FuelWatch: evidence-based-policy or policy based evidence?

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Abstract

Experience from the United Kingdom and the United States suggests that expert evidence is often reshaped and repackaged by government's so that it supports existing policy rather than informing policy decisions.

The Australian government based its decision to introduce FuelWatch on evidence in the form of econometric work by the ACCC. This paper asks two questions about that decision. First, was the policy shaped by the econometric evidence or was the government's presentation of the evidence shaped by the pre-determined policy? Second, is the econometric evidence sufficiently robust as to support the FuelWatch policy?

I find that some of the facts suggest that evidence was reshaped and repackaged to support the FuelWatch policy. I also find that the ACCC analysis was not robust. Specifically, they study the nominal retail margin when economic theory suggests that analysis should focus on the real retail margin to producers.

Using data digitized from a graph in the ACCC report I redo the econometric analysis and find that the evidence no longer unambiguously supports the FuelWatch policy.

The ACCC claim that their analysis is robust because it has been subject to scrutiny within the ACCC and by Treasury but such claims of robustness cannot be verified because they refuse to release the data for public scrutiny.

Publication of data and analysis underpinning government decisions and independent review of econometric work provides a more credible evidence base for future policy decisions.

1 Introduction

Stilgoe, Irwin and Jones (2006) provide a detailed discussion of evidence based policy in the United Kingdom and the United States that sets the context for this paper. They document cases where expert evidence was often reshaped and repackaged by government's so that it supported existing policy rather than informing policy decisions.

The decision to introduce a national FuelWatch scheme raises a number of issues about the interplay between evidence and policy in Australia; see Harding (2008a,b,c).

In this paper I focus on just two questions. First, was the policy shaped by the econometric evidence or was the government's presentation of the evidence shaped by the pre-determined policy? Second, is the econometric evidence sufficiently robust as to support the FuelWatch policy?

2 Background to FuelWatch and the 2007 ACCC report on petrol pricing

The national FuelWatch scheme which was announced on April 15 and is to start on 15 December 2008 is based on the Western Australian government's scheme of the same name that was introduced on 2 January 2001.

2.1 The 2007 ACCC report on petrol pricing

Petrol pricing has been a contentious issue in Australia and has been the subject of a large number of inquiries. In many of these inquiries the ACCC has voiced suspicion that the Western Australian FuelWatch scheme might lead to increases in the average price of petrol. In late 2007 the ACCC delivered a report on Petrol pricing that was very cautious about FuelWatch stating that[1]

> Assessing any system in the style of FuelWatch that incorporates increased price information and price commitment requires great care due to the potential for anti-competitive as well as pro-competitive benefits. Although the inquiry gained a preliminary assessment of the impacts in Perth from the scheme, it is clear that a case–by–case approach is required to assess the potential impacts on competition of any similar scheme. In particular

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[1]ACCC, 2007, *Petrol prices and Australian consumers—report of the ACCC inquiry into the price of unleaded petrol*, 18th December 2007

the ACCC has not analysed the application of such a scheme to rural and regional areas. Apparent extra considerations here include the increased potential for anti-competitive effects due to the more concentrated nature of the market, the extra cost in initialisation, administration and compliance and how to decide which areas to cover. In summary, there are potential benefits and potential costs of adopting a national price commitment arrangement that need to be carefully considered.

Appendix S of the ACCC report provides an econometric analysis of the Western Australian FuelWatch scheme. Changes to the relevant laws in 2006 and at the end of 2007 provided the ACCC with new powers to subpoena documents, data and witnesses.[2] Mr. Graeme Samuel, Chairman of the ACCC explained the propose of that econometric work to the Senate Estimate inquiry

There has been an enormous focus on one particular half-page of our report, the econometric analysis and appendix S of that report. The econometric analysis which was described in appendix S was undertaken with one purpose in mind, and that was to determine whether or not FuelWatch had caused any harm to Perth motorists since its introduction. It was designed to assess whether FuelWatch had caused any increase in prices to Perth motorists.

Source: Senate Committee Hansard, Standing Committee on Economics, Estimates, Thursday 5 June 2008.

The ACCC claim that their analysis is robust because it has been subject to scrutiny within the ACCC and by Treasury.[3] However, neither the Senate Estimates hearing nor the subsequent Senate Economics Committee hearing could obtain a comprehensive description of the actions taken by Treasury to scrutinize the ACCC econometrics.

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[2]Mr Samuel, Chairman of the ACCC observed that,

the powers that were conferred upon us by then federal Treasurer, Peter Costello, powers of subpoena, powers of ability to obtain evidence from Informed Sources that had never been available to us before and powers to obtain data that enabled us to undertake econometric modelling.

[3]See Senate Hansard (Standing Committee on Economics) Estimates 5 June pages E29 and following.

In many fields of endeavour information is not viewed as being evidence unless the results can be replicated independently - what this means in practice varies but a minimum requirement is that the data be public and the paper must have been subject to independent public scrutiny. Neither of these minimum requirements were met in the case of FuelWatch.

Experience with 'evidence based policy' making in the United Kingdom (UK), see Stilgoe, Irwin and Jones (2006), confirms that the absence of public scrutiny often led to government agencies filtering out information that was inconsistent with government policy. The UK experience also suggests that internal review procedures and even review by other government agencies have little value in protecting against such 'policy-based-evidence'.

2.2 The government decision to introduce FuelWatch

On 15 April the Australian Cabinet decided to implement a national Fuel-Watch scheme. The press release announcing that decision said that[4]

> Econometric analysis undertaken by the ACCC last year concluded that under the WA FuelWatch scheme the "relevant weekly average price margin was around 1.9 cpl [cents per litre] less on average".

Initially the econometric analysis was designed to reassure the ACCC that Fuel watch was not causing WA motorists to pay higher prices for petrol.[5] Now the Government has transformed its use of the econometric analysis to support a conclusion that FuelWatch had reduced the price of petrol to WA motorists. This change in use is the first evidence that we have a case of 'policy-based-evidence' rather than 'evidence-based-policy'.

On 29 April the ACCC released a document "Further FuelWatch econometric analysis undertaken by ACCC". The conclusion of that document is as follows:

> The purpose of this econometric analysis has been to satisfy the ACCC that the introduction of a FuelWatch scheme nationally would not, based on the experience in Western Australia, lead to consumers paying higher prices for petrol.

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[4]The Prime Minister also observed that

"The National FuelWatch Scheme is a key part of the Rudd Government's response to the ACCC report into the price of unleaded petrol."

[5]See Graeme Samuel, Senate Hansard (Economics Committee), Estimates 5 June page E20.

From the econometric analysis, on a conservative basis, the ACCC can say that there is no evidence that the introduction of FuelWatch in Western Australia led to any increase in prices and it appears to have resulted in a small price decrease overall.

The ACCC conclusion up until the 12 words "and it appears to have resulted in a small price decrease overall" are unexceptional. They represent a competition authority doing its job by reassuring the public that the extension of a scheme that it had previously viewed as possibly anti-competitive was unlikely to hurt consumers. The only issue that one could take with this statement is that the econometric analysis released by the ACCC may not be of sufficient quality or sufficiently well explained to support the statement. I return to this issue later in the paper.

The last 12 words in the ACCC statement go well beyond the ACCC's brief and provide comfort to a government that was in political difficulty over its decision to introduce a FuelWatch scheme. It is this part of the ACCC's conclusion that supports the contention that it provided 'policy-based-evidence' rather than the reverse.

3   Assessing the ACCC's econometric analysis

Objective criteria for determining a minimum standard of what constitutes good econometrics can be extracted from instructions that Professor Kenneth D. West, Ragnar Frisch Professor of Economics, at the University of Wisconsin gives to his students as a guide,

> The objective of your project should not be to calculate many numbers, nor to perform a long series of tests, but rather to learn something about some interesting parameter(s). The paper will be evaluated with respect to clarity of exposition, thoroughness of description of the data and methods, competence in using the methods, and thoughtfulness in interpreting results. Complexity of economic theory and econometric methods does not carry weight in the evaluation. Appropriateness of the theory and methods to the project does carry weight. So does good writing.[6]

Public sector econometric analysis that is intended to form a basis for evidence based policy should aim to exceed these criteria.

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[6]Source: http://www.ssc.wisc.edu/~kwest/teaching/econ880/econ880%20syllabus.pdf

3.1 The ACCC data

The ACCC constructed a series that represents the difference between the nominal retail margin on petrol in Perth $\left(m_t^{Perth}\right)$ and the nominal retail margin on petrol in the eastern capital cities m_t^{East}. The ACCC described this data as follows

> The data series was constructed using pricing information supplied by Informed Sources and Platts. The series tested was a measure of price margin that removes factors from the retail price that are beyond the scope of FuelWatch to affect, such as net taxes, fuel quality premiums and ex-refinery petrol prices. ACCC report p375.

Details of how the difference in the nominal price margin, which I denote as m_t, are calculated are provided on page 375 of the ACCC report and the 'formulas' are set out below.

$m_t^{Perth} = (\text{Retail price-lagged Mogas95 price-net taxes - fuel quality premium})_{\text{Perth}}$

$m_t^{East} = (\text{Retail price-lagged Mogas95 price-net taxes - fuel quality premium})_{\text{Average of eastern capitals}}$

$$m_t = m_t^{Perth} - m_t^{East}$$

Harding (2008b) discusses the aspects of the ACCC's description of how the data is constructed that are incomplete. Most importantly, nowhere in the ACCC report is it acknowledged that nominal price margins are used in the econometric analysis whereas the relevant body of economic theory relates to real price margins. For later use I define the east-west difference real margin to service station owners $\left(rm_t^P\right)$ and to consumers $\left(rm_t^C\right)$ as follows

$$rm_t^P = \frac{m_t}{P_t^F}$$

$$rm_t^C = \frac{m_t}{P_t^C}$$

Where P_t^F is the price index for fuel in the CPI and P_t^C is the All groups headline measure of the consumer price index.

What does economic theory say about the properties of these three series? Exit and entry of service stations is the economic process that can be expected to stabilise the real producer margin so that it fluctuates, without exhibiting a time trend, about a 'constant' that reflects the real retail margin at which two conditions are met

- entry of an additional service station is not profitable; and

- exit by one service station would make entry by another profitable.

I have put 'constant' in inverted commas for three reasons. First, changes in a variety of factors including the real interest rate, real (relative to petrol prices) wages, and the real rental rate's on land and capita will influence the real retail margin on petrol. Second the demand for petrol is heavily influenced by the calendar and this will cause the retail marginal to fluctuate with the calendar. The third reason is that if there is imperfect competition then it is possible that the petrol stations set prices that fluctuate through coordination.

If the real retail margin to service stations is approximately 'constant' then the nominal margin should vary with the price of fuel P_t^F. Specifically, the variance of the nominal margin should be proportional to the square of P_t^F. This feature makes the nominal margin (m_t) unsuitable for econometric analysis.[7] A similar problem arises with rm_t^C as its variance will be proportional to the square of $\frac{P_t^F}{P_t^C}$.

Thus, the variable that is suitable for econometric analysis is the east-west difference in the real producer retail margin for petrol $\left(rm_t^P\right)$. Factors such as interest rates and wage rates which are common between Perth and the eastern capital cities should cancel out when this margin is calculated. Thus rm_t^P should be determined primarily by the following factors

- differences between Perth and the eastern capitals in calendar effects;

- differences between Perth and the eastern capitals in the effects of the new tax system that was introduced in 1999/2000[8]; and

- the effects of FuelWatch.

Once these factors are controlled for the residual should be comprised of

- Measurement error arising because the data was digitized;[9]

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[7] The essence of the problem is that P_t^F is almost certainly integrated of order one so that the variance of the nominal margin will be an integrated process. One can see this feature from a graph of the nominal margin.

[8] Here it is important to understand that the new tax system involved much more than the introduction of the GST. It also involved changes to capital gains taxes and to a range of other taxes. Differences between states in the physical size of the block of land on which service stations are located, differences in the storage tanks and number of bowsers per service station and differences in the income distribution of the population could interact with the changes in the tax system to have differential effects on the petrol retail margin.

[9] Harding (2008a) provides evidence that the measurement error is small.

- independent and identically distributed shocks that represent primarily differences between Perth and the eastern capitals in petrol demand shocks

- a component that reflects differences between Perth and the eastern capitals in any coordination of petrol stations in setting prices.

3.2 Appropriateness of theory and method

3.2.1 Model

The model (Model 1 (ACCC)) encompasses the two models used by the ACCC viz the single structural break model in Appendix S of the ACCC report and the two structural break model on the last page of the document *Petrol — Further Econometric Analysis Undertaken by ACCC* that was released on 29 May 2008.

$$m_t = \alpha_{ACCC} + \beta_{ACCC}d_{1t} + \delta_{ACCC}d_{2t} + \varepsilon_{ACCC,t} \qquad \text{(Model 1 (ACCC))}$$

The single break case is easily obtained in from model 1 by setting $\beta_{ACCC} = 0$. This is a restriction that can be tested and one will find that when d_{1t} breaks in early May 2000 the restriction $\beta_{ACCC} = 0$ is strongly rejected. Indeed from Table 1 one can see that the HACC robust t-statistic is -4.2. Another way of looking at this is that the single break model in Appendix S is not robust to the addition of an additional variable viz d_{1t}.

There is also an important logical reason for including the second structural break — the ACCC report relies on a form of logic which says 'after this therefore because of this'. That is the identifying assumption that allows the ACCC to relate the shift in mean after the introduction of FuelWatch to FuelWatch. This form of logic is regarded with considerable suspicion in the sciences. A simple example will show why. Since Christmas cards always arrive before Christmas, this form of logic would say that Christmas cards cause Christmas. The fundamental problem here is that there is an omitted variable 'expectation of Christmas'. Addition of a variable that measures 'expectation of Christmas' will solve the problem as after adding this variable one will no longer find that Christmas cards cause Christmas. This simple example shows how econometricians address their concerns about the 'after this therefore because of this' logic — they add further variables and see whether that changes the findings. That is what I do here.

In model 1, the model used by the ACCC, the nominal petrol retail margin m_t is the variable to be explained. But as discussed in the preceding

section, this specification is invalid and results in the variance of $\varepsilon_{ACCC,t}$ being proportional to to the square of P_t^F something that precludes using regression analysis. A sensible modification is to replace the dependent variable with rm_t^P which leads to model 2.[10]

$$rm_t^P = \alpha_P + \beta_P d_{1t} + \delta_P d_{2t} + \varepsilon_{P,t} \qquad \text{(Model 2)}$$

In model 2, rm_t^P is explained by a constant (α_P) and two shift variables d_{1t} and d_{2t}. The residual $\varepsilon_{P,t}$ represents the part of the margin that is explained by stochastic factors other than the constant and the two shift variables.[11] The coefficients β_P and δ_P measure the extent to which the mean nominal retail margin for petrol is changed after dates t_1 and t_2 respectively. The unit of measurement for the coefficients is cents per litre at fuel prices prevailing in the week starting 25 August 1998 - a real quantity.

Decisions about when people drive, how far they drive and the timing of their proximity to service stations are all affected by the calendar and by events such as public holidays and school holidays that are related to the calendar. Thus, demand for petrol shifts with the calendar causing the price of petrol to move with the calendar. To the extent that retail petrol prices are set above marginal cost through (imperfect competition) retail margins will also vary with the calendar. The ACCC makes no allowance for calendar effects in their modelling. In Harding (2008b) I discuss this issue in more detail however for reasons of space and accessibility to a broad set of readers I have omitted this material and have focused on the issue of replicating the ACCC analysis.

Two types of non-stationarity are potentially present in the FuelWatch data. The first of these are structural breaks in the mean. These could arise for example if

1. Changes in tax policy had different effects on petrol station margins in Western Australia to Eastern Australia. Importantly, the tax systems was changed extensively through the period 1999 to 2001 with major changes being made in mid 2000.

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[10]One might ask why the margin is not set in constant real terms to the consumer. The reason suggested by economic theory is this. If petrol stations set the margin in this way then when the petrol price was increasing by more than the CPI they would go broke and when the petrol price was increasing by less than the CPI they would be earning excess profits that encouraged entry of new service stations thereby driving the margin down

[11]d_{1t} takes the value 0 until week $t_1 - 1$ and it takes the value 1 from week t_1 through to week $t_2 - 1$.

d_{2t} takes the value 0 until week $t_2 - 1$ and it takes the value 1 from week t_2 through to the end of sample.

2. New entrants to the industry such as Coles caused a reduction in the margin obtained by Western Australian service stations;

3. The FuelWatch scheme had its intended effect to reduce service station margins.

The second form of non stationarity arises where the variance of a series is a function of time. This arises in two main way. The first is if the data is a deterministic function of time so that $rm_t^P - d_t$ is stationary where d_t is deterministic function of time. Because of the effect of the calendar on petrol demand this is a plausible specification.

The second way that the variance of rm_t^P could be a function of time arises where $rm_t^P - d_t$ can be written as the cumulation of a stationary series.[12] In this case the series can be written as[13]

$$\Delta \left(rm_t^P - d_t \right) = \pi \left(rm_{t-1}^P - d_{t-1} \right) + \sum_{i=1}^{q} \gamma_i \Delta \left(rm_{t-1}^P - d_{t-i} \right) + \eta_t \quad (1)$$

Where π is the parameter of interest. If $\pi = 0$ this means that the series rm_t^P has a unit root and the variance of rm_t^P will have a time trend.

This is a specification that is often found in macroeconomics but we should question its plausibility for this data. If $\pi = 0$ it means that the variance of $\left(rm_t^P - d_t \right)$ is proportional to time. So that at June 30 2007 the variance of $\left(rm_t^P - d_t \right)$ would be 459 times as high as in the week beginning 1 August 1998 something that does not seem consistent with free entry into and exit from petrol retailing.

There are also technical deficiencies in the ACCC testing for unit roots these are discussed in Harding (2008b) where I find that after applying the correct unit root tests we can conclude that $\left(rm_t^P - d_t \right)$ is stationary as suggested by the theory related to free entry into and exit from petrol retailing.

3.2.2 Thoroughness of description of methods

As discussed above and in Harding (2008b,d) the ACCC leaves out much of the information that is necessary to judge whether the unit root testing has been applied correctly. A similar problem arises with the Newey West standard errors that are reported in Table S2. The ACCC recognize that serial correlation is present in the data and seek to correct that using Newey West standard errors. There are two issues here,

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[12]Strictly speaking the stationary series must also have positive spectral density at frequency zero.

[13]Δ is the difference operator. So $\Delta x_t = x_t - x_{t-1}$.

1. The key parameter in calculating the Newey West standard errors is the window width used in the calculation. The ACCC does not tell us what window width was used or how it was determined.

2. The ACCC does not provide diagnostics that might help us understand how important is the problem of serial dependence in the data.

The ACCC report says that they searched for endogenous structural breaks. However, no information is provided on how this search was conducted. As search that attempted to minimize the sum of squared errors in Model 1 would be incorrect as it would not allow for the presence of serial correlation in those errors.

3.2.3 Estimating the effect of FuelWatch for known break dates

Here I replicate the ACCC analysis using the correct dependent variable $\left(rm_t^P\right)$. I assume that there are two break dates one in the first week of May 2000 . The other in the first week of January 2001 reflecting the introduction of FuelWatch in WA. The estimates, robust standard errors[14] and robust confidence intervals are reported in Table 1.

Table 1: Estimated coefficients of Model 2

Coefficient	Estimate	Robust	
		Standard Error	95% Confidence Interval
α_P	1.23	0.22	$(0.79, 1.67)$
β_P	−1.68	0.40	$(-2.48, -0.88)$
δ_P (FuelWatch)	−0.29	0.36	$(-1.01, 0.43)$

Since the robust 95% confidence interval includes zero it is not possible, based on this data to say, as the ACCC did, that the WA FuelWatch scheme did not act to increase the real retail margin for petrol in Perth. The mean estimated effect is for a reduction of 0.29 1 August 1998 cents which translates into about 0.52 of a cent in mid 2008.

One possibility is that the estimated effects of FuelWatch are biased downwards because although the scheme came into effect on 2 January 2001 it may

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[14]The standard errors are calculated making use of the fact that the regressors are deterministic. So that the covariance matrix for the estimators is $(X'X)^{-1} X'\Omega X (X'X)^{-1}$ where $\Omega_{ij} = E\varepsilon_{P,i}\varepsilon_{P,j}$. Consistent estimators of the first q autocovariances were used to construct $\widehat{\Omega}$ resulting in a feasible and consistent estimate of the covariance matrix using a $q = 17$. The covariance matrix hardly changes for values of q between 10 and 100. Similar standard errors are obtained using the Newey West procedure.

not have had an effect until some weeks later. To check this I allowed the introduction of the FuelWatch to vary from 13 January 2001 to 3 March 2001. The resulting estimates for the FuelWatch coefficient $\left(\widehat{\delta}_P\right)$ are -0.24, $-0,21$, -0.18, -0.14. -0.14, -0.14 and -0.16. These estimates suggests that assuming a 2 January 2001 start date provides an upper bound on the point estimate of the effect of FuelWatch.

3.2.4 Overall assessment

The approach of the ACCC does not stand up well against the criteria set out at the beginning of this section. Specifically,

1. The ACCC uses the incorrect dependent variable (the east-west difference in the nominal retail margin for petrol) rather than the east-west difference in the real producer retail margin for petrol.

2. Use of the incorrect variable results in more than misspecification because it means that the assumption of stationarity necessary for the econometrics cannot hold.

3. The ACCC procedures cannot detect such non stationarity because they apply the incorrect test to the incorrect variable. Moreover, as discussed in Harding (2008b) their application of the test is flawed because the seem to use an incorrect lag length in the testing procedure.

4. The ACCC approach is one in which it has sought to use tests to 'inoculate' itself against criticism rather than trying to 'learn something about some interesting parameter(s)'. This is the source of many of the econometric flaws in the ACCC analysis.

5. The reporting of the ACCC econometrics makes it difficult to assess precisely what the ACCC did.

6. When I redo the ACCC analysis using the correct dependent variable and allowing for two structural breaks the data does not support the ACCC conclusion that the FuelWatch scheme did not lead to increased petrol prices in Perth.

That said Appendix S of the ACCC report provides a thoughtful discussion of the caveats to their work. However, some important caveats such as the issue of nominal versus real margin and the possible effects of the tax system introduced in 1999-2001 are neglected.

A natural but incorrect response is to blame the econometricians who undertook this work. The correct response is to recognise that the quality of econometric work is almost always improved by public scrutiny and particularly by seminars and workshops involving academics. Thus, it is the secrecy of the ACCC, its refusal to release the data for independent analysis and its refusal to subject its work to independent scrutiny that is the ultimate source of the problem.

4   Who are the experts?

Who are the experts, is the central question that government, media and the community are to avoid repeat episodes of 'policy based evidence' like that encountered with FuelWatch.

Stilgoe Irwin and Jones (2006) observe that

> The physicist Werner Heisenberg defined an expert as 'someone who knows some of the worst mistakes that can be made in their subject and who manages to avoid them'. Expert wisdom is about navigating uncertainty, reminding people in power what we still might not know, in addition to what we think we know, and cautioning against complacency.

This is a reasonable starting point for discussion but Heisenberg has defined someone who has expertise rather than someone who is has sufficient knowledge of the particular issue as to be regarded as an expert.

For econometric analysis the expert is the person who actually undertook the econometrics and thus will have an intimate knowledge of the data and the methods used. Such a person should also have an appreciation of the qualifications to the analysis, the mistakes that can be made and what was done to make the analysis robust to these potential qualifications. Whether the person actually has the knowledge described can only be discovered by asking them. It is rare to see such people give evidence at public inquiries because they are typically very junior in the bureaucratic hierarchy. They are, however, experts on the particular matter.

The second category of expert is the manager who supervised the person(s) who performed the econometrics. Such people are experts because they know the procedures and protocols that were used to ensure that the econometrics were undertaken according to best practice. It is also relatively rare for such people to appear at public inquiries.

The third category is the manager's manager. Such people may or may not have expertise as defined by Heisenberg but they definitely are not experts

because they have little direct knowledge of what was done or how what was done was supervised. It is usually the managers manager or some person even further removed from direct experience with what was done who gives the evidence at bureaucratic inquiries. Because they are so removed from what was done the testimony of such people is largely useless in evaluating whether the process under study was capable of turning information into robust and tested evidence.

The ACCC's econometric work was discussed in the Senate estimate's economic committee on 5 June 2008 which heard evidence from a number of officials including the ACCC Chairman, the Commissioners who were responsible for the ACCC report and senior Treasury officials. None of the ACCC officials that appeared before the Senate Committee as experts actually did the econometrics for appendix S of the ACCC report. Nor were any of these officials the immediate manager of the person(s) who did the calculations. Thus, these officials may or may not have expertise but they cannot be said to be experts in the econometric analysis of FuelWatch.

There is a fourth category of people with expertise that needs mentioning - academics. Academics were excluded from the process because the ACCC refused to release the data used in its report. In evidence to the ACCC Mr. Samuel effectively dismissed academics as a public nuisance stating that:

> I am not in a position to be able to say that we would make our data and our methodology available to anyone out in the public arena. We are not prepared to make all this available for any economic modeler or any economic student to simply go through and then to engage the already heavily worked staff of the ACCC in debate on these issues. The commission of inquiry needed to satisfy itself that the work that was done was robust and they have done just that.[15]

In essence Mr. Samuel is saying that the ACCC staff who defend ordinary Australians against anti-competitive behaviour by business cannot benefit from scrutiny by academics, students, journalists and the general public. It is evident from the previous section that the ACCC would benefit from greater exposure to academic econometricians. It is also evident that public policy would benefit from such scrutiny.

In the event several academics did present evidence to the Senate Economics Committee inquiry into FuelWatch. The coalitions senator's dissenting report evaluated the ACCC's reaction as follows,

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[15]See Graeme Samuel, Senate Hansard (Economics Committee), Estimates 5 June page E59-60.

It is disappointing that when presented with this various evidence, the ACCC's defence was to attack the witnesses rather than argue the facts. It did not enhance their case.[16]

5 Reflections on evidence-based policy making in Australia

Shortly after winning the 2008 election the new Prime Minister reaffirmed his commitment to evidence based policy making:.

I believe in evidence-based policy not just sort of grand statements. Prime Minister Kevin Rudd, *7.30 Report* 27/11/2007

Experience suggests that several issues arise with the evidence-based approach.

First, public policy decisions create winners and losers who have considerable incentives to distort the evidence or its interpretation. These winners and losers may be commercial interests who have financial incentives to pay considerable sums of money to influence or shape 'expert' opinion. The battle of 'experts' that ensues rarely sheds light on how the public interest can be furthered.

Political interests also have strong incentives to influence or shape expert opinion so as to achieve a political agenda. As Stilgoe, Irwin and Jones (2006) observe it is very difficult for bureaucrats to 'lean against the wind' created by the ambition of a minister. In the FuelWatch case there is a cadre of well trained public servants in Treasury, Finance, Prime Minister and Cabinet, ACCC and the various energy, resource and industry departments who have sufficient econometric expertise to see through the flaws in the ACCC's published work. Indeed the leaked departmental coordinating comments suggests that at least four departments applied their econometric expertise to reach the correct conclusion. So the problem was not one of knowledge or training it was one of incentives. Any bureaucrat who stood up to point out the errors in the ACCC report would be doing more than 'leaning against the wind'. In standing up to a new government that may be in office for two or more terms they would be making what is known as 'a career limiting move'.

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[16]The Senate Standing Committee on Economics National Fuelwatch (Empowering Consumers) Bill 2008 National Fuelwatch (Empowering Consumers) (Consequential Amendments) Bill 2008, October 2008, page 61.

Second, after having made a decision for narrow political purposes governments have a strong incentive to 'dress that decision up' in the clothes of respectability by selectively using facts that support the decision. Once a government engages in such practices it becomes difficult for voters to distinguish between true evidence-based policy making and 'policy-based evidence'. The result is a general loss of faith in government and in its claims to base decisions on evidence.

Such financial and political incentives make the 'realpolitik' of evidence-based-policy making much more difficult than it might seem. Some of the problems experienced in the United Kingdom with evidence-based-policy are summarized in the following paragraph from Stilgoe, Irwin and Jones (2006)

> In November 2006, a report from the Commons Select Committee on Science held a mirror to the fashion for evidence-based policy. In some areas, the committee argued, 'evidence-based' has become a way to justify policy rather than a way to make policy – the evidence is found to suit the decision. Evan Harris, a committee member and Liberal Democrat science spokesman, said that the way some policies claimed to be evidence-based was a 'fraud which corrupts the whole use of science in government'.

Commitment to evidence-based-policy has a natural attraction to voters it conveys the hope that public policy decisions can be objective, rational and informed by careful quantification of the evidence. But some government decisions have to be made on the basis of ideology, convenience or whim because the evidence is inconclusive. The problem with the unqualified mantra of 'evidence-based-decision' making is that it creates a false hope that governments and their advisors cannot possibly meet. When they are inevitably seen to fail in reaching this goal governments run the risk of damaging their credibility and that of the evidence based approach.

6   Conclusion

Experience shows that good decisions are based on evidence that is tested. The ACCC econometric 'evidence' used to justify the FuelWatch decision was not adequately tested or evaluated. The actual econometrics was deeply flawed. When the econometrics is redone the ACCC conclusion can no longer be supported.

This case study replicates the UK experience where it was found that expert analysis was often misleading unless it was made robust by being exposed to public scrutiny and scientific analysis. For econometric analysis

the key criteria is that the data is publicly available and clearly described so that the analysis can be replicated. Until the Australian government modifies its procedures in this way it cannot legitimately claim that its decisions are evidence based.

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