1997 (LF pp. 35)). Yet does not include the period from 1998 where data on union membership and other variables are available.[15] It is unclear why so much information is excluded from the analysis.

CONCLUSION

In sum, the discussion of the three questions raises serious concerns about the empirical analysis presented in Layne-Farrar (2009). First, even if the results are taken at face value (and the identification problem suggests this is not possible), the implications of the results for the unemployment rate and the employment-to-population ratio based on predictions of union density rising by 5 to 10 percentage points in the period of a year are unrealistic and misleading. Second, a research design that relies on lagged union density to identify the impact of EFCA is unlikely to isolate the effect of legislative change on the unemployment rate or the employment-to-population ratio. If this is the case, it is not possible to use the empirical results to make predictions concerning the likely impact of the EFCA on the macro variables of interest. Finally, it is very puzzling that the analysis does not examine a longer period of time. These issues suggest the empirical results in Layne-Farrar (2009) are at minimum questionable and are likely fundamentally flawed. Under these circumstances the results and their interpretation should be viewed with considerable skepticism.

NOTES

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*   I would like to thank Mike Veall for reading these comments and providing valuable feedback. Any errors that remain or opinions expressed are the author's alone.
1.   The testimony was given to the Senate Committee on Health, Education, Labor and Pensions, Hearing on Rebuilding Economic Security: Empowering Workers to Restore the Middle Class, March 10, 2009, http://help.senate.gov/Hearings/2009_03_10/Layne-Farrar.pdf.
2.   Kris Maher "Economists Debate Pro-Labor Measure." Wall Street Journal, March 2, 2009 http://online.wsj.com/article/SB123595413617305463.html
3.   Art Levine, "Shilling on the Corporate Dollar." In these Times, May 31, 2009 http://www.inthesetimes.com/article/4461/shilling_on_the_corporate_dollar/
4.   The research itself is funded by the *Alliance to Save Main Street Jobs* a group with close ties to the business community. The Alliance includes the American Hotel and Lodging Association, the Associated Builders and Contractors, the International Council of Shopping Centers, the Real Estate Round Table, the Retail Industry Leaders Association and the U.S. Chamber of Commerce.
5.   http://www.chamberpost.com/2009/03/study---efca-would-eliminate-600000-jobs-in-2010.html
6.   http://www.shopfloor.org/2009/06/09/card-check-600000/
7.   These comments are limited to the empirical analysis and do not purport to provide a complete review of either the empirical analysis or the paper as a whole.
8.   Most predictions in LF are based on scenarios where union density is assumed to increase by 5 or 10 percentage points in a single year. Occasionally LF considers the case where union density increases

by 3 percentage points (see the abstract in Layne-Farrar (2009)). The simulation results presented below suggest that even an increase of one percentage point in union density (as a result of the introduction of card check) in a given year would be high.

9. Assuming net union membership growth keeps pace with labour force growth.
10. Especially when it is considered that union density is measured relative to some measure of the labour force.
11. More precisely the simulations are based on a union membership stock-flow growth accounting identity. For each simulation the application rate and certification success rate is adjusted to reflect presence of either mandatory vote or card check. These rates are adjusted based on Johnson (2002) where the empirical results from two specifications are presented. In Johnson (2004) simulations based on both specifications are estimated. For simplicity I present only simulation results from specification #2.Results based on specification #1 show that after 18 years simulated union density is 4.24 percentage points higher under card check than under mandatory vote. These results are shown in the Appendix. Other factors in the identity that affect union membership are fixed at their actual values in each year. The results are slightly different from what can be inferred from Johnson (2004).
12. Mandatory votes in Canada occur under strict time limits between filing the application for certification and the vote (5-10 days depending on the jurisdiction). This is not true in the U.S. In Canada allegations of unfair labour practices are dealt with by the Labour Board in the jurisdiction and are rarely processed in the courts. This means it is faster and less expensive to process such complaints in Canada compared to the U.S.
13. I was unable to determine the time period over which the net investment rate analysis could be conducted. CANSIM series numbers are not provided in LF. In general the variables and data in LF are not well documented. For example, neither a precise definition of union density nor the data sources used to construct union density- the critical explanatory variable in the analysis- are provided (LF, pp. 35).
14. Data on union membership by province for 2007 and 2008 are available from *Perspectives on Labour and Income* http://www.statcan.gc.ca/pub/75-001-x/pdf/topics/unionization2008.pdf (page 6) and can be backdated to 1987 (not including 1996) from this source. Data prior to 1987 are available from the Corporations and Labour Unions Returns Act (CALURA).
15. It should be noted that no consistent data on union membership by province exist from 1976 to 2008. Data are available from CALURA from 1976 to 1995 with a change in the definition of union membership in 1983. Data from 1997 to 2008 are available from the Labour Force Survey (LFS). No data are available for 1996. If year effects are included in the analysis changes in the definition of union membership or data source can be taken into account.

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Statistics Canada. *Perspectives on Labour and Income.* Catalogue no. 75-001-XPE. Union membership data are presented annually in the Autumn issue.

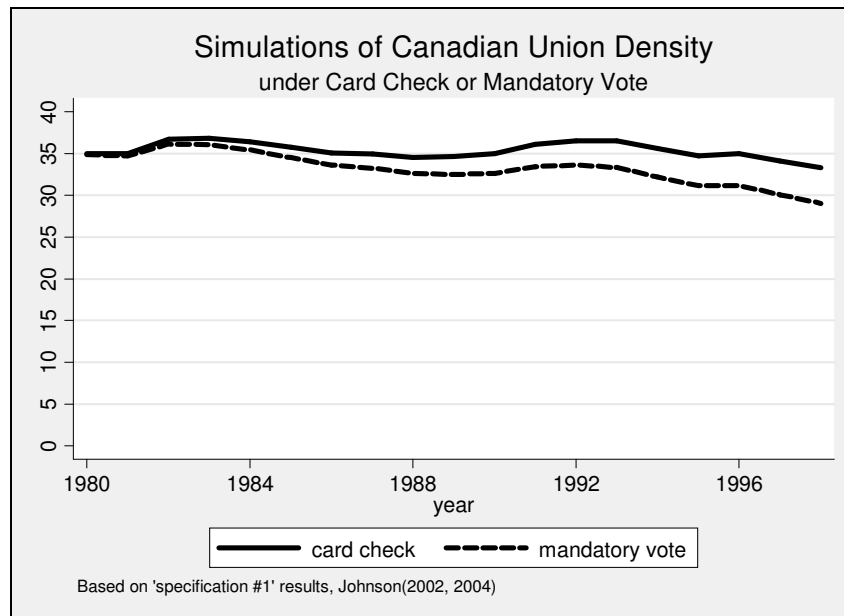**Appendix One:**
Additional Simulation

Table A-1:
Difference in Simulated Union Density in Canada 1980 to 1998*

Year	Cards-vote	Difference
1980	.12	.12
1981	.34	.22
1982	.56	.22
1983	.76	.20
1984	.97	.21
1985	1.23	.26
1986	1.47	.24
1987	1.67	.20
1988	1.9	.23
1989	2.14	.24
1990	2.38	.24
1991	2.68	.3
1992	2.95	.27
1993	3.20	.25
1994	3.41	.21
1995	3.59	.18
1996	3.85	.26
1997	4.05	.20
1998	4.24	.19
Total		4.24

*Based on Specification #1 from Johnson (2002, 2004)