

The Predictability of Foreign Policies: The British EMU Policy

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1 Introduction

In this contribution, we demonstrate the predictive power of recent collective decision-making models in the field of foreign policies. This predictive power concerns not only the outcomes of political decisions but also how much conflict is involved in the decision to be taken. The study reported concerns a case study of whether Great Britain would enter EMU immediately or would postpone its membership. The study was conducted well before the British elections (1 July 1997) and is based on an interview with only one expert. The results of the study were published in an internal report and offered to several organisations well before the elections with the request whether they would be interested in more extensive studies on the EMU (*quod non*). The study uses a methodology that has been developed by Bueno de Mesquita.¹ An earlier study in the context of the European Community can be found in Bueno de Mesquita and Stokman.² The approach is based on explicit dynamic modelling of the political process in combination with a special interview technique to collect the necessary data for the fit in an empirical situation.

The Bueno de Mesquita dynamic model, denoted by the Expected Utility model, conceives of collective decision-making as conflict resolution, a non-cooperative game, fundamentally different from exchange relations in economics. This model belongs to a family of models that represent fundamental processes in collective decision-making. In the model of Stokman and Van Oosten³ collective decision-making is conceived of as a cooperative game in which all stakeholders can gain under certain conditions and in which promises to shift positions are taken as binding commitments. In the model of Stokman and Stokman⁴ stakeholders optimise their leverage over a set of issues to optimise the outcomes of decisions and often find in this way interesting exchange possibilities. In the model of

¹ B. Bueno de Mesquita, D. Newman and A. Rabushka, *Forecasting Political Events. The Future of Hong Kong*, Yale University Press, New Haven etc., 1985; B. Bueno de Mesquita and D. Lalman, 'Reason and War', *American Political Science Review*, Vol. 80, 1986, pp. 1113-1129; B. Bueno de Mesquita, 'Political Forecasting: An Expected Utility Method', in: B. Bueno de Mesquita and F.N. Stokman (eds), *European Community Decision Making. Models, Comparisons, and Applications*, Yale University Press, New Haven, 1994, pp. 71-104.

² B. Bueno de Mesquita and F.N. Stokman (eds), *European Community Decision Making. Models, Comparisons, and Applications*, Yale University Press, New Haven, 1994.

³ F.N. Stokman and R. van Oosten, 'The Exchange of Voting Positions: An Object-Oriented Model of Policy Networks', in: Bueno de Mesquita and Stokman (eds), *op.cit.* (note 2), pp. 105-127.

⁴ F.N. Stokman and J.V. Stokman, 'Strategic Control and Interests. Its Effects on Decision Outcomes', *Journal of Mathematical Sociology*, Vol. 20, 1995, pp. 289-317.

Stokman and Zeggelink⁵ stakeholders influence each other's positions through influence access relations that cannot be confined to single issues.⁶ All models take the same data as input of their analyses.

As the British entrance to the EMU was specified as a single issue and more than one issue is required for the cooperative approach, we confine the present paper to the conflict model of Bueno de Mesquita.

The model assumes the existence of one or more unidimensional issues. Unidimensionality means that the possible outcomes of a decision can be represented as points on a line; as values on an underlying continuum. Some issues, like the size of a budget, seem to fulfil this criterion easily, but for others, like the entrance to the EMU, special interviewing techniques are required to transform the different alternatives into such a scale.

Collective outcomes cannot be explained without reference to the choices made by the stakeholders in the relevant social system. Stakeholders are organisations and/or persons who have a substantial effect on the outcome of a decision. At the highest level of abstraction, stakeholders are assumed to have monotonously increasing utility functions related to universal goals, like physical well-being and social approval, but they have different instrumental preferences for the means that lead to these ultimate goals.⁷ In this perspective, outcomes of collective decision-making can be perceived as instrumental goals: whereas one outcome can produce physical well-being or social approval for one set of people, another outcome can be better for others. Within a collective decision-making setting, differences of instrumental goals among stakeholders result in two types of relations between stakeholders and issues.

First, what is an important issue for one stakeholder might well be irrelevant for the realisation of the ultimate goals of another stakeholder. Second, differences in instrumental goals result in diverging political stances of stakeholders on issues. Consequently, people can be expected to behave quite differently despite the assumption that they are all rational in the sense that they are interested in maximising their welfare. Even people in possession of the same information and, of course, holding the same universal goals, may nevertheless have radically different instrumental objectives.

The importance of an issue a for a stakeholder i is denoted by the *saliency* stakeholder i attaches to issue a (s_{ia}). The outcome on issue a that stakeholder i desires is denoted by the stakeholder's *policy position* on the issue (x_{ia}). The policy

⁵ F.N. Stokman and E.P.H. Zeggelink, 'Is Politics Power or Policy Oriented? A Comparative Analysis of Dynamic Access Models in Policy Networks', *Journal of Mathematical Sociology*, Vol. 21, 1996, pp. 77-111.

⁶ F.N. Stokman and J. Berveling, 'Predicting outcomes of decision-making. Five competing models of policy-making', in: M. Fennema, C. van der Eijk and H. Schijf (eds), *In search of structure. Essays in social science and methodology*, Het Spinhuis, Amsterdam, 1998, pp. 147-171.

⁷ S. Lindenberg, 'Homo Socio-oconomicus: The Emergence of a General Model of Man in the Social Sciences', *Journal of Institutional and Theoretical Economics*, Vol. 146, 1990, pp. 727-748, at p. 741.

position expresses the policy preference of the stakeholder, while the salience expresses the relevance of the issue compared to other (perhaps unspecified) issues. These two elements – position and salience – are combined into a utility function for each stakeholder that specifies the value the stakeholder attaches to each feasible alternative outcome on the issue in question. The policy position, then, denotes the point on the continuum that has the highest utility for the stakeholder. For any stakeholder, the utilities of the other alternatives are assumed to be a function of their distance from the stakeholder's most preferred position, taking the salience of the issue into account.

The next basic assumption has to do with the transformation of the preferences of the stakeholders into a collective outcome, a final decision. This step requires a third element in which stakeholders differ fundamentally, namely their *capability* to influence the collective outcome (c_{it}). This is the third empirical element that needs to be specified within a field of application.

Given the initial positions as well as the saliences and capabilities of the stakeholders, the Bueno de Mesquita expected utility model takes the median voter position as the initial predicted outcome. This is the starting point from which stakeholders try to improve their utility through the decision-making processes. The model then gives stakeholders the opportunity to challenge the positions of other stakeholders if they expect a positive outcome from such a possible confrontation. In this process stakeholders may be forced to take less attractive stances if they have no better alternatives. These challenges may, therefore, result in forced or negotiated shifts of policy positions for some stakeholders and consequently may imply shifts in the predicted collective outcome. This process is repeated until no further important effects on the outcome of a decision can be observed.

2 The Data

At the time of the investigation, the question to be investigated concerned of whether or not the United Kingdom will participate in the European Monetary Union within the following government period, expected to run from 1997 until 2002. As the investigation took place before the last elections, two scenarios were investigated; firstly, a scenario in which the Labour Party wins the general election and forms a government. According to the public opinion surveys, this was the expected outcome of the election. From previous experience, however, we all know that predicting election results on the basis of such surveys is an inexact science. Therefore, a second scenario was investigated; one in which the Conservative Party remains in government after the election.

The data under the two scenarios are given in Tables 1 (Labour Government) and 2 (Conservative Government). A subject area specialist was carefully selected and interviewed in order to identify the stakeholders or key players of relevance to the resolution of this issue. For each stakeholder he gave the three variables needed for the Expected Utility Model on numerical scales: the capability,

position, and salience. In Table 1 and 2, capabilities and saliences are given on scales ranging from 0 (no) to 1 (high). The positions are given on a scale from 0 to 100. In the position scale, 0 indicates unequivocal opposition to UK membership, 100 full support. The more remote the value from either extreme, the more hesitant the stakeholder is. The data reflect the fundamental splits in the two parties between a pro EMU group and the Eurosceptics. The positions of the stakeholders are the same in the two tables, and only small changes in the saliences were given. The main differences between the two tables have to do with the capabilities of the stakeholders. These capabilities are of course drastically different for the two parties. The very low capability of the pro-EMU leadership group of the Labour Party under a Conservative government reflects the view of the specialist that a Labour defeat in the elections would be devastating for Labour given the such good prospects at that time.

In the next Section we give a more elaborate description of the Bueno de Mesquita model. Readers not familiar with mathematical models, may skip this section and can read the results of the study in sections 4 and 5 without difficulties.

Table 1
Capability, position, and salience of the stakeholders regarding
UK membership of the EMU under a Labour Government

Code	Name of stakeholder	Capability	Position*	Salience
Lab1	Pro EMU leadership group of the Labour Party	1	75	0.4
Lab2	Eurosceptic group within the Labour Party	0.5	35	0.4
BoE	The Bank of England	0.1	50	0.6
Tech	Technocrats	0.1	95	0.4
CBI	Confederation of British Industry	0.1	50	0.4
IoD	Institute of Directors	0.1	40	0.4
Inv	Financial Investors	0.1	85	0.6
Con1	Conservative Eurosceptics	0.3	5	0.95
Con2	Conservative Europhiles	0.3	60	0.5

* 0: No, Unequivocal opposition to UK membership of EMU
50: Undec, Undecided on the issue
100: Yes, Full support of UK membership in 1999

Table 2
 Capability, position, and salience of the stakeholders
 regarding UK membership of the EMU under a Conservative Government

Code	Name	Capability	Position*	Salience
Lab1	The pro EMU leadership group of the Labour Party	0.1	75	0.3
Lab2	The Eurosceptic group within the Labour Party	0.4	35	0.3
BoE	The Bank of England	0.1	50	0.6
Tech	Technocrats	0.1	95	0.4
CBI	Confederation of British Industry	0.1	50	0.4
IoD	Institute of Directors	0.1	40	0.4
Inv	Financial Investors	0.2	85	0.6
Con1	Conservative Eurosceptics	1	5	0.95
Con2	Conservative Europhiles	0.4	60	0.5

0: No, Unequivocal opposition to UK membership of EMU

50: Undec, Undecided on the issue

100: Yes, Full support of UK membership in 1999

3 The Expected Utility Model of Bueno de Mesquita (Conflict Model)

In the Expected Utility model, the issues are not linked with each other. For each issue a separate analysis is done. The dynamic element in the decision-making process lies in the ability of stakeholders to challenge the policy position of other stakeholders. Figure 1 (see the appendix to this contribution) gives the choices a stakeholder (say stakeholder i) can make *vis-à-vis* every other stakeholder j . (S)he can challenge stakeholder j or can decide not to do so. If (s)he challenges stakeholder j , his/her opponent can give in or not. If stakeholder j gives in, the opponent (stakeholder j) will have to support the policy position of the challenger (stakeholder i). If stakeholder j resists, there are again two possibilities: the challenger (stakeholder i) wins or the opponent wins. The other possible outcomes result from situations where stakeholder i does not challenge stakeholder j (given in the left part of Figure 1). In that case stakeholder j will not move due to challenges by stakeholder i . However, due to other challenges stakeholder j may move, resulting in a better or worse policy outcome from the perspective of stakeholder i . Every stakeholder computes the utility of each alternative and the likelihood of occurrence. This requires an estimate of the utility and the likelihood of occurrence from the perspective of the opponent. In the latter, the model simulates misperceptions because stakeholders do not take into account that some

stakeholders are risk accepting and others risk averse. These computations take into account the support stakeholder i and j get from the other stakeholders.

The expected utility for i to challenge stakeholder j can now be computed as follows. The likelihood that stakeholder j will accept a challenge of stakeholder i can be estimated by the salience of issue d for stakeholder j , s_{jd} . The likelihood that stakeholder j will give in is equal to $(1 - s_{jd})$. In the latter case stakeholder j will support the policy position of stakeholder i . The utility of the move of stakeholder j in the direction of stakeholder i is denoted by $u^i \Delta x^+_{jd}$. If stakeholder j accepts the challenge, stakeholder i can win or lose. In the first case again the shift of the position of stakeholder j to that of stakeholder i has a utility of $u^i \Delta x^+_{jd}$. If stakeholder i loses, (s)he is forced to support the position of stakeholder j . The negative utility for stakeholder i of that move is denoted by $u^i \Delta x^-_{jd}$. The likelihood of success or failure for stakeholder i in such a dispute depends on the relative powers of stakeholder i and j , denoted by p_{ij} . It depends on the leverage (capability times salience) each of the stakeholders is willing to invest and the support each of them gets from third stakeholders. The expected utility for stakeholder i to challenge stakeholder j is now equal to:

$$E^i u^i \Delta x_{jd} \mid \text{Challenge} = s_{jd} p_{ij} [u^i \Delta x^+_{jd}] + (1 - p_{ij}) [u^i \Delta x^-_{jd}] + (1 - s_{jd}) [u^i \Delta x^+_{jd}] \quad (1)$$

In a similar way, we can compute the expected utility for stakeholder i not to challenge the policy position of stakeholder j . If we assume no anticipation of autonomous changes, none of the stakeholders will shift their support. The utility for stakeholder i of such a status quo is denoted by $u^i \Delta x^0_{jd}$. The expected utility, given no challenge is simply:

$$E^i u^i \Delta x_{jd} \mid \text{No Challenge} = u^i \Delta x^0_{jd} \quad (2)$$

The total expected utility for stakeholder i relative to stakeholder j is now equal to:

$$E^i u^i \Delta x_{jd} = E^i u^i \Delta x_{jd} \mid \text{Challenge} - E^i u^i \Delta x_{jd} \mid \text{No Challenge} \quad (3)$$

The dynamic element in the Bueno de Mesquita model can now be summarised by Figure 2 (see the appendix to this contribution). On the horizontal axis the expected utility of the challenger (stakeholder i) is given relative to the opponent (stakeholder j). On the vertical axis stakeholder i 's estimate of the expected utility of a challenge by stakeholder j towards stakeholder i is given. Stakeholder i will challenge the policy position of stakeholder j solely if he estimates his expected utility as positive and larger than that of stakeholder j (the sectors 1, 8, and 7). The opponent (stakeholder j) reacts on his or her own perception of the situation which is not necessarily equal to that of stakeholder i because of misperceptions of the other stakeholder's expected utility. On the basis of this combination the model predicts which stakeholders will challenge other stakeholders, whether the

other stakeholders will accept such a challenge or not, and what the outcome of the challenge will be.

This model has given very promising results. This model has been evaluated in independent research over 1,000 predictions. In about 50 percent of the cases, the experts and the model arrived at the same predictions. In the other 50 percent of the cases, 80 percent of the predictions of the model were better than those of the experts. Another indication of the success of the model was delivered in the investigation of 133 European conflicts between 1816 and 1970 in which at least one of the larger powers was involved.⁸ Of the conflicts that were classified in the first quadrant of Figure 2 (sections 1 and 2), 90 percent resulted in war. Of the conflicts classified in the negotiating parts of the figure (sections 3 and 8), 38 percent ended in a war. In the sections 4 and 7 (one of the stakeholders yield to the other), only 12 percent resulted in a war. In the *status quo* quadrant (sections 5 and 6), none of the conflicts resulted in war. The model therefore not only predicts outcomes very well, but also the amount of conflict involved and the stability of the outcome.

4 The British Position on the EMU

The conventional wisdom at the time of the investigation was that if there is to be any chance of the UK entering the EMU, the Labour Party must win the forthcoming election. The forecasts we made at that time stood in contrast to this conventional wisdom. On the basis of the data given in Tables 1 and 2, we forecasted that the next UK Government, whether Labour or Conservative, would not enter the EMU. In addition to the outcome, forecasts were made of the way in which the issue would be resolved under both of the possible scenarios. This provides a fascinating example of the application of the methodology and insights about the nature of conflict resolution on this issue.

4.1 A New Labour Government

The potential power or capabilities of the various stakeholders, who have an interest in the issue, is one of the variables that will determine the final outcome. After a Labour Party election victory, the pro EMU faction of the Labour Party was expected to have far more potential power than any other relevant stakeholder. It is therefore understandable that the conventional wisdom stated that the only chance of UK membership lays in an election victory for the Labour Party. This, however, neglects two key elements of political conflict resolution. Firstly, certain stakeholders are willing to devote more of their potential power to the issue than others and, secondly, certain stakeholders are more sensitive to the risks associated with political confrontations with others. While the pro EMU faction of the Labour Party was moderately in favour of EMU membership, the

⁸ Bueno de Mesquita and Lalman, *loc.cit.* (note 2); and B. Bueno de Mesquita and D. Lalman, *War and reason. Domestic and international imperatives*, Yale University Press, New Haven, 1993.

members of this faction were not assumed to be willing to devote a large amount of their potential power to the realisation of this goal. Other issues on the political agenda, such as social and constitutional reform, were expected to take up a considerable amount of this group's effort. For the Conservative Eurosceptics, on the other hand, this is an issue that goes to the heart of their identity and is one that they were expected to fight for, tooth and nail. During the initial few months of the new Labour Government, the moderately positive attitude of the pro EMU Labour faction corresponds with a moderately positive expectation that the UK would join the EMU. This created the misperception within the pro EMU Labour faction that UK membership is likely, without a series of conflicts with other stakeholders. The Conservative Eurosceptics' unequivocal opposition to UK membership contrasts with the initially expected outcome. They realise that if there is to be a chance of winning the debate, conflicts with other stakeholders are inevitable. Furthermore, the fact that they no longer form the Government ameliorates their sensitivity to the risks of engaging high profile conflicts with other stakeholders, who are more positively inclined toward UK membership. This analysis reveals that the strategic position of the Conservative Eurosceptics is stronger than that suggested by the potential power of this stakeholder alone.

Table 3

Expected changes in the positions of the relevant stakeholders under scenario 1. Stakeholders close to zero are unequivocally opposed to UK membership of the EMU, stakeholders close to 50 are undecided, and stakeholders close to 100 are in full support of UK membership

Stakeholders	Initial Position	Round 1	Round 2	Round 3	Round 4
Labour Party – pro EMU faction	75	40	25	16	5
Labour Party – anti EMU faction	35	35	35	6	5
Bank of England	50	28	28	5	5
Technocrats	95	95	95	5	5
Confederation of British Industry	50	28	28	5	5
Institute of Directors	40	38	15	17	5
Financial Investors	85	85	69	51	5
Conservative Eurosceptics	5	5	5	5	5
Conservative Europhiles	60	60	43	5	5
Expected Outcome	60	40	25	6	5

As elaborated above, the model consists of a series of 'rounds', during which each of the stakeholders has the opportunity to challenge the positions of others. These challenges may force certain stakeholders to change the position that they express on the issue concerned. After four rounds, the positions of all relevant stakeholders converged to the same unequivocally negative stance toward UK membership of the EMU (see Table 3).

During the first two rounds, the pro EMU faction of the Labour Party is forced to change its position dramatically. This stakeholder is unable, given the anticipated distribution of effected power, to maintain a positive position toward UK membership. As a result of the change in position of the originally pro EMU Labour faction, the potential power of all stakeholders that are negatively inclined toward UK membership becomes overwhelming. The remaining positively inclined stakeholders are forced to follow suit.

The level of conflict involved in the resolution of this issue is extremely high. The high intensity of the conflict continues until all stakeholders converge on the same position. It should be noted that it is the Conservative Eurosceptics who engage in the most conflicts and confrontations with other stakeholders, and are instrumental in bringing about the forecasted outcome.

As the victory of the Labour Party in the general elections was much larger than expected at the time of the data collection, we did two kinds of sensitivity analyses after the elections. In the first sensitivity analysis, we reduced the capability of both conservative groups (0.3 in the original data) to 0.2 and then to 0.1. The reduction of the Conservative Party fractions to 0.2 still results in an immediate shift of the pro EMU leadership group of the Labour Party to 41 in the first round, but stays there in the next rounds. With the further reduction to 0.1, the pro EMU leadership group of Labour shifts in three rounds to 64. In the second sensitivity analysis, we reduced the salience of the Conservative Eurosceptics with small steps of 0.5 from the original salience of 0.95 to 0.7. The idea behind this sensitivity analysis is that the large defeat would result in less attention of the Conservative Eurosceptics for the European process than anticipated. From a salience of 0.7 to 0.8, the outcome is still 60. Under a salience of 0.85, the pro EMU leadership fraction of Labour moves to 53, under 0.9 to 46 and, as we have seen above, under 0.95 to 5. These sensitivity analyses show that also under the large Labour victory unconditional immediate entrance of Great Britain to the EMU is highly unlikely.

4.2 A Conservative Government

After an election victory for the Conservative Party, the Conservative Eurosceptics were expected to be the most potentially powerful stakeholder. Given the great importance of the issue for the Eurosceptics, it is anticipated that they would devote almost all of this potential to the attainment of their goal; keeping the UK out of the EMU. However, this does not lead to a consensual rejection of UK membership by all stakeholders, as was the case in the previous scenario.

Due to a widespread expectation that the UK will remain outside the EMU under this scenario, the Conservative Eurosceptics will judge that to challenge the Europhiles within their party would not be worth the risks associated with such a conflict. As a result, the fundamental split within the Conservative Party will remain. The pro EMU faction of the Labour Party, vanquished by election defeat in this scenario, sees that the expected outcome lies far from the moderately positive position that they had been expressing until the election. Under this scenario, the pro EMU Labour faction is more willing to accept the risks of challenging the positions taken by other stakeholders. Despite this willingness to engage in confrontations, there are no opportunities for the pro EMU Labour faction to successfully challenge the negatively inclined positions of the more powerful stakeholders.

On the basis of the simulation model, it is forecasted that no lasting changes will occur in the positions of the relevant stakeholders (see Table 4).

Attempts made by positively inclined stakeholders to influence the position of negatively inclined stakeholders will be unsuccessful. Furthermore, given the expected outcome in this scenario, the negatively inclined stakeholders will not perceive the risks of challenging positively inclined stakeholders to be worthwhile. The result is a persistent dissent on the issue of UK membership of the EMU. The level of conflict associated with this issue will remain extremely high. Nevertheless, the forecast is clear: the United Kingdom will not join the EMU.

The methodology applied here not only provides forecasts of the outcomes of decisions and the way in which they will be resolved, but can also be used to provide strategic advice to the relevant stakeholders. As mentioned above, under this scenario, the Conservative Eurosceptics perceive the risks of a conflict with the Europhiles within their party as unacceptably high. They therefore decide not to challenge the Europhiles. The simulation model allows the analyst to see the situation from the perspective of each individual stakeholder and to identify which challenges, if launched, would be successful. In this case, an unseen opportunity for the Conservative Eurosceptics was identified. If they were to challenge the Europhiles within their own party, the Europhiles would capitulate and voice a more sceptical position toward UK membership of the EMU. This type of advice, and the way in which it should be carried out, is part of the potential uses of this methodology.

5 Summary and Concluding Remarks

The general feeling at the time of the data collection was that the election victory of the Labour Party, generally perceived to be more in favour of UK membership of the EMU than other relevant stakeholders, would result in the immediate entrance of Great Britain in the EMU. We have shown that the Bueno de Mesquita model predicts a consensual rejection of UK membership under Labour and this is what has actually happened. Even if we take the large victory of Labour into account, unconditional immediate entry to the EMU was a highly unlikely event

according to the model predictions. Under the scenario of a Conservative election victory, the model predicted also that the UK would not join the EMU. However, under this second scenario, the model predicts that a consensus cannot be reached, and that the issue will remain highly conflictual. The process that these forecasts anticipate is certainly not without historical precedent. There are many examples of issues on which it was only after a change in position of a key stakeholder in an unexpected direction that consensus could be reached on the issue. For example, in the 1970s, President Nixon's overtures toward China were required, before the hawks on US foreign affairs could be convinced that a more open policy toward China was appropriate.