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Confidence and trust: empirical investigations for the Netherlands and the financial sector*

Robert H.J. Mosch† and Henriëtte M. Prast‡, §

January 2008

Abstract

This paper reviews the state of confidence and trust in the Netherlands, with special attention to the financial sector. An attempt has been made to identify the factors that determine individual trust and confidence and to uncover connections between the various variables. Based on surveys over the period 2003-2006, the data show that interpersonal trust in the Netherlands – the extent to which the Dutch trust each other – is high from both an international and an historical perspective. People who trust others typically display higher trust in institutions, promoting the smooth operation of such institutions. Yet the Dutch have little trust in some of the country's institutions, i.e., the euro, parliament and the social security system. However, the level of trust in financial institutions and the Dutch central bank is high, although trust in the integrity of business is clearly lower than that in financial institutions – but still higher than that in parliament. The high level of trust in the financial sector was not harmed by a bank failure in the Netherlands in 2004. People on benefits generally take a less favourable view of institutions and the economy in the Netherlands. Closer analysis of the data reveals a significant link between confidence in the economy and trust in the country's institutions. This correlation only adds to the importance of trust in institutions and between people.

Keywords: financial supervision, consumer confidence, trust

JEL Classification: G18, Z13

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§ Views expressed are those of the individual authors and do not necessarily reflect official positions of De Nederlandsche Bank.

Contents

1 INTRODUCTION

This paper studies confidence and trust in the Netherlands, especially with regard to the financial sector. Confidence and trust are qualitative, emotion-based variables which seem to be a powerful force in the economy. The aim of this paper is to gain a better understanding of the relationship between confidence and trust, how confidence and trust influence the way people behave and how this affects the economy.

Confidence is about future developments, and reflects a conviction that favourable economic trends will emerge, continue or accelerate. Trust is about relationships with other people, organisations, institutions or a system. It reflects the conviction that the other person or organisation will not merely act out of self-interest and is not out to damage one's individual interests. It also involves the expectation that an institution will do the things it is supposed to do competently and with integrity.

Low confidence can turn into a self-fulfilling prophecy that pushes the economy into recession and, if it vanishes altogether, puts currencies and payments at risk (e.g. hyperinflation (Katona, 1975)). Kenneth Arrow argues that every economic transaction involves an element of trust (Arrow, 1999). People in a high-trust society typically respect the government and the law, and observe rules and agreements, even informal ones (Putnam, 1993; Fukuyama, 1995). This increases efficiency as it reduces the time and money spent on enforcing contracts and agreements. In a low-trust environment, many endeavour to legally safeguard their own positions. This involves non-productive usage of production factors. Institutions may lower their transaction costs (Williamson, 1985), but this does require trust in these institutions. Confidence and trust, then, are to be treated as social capital and hence as a production factor alongside physical capital, technology, education and labour.

Consumer confidence reflects not just the sum total of purely economic factors, but also communications and the media. The country's social climate creates – or discourages – fertile ground for optimism and confidence. But it is not just words that inspire and encourage confidence, actions also count. Predictability of policy is all the more important as governments are able to unilaterally change the rules if they so desire. Time consistency and the question of who supervises the supervisor – i.e., the government in this instance – are central issues here. This is one of the reasons why De Nederlandsche Bank (DNB)[5] operates at arm's length from the government and why today's central banks are committed to price stability (see the European Central Bank's mandate).

Traditionally, economists have paid little explicit attention to confidence and trust in their economic models. And yet as early as 1936 Keynes observed that, at times of uncertainty and lack of confidence, more factors than mere rational calculation affect economic behaviour

[5] De Nederlandsche Bank (DNB) is the central bank and prudential supervisor of financial institutions in the Netherlands.

(Hoogduin, 1991). Put differently, it is harder to explain and predict people's economic choices – e.g., consumption, capital spending, investing – if confidence and trust are lacking.

With confidence and trust such a prime force in the economy, this paper assesses the situation in the Netherlands. It also probes the relationship between confidence and trust, and investigates the extent to which these tie in with individual characteristics such as education, position in the labour market, income and age – a crucial area of interest for both scientific and policy reasons. Our investigation of these background data is based on the findings of the DNB Household Survey (DHS), an independent Internet panel of the University of Tilburg's CentERdata.

Some major conclusions are the following. Interpersonal trust in the Netherlands is high in international terms, and has in fact been growing in the past couple of years. It turns out to be positively correlated with confidence in the Dutch economy and institutions. The economic literature does not offer any unequivocal answers as to the causal relationships between these variables, but common sense tells us that trust is likely to be a prerequisite for confidence. However, public trust in some of the country's institutions – e.g. parliament, social security, the euro – has shown a downward trend. In parliament's case, this might reflect the fact that government is able to change the rules unilaterally. Public interest demands that politicians step in, but the key word is predictability. Change the rules too often and the people begin to perceive the government as untrustworthy. Another – possibly complementary – explanation is that interpersonal trust reflects proximity whereas institutions are felt to be overly distant, and as not belonging to the people.

Consumer confidence in the Netherlands has veered sharply downwards over the period 2000-2005. This is most likely attributable not just to relevant economic factors (employment, growth), but also reflects a lack of public trust in the country's institutions. Our study reveals a significant relationship between economic conditions in the Netherlands and public trust in the competence and integrity of the executive officers of financial institutions, in the integrity of corporate Holland, and in parliament. Insofar as we have been able to ascertain, the relationship between trust and confidence has not been theoretically investigated nor empirically identified before. We can rule out the possibility that the correlation is simply due to optimistic or pessimistic individual mindsets. Our analysis also shows up a negative correlation between being on benefits and the degree to which individuals consider themselves optimists.

Trust in financial institutions is high in the Netherlands. Over 90% of the population trusts that their bank or insurer will be able to pay up their money at all times, while three-quarters feel their pension funds will come through. We carried out an additional survey after a small bank in the Netherlands failed in December 2005, and it turns out that this has not jeopardized public trust in DNB and/or financial institutions in the Netherlands. Trust in the competence and integrity of financial institutions' executive officers is also firm (with only 8% of respondents taking a negative view), firmer at least than trust in the integrity of the corporate world (18% negative) and parliament (two-thirds negative).

DNB as an institution also enjoys a high level of trust. Moreover, people who are aware of the existence of the central bank and its supervision of financial institutions have greater trust in these institutions. Our findings also show that DNB's existence increases public trust in the financial sector and the euro. Still, one in five Dutch people reports little or no trust in DNB. Those on benefits are particularly gloomy about the country's economy and institutions, underscoring the importance of creating conditions conducive to improving their social and economic positions and to help make them less dependent on government policies.

One notable finding is that the Dutch associate DNB and its responsibilities with the world of politics. Actually, this does not go for DNB alone. People's trust in the euro also ties in directly with their trust in Dutch parliament. Perhaps this is because DNB's tasks are seen to have a bearing on society and to serve the public interest. Another reason might be recent political debates about the role of regulators and, more generally, independent governing bodies, and about demarcation lines between politicians and regulators in terms of responsibilities and accountability. The question as to who supervises the supervisors is legitimate, but one should beware of reputation risk if DNB and politics become too closely associated, especially since trust in DNB is fairly constant and fundamentally high, whereas public trust in politicians has slumped to significantly lower levels.

Ever since its launch, the euro has been shown to inspire few positive feelings in a large majority of the Dutch population. Our poll of euro confidence was taken after news coverage of the exchange rate at which the guilder entered the euro and the Dutch vote on the European Union constitution: its outcomes do not make for happy reading. A majority of around 60% of the Dutch population expressed none or very little confidence in the single currency. It is beyond dispute that emotions figure prominently here: people in the Netherlands have overestimated inflation since the birth of the euro, a phenomenon which is even stronger, and significantly so, when the word 'euro' is mentioned. Interestingly, the 2005 edition of the most important dictionary of modern Dutch includes the newly-coined term *gevoelsinflatie*, meaning perceived inflation. When it comes to individual determinants of confidence in the euro, our findings show that awareness of and trust in DNB make for a positive contribution to confidence and trust, as do interpersonal trust and trust in parliament. Significant individual characteristics include education, income and position in the labour market – i.e. being on benefits or not. Low income earners, the less educated and people on benefits typically have less confidence in the euro.

2 CONFIDENCE AND TRUST IN THE NETHERLANDS: AN HISTORICAL AND INTERNATIONAL PERSPECTIVE

This section looks at the way consumer confidence and trust in institutions in the Netherlands have actually developed, and will provide an international perspective on these findings. Our investigation draws on the DNB Household Survey (DHS), an independent Internet panel of the University of Tilburg's CentERdata. This representative sample of the Dutch population over the age of sixteen logs on to answer questionnaires via their home PCs. Focusing first on confidence, Section 2.1 will discuss Dutch consumer confidence and compare its development with that in neighbouring countries. Trust is next on our list. Section 2.2 reviews interpersonal trust and trust in a number of civil institutions, and the ways in which these have developed since 1981. Section 3 will be devoted to the confidence and trust of the Dutch in the financial industry and its supervision, as well as in the euro.

2.1 **Trends in consumer confidence**

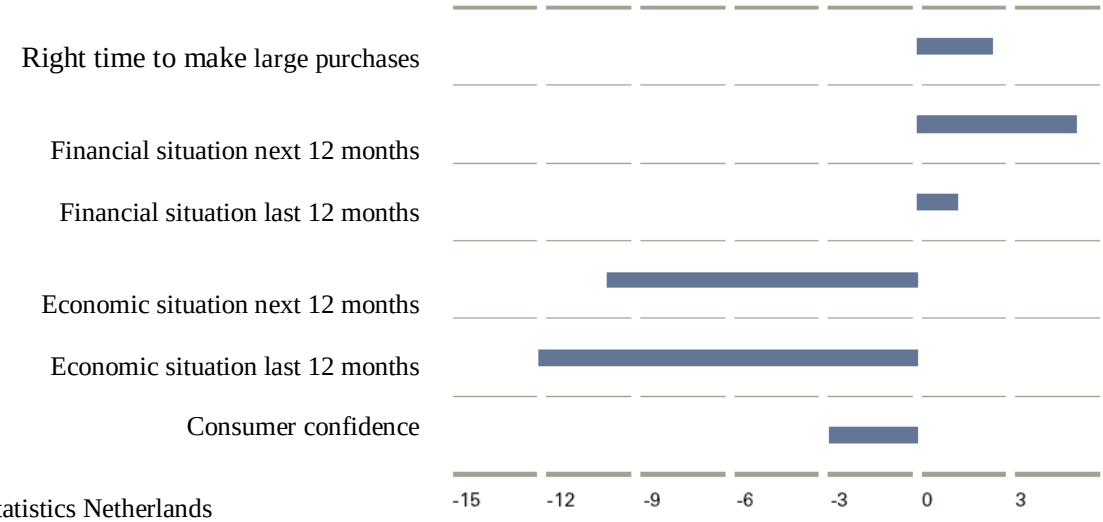
Statistics Netherlands finds Dutch consumers to be fundamentally pessimistic about the economy, with the pessimists on average outnumbering the optimists since it started measuring consumer confidence in 1986. With an average consumer confidence reading of –3, consumers have been particularly bearish about the general economic climate, rating it –11 for the past twenty years, whereas they have mostly assigned positive average ratings to their own financial situations and prospects. These findings are much the same as those recorded by the Social and Cultural Planning Office of the Netherlands (SCP), which in 2003 described the average Dutch person's attitude as 'I'm doing OK, but we're doing badly', and saw this reconfirmed two years later (SCP 2003, 2005). Figure 1 gives the average scores for the sub-questions and the total index in the period from 1986 to August 2005.

From an international perspective, consumer confidence levels in the Netherlands are not at all bad (see Figure 2), but the striking thing about these figures is that the country's comparatively strong position in 1986 – a position that strengthened further between 1995 and mid-2000 – has virtually evaporated since 2001. All the more important, then, to carry out an even more probing analysis of consumer confidence and its determinants.

Research by DNB (DNB, 2005a) demonstrates that people's own financial positions, wealth and home ownership have little effect on individual confidence in economic developments. DNB concludes: 'Apparently, in estimating their financial future, people tend to be guided more by the economic situation at large than by their wealth position.' Again, a conclusion that warrants more research into people's assessment of the country's economic situation.

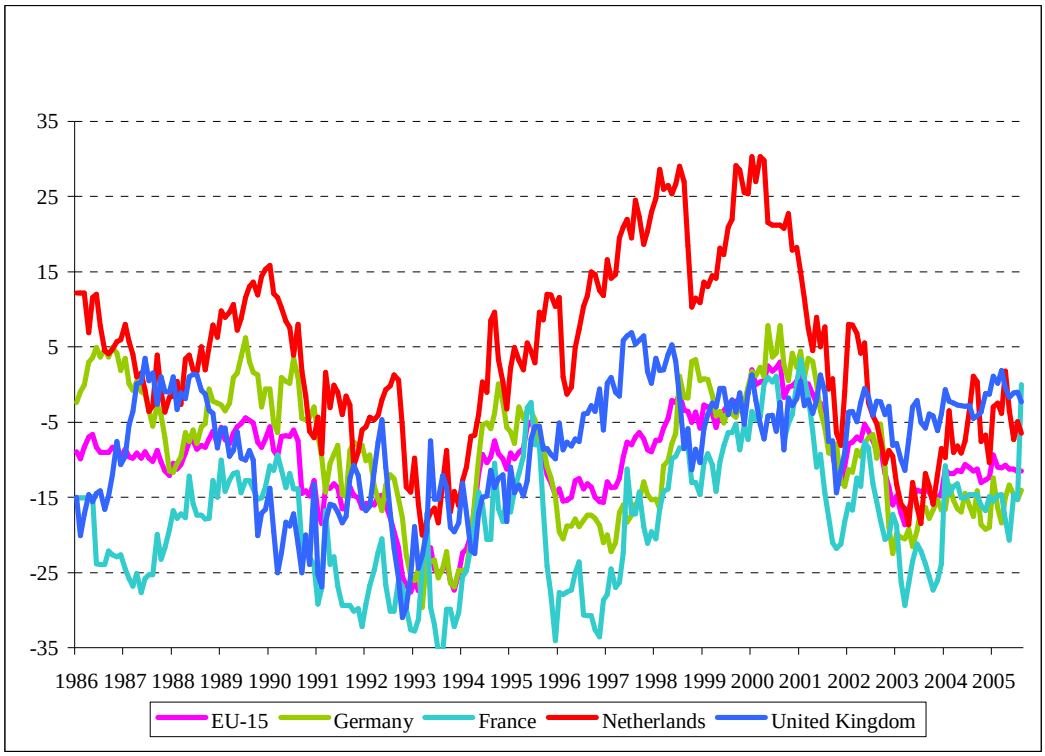
Figure 1. Consumer confidence in the Netherlands, averages 1986-2005

Balance of positive and negative answers, as a %



Source: Statistics Netherlands

Figure 2. Consumer confidence in Germany, France, the Netherlands, the United Kingdom and the EU-15, 1986-2005



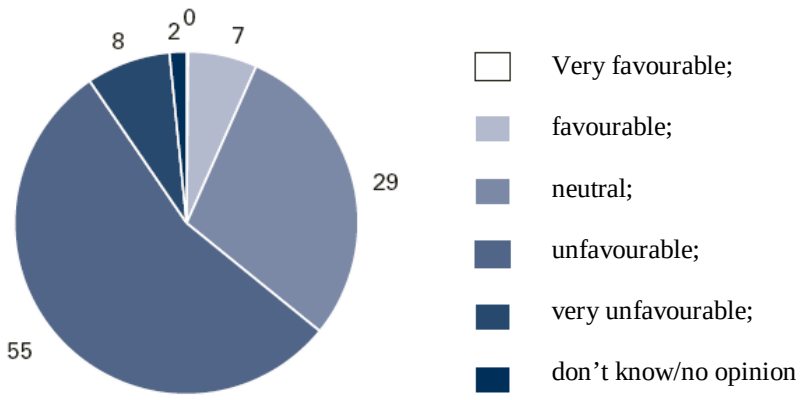
To gauge consumer confidence in the country's economic climate, we had DHS pose the following question: *How would you currently rate the economic situation in the Netherlands?* Although not identical to consumer confidence as measured by Statistics Netherlands or Eurostat, the answers to this question do give an indication of the confidence felt by people regarding the way the Dutch economy is moving. Possible answers were 'very unfavourable', 'unfavourable',

'neutral', 'favourable' and 'very favourable'. The picture that emerged from the replies is captured in Figure 3, which leaves no doubt as to Dutch people's bearish take on their economy: no-one expresses a very favourable view, only 6% rate the economic situation as favourable, 29% are neutral while 55% and 8% take a gloomy or very gloomy view of the economy, respectively. Section 4 delves deeper into the variables that affect people's personal confidence in the economy.

2.2 **Trends in interpersonal and institutional trust**

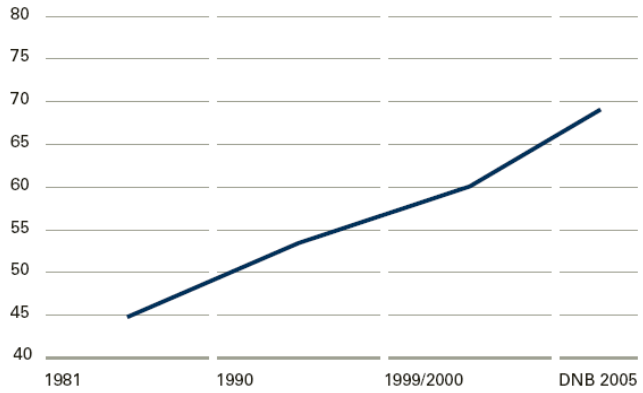
Tilburg University's Faculty of Social and Behavioural Sciences has been conducting research into Dutch views and values – including trust – since 1981, as part of an ongoing values survey of the differences in social, political, economic and cultural beliefs and opinions across countries, and of how these beliefs and opinions change as a result of economic and technological progress. Polling an ever-changing representative sample of around 1,000 people, 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 put a number of trust-related questions to our CentERpanel in July and August of 2005, which are identical to the Values Survey questions. Note that 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. Research has shown the latter type of survey to be preferable: as it is more anonymous, its respondents are less likely to give 'politically correct' answers (Chang and Krosnick, 2003a, 2003b). 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.

Figure 3. Public assessment of economic conditions in the Netherlands (December 2003/January 2004)



Interpersonal trust. To measure interpersonal trust, CentERpanel put the now familiar question to the panel: 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 captures the development over time of the percentage of people 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 % in 1981 to nearly 70 % in 2005. Although this is good news, comment is in order. International comparisons also show the Netherlands to do poorly on the index of civic cooperation, which measures disapproval of hit-and-run accidents, tax evasion, dodging public transport fares and abuse of social security benefits among other things (Knack and Keefer, 1997). This seeming paradox of high interpersonal trust and low civic cooperation might be taken to mean that the Dutch perhaps put greater trust in one another because they do not blame themselves and others overmuch for ducking some rules. Be that as it may, Section 4 will show this variable to be a key factor in explaining trust in institutions in the Netherlands.

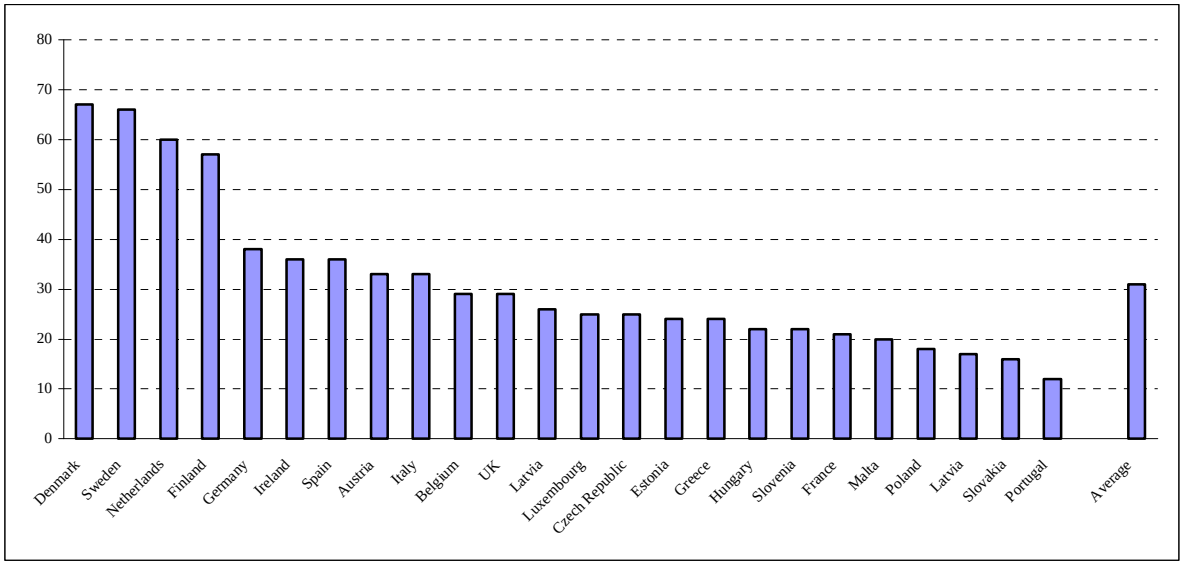
Figure 4. Interpersonal trust in the Netherlands, 1985-2005



In 2000, an international comparison of interpersonal trust in the European countries (including new entrants) showed that the Netherlands also scored favourably in the international arena (see Figure 5). Claiming third place in this league table, the Netherlands even boasted an interpersonal trust percentage that was double the EU average. In fact, only four countries belong to what we might term the happy few: only in Denmark, Finland, the Netherlands and Sweden does more than half the population feel that other people are generally to be trusted.

Figure 5. Interpersonal trust (2000)

Percentage of people per country who feel that, generally speaking, most people can be trusted (2000)

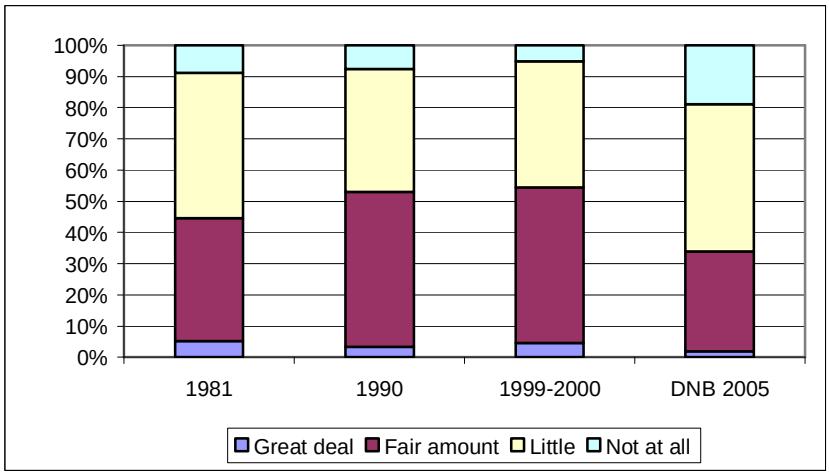


Trust in institutions. To measure trust in institutions, the panel was asked the following question: *How much do you trust [name of institution]?* Respondents were asked to tick any of four answers: *A great deal*, *A fair amount*, *A little*, or *Not at all*. Charting the development of trust in Dutch parliament since 1981, Figure 6 shows the Dutch to be less trusting in 2005 than they were in previous surveys: only one in three respondents said they had 'a fair amount' or 'a great deal' of trust in the country's parliament, while a striking 20% said it did not trust parliament at all – a quadrupling of the 1999/2000 score and a doubling vis-à-vis 1981.[6] Here, too, we need to keep in mind the distortions caused by the differences in approach between the Values Survey and the DNB Household Survey (Internet, anonymous, panel) and the slightly different make-up of the sample (slightly better educated on average). The Social and Cultural Planning Office of the Netherlands (2005) notes that the percentage of Dutch people that trust the government declined from 75% in 2000 to 48% in 2004. International comparisons show that Europeans have less faith in politics than 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.'

[6] Dutch trust in the civil service exceeded the international average five years ago (Halman, Luijkx and Van Zundert, 2005).

Figure 6.Trust in parliament

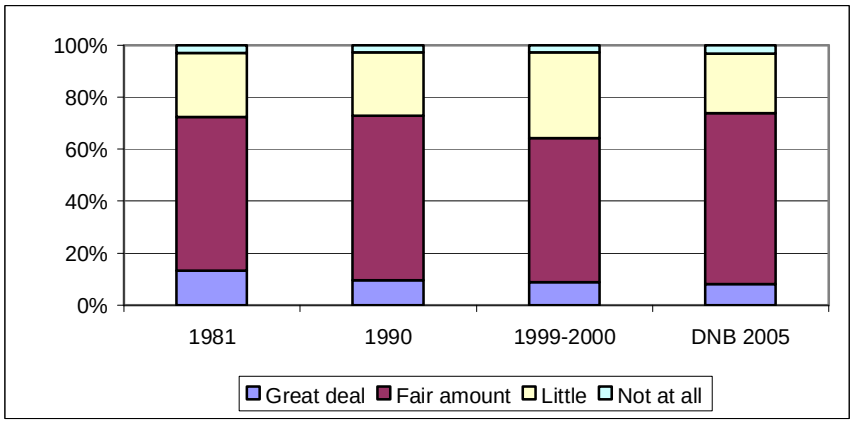
How much do you trust parliament?



We also enquired after the people's trust in the police, the reason being that we were curious to find out whether the declining trust in parliament might reflect a general loss of trust in authorities. As Figure 7 shows, despite the debate about public safety in the Netherlands, trust in the police merely edged down between 1981 and 2000 and was even found to have risen vis-à-vis 2000 in the DNB Household Survey in 2005. Possibly, people feel the police to be closer to them than politicians or the EU, which might mean that the campaign for more police on the beat has left its mark. Another possibility is that police action is seen to be predictable and consistent. People may not actually like the police to be predictable and consistent when ticketing minor speeding infringements, but predictable and consistent behaviour does contribute to trustworthiness. In the 2000 international comparison, the Netherlands matched the average for EU countries' trust in the police.

Figure 7. Trust in the police

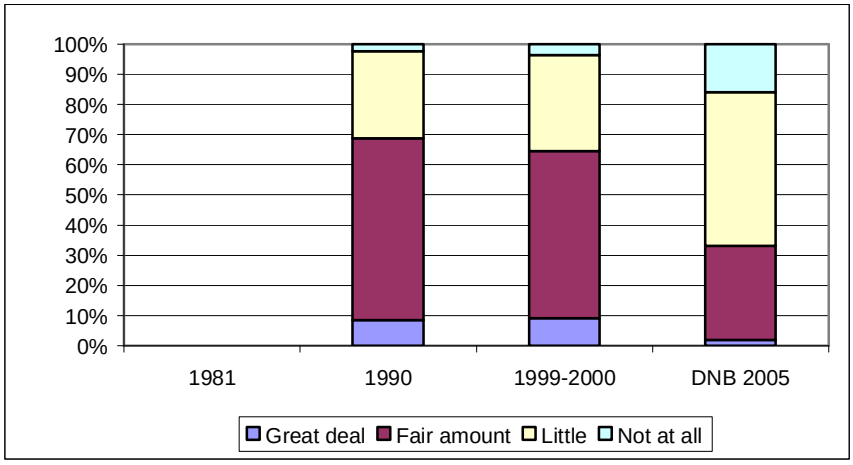
How much do you trust the police?



During the years 2002 – 2006, radical changes were made to the Dutch social security system. This is the presumable reason for a slump in public trust. Figure 8 shows the percentage of Dutch people who claim to have 'a great deal' or 'a fair amount' of trust in the system to have plummeted from around 60 % in 2000 to some 25 % in the summer of 2005.

Figure 8. Trust in the social security system

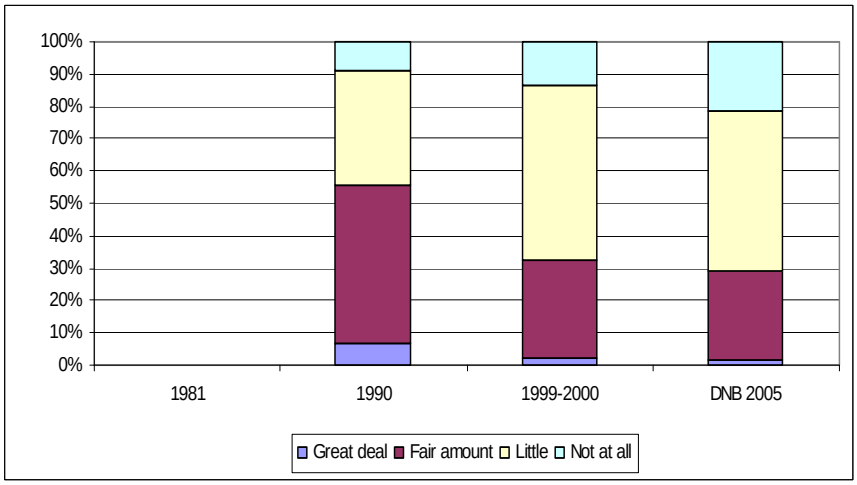
How much do you trust the social security system?



The European Values Study has been surveying trust in the European Union (EU) since 1990. Figure 9 shows this trust to have fallen steeply in the last decade of the twentieth century, with the DHS survey observing a further decline.

Figure 9. Trust in the EU

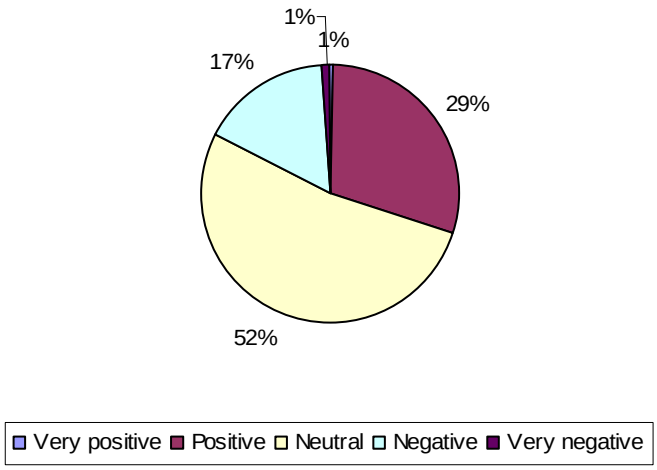
How much do you trust the EU?



An international comparison shows Dutch trust in the EU to be low in both absolute and relative terms. In 2000 the Dutch population displayed the lowest level of trust of all countries

that have formed part of the European Union and its predecessors from their inception (Halman, Luijkx and Van Zundert, 2005).[7]

Figure 10. Integrity of business



We asked the DHS panel one additional question on the subject of trust: *Do you trust the integrity of business in the Netherlands?* Our enquiry into the way the Dutch feel about the integrity of their businesses is important because of the accounting and other scandals of the past few years (building fraud, insider trading, share-leasing schemes). Confidence in the economy (consumer confidence) does not hinge on 'rational' economic factors alone, and we cannot rule out in advance concerns about the integrity of corporate Holland. Nearly one in five Dutch people 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 (see Figure 10).

2.3 **Summary**

In 2005, the Dutch were fundamentally bearish about the economy in general, but quite upbeat about their own financial situations. 'I'm doing OK, but we're doing badly,' seemed to be the message. A mixed picture emerges for indicators of trust: the Dutch may show a high and still rising level of trust in their compatriots in international terms, but their trust in institutions and broader civic organisations – and in politicians in particular – has been crumbling.

[7] The EVS puts the Netherlands in 18th place in terms of trust in the European parliament and the European Commission out of all 25 EU countries: around half of the Dutch population would seem to trust these institutions. The 2005 DHS survey did not measure this type of trust.

3 TRUST IN THE FINANCIAL SECTOR AND ITS SUPERVISION AND IN THE EURO

This section takes an in-depth look at trust insofar as it directly impinges on DNB's terms of reference. Its key subject is trust in the financial industry and its supervision, and in the euro. Our research again draws on the CentERpanel surveys conducted at the end of 2003/in early 2004 and in the summer of 2005. Our discussion focuses on both public trust in general and on its individual determinants.

3.1 **Trust in the financial sector and its supervision**

DNB monitors financial stability and the health of financial institutions, and these two core duties inform this section on public trust in the Netherlands' financial institutions – banks, pension funds and insurers – and in the financial industry at large. This particular subsection will present and analyse recent research findings concerning trust in the financial sector. A survey was conducted in December 2003/January 2004 to uncover to what extent the Dutch public trust the country's financial institutions and their supervision, and what individual characteristics influence this trust. Key areas of investigation include trust in the health of financial institutions and in the trustworthiness and integrity of their executive officers, as well as trust in the quality of supervision imposed and enforced by DNB.

After reviewing the aggregated data, we will analyse in some greater depth the degree to which trust is linked to objective individual characteristics such as education, income, age and class, as well as to subjective characteristics, e.g. the degree to which people trust others in their own environment.

Confidence and trust in banks, life insurers and pension funds. The DNB Household Survey of December 2003/January 2004 found that over 90% of the Dutch population has confidence in the Dutch *banking system at large*. In the twelve months leading up to the survey, only 15% had ever considered the possibility that banks in the Netherlands could go bankrupt. Around half of the population fully trust that *their own bank* will be able to pay up their money at all times (Figure 11), while another 45% are broadly confident. Trust in life insurers runs equally high (Figure 12), with a majority of policyholders fully or broadly trusting that their insurers will honour their commitments in the future. Confidence in pension funds in the Netherlands is lower (Figure 13). Admittedly, 74% of future pension beneficiaries are broadly confident that their pension funds will be able to pay their pensions in due course, but in 2003 more than one in three pension scheme participants had their doubts as to whether their pension funds would be able to meet their commitments. As we will see, confidence in pension funds is age-related: the older the respondent, the fewer the doubts.

Figure 11. Trust in own bank

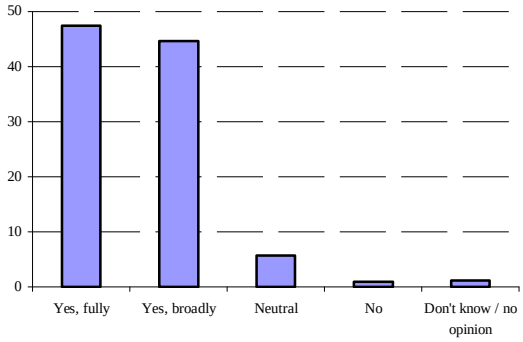


Figure 12. Trust in own life insurer

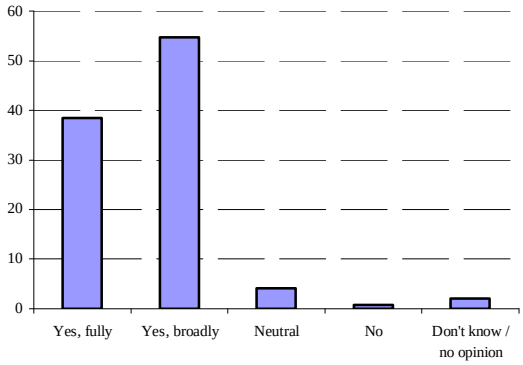
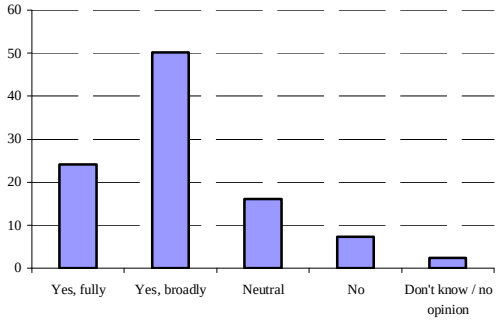


Figure 13. Trust in own pension fund

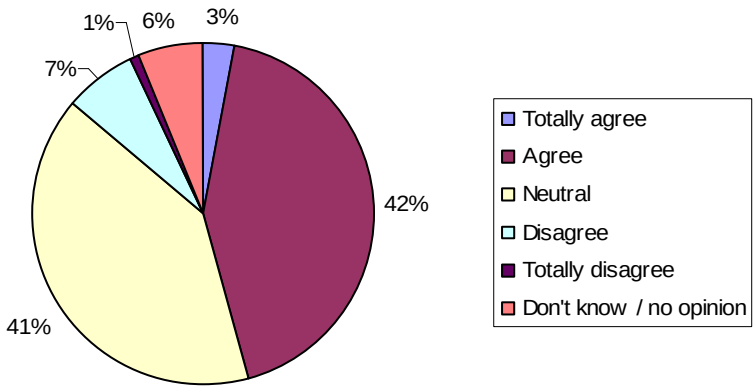


Altogether, then, trust in financial institutions is high. And yet, in 2003 7% of respondents had some concerns that their bank or banks would not be able to stump up, and 17% of this group – 1.4% of the total Dutch population – had acted on these doubts and transferred to another bank. One in five doubters had gone so far as to seek information but had decided to leave their money where it was. Of the people who did not have any concerns, 62% said they would withdraw their money if information or rumours about their bank's reliability caused them to have any doubts. This suggests that a loss of trust would trigger a massive run on the banks, a major impact that would appear liable to be triggered even by a mere suspicion of unreliability – making trust in banks a very vulnerable variable indeed. Some reservation is called for: a gap often exists

between what people say they will do and what they actually do, and it is questionable whether so many would indeed snap into action.

Figure 14. Trust in the executive officers of financial institutions

Executive officers of financial institutions are generally competent and above reproach. Percentages



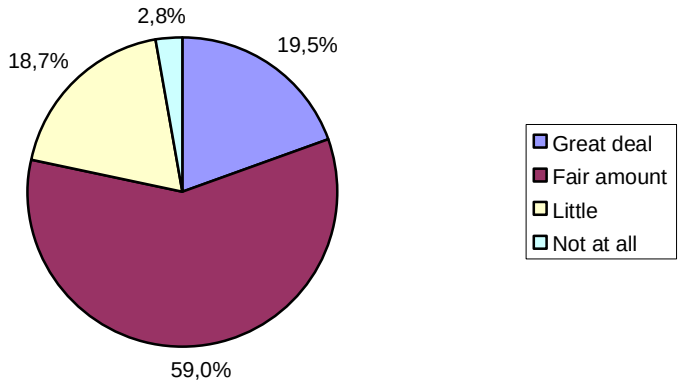
The survey asked the following question about trust and executive officers of financial institutions: Do you trust the competence and integrity of the executive officers of financial institutions? Of course, this particular question carries additional weight for DNB, if only because of its regulatory duties and the supervision of executive officers of financial institutions that is part of its remit. Competence and integrity of their executive officers are a key precondition for banks to obtain and keep their licenses to run their banking business – a condition that does not apply to non-financial institutions, which typically have no regulatory body supervising them. This is not surprising, really, considering that the financial system is what keeps the economy's circulation pumping. About 45% of the Dutch are reasonably or very confident about the competence and integrity of executive officers of financial institutions (Figure 14), with a large proportion of respondents reporting themselves to be neutral (41%) or not to know (6%), and only 8% rating these executive officers incompetent and/or lacking in integrity. These showings compare favourably with integrity scores for corporate executive officers: no fewer than one in five Dutch people have doubts about the integrity of business in general (see Section 2).

Trust in the supervision of the financial sector. Appropriate regulation and supervision of the financial industry is one way to ensure continued confidence in financial institutions, and this is one of DNB's key responsibilities. An overwhelming majority of Dutch people – around 90% – feel that banks, pension funds and insurers in the Netherlands should be regulated and supervised. Trust in DNB, responsible for supervising the health of all of the country's financial institutions and its financial stability, runs high: one in five of the Dutch has a 'great deal' and three in five a 'fair amount' of trust in DNB (see Figure 15). High as these ratings may be, this still means that

over 20% do not trust DNB, or only a little. This is important, as we will find later that greater trust in DNB typically implies greater trust in the country's financial institutions, which in turn bolsters confidence in the economy. What is more, trust in DNB, as we will discover, has a positive effect on confidence in the euro. Section 4 will return to these issues in some greater depth.

Figure 15. Trust in DNB

Do you trust DNB? Percentages



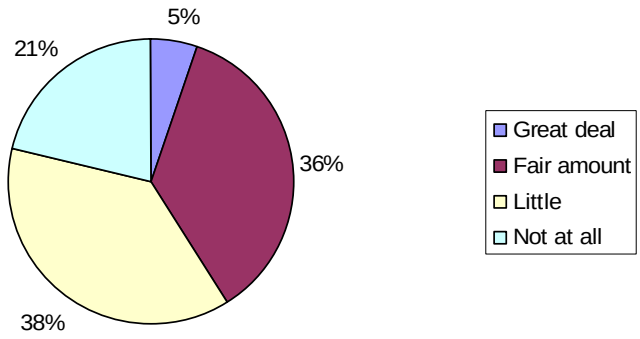
Trust after bank failure. In December 2005, a small bank in the Netherlands failed. It was the first bankruptcy in the Dutch banking sector in about 25 years, and hence it came as a considerable surprise to the public. To study the potential trust implications of this bank failure, in February 2006 we submitted a second questionnaire to the DHS panel, repeating the previous questions about trust in the financial sector and in DNB without reference to the recent failure. Our results indicate that despite extensive media coverage, the failure had not had a significant impact on trust in either individual banks, the system as a whole or DNB as prudential supervisor.

3.2 **Trust in the euro**

Figure 16 captures the state of Dutch trust in the euro in mid-2005, i.e. after press reports about the value at which the guilder had joined the euro and the referendum on Europe's constitution. A majority of around 60 % has little or no confidence in the single currency, with over one in three expressing a 'fair amount' and five % 'a great deal' of confidence, reflecting a widespread feeling in the Netherlands that the euro has caused higher inflation and a loss of purchasing power. A recent opinion poll suggests that the Dutch overestimate inflation by a wider margin if the question includes the word 'euro' (Christensen, 2005).

Figure 16. Trust in euro

Do you trust the euro? Percentages



3.3 **Summary**

This section has reviewed confidence and trust among the Dutch as directly linked to De Nederlandsche Bank's remit. In view of the low – and declining – indicators of institutional trust as described in the previous section, the high level of trust in banks, insurance companies and pension funds would, at first glance, appear rather striking. Ratings of executive officers of financial institutions are also remarkably good when compared with the scores on integrity of business. Deeper reflection suggests that, really, no other outcomes would be possible. High trust is the very mainstay of the financial industry, and there might not be a financial industry at all if these were absent. Over half those interviewed said they would withdraw their money from their banks in the event of reliability worries, even if these concerned the bank's insurance operations. Solid financial supervision is exceedingly important, and the Dutch would seem to trust DNB to do its job – a resounding 80% reported a great deal or a fair amount of trust in DNB. It is not merely interesting that DNB commands so much more trust than do other institutions, it is essential that it should do so, because it can only properly carry out its confidence-generating and trust-inspiring responsibilities on the strength of its own solid reputation. The next section will investigate the personal characteristics that come into play in confidence and trust.

4 CONFIDENCE AND TRUST IN THE NETHERLANDS: A CLOSER ANALYSIS

This section studies the objective and subjective determinants of a number of variables of confidence and trust at an individual level, which, if appropriate, would help to develop policies that target specific groups. Our analysis draws on the CentERpanel surveys of December 2003/January 2004 and July/August 2005. Given the type of data analyzed, we have applied ordered probit regression analysis.[8] As far as the explanatory variables age and education are concerned, we have run regressions both with dummies for each category separately, and with age and education ordered from low to high. Both types of regressions gave similar results; here we present only the latter regressions (see below, Tables 1 and 2).

4.1 **Confidence**

We begin by investigating a number of factors that may influence confidence in the state of the Dutch economy. As we said in Section 2, we measured this confidence by asking CentERpanel members: *How would you currently rate the economic situation in the Netherlands?* Aiming to gauge the public's confidence in a development or trend, this question is not identical to consumer confidence as measured by Statistics Netherlands, but we do take the answers to be an indication of the confidence people have in the development of the Dutch economy. Our interest here is in what individual characteristics influence people's assessment of the economic climate, and particularly in whether trust in institutions has any part to play.

Closer analysis of survey findings reveals that confidence in the state of the Dutch economy ties in with a number of objective individual characteristics. Table 1 presents three regression results for confidence in the economic climate. The first column includes objective background characteristics. As this column shows, income has a positive effect on confidence in the Dutch economic climate, and education does not. Confidence falls with age, and women are less confident than men. The gender effect is found in the trust variables too (see below). Our analysis also shows that labour market position is significant: people on benefits have significantly less confidence.

[8] Note, that for this type of micro data analysis, R squared values are generally rather low. See Cramer (2003).

Table 1 Determinants of confidence

	1	*2*	*3*
Explanatory variables	Confidence	Confidence	Confidence
Age	-0.048** (-2.5)	-0.26 (-1.10)	-0.066** (-2.48)
Female	-0.25** (-4.3)	-0.23** (-3.17)	-0.26** (-3.21)
Education	0,024 (1,27)	0.033 (1.41)	0.013 (0.51)
Income	0,037** (0,017)	0.016 (0.76)	0.018 (0.75)
On benefits	-0,24* (0,10)	-0.14 (-1.11)	-0.16 (-1.14)
Trust in executive officers of financial institutions		0.14** (3.27)	0.088* (1.81)
Trust in corporate integrity		0.31** (5.95)	0.30** (4.95)
Trust in parliament		0.068 (1.55)	0.058 (1.17)
Optimism			0.09** (2.76)
Observations	*2076*	*1454*	*1147*
Pseudo R2	*0.016*	*0.049*	*0.051*

Ordered probit regression. * significant at 10% level, ** significant at 5% level. Z-values in parentheses.
Note: Respondents answering 'don't know' are excluded from the regressions. As a result, the number of observations is lower if more subjective background variables are added.

To find out whether confidence in the Netherlands is influenced by trust in the country's institutions, column 2 of Table 1 adds various trust measures as explanatory variables. As column 2 indicates, trust in the integrity of business and in the competence and integrity of executive officers of financial institutions significantly contributes to confidence. The effect of objective background characteristics disappears, with the exception of gender. Note that the number of observations in column 2 is lower than that in column 1. This is because 'don´t knows' are excluded from the sample, and these are more frequent for subjective background characteristics.

A third factor might explain the link between people's trust in the competence and integrity of business and executive officers of financial institutions and confidence in the state of the Dutch economy. Income would be a prime candidate here. After all, income disappeared as a relevant background characteristic as soon as trust variables were factored in. Another possible third factor effect may be that pessimists tend to have both little trust in others and institutions and little confidence. To allow for this, we asked DNB Household Panel members to what extent they would describe their personalities as pessimistic or optimistic by assigning a rating on a scale of 1 ('very pessimistic') to 7 ('very optimistic') and run a regression adding this variable (column 3 in Table 1). Of course, being an exercise in self-assessment, this raises the question as to how reliable these data are. Economists tend to prefer revealed to stated preferences, as respondents may provide answers that do not match their true natures or views. However, academic research has shown time and again that self-declared preferences paint a reliable picture. Kapteyn and Teppa

(2002) and Van Rooij, Kool and Prast (2004) found 'self-declared' risk appetite to be a good predictor of economic behaviour. For instance investors claiming to be more risk averse typically have fewer equities and more bonds in their investment portfolios and make other choices that confirm high risk aversion. Adding a self-declared optimistic or pessimistic nature to the explanatory variables identified, we find that someone's basic nature is indeed a significant factor in their confidence in the economic situation in the Netherlands. Self-declared pessimists display significantly less confidence. That said, as column 3 in Table 1 shows, the inclusion of this variable does not in any way preclude trust in the integrity of business from having a significant effect on confidence in the economy. The significant effect of trust in the competence and integrity of executive officers of financial institutions also remains unchallenged. One striking change that results from including the optimism indicator is the disappearance of the effect of being on benefits. This might suggest that people on benefits are more pessimistic by nature.

Harking back to the World Values Survey question - *Generally speaking, would you say that most people can be trusted, or that you can't be too careful in dealing with people* - we reviewed whether trust in others had an effect on confidence in the economy. Although we did not find this to be so, if we strip out all other trust variables, then this social capital gauge does show an effect. In this case, too, the effect of being on benefits disappears (as it did in column 2 of Table 1). This finding suggests a negative correlation between interpersonal trust and relying on benefits. Cause and effect are not immediately obvious: do people on benefits acquire a pessimistic attitude or are people with a pessimistic take on life more likely to end up on benefits? The available data do not provide any easy answers, and, in any case, this question is beyond the scope of this study.

Our results reveal that the young are typically more confident. This might be attributable to their longer time horizons: they can afford a more optimistic view of future economic conditions because their working lives may yet take many different turns. As cognitive psychology has demonstrated, people tend to overestimate their own opportunities and qualities (Prast, 2004b). As long as people have not reached the age at which they will obviously never achieve their earlier ambitions, they may take a more bullish view of the economic situation. Research among first-year students of economics in the Netherlands reveals that, on average, they expect to take less time to finish their studies, to achieve higher grades and to end up in better-paid jobs than is actually the case for the average student of economics (Oosterbeek, 1992; Leuven, Oosterbeek and Van der Klaauw, 2004). This might also explain why (see section 4.3 below) the young do not have more trust in institutions than the old: trust has to do with the present and is not related to one's personal outlook.

Men display higher levels of confidence than women. This, too, may be attributable to an inclination to over-assess one's abilities, which men are known to do more than women (Barber and Odean, 2001). Being more competitive and career-oriented may also play a part, as may the desire to take control of one's own life. Psychological research has shown money and dealing with money to be associated with vigour and enterprise for men, whereas women often see money

as something that happens to them or not (Prince, 1993). Confidence being stronger in people with high incomes than in those with lower incomes may reflect the wider variety of opportunities, greater independence and greater control of the economic future that a higher income affords. Interestingly, a recent DNB study discovered that higher incomes do make people happier, but that greater wealth does not (DNB, 2005a).

Our analysis also shows confidence in the economy to be lower in people on benefits. This finding may reflect a sense of dependence on the government and the rules it imposes – a dependence that is likely to be all the more keenly felt in periods when social security schemes are being challenged and debated, as they have been in the Netherlands for some time.

A positive correlation between confidence and trust also emerges. People who express more trust in the competence and integrity of executive officers of financial institutions and in the integrity of business, also report more confidence in the economic situation in the Netherlands. This effect remains even if we include an optimism indicator in our analyses. Admittedly, optimism as a subjective personal characteristic does influence confidence in the state of the Dutch economy, but this does not detract from the link between trust and confidence. To date, as far as we know, virtually no research has been done on the relationship between confidence and trust, which deserves closer scrutiny.

4.2 **The determinants of trust in institutions**

A second line of enquiry we have pursued is to investigate on what, at the individual level, trust in Dutch institutions depends, with a focus on institutions that directly touch on DNB's duties: the financial industry and its supervision, DNB itself, and the euro. In addition, we have reviewed the determinants of trust in the integrity of business, and, for background purposes, we will start off by looking at the determinants of trust in parliament.

Trust in parliament. Column 1 of Table 2 shows that income has a positive effect on trust, and that people on benefits report lower trust. Moreover, the subjective variable of interpersonal trust proves a significant force here: people who trust other people also report more trust in parliament as an institution. We will see this particular variable – interpersonal trust – crop up frequently as an explanatory factor for trust in institutions. Incidentally, the same applies to being on benefits.

Trust in DNB. As recorded earlier, four in five Dutch people report a 'fair amount' or a 'great deal' of trust in DNB. Column 2 of Table 2 reveals that older people put greater trust in DNB than young people, those with higher incomes more than those with low incomes, and men more than women. People on benefits are found to trust DNB less, and the interpersonal trust variable is also significant: people who put more trust in their fellow humans also trust DNB more. Trust in DNB ties in with trust in parliament, an effect that comes in ahead of the optimism indicator and the interpersonal trust variable.

Table 2. Determinants of trust

	1	*2*	*3*	*4*	*5*	*6*	*7*	*8*
Explanatory variables	*Trust in parliament*	*Trust in DNB*	*Trust in corporate integrity*	*Trust in executive officers of financial institutions*	*Trust in own bank*	*Trust in own insurer*	*Trust in own pension fund*	*Trust in euro*
Age	-0.15 (-0.63)	0.053** (2.16)	-0.10**# (-4.06)	0.027 (1.09)	-0.044 (-0.77)	0.13 (1.15)	0.30** (4.97)	-0.031 (-1.28)
Income	0.049* (2.26)	0.068** (2.99)	0.078** (3.37)	0.054** (2.31)	0.091 (1.43)	-0.008 (-0.11)	0.065 (1.21)	0.060** (2.70)
Education	0.001 (0.05)	-0.006 (-0.23)	-0.045* (-1.79)	-0.65* (-2.53)	-.12* (-1.89)	-0.066 (-0.68)	0.056 (1.05)	0.75** (3.03)
Female	0.014 (0.19)	-0.17** (-2.25)	-0.28** (-3.59)	-0.18** (-2.27)	-0.19 (-1.06)	0.14 (0.50)	-0.19 (-1.25)	-0.15** (-1.96)
On benefits	-0.51** (-4.00)	-0.16 (-1.23)	-0.032 (-0.25)	-0.23*## (1.74)				-0.29** (-2.23)
Optimism	-0.001 (-0.04)	0.052* (1.74)	0.11** (3.55)	0.076** (2.48)	0.10 (1.59)	0.25** (2.49)	0.093 (1.53)	0.069** (2.28)
Interpersonal trust	0.42** (5.85)	0.35** (4.72)	0.15** (2.01)	0.13* (1.75)				0.26** (3.42)
Trust in parliament		0.37** (0.047)	0.34** (7.20)	0.20** (4.03)	0.13 (1.19)	0.089 (0.53)	0.37** (3.72)	0.62** (12.7)
Knowledge about financial supervision				0.18** (3.61)	0.30** (3.01)	0.43** (3.07)	0.26** (2.89)	
Trust in DNB				0.24** (4.84)	0.36** (3.03)	0.31* (1.77)	0.17* (1.61)	0.35** (7.02)
Knowledge about DNB					0.28 (1.59)	0.30 (1.10)	-1.0 (-0.58)	
Observations	*1147*	*1147*	*1147*	*1147*	*571*	*264*	*407*	*1147*
Pseudo R2	*0.027*	*0.068*	*0,060*	*0.0536*	*0.10*	*0.15*	*0.12*	*0.15*

Ordered probit regression. * significant at 10% level, ** significant at 5% level. Z-values in parentheses.
The effect of this variable disappears when interpersonal trust is added to the equation. ## The effect of this variable disappears when the optimism indicator is added to the equation.
Note: the questions regarding knowledge about DNB and the existence of financial supervision are submitted to only half the total panel. Moreover, the 'don't know' categories are excluded from the regressions. As a result, the number of observations falls if these variables are added to the regression (notably in columns 5, 6 and 7). Also, the trust in insurance question was relevant for respondents with a life insurance only (less than 50% of respondents), hence the low number of observations in column 6.

Trust in the integrity of business. As the third column in Table 2 shows, trust in the integrity of business is negatively correlated with age, positively with income but not education, and men display greater trust than women. Optimists also report greater trust in the integrity of corporate Holland. Being on benefits has no effect, unless we strip out the optimism indicator as an explanatory variable – again confirming the robust correlation between these two variables. Add the subjective variable of interpersonal trust and a significant effect emerges, whereas the age effect disappears. (Although closer analysis does not suggest that older people trust others less than do young people). Trust in parliament is again found to be a significant factor, and its effect comes on top of the optimism indicator and interpersonal trust. This suggests that the Dutch public feel parliament to be capable of influencing the integrity of business.

Trust in executive officers of financial institutions. Column 4 in Table 2 shows that gender, education and income have an effect on trust in the executive officers of financial institutions. Women report lower trust in the executive officers of financial institutions than men, income has a positive effect, but there is a negative correlation with education: the higher educated are more cynical or, if you like, less naïve about the behaviour and intentions of the top management of financial institutions. At the same time, people who know about banking supervision display higher trust. This suggests that the public believe that supervision of the financial sector will benefit the quality of the executive officers running financial institutions. Both the optimism indicator and interpersonal trust have a positive effect. People on benefits report lower trust in the competence and integrity of the executive officers of financial institutions, but again, this effect only applies if we strip out the optimism indicator as an explanatory factor. A thought-provoking finding is the significant relationship between trust in the competence and integrity of the executive officers of financial institutions and trust in parliament. Awareness of DNB's existence and of its supervision of banks, insurers and pension funds shows a positive correlation with education and income.

Trust in banks, life insurers, pension funds. Column 5 of Table 2 shows that people's trust in their own banks is not affected by the objective factors of age and gender, but depends negatively on education, suggesting again that the higher educated are more cynical or less naïve about the possibility of a bank failure. Trust in the bank where one is a client is not affected by the optimism indicator and trust in others. Awareness of the existence of banking supervision does matter, though: respondents who are aware of banking supervision report significantly higher trust in their own banks. Column 6 shows that trust in the own life insurance company benefits from an awareness of supervision and trust in DNB, as this increases respondents' conviction that their insurers will honour their life policies at all times. As Column 7 indicates, people with an awareness of pension industry supervision and trust in DNB are more likely to believe that their pension fund will meet its obligations. Unlike trust in banks and insurers, trust in pension funds is influenced by the objective characteristic of age. Trust that a pension scheme will indeed pay up increases with age. In other words, the younger the respondent, the more likely they are to believe their pension entitlements might be tinkered with. This is hardly surprising in view of the current debate about the sustainability of the Dutch pension system, constraints on index-linking and the possible changeover to defined contribution schemes, collective or otherwise. Trust in parliament also proves a significant factor, which is surprising because supervision of banks, insurers and pension funds has been delegated to DNB, and DNB operates at a remove from politicians – despite the debate that has recently flared up about the need for supervisors to be accountable to parliament.

Trust in the euro. In-depth analysis of trust in the euro shows people with higher incomes, the higher educated and those with greater trust in DNB to have significantly more trust in the euro (Column 8 in Table 2). Irrespective of their income level, people on benefits are clearly less taken with the single currency, while age and gender are found to have no bearing on trust in the euro. In a previous study, Van Everdingen and Raaij (1998) discovered that a higher score on national identity (i.e. nationalism) had an adverse effect on euro attitudes, while perceived macroeconomic and microeconomic expectations of the euro were a positive factor. This would suggest more of an emotional than a rational economic explanation for aversion to the euro. Trust in parliament is also significant for trust in the euro, with the subjective variables of interpersonal trust and the optimism indicator likewise playing a part.

Having weighed all factors, variables and characteristics, our analysis produces the following picture of trust in institutions. *Trust in parliament* depends on the objective economic variables of income and position in the labour market. It would appear that people with lower incomes and benefits claimants feel under-represented in national politics. Our study also corroborates the link between interpersonal trust and trust in institutions documented in previous studies, not just for trust in parliament but for all other institutions we investigated: interpersonal trust invariably proves a significant positive factor. However, it is unclear how the connection works: does it go from interpersonal trust to trust in institutions, or is it the result of some interplay?

Trust in DNB turns out to be related to the objective characteristics age, gender and income but proves indifferent to education. Of the subjective variables, the optimism indicator did not while interpersonal trust did weigh in. The significant correlation between trust in DNB and trust in parliament is rather surprising, given that DNB operates at a distance from politics. In terms of monetary policy, DNB is fully independent from the government – always within the parameters of the ECB's mandate and powers, of course – but in its supervisory duties DNB has the status of a semi-dependent agency. That said, the public does not appear to see DNB as separate from politics. Our current analysis does not entirely rule out the possibility of a third subjective, individual factor influencing trust in parliament and DNB, and causing the correlation. Interpersonal trust and the optimism indicator do not qualify, as these have been factored into our analysis (see Table 2). Some people having more – or less – faith in any and all kinds of authority is a potential third factor that springs to mind.

Whatever the explanation, trust in DNB has a positive effect on trust in the competence and integrity of executive officers of financial institutions, on trust in banks, insurers and pension funds, and on trust in the euro. As a result, trust in DNB has an indirect positive effect on confidence in the economy. We were intrigued to find that trust in banks, insurers and pension funds bears no relationship to age, education or income – a reflection of trust widely shared throughout the population. Our analysis also shows that awareness of DNB's existence and its supervision of financial institutions increases trust in these very institutions. Apparently, the Dutch public feel that regulation adds to the trustworthiness of financial institutions.

Trust in the euro reveals predictable links with people's social and economic positions and with the subjective variables of trust in DNB, optimism and interpersonal trust. Here, too, trust in parliament is the wild card. After all, monetary policy is separate from Dutch politics, and the current parliament did not even have a say in the introduction of the euro. Besides, one would expect the public to blame retailers for perceived euro inflation, but apparently they associate the national currency with the government – and parliament – of the day.

4.3 **Summary**

This section has demonstrated how a number of indicators of trust, particularly those touching upon DNB's policies, tie in with individual background characteristics of the Dutch and, where appropriate, has also explored any potential connection between variables. Our analysis reveals that confidence in the state of the economy depends on both objective social and economic factors and subjective variables such as individual optimism and trust in institutions. Trust in institutions in turn reflects subjective trust variables as much as objective characteristics. One thing really stands out: the recurrence of 'being on benefits' as a social and economic characteristic that has an adverse effect on both confidence and trust, regardless of income or education. We have also uncovered a connection between confidence and trust that has so far gone unnoticed in the economic literature.

Time and again we have found trust in DNB to have a positive influence on confidence in institutions that fall within its terms of reference – financial institutions and their executive officers (supervision) and the euro (monetary policy). Strikingly, trust in DNB and in these institutions showed some dependence on trust in parliament.

5 CONCLUSIONS

This study has reviewed the state of confidence and trust in the Netherlands, focusing on trust in institutions and confidence in the economy. An attempt has been made to identify the factors that determine individual trust and confidence and to uncover connections between the various variables. This is an important undertaking, as confidence and trust have been scientifically proven to be a factor of production: social capital. In other words, confidence and trust are drivers of economic growth and social well-being.

The introductory section described this study's main conclusions, and a brief recapitulation should suffice here. Interpersonal trust in the Netherlands – the extent to which the Dutch trust each other – is high from both an international and an historical perspective. People who trust others typically display higher trust in institutions, promoting the smooth operation of such institutions. Yet this study found the Dutch to have little trust in some of the country's institutions, i.e., the euro, parliament and the social security system. Two in three have little or no trust in parliament and close to 60% report an absence of or very little trust in the euro. However, the level of trust in financial institutions and DNB is high, although trust in the integrity of business is clearly lower than in financial institutions – but still higher than in parliament.

At the individual level, a significant correlation turns out to exist between trust in parliament and trust in DNB. Trust in financial institutions and in the euro – both included in DNB's terms of reference – hinges on trust in parliament. This is rather surprising, because DNB operates at arm's length from politics in terms of monetary policy and acts as an independent agency in its supervisory duties among other responsibilities.

Our study found people on benefits to generally take a rather less favourable view of institutions and the economy in the Netherlands. This might mean that claiming social security makes people pessimistic, although we cannot rule out the possibility that a pessimistic nature reduces a person's chances in the labour market. Be that as it may, being in work appears to be a prerequisite for citizens to feel part of society.

Consumer confidence in the Netherlands has veered sharply down in the period 2000-2005, much more so than in neighbouring countries. Closer analysis of our data reveals a significant link between confidence in the economy and trust in the country's institutions. People with higher trust in institutions typically report greater confidence in the economy. This correlation, which had not previously been identified in the economic literature, only adds to the importance of trust in institutions and between people.

6 REFERENCES

Abel, A.B. (2002), 'An exploration of the effects of optimism and doubt on asset returns', *Journal of Economic Dynamics and Control*, 26, pp. 1075-1092.

Arrow, K.J. (1973), *Information and Economic Behaviour*, Stockholm: Federation of Swedish Industries.

Arrow, K.J. (1999), 'Observations on Social Capital', in Dasgupta, Partha and Ismail, Serageldin, editors, *Social Capital: A Multifaceted Perspective*, Washington, DC: World Bank.

Barber, B. and Odean, T. (2001), 'Boys Will Be Boys: Gender, Overconfidence and Common Stock Investment', *Quarterly Journal of Economics*, 116, pp. 261-292.

Barberis, N., Shleifer, A. and Vishny, R. (1998), 'A model of investor sentiment', *Journal of Financial Economics*, 49, pp. 307-343.

Beale, H. and Dugdale, T. (1975), 'Contracts between businessmen: planning and the use of contractual remedies', *British Journal of Law and Society*, 2, pp. 45-60.

Beltran Lopez, H. and Durré, A. (2003), 'The Determinants of Consumer Confidence: The Case of United States and Belgium', *Core Discussion Paper,* July 2003.

Berry, S. and Davey, M. (2004), 'How should we think about consumer confidence?', *Bank of England Quarterly Bulletin,* Autumn 2004.

Beugelsdijk, S., Schaik, A.B.T.M. van (2003), 'Participation in civil society and European regional economic growth', in Arts W., Hagenaars, J. and Halman, L., editors, (in collaboration with van de Donk, W. and van Schaik, A.B.T.M.), *The cultural diversity of European unity. Findings, explanations and reflections from the European Values Study*, Leiden – Boston: Brill, pp. 119-145.

Bjørnskov, C. (2003), 'The Happy Few: Cross Country Evidence on Social Capital and Life Satisfaction', *Kyklos* 56 (1), pp. 3-16.

Buskens, V.W. (1999), *Social Networks and Trust*, Utrecht: Thesis.

Chang, L. and Krosnick, Jon A. (2003a), 'National Surveys via RDD Telephone Interviewing vs. the Internet: Comparing Sample Representativeness and Response Quality', Working Paper, Ohio State University.

Chang, L. and Krosnick, Jon A. (2003b), 'Comparing Oral Interviewing with Self-administered Computerized Questionnaires: An Experiment', Working Paper, Ohio State University.

Christensen, C. (2005), 'Perceptions and expectations of Dutch households with respect to economic developments in the Netherlands', DNB Working Paper, forthcoming.

Coleman, J.S. (1990), *Foundations of Social Theory*, Cambridge MA: Harvard University Press.

Cramer, J.S. (2003), *Logit Models*, Cambridge: Cambridge University Press.

Croushore, D. (2005), 'Do Consumer Confidence Indexes Help Forecast Consumer Spending in Real Time?', Working Paper, University of Richmond, January 2005.

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.

Elster, J. (1989), *The cement of society*, Cambridge: Cambridge University Press.

Everdingen, Y.M. van and Raaij, W.F. 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.

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.

Gambetta, D.G. (1988), 'Can we trust trust?' in Gambetta, D.G., editor, *Trust: Making and Breaking Cooperative Relations*, Oxford – New York: Basil Blackwell, pp. 213-237.

Good, D. (1988), 'Individuals, interpersonal relations, and trust', in Gambetta, D.G., editor, *Trust: Making and Breaking Cooperative Relations*, Oxford – New York: Basil Blackwell, pp. 31-48.

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.

Helliwell, J. (1996), 'Economic growth and social capital in Asia', *NBER Working Paper 5470*.

Hirschman, A.O. (1984), 'Against parsimony: three ways of complicating some categories of economic discourse', *American Economic Review Proceedings*, 74, pp. 89-96.

Hoogduin, L.H. (1991), *Some aspects of uncertainty and the theory of a monetary economy*, PhD Dissertation, University of Groningen.

Inglehart, R. (1997), Modernization and postmodernization: cultural, economic, and political change in 43 societies, Princeton NJ: Princeton University Press.

Jansen, W.J. and Nahuis, N.J. (2002), 'The stock market and consumer confidence: European evidence', *MEB Series No. 11*, Amsterdam: De Nederlandsche Bank.

Jansen, W.J. and Nahuis, N.J. (2003), 'Vertrouwen op de beurs', *Economisch Statistische Berichten* 85, no. 4392, 10 January, pp. 20-25 ('Confidence in the stock markets', in Dutch only).

Kapteyn, A. and Teppa, F. (2002), 'Subjective measures of risk aversion and portfolio choice', Discussion Paper 11, Tilburg University, Center for Economic Research.

Katona, G. (1975), *Psychological Economics*, New York: Elsevier.

Keynes, J.M. (1936), *The General Theory of Employment, Interest and Money*, Macmillan, Cambridge University Press.

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.

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.

Leuven, E., Oosterbeek, H. and Klaauw, B. van der (2004), 'The effect of financial rewards on students' achievements: Evidence from a randomized experiment', Working Paper, Faculty of Economics, University of Amsterdam.

Lorenz, E.H. (1988) 'Neither friends nor strangers: informal networks of subcontracting in French industry'. In Gambetta, D.G., editor, *Trust: Making and Breaking Cooperative Relations,* Oxford – New York: Basil Blackwell, pp. 194-210.

Luhmann, N. (1979), *Trust and power*, New York: John Wiley.

Lusardi, A. (2004), 'Saving and the Effectiveness of Financial Education', in Mitchell, O. and Utkus, S., editors, *Pension Design and Structure: New Lessons from Behavioral Finance*, Oxford University Press, pp. 157-184.

Macaulay, S. (1963), 'Non-contractual relations in business: a preliminary study', *American Sociological Review*, 28, pp. 55-67.

Marshall, A. (1923). *Money credit and commerce*, London: McMillan.

Mosch, R.H.J. (2004), The economic effects of trust. Theory and empirical evidence, Amsterdam: Thela Thesis.

Nijkamp, J., Gianotten, H.J. and Raaij, W.F. van (2002), 'The structure of consumer confidence and real value added growth in retailing in the Netherlands', *International Review of Retail, Distribution and Consumer Research*, 12(3), pp. 237-259.

Oosterbeek, H. (1992), *Essays on human capital theory*, Amsterdam: Thesis Publishers.

Otoo, M.W. (1999), 'Consumer sentiment and the stock market', *Discussion Paper*, Washington DC, Federal Reserve Board.

Prast, H.M. (2004a), 'Psychology in Financial Markets: an Introduction to Behavioural Finance', *Financial Monetary Studies* series, Amsterdam: NIBE-SVV Publishers.

Prast, H.M. (2004b), *Geld en geluk – over emotie-economie*, Business Contact/Het Financieele Dagblad (*Money and happiness – about emotionomics*, in Dutch only).

Prast, H.M. (2005a), *Emotionomics: the myth of personal financial planning*, Inaugural Lecture, Tilburg University, Faculty of Economics and Business Administration.

Prast, H.M. (2005b), 'Economie en de staat', *Het Financieele Dagblad*, 3 June ('Economy and the state', in Dutch only).

Prince, M. (1993), 'Women, men and money styles', *Journal of Economic Psychology*, 14 (1), pp. 175-182.

Putnam, R.D. (2000), Bowling alone: the collapse and revival of American community, New York: Simon and Schuster.

Putnam, R.D. (with Leonardi, R. and Nanetti, R.Y.) (1993), *Making democracy work: civic traditions in modern Italy*, Princeton: Princeton University Press.

Raaij, W.F. van and Gianotten, H.J. (1990), 'Consumer confidence, expenditure, saving, and credit', *Journal of Economic Psychology*, 11, pp. 269-290.

Rooij, M.C.J. van, Kool, C.J. and Prast, H.M. (2004), 'Risk-return preferences in the pension domain: are people able to choose?', *DNB Working Papers*, 25, December 2004.

Rose-Ackerman, S. (2001), 'Trust and honesty in post-socialist societies', *Kyklos*, pp. 415-444.

Schürz, M. and B. Weber (2003), 'Transparency as a mechanism of governance in financial systems', Paper presented to the European Association for Evolutionary Political Economy Conference, 7-10 November, Maastricht.

Smith, A. (1766), Lectures on Jurisprudence, in The Glasgow Edition of the Works and Correspondence of Adam Smith, Volume 5, Oxford: Oxford University Press.

Sobel, J. (2002), 'Can we trust social capital?', *Journal of Economic Literature*, 40, pp. 139-154.

Social and Cultural Planning Office of the Netherlands (2003), De sociale staat van Nederland 2003 Over onderwijs, arbeid, inkomen, gezondheid, wonen en woonomgeving, veiligheid, mobiliteit en vrijetijdsbesteding van de Nederlandse bevolking, SCP 2003-12 (The state of Dutch society: education, labour, income, health, housing and residential setting, safety, mobility and recreation of the Dutch population, in Dutch only).

Social and Cultural Planning Office of the Netherlands (2003), Sociale staat van Nederland 2005 - Over de leefsituatie van de Nederlandse bevolking, scp-publicatie 2005/14 (The state of Dutch society: On the social situation of the Dutch population, in Dutch only).

Statistics Netherlands (1993), Gebruikershandboek Consumenten Conjunctuuronderzoek, 1972-1992

Statistics Netherlands (2005), 'Grote verschillen in consumentenvertrouwen', *Conjunctuurbericht*, 15 August 2005, www.cbs.nl ("Major differences in consumer confidence", in Dutch only).

Stock, J.H. and M.W. Watson (2001), 'Forecasting output and inflation: the role of asset prices', NBER Working Papers 8180.

Sztompka, P. (1999), *Trust: a sociological theory*, Cambridge: Cambridge University Press.

Teulings, C., Bovenberg, L. and Dalen, H. 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).

Thaler, R. (1985), 'Mental accounting and consumer choice', *Marketing Science*, 4(3), pp. 199-214.

TNS NIPO (2005), Report on Euro banknotes, prepared for De Nederlandsche Bank.

Volkskrant (2005), various issues.

Weiner, B. (1986), An Attributional Theory of Motivation and Emotion, New York: Springer-Verlag.

Williamson, O.E. (1985), *The economic institutions of capitalism*, New York: Free Press.

Zak, P.J. and Knack, S. (2001), 'Trust and growth', *Economic Journal*, 111, pp. 295-321.

Zullow, H. (1991), 'Pessimistic rumination in popular songs and news magazines predict economic recession', *Journal of Economic Psychology*, 12, pp. 501-526.