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WETENSCHAPPELIJKE RAAD VOOR HET REGERINGSBELEID

THE PSYCHOLOGY AND ECONOMICS OF ATTITUDES IN THE NETHERLANDS

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WEBPUBLICATIONS 18

The Hague, June 2007

The Webpublications series comprises studies carried out as part of the activities of the WRR. Responsibility for the content and views expressed rests with the authors. A list of all Webpublications can be found on the WRR website (www.wrr.nl).

If we expect large changes but are very uncertain as to what precise form these changes will take, then our confidence will be weak (John Maynard Keynes, 1936)

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1 INTRODUCTION

This study focuses on the attitude of Dutch citizens towards the euro, the European Union (EU) and the Economic and Monetary Union (EMU) and other institutions, taking the psychology of economic preferences, perception and behaviour as a starting point.¹ Against the background of, inter alia, behavioural economics – which combines insights from psychology with economics – developments in perceptions, notably the attitude towards and trust in institutions in the Netherlands, will be presented and discussed. The first part of the paper concentrates on the economic role of trust and on the psychology of economic preferences, perception and attitudes. The second part presents the results of recent empirical work regarding the perception of and attitude towards relevant institutions. Empirical findings are explained by individual background characteristics using multivariate regression analysis. Providing solutions to deal with the lack of support for European institutions and the euro is outside the scope of this paper.

This study is structured as follows. The next section briefly reviews the economic role of trust. Section 3 introduces concepts from behavioural economics that may be helpful in explaining trust and Euro-attitudes in the Netherlands. Section 4 presents empirical findings using outcomes from the European Value Survey and data collected through the DNB Household Survey (DHS). The latter is an independent Internet panel of the University of Tilburg's CentERdata. It consists of a representative sample of Dutch households which is interviewed repeatedly on a variety of issues. Data include trust in the European Union, the euro and the European Central Bank (ECB) and the voting behaviour in the EU referendum of June 2005. In an attempt to find out in what respect the characteristics of those citizens who exhibit little trust differ from those who are trusting, the section also presents the results of multivariate regression analysis relating the data to individual objective and subjective background characteristics. Section 5 discusses the results with an eye on policy implications.

2 TRUST AND ECONOMICS

2.1 Effects of trust on the economy

Every economic transaction involves an element of trust (Arrow, 1999). In a high-trust society scarce resources do not need to be spent on enforcing contracts and agreements (Mak, 2004; Fukuyama, 1995). A low-trust environment sees many give priority to their own interests and to legally safeguarding their own positions – a phenomenon called rent-seeking. This involves non-productive use of production factors and is therefore inefficient. Institutions may lower their transactions costs (Williamson, 1985; Teulings, Bovenberg and Van Dalen, 2005), but this does require that there be trust in these institutions. Trust, then, is to be treated as social capital and is a production factor alongside physical capital, technology, education and labour.

Keynes (1936) observed that, at times of uncertainty and lack of confidence, more factors than mere rational calculation affect economic behaviour. Put differently, it is harder for rational models to explain and predict people's economic choices – eg, consumption, capital spending, investing – in an economy in which confidence and trust are lacking. Recent views in the field of behavioural economics and neuroeconomics underscore the systematic role of psychology and emotions in determining economic perception and behaviour. Insight into these mechanisms may help policy makers to predict, explain and perhaps influence the support for and effects of policy decisions.

Fukuyama (1995) argues that the link between trust and economic prosperity is reflected in the degree to which societies are able to create large corporations. Trust is necessary for people to accept being governed by business and politics from a distance. Where such trust is lacking, family ties are all-important, limiting firm size and hence economic growth. Van der Pol (2005, quoted in Prast, 2005b) argues that during the period of *verzuiling* institutions still belonged to the people, but that today's citizens no longer feel that way. For example, educational mega-institutions that have resulted from mergers have put schools at a big and anonymous distance from the individual. Van der Pol's diagnosis would suggest that distance and scale, rather than being a reflection of confidence, have transformed into factors that potentially undermine trust. One may wonder whether distance contributes to explaining the lack of support for the European Union in the Netherlands (see also Section 4).

A distinction can be made between individuals, or horizontal trust, and trust between people and institutions, or vertical trust. Institutions include formal organizations, the government, the police, the church, the army, the media, the corporate sector, but also the euro and the

European Union. Institutions need trust if they are to be effective. Entrepreneurs who fear dispossession by the government will invest less. People who believe the police to be amenable to bribes will feel the need to pay for their own protection. People who think politicians are just in it for the money and turn their backs on the political process will be giving just such politicians a chance to cling on.

La Porta et al (1997) establish a positive link between trust and government effectiveness.² Mosch (2004) demonstrates that the greater the inter-country trust, the more countries trade with one another. The Italians trust other nations more than other nations trust Italy, and the same goes for Sweden, the United Kingdom, Finland, France and Ireland while the reverse is true for Greece, Portugal, Germany and Luxembourg. For the Netherlands there is a balance between the two variables: the Dutch trust other nationalities about as much as they are trusted themselves by others. The EU's new entrants – and this may be of importance in the light of the EU-scepticism - are the least trusted by the population in other countries.

The importance of trust for economics is underscored by recent findings in the area of neuroeconomics, which uses neurological techniques, e.g. MRI brain scans to monitor brain activity during economic decision making. Kings-Casas *et al* (2005) find that in an economic exchange or trust game –which mimics the interaction between an investor and a trustee – reciprocity affects both the intention to trust and the speed of brain response by the business partner. That is, once trust is established, both the speed of and amount of investment go up, or in other words, economic efficiency and performance are fostered.

2.2 Determinants of trust

Research into the behaviour by participants in a game imitating economic transactions reveals that the majority of individuals has social preferences. Most individuals are willing to contribute to a collective good even if they know that they will not profit from it (Fehr and Gächter, 2000). This goes counter to the view laid down by Olson (1965) in his famous The logic of collective action. which is often used for public policy analysis. Olson assumes that individuals will free-ride on the contributions by others. As a result, he predicts that, absent material incentives or punishment, too few individuals contribute to the public good and social welfare is not maximized. However, the free-rider model does not explain most of real world behaviour. For example, although people may try to evade taxes, actual tax compliance does not vary with the expected penalty for tax evasion (Kahan, 2002). In fact, citizens can be distinguished into three groups (See Figure 1). A small group always acts as a free rider, no matter what others do. Another small group always contributes, no matter the behaviour of others. In between there is the large majority of citizens that have a favourable attitude

towards contributing, but whose attitude is affected by the behaviour of both fellow-citizens and policy makers. This creates path dependence: in countries or regions where people generally trust one another and act in a cooperative manner, a person would be well advised to act accordingly. However, in societies where opportunist behaviour is the norm, trust would be abused. The first situation creates a virtuous cycle of trust, the second a negative spiral.

Based upon the evidence it will be concluded that the lack of trust in the Netherlands is clearly a lack of vertical trust in some institutions. There is no general trust crisis, and horizontal trust in the Netherlands is high, both historically and compared to that in other countries. This is good news, because society can end up in a low or in a high trust equilibrium, depending on the interaction between individuals (Rose-Ackerman, 2001). Things are more complex in the real world, though. In Russia and Ukraine, for instance, interpersonal trust runs high, but nearly all institutions are deeply distrusted. People in Romania and Bulgaria, by contrast, have little trust in one another, but consider some of their institutions very trustworthy indeed. The Netherlands is a special case too, with horizontal trust at a high level both historically and in comparison to other EU-countries, but with vertical trust in some relevant institutions – notably, the euro, parliament, and some – but not all - European institutions low in absolute and relative terms. The challenge is to identify both the causes of the lack in vertical trust in European institutions and the factors that may contribute to or hamper the development of vertical trust. This paper contributes to this challenge in two ways. The first is theoretical, by using insights in behavioural and neuroeconomics to assess the psychological processes that may affect interpretation of information by individuals (Section 3). The second is empirical, by studying for the Netherlands the individual determinants of vertical trust in our country (Section 4).

3 THE PSYCHOLOGY OF ECONOMICS

Trust is a qualitative variable and is an important, if not the most important, aspect of the attitude towards institutions and their policy. As the psychological approach to economics – behavioural economics - shows, people are biased in their perception of reality. This section introduces psychological mechanisms that are relevant for an interpretation of the attitude in the Netherlands towards institutions in general and European institutions, including the euro, in particular.

The foundations of behavioural economics go back to the 1970s when psychologist Daniel Kahneman – who was to receive the Nobel prize for economics in 2002 - developed prospect theory as an alternative to expected utility theory. The behavioural approach has recently been extended and has gained importance in economics and finance, where it has convincingly challenged inter alia the view of rational economic man, the efficiency of financial markets, the unbiased use of information and the desirability of unlimited choice. The behavioural concepts that will be discussed here are chosen because of their potential relevance in contributing to an explanation of the attitude towards Europe and its institutions in the Netherlands.

3.1 Biased information filtering

The psychological theory of cognitive dissonance states that people tend to look for information which confirms their fundamental opinion (Festinger, 1957). People hear, see and remember what they already believe to be true (selective perception) and turn a blind eye to news that does not concur with their framework of reference. Asymmetric information filtering is e.g. used to explain hypes and panic in financial markets (Prast, 2004). Once a pessimistic framework of references has been established, investors systematically overreact to bad news and underestimate the value of positive information. For example, investors at the Amsterdam Stock exchange reacted almost twice as strongly to good IT news than to bad IT news from October, 1999 through early March, 2000, when the It bubble burst (Keijer and Prast, 2001). Along similar lines, after the birth of the euro investors in currency markets did not increase their demand for euros after a good economic news release about the euro area, but did increase their demand for US dollars after a good news release about the US economy (Prast and de Vor, 2004).

Once the framework is negative, people focus on information selection and interpretation which confirms their pessimistic attitude. This process is further reinforced and easier to

maintain if others have a similar attitude (herd behaviour, peer group pressure) or if maintaining a view may be in the interest of the individual (*self serving bias*, see below).

Sometimes we are aware of our bias in information filtering, without however being able to change it (e.g. adoring the person with whom one is in love) or willing to change it (reading the newspaper which corresponds to our political preferences). To a large degree however people are unaware that they treat and process information in a biased manner. This makes it difficult to change the attitude of a person or a group merely by providing correct information. This holds even more if a source of information is judged as being untrustworthy. In that case, a paternalistic tone, for example by politicians, and the attitude that “people do not listen” only makes matters worse.

Can society as a whole be in a certain mood and have a common framework of reference? The answer is yes. The psychology of society’s economic “mood” has been studied empirically for the period 1955 – 1987 by Zullo (1991), who screened the lyrics of top-ten hits and the cover text of Time magazine for a brooding, contemplative and pessimistic style. He then went on to analyse the correlation between the lyrics, Time magazine cover texts and consumer confidence, and found US consumer confidence to be significantly related to the degree of pessimism in pop songs and Time magazine covers, with a one to two-year lag.

How is this to be interpreted? Perhaps the lyrics and cover texts *reflect* a fundamental opinion already present in society, which would affect consumer confidence only with a lag. Alternatively, or in addition, they might be a factor *affecting* the framework of reference – perhaps increased by media bias (see below). Finally, it could be a channel through which an existing mood is reinforced.

3.2 Representativeness heuristic

The fundamental opinion in society may also be affected by major events. Behavioural studies into financial markets find a short-lived effect of non-economic “disasters”, including unfavourable outcomes of sport matches, on asset prices (Edmans, García and Oyvind, 2005; Mehra and Sah, 200). No lasting evidence has been found of individual “disasters” (Jansen en Nahuis, 2003; DNB, 2005) but a series of “disasters” may influence the framework of reference and thus contribute to asymmetric news filtering by citizens. This is due to *the representativeness heuristic*. According to this heuristic, people typically see patterns in objectively unrelated events and may as a result overestimate the importance of a single event or message. The heuristic is also known as the Big Bear effect, because people tend to see the Big Bear in an image of a sky with a random pattern of stars (Prast, 2004). The concept

has been applied *inter alia* to investor behaviour and explains long term overreactions to a news item if it is part of a series of uncorrelated, but similar news items (Barberis, Shleifer and Vishny, 1998). Through the representativeness heuristic a series of uncorrelated, but similar political, social and economic events may have their impact on the framework of references and therefore the fundamental attitude of society.³

3.3 Media bias and selective perception

Media bias may increase asymmetric information filtering for two reasons (Mullanaithan and Shleifer, 2003). First, journalists themselves are likely to behave according to the *psychological* mechanism of asymmetric filtering of good and bad news according to their own framework of reference. Second, it is *rational* for the media to exploit their readers' preferences for either positive or negative news. Hence they have an incentive to deliberately select and present information that their potential clientele welcomes. This leads to a general bias if preferences in the population are homogeneous rather than divided along the lines of, for example, political preferences. Examples of issues where preferences are rather homogeneous are national "heroes" – soccer teams, CEO's who seem to conquer the world – or "enemies" –the euro, Brussels? (Prast, 2006).

Selective perception may affect citizen's views of how the media depicts their side of the political arena. The hostile media effect is the phenomenon that people feel that the media are biased against their political view or against the candidate that they support in the election (Vallone, Ross and Lepper, 1985; Schmitt, Gunther and Liebhart, 2004). In this case, citizens may have the impression that they are "fooled" by the media. If media are aware of this hostile media effect, the incentive to select and adapt information to the public's wishes is even larger. The more time people spend talking about politics with people who share their views, the more likely they are to perceive hostile media bias. This social (peer group) effect fits in with the theory of cognitive dissonance and information filtering, which stresses that being part of a group with similar ideas facilitates a biased processing of information (Prast and de Beurs, 200)

3.4 Self serving bias and scape-goatism

The self serving bias is the phenomenon that people tend to interpret information in a way that is comforting to their ego. People are unaware of this bias. It influences their judgment and may lead to scapegoatism. Boeri (2006) finds that, after correcting for education, political preference and muslimfobia, people with lower incomes and unemployed - groups who are likely to depend on the welfare state - are more likely to have the opinion that immigrants abuse the welfare system. Boeri also presents evidence that immigrants do not

make more use of the welfare state than other citizens with similar characteristics. His interpretation of the abuse-opinion is that citizens who depend more on the welfare state are afraid that higher claims on social welfare (number of people benefiting) may lead to a reduction of the level of social benefits, thus affecting their income. The judgment by lower social classes is therefore self serving. It results in the policy paradox that reforms of the welfare state may actually reinforce social tensions between lower social classes and immigrants.

3.5 Money illusion and number numbness

Numbers have a larger psychological effect than we tend to think. One example is that people confuse real and nominal magnitudes. Employees and trade unions do not accept a fall in their money wage. However, they are prepared to accept a fall in their real wage as a result of a nominal wage increase that stays behind inflation. Another example is that numbers provide an anchor. This is illustrated by the following experiment. Participants were asked to answer the following question: *what is the percentage of African nations in the United Nations?* They had to answer after a wheel of fortune was spun. As it turns out, the participant were highly influenced in their estimate by the number that came out from the wheel. The higher the number is, the higher the estimate.

There is strong evidence that money illusion has played a role in perceptions and behaviour with respect to the changeover to the euro. Kooreman, Faber and Hofmans (2003, 2004) compare the revenues of a house-to-house collection for a charity in the province of Groningen before and after the introduction of the euro. Clearly, donations can be chosen freely by the donator himself, there is not a retailer who can be blamed. Kooreman *et al* show that whereas in 2000 and 2001 the revenues of the charity increased by 2.2 and 1.3 percent compared with the previous year, in 2002 they were 11.1 percent higher than in 2001 (the final year of the guilder). In the pre-euro years the revenue increases did not exceed the inflation rate, but in the euro years, the increases were substantially higher than the inflation rate, in particular in 2002, the first year of the euro.

3.6 Loss aversion and status quo bias

Money illusion is related to *loss aversion*. Behavioural economics concludes that losses systematically have a larger psychological impact than gains. The loss aversion coefficient is about 2.2. It explains for example why demotion is not accepted by workers. Loss aversion has a major effect on choices and attitude. It contributes to the *status quo effect* (Kahneman, Knetsch and Thaler, 1991). This is the attitude “if it ain’t broke, don’t fix it” and it implies that people are in general resistant to change.

3.7 Hyperbolic discounting and default effects

People tend to postpone saving, sporting, dieting and so on. Thaler and Shefrin (1981) describe it as a self-control problem and model individual intertemporal decision making as the result of the interaction between a “planner” and a “do-er”. The planner maximizes lifetime utility, the do-er behaves as if he is a one-day fly and makes choices that harm his future self (consuming too much food, alcohol, income).

The self-control problem can be solved if the planner can influence the behaviour of the do-er. He can do this by affecting preferences (take the example of an ex-alcoholic who takes Antabuse before going to a party, or the planner who enrolls in a weight watcher programme), or by limiting the choice options for the do-er (take the example of signing a contract for automatic savings, the mandatory enrollment in pension plans, putting your credit card in a plate of water in the freezer). The planner can also delegate decision making to an external planner, for example the government or a pension fund. As will be shown below, the external planner can help control the do-er even without affecting his freedom of choice, by choosing appropriate defaults.

The planner-doer model is corroborated by neuroeconomic research (Ainslie and Monterosso, 2004). fMRI⁴ scans show that different parts of the brain kick into action on these issues. Short-term gratification is the domain of the limbic system, the impulsive part of the brain, whereas the neocortex – the part of the brain in charge of planning – wins on matters involving a long-term horizon.

A formal way to describe the self-control problem is that people discount future utility hyperbolically, implying that they are very impatient when immediate gratification is possible, even though in long term decisions they are able and willing to be patient. The implication is, that in contrast with the standard assumption in models of intertemporal decision making, discounts are not constant. An example can illustrate this. When asked to choose between one glass of wine today or two tomorrow, most people choose for one glass now. When asked to choose between one glass a year from now or two glasses a year plus one day from now, they choose the latter. However, next year they will again go for immediate gratification. Hyperbolic discounting is the reason why people delay saving for the distant future for much longer than their long-term preferences would suggest (Frederick, Loewenstein and O’Donoghue, 2002; Prast, 2005). The issue is relevant for policy makers because preferences affect the basis for the public’s political support. Viscusi and Huber (2006) examine revealed rates of time preference for public goods, using environmental

quality as case study. They conclude that the rate of time preference is very high for immediate improvements and drops off substantially thereafter.

Rather than deliberately making their own choices, people tend to stay with the default – the standard option, the choice you make if you do not choose - in a variety of domains. For example, in the Netherlands the default is not to be an organ donor, whereas in Belgium those who do not actively object are automatically an organ donor. This difference in defaults has a major effect on donorship. In the pension saving domain, default effects are especially important. Non-mandatory but automatic enrolment in pension plans has a major effect on participation and may therefore contribute to solving the self control problem in retirement saving (for an application on the Dutch case of the life course arrangement – levensloop- see Kooreman and Prast (2006).

Default sensitivity can be used by policy makers when individuals have difficulty in making choice that satisfy their preferences because they lack the skills, because of choice paralysis or because of self-control problems. Default effects also occur because people perceive the default as indicating the recommended course of action. In that case, policymakers can use defaults as a cheap instrument of affecting behaviour. However, this applies only if the maker of the default is trusted by the public, which is an additional reason for studying trust.

4 TRUST IN INSTITUTIONS AND THE EURO IN THE NETHERLANDS

This section assesses horizontal and vertical trust in the Netherlands and the attitudes of the Dutch towards Europe and the euro. Aggregate data are interpreted against the backdrop of the psychological concepts introduced in the previous section. To improve understanding of the driving factors of EU-opinions, individual attitudes are also explained at the micro level by objective (e.g. age, gender, education) and subjective (e.g. pessimism, trust in others) background characteristics.

The data are based on the DNB Household Survey (DHS), an independent Internet panel of the University of Tilburg's CentERdata, and on the European Value Survey (EVS). The latter is conducted by Tilburg University's Faculty of Social and Behavioural Sciences to assess the differences in social, political, economic and cultural beliefs and opinions across countries. The last official survey was conducted in 2000 and reported in 2005 (Halman, Luijkx and Van Zundert, 2005). To capture trends and developments since then, we have asked some identical trust-related questions in the DHS.⁵ The last DHS survey used in this paper was conducted in 2005 and 2006. As the DHS survey captures many background characteristics of panel members, we are able to explain individual attitudes by these objective and subjective background characteristics, including social and demographic variables such as gender, age, education and income.

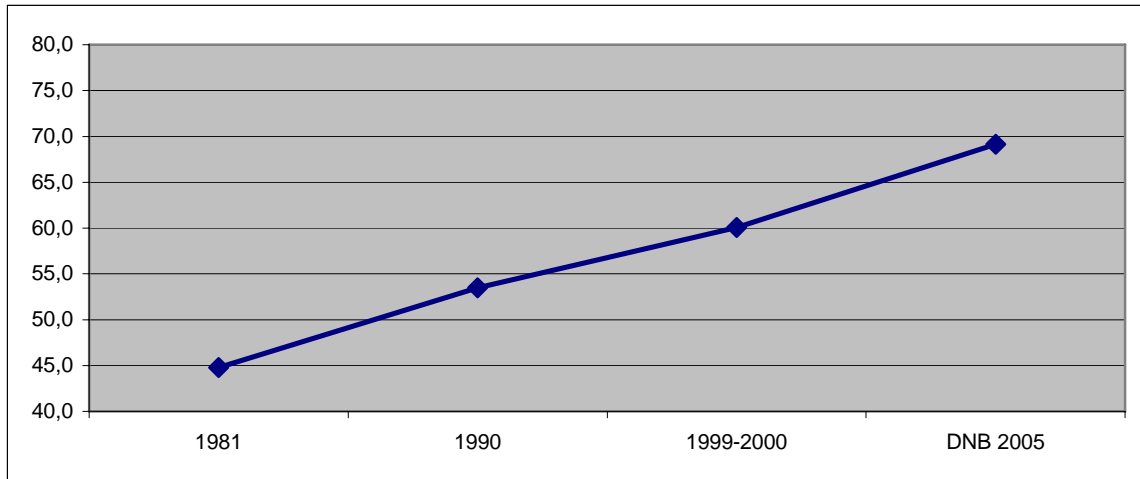
4.1 Horizontal trust

Before turning to the trust in the euro, the economy in general, and in institutions, we will first take a look at horizontal trust in the Netherlands. People who trust others typically display higher trust in institutions, promoting the smooth operation of such institutions. Horizontal trust is measured by the percentage of the population that express their trust in their fellow-men through answering the following question:

Generally speaking, would you say that most people can be trusted, or that you can't be too careful in dealing with people?

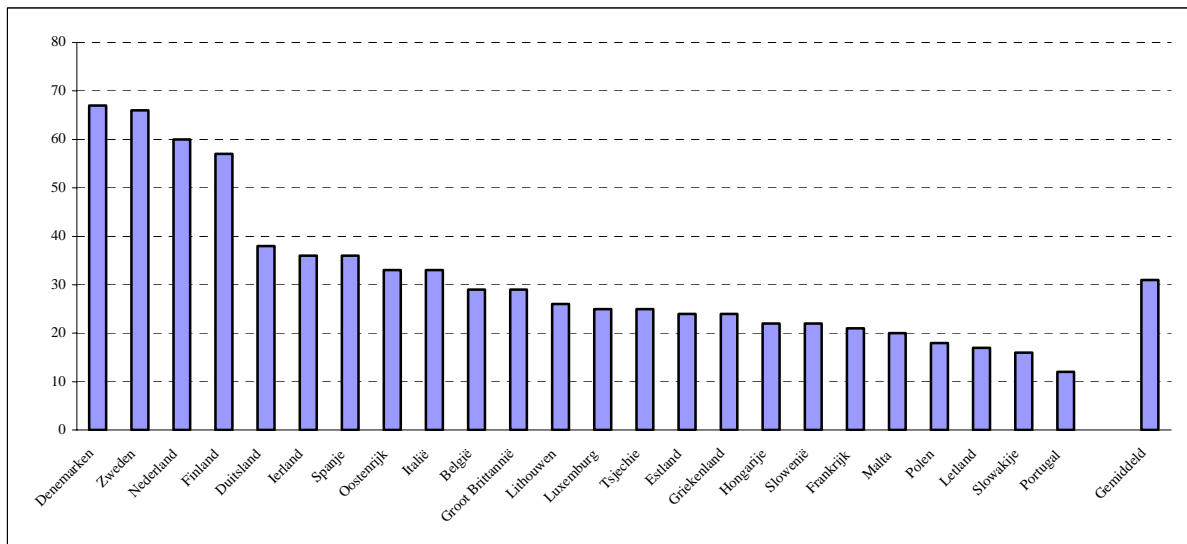
Figure 4.1 captures the development over time of the percentage of people in the Netherlands who feel that, on the whole, most people can be trusted. As the figure demonstrates, interpersonal trust in the Netherlands has been on an upward trend in the past 25 years, growing from 45 per cent in 1981 to nearly 70 per cent in 2005.

Figure 4.1 Interpersonal trust in the Netherlands, 1985-2005



Source: Prast, Mosch and Van Raaij (2005)

Figure 4.2 Interpersonal trust: an international comparison (2000)



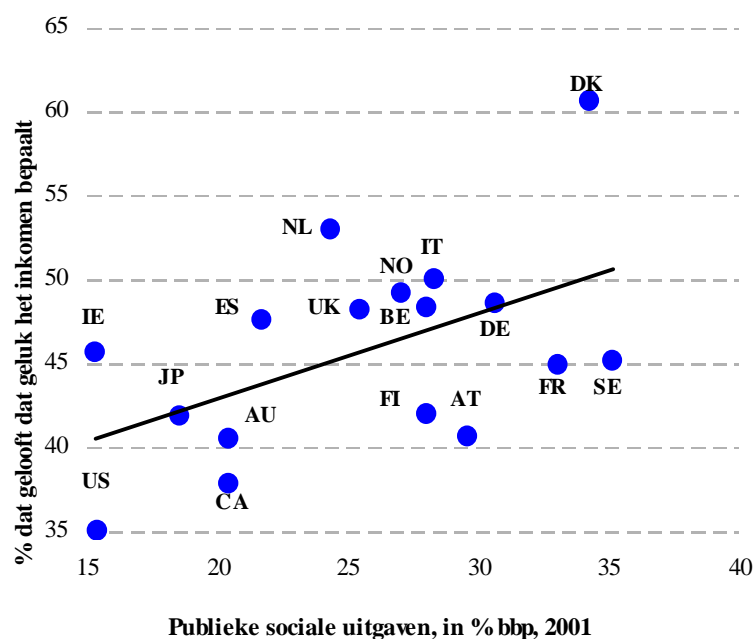
Source: Prast, Mosch and Van Raaij (2005), based on European Value Survey

An international comparison of interpersonal trust in the European countries (including new entrants) shows that the Netherlands also cuts a good figure in the international arena. Claiming third place in this league table, the Netherlands even boasted an interpersonal trust percentage that was double the EU average.

How to explain the high interpersonal trust in the Netherlands? First, institutions in the Netherlands may historically have been judged as trustworthy, creating an environment in which fellow-men can be trusted too. Second, in the Netherlands the percentage of people who feel that poverty is a result of bad luck is very high relative to international standards

(Wellink, 2006, based on the World Value Surveys). This is illustrated in Figure 4.3. Third, high interpersonal trust may be bad news, reflecting an attitude of permissiveness. Note that the Netherlands, according to a 1997 study, performed badly in civic norms – high acceptability of tax evasion, of abuse of social security benefits, keeping money found, and failing to report accidental damage caused to a parked vehicle (Knack and Keefer, 1997). Our country took the seventeenth position, ahead of only four other European countries. The Netherlands' low civic norms ranking may be due to a variety of reasons: its tolerance, which could just as easily be labelled indifference, its tradition of civil disobedience, and/or the effect of low levels of law enforcement (the ubiquitous Dutch policy of *gedogen* – turning a blind eye).

Grafiek 4 Publieke sociale uitgaven en % dat gelooft dat geluk het inkomen bepaalt¹



Bron: Adema en Ladaique (2005), World Value Survey.
 regressieverglk.(t-waarden tussen haakjes), publ. soc. uitgaven(in % bbp)
 = 1,15 (0,11) - 0,53 (2,37) * gelukspercentage. R²: 0,27

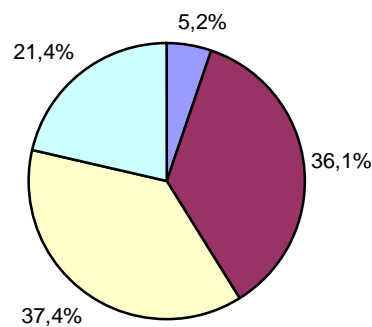
¹ Antwoord op de vraag "In the long run, hard work usually brings a better life (waarde 1 op schaal van 1 tot 10)", of "hard work does not generally brings success; it's more a matter of luck and connections (waarde 10 op schaal van 1 tot 10)".
 Antwoordcategorieën gehercodeerd tot dummyvariabele (0-1), waarbij 1 het sterkste geloof in "geluk" weergeeft.

Having sketched horizontal trust, we now turn to confidence in the euro and the economy, and to vertical trust (trust in institutions).

4.2 The euro

As Figure 4.3 reveals, in 2005 a majority of around 60 per cent of the Dutch had little or no confidence in the common currency, with over one in three expressing a 'fair amount' and five per cent 'a great deal' of confidence.⁶ Note, that the survey was held press reports about the value at which the guilder had joined the euro and after the referendum on Europe's constitution. The trust in the euro by Dutch citizens compares unfavorably to that of the current average attitude of other euro-area citizens.

Figure 4.3 Euro-attitude, 2005 A great deal; a fair amount; a little; not at all



This reflects a widespread feeling in the Netherlands that the euro has caused higher inflation and a loss of purchasing power. However, the Dutch were already skeptical about the new currency before the euro notes and coins were introduced. Between 1999 and 2000 the percentage of Dutch citizens with a positive attitude towards the euro fell from 80 to 60%. The confidence in the euro also diminished in comparison to the EU average. As the introduction date approached, a large fraction of the population feared that the new currency might accelerate inflation in the Netherlands (Stokman and Van Renselaar, 2001). In short, at the time of the introduction of the euro notes and coins, the framework of reference towards the euro and its effect on prices in the Netherlands was negative. On the other hand, policy makers, including De Nederlandsche Bank, estimated that the price increase due to the euro would be very moderate. They turned out to be right, inflation in the years following the introduction of the euro notes and coins fell relative to that in the years preceding the changeover. Still, the public's perception was that prices had risen, and that purchasing power had fallen, because of the euro. In 2002 the so-called *gevoelsinflatie* (perceived inflation) in the Netherlands was 7.3 percent, whereas in that year actual inflation was no higher than 3.5 percent – a decrease relative to 2001, when inflation was around 4.5 percent (Prast, 2002; Bouwman, 2006). That this is a structural phenomenon is underscored by the

fact that the 2005 edition of the Dikke Van Dale includes the newly-coined term *gevoelsinflatie*, or perceived inflation.

The negative framework of reference with respect to the euro is further confirmed by a survey held in April 2005. DNB household panel members were asked to give their estimate of the level of inflation in the 2000-2005 period. As it turns out, there is a general and significant overestimation of inflation. More importantly, the degree of overestimation of inflation turns out to depend significantly on the framing of the question. If the question contains the word euro,⁷ average inflation is estimated significantly higher than if it does not, the difference being several percentage points.

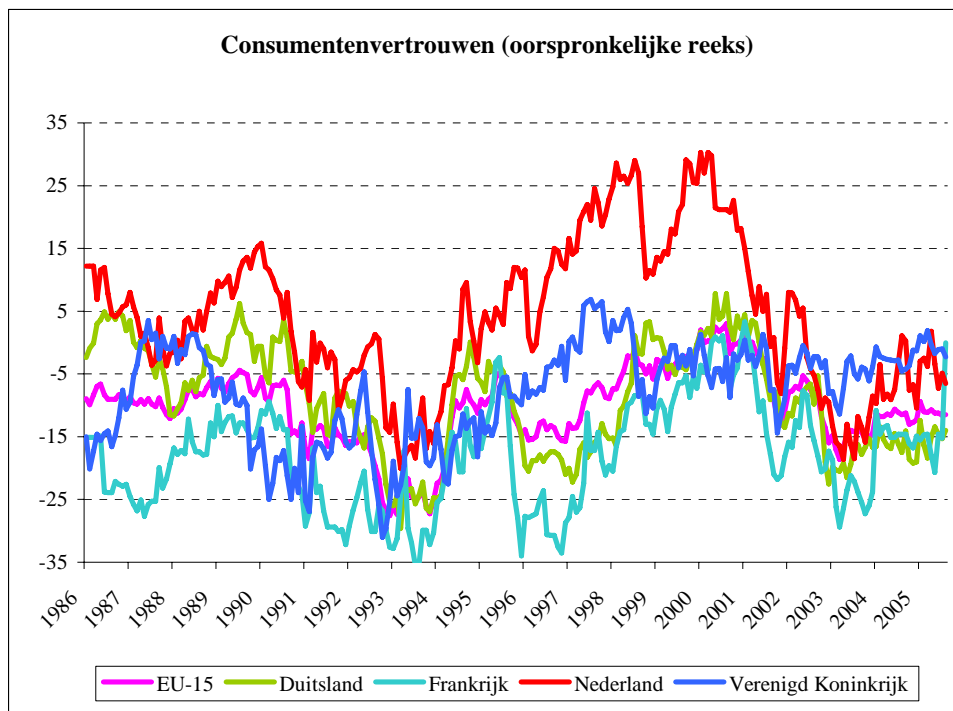
The explanation for *gevoelsinflatie* is to be found in asymmetric information filtering, the representativeness heuristic, anchoring and number numbness. Given the negative fundamental opinion, the focus of consumers was on price increases, not on price decreases or constant prices. Moreover, individual, easily visible price increases were seen as representative for the general price movement. The size and visibility of price increases in cafes and restaurants may have prompted citizens to believe that all prices had gone up extremely as a result of the introduction of the euro, even though inflation was lower than in previous years (Prast, 2002). Furthermore, the exchange rate of the euro versus the US dollar fell for several years in a row after its introduction. This may have contributed to an even more pessimistic view on the euro in particular and on the economy in general. Just as we are giving higher donations in real value – but not in numbers - we tend to buy more expensive products than we would have in the guilder era. Moreover, we tend to compare current euro prices with the guilder prices that we remember from the past – our anchor-, although guilder prices would have risen too between 2002 and 2006.

International comparison reveals that the Netherlands is among the countries where people find it most difficult to “think” in euros. The easy converting method was expected to help, but may instead have provided too little incentive to “forget” the guilder. Ireland is the countries with by far the highest percentage of people who have gotten used to the euro. Most likely this has to do with the fact that the euro has a smaller value than the former Irish currency, the Irish pound. In all other EMU-countries, the euro is worth more than one unit of the former currency. Hence in Ireland products seem to be more expensive now they are denominated in euros, whereas in fact they are less expensive.

The pessimistic attitude of Dutch citizens was not limited to the euro, as is illustrated by Figure 4.2, which graphs consumer confidence in the Netherlands in historical and

international perspective. What stands out is that from about 2000, consumer confidence in the Netherlands fell sharply to the EU-average, whereas in previous years it was higher. Note that the decrease started at the time the euro was introduced, the Internet bubble burst and the stock market boom ended.

Figure 4.2 Consumer confidence in Germany, France, the Netherlands, the United Kingdom and the EU-15, 1986-2005



Source: Prast, Mosch and van Raaij (2005), based on CBS data

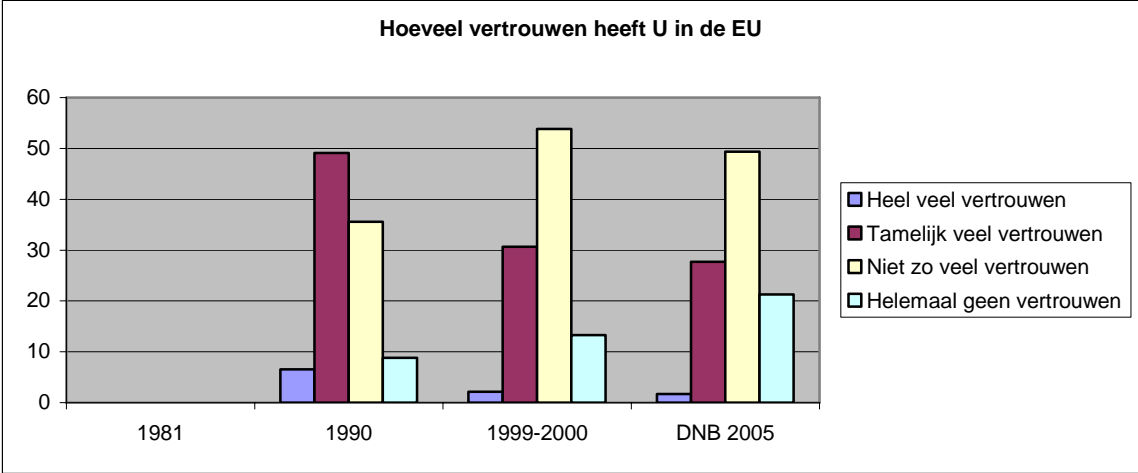
The negative mood in the Netherlands is most likely due to a psychological reaction to a succession of economic and political events that were in part international, but in part typical for the Netherlands. The international events were the end of the stock market boom (2000), the attack on the World Trade Center (2001), and the Enron and Parmalat accounting scandals. The effect of the stock market boom and the subsequent crash was much more pronounced in the Netherlands than abroad. The deductibility of mortgage interest payments, the continuous increase in real estate prices and the generous availability of high mortgage loans enabled the Dutch to use their home as a collateral for both stock market investments and consumption. As a result, many new small investors entered the stock market, with many of them buying highly complex financial products. As a result, the vulnerability to asset market developments for small investors was much higher in our country than abroad. Moreover, the Netherlands had its own corporate scandals, with key roles for typical Dutch companies (Ahold, Philips and Shell), and the building fraud. The

political tension created by 9/11 was reinforced by the murder of Fortuyn. Whereas for example Italians have traditionally less faith in the integrity of politicians and business men, the attitude of the Dutch is one of overconfidence about moral rules in our consensus-based country. This may have added to the disappointment about both the local accounting scandals and the political murder. Politics did not much to help. Governments are inclined to take unpopular decisions immediately upon being installed, so that they can take popular decisions at a later stage, at the time of elections. According to Bouwman (2006) both the content of statements by the government (notably the prime minister and the minister of Finance) and the content of economic policy have reinforced the social climate and the decline of the business cycle in the Netherlands.

4.3 The European Union

The general pessimistic framework of reference about the economy may also have contributed to the decline in vertical trust. The European Values Study has been surveying trust in the European Union (EU) since 1990. Figure 4.3 shows this trust to have fallen steeply between 1990 and 2000, with the 2005 DHS data showing a further decline.

Figure 4.3 Trust in the EU



Not at all, a little, a fair amount, a great deal

Dutch trust in the EU is low in relative terms too. In fact, in 2000 the Dutch population displayed the lowest level of EU-trust of all countries that have formed part of the European Union and its predecessors from its inception (Halman, Luijkx and Van Zundert, 2005).¹²

A survey among the DHS panel in June 2006 provides some explanation for the EU scepticism. The Dutch hardly perceive any economic advantages of the European economic integration (Bom and Van Renselaar, 2006). Yes, a large part of the population (40%) holds

the opinion that the future of the Netherlands is a European one, and the Dutch characterise themselves as open minded and progressive. But the majority is against EU-enlargement for economic reasons – potential new countries are too poor -, does not trust European politics, believes that delegation of authority to Brussels is harmful for the Dutch identity, and holds the opinion that the Netherlands should cherish its cultural identity. The self-image does not correspond to how people from abroad who live here judge the Dutch. According to the results of a questionnaire entitled *'How staff members of international organisations view life in the Netherlands'*, the majority of foreigners who work in international organisations and companies in the Netherlands complain about the Dutch mentality and cannot wait to leave our country (Bom and Van Renselaar, 2006).

Trust in DNB, the ECB, parliament

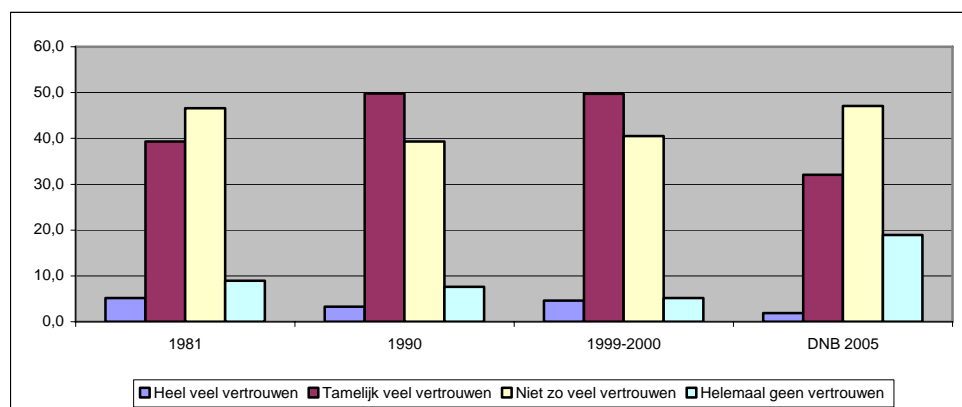
The outcome of the 2005 referendum and the finding that the Dutch have little trust in the European Union and the euro is not reflected in a low degree of trust in the ECB and DNB, which are responsible for the euro and for maintaining price stability in the euro area. As Table 4.1 shows, when asked about the European Central Bank (ECB), 56 has a fair amount or a great deal of trust, and only has no or little trust in the ECB. Trust in DNB is even higher. This justifies the conclusion that the lack of support for the euro is not due to lack of trust in or support for the ECB and DNB. Vice versa, the low confidence in the euro does not seem to have harmed central bank reputation. This contrasts sharply with trust in parliament, which is very low, with two out of three citizens having a little or no trust at all in parliament.

Table 4.1 How much do you trust DNB, ECB, Parliament (% of population, 2005/2005)

	DNB	ECB	Parliament
A great deal	19	6	2
A fair amount	59	50	31
A little	19	19	47
Not at all	3	4	20
Don't know	-	22	-

Charting the development of trust in the Dutch parliament since 1981, Figure 4.4 shows the Dutch to be less trusting in 2005 than they were in previous surveys. Note, that Europeans have less faith in politics than do their counterparts in Canada and the United States. This leads Teulings, Bovenberg and Van Dalen (2005) to observe that 'Europeans may fear American-style conditions, but the Americans themselves are obviously less fearful.'

Figure 4.4 Trust in parliament



4.4 ECB-independence

The ECB has an independent status from national governments. The reason is, that otherwise monetary policy decisions might be affected by (short term) employment and re-election goals, thus jeopardizing price stability. We have assessed the support for this construction, which might be judged as a “democratic deficit” by asking (mid 2006) the opinion of Dutch citizens regarding the relationship between the European Central Bank and politicians. As it turns out, more than 70% holds the opinion that the ECB should be independent from politics (Table 4.2). This indicates a major support for the current situation, with the ECB (and the national central banks) having statutory independence and being committed, through a mandate, to maintaining price stability. This underscores that people trust a European institution that operates at a distance and even outside the control of national parliaments.

Table 4.2 Do you find it important that the European Central Bank in maintaining price stability is independent from national governments?

Very important	27
Quite important	45
Not very important/not at all important	7
Don't know	21

4.5 Trust in the corporate sector

Enron, Parmalat, Ahold and Shell affairs, and the building fraud, insider trading (Philips) and Legiolease are cases that have rocked the Netherlands in particular. According to our DHS survey, the trust in the integrity of the corporate sector is lower than that in DNB and the ECB, but higher than that in parliament and the European Union (Prast, Mosch and Van Raaij, 2005). Nearly one in five Dutch citizens takes a negative or very negative view of the integrity of business, with around half neutral and less than one-third positive to very positive. Hence

it seems fair to say that the corporate scandals, even though they may have affected the general framework of reference in the Netherlands, have not resulted in a major trust crisis vis a vis the Dutch corporate sector. On top of these accounting irregularities and misdemeanors, the Dutch people's confidence and trust in their society and its institutions may well have been shaken by the murders of Pim Fortuyn and Theo van Gogh and the threat of terrorism. Meanwhile, Dutch business integrity has come under closer international scrutiny: corruption scandals in the Dutch building industry recently prompted Transparency International, the international non-governmental organisation devoted to combating corruption, to lower the country's ranking on its Corruption Perceptions.

Before turning to the micro-analysis, it is useful to sum up and interpret the aggregate results so far.

Some argue that the Netherlands is well on its way to changing from a high-trust to a low-trust society (Mak, 2004). We do not find support for this view in the data. First of all, it clearly is not the case when it comes to horizontal trust: this is high both in comparison with the past and compared to other countries. Moreover, we do not find a general crisis of vertical trust, as some institutions enjoy a large degree of trust. Moreover, despite the various accounting scandals of the past decade, only a minority of the population distrusts the corporate sector in the Netherlands. Support for "The Hague", "Brussels" and the euro is very weak, however. The lack of support for the EU does not reflect a general aversion against supranational or European institutions: thus, the ECB is trusted by the majority of the public.

How is the lack of support for the euro and the European Union to be explained, and could it have been prevented? De Beus en Mak (2005) argue, that European integration has been presented in the Netherlands in economic terms only. This economism might be one of the reasons for the euro-scepticism. After all, in economic terms the European integration has not (yet) brought economic prosperity to the man in the street. This is confirmed by the recent DHS survey into the perceived benefits from European economic integration. Bear in mind, however, that the scepticism manifested itself already before the euro was introduced. Although initially the Dutch were favouring economic integration and the entrance in the EMU (there was no debate on the issue in the Netherlands), this attitude changed. Probably as a result of the economic downturn, developments on stock markets and a number of corruption scandals that were previously unthinkable for the Dutch, the "framework of reference" at the onset of the new currency was certainly not optimistic, both in general (confidence in the economy) and with respect to the euro.

The way the Netherlands has dealt with the euro-conversion may have played a role. Thus, the retail sector had been very reluctant to introduce double pricing in 2001 in order to help consumers getting used to the euro prices. And once the euro coins and notes were introduced, there was only a relatively brief period of dual acceptance of both the euro and the national currency. The Dutch chose for a period of only four weeks, whereas EMU rules permitted a period up to six months. This was a compromise decision taken by the National Forum for the Euro introduction, with the corporate sector, and especially retailers, hoping for a big bang scenario. Moreover, double pricing was applied only for a short time after the euro introduction. In many other EMU countries, double prices were applied for much longer – in some cases up till this date. Getting used to the euro was certainly much more difficult than expected, as psychological factors had not been taken into account. However, if the general attitude would have been one of optimism, and economic perspectives would have been good, the euro might have received a warmer welcome.

In order to improve understanding of the attitudes of Dutch citizens, the remainder of this section will focus on the individual background characteristics as explanatory variables both of trust and of the voting behaviour in the EU referendum of June 2005. This enables us to characterize the groups in society that are most likely to distrust European integration and institutions.

Micro-analysis

In order to verify the background characteristics affecting confidence and trust, we have applied multivariate regression analysis of the data. This enables us to identify the contribution of individual variables while holding others constant. Thus, if we find for example an effect of being on a social benefit, this is after correcting for income and educational differences: the effect is purely due to the labour market position of the individual. In order to correct for the effect of personality – optimists, pessimists – of individuals, we have added an explanatory variable indicating self assessed optimism as personality trait on a scale from 1 to 7.

Our analysis reveals that confidence and trust as a rule vary positively with education and income, while people on social benefits have less trust and confidence in all institutions including the European union, except for the ECB where being on benefits has no effect. Individual subjective variables like horizontal trust and optimism have a positive effect on confidence and on vertical trust in the various institutions,

Trust in the integrity of business is negatively correlated with age and positively with income. Men display greater trust than women. Being on benefits has no effect, unless we strip out the optimism indicator as an explanatory variable, which reflects a correlation between these two variables. Trust in parliament is also significant, which suggests that the Dutch public feel parliament to be capable of influencing the integrity of others, be it by setting an example, or by setting adequate governance rules.

4.6 Voting behaviour eu referendum June 2005: individual determinants

We have asked DHS panel members how they have voted in the EU referendum of June 2005 and have related their voting behaviour to individual objective and subjective background characteristics. As it turns out, the probability of having voted YES depends positively on the *objective* background variables age, income and education. Hence older people, higher incomes and higher educated have *ceteris paribus* more often voted in favour of the European Union “constituency”. In other words, the young do not have more confidence in the current process of “Europeanization” than do the old – on the contrary. As far as the *subjective* determinants are concerned, people who trust the Dutch parliament are more likely to have voted YES, and the same applies to people who trust the ECB. Interpersonal trust does also have a positive effect on the probability of having voted YES.

5 DISCUSSION AND POLICY IMPLICATIONS

This study has evaluated attitudes in the Netherlands towards various institutions against the backdrop of the psychological approach to economic behaviour. Relevant psychological concepts are to be found in the theory of cognitive dissonance, prospect theory, loss aversion, framing effects, media bias, money illusion, anchoring and hyperbolic discounting. Using the DNB Household Survey and the results from earlier European value Surveys, trust and confidence in the Netherlands were measured both at the aggregate and individual level.

The main findings are the following. Interpersonal trust is high, whereas vertical trust reveals a mixed picture. This may be interpreted positively, but could also reflect a Dutch attitude of over-permissiveness, chauvinist arrogance and/or overconfidence about the Dutch mentality and integrity. Trust in the ECB and DNB are high, but that in the EU, the euro and the Dutch parliament are low. People who trust others typically display higher vertical trust, whereas those who are economically weak – lower incomes, people on social benefits – are less likely to have trust in institutions. Hence the importance of creating conditions conducive to improving socioeconomic positions and to help make them less dependent on not-always-predictable government policies. The lack of trust in the euro is not the result of a lack of trust in the institutions responsible for the stability of the euro and the smooth operation of the payment system.

At the time of the introduction of the euro, there clearly was a negative framework of reference in the Netherlands with respect to the economy and financial markets. In 2001, that is before the euro coins and notes were introduced, the general public feared price increase and was biased towards information confirming their fear.

In this respect three questions are relevant: how does a framework become negative, can it be countered once negative, and can one prevent it from being created?

As for the first question, people may develop a pessimistic attitude in response to a sequence of unrelated, but unfavourable messages. The negative attitude in the Netherlands has most likely been the effect of a series of unexpected international and national economic and non-economic events: the building fraud; the suspicions of insider trading by highly regarded business people and/or in firms that are seen as typical Dutch, 9/11; accounting scandals; the bursting of the stock market bubble; the murdering of Pim Fortuyn.

As for the second question, people are able to change their framework of reference only if there is so much information contradicting their opinion that it becomes impossible to neglect it. A prerequisite is, of course, that the information is released by a trusted source. If the institution is part of the negative framework of reference, its information is by definition neglected or rejected. For an institution to regain trust it is a prerequisite that citizens feel that they are taken seriously. This implies that a paternalistic tone, and a downplaying of people's worries, are counterproductive (Prast, Mosch Van Raaij, 2005). Adding to the problem is that media may have an incentive to fuel an existing opinion if it is shared by a large majority.

As for the third question, take as an example the introduction of the euro. Although some sectors used the euro to increase their prices, inflation was quite low in the period following the euro introduction. However, people expected higher inflation and were confirmed in their view by the highly visible price increase of some goods and services that are acquired in isolation (taxi for example). Given a negative framework of reference, information regarding the euro was gathered and processed in a biased manner. This has no doubt been reinforced by money illusion and anchoring effects (Prast, 2002). Thus, when judging the amount of money given as a tip, as a present, or in exchange for a product, people still evaluate "emotionally" on the basis of guilder values. For example, 50 eurocent (tip) is considered a small amount, as is ten euro for a present. Moreover, adjustment to thinking in euros was far more difficult than anticipated, people spent their euros as if they were guilders, buying products that they would have judged too expensive in the guilder area. These were psychological reactions that had not been anticipated. Whereas some sectors certainly had used the euro to increase prices, it was often the free choice of consumers to spend the same amount in numbers, representing a larger amount in guilders than they used to.

The concepts of loss aversion and status quo bias imply, that in order to make people vote in favour of change in a period in which things "ain't broke", the advantages should be made very clear. However, hyperbolic discounting may lead to myopic attitude towards policy directed at long-term effects, even if citizens expect that those effects will be positive. One way to deal with resistance to change may be to create the change as a default. In the case of the EU constituency, this would have implied not to carry out a referendum. However, defaults are only accepted if people trust that institutions do their best to create the optimal default, taken preferences into account. If not, the default is interpreted as a violation of the democratic process and most likely this would have been the case with the EU referendum. The theory of libertarian paternalism argues that individuals can benefit from delegation of choice because they know that they are unable to make the best choices themselves. Again,

this requires that the institutions to which choices are potentially delegated enjoy a large degree of trust.

Vanthoor (1996) discusses the German-Austrian Monetary Union (1857-1867), the Latin Monetary Union (1865-1926), which included France, Italy, Belgium, Switzerland and later Greece, and the Scandinavian Monetary Union (1873-1931). These unions, none of which survived, were similar to EMU in that there was no political integration. Vanthoor concludes that the reason why these unions fell apart was always a political, not an economic one. This would imply that in the end economic advantages do not suffice to create support for international integration.

REFERENCES

- Alesina, A. and Angeletos (2005), *Fairness and redistribution*, *American Economic Review* 95, 960-980
- Arrow, Kenneth (1999), 'Observations on Social Capital', in Dasgupta, Partha and Ismail, Serageldin (eds.) *Social Capital: A Multifaceted Perspective*, Washington, DC: World Bank.
- Barberis, N., Shleifer, A. and Vishny, R. (1998), 'A model of investor sentiment', *Journal of Financial Economics*, 49, pp. 307-343.
- Bazerman, Max B., George Loewenstein and Don A. Moore (2002), *Why Good Accountants Do Bad Audits*, *Harvard Business Review*, Vol. 80, No. 11, November 2002.
- Bjørnskov, C. (2003), 'The Happy Few: Cross Country Evidence on Social Capital and Life Satisfaction', *Kyklos* 56 (1), pp. 3-16.
- Bom, G., and C. van Renselaar (2006), *Europa: integratie versus identiteit* (Europe, Integration versus Identity), De Nederlandsche Bank, autumn 2006 (forthcoming)
- Boeri, Tito (2006), *Migration policy and the welfare state*, Paper prepared for the Conference Reinventing the Welfare State, The Hague, April
- Bouwman, Matthijs (2006), *Balans*
- De Beus, Jos and Jeannette Mak (2005), *European Integration without Europeanization*, *Acta Politica* 2005 (40), pp 440-458
- DNB (2005a), *Confidence, happiness and the financial situation of households*, *Quarterly Bulletin*, De Nederlandsche Bank, September 2005.
- DNB (2005b), 'Terrorism: limited impact on the economy', *Quarterly Bulletin*, De Nederlandsche Bank, September 2005.
- Everdingen, Y.M. van and Raaij, W. Fred van (1998), 'The Dutch people and the euro: A structural equations analysis relating national identity and economic expectations to attitude towards the euro', *Journal of Economic Psychology*, 19, pp. 721-740.
- Fehr, E. and Gächter ()
- Frederick, Loewenstein and O'Donoghue (2002)
- Festinger, L. (1957), *A Theory of Cognitive Dissonance*, Palo Alto, CA: Stanford University Press.
- Fukuyama, F. (1995), *Trust: The Social Virtues and the Creation of Prosperity*, New York: Simon and Schuster.
- Guiso, L., Zingales, L. and Sapienza, P. (2005), 'Trusting the Stock Market', CEPR Discussion Papers Series 5288, October 2005.
- Halman, L., Luijkx, R. and Zundert, M. van (2005), *Atlas of European Values*, Leiden: Brill Academic Publishers and Tilburg University.

- Jansen, W.J. en N.J. Nahuis (2003), *Vertrouwen op de beurs*, Economisch Statistische Berichten 85, nr 4392, 10 januari, pp. 20 – 25
- Kahan, D. (2002), *The Logic of Reciprocity: Trust, Collective Action and Law*, Yale Law School Paper 281
- Kahneman, D. en A. Tversky (1984), Choices, Values and Frames, *American Psychologist* 39 (4), pp. 341-350
- Kahneman, D., J. Knetsch and R. Thaler (1991), Anomalies: The Endowment Effect, Loss Aversion and Status Quo Bias, *Journal of Economic Perspectives* 1, pp.193-206
- Keynes, J.M. (1936), *The General Theory of Employment, Interest and Money*, Macmillan, Cambridge University Press
- Kings-Casas, B., D. Tomlin, C. Anen, C.F. Camerer, S.R. Quartz, P.R. Montague (2005), *Getting to Know You: Reputation and Trust in a Two-Person Economic Exchange*, *Science* 308, 78-83
- Knack, S. and Keefer, P. (1997), 'Does social capital have an economic payoff? A cross-country investigation', *Quarterly Journal of Economics*, 112(4), pp. 1251-1288
- Kooreman, P., R. Faber en H. Hofmans (2003), De euro en de collectebus ("The euro and the collecting box"), *Economisch Statistische Berichten* 13 juni 2003, pp. 274-275.
- Kooreman, P., R. Faber en H. Hofmans (2004), *Charity Donations and the Euro Introduction: Some Quasi-Experimental Evidence on Money Illusion*, *Journal of Money, Credit, and Banking*, vol. 36 (2004), pp. 1121-1124
- Kooreman, Peter and Henriëtte Prast (2006), *Werknemer wil een duwtje in de goede richting*, (On the role of defaults in savings decisions), *Trouw*, March 18, 2006, p. 15 (de Verdieping)
- La Porta, R., Lopez-de-Silanes, F., Shleifer, A. and Vishny, R.W. (1997), 'Trust in Large Organizations', *American Economic Review Paper Proceedings*, 87 (2), pp. 333-338.
- Loewenstein, G. Ch. Hsee, E. Weber and N. Welch (2001), Risk as Feelings, *Psychological Bulletin*.
- Madrian, B. and D. F. Shea (2000), The Power of Suggestion: Inertia in 401(k) *Participation and Savings Behavior*, NBER Working Papers 7682.
- Mak, Geert (2004), *De mercator sapiens anno 2004, over eenzaamheid, moed en vertrouwen*, Raiffeissen Lecture, 31 March 2004 (Mercator sapiens in 2004: On loneliness, courage and trust, in Dutch only).
- McKean, Kevin (1985). "Decisions." *Discover*, June
- McKenzie, C.R.M., M. J. Liersch and S. R. Finkelstein (2006), *Recommendations Implicit in Policy Defaults*, *Research Article Volume 17 (5) Page 414 - May 2006*
- Mosch, R.H.J. (2004), *The economic effects of trust. Theory and empirical evidence*, Amsterdam: Thela Thesis.

- Mullanaithan, G. en A. Shleifer (2003), *The Market for News* - NBER Working Paper December 2003.
- Oosterbeek, H. (1992), *Essays on human capital theory*, Amsterdam: Thesis Publishers.
- Pol, Kick van der (2005a), 'Geef de sociale zekerheid terug aan de burgers', in Bussemaker, Jet, Kalma, Paul and van Leeuwen, Martin, editors, *Zonder visie geen toekomst-zeven bijdragen over de verzorgingsstaat*, Wiardi Beckmanstichting/PvdA Tweede-Kamerfractie ('Give social security back to the people', in Without a perspective, no future – seven contributions about the welfare state, in Dutch only).
- Pol, Kick van der (2005b), Het is stil aan de overkant, Lecture given on the occasion of the 125th Anniversary of the Free University of Amsterdam, 28 May 2005 (Quoted in Prast, 2005b) (It's quiet across the road, in Dutch only)
- Prast, H.M. (2004a), 'Psychology in Financial Markets: an Introduction to Behavioural Finance', *Financial Monetary Studies series*, Amsterdam: nibe-sv publishers.
- Prast, Henriëtte, en Corry van Renselaar (2001), Uitzwaaien zonder tranen, *Het Financieele Dagblad*, 29 december
- Prast, Henriëtte (2002), De invasie van de euro, *Het Financieele Dagblad*, 28 december 2002
- Prast, Henriëtte (2004b), *Geld en geluk – over emotie-economie*, Business Contact
- Prast, H.M. and M. de Vor (2005), *Investor Reactions to News: a Cognitive Dissonance Analysis of the Euro-US dollar Exchange Rate*, *European Journal of Political Economy*, vol. 21, no. 1, pp. 115-141.
- Prast, H.M. (2005a), *Emotie-economie: de mythe van de persoonlijke financiële planning, Inaugural Lecture*, Tilburg University, Faculty of Economics and Business Administration (Emotionomics: the myth of personal financial planning, currently under translation into English).
- Prast, H.M. (2005b), 'Economie en de staat', *Het Financieele Dagblad*, 3 June ('Economy and the state', in Dutch only).
- Prast, H.M. (2006), Ahold, media en vertrouwen (Ahold, media and trust), in Van Luyk, Henk and Wim Dubbink (eds.), *Bedrijfsgevallen, morele beslissingen van ondernemingen*, Van Gorcum, Assen (forthcoming, September 2006)
- Rose-Ackerman, S. (2001), 'Trust and honesty in post-socialist societies', *Kyklos*, pp. 415-444.
- Schmitt, K. M., Gunther, A. C., & Liebhart, J. L. (2004). *Why partisans see mass media as biased. Communication Research*, 31(6), 623-641
- Smith, A. (1766), *Lectures on Jurisprudence*, in The Glasgow Edition of the Works and Correspondence of Adam Smith, Volume 5, Oxford: Oxford University Press.

- Smith, K., J. Dickhaut, K. McCabe and J. Pardo (2002), *Neuronal substrates for choice under ambiguity, risk, gains and losses*, *Management Science* 48
- Teulings, Coen, Bovenberg, Lans and Dalen, Harry van (2005), *De cirkel van goede intenties – de economie van het publieke belang*, Amsterdam: Amsterdam University Press (The circle of good intentions – the economy of the public interest, in Dutch only).
- TNS NIPO (2005), Report on Euro banknotes, prepared for De Nederlandsche Bank.
- Vallone, R.P., Ross, L., & Lepper, M.R. (1985). *The hostile media phenomenon: Biased perception and perceptions of media bias in coverage of the Beirut massacre*. *Journal of Personality and Social Psychology*, 49, 577-585
- Vanthoor, W. F.V. (1996), *European Monetary Union since 1848, A Political and Historical Analysis*, Edward Elgar, Cheltenham, UK/Brookfield, US.
- Viscusi, W.K and J. Huber (2006), *Hyperbolic Discounting of Public Goods*, NBER Working paper 11935
- Wellink, A.H.E.M. (2006), *speech*, www.dnb.nl May 2006
- Williamson, O.E. (1985), *The economic institutions of capitalism*, New York: Free Press.
- Zullo, H. (1991), 'Pessimistic rumination in popular songs and news magazines predict economic recession', *Journal of Economic Psychology*, 12, pp. 501-526.

NOTES

- ¹ Sections 2 and 4 of this study rely partly on Prast, Mosch and Van Raaij (2005)
- ² They measure trust by the World Values Surveys' trust question – which we will also use in our empirical analysis - and government effectiveness by investor surveys of the efficiency of the judicial system, corruption, bureaucratic quality and tax compliance
- ³ Drawing on data for the United States, the Netherlands and Italy, Guiso, Sapienza and Zingales (2005) find that the accounting scandals have dented investor trust in the stock market as an institution and have depressed participation rates as a result.
- ⁴ Functional Magnetic Resonance Imaging.
- ⁵ Note that the Values Survey and DNB Household Survey findings are not entirely comparable, for various reasons – one being that the Values Survey is based on face-to-face interviews, whereas the DNB Household Survey uses the Internet to obtain its replies. As the latter type of survey is more anonymous, respondents are less likely to give 'politically correct' answers (Chang and Krosnick, 2003). Another difference is the actual make-up of the DHS panel, with the respondents' average education levels slightly higher than in the Values Survey. These differences need to be kept in mind when interpreting findings.
- ⁶ Of course, trust in the euro may be interpreted in a number of ways: is it generally accepted as means of payment, will its value over time not be eroded by inflation, will its value in the exchange rate markets keep up, does the single currency have long term viability, etcetera. However, we have chosen for a general formulation of the question for a number of reasons. First of all, it was our purpose to assess the general sentiment towards the euro. Second, given the low degree of financial literacy in the Netherlands, we were afraid that a more technical question would result in a large number of "don't know"s.
- ⁷ How much have prices increased since 2002? vs How much have prices increases since 2002, that is since the introduction of the euro?