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# On the Process of Scientific Policy Advice – With Special Reference to Economic Policy

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**CESifo Center for Economic Studies & Ifo Institute** 

### On the Process of Scientific Policy Advice – With Special Reference to Economic Policy

### Abstract

We first show three major disagreements among today's leading economists: the minimum wage, the effects of large government debt and the politics of the European Central Bank. Using a prominent and highly relevant example, the possible deterrent effect of death penalty, we demonstrate how political convictions can have an impact on the results of empirical research even if the most advanced statistical methods are applied. Then we deal with three different approaches to analyse the process of political advice: the traditional approach, the Public Choice approach and the Political Economy of Scientific Advice. Contrary to the two others, the latter consistently applies the economic model of behaviour to all agents of this game: economic agents, politicians, but also scientists as political advisors. We then deal with the process of policy advice; the main scope is to show how this process has to be organised in order to allow for at least some objectivity, even if advisors are politically biased. To understand (and perhaps even improve) this process, the economic model of behaviour should be applied to all agents; a 'new' economic theory is not necessary.

JEL-Code: A110, H190, H630, J310, K140.

Keywords: economic policy advice, minimum wage, government debt, death penalty, objectivity, self-interest.

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#### 1 Introduction

[1] Economists often agree, but they often also disagree; consensus among economists about economic policy is no matter of course. The following statement is attributed to WINSTON CHURCHILL: "If you put two economists in a room, you get two opinions, unless one of them is Lord Keynes, in which case you get three."<sup>1)</sup> This might be somewhat overstated, but contains an important truth: Economists often disagree over very important problems of economic policy. There is, of course, also a large range of agreements among a large majority of economists, but not necessarily with respect to the most pressing economic policy problems. Since the seventies of the last century, there have been several surveys among economists documenting consensus and dissents among them.<sup>2)</sup> They conclude that there is quite a lot of consensus with respect to microeconomic questions, but much less with respect to macroeconomic or macro policy questions.

[2] This disagreement even among leading economists is just one reason for the loss of reputation economists experienced in the last ten to fifteen years. A second important reason was and still is their inability to solve or even prevent the economic crisis following the financial crisis. That the situation on the United States subprime mortgage market and the low interest rate monetary policy of the United States might lead to a financial crisis has been expected by many economists; only the extent and the timing remained open.<sup>3)</sup> However, hardly anybody expected that the financial crisis would lead to a world-wide economic crisis, the second largest in the last 100 years after the world economic crisis in the thirties of the last century.<sup>4)</sup> Even in June 2008, i.e. several months after the outbreak of the financial crisis, the OECD still predicted positive growth rates for 2008 and 2009 for all of its member countries, except for Island.<sup>5)</sup> And this concerned not only international institutions; Germans Institutions did not do better in the first half of 2008.<sup>6)</sup>

[3] It is debated – among 'leading' economists – whether economists have to bear some responsibility for this development or not. While some economists as, for example, DARON AC-EMOGLU (2010) see failures of the economists' profession, in particular with respect to theories of financial markets and of Macroeconomics, other prominent economists as, for example, ROBERT LUCAS, deny any responsibility of economists.<sup>7)</sup> According to their opinion, the

- 4. See for this also C. WYPLOSZ (2009).
- 5. See OECD Economic Outlook 83, 2008/1, p. 239.
- 6. See the references in G. KIRCHGÄSSNER (2009, p. 442).
- 7. See: R. LUCAS, Defence of the Dismal Science. *The Economist online*, 6 August 2009; http://www.economist.com/node/14165405 (21/10/14).

<sup>1.</sup> Cited from A. FREEMAN (2009, p. 23).

<sup>2.</sup> For a survey of the earlier studies see B.S. FREY et al. (1984), for a more recent study V.R. FUCHS et al. (1998).

<sup>3.</sup> See, for example, SVR (2004, pp. 44ff., pp. 118ff.) and SVR (2006, p. 37, pp. 88ff.).

crisis has been caused by bad economic policy, in particular by the Fed, and perhaps also by the greedy behaviour of some bankers. Economists are innocent.<sup>8)</sup>

[4] One reaction of economists to this situation is the concept of "Experience Based Economic Policy",<sup>9)</sup> discussed, for example, at the 2014 annual meeting of the German Economic Association (Verein für Socialpolitik).<sup>10)</sup> From an a priory point of view, it might be trivial that every policy should be based on experience. What else should be the basis of policy measures? But the simple fact that this concept is advertised as something 'new' indicates that at least sometimes economic policy might not be "evidence based". The question is of course: What kind of evidence?

[5] In recent decades, new econometric methods have been developed with the claim to better isolate causal effects between instrument and objective variables. The pretension is that these methods largely improve the quality of empirical (econometric) analyses and are, therefore, better suited to support policy measures. J.D. ANGRIST and S. PISCHKE (2010)<sup>11)</sup> even speak of a "credibility revolution". These are, however, micro-econometric methods, employing large data sets, and trying to use natural or quasi experimental designs in order to separate causal effects.<sup>12)</sup> It is possible to use these methods for some – perhaps very many – (micro-) economic policy questions, and some of these problems are highly relevant. But even J.D. AN-GRIST and S. PISCHKE (2010, p. 26) acknowledge that they are not applied in the field of macro-economics, and it is hard to see how they ever could be applied there. It is difficult to see how they never could be applied in macroeconomic or monetary policy problems. Moreover, to interpret a real situation as being quasi-experimental demands very strong assumptions most of which are untestable. Correspondingly, C.A. SIMS (2010, p. 59) insists that "economics is not an experimental science", and he classifies what J.D. ANGRIST and S. PISCHKE (2010) tell us about possible applications in macro-economics as "mainly nonsense". He even fears that: "If applied economists narrow the focus of their research and critical reading to various forms of pseudo-experimental analysis, the profession loses a good part of its ability to provide advice about the effects and uncertainties surrounding policy issues." (p. 59)

[6] Today's big problems are mainly macro-economic ones for which no quasi-experimental set-up is available. Moreover, even in cases where micro-econometric analyses can be applied effectively, the macro-economic effect is not necessarily clear; one might get into the ecological fallacy. Using micro-econometric analyses it is, for example, possible to analyse which active labour market policy measures are effective and which are not.<sup>13)</sup> But the application of

<sup>8.</sup> See for such a position also KRONBERGER KREIS (2009), a private club of liberal-right economics and law professors.

<sup>9.</sup> See for this concept, for example, C.M. SCHMIDT (2014) or WHAT WORKS CENTRE FOR LOCAL ECONOMIC GROWTH (2014).

<sup>10.</sup> See https://www.socialpolitik.de/De/vfs-jahrestagung (10/11/2014).

<sup>11.</sup> They refer with their title to E. LEAMER (1983).

<sup>12.</sup> For a description of these methods see, for example, F. KUGLER, G. SCHWERDT and L. WÖSSMANN (2014).

<sup>13.</sup> For such a study see, for example, C. WUNSCH and M. LECHNER (2008).

only effective measures which would reduce the unemployment period of those treated would not necessarily imply that unemployment is decreased; the treated people might just replace others while the number of jobs and, correspondingly, of unemployed remains constant.

[7] The dispute about the potential of micro-econometric methods documented for example, in the *Journal of Economic Perspectives* 2010(2), shows that economists not only disagree on economic policy problems but also about which methods are appropriate for helping to solve such problems. Thus, the ideal of a scientific community speaking with one voice is a myth. This holds for economists, but for other scientists as well. Therefore, two questions arise. First, how can we understand the process of political advice; what is going on in this process? Second, how can this process be organised in order to improve the probability in order to take 'better' political decisions, whatever 'better' means. It demands, of course, in any case, that in such a process not only ideology but also 'objective knowledge' is transferred from the scientific to the political world.

[8] In the following, we first demonstrate three major disagreements among today's leading economists: the minimum wage, the effects of large government debt and the politics of the European Central Bank (*Section2*). Using a prominent and highly relevant example, the possible deterrence of death penalty, we show how political convictions can have an impact on the results of empirical research even if the most advanced statistical methods are applied (*Section 3*). *Section 4* deals with three different approaches to analyse the process of political advice: the traditional approach, the Public Choice approach and the Political Economy of Scientific Advice. Contrary to the two others, the latter consistently applies the economic model of behaviour to all agents of this game: economic agents, politicians, but also to scientists as political advisors. *Section 5* deals with the process of policy advice; the main scope is to show how this process has to be organised in order to allow for at least some objectivity, even if advisors are politically biased. *Section 6* finally argues that to understand (and perhaps even improve) this process, the economic model of behaviour should be applied to all agents; a 'new' or heterodox economic theory is not necessary.

### 2 Major Disagreements between 'Leading Economists'

#### 2.1 The Minimum Wage

[9] At the moment, the perhaps best example for a major disagreement among leading economists is the minimum wage. In Germany, many economists tend to insinuate that there is a large consensus among economists that a minimum wage is either useless or detrimental: below the market wage it is useless, and above the market wage it produces unemployment. Thus, most German economists were against the introduction of the minimum wage in Germany in 2015.

[10] But Germany is not the world. There is a consensus among economists that a too high minimum wage increases unemployment. But there is hardly any consensus about the level above which a minimum wage is 'too high'. In this respect, economists are deeply divided. In

January 2014, 600 U.S. economists, including 7 Nobel Prize winners, wrote a letter to President Obama demanding that he should increase the minimum wage from \$ 7.25 to \$ 10.10.<sup>14</sup>) Taking the current exchange rate, this equals about 8  $\in$  but taking the Purchasing Power Parity from the OECD this is equivalent to above 8.31  $\in$  slightly below the German minimum wage of 8.50  $\in$ <sup>15)</sup> They justify this demand in the following way:

In recent years there have been important developments in the academic literature on the effect of increases in the minimum wage on employment, with the weight of evidence now showing that increases in the minimum wage have had little or no negative effect on the employment of minimum-wage workers, even during times of weakness in the labor market. Research suggests that a minimum-wage increase could have a small stimulative effect on the economy as low-wage workers spend their additional earnings, raising demand and job growth, and providing some help on the jobs front.

The vast majority of employees who would benefit are adults in working families, disproportionately women, who work at least 20 hours a week and depend on these earnings to make ends meet. At a time when persistent high unemployment is putting enormous downward pressure on wages, such a minimum-wage increase would provide a much-needed boost to the earnings of low-wage workers.

C.A. SIMS, who shared the prize in 2011, said research shows "very small, if any, negative effects on employment," especially when real wages are low. And the impact on worker incomes can be "substantial", he said

[11] Responding to this, 500 economists including 4 Nobel Prize winners, published a "Statement to Federal Policy Makers" demanding not to raise the minimum wage.<sup>16)</sup> They refer to the Congressional Budget Office and write:

The Congressional Budget Office's (CBO) most recent report underscores the damage that a federal minimum wage increase would have. According to CBO, raising the federal minimum wage to \$10.10 per hour would cost the economy 500,000 jobs by 2016. Many of these jobs are held by entry-level workers with limited experience or vocational skills, the very employees meant to be helped.

The minimum wage is also a poorly targeted anti-poverty measure. Extra earnings generated by such an increase in the minimum wage would not substantially help the poor. As CBO noted, "many low-wage workers are not members of low-income families." In fact, CBO estimates that less than 20 percent of the workers who would see a wage increase to \$10.10 actually live in households that earn less than the federal poverty line.

Thus, these two groups do not only disagree with respect to the employment effect of an increased minimum wage but also to its usefulness as a measure to help the poor.

<sup>14.</sup> See http://www.epi.org/minimum-wage-statement/ (17/11/14).

<sup>15.</sup> According to the OECD, in 2013 1 €in Germany corresponded to 0.822837 U.S. \$. See http://stats.oecd.org/Index.aspx?datasetcode=SNA\_TABLE4 (18/11/14).

<sup>16.</sup> See http://economistletter.com/ (18/11/14).

[12] The empirical evidence is highly diverse and far from being clear-cut.<sup>17)</sup> Some authors even find positive effects of minimum wage increases.<sup>18)</sup> Given this situation, it is not surprising that the interpretations of the results are diverging. This also holds for the evaluation of the effects of the introduction of minimum wages in some German branches in recent years. J. MÖLLER (2012, p. 187), the director of the Institute for Employment Research, a research institute of the federal government, concludes from the existing minimum wage studies in Germany "that dis-employment effects are hard to find", while T. SCHUSTER (2013) of the Cologne Institute of Economic Research, a registered association with a membership consisting of some 110 German business and employers' associations as well as a number of individual companies, states that the risks for unemployment with an introduction of a nationwide minimum wage are higher than claimed.

[13] There is a consensus among economists regarding two aspects of the minimum wage:(i) A too low minimum wage has no effect. (ii) A too high minimum wage can have detrimental effects on employment. But what means "too high"? In this respect, there is no consensus at all.

[14] The relevant ethical question behind these controversies is: under which condition is unemployment preferable to employment? Opponents of a minimum wage often state that even an employment with a very low wage is preferable to unemployment. Thus, they criticise all employment losses, however small they might be. Proponents, on the other hand, demand that humane employment should include a reasonable income. They accept small losses of employment in inhumane jobs but do not believe in large losses. It is not astonishing that these different value convictions lead to different evaluations of the empirical evidence.

[15] The main disagreement between these two groups is, however, not so much with respect to the minimum wage but much more fundamental: it is a dis-agreement about the role of the government in economic policy and, in particular, in labour market policy. While one group deeply believes in market forces and, therefore, dislikes (nearly) any government intervention into this market, the other group relies less on market forces and believes that without at least some government intervention the outcome of the labour market would lead to a socially inacceptable outcome. This fundamental divide can lead to completely opposite policy recommendations and also to different interpretations of the same empirical (econometric) evidence.

#### 2.2 The Effect of Large Government Debt

[16] A further point of discussion is how large the government debt should be, in particular in the current situation. Should we start saving and reduce government debt (at least in relation to GDP) or should we take up new debt? Today, the majority of (German) economists object to a further extension of the public debt. However, since the financial crisis, JOSEPH

<sup>17.</sup> See, for example, the contributions in *Journal of Labour Market Research* 45(3-4) (2012) and in *German Economic Review* 14(3) (2013).

<sup>18.</sup> See, for example, L.F. KATZ and A.B. KRUEGER (1992) or G. BOSCH, T.KALINA and C. WEINKOPF (2012).

STIGLITZ and PAUL KRUGMAN, two Nobel Prize winners, demand debt financed public investment programmes and criticised Germany because of its austerity policy.<sup>19)</sup>

[17] On November 8, 2013, at a conference of the International Monetary Fund (IMF), LARRY SUMMERS remarked that we might be in a secular stagnation period which might have the effect that interest rates will be below the growth rate of GDP for a long-time.<sup>20)</sup> Under these conditions, it is possible to have a primary deficit without an increase of public debt in relation to GDP.<sup>21)</sup> Thus, LARRY SUMMERS pointed to something CARL CHRISTIAN VON WEIZSÄCKER called attention to for several years.<sup>22)</sup> The statement of LARRY SUMMERS caused a heated debate (not only) among German economists.<sup>23)</sup> CARL CHRISTIAN VON WEIZSÄCKER believes that the low interest rates in Germany, Switzerland or the United States are a consequence of the ageing of their populations. Based on this reasoning, he recently demanded in an interview that the German government should refrain from a balanced budget in 2015 but take up new debt in order to repair the public infrastructure which partly is in a very bad shape.<sup>24)</sup> To counter the argument that this would be at the expense of future generations he argued that a sound infrastructure and a good educational system are more important for the future generation than not to make these expenditure in order to balance the budget.

[18] Relying on historical evidence does not help us very much. Since 2007, countries like the United States, Germany and Switzerland have long-run government bond rates below the GDP growth rates, while those of 'problem countries' like Greece, Spain or Portugal have rates above the GDP growth rate. If we go back farther, we find both: periods with the bond-rate below and others with the bond-rate above the growth rate. In Germany and Switzerland, for example, after World War II, up to the mid-seventies the GDP growth rate was above the long-term government bond rate, after that, up to the financial crisis, it was above. Moreover, if the current low interest rate is, as C.C. V. WEIZSÄCKER argues, due to the demographic development, we can hardly learn anything from recent decades.

[19] This disagreement also became obvious when the German National Academy of Sciences, Leopoldina, and the Berlin-Brandenburg Academy of Sciences and Humanities decided to produce a positional paper with respect to (German) government debt. They assembled a

24. See *Wirtschaftswoche* No. 43 of 20 October 2014, p. 44. – Again, this interview caused a lively discussion among German economists in the internet.

<sup>19.</sup> See, for example: Trans-Atlantic Turbulence: Nobel Economist Krugman Slams German Austerity, *Spiegel online* of July 21, 2010; http://www.spiegel.de/international/business/trans-atlantic-turbulence-nobel-economist-krugman-slams-german-austerity-a-701894.html (18/11/14) and: Moore, Malcolm: Stiglitz says European austerity plans are a 'suicide pact', *The Telegraph online* of January 17, 2012; http://www.telegraph.co.uk/finance/financialcrisis/9019819/Stiglitz-says-European-austerity-plans-are-a-suicide-pact.html (23/10/2014).

<sup>20.</sup> See http://www.imf.org/external/mmedia/view.aspx?vid=2821294542001 (18/11/14).

<sup>21.</sup> This consideration goes back to E.D. DOMAR (1944). See for this G. KIRCHGÄSSNER (2014).

<sup>22.</sup> See, for example, C.C. v. WEIZSÄCKER (2011, 2014).

<sup>23.</sup> See: PLICKERT, PHILIP, Ist Sparen eine Sünde, *FAZ online* of 2 December 2013, http://www.faz.net/aktuell/wirtschaft/wirtschaftspolitik/oekonomen-debatte-ist-sparen-eine-suende-12689704-p2.html?printPagedArticle=true#pageIndex\_2 (18/11/14).

group of well-known scientists, mostly members of these two academies, not all of them economists. There were three positions among the economists in this group: (i) The debt brake introduced in the German constitution in 2009 should be strictly observed. Germany should reduce its debt. (ii) In principle, Germany should reduce its debt. However, given the bad shape of large parts of the German infrastructure and the extremely low interest rates Germany should temporarily deviate from a balanced budget to be able to repair its infrastructure. (iii) Based on the arguments presented above, it does not make sense to hold on to the debt brake. The only consensus in the group was that all three positions had to be documented in the final report.

#### 2.3 The Politics of the European Central Bank

[20] A third problem where strong disagreement exists is the Euro or the behaviour of the European Central Bank (ECB) to keep the Euro zone together. In Germany, there was a relatively small group of economists who opposed the introduction of the Euro and filed a lawsuit at the German Constitutional Court which however failed.<sup>25)</sup> They feel themselves corroborated by the development of recent years. Today, most German economists might concede that it would have been better not to start with the Euro experiment or at least to look more carefully which countries participate. But nobody knows how to stop this experiment without causing tremendous economic damages in many countries. Politically relevant is, however, the current policy of the ECB. Some months ago it announced, in order to fight deflation, to buy assetbacked securities with BBB rating which is just above junk. It is highly debated whether this makes sense. HANS-WERNER SINN, president of the Ifo Institute for Economic Research in Munich, classified this strategy as "adventurous". He denies the danger of a deflation and accuses the ECB to misuse its mandate in order to - de facto - subsidise failing banks. He expects that this will lead to considerable burdens for German taxpayers in the future.<sup>26)</sup> Contrary to this, the president of the German Institute for Economic Research in Berlin, MARCEL FRATZSCHER, acknowledges that there exists the danger of a deflation and defends the ECB policy.<sup>27)</sup> Together with other prominent economists, in the summer of 2013, he had already launched a call to support the ECB policy which was signed by prominent European economists.<sup>28)</sup>

[21] These are just three examples which show that there is large disagreement among economists with respect to highly relevant policy questions. There are, of course also areas of wide consensus. But this is not necessarily the rule. Based on the fact that disagreements exist with respect to such important questions one should not suggest that consensus is the rule

<sup>25.</sup> See: K.-A. SCHACHTSCHNEIDER (1998).

<sup>26.</sup> See: LEISINGER CHRISTOPH, Standpunkt Hans Werner Sinn: Abenteuerliche Strategie der Europäischen Zentralbank. Neue Zürcher Zeitung No. 231 of 6 October 2014, p. 25; http://www.nzz.ch/finanzen/standpunkt/die-strategie-der-europaeischen-zentralbank-ist-abenteuerlich-1.18397722 (18/11/14).

<sup>27.</sup> See: FRATZSCHER, MARCEL, Die EZB Politik hilft uns, Handelsblatt, 20. August 2014.

<sup>28.</sup> See: A Call for support for the European Central Bank's OMT Programme, https://berlinoeconomicus.diw.de/monetarypolicy/2013/07/26/a-call-for-support/ (18/11/14).

among economists and disagreement the exception. Moreover, it should be obvious that the micro-econometric methods which represent the methodological core of evidence based economic policy concepts are hardly applicable in these cases. With respect to the ECB policy it is also impossible to recur to earlier experience. As explained above, the same probably holds with respect to government debt. In the discussion on the minimum wage one can refer to other countries and also to several German commercial branches where a minimum wage already exists. But, as mentioned above, the empirical results are not without ambiguity, and in addition it is unclear how the results in these countries or in single German branches can be transferred to a nationwide German minimum wage.

# **3** Problems of Empirical Analyses and the Impact of Ideology: The Case of the Death Penalty

[22] When solving economic policy problems, pure theory is hardly sufficient. Economic theory is in many cases well suited to isolate single effects but hardly able to tell us something about the combined effects of many influences. Moreover, economic policy measures usually have several effects, direct and indirect ones, which often go in opposite directions. The most relevant case is income and substitution effects. The traditional example is the effect of wage increases. A wage increase raises the gross demand in an economy and should, therefore, also increase the demand for labour and, thus, reduce unemployment. It makes, however labour more expensive. Thus, some labour might be substituted by capital, i.e. less labour intensive production processes might be used. Based only on theoretical reasoning we are unable to say which effect dominates. To answer this question, empirical analyses are necessary.

[23] The hope is that, by employing modern econometric techniques, empirical analyses provide unambiguous answers. However, as the example of the minimum wage has already shown, the results of empirical analyses are often anything else than clear-cut. The reason for this is not necessarily 'bad science' or unprofessional (unethical) behaviour of scientists; based on the same data and applying the same methods even serious working scientists can come to rather different conclusions. In such cases a priori convictions of the scientists can play an important role. This is shown in the following, using empirical studies of the deterrent effect of death penalty as an example.<sup>29</sup>

[24] Whether the death penalty is deterrent or not, is not an economic question (in a narrow sense). On the other hand, in the United States it has been and still is an important issue in policy advice. Economists play a very prominent role in these discussions. Moreover, it is a nearly ideal example for the Economic Analysis of Law, because death penalty is a radical incentive in order to prohibit some behaviour. There exists already a long ongoing discussion whether the death penalty deters or not. If there is any argument in favour of the death penalty which might justify it, it is a strong deterrent effect for murderers. Actually, in the United States a majority of the population (still) believes this and, therefore, supports this penalty.

<sup>29.</sup> This part is mainly based on B. GERRITZEN and G. KIRCHGÄSSNER (2013); see also G. KIRCHGÄSSNER (2011).

[25] The first paper in which an economist employed econometric techniques to test the deterrent effect was from I. EHRLICH (1975). His conclusion was that every execution reduces the number of homicides up to eight. There was considerable critique of this result by other authors, but also support. A whole literature developed, and members of economic, law, criminology and sociology departments participated. From a methodological point of view, the first papers were rather primitive and could easily be criticised. However, over time the methods were improved, and today nearly all participants in this discussion, economists as well as non-economists, employ the same modern methods. Most of the data and of the participants are, of course, from the United States. While most economists believe in the deterrent effect and present corresponding results, most members of other faculties have doubts on the validity of this hypothesis and demonstrate the fragility of the presented results. Because both sides use the same advanced econometric methods there are also methodological discussions between them.

[26] Given this situation one might argue that this discussion is just a romping place for ideologists. W.S. MCMANUS (1985) already showed that ideological convictions might have an impact on these results. However, these different findings might simply result from selective perception: If – with good arguments – several results are possible, the authors select those which correspond to their prior convictions, and they search for strong arguments to support these results. Such behaviour is, of course, not restricted to this question and not to economists, but quite general among empirical social scientists, and it is the more relevant, the less we have the possibility of controlled (true) experiments.

[27] To investigate what causes the different results we employed a meta-analysis. Such analyses can have two objectives. (i) If there are many studies with the same objective, for example, to estimate the same parameter, one can attempt to combine all available evidence in order to get a 'better' estimate of it. (ii) One can analyse what the reasons for the different estimates are. These might be, for example, different time periods of the data, or different estimation procedures. In this study, we only ask the second question.

[28] We have tried to include all papers with original analyses, starting with the paper by I. EHRLICH (1975) and up to 2011. Altogether, we have found 102 papers employing statistical procedures, out of which 87 come to definite conclusions. In 34 papers, results in favour of a significant deterrence effect are presented which might justify the imposition of the death penalty. 53 papers come to the conclusion that if there is any evidence for a deterrent effect at all, it is so precarious that the imposition of the death penalty cannot be justified by the results of empirical research. The remaining 15 papers are inconclusive, i.e., the authors did not want to derive any conclusion or policy-recommendation from their analysis. W.S. MCMANUS (1985) as well as the results of a previous meta-analysis by D. HERMANN (2010) suggest that a major cause for contradictory results might be whether the authors of the studies are economists or not. However, other factors might also play a role, such as the kind of data, as, for example, B. YANG and D. LESTER (2008) state, but also different methods or estimation procedures. Moreover, economic conditions might also have an effect because the models attempt to explain the number of homicides in a certain area and year. Finally, if not only economists who are participating in this debate but also editors of economic journals have stronger

a priory beliefs in favour of the deterrent effect of death penalty than, for example, editors of sociological or law journals, it might be easier to publish results supporting a deterrent effect in an economic than, for example, in a law journal. If this is the case, we face reverse causality, but this should also become obvious in the estimation equation of a meta-analysis.

[29] We start with the following equation:

(1) DET = f (AECON, ECONJ, NECONJ, TS, CS, OLS, INST, WLS, US, YEAR, UER, Y)

with:

DET	The study claims that there is a significant deterrence effect.
AECON	The (one) author is an economist.
ECONJ	The paper has been published in a (scientific) economic journal.
NECONJ	The paper has been published in a scientific journal, but not in an eco- nomic one.
TS	Time series data are used.
CS	Cross-section data are used.
OLS	The equation is estimated using OLS.
INST	More advanced estimation methods (IV estimators, GMM) are employed.
WLS	The observations are weighted.
US	The data are from the United States.
YEAR	Publication year.
UER	The unemployment rate is included in the estimation equation.
Y	The growth rate of real income is included in the estimation equation.

Because the dependent variable is a binary one, we employ a probit estimator.<sup>30)</sup> Except for YEAR, all explanatory variables are also binary variables. The standard errors are clustered according to the (groups) of authors; the 87 observations lead to 51 clusters.<sup>31)</sup>

[30] In the empirical analysis, the dependent variable DET takes on the value '1' if a paper finds a deterrence effect, and '0' if it does not. The undecided papers will be denoted as missing. We include two dummy variables for time series (TS) and cross-section (CS) data; for panel data both take on the value '1'. We also include two variables for the publication medium, for Economic (ECONJ) and for other (NECON) scientific journals, are they, for example, from Sociology or Law. The default category is newspaper articles. We use three variables in order to capture the methods the authors have employed: OLS for ordinary least squares, WLS for weighted estimation methods, and INST for instrumental variable estimators and other advanced estimation methods such as GMM or, for example, Poisson regression. The

<sup>30.</sup> We also used a logit estimator and an ordered probit one including all 102 papers where we classified the dependent variable as '+1' if the authors state a deterrent effect, '-1' if they deny it and '0' if they remain undecided. The differences between the results of these estimation methods are negligible.

<sup>31.</sup> If we include all 102 papers, we get 64 clusters.

reference category in this case includes studies employing simple comparisons. Economic development is represented by the development of real income (Y) and unemployment (U). The publication year (YEAR) is included in order to test whether there is a trend in the results, if, for example, the death penalty has gained or lost acceptance in the scientific community over time. The variable for the United States might indicate that there are differences between the United States on the one hand and the two other countries for which studies exist, i.e., the United Kingdom and Canada.

[31] We got the following result:  $^{32)}$ 

(2) 
$$DET = -26.907 + 2.086 AECON + 0.658 ECONJ + 0.251 NECONJ$$
  
 $(-0.65)$  (3.38) (0.95) (0.41)  
 $-0.064 TS - 0.752 CS - 0.195 OLS - 0.456 INST + 0.365 WLS$   
 $(-0.11)$  (-1.52) (-0.36) (-1.09) (0.90)  
 $+ 0.908 US + 0.013 YEAR + 0.054 ALQ - 0.487 Y + \hat{u}$   
 $(1.35)$  (0.60) (0.15) (-1.02)  
Pseudo R<sup>2</sup> = 0.363, SER = 0.491, Log LR = -37.067, H.-Q. = 1.299

If we accept that a deterrent effect holds whenever the probability for such an effect is above 0.5, and it is rejected, whenever this probability is below 0.5, 27 papers of those which state a deterrent effect and 43 papers that deny such an effect are correctly predicted. The hit rate is 80.5 per cent. <sup>33)</sup>

[32] No variable has a significant impact in this equation aside from the profession of the author. Using a likelihood ratio test to check whether we can exclude all these variables we get a p-value of 0.694. Thus, we can exclude all these variables and come to the reduced equation:

(3) DET = -1.221 + 1.718 AECON + û (-2.65) (3.30) Pseudo R<sup>2</sup> = 0.284, SER = 0.491, Log LR = -41.684, H.-Q. = 1.027.

The Pseudo  $R^2$  is now somewhat smaller, but the standard error does hardly change, and the Hannan-Quinn criterion is significantly improved. Altogether, 25 papers of those that affirm a deterrent effect and 40 papers of those that deny it are correctly predicted; the hit-rate is slightly reduced to 79.3 per cent. The profession of the author is still highly significant. Thus, a majority of (American) economists apparently beliefs that the incentive by the thread of the death penalty is so strong that a significant large number of potential murderers is deterred, while the majority of non-economists assume that homicides are not so much the effect of rational calculations but are caused by a variety of motives. Therefore, the incentive by threat

<sup>32.</sup> The numbers in parentheses are the z-values of the estimated parameters. SER is the standard error of the residuals, Log LR the logarithm of the likelihood function, and H.-Q. the value of the Hannan-Quinn information criterion. The estimations have been performed with STATA, version 11.2.

<sup>33.</sup> For more details see B. GERRITZEN and G. KIRCHGÄSSNER (2013, p. 12ff.).

of the death penalty, if it exists at all, is so weak that it cannot justify the death penalty given its moral problems. This basic conceptual difference is mainly responsible for different results even if the authors use the same data and estimation methods; small changes of the specification of the equation to be estimated or different instruments allow completely different results.<sup>34</sup>

[33] This is relevant for policy advice because some of these papers have not only been produced for the scientific discourse but also as reports or at least background material for hearings in the U.S. congress.<sup>35)</sup> These hearings and the arguments presented there might have had an impact on the legislation but also on jurisdiction.

#### 4 On Analysing the Process of Political Advice

[34] This if by far not the only and not even an extreme example for different empirical results presented by economists.<sup>36)</sup> Not always, but in many cases such discrepancies arise despite of all scientists working seriously. To understand how this can come about it is necessary to analyse the process of policy advice.

[35] The traditional understanding of the relation between Science and Politics is rather naive. It starts with ideal pictures of politicians and scientists that are not represented in reality. Politicians are expected to strive for the common good and to equip the scientists with the necessary resources to do independent research. Scientists are expected to provide politicians with the objective information that the politicians need to do their job.<sup>37)</sup>

- [36] There are four assumptions behind this concept that are rarely reflected:
- (i) The government behaves like a benevolent dictator. Its acting can be seen as the maximisation of an objective function which represents social welfare.
- (ii) The government depends for its policy on receiving the relevant information from scientists.
- (iii) Scientists are politically neutral and committed only to tell the truth (or to support the common good).
- (iv) Advice from the sciences is unambiguous.

Not only economists, but also many other scientists see themselves in a heroic picture as in (iii). They believe in it, in particular whenever they give policy advice. They believe that they are more objective and more independent than other human beings. Given their scientific background, they believe that they do not only have more information and are better able to judge political questions, but that they also serve the common good better. They grant them-

<sup>34.</sup> In B. GERRITZEN and G. KIRCHGÄSSNER (2013) we have shown how easy it is to get different result with a data set that has been used before in this discussion by several authors.

<sup>35.</sup> See, for example, J. FAGAN (2005) or J.M. SHEPHERD (2004).

<sup>36.</sup> See, for example, further cases in G. KIRCHGÄSSNER (2013).

<sup>37.</sup> See for this also G. KIRCHGÄSSNER (2007).

selves a high moral standing which they hardly grant anybody else.<sup>38)</sup> As E. ANGNER (2006, p.1) states, "economists acting as experts in matters of public policy are likely to be victims of significant overconfidence."<sup>39)</sup>

[37] From this perspective the problem of the scientist is to exactly explain to the politicians and convince them what social welfare is and how it can be maximised as far as possible. This traditional view is still largely popular. At the same time, economists lament that politicians are not prepared enough to follow their advice and that they had and have a too small impact on politics (at least during recent decades).<sup>40</sup>

[38] Because economists are – at least according to their own perception – not successful enough to gain influence on politicians a large part of the (economic) literature about policy advice, based on the traditional concept, deals with the problem how to bring politicians 'on the right track' and how this attempt sometimes was successful.<sup>41)</sup> This also holds for those contributions which deal with the relation between empirical research and economic policy advice.

[39] That (in a democracy elected) politicians behave generally like benevolent dictators is, by the way, a curious imagination. In particular in a democracy, politicians of different parties strive for quite different objectives, which sometimes even are diametrically opposed. If we assume in economic theory that economic agents mainly strive for their own interest (subject to constraints, of course), there is no reason why politicians should behave differently. Taking this into account, starting with K.J. ARROW (1951), A. DOWNS (1957) as well as J.M. BU-CHANAN and G. TULLOCK (1962) a modern Political Economy has been developed which analyses the behaviour of political in the same way as economic agents by applying the economic model of behaviour. Today, this approach is largely accepted and integrated in Economics. But then the question changes. While the traditional question was: Why did the patient (not) follow the prescriptions of the doctor?,<sup>42</sup> the new question is: Why should a government follow the recommendations of its scientific advisors as long as this is not in its own interest?

[40] Of course, the government will usually follow the advice whenever it is in its own interest and/or the interest of its political clientele (electorate). In a specific situation different strategies might be for the benefit of different groups or parts of the electorate. Thus, differing strategies can be optimal for different governments, and a government will, in its own interest, follow the recommendations of its advisors only selectively. This holds in particular whenever these advisors are not selected by the (current) government but are representatives from 'independent' research institutes. Besides this, for the implementation the public bu-

<sup>38.</sup> For an – admittedly – extreme example see H. HESSE (1994).

<sup>39.</sup> See the recent survey about studies on overconfidence in A. SANDRONI and F. SQUINTANI (2013, pp. 151ff.).

<sup>40.</sup> See for this, for example, J. SCHEIDE (2005).

<sup>41.</sup> See, for example, J. FRANKEL (2003).

<sup>42.</sup> See for this P. VANDOREN (1989) and, in particular for environmental policy, R.W. HAHN (1989).

reaucracy is relevant as well: its chance to be implemented is the larger the more a policy meets the interest of the bureaucracy. This is one reason, for example, why bureaucratic measures of command and control still dominate environmental policy, despite that the over-whelming majority of economists advocate the use of economic instruments since quite a long time.<sup>43)</sup>

[41] In this concept the scientist is still the one who (only) strives for social welfare. However, the general public does not believe in this self-image of economists (and other scientists). Even if the critique might often be overstated, one has to admit that the picture of economic advisors the general public has is rather more realistic than the ideal picture economists (and other scientists) have themselves. They produce (scientific) reports for different interest groups, and they are often well paid for this activity. In most cases, the results are in line with the interests of their clients, and when different clients ask different scientists for a report on the same subject, the results are not seldom contradictory. When they realise that there might be a conflict with their role as scientists, they sometimes try to camouflage their involvement in economic interests.<sup>44)</sup> It is not for nothing that the American Economic Association as well as the German Economic Association (Verein für Socialpolitik) adopted an ethical codex that obligates their members to disclose potential conflicts of interest whenever they publish in one of the journals of these societies.<sup>45)</sup>

[42] There is, in addition, a systematic argument. Even if many economist and, in particular those who reckon themselves to belong to the Public Choice School and/or to Constitutional Economics resist, it is inconsistent to assume on the one hand that all other economic and political agents only pursue their self-interest and, on the other hand, to claim that oneself is only striving for the common good. If we assume, applying the economic model of behaviour, that all political and economics? A consistent application of the economic model of behaviour does not allow any exception: economists also maximise their utility subject to constraints. In this respect they are not different from other human beings, they are neither better no worse.

[43] But even if we distract from the ideal picture of a scientist as has been painted, for example, by MAX WEBER (1919) and apply a more realistic picture, we should not try to explain the fact that there are often opposing scientific reports by insinuating that the advisors are 'bad' people and/or opportunistic in the sense of O.E. WILLIAMSON (1985, p. 47). We should rather – following the economic approach – try to explain it as a result of rational behaviour, assuming that the agents follow their own interests without necessarily dubious acting in a legal or moral sense. We can hardly ever totally exclude opportunistic behaviour, but nothing justifies the assumption that political advisors always behave in this way.

<sup>43.</sup> See for this, for example, F. SCHNEIDER and G. KIRCHGÄSSNER (2003).

<sup>44.</sup> See for this the examples in C.F. FERGUSON (2012, pp. 240ff.).

<sup>45.</sup> For the American Economic Association see https://www.aeaweb.org/aea\_journals/AEA\_Disclosure\_Policy.pdf, for the German Economic Association http://www.socialpolitik.org/inhalte/Ethikkodex\_final.pdf (19/11/14).

#### 5 On the Process of Political Advice

- [44] There are mainly five ways for scientific knowledge to influence the political process:
- (i) Scientists can become politically active themselves, becoming politicians or top bureaucrats.
- (ii) Scientists advise politicians directly.
- (iii) Scientists advise the general public, for example, by writing newspaper articles or papers for (non-scientific) journals.
- (iv) Scientific papers are used in the political discourse and/or before courts as the basis for arguments presented there.
- (v) Scientists produce reports for politicians, political institutions, and/or interest groups.

In the following, we only discuss the fifth point. There, scientists intervene in particular with their scientific authority in the political process.

- [45] If we have a closer look at these reports, we can distinguish three categories:
- (i) *Instrumental reports* (or scientific reports in the narrow sense): The politicians have a certain objective, they do not know how to reach it, and they have to rely on the scientists for the relevant information.
- (ii) *Ideological reports*: The politicians know their policy; they demand a scientific foundation and/or a justification from outside for the realisation of a policy that is already decided.
- (iii) Alibi reports: The content of the report is of minor interest; important is the time needed to produce the report. This allows the politicians to postpone an (unpopular) decision (for example until after the next election) and/or to prepare a decision that might have nothing to do with the content of the report.

[46] There are many instrumental reports. Most scientists may be inclined to classify their reports in this way. This is also the main political activity of serious research institutes, and generates a large part of their financial basis. As mentioned above, an example might be the many reports on the effectiveness (or ineffectiveness) of active labour market policy.<sup>46)</sup> As far as these are purely instrumental reports, the traditional concept of political advice (criticised above) is largely true. If we distract from which objectives are targeted, the ideological orientation of the politician and/or the advisor should only play a minor part.

[47] However, more relevant for our discussion are ideological reports. Normally, they are also produced by economic research institutes or by (economic) scientists. If such reports ought to transport not only ideology but also information, there has to be an opportunity for a public debate and the background information has to be disclosed. For empirical studies this demands the disclosure of the data and their sources, sometimes also of the computer pro-

<sup>46.</sup> See, for example, the condensed versions of several studies on Swiss labour market policy in: *Die Volkswirtschaft – Das Magazin für Wirtschaftspolitik* 73(4), 2000.

grammes. Only this allows competing parties or interest groups as well as the general public to critically scrutinise the results. This is necessary if it is to be possible to distinguish between factual information and political opinions in a public debate. Of course, both have their legitimate place in the political discourse, but it should always be possible to distinguish both, even if this is sometimes rather difficult. Thus, this concept which adjudges the decisive role to reach objective information to the (possibility of a) political discourse and not the individual motivation of the scientists is fully in line with the concept of value freedom as argued by MAX WEBER, HANS ALBERT and many others.

[48] We can assume that in many (if not most) cases economists writing an ideological economic policy report personally support the political objectives, i.e. they are biased in the direction of their clients. This contradicts the picture of the ideal scientist by MAX WEBER (1919) who is only obliged to seek the truth. It is, however, a fact that usually the clients consciously hire those advisors from whom they can expect the corresponding results. Because the scientists are aware of these expectations, we can assume that the demanded results are at least not in opposition to their own political convictions. After all, they have to identify themselves with the result once the reports are publicised. By sharing the same basic political convictions, they usually do not have to distort themselves in order to reach the demanded results.

[49] On the other hand, that advisors come to different conclusions does not imply that the results are arbitrary. Whenever there are opposing reports, a critical discussion could detect mistakes and tricks in order to allow for a more objective evaluation.<sup>47)</sup> An important function of such a discussion is to disclose arguments that are in the interest of special groups even if they are presented with the rhetoric of the common good. Such an enlightening discussion will not please all. But it can help independent third parties and, in particular, political decision makers to take 'reasonable' decisions. This might hold even more in a (half-)direct democracy compared to a purely representative system, as the public political discourse becomes more important when the citizens are able to co-decide.<sup>48)</sup>

[50] In addition, it might be conductive to the political discussion and the subsequent decision if the advisers try to present strong arguments for their side. As it can be disadvantageous in scientific discussions if theories are dropped 'too fast', it makes sense in political discussions if both sides have the possibility to present all their arguments. Only then the citizens (or their parliamentary representatives) have the chance to really know what is at stake.

<sup>47.</sup> See, for example, the discussion on the paper by C.M. REINHART and K.S. ROGOFF (2010). They came to the conclusion that a public debt of 90 per cent in relation to GDP is a barrier above which rising public debt leads to economic decline. Politicians, in particular in Germany and in the European Union were eager to take this result in order to use it as a scientific foundation for the demanded austerity policy in the European debt crisis. (See for this M. BROST, M. SCHIERITZ und W. UCHATIUS, Verrechnet, *DIE ZEIT* No. 27 of 27 June 2013, pp. 17 – 19.). T. HERNDON, M. ASH and R. POLLIN (2014) have however shown that this result is based on a calculation error and some questionable assumptions. There is no barrier at all at the 90 per cent. Countries with a public debt of above 90 percent in relation to GDP have – on average – only slightly less economic growth than countries below this line. In addition, C.M. REINHART and K.S. ROGOFF (2010) are unable to say anything about causality because they only consider correlations.

<sup>48.</sup> See for this B.S. FREY and G. KIRCHGÄSSNER (1993).

[51] One might concede this but argue that, first, scientists often also seek for truth and this might even be the only incentive and that, second, scientists not always write what their clients expect. Both cannot be denied, but it can also not be denied that scientific advisors, besides seeking for truth, often also have quite other motives and objectives, and that they usually write in reports for interest groups what these expect from them. What follows from this?

[52] First, it has to be taken into account that the incentives of scientists depend on the environment in which they operate. Other conditions are valid for the 'scientific game' than for the 'political game' or the 'policy advice game'. Generally, the scientific game is more transparent and has a more long-run perspective. Thus, striving for objectivity is stronger in (pure-ly) scientific activities than in the policy advice game, but it can exist in the latter as well. Moreover, there are many arguments in the utility functions of all agents; (monetary) income is a very important one, but only one among many arguments.

[53] Reputation in the scientific community plays certainly an important role for scientists, and they are usually not willing to risk this reputation because of negligible financial rewards. Thus, it would not be rational even for self-interested scientists to be corruptible for small amounts of money and to produce results which can easily be rejected.<sup>49)</sup> This holds the more, the more intense the information spills over from the political to the scientific area, i.e. the easier other scientific colleagues get knowledge of political advice statements which are scientifically not sound. Thus, striving for objectivity can be generated by self-interest, even if it might appear or be interpreted differently: as intrinsic motivation. On the other hand, among scientists but also among other human beings there is also genuinely non self-interested (altruistic, intrinsically motivated) behaviour. In some situations such behaviour can even be very relevant for society.<sup>50</sup>

[54] Nevertheless, in order to find answers to the question of how the process of policy advice has to be organised that not only ideology but also information is transmitted, it makes sense to follow the concept of Constitutional Economics and assume self-interested behaviour of all participants. This holds even if the majority of scientists were purely intrinsically motivated, solely striving for objective knowledge. In analogy to the constitutional considerations of KARL R. POPPER (1945, p. 121) the relevant question is: how can we organise the institutions of scientific policy advice in such a way that bad or incompetent experts can be prevented from doing too much damage? A somewhat nicer formulation for this might be: how should the rules of the policy advice game be so that even those scientific experts who are more interested in their own (monetary) income than in truth will produce objective knowledge. As shown above, a precondition for this is the open discussion of research methods and results.

[55] With respect to the question of the objectivity of scientific reports it has additionally to be taken into account that scientific experts who get their mandate from interest groups are in

<sup>49.</sup> However, as the case of FREDERIC MISHKIN, documented in C.H. FERGUSON (2012, pp. 253ff.), shows, economists are at least sometimes ready to risk their reputation for considerable sums of money.

<sup>50.</sup> See for this G. KIRCHGÄSSNER (1991, p. 168ff.)).

many cases neither able nor willing to do anything else than support the political objectives of their clients. This holds even if they are in no way corruptible. First, a report not in support of the political objectives of the client will – with high probability – never be presented to the general public. This alone ensures that the published reports are (largely) supporting the objectives of the client. Second, an expert who presents results which contradict the objectives of his/her client might get no further mandate. Consequently, the selection of the experts by clients leads to a substantial convergence of interests of clients and experts. We observe a similar process in the market for scientific reports as, following ADAM SMITH (1776), it has already been described by A.A. ALCHIAN (1950) and M. FRIEDMAN (1953) for ordinary markets: (i) The self-interest of the experts provides incentives for them to help their clients to reach their political objectives. (ii) Even if all experts only support those political objectives of which they are personally convinced and which they believe to be justified (in a moral way), the selection mechanism generates an assignment between clients and experts such that finally the political objectives of clients and experts are largely corresponding. Thus, the selection process generates an 'as if'-result. In this game all experts may survive, but only under the protection of specific clients. 'Objectivity' can in this game only be reached approximately and only if a public discourse is possible.

[56] On the other hand, whenever they are engaged as experts most scientists have not only scientific but also political objectives. Thus, they have strong private incentives to look for clients whose political objectives correspond to their own. As citizens they have the right – as all others, too – to pursue their own objectives in the political process. If they enter the political area as policy advisors, they only have a chance to be successful if they accept themselves as active players in the democratic process and if their political objectives are not too far away from those of their clients. Therefore, there is a convergence of interests between clients and experts in the process of scientific policy advice. This originates not only from the demand but also from the supply side, and the experts do not have to be corruptible for reaching such a convergence.

#### 6 Summary and Concluding Remarks

[57] Despite that at least some economists sometimes try to create the impression in the general public that there is a large consensus among economists with respect to most economic policy questions, there are major disagreements even among leading economists about some of the most pressing economic problems. This holds in particular for macro-economic problems. These disagreements exist not only with respect to purely theoretical problems, but also – and perhaps even more – with respect to empirical questions or the interpretation of empirical results, respectively. In many cases even serious researchers can come to quite different conclusions because small – more or less equally plausible – modifications of the equations to be estimated or of the estimation procedures can lead to quite different results. In such situations researchers will present those results which they believe to be more plausible, and this largely depends on their political convictions (or ideology). Thus, political convictions can have an impact on the results of empirical research even if the most advanced statistical methods are applied. This often allows politicians and interest groups to select as advisors

from all researchers with high reputation those who are closest to their political conceptions in order to get scientific support for their policy.

[58] Despite all this, (economic) policy advice can nevertheless contribute to improve political decisions. This does not only hold for purely instrumental questions, but also for problems with ideological relevance. A precondition for this is the possibility for open discussions in the scientific community as well as in the general public. This demands that scientific reports are published and, for empirical papers, that re-estimations by independent researchers are possible. As far as no problems of data privacy are involved, the data should be publicly accessible.<sup>51)</sup> The possibility of an open discussion does not only make it possible to detect errors and manipulations in the empirical procedures but also provides strong incentive for the political advisors not to fall into ideological traps.

[59] Finally, to understand and improve the process of political advice, we should suspend the traditional view in which the scientist (economist) has a special role in that (s)he better knows what is good for the society and acts less self-interested than all other political and economic agents. Such a perspective hardly reflects the real situation, and is moreover inconsistent with the economic approach. To be consistent, the behaviour of political advisors, including economists, has to be analysed with the same model of behaviour as the behaviour of all other agents. This is a precondition to analyse the process of political advice without falling into a conspiracy theory or something similar. But this also implies to concede that the political convictions can have a large impact on the research of (social) scientists, in particular also of economists. This creates no problems as long as it only influences which problems are recognised as relevant by the researcher what steers his/her research in a certain direction. Problems only arise once it also influences what (s)he believes to be a scientifically approved fact. However, as mentioned above, the empirical evidence that can be reached is often not discriminatory enough in order to exclude this. Thus, competition between researchers and open discussion of the results are the only instruments available to prevent errors and manipulations as far as possible.

[60] To recognise all this, and to try to improve the process of policy advice, we do not need a basic new economic theory. 'Heterodox' approaches might be nice with respect to many aspects, but they are not necessary in this context. On the contrary, we have to generally apply the basic economic approach, consisting of the principle of Methodological Individualism and the Weak Rationality Principle<sup>52)</sup> to all agents of the political advice game. In addition, it is reasonable to assume that all agents have the same amount of self-interest. It is difficult to see what approaches could contribute that do not include these ingredients.

<sup>51.</sup> Even if such problems exist, the data can confidentially be made available for re-estimations.

<sup>52.</sup> For the Weak Rationality Principle see G. KIRCHGÄSSNER (2013a).

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