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Discussion Paper Nr. 11, ISSN 1618-0798

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**Universität Flensburg
Internationales Institut für Management**

Discussion Paper Nr. 11, ISSN 1618-0798
Flensburg, Juni 2006

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Abstract

The introduction of a single European currency, the euro, is one of the biggest political projects undertaken up to now promoting European unity. However, in some countries – such as Germany – acceptance is still not high, even several years after the currency's introduction. Yet widespread acceptance of the new currency is absolutely necessary for the idea of Europe to succeed, and its failure could exacerbate historic tensions and resentments within Europe.

In this study, we concentrate on people's attitudes towards the euro and their changing perceptions from a longitudinal perspective. Since data sources on this topic are rare, we rely on German micro-data from the Socio-Economic Panel Study 1999 to 2002 and focus only on the single country of Germany.

Our main findings are the following: first, a large part of the German population was worried about the new currency, both immediately before and after its introduction. Second, people with better access to information were less concerned about the new currency. Third, persons who profit most from the new currency in Germany – EU foreigners – have lower concerns about the euro in general. Fourth, difficulties in handling the new currency increased people's concerns about the euro significantly. Additionally, we argue that the monthly pattern of remaining and becoming concerned in 2002 is traceable back to media reports on price increases. For these reasons, future EMU member states should prepare their populations better for these challenges.

1. Introduction

Since January 2002, twelve member states of the European Union (EU) have introduced the euro. Those who have not include the countries of Denmark, Sweden and the United Kingdom, which rejected membership in the European Monetary Union (EMU), and the ten new states that have joined since May 2004 but not yet introduced the euro. Since its introduction, the euro has acted as a constant daily reminder to the citizens of the participating countries that they live in the EU and that political decisions at the European level have real, tangible consequences in their everyday lives.

Money is more than just a medium of exchange, an abstract purchasing power, or a factor of evaluation. It is a powerful symbol identifying the individual with the nation, evoking a subjective feeling of “togetherness” (see, for example, Deflem, 2003). So far there is no European national state, and until there is, the euro will have to continue surviving without this form of symbolic identification. In fact, the euro appears to be promoting the formation of a European identity and will likely continue to do so in the future.

Europe-wide polls before and after introduction of the euro show that acceptance of the new currency varies widely from country to country (European Commission, 2001, 2002, 2003, 2004). The lowest proportion of people in favour of the euro has consistently been found in those countries that are not members of the EMU (Denmark, Sweden and the UK). However, acceptance is also low in Germany and the Netherlands, both of which belong to the group of countries whose national identity is constructed primarily through their economic and political system.¹ In those countries whose national identity is strongly culturally defined, such as Italy and Greece, acceptance of the euro is much higher (Müller-Peters, 1998, p. 709; Pepermans and Verleye, 1998, p. 687ff.).

In the following, we concentrate on a single country: Germany. Not only is it one of the countries that showed low acceptance of the euro before its introduction, it is also a country whose economic system is important for national identity. This has primarily historical grounds. One consequence of the Second World War was that flags and national hymns became deeply problematic as

symbols of identification for most Germans. The German mark, however, became a national symbol of the country's economic recovery and prosperity (Helleiner, 1998). Even for residents of the German Democratic Republic, the German mark was an object of aspiration, symbolizing freedom and wealth.

In addition to the particular characteristics that are unique to the different countries, there are differences within populations that influence attitudes toward the euro, and changes in individual attitudes over time. Especially the introduction of the actual currency in coins and notes can influence the process of attitude formation. According to social-psychological theories of self-perception and cognitive dissonance (Bem, 1972; Festinger, 1957), people's concerns about the euro should decrease after its introduction. This idea is based on two assumptions: first, that individuals evaluate the euro positively because they use it every day, and second, that since individuals cannot change the situation, the cognitive dissonance can only be diminished by adapting to institutional conditions. In contrast, according to the theory of reactance (Brehm, 1976), concerns about the euro will increase after its introduction because people feel that their freedom has been reduced and react defiantly. Only theories conceptualising attitude changes as a result of learning processes offer the possibility to explain both a reduction and an increase in concerns towards the euro (Petty and Cacioppo, 1986; Chaiken et al., 1989).

To test these theories and analyse the individual factors influencing and especially changing attitudes following the issue of a new currency, we use a nation-wide, representative longitudinal study: the German Socio-Economic Panel Study (SOEP). Unlike most studies on happiness and life satisfaction, the SOEP does not study attitudes toward the euro using a positive item such as 'how satisfied are you with...', but formulates the question in terms of concerns.

2. Previous research and theoretical background

The existing literature reveals two dominant factors influencing attitudes towards the euro: extent of knowledge and general beliefs (see e.g. Müller-Peters et al.,

1998a, b; Pepermans and Verleye, 1998; Isengard and Schneider, 2002; Meier-Pesti and Kirchler, 2003a, b).

The first of these – the extent of knowledge or information level – is crucial for attitude formation since a higher level of knowledge enables better assessment of consequences. The literature finds evidence that highly informed people not only have a more positive attitude towards the euro – even if they are not fully convinced about it – they are also better able to cope with the situation, despite the fact that they cannot change it. This latter case is called secondary control (Rothbaum et al., 1982).²

However, Luna-Arocas et al. (2001) discovered that in Spain and Portugal, not only well informed individuals are in favour of the euro, but also those with poor knowledge of the new currency and of the European Union in general. The attitude towards the euro is determined more by European identity than by economic expectations or knowledge. European identity outweighs other predictors such as information level and economic expectations.

The second main factor influencing personal attitudes are general beliefs. New ideas that influence openness to new situations have to be integrated into existing belief systems. Different socialisation processes and past experiences may lead to different general beliefs and cultures, and therefore produce differences in thinking, feeling and acting (Schwartz, 1997).

Concerns about the euro can be seen as an attitude. There are extensive and diverse theoretical traditions regarding attitude formation and change (Chaiken and Stangor, 1987). Attitudes can be either positive or negative evaluations, and are mainly the result of cognitive information processing (Rosenberg and Hovland, 1960, p. 3). Thus, they can reflect short-term positive or negative emotions, long-term beliefs determined by knowledge, or general beliefs that emerge through socialisation processes and past experiences.

Attitude changes can be the result of learning processes based on socially transmitted experiences and social communication. These processes are a function of the admission of message contents and their reinforcement (Staats, 1968; for further elaborated models see Petty and Cacioppo, 1986; Chaiken et al., 1989).

This might be the reason why Germans distanced themselves quickly from the German mark after the euro was introduced in January 2002. Instead of the predicted 'Euro-phobia', there was a widespread 'Euro-phoria' in the first few weeks following the introduction of the currency. At that time, press coverage was extremely positive. However, after lively widespread discussion about price increases in the context of the currency reform, worries about euro increased. Attitude changes might therefore result in part from persuasive arguments in the media.

Bem (1972) attributes changes in attitudes to a process of self-perception whereby people infer their attitudes from their own behaviour under certain circumstances. This is particularly the case if internal references are weak and no pronounced knowledge is present. For this theory to apply to concerns about the euro, a necessary precondition is that people have no firm opinion about it. The experience of quickly getting rid of the old German currency would lead, through daily behaviour ('I pay with euros instead of marks'), to a positive attitude ('I like the euro because I have no problems paying with it').

Furthermore some approaches attribute attitude changes to cognitive processes. Cognitions are understood as the totality of a person's thoughts: their opinions, values, knowledge, and beliefs. The cognitive approach incorporates two theories that lead to different predictions about attitudes towards the mark and the euro: one is the theory of reactance, and the other is the theory of cognitive dissonance.

According to the theory of reactance (Brehm, 1966), individuals aspire to behave freely. If their freedom of choice has been threatened or taken away, psychological reactance emerges. In this case, people attempt to recover their endangered or lost liberty by upgrading the threatened or eliminated alternative and devaluating the forced alternative (Brehm, 1976). This cognitive restructuring process is motivated by resistance to liberty restriction and refusal to adapt or conform. In the case of the euro, this would imply that they should reject the euro and place higher value on the German mark.

Greitemeyer et al. (2001) have produced empirical evidence that the reactance theory does not adequately explain attitudes towards the euro, and instead favour

the dissonance theory.³ The theory of cognitive dissonance implies that people aspire to a balanced cognitive system (Festinger, 1957). The relations among different cognitions can be either relevant (content is coherent) or irrelevant (content is incoherent). Relevant relations can be consonant or dissonant. Cognitive dissonance is generated, for example, if one's behaviour is inconsistent with one's own opinion. This creates an aversive feeling, as well as the motivation to avoid or eliminate this feeling. If the behaviour demonstrated is not reversible, then the preferred method of dissonance reduction is to adapt the opinion to the behaviour.

The introduction of the euro leads to dissonance if people reject the new currency. As this situation can only be escaped through emigration, the cost-effective way of reducing cognitive dissonance is to change the negative attitude.

3. Data

The German Socio-Economic Panel Study (SOEP) is an interdisciplinary longitudinal study of private households in Germany that provides data for scientific research. Since 1984, it has been a representative source of data on different topics such as working biographies, education, income, demographic developments, health, time use, as well as satisfaction and values, whereby each person in a household being 17 years and older gives his/her own answers. This design provides representative longitudinal microdata on individuals, households and families (SOEP Group, 2001). Because of the diversity and richness of the data, it is analysed by researchers worldwide from a broad range of disciplines to study a many different topics. Psychologists, for example, have investigated whether the change in marital status has a long-lasting influence on subjective well-being (Lucas et al., 2003). Sociologists have conducted research on the careers of couples (Blossfeld et al., 1998) and on poverty and welfare (Muffels and Fouarge, 2004; Headey et al., 2000), while economists have analysed the data to evaluate the impact of health care reforms on individual behaviour (Winkelmann, 2004).

Although the survey has studied concerns in such areas as job security and environmental protection from the very beginning, these issues have not been analysed extensively. Since 1999 – the year in which the European Monetary Union started – the SOEP has asked about people's concerns towards the euro. There are three response categories: very concerned, somewhat concerned or not at all concerned. In 2002, additional questions were asked about the expected advantages and disadvantages of the single currency.⁴ For the first year the euro questions were asked (1999), the survey includes answers from 14,035 persons. The sample was enlarged in 2000 to 24,331 and declined in the two successive years to 22,151 and 21,048 respondents, respectively. The SOEP thus constitutes a large data set with which we can identify global as well as individual changes in attitudes towards the euro over time.

In our multivariate analysis, we use the highest level of school attainment, the use of the Internet, and political interest as indicators for the level of knowledge. They cover education, access to information, and the observation of political debates.

As indicators of general beliefs, we use expected life satisfaction in five years time, long-term party preferences, and regional and national origins. The expected life satisfaction is clearly oriented towards the future. Here, we assume that individuals who believe that they will be happy with their life in five years time have a more optimistic attitude towards life and therefore evaluate the euro in a more positive manner.⁵

Political interest is an aspect which reflects the level of political information. Long-term party preferences express political convictions and ideologies. As with religious identity, party identification represents a core component of individual self-definition. The acceptance of the euro should differ according to party preferences: voters for extreme right-wing parties should be expected to reject the euro, while voters for the liberal parties should accept it.⁶

National and regional origin does not actually define general beliefs, because general beliefs of individuals are determined by acquired attitudes and opinions, whereas nationality is determined simply by one's place of birth. Nevertheless, it

can be assumed that specific attitudes towards the euro can be linked to national origins via socialisation and cultural influences. The fear of losing national autonomy and of dependence on other European states in monetary matters could influence the formation of broad national attitudes towards a new currency (Jonas et al., 2002, p. 148).

We assume that the German mark is not a national symbol for foreigners and in addition,⁷ that foreigners from the EU see direct advantages of the single currency.

4. Results

4.1 The development of concerns towards the euro

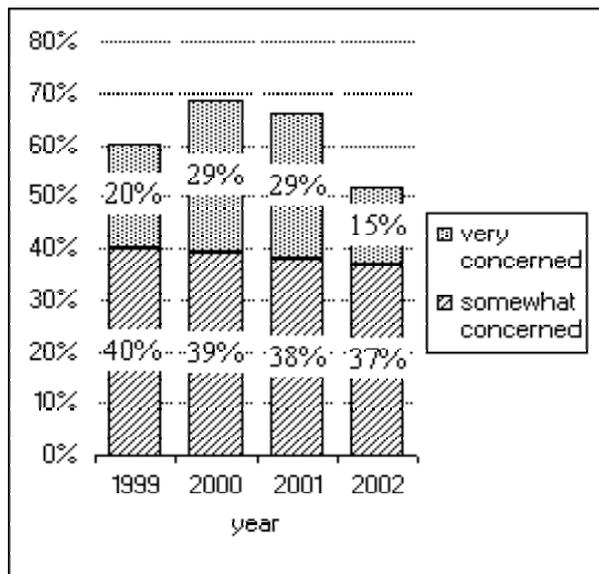
First we look at the extent of concerns towards the euro and their development over time (cf. Fig. 1). The proportion of individuals with concerns was 60% in 1999, and in the following two years somewhat higher (68% and 67%). A sharp decline is observable for the year 2002 when the euro notes and coins became the means of payment (52%). If we differentiate between those who were somewhat concerned and those who were very concerned, we see that the rates of somewhat concerned individuals were nearly stable across the time period (40% in 1999, 37% in 2002). However, the proportion of very concerned individuals falls by half from 2001 to 2002.

The time series can only show distributions over time, but not what went on before. It might be that when reporting concerns, people give answers that are unreliable and arbitrary. We report individual changes from one year to the next, concentrating on individual changes from 2000 to 2001, when we observed a stable distribution in Fig. 1, and from 2001 to 2002, when we found a reduction in the proportion of very concerned individuals in the cross-sectional comparison.

In Table 1, upper panel, we see that most of the individuals reporting no concerns in 2000 also did not report concerns in 2001 (65%), and the concerns they did report were seldomly strong (8%). A comparable pattern is found for very concerned individuals: 60% of them give the same answer in the following

year, 30% of them switch to some concerns, and only 10% report having no more concerns at all.

Figure 1: Proportions of individuals concerned about the introduction of the euro¹



¹ Weighted data.

Sources: SOEP 1999-2002, own calculations.

The answers from the middle category ‘somewhat concerned’ are not so stable. Half of the individuals report the same category in the following year, one-quarter report not having any concerns, and one-quarter report stronger concerns.

If we look at the individual changes in being concerned before and after the introduction (cf. Table 1, lower panel) we can see a particularly high stability of unconcerned individuals in 2001 (77%). On the other hand, we observe that concerns are reduced from 2001 to 2002. Nearly half of the individuals from the middle category still give the same answer in the following year, but the dividing lines among the rest are completely different from what we previously observed (2000 to 2001). Now we have a high proportion of individuals who are no longer concerned, but only a small fraction with higher concerns. This comparison shows that concerns are not driven by a random process.

Table 1: Individual stability of concerns towards the euro over years¹

concerned about € in 2000	in the following year			<i>total</i>
	not at all	somewhat	very	
not at all	65 %	27 %	8 %	100 %
somewhat	25 %	52 %	22 %	99 %
very	10 %	30 %	60 %	100 %
total	33 %	38 %	29 %	100 %
in 2001				
not at all	77 %	18 %	5 %	100 %
somewhat	43 %	46 %	10 %	99 %
very	23 %	46 %	32 %	101 %
total	49 %	37 %	15 %	101 %

¹ Longitudinal weighted data.

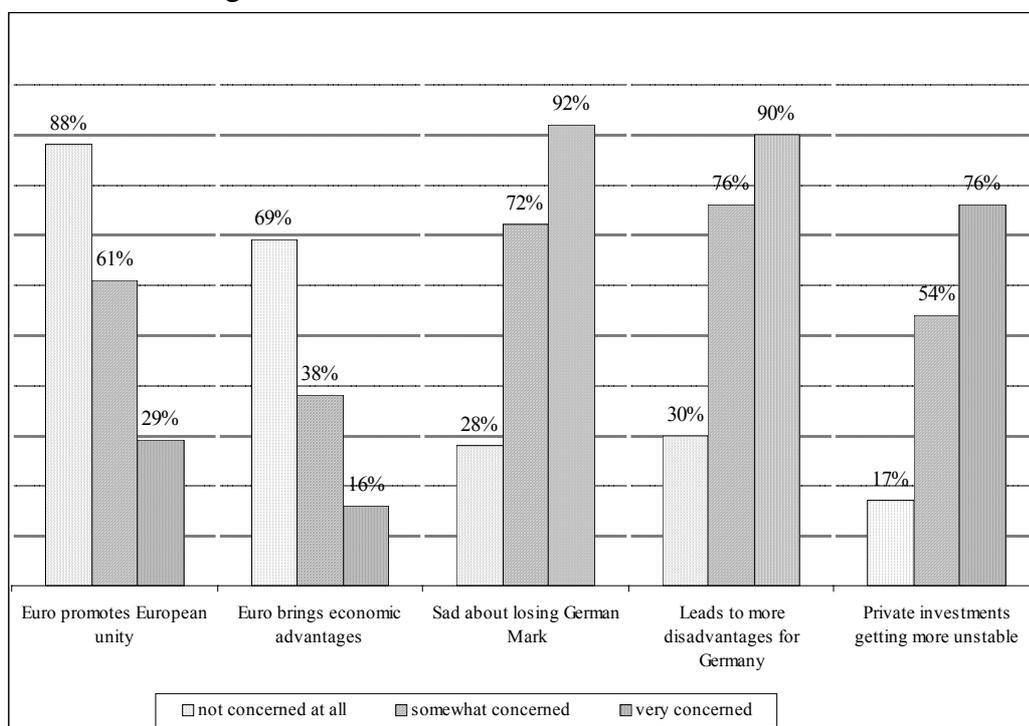
Sources: SOEP 2000-2002, own calculations.

4.2 What are the concerns towards the euro?

There is a high correlation between the extent of more general concerns towards the euro and the expected advantages or disadvantages (cf. Fig. 2): 88% of those people not concerned about the euro believe that a single currency promotes European unity. However, only 29% of those individuals hold this belief if their concerns are very strong. People with some concerns take a middle position, with 61% expecting a positive effect on the process on European unification.

A similar pattern can be observed if we look at the correlation between concerns and the expectations of economic advantages arising from the new currency: the stronger the concerns, the lower the percentage of people expecting economic advantages. In all cases, however, expectations of economic advantages are significantly lower than expectations regarding European unity. This means that individuals connect the new currency with political rather than economic changes.

Figure 2: Kind of concerns towards the euro: Expected advantages and disadvantages due to the introduction of the euro¹



¹ Weighted data.

Sources: SOEP 2002, own calculations.

If we look at the items regarding disadvantages, the correlation is reversed. Reports of increased concerns go hand in hand with perceptions of negative consequences of the euro. The item 'sad about losing the German mark' is an emotional statement. This statement is affirmed by 28% of individuals with no concerns about the euro but 92% of those with strong concerns. A high percentage of those with some concerns report being sad about losing the old currency as well (72%).

We observe a similar pattern in the expectation of disadvantages for Germany in general and of a decreasing stability of private investments, but lower figures regarding private investments. We have already observed lower percentages for the statement on economic advantages. The findings that attitudes towards the euro depend on economic expectations are in line with the results of studies on the

Netherlands (van Everdingen and van Raaij, 1998), but some aspects are more pronounced in Germany.

Up to now we have only shown the development in concerns towards the euro in Germany and what goes hand in hand with these concerns. In the next chapter, we investigate what influences these concerns in the year 2001. Thereafter, we will look for reasons behind the decrease and changes in concerns from 2001 to 2002.

4.3 Determinants of concerns towards the euro

To test what influences concerns, we assumed an ordered logit model⁸ as the dependent variable with three categories: unconcerned, somewhat concerned and strongly concerned about the euro. Positive regression coefficients indicate stronger concerns, and negative coefficients indicate lower or no concerns. The results for being concerned in 2001 are reported in Model 1 (cf. Table 2).

We can see that those with higher educational qualifications⁹ are less concerned about the introduction of the euro than individuals with medium or low qualifications. However, young people still attending school are slightly more likely to be concerned.

The influence of political interest is not consistent. Individuals with high levels of interest in politics are less concerned than those with little interest. However, the regression coefficient for individuals with high interest is not significant. People with no interest whatsoever have the lowest concerns. This is comparable to the results mentioned above for Spain and Portugal. It thus seems clear that a complete lack of political interest leads to an unconcerned attitude towards the euro.

Table 2: Ordered logit model about being concerned in 2001 and logit models for changes in being concerned before and after introduction of the euro

	model 1	model 2	model 3	model 4	model 5
	concerned in 2001	concerned in 2001 => not concerned in 2002		not concerned in 2001 => concerned in 2002	
highest school level (low)					
middle secondary qualification	-0,02	0,14**	0,11*	-0,24**	-0,20*
higher qualification	-0,50**	0,37**	0,35**	-0,68**	-0,68**
still in school	-0,83**	0,75**	0,70**	-0,75**	-0,73**
interested in politics (not so much)					
very much	-0,12	-0,01	-0,08	-0,19	-0,16
much	-0,08*	0,12*	0,07	-0,17*	-0,13
not at all	-0,15**	0,00	0,02	0,07	-0,14
using internet					
	-0,31**	0,23**	0,22**	-0,25**	-0,24**
expected life satisfaction in 5 years (ambivalent)					
unhappy	0,36**	-0,51**	-0,37**	0,77**	0,60**
happy	-0,36**	0,40**	0,39**	-0,31**	-0,25*
totally happy	-0,39**	0,69**	0,63**	-0,25	-0,15
long lasting party preference (social democrats, SPD)					
conservatives (CDU/CSU)	0,10*	-0,04	-0,09	0,21	0,30**
liberals (FDP)	-0,35**	-0,16	-0,25	-0,27	-0,23
green party (Grüne, B'90)	-0,64**	0,40**	0,50**	-0,38	-0,45*
socialist / former communists (PDS)	0,01	-0,05	-0,07	-0,10	0,03
right wing parties (DVU, REP)	1,56**	-1,53**	-1,48**	1,68**	1,66*
other parties	0,31*	0,12	0,25	0,24	0,29
no long lasting preference	0,13**	-0,11*	-0,14*	0,19*	0,29**
origin (West German)					
East German	0,57**	-0,34**	-0,38**	0,30**	0,37**
foreigner of the EU	-0,51**	0,19	0,26*	0,00	0,00
other foreigner	-0,35**	-0,32**	-0,15	0,30*	0,12
income position (2. + 3. quartile)					
lowest income quartile	-0,01	-0,08	-0,05	0,28**	0,23**
highest income quartile	-0,31**	0,12*	0,09	-0,41**	-0,34**
gender: men					
	-0,13**	0,18**	0,09*	-0,27**	-0,12
age (in years)					
	-0,005**	0,01**	0,01**	-0,02**	-0,02**
month of questioning (February)					
January		0,18**	0,13*	-0,26**	-0,24*
March		-0,15**	-0,14*	0,15	0,07
April		-0,33**	-0,31**	0,21	0,17
May		-0,43**	-0,38**	0,74**	0,68**
June and later		-0,48**	-0,49**	0,36**	0,31*
difficulties in handling the new money (not at all)					
great difficulty			-1,53**		1,88**
some difficulty			-0,74**		0,76**
difficulties in converting DM amounts into EURO (not at all)					
great difficulty			-1,10**		0,63*
some difficulty			-0,48**		0,61**
cut point 1	-1,53**				
cut point 2	0,24**				
constant		-1,50**	-0,97**	0,09	-0,47*
Number of observations	20852	12238	12238	5920	5920
Pseudo-R ² (Mc-Fadden)	0,05	0,04	0,10	0,09	0,15

Level of significance: * < 5 %; ** < 1 %.

Sources: SOEP 2001, 2002, own calculations.

The third factor describing level of knowledge is Internet usage.¹⁰ Individuals using modern media are less concerned about the new currency than people not using the Internet. To provide an example of how the level of knowledge influences the probability of being concerned, we calculate the probability of being somewhat or very concerned for a person with special characteristics (46-year-old man from West Germany, etc.). If this person has a low level of education and does not use the Internet, he has a 77% probability of having concerns, whereas if he does use the Internet, the probability is six percentage points lower. If our hypothetical 46-year-old West German man is highly educated, the probability decreases to 66%, and if he does use the Internet, the probability decreases further to 59%.

We return again to Model 1 and look at the variables indicating general beliefs. Those who expect to be happy or even totally happy in five years time are significantly less concerned about the future currency than those who are ambivalent on this topic. On the other hand, people who have a pessimistic attitude towards the future have stronger concerns.

Next we look at political affiliations. The Social Democrats (SPD) are our reference group. Affiliates of the other large party, the Christian Democrats (CDU) have slightly higher concerns than the Social Democrats. Individuals with a party preference for the Socialist party (PDS, former East German Communists) do not differ from the Social Democrats. People with a long-lasting party preference for the Liberal Democratic Party (FDP) and for the Green Party (Grüne) are less worried than the Social Democrats. These results are not surprising, as the FDP is in favour of a free market, while supporters of the Green Party are often post-materialists who are interested in Europe as a political project. In contrast, supporters of the extreme right-wing parties (e.g. DVU) have a significantly higher probability of being concerned: they believe that the new currency is not compatible with their understanding of the national state.

For national and regional origins, we observe large differences in the degree of concerns.¹¹ We observe that Germans, and especially East Germans, are more concerned about the euro than foreigners. Furthermore, foreigners from a country

that belonged to the EU in 2001 are less concerned than other foreigners. Both groups have a lower attachment to the German mark and EU foreigners enjoy direct advantages when travelling and transferring money to their home countries (except Denmark, Sweden and the United Kingdom). But there are also strong differences between German citizens. East Germans are much more concerned about the euro than West Germans. They obtained the ‘desired’ German mark in 1990, but their vision of rapid economic boom has not been achieved. On the contrary, there are high unemployment rates in East Germany as well as a strong movement of labour in the direction of West Germany.

Some examples are presented in Table 3. Here we look at the influence of origins and ethnicity on concerns – first independent of the extent of concerns, then on strong concerns regarding the euro (for a person with specific characteristics). If the person originates from East Germany, he has an 85% probability of being somewhat or severely worried. A comparable West German person is eight percentage points less likely to have concerns, while an EU foreigner is nearly 20 percentage points less likely to have concerns. If we calculate the probability of having only strong concerns, we see the same pattern, although the distances are greater. A West German is 14 percentage points less likely to have strong concerns than an East German, and a EU foreigner is 25 percentage points less likely. The distance between West Germans and EU foreigners remains the same in both cases.

Table 3: Examples of the influence of origin and ethnicity on concerns towards the euro in 2001¹

concerned	West German	East German	EU foreigner	other foreigner
somewhat or very	77 %	85 %	66 %	70 %
very	36 %	50 %	25 %	28 %

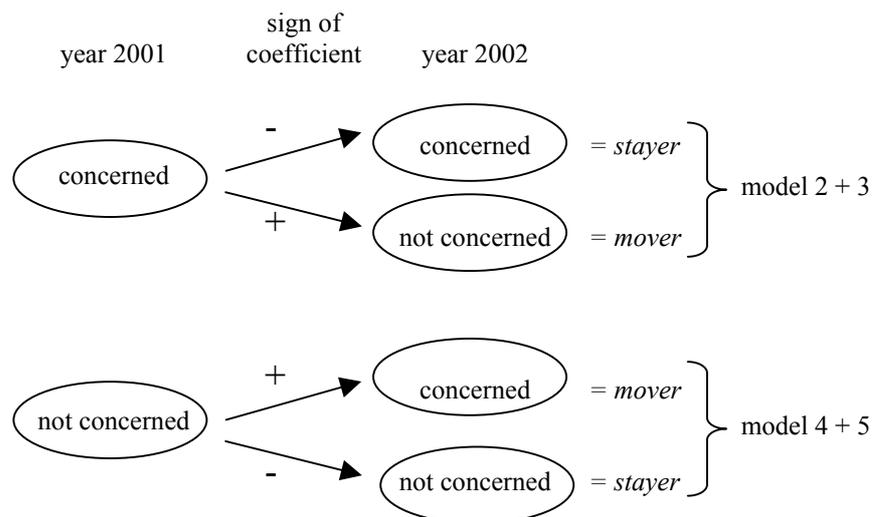
¹ Probabilities calculated from Model 1 for a 46-year-old, low-educated male with middle income and ambivalent future expectations who does not use the Internet, who has little interest in politics and has no party preferences.

Finally, we consider income position and gender and age. We find that people who are in the highest income quartile are less likely of being concerned than individuals with middle incomes.¹² However, no significant effect is observable for the lowest income group. Men have a lower probability of being concerned about the new currency than women. This pattern is well known from the research on concerns, anxiety and anomy (e.g. Rosenfield 1980; Kessler and McRae 1981).

4.4 Changing attitudes towards the euro

To look at the changing concerns before and after the introduction of the euro currency, we estimate some logit models.¹³ We model the loss of, as well as the development of concerns. Fig. 3 illustrates our procedure. First we look at individuals who were concerned in 2001. We construct a dummy variable indicating whether these individuals lose their concerns (coded as 1) or not (coded as 0). Metaphorically speaking, individuals who lose their concerns are defined as ‘movers’, while those who do not change are defined as ‘stayers’.

Figure 3: Analysing changes of attitudes



In Models 2 and 3 in Table 2, a positive logistic regression coefficient indicates that it is more likely to be a ‘mover’, and a negative one indicates a higher

likelihood of being a 'stayer'. Secondly, Models 4 and 5 investigate what influences the change in becoming concerned from 2001 to 2002. Here the dependent variable is coded as 1 if someone develops concerns, and coded as 0 if the person has no concerns in both years. We can also define these as 'mover' and 'stayer'. However, it should be noted that in the first case, movers have no concerns, while in the second they do. If we observe a positive sign for an independent variable in both models, we only have a high fluctuation. This would indicate a weakly pronounced attitude. If we observe a positive coefficient for moving from concerned to not concerned and a negative coefficient for moving from not concerned to concerned, then the total number of concerned individuals (with this characteristic) is lower in 2002 than in 2001.

In Models 2 and 4, we use the same variables as in Model 1, and additionally the month of questioning. In Models 3 and 5, we also include the difficulties in handling the new money and in converting prices from German marks to euros. First we discuss Model 2, which depicts the abandonment of concerns regarding the euro. We observe that the higher the formal school attainment, the greater the probability of changing from being concerned in 2001 to not concerned in 2002. There is also a strong effect for people still in school. For this group the chance of losing their worries is significantly higher. Compared to this, the impact of political interest is not very pronounced. The probability of losing worries is significantly higher only for those who have a high interest in politics. Using the Internet has a strong effect: individuals who do use this medium are more likely to change attitudes than people who do not use it. The pattern of expected life satisfaction in five years time is similar to the one observed in Model 1: individuals who expect to be (totally) happy in the future have a higher probability of losing their concerns than the ambivalent group. In contrast, people who expect to be unhappy in five years have a higher probability of remaining concerned.

Next we look at the influence of long-lasting party preferences. People with a party preference for the extreme right-wing parties have a significantly higher probability of not giving up their concerns than supporters of the Social

Democratic Party. In contrast, supporters of the Green Party have a higher probability of losing their concerns after introduction. The same applies to people without any party preferences. There is no statistically significant effect for the supporters of the Liberal Democratic Party. However, we have to keep in mind that this constitutes only a small number of cases.

People from East Germany and foreigners from outside the EU have a higher probability of remaining concerned than West Germans and EU foreigners. The effect for non-EU foreigners is astonishing at first glance, a phenomenon we will discuss later.

The month of questioning in 2002 is important for explaining changes in attitudes after the introduction of the euro,¹⁴ as the German media at first reported positively on the euro but suddenly switched to critical coverage, especially of price increases. The probability of changing from being concerned to not concerned was at its highest in January. In the following month the probability of losing worries declined steadily. We illustrate this effect by calculating some probabilities for a more or less ‘hypothetical’ person (middle age, low-educated man, etc.). We observe that the probability of abandoning concerns falls continuously from 34% in January to 22% in May. On the other hand, if we calculate the probability of becoming concerned by using the results of Model 4 (not discussed yet), we have a steady rise from 24% in January to 47% in May.

In Model 3 we expand the set of variables, and in addition take into account the difficulties in handling the new money and converting prices. There are strong effects between continuing to be concerned about the euro and having difficulties with the new money. Problems in handling the euro impede the abandonment of worries. There are also strong negative effects for the variables, indicating the conversion of prices from German marks into euros. However, the coefficients are somewhat smaller. Again, we exemplify the influence of these two indicators for a more or less fictitious person (cf. Table 4). If a person has no difficulties in handling the new money (but some in converting prices), he has a 31% probability of giving up his concerns. If he has some difficulties, the probability goes down to 18%, and the probability of abandoning his worries is very low if he has great

difficulties in handling the new currency. The pattern and figures for converting prices are comparable.

Insert Table 4 about here

Table 4: Examples of the influence of difficulties in handling the new money and in converting prices from marks into euros on shifting concerns towards the euro¹

difficulties	abandoning concerns		becoming concerned	
	handling the new money ²	converting prices ³	handling the new money ²	converting prices ³
not at all	31 %	26 %	31 %	34 %
some	18 %	= 18 %	49 %	= 49 %
great	9 %	10 %	74 %	49 %

¹ Probabilities calculated out of Models 3 and 5 for a 46-year-old, low-educated male with middle income and ambivalent future expectations who does not use the Internet, who has little interest in politics and no party preferences, and who gave his interview in February.

² This man also has some difficulties in converting prices.

³ This man also has some difficulties in handling the new money.

If we compare the coefficients of the other variables included in Model 2 and in Model 3, they are fairly similar, albeit with some exceptions. There is no significant influence of political interest in Model 3. This could be interpreted to mean that people with political interest are better informed on the euro and can handle it better. The other remarkable changes are those regarding origins. East Germans still have the lowest probability of losing their concerns. The lowest concerns observable are for EU foreigners. Here, they differ significantly from West Germans (whereas in Model 2 they did not). Other foreigners in Models 2 and 3 are comparable with East and West Germans, respectively. Controlling for handling of the currency causes these displacements. Simple cross-tabulations reveal that both groups of foreigners have greater problems in handling the new currency. Not controlling for this produces negatively biased effects for foreigners.

In Models 4 and 5, we take the opposite perspective, and look at the change from being unconcerned in 2001 to being concerned in 2002. The effects are similar to those in Models 2 and 3: here, a positive coefficient here leads to less people being concerned, and in Models 4 and 5, a negative coefficient prevents people from becoming concerned. It should be accentuated that in Models 4 and 5, the income effects are not only significant for the high income group (with a higher probability to stay in the group without worries), but also for the lowest income group. They have a higher probability to change their attitude from 2001 (not concerned) to 2002 (being concerned) compared to middle income groups. This may be due to the fact that real price increases and the discussion on this topic in the media affected people with low income particularly strongly.

It is worth pointing out that the difficulties in handling the new money have a particularly strong influence on people's concerns. In the third column of Table 4, we calculate the probabilities of becoming concerned with respect to difficulties in handling the new money. If our hypothetical person has no difficulties in this area, he has a 31% probability of becoming concerned. If the same person has some difficulties, the probability rises to 49% and if they experience great problems, the figure rises to 74%. In comparison, the influence of converting prices (last column) is much lower.

5. Conclusion and outlook

The theory of reactance, which implies an increase in worries after the introduction of the euro, does not provide a plausible explanation of attitude changes in Germany given the decline in worries from 2001 to 2002. Looking at the development in concerns in the year 2002 differentially, we see that they fell directly after the euro notes and coins were distributed. However, this drop was only temporary.

The theory of cognitive dissonance implies declining worries after introduction because people want to abolish the stress that emerges if they remain opposed to the new currency. As concerns do not fall steadily – in fact, quite the opposite –

this theory does not seem adequate. The same prediction can be traced using a theory of self-perception but the reasoning is different. If the attitude towards the euro is accompanied by little knowledge about the euro, the new situation is real (the euro is the official currency) and people act adequately (paying with euros) then people infer their attitude from their behaviour. We observe that people with difficulties in handling the new money continue to have or develop concerns. This is in line with the theory of self-perception, whereby problems impede a positive attitude. However, when controlling for this, there should be no significant effect in later months on remaining and becoming concerned.

The strong decline in worries from 2001 to 2002 and the re-increase since February 2002 provide hints supporting the theory of attitude change as a result of learning processes. First, individuals with difficulties in handling the money are more concerned. Second, school attendance and Internet usage, which are indicators of knowledge and access to information, influence the loss of concerns and prevent concerns from being developed. Third, the re-increase in concerns runs parallel to the change in press coverage.

The introduction of a single European currency, the euro, is one of the biggest political projects undertaken up to now promoting European unity. However, in some states acceptance is still not high, even two years after the currency's introduction, as is the case in Germany. However, widespread acceptance of the new currency is absolutely necessary for the idea of Europe to succeed. Its failure could promote historic tensions and resentments within Europe.

Three members of the European Union currently remain outside the EMU. But since May 2004, ten Eastern European countries have become new members of the EU, and at least some of them are expected join the EMU and introduce the euro currency in the near future. In order to minimise their problems in introducing the euro, it is worth looking at what has happened in the countries that introduced the euro in January 2002 to find hints for practical measures that can help reduce the population's concerns. Although general beliefs and educational levels cannot readily be changed, our findings for Germany show that people with better access to information are less concerned about the new currency. We also

found that difficulties in handling a new currency have a particularly strong influence on general concerns regarding that currency. Taking all of these factors into account, it seems that providing the population with more information could reduce concerns. Additionally, the discussion about price increases in the German press suggests that the use of double pricing (in the old currency and in euros) could be helpful: this would lead to a decrease in handling difficulties and consequently to lower concerns. Furthermore, it would probably even prevent real or just 'subjectively felt' price increases. Price increases do indeed seem to influence concerns: we argue that the monthly pattern of remaining and becoming concerned in 2002 is traceable back to media reports on price increases.

Finally, the empirical analyses presented above show that those who profit most from the new currency in Germany – EU foreigners – have lower concerns about the euro. However, the abolishment of the exchange rate and the opportunity to make direct price comparisons are advantageous not only for EU foreigners but also for Germans travelling to other countries in EMU. This advantage will be experienced as well by every individual who is a citizen of one EMU country and travels or works in another one.

¹ According to the Theory of Social Identity (Tajfel and Turner, 1979) social identity is defined primarily according to those aspects perceived as strengths of the "ingroup". Therefore, national pride is also generated by issues where citizens of one state appear to be better off than those of another.

² Primary control is present if in fact control can be exercised. In order to produce a person-environment-congruence or to reduce dissonance, it is sufficient if secondary control is exercised on a cognitive level. Thereby, ones own motives and goals are adapted to the given situation.

³ It should be noted however, that their evidence is based on only 40 persons.

⁴ Recent questionnaires are available at <http://www.diw.de/english/sop/service/fragen/index.html>.

⁵ Müller-Peters (2001, p. 38f.) found that countries where life satisfaction is higher on average in EU comparison tend to reject the euro more than in countries with low life satisfaction, which tend to endorse the euro. On the other hand, looking at the individual level, the picture is reversed: the more satisfied individuals are, the greater their acceptance of the new currency and vice versa.

⁶ For each party preference, we construct a dummy variable. It should be noted that nearly half of the respondents report not having any party affiliation.

⁷ We construct four dummy variables: one for West Germans, one for East Germans, one for foreigners with an EU passport and one for other foreigners.

⁸ See Winship and Mare (1984) for details of regression models with ordinal variables.

⁹ The variable highest school level differentiates between individuals with no formal school-leaving certificate and those who graduated only from compulsory schooling (lowest category). Then we have individuals with intermediate general qualifications (middle category) and the highest category, including people with minimum maturity certificates. A fourth category contains those who are still in school.

¹⁰ Using the Internet includes all individuals who state that they use Internet either privately or professionally.

¹¹ We differentiate between Germans, separated for individuals living in East and West Germany, and foreigners. The latter are differentiated between foreigners from an EU country (also including the three states which are not participating) and from all other states.

¹² We use needs-adjusted equivalence incomes and group them into four quartiles, but we only include the lowest and highest quartile in the regression model.

¹³ For details see Long (1997, p. 50ff).

¹⁴ As the SOEP interviews are face-to-face and the number of interviews is high, the fieldwork takes a few months. Each interview month is covered by a dummy variable, except for those in June or later. They are summarised in one dummy, as the number of cases is low here.

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