MULTILEVEL ECONOMIC PERCEPTIONS?

THE CASE OF GERMANY

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1. Introduction

Ever since Kinder and Kiewiet (1979) have introduced the notions of pocketbook and sociotropic voting, the study of economic voting has been dominated by these concepts. The basic idea is straightforward: The voter either looks at his own economic situation or at the economic situation of the country as a whole and – depending on his perception of the respective situations – takes his voting decision. Empirical studies usually find stronger support for the sociotropic version of economic voting; Kinder and Kiewiet (1979: 512) conclude: „the relationship between macroeconomic conditions and congressional election outcomes appears by this evidence to be carried mainly by collective economic judgements, not by personal economic grievances“ (Kinder/Kiewiet 1979: 512. see also Funk/García-Monet 1997: 337; Nannestad/Paldam 1994). However, there is also evidence that personal circumstances (in the sense of the pocketbook version of economic voting) matter, even though less strong (Markus 1988, 1992).

However, a list of economic perceptions comprising only these two elements is by no means exhaustive. As all of us are embedded in a “multiple and hierarchical multilevel structure” (Esser 1999: 446, my translation) ranging from districts, towns and cities, counties, states to the country as a whole, it is quite conceivable that we also have economic perceptions for all of these layers. To visualize this idea, Eulau (1986, see also Johnston et al. 2007) used a series of concentric circles resembling an onion-like figure. In addition, these different layers can have separate effects, as Huckfeldt and Sprague (1995: 20) point out: „none of these environments is necessarily more important than any other in influencing citizen behavior“.

While the possibility of such contextual effects is generally taken into account in the study of elections, especially since the “returning to the social logic of politics (yet again)“ (Zuckerman 2005), this extension has only rarely been applied to the field of economic
voting. Very little is known about whether citizens do have separate perceptions of the
different layers described above, but also about possible effects of such perceptions.¹

The idea of the present paper is to test whether citizens in fact do have perceptions of
the regional economic situation. To do so, it comprises four parts: First, I will review what
is known about possible influences on economic perceptions. Following that, I will
present the data used. In the third part of the paper, I will present my empirical results
concerning economic perceptions as dependent variables. Finally, I will conclude.

2. Economic Perceptions

Possible influences on subjective economic perceptions can be grouped into two
categories. First, subjective economic perceptions will be influenced by objective
economic situations; secondly, other – non-economic – factors can also be expected to
matter. As Weatherford (1983b) has argued, this especially applies to more general,
abstract layers, as information concerning the national level cannot be obtained or
perceived directly by citizens. In addition, it is not always easy to understand, might even
be contradictory. It is also not clear why an average citizen would have a genuine interest
in following the development of the national economy in every detail – all of this
corroborates the expectation that a citizen might refer to other, non-economic factors in
the sense of shortcuts when forming perceptions.

¹ In addition to possible regional influences on voters, social influences (in the sense of friends, relatives or
colleagues) are also studied. There is also some work in this respect in the field of economic voting (see for
example Conover 1985; Kinder et al. 1983, 1989). In the same line of reasoning as outlined above, Kinder et al.
(1983: 3) argue: „The familial and the national frames of reference do not exhaust the possibilities, of course.
Presidential choice may also reflect assessments of the group’s predicament, where group might refer to women,
blacks, or air traffic controllers. … In between the two extremes are many intermediate possibilities, where
group interest may stand independently from the other two.“ However, the present paper will not follow this
line of research, but rather focus on regional influences.
If we look at the two group of factors in detail starting with the objective situation, it is not entirely clear a priori what exactly describes an objective economic situation. On an individual level, income will be an important factor (see for Germany Terwey 1990, Abold/Wenzel 2005), but also the employment situation (see Nannestad/Paldam 2000, Pattie/Johnston 1995). Similar relationships can also be expected to apply to the national levels: If the economy is booming and national income is growing, the respective economic situation should be perceived as good, too. However, there is one possible caveat to this: The number of relevant background variables possibly increases: In addition to the national income, employment and inflation might also influence such economic perceptions.

What about the regional level? The number of studies analysing perceptions of the regional economy is very limited – Mondak et al. (1996: 250) argue that there is a "lack of available data", according to Pattie/Johnston (1998b: 250) a "direct measure of voters’ perceptions of the regional economy, equivalent to the now-standard questions of individual and national economic performance" is missing in most surveys. Still, both of them find that the pattern found for the individual and the national level also applies to other, intermediate layers. Mondak et al. (1996: 249) conclude that a "multilevel structure of economic evaluations" exists. And Pattie et al. (1997: 152) add that "the important point to note here is that personal, regional and national evaluations are not one and the same thing", leading to the overall conclusion that voters were sophisticated readers of a complex and multifaceted economic geography (Pattie et al. 1997: 153).²

According to Kramer (1983), this should be the end of the story. Economic perceptions should not be influenced by other factors. As there is one and only one objective economic situation at a time, differences in perceptions indicate erroneous perceptions.²

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² This is further supported by studies finding a genuine state economic voting (relating the objective regional situation to aggregate patterns of voting, see e.g. Atkeson/Partin 1995; Howell/Vanderlleeuw 1990; Stein 1990; Svoboda 1995; for Germany see Klein/Pötschke 2000; Pickery 2002).
But his conclusion is probably too far-reaching. If one perceives of the economic situation as a multidimensional construct (comprising the employment situation, economic growth, and inflation), it is not a priori clear that each individual weights the different dimensions equally, possibly leading to different overall perceptions. Employed people (and also the unemployed) might pay greater attention to the employment situation, whereas retired people put greater emphasis on inflation (see Kinder et al. 1989; Nadeau/Lewis-Beck 2001; Roos 2005). A similar line of reasoning might apply to people with a rather leftist political ideology: As argued by Hibbs (1977), they also pay closer attention to developments on the labour market. Taken together, such arguments in the line of priming mechanisms lead to the overall conclusion that even in the context of an identical economic situation and an identical perception of the separate dimensions, citizens might still hold different overall perceptions due to different individual weighting algorithms.

Priming arguments are but one of several that can explain why people have different economic perceptions. Systematic variation can also be expected – but how and why? First of all, the different layers – despite their distinctiveness – might nonetheless interact and influence each other. If citizens are cognitive misers, they will try to form their perceptions as efficiently as possible. Immediately known to them is their immediate environment: „personal economic experience is vivid and immediately known“ (Weatherford 1983b: 884), which also implies that the link between objective conditions and subjective perceptions should be closest for this layer. Comparing how well different layers can be explained, Rattinger (1984) in fact confirms this. As Baybeck and McClurg (2005) show: Perceptions of neighborhoods are a mixture of objective conditions and subjective projections influenced by citizens’ own economic situation. Such mechanisms can also be assumed for other layers. Personal economic circumstances can be conceived of as a doorstep issue (Funk/Garcia-Monet 1997) that influence other economic perceptions even up to the national level (see also Books/Prysby 1999: 6; Duch et al. 2000; Haller/Norpoth 1997; Nannestad/Paldam 2000; Rattinger 1985b). As Weatherford (1983a, see also Conover et al. 1986; Mondak et al. 1996: 263) has argued this should especially apply to citizens with a rather low interest in politics, as they are unwilling and possibly also unable to understand the national economic reality.
However, others have argued that people do in fact understand that their immediate economic environment is not well suited to obtain information about the nation as a whole. This is where regional patterns enter. According to Pattie/Johnston (1998b: 250), citizens use local information, they use the „regional context … as a „corrective‘ for … personal circumstances”.

Other variables can also be expected to have an influence, especially for the higher levels. The flow of information is the key to understand how citizens form their national perceptions of the economy, which – as has already been pointed out – is always „open to alternative interpretations which are essentially unverifiable“ (Weatherford 1983b: 884). All of this supports the expectation that other external influences matter by means of the dissemination of information, but also their interpretation (Quiring 2003b). The media surely play a role. The more citizens use media (to get information), the more information they should have concerning the state of the regional and national economy. But the media also supplies interpretation – in addition to parties. Parties are also more than willing to provide the public with their interpretation of economic affairs. Both aspects are supported by empirical findings: Most studies concerning influences of the media confirm that the media influence perceptions of the economy (see Brettschneider 2000; Gavin/Sanders 2003; Goidel/Langley 1995; Hagen 2001; Haller/Norpoth 1997; Hetherington 1996; Quiring 2003b; Shah et al. 1999; Wu et al. 2002). As some studies show this is especially true in times of economic downturn which caters more to the media’s logic of reporting. (Wu et al. 2002, Soroka 2006). Others have shown that national campaigns limit the influence of the media (Nadeau et al. 2000a) – little surprising, after all, a channel is added during these times, as parties themselves provide more information, which in turn affects citizens as well. As Campbell et al. (1960: 381–401) has shown: perceptions of the economic situation are influenced by party politics. Some even argue that perceptions of the national economy can hardly be used as independent variables in voting models, as they are so heavily influenced by partisan predispositions themselves. (Duch et al. 2000; Erikson 2004; Evans/Andersen 2006; van der Eijk et al. 2007; Wlezien et al. 1997, but see Lewis-Beck 2006; Pappi/Bytzek 2007). We know for sure that citizens supporting the government have a more positive perception of the economy (see
Taken together, the expectation can be summarized as follows: “All of this is leading to the inescapable admission that economic sentiment is a function of things *in addition to* the economy” (de Boef/Kellstedt 2004: 638). There should be a relationship between objective reality and subjective perceptions, but systematic variation should also exist. What these influences look like and how different economic perceptions are related to each other will now be the subject of the subsequent analysis. First of all, however, I will provide some details concerning the data and questions used.

### 3. Data and Methods

Data from the 1991, 1992 and 1994 German General Social Survey (Allbus) will be used to test the arguments and ideas discussed above. Concerning perceptions of the current economic situations, three indicators are included in these surveys – one for the individual, one for the state and one for the national level. The wording of the national question is: “How do you evaluate the present economic situation in Germany”, possible answers ranging from -2 (very poor) to +2 (very good).

To explain these perceptions, a number of independent variables will be used given the arguments presented above: On an individual level, the employment situation of the respondent, but also his or her partner will be included as well as a standardized indicator.

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3. Germany has 16 states, ranging from the very small state of Bremen (with approximately 500,000 inhabitants) to North Rhine-Westphalia (with about 18 million people).

4. The survey also includes questions about the prospective economic future, but these will not be used here.

5. Since three years (1991, 1992, 1994) are used for the analysis, income variables have to be standardized. This is done by dividing each individual’s household income by the mean household income that results if all respondents are taken into account. The indicator thus shows an individual’s deviation from that mean (in percentage).
of household income. Concerning other variables, interest in politics, but also selfplacements on the ideological left-right-dimension are included. Finally, age, gender and education are included as control variables. To test, whether perceptions of the regional economy are driven by the objective regional economy, the average unemployment rate for 1991, 1992 and 1994 will be included. Series of OLS regressions are used at first – first entering objective individual indicators, then in a second step adding further non-economic indicators. Since 1991 to 1994 are years right after German unification, results are reported separately for East and West Germany. Finally, when the regional unemployment rate is included to explain regional economic perceptions, multilevel regressions will be estimated.

4. Empirical results

4.1 Correlations between economic perceptions

What do the empirical results look like? Figure 1 first provides a simple correlational picture between the three economic indicators. As one can see, the three indicators are indeed positively correlated, but far from perfect. The size of the coefficients is about $r=.3$ – with one major exception: For West Germany, the correlation between the perception of the regional situation and the perception of the national situation is obviously much higher (about $r=.7$) and the difference becomes obscured. What does that imply? Apparently, the indicator of the regional economic situation measures not only the situation in the respective state, but also in the respective part of the Germany – East and West. As about 80 per cent of the German population live in West Germany, there is little

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6 Household instead of individual income is used as a household is usually defined by the sharing of income. However, economies of scale have to be taken into account. To do, the household income is divided by a weighted household size. Weighted household size is calculated as follows: The first adult individual is given a weight of 1, other adult household members are given a weight of .8, non-adult members are given a weight of .5.

7 All independent variables are recoded to a range from 0 to 1 to make effect sizes comparable.
difference between the Western part of Germany and Germany as a whole, hence the correlations rises considerably. Compared to that, East Germans perceive their part of Germany quite differently from Germany as a whole.

Apart from that, however, perceptions of the economic situation are distinct elements of the attitudes individuals hold. Hence, it makes sense to proceed to further analysis of the background variables underlying such perceptions.

**Figure 1: Correlations between Perceptions of the Individual, Regional and National Economic Situation**

![Correlation Chart]

Source: Allbus 1991–1994 combined, n = 3,542 (East Germany), 5,725 (West Germany)

### 4.2 Determinants of Perceptions of Individuals’ Own Economic Situation

As Figure 2 shows an individual’s employment, but also the respective income situation are clearly related to perceptions of individual economic well-being. Compared to employed individuals, unemployed respondents give a rating of their economic situation that is at least half a point lower (on the five-point-scale used in the question). Moreover, even after controlling for differences in household income in the second step\(^8\), a significant difference remains in an almost unchanged magnitude.

\(^8\) This result is not driven by the choice of income variables used. Even if an individual’s income is used, the difference between the employed and the unemployed does not disappear.
A second point warrants attention: Perceptions of an individual’s economic well-being are not exclusively driven by purely individualistic circumstances, but other features of the household situation matter as well. Two aspects corroborate that: First, the measure of household income has a significant influence on the economic well-being; secondly (and even more important), the employment situation of one’s spouse also matters: In all six cases, a significant negative coefficient emerges if the spouse is currently unemployed.

4.3 Determinants of Perceptions of the National Economic Situation

Next, we look at the determinants of perceptions of the nation’s economic well-being – this time also taking into account other non-economic sources of influence. The results are presented in Figure 3. Objective individual circumstances play a much less influential role this time. Household income or spouse unemployment exert no influence at any point; individual unemployment matters in only two of six cases. Still, that does not imply that an individual’s own economic well-being is irrelevant. But the effect is entirely mediated by the subjective perceptions of the situation. These perceptions of individual economic well-being do have a significant effect in all three years in both parts of Germany.

Concerning other variables, we also see some influences: This is less true for interest in politics, but more so for ideological self-placement. In the period studied here, at least some of the coefficients turn out as significant predictors of economic perceptions. As Germany has been governed by a government of Christian Democrats and Liberals
throughout the period studied, the positive coefficients show that supporters of that government (placing themselves further to the right on the scale used) have a more positive picture of the national economy.9

Figure 3: Determinants of Perceptions of the National Economic Situation (unstandardized regression coefficients and 95%-confidence intervals)

<table>
<thead>
<tr>
<th>Respondent Unemployed (Reference: Respondent Employed)</th>
<th>Respondent’s Partner Unemployed (Reference: Partner Employed)</th>
<th>Standardized Household Income</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.png" alt="Graph 1" /></td>
<td><img src="image2.png" alt="Graph 2" /></td>
<td><img src="image3.png" alt="Graph 3" /></td>
</tr>
</tbody>
</table>

Self-Placement on Left-Right-Dimension | Interest in Politics | Perceptions of Own Economic Situation

Source: Allbus 1991-1994, n = 963-1.505 (East Germany), 1.243-2.289 (West Germany); additional variables in the model: age, sex, education.

In addition to these results, I have also tested whether there are signs of interactions – but this does not seem to be the case. It is not the case that respondents with a lower level of

9 The German General Social Survey has been collected since 1980 on a two-year basis (with an additional survey in 1991 following German unification). While the questions concerning the regional economic situation have only been asked in 1991, 1992 and 1994, questions concerning the individual and the national economic situation have been asked in almost all of the studied fielded. When taking into account that longer period of time, one can clearly see that the coefficients for the left-right-dimension change directions in line with the composition of the government. When using this longer period of time, it is also possible to relate the subjective perceptions of the national economy to the objective economic reality using a multilevel-time-series design. As it turns out, it is mostly the unemployment rate that drives subjective perceptions (results not shown here) – but this relationship does not turn out to be stronger for more left-leaning people.
interest in politics rely more heavily on their individual economic well-being when forming perceptions of the national economy – this expectation often proposed in the literature as described above cannot be confirmed here.

4.4 Determinants of Perceptions of the Regional Economic Situation

Finally, we turn to perceptions of the regional economic situation – the results are displayed in Figure 4 – the models have been tested in three steps: Objective individual circumstances again hardly matter for perceptions of the regional economic situation – these are not directly projected to higher levels of the economy. This is true for the employment situation, but also household income. Again, this effect is entirely mediated by subjective perceptions of the individual economic situation. Also, there is little evidence for influences of interest in politics. Concerning self-placements on the left-right-scale, we do find effects for East Germany, but not for West Germany. These differential results stem from the fact that East German states in those times were almost exclusively governed by centre-right-governments, while the governing patterns were more diverse for the Western part, so effects cancel each other out there.

Most interesting, we find strong effects for perceptions of the national economic situation. However, these effects are not constant over the period under study. Instead, effect sizes are on the rise in East and West Germany. Within only three years, perceptions of the regional economic situation come under stronger pressure from above, i.e. from perceptions of the national economic situation.

These models do not include the objective regional economic situation. To include this (as measured by state unemployment rates), a multilevel regression model is appropriate; the respective results are presented in Figure 5. In multilevel modelling, the first step is to test, whether multilevel modelling is necessary at all. This is done by looking at the variance component that is located between the higher units (that is states in the present case). As the first part of Figure 5 shows, there is a considerable amount of variance between German states: It matters for perceptions of the regional economy, in which of the 16 German states a respondent lives. At the same time, however, we can also see that
it does not matter in the same way throughout the period under study: The intraclass correlation decreases considerably. While in 1991 and 1992, almost half of the variance is between states, in 1994, it is only about 15 per cent.

**Figure 4:** Determinants of Perceptions of the Regional Economic Situation (unstandardized regression coefficients and 95%-confidence intervals)

- **Respondent Unemployed (Reference: Respondent Employed)**
- **Respondent’s Partner Unemployed (Reference: Partner Employed)**
- **Standardized Household Income**
- **Self-Placement on Left-Right-Dimension**
- **Interest in Politics**
- **Perceptions of Own Economic Situation**
- **Perceptions of National Economic Situation**

Source: Allbus 1991–1994, n = 963-1.505 (East Germany), 1.243-2.289 (West Germany); additional variables in the model: age, sex, education.

Why is that the case? Coming from East or West Germany has no influence, as the coefficients display in the next graphs show. But the influence of the regional
employment situation can explain part of that decline. The objective economic situation\textsuperscript{10} is less of a driving force behind perceptions of the regional economy in 1994 than it was in 1991 and 1992. This is the reverse of the pattern that we have already seen for perceptions of the national economy: Their importance increases over time, while we now see that the importance of the objective regional economy loses importance. However, this can be tested explicitly by taking into account interaction terms between the two.

\textbf{Figure 5: State Unemployment Rates and Perceptions of the Regional Economic Situation (unstandardized multilevel regression coefficients and 95%-confidence intervals)}

\begin{center}
\begin{tabular}{|c|c|c|}
\hline
(Residual) Intraclass Correlation & East Germany & State Unemployment Rate \\
\hline
\hline
\end{tabular}
\end{center}

\textbf{Source:} Allbus 1991-1994, n=963-1,505 (East Germany), 1,243-2,289 (West Germany); additional individual level variables in the model: age, sex, education, employment situation, household income, left-right-self-placements, interest in politics, perceptions of individual and national economic situation.

As it turns out, a multiplicative interaction term between the state unemployment rate and perceptions of the national economy turns out to be significant for 1991 and 1992.\textsuperscript{11} Figure 6 shows that the objective regional situation (measured by the employment situation) influences subjective perceptions if and only if perceptions of the national economy are not poor on the part of respondents. If they are, i.e. if citizens think that the national economy is doing poorly, the regional situation is automatically perceived as poor, too.

\begin{footnotesize}
\footnotesubscript{10} The state unemployment rate has been coded in such a way that it always ranges from 0 to 1, 0 representing the state with the lowest unemployment and 1 representing the unemployment rate of that state with the highest unemployment rate.

\footnotesubscript{11} For 1994, the model does not converge.
\end{footnotesize}
This pattern holds on an individual level, as can be seen by these interaction terms, but it is also supported by the patterns presented above: As the perceptions of the national economy deteriorated between 1991 and 1994, there was less and less space for the objective regional situation to exert influence, while on the other hand, perceptions of the national economy became increasingly influential.\textsuperscript{12}

\textbf{Figure 6: Predicted Perceptions of the Regional Economic Situation by State Unemployment and Perceptions of the National Economy}

\begin{center}
\begin{tabular}{l}
\textbf{1991} & \textbf{1992} \\
\begin{tikzpicture}
  \begin{axis}[
    title={Perception of national economy vs. state unemployment rate},
    xlabel={State unemployment rate},
    ylabel={Perception of national economy},
    xmin=-2, xmax=2,
    ymin=-2, ymax=2,
    xtick={-2,-1,0,1,2},
    ytick={-2,-1,0,1,2},
    legend style={at={(0.5,-0.15)},anchor=north},
    legend entries={very poor, ... , very good},
  
  \addplot+[domain=-2:2,samples=100] {x};
  \addplot+[domain=-2:2,samples=100] {-x};
  
  \end{axis}
\end{tikzpicture}
\end{tabular}
\end{center}

\textit{Source:} Allbus 1991-1994, n = 963-1,505 (East Germany), 1,243-2,289 (West Germany); additional individual level variables in the model: age, sex, education, employment situation, household income, left-right-self-placements, interest in politics, perceptions of individual and national economic situation.

Taken together, the results presented here suggest that people have hierarchical perceptions of the economic situation surrounding them. Perceptions of the national economic situation have a higher order than regional ones. The latter ones are determined by the former ones if the national economic situation is poor. Only if that is not the case, do they refer to the objective regional economy to form their perceptions. Pattie/Johnston (1998b: 250) have pointed out that citizens use the „regional context … as a „corrective’ for … personal circumstances”. The findings presented here support the idea of the

\textsuperscript{12} The fact that the model for 1994 does not converge also supports this: Average perceptions of the national economy were quite poor altogether (averaging -.7) that there is too little variance.
regional context as a corrective – but not for personal, but rather for national circumstances.\textsuperscript{13}

4.5 Conclusions

Perceptions of economic situation are standard predictors in models of voting. Most often, perceptions of the individual and the national economy are used. However, that does not exhaust the possibilities, as individuals are embedded in a series of contexts - all of them with a possible economic situation of their own. The German General Social Surveys 1991, 1992 and 1994 included a question about the economic situation of states. Given the general lack of such perceptual data about economic perceptions, this opened up one of the few opportunities to study such perceptions.

As could be shown in the first step, perceptions of the individual, regional and national situation are positively interrelated, but the relationships were far from perfect. Turning to background variables, it was shown that perceptions of the individual economic situation are clearly driven by the objective situation of the individual, but also his or her household situation: The employment and income situation each had clear effects of their own. As for the national perceptions, it was expected that variables over and above objective economic indicators have effects. Indeed, that was the case, especially with regard to self-placements on the ideological self-right-scale.

Still, the focus of the paper was on perceptions of the regional economy. We saw that there is an influence of the regional economic situation, but only for those times when the national economic situation is perceived as good. For other times, perceptions of the national economy are superimposed on perceptions of the regional economy. This was

\textsuperscript{13} Perceptions of the regional economy turn out to be more difficult in a different respect, too: If – in a similar way as before – one includes interaction terms of the state unemployment with the level of political interest, this term turn out to significant as well. The relationship between the objective situation and the subjective perceptions is stronger the more interested people are in politics.
shown by a comparison of the results from 1991, 1992 and 1994 (with a worsening economic situation in that period of time), but also by way of including an interaction term.

Finally, it can also be shown that these different economic perceptions have differential effects: For 1991 and 1992, the study also included questions related to the performance of the national, but also state government. Perceived performance of the national government is clearly related to perceptions of the individual, but also the national economic situation – not so for the regional ones. These, however, have clear and strong effects for perceptions of the state government – while the other two hardly matter this time. This differential pattern – together with the results concerning the background variables of economic perceptions – suggest that (in line with Pattie/Johnston 1998b: 250) a „direct measure of voters’ perceptions of the regional economy, equivalent to the now-standard questions of individual and national economic performance“ would be a valuable add-on to studies of voting behaviour.

References


