



Societal Unease: an Economic Problem?

A LISS panel case study for the Netherlands

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Abstract

This paper investigates how changes in income and job loss affect the societal unease that underlies developments like the rise of populist parties or the 'gilets jaunes' protests. Using LISS panel data for Dutch individuals between 2008 and 2017, this paper uniquely exploits variation in unease within Dutch individuals over time. It finds that job loss has a substantial effect on societal unease, while changes in income are unrelated, indicating that the anti-cyclical nature of societal unease results from the status or meaning found in a job. Furthermore, this paper considers behavioral scientific theories and finds that there is loss aversion in gaining and acquiring a job. Moreover, financial expectations have little effect on societal unease – contrary to life satisfaction. Additionally, this paper compares the influence of economic factors to that of cultural factors related to immigration and cultural protectionism. While economic factors are important determinants of societal unease, cultural factors appear to be more consequential.

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1. Introduction

In recent years, the Western political stage has been marked by a surge of anti-establishment parties. Distinctive utterances of this trend are the election of Trump as the US President and the UK's vote to leave the European Union in 2016. Likewise, continental Europe has seen electoral success of anti-establishment parties. The Law and Justice in Poland, the Freedom Party in Austria, the Five Star Movement in Italy and Fidesz in Hungary currently participate in their national government. These political parties are connected by a deep discontent and loss of faith in the political status quo – often portraying some elitist establishment with a disregard for the 'common people' as their political rival (Mudde & Kaltwasser, 2017). Most recently, protesters known as the 'gilets jaunes' have passionately expressed their discontent for the French President by rioting in the streets across France. The societal sense of unease that underlies these phenomena is the topic of this paper. Societal unease is described as the latent concern among citizens about the precarious state of society (Steenvoorden, 2016). This phenomenon is often associated with economic factors. It is a popular belief that the economic insecurity resulting from the 2008 economic crisis and the consequent Euro crisis contributed to the rise of populism in Europe, the election of Trump and Brexit. Also in the Netherlands there are signs that cyclical fluctuations are positively associated to societal unease (Steenvoorden, 2016). Using LISS panel data, this paper researches the influence of changes in economic factors on societal unease in the Netherlands.

As unease depends on perceptions, it is conceivable that apart from real economic factors, there are also psychological factors at play. Taking these psychological factors into account gives further insight into the mechanism between economic factors and unease, and therefore allows to create more effective policy to curb societal unease. The Easterlin paradox, which says that income is positively related to happiness at one point in time, but not over time, is generally explained by the notion that happiness depends on a relative level of income rather than an absolute level (Easterlin, 1974). This paper builds on literature that points out behavioral economic explanations for the Easterlin paradox, by conducting similar analyses for societal unease. Specifically loss aversion, adaption and the role of expectations will be considered.

In addition to the economic explanation for societal unease, this paper considers an alternative account, which emphasizes the importance of immigration and the resistance to cultural change. This cultural aspect is an equally common explanation for societal unease and the resulting populist movements. After all, immigration is often the main concern of (right-wing) populist parties. Comparing the economic and cultural account provides a further understanding of the importance of economic factors, and therefore gives policy makers a better sense on how to prioritize on these issues.

The structure of this paper is as follows. Section 2 further explains the concept of societal unease and sketches a picture of the situation in the Netherlands. At the end of section 2, seven hypotheses will be given of which the answers will jointly give a further understanding of the importance of economic factors. Section 3 goes into the existing literature concerning the economic, behavioral and cultural aspect of this paper. The models for the empirical analysis of this paper are introduced in section 4, which also goes into on the employed methods. Section 5 elaborates on the data, and section 6 discusses the results for the economic, behavioral and cultural analysis respectively. Section 7 concludes and provides policy implications.

2. Societal unease in the Netherlands

Definition

Societal unease can be described as the perception of an uncontrollable deterioration of society (Steenvoorden, 2016). Despite the fact that the Netherlands has consistently progressed in many aspects in previous years, this attitude is not uncommon. The Netherlands Institute for Social research (SCP) famously characterizes this attitude with the saying ‘I’m doing fine, but we are in decline’¹, pointing towards the fact that Dutch people are consistently happy on average, while approximately half of the population keeps hold on the belief that the country is heading in the wrong direction (Bijl et al., 2017). To some degree, the belief that the country is in decline is part of a harmless (some say typical Dutch) attitude of always wanting to complain about something. In more serious cases however, societal unease lies at the basis of discontent and loss of faith in the political status quo, and is often expressed by (protest) voting for a populist political party (Steenvoorden, 2016; Mudde & Kaltwasser, 2017). The term societal unease is well known within Dutch institutions occupied with public policy, but less so in the scientific literature outside of the Netherlands. This paper uses mistrust in political institutions as a proxy for societal unease. Though these two are not precisely the same, mistrust in political institutions is closely related to societal unease, and is arguably what is problematic about societal unease in the first place.

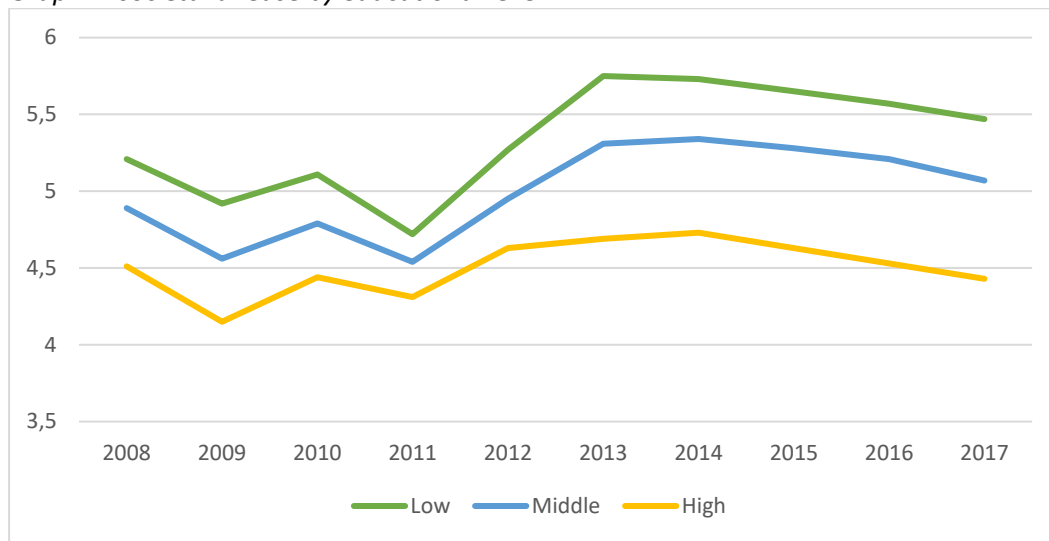
Mistrust in political institutions is also closely related to populism. The relation between trust in political institutions and voting for a populist party has been examined thoroughly for Europe by the Centre for Economic Policy Research, which found a strong correlation, controlling for age, education and gender (Dustmann et al., 2017). A similar correlation was found for trust in political institutions and ‘leave’ votes for the Brexit referendum. For Latin America, Doyle (2011) finds a strong relation between varying levels of trust in the government, political parties and the judiciary, and “political outsiders crusading against the established political order” in 48 presidential elections, across 18 countries between 1996 and 2008. An additional confirmation for the close connection between populism and mistrust in political institutions is given by Inglehart & Norris (2016) and Algan et al. (2017). These papers connect unemployment to populist voting as well as mistrust in political institutions, and find results that are roughly the same.

Situation in the Netherlands

Graph 1 shows the development of societal unease in the Netherlands between 2008 and 2017 for three educational levels. The different levels are closely correlated and lower levels of education correspond to higher levels of unease for all years. This corresponds to the Dutch literature on societal unease, which persistently show a high correlation between educational levels and societal unease (Steenvoorden, 2016; Dekker et al., 2013).

¹ In Dutch: “Met mij gaat het goed, maar met ons gaat het slecht”.

Graph 1: societal unease by educational level



Steenvoorden (2016) partly ascribes societal unease to changes in the business cycle. Stevenson & Wolfers (2011) use time series evidence to claim that trust in institutions has an anti-cyclical nature. Graph 1 shows a similar relationship: while unease moved relatively stable before the start of the Eurocrisis in 2011, the graph shows a rapid increase between 2011 and 2013, and gently decreases afterwards when the economy started to recover.

This anti-cyclical trend is seen more clearly in graph 2, which shows that societal unease is strongly correlated with unemployment (correlation of 0.74), roughly making the same upward and downward movement. A second indication of the importance of economic factors is the different reaction to the economic crisis for the educational levels. The lower educated have suffered more job loss than the medium educated due to the Eurocrisis, and the medium educated suffered more job loss than the higher educated (Bijl et al., 2017). Furthermore, graph 1 in the appendix shows that the share of flexible employment started rising in 2011 for all educational levels, but the lower the educational level, the sharper the rise. The sharper the rise in the share of flexible contracts, the sharper the rise in societal unease. In terms of employment protection, Dutch legislation is one of the least stringent for flexible contracts in Europe, and one of the most stringent for permanent contracts (OECD, 2013). The difference between educational levels in additional unemployment and flexible contracts after the Eurocrisis, therefore seems like a plausible explanation for the different responses in terms of societal unease.

Graph 2: societal unease and unemployment



Who are the uneasy? Table 1 in the appendix gives an overview of average unease levels for different groups of people. Societal unease is measured on an eleven-point-scale (0 to 10). The difference with the mean level of unease is shown in the second column. The values with an asterisk are significantly larger than the mean level of unease according to a one-sided t-test. The level of societal unease between these different groups seems to be relatively small, with values generally being between 4 and 5.5. The main reason for this is that the proxy for unease is an average of 4 questions, which reduces the total variation. Small difference therefore represent considerable differences in unease. According to t-tests on the 95% level, all values in table 1 significantly differ from the mean on the 95% certainty level, except for the gender groups. Looking at different personal characteristics, higher levels of unease are found for older people (above 45) with a low educational degree. Furthermore, the Freedom Party (PVV) and Socialist Party (SP) are the only parties that show higher-than-average levels of societal unease. The PVV is a right-wing populist party, which strongly advocates rigorous immigration laws. The SP is a left-wing populist party, which strongly advocates more redistribution. This shows that societal unease is not just a right-wing phenomenon, but a sentiment that occurs across the political spectrum, leading to different kinds of ‘extreme’ opinions. The most uneasy however, is the group of non-voters. It makes sense that people with a deep distrust in the political status quo are inclined to abstain from voting. Guiso et al. (2017) argue that vote abstainers are as important as populist voters when looking at the effect of economic factors on populism and political distrust. The proxy for unease does this by also capturing this group. Concerning economic factors, societal unease is higher for lower income groups and unemployed people. All the above mentioned observations are in line with the literature on societal unease as well as the literature on populism and distrust in political institutions (Steenvoorden 2016, Algan et al. 2017, Mudde & Kaltwasser 2017), which is a further indication that the current proxy for societal unease is valid.

2.3 Societal unease: economic, behavioral, cultural

The central purpose of this paper is to gain further understanding into the importance of economic factors for societal unease in the Netherlands. The economic factors that will be considered here are income and employment status (employed or unemployed). The descriptive evidence shows that

societal unease is associated with lower incomes and unemployment. The first two hypotheses are therefore:

H1: Higher income leads to less societal unease.

H2: Unemployment leads to more societal unease.

Furthermore, this paper aims to look further than the effect of real changes in economic factors by including an analysis of the influence of behavioral economic factors. This is especially relevant for a subjective measure as unease, which is a perception that is liable to various ‘irrational’ influences. There is an extensive body of literature on the significance of behavioral factors in the relation between economic variables and happiness. Happiness and unease are related in the sense that the former is the perception of one’s own situation, while unease is the perception of the state of society. Behavioral aspects that influence the relation between income and happiness, may therefore also influence the relation between income and unease. Specifically the behavioral explanations of the Easterlin Paradox (Easterlin, 1974), which demonstrates that there is no clear one-on-one relation between income and happiness, will be considered. Four additional hypothesis are:

H3: People adapt to changes in unease due to economic factors, returning to a stable level of unease.

H4: Losses in income and work status are asymmetric in their effect on societal unease.

H5: Expected changes in economic factors affect unease less than unexpected changes.

Finally, to get a better sense of the magnitude of economic factors on societal unease, this paper also looks at the significance of cultural factors on societal unease. More specifically, the role of attitudes towards people of foreign descent or origin, and protection of national identity will be considered. This cultural aspect is often seen as the main determinant for societal unease, distrust in the political status quo and populism. After all, while left-wing populism is centered around economic values, right wing populism populist agendas are primarily built upon these cultural values (Mudde & Kaltwasser, 2017). The final hypothesis is:

H6: Economic factors are of greater importance to societal unease than cultural factors.

3. Literature

3.1 Economic aspect

This paper’s analysis of the influence of economic factors on societal unease is related to several strands of literature. First of all, a range of studies have been conducted on societal unease itself by Dutch researchers related to (semi)governmental institutions. While the exact definition may vary across different studies, all these studies refer to societal unease as a latent concern about the direction in which the country is heading. Using an OLS regression with control variables, based on national survey data, Steenvoorden (2016) and Dekker et al. (2013) find a small negative association between both income and employment status, and societal unease. In both studies, educational level is a much greater determinant of societal unease.

A second strand of literature to which this paper is related, concerns research on the relation between trust in political institutions – the proxy for societal unease – and economic factors. Stevenson & Wolfers (2011) argue that trust in political institutions in the US has a pro-cyclical nature. After first

establishing that the trust in political institutions declined considerably after the 2008 crisis, they conduct a cross-country comparison, showing that those countries that experienced the largest rise in unemployment also saw public trust in the national government decline dramatically. On a regional scale, Algan et al. (2017) specifically look at the link between economic insecurity as a result of the 2008 crisis and political distrust in Europe and the US. They conclude that political distrust is strongly connected to the severity of an economic crisis, fueling political polarization. Similarly, but on an individual level, Guiso et al (2017) document a link between economic insecurity parameters, financial distress and distrust in political parties. Dustmann et al. (2017) use ESS data to demonstrate that unemployment and GDP shocks at the regional level of European countries, are associated with lower trust. Algan et al. and Guiso et al. explicitly relate political distrust to populism, finding similar results when conducting the same analysis on populist voting.

The third and largest body of literature to which this section of the paper relates, is research on the political economy of populism itself, which investigates the origin of populist movements and policies (see Gidron & Bonikowski (2013) for an overview of political economy studies on the causes of populism). More specifically, this paper explores the influence of economic factors on populism. Rodrik (2018) provides a generic discussion of the rise in global populism and relates it to economic theory. He attributes populism to the common denominator of advanced stages of globalization. The dominant form of populism in a country depends on how globalization shocks manifest in society. He argues that if the shock mainly becomes salient in the form of immigration, right-wing (cultural) populism is likely to be more significant, while left-wing (economic) populism is more apparent when globalization chiefly concerns trade, finance, global investments, and a consequent rise in inequality. Rodrik argues that the former is largely the story of advanced countries in Europe, while the latter applies to southern European and Latin American countries.

A range of recent empirical studies however, point out that this distinction between left- and right-wing populism is not so clear-cut. For the UK, Colantone & Stanig (2018) demonstrate that trade exposure (specifically import competition from China) strongly correlates with leave votes during the Brexit referendum in 2016. Similarly, Che et al. (2016) and Autor et al. (2016, 2017) reveal a higher likelihood for Trump support in US countries that were affected the most from the entrance of China to the WTO. This is also in line with Dippel et al. (2016), who uncover a relation between voting for extreme-right parties in Germany between 1997 and 2009 and import competition from China. Colantone & Stanig (2017) shows a similar relation between support for nationalistic right-wing parties across 15 European countries and import competition

The international literature on political distrust and populism gives a strong indication that economic factors play an important role when looking at different EU countries and the US. However, these papers are all conducted on a macro level, and mostly look at GDP or the effect of a crisis. This paper focusses on household income and unemployment within the Netherlands specifically, making this paper more relevant for the creation of Dutch policy. The added value of this part of the paper to the Dutch research on societal unease (Steenvoorden, 2016; Dekker et al., Engbersen et al., 2013) is the fixed effects estimation method, which assesses changes in unease over time within individuals. This has never been done before in the Dutch societal unease literature, which assesses societal unease cross-sectionally. In the method section of this paper I will argue why panel data is particularly useful for a subjective measure like societal unease.

3.2 Behavioral aspect

Ever since the work of Easterlin (1974), it has become clear that the relation between economic factors and subjective indicators of well-being is not straightforward. Easterlin, as well as more recent literature, shows that the relationship between subjective well-being and GDP per capita is roughly log-linear. Richer countries are associated with higher average levels of happiness than poorer countries, and richer people within a country are happier on average than poorer people within the same country (Deaton, 2008; Helliwell et al., 2013). However, time-series analysis within countries does not show a clear relationship between income and happiness. This dealignment is called the Easterlin Paradox: money brings happiness across countries and individuals, but not over time. There is considerable agreement among researchers that it is mostly relative, rather than absolute income that brings happiness. Relative income depends on some reference point. In a bid to explain the Easterlin paradox, researchers in the field of behavioral economics have studied what these reference points may be. While the Easterlin paradox explicitly concerns subjective well-being, the behavioral economic explanations for it are relevant for the evaluation of the relation between societal unease and economic factors. As societal unease is a subjective feeling that depends on perceptions, it is plausible that some of the behavioral explanations for the Easterlin Paradox would give some insight in the relation between economic factors and societal unease.

One behavioral explanation for the Easterlin Paradox is adaption, which holds an individual's own economic situation in the past as a reference point. According to this theory, a one-off change in income or a certain life event only leads to a temporary change in well-being; (partially) returning to a certain base point after some time. Brickman & Campbell (1971) famously described this phenomenon as a hedonic treadmill, comparing the pursuit of happiness to walking on a treadmill – making you walk just to stay in the same place. As such, adaption stems from the human predicament to not easily be satisfied with the current situation. While the scientific literature on adaption is relatively new, the basic notion has been around for centuries. The most central Buddhist teaching is that life is suffering. Buddhism came to this conclusion through the observation that suffering is the result of the fact that humans always want more after they got what they were craving for (Byock, 1996). This is analogous to the hedonic treadmill.

Of course, the other side to this is that people also adapt to negative life events. Brickman et al. (1978) compared happiness levels of both major lottery winners and people who became paralyzed after an accident, and found that the major life events only had a temporary effect on happiness. Both groups returned to a stable level of happiness within several years. Similar habituation effects have been found for all kinds of life events, such as marital status (Clark et al., 2003) and self-employment (Hanglberger & Merz, 2011). Concerning income, the adaption mechanism is well established. Di Tella et al. (2003) demonstrate that well-being effects of a rise in per capita GDP tends to disappear after two years; Grund & Sliwka (2007) and Clark (1999) find adaption effects with wage increase for employees; Burchardt (2005) finds adaption to income levels and employment status in ten years of British Household Panel Survey data (BHPS); Weinzierl (2005) and Vendrik (2013) come to a similar conclusion using the German Socio-Economic Panel (SOEP). For unemployment however, evidence shows that there are no or limited adaption effects (Clark et al., 2008; Clark & Georgellis, 2007; Lucas et al., 2004). Given that people adapt relatively easy to changes in income, the lasting effects of unemployment are largely due to loss in status.

A second behavioral explanation for the Easterlin Paradox appeals to loss aversion. This phenomenon has received considerable academic attention since the work of Kahneman and Tversky (1979), who documented that people tend to react stronger to financial losses than equivalent financial gains, in terms of satisfaction. According to the experiments of Kahneman, losses are roughly twice as substantial as gains. De Neve et al. (2015) find that individuals are more sensitive to economic downturns than to equivalent economic upswings, and argue that this macro-economic loss aversion may be the reason that countries do not show higher average happiness levels over time. On a micro scale, this asymmetry in losses and gains has been well established for both income and employment status (Vendrik & Woltjer, 2007; Di Tella et al., 2010; Maennig & Wilhelm, 2011; Boyce et al., 2013).

A third behavioral feature does not place the reference point in the past, but on one's expected situation in the future. Senik (2008) argues that the influence of expectations about future income levels is one more behavioral theory that adds to explaining the Easterlin Paradox. He states that while adaptation, loss aversion and social comparison reduce the positive effect of income growth on well-being, optimism has a positive effect. While social comparison, adaptation and loss aversion effect one's well-being negatively, expectations have a positive effect on well-being, beyond the obvious channel of consumption smoothing. According to his argument, individuals increase their well-being by expecting a better financial situation in the future, beyond the positive effect of consumption smoothing. The explanation of the Easterlin Paradox lies in the additional finding that expectations have a larger impact on well-being in transition countries (Senik, 2004).

There is however, another side to optimism, especially when positive expectations are not met. Unrealistic optimism corresponds with regret, disappointment, and other problems when outcomes fall short of expectations (Carroll et al., 2006). For example, students who had unrealistically high expectations about their exam result, reported an increase in negative emotions after receiving their mark, while students who were realistic or pessimistic reported a decrease in negative emotions after receiving their mark (Sweeny & Shepperd, 2010). Concerning politics, Niven (2000) argues that unrealistic optimism is an important source of the rejection of status quo politics in the US. The more optimistic one is about political change, the more prone that person is to developing feelings of disappointment and mistrust if those expectations are not met. Again, this behavioral idea is not as new as the scientific literature that discusses it. The role of expectations in well-being was central in the philosophy of Stoicism, which taught that anger was caused by the collision of hope and reality. As the Roman Stoic philosopher Seneca put it: "To reduce your worry, you must assume that what you fear may happen is certainly going to happen" (Edwards, 2009).

A final relevant behavioral theory that has been brought forward as an explanation for the Easterlin Paradox is social comparison. Instead of looking at one's own situation, people compare themselves to certain groups, such as people in a similar socio-economic condition, friends, family or neighbors. If this is the case, a proportional increase of all incomes in an economy would leave average happiness unaffected, in line with the Easterlin Paradox. This aspect however, will not be considered in this paper due to data restrictions.

3.3 Cultural aspect

The final section of this paper aims to find out about the significance of cultural values in explaining societal unease, and how these compare to economic factors. Specifically immigration and the fear of

erosion of domestic culture are an often mentioned cause of unease and its consequent populism (Mudde & Kaltwasser, 2017).

Barone et al. (2016) research how migration from Northern Africa affected vote shares for the center-right coalition -which has a political platform that is unfavorable to immigrants- at the 2016 national elections. They find that immigration generates a sizable causal increase in votes for the coalition. Otto and Steinhardt (2014) use variation across districts in Hamburg and find a positive relation between immigration and support for anti-immigration parties. Using Danish data, Harmon (2015) finds that an increase in local ethnic diversity leads to a higher share of populist parties in Danish election. For Austria, Halla et al. (2017) look at municipality-level vote shares between 1979 and 2013 to conclude that immigration explains roughly one tenth of the variation in vote shares, favoring the populist party FPÖ. These papers demonstrate that immigration contribute to the support of populist parties. The aim of this paper is to find out how immigration and cultural protectionism compare to economic factors as an explanation for populism. Two other papers have explicitly made this comparison, on the European level.

Using European Social Survey data from 5 European countries in 2003, Oesch (2008) makes this comparison by looking at the effect of unemployment on votes for right-wing populist parties on the one hand, and the effect of a set of indicators for cultural values on the other hand. The set of cultural indicators consists of questions that say something about the respondents opinions on immigrants and the extent to which the domestic culture needs protection. Using the same dataset, Inglehart & Norris (2016) conduct a pooled cross-sectional analysis with 31 European countries between 2002 and 2014, looking at individual level variation as well as country level variation. The authors compare the effect of indicators of economic factors (unemployment, whether the person lives on social benefit and subjective economic insecurity) to cultural factors (whether the person is anti-immigration, but also whether the person mistrusts global governance). An important consideration here is that mistrust in global governance is included as a cultural factor, while the focus of this paper is on aversion towards immigration and fear of loss of national identity. Looking at the explanatory power of the different hypothesis, including the hypothesis that it is the interaction of cultural and economic factors that matters, both Inglehart & Norris (2016) and Oesch (2008) conclude that cultural variables are more consequential than economic variables or interaction variables for populist voting. This paper will assesses whether this finding also applies to the Dutch context.

4. Methodology

The empirical analysis will consist out of three parts, addressing economic, behavioral and cultural aspect respectively. All sections appeal to a base model, and include their relevant independent variables. The base model is:

$$Y_{it} = \alpha_{it} + \beta_1 I_{it} + \beta_2 U_{it} + \gamma X_{it} + \beta_3 T_t + u_i + \epsilon_{it}$$

Where Y_{it} is the level of societal unease of individual i at time t , I is the respondents household income, U is a dummy that takes value 1 if the respondent is unemployed and 0 when employed, X is a vector of control variables, T is a set of year dummies which is included to correct for year effects. Year dummies control for aggregate trends in societal unease. Failing to control for time effects. u_i is an

individual fixed effect, and ε_{it} is a time-varying error term, i.e. the variation in societal unease which is not explained by the model.

The economic section of the analysis estimates the effect of income and unemployment on societal unease by means of an Ordinary Least Squares (OLS) regression and a fixed effects regression, with and without a set of control variables². Unlike OLS, the fixed effects method estimates the effect of *changes* in the independent variables, and therefore corrects for time-invariant heterogeneity such as personality, genes or constant cultural circumstances. This is particularly useful for societal unease, because there are good reasons to believe that there are time-consistent factors that bias the results, yet are hard to control for in an OLS-regression. Societal unease is a subjective measure, which to a relatively large extent depends on personality. Garretsen et al. (2018) for example, find that psychological openness is a strong predictor for Brexit votes, with psychologically less open people more often favoring the UK to leave the EU. Psychological openness on its turn, may correlate with other factors that affect unease such as mental health or one's social life. The correction for time-invariant heterogeneity is furthermore of importance because standard regression models require the assumption that unease scores are comparable between individuals. Given the differences in genetics or environmental influences between individuals, this is highly improbable. Fixed effects models only require that unease scores are comparable within individuals over time, which is a more plausible assumption.

This paper considers three behavioral theories, namely loss aversion, adaption and the role of expectations. Apart from testing these theories on societal unease, the theories are also tested for life satisfaction. As such, the validity of the employed methods is tested. If a model shows a completely different result for life satisfaction as the previous literature, something might be wrong with either the method or the data. Furthermore, comparing the effect of behavioral factors on societal unease and life satisfaction provides some interesting insights. This paper is unique in its comparison of societal unease to life satisfaction.

In comparing the economic factors to cultural factors, this paper largely follows Inglehart & Norris (2016), who compare the explanatory power of an economic, cultural, combined and interaction model. The inclusion of an interaction model is of importance because it may be the combination of economics and culture that fosters societal unease. The Akaike Information Criterion (AIC) and Bayesian Information Criterion will be used as a measure for the explanatory power of each model. Both measures have different sets of asymptotic assumptions Dziak et al. (2018). Therefore, both measures will be considered. The lower the value of these measures, the higher the explanatory power of the model.

The fixed effects specification however, may still not have a causal interpretation. First of all, time-variant heterogeneity (ε_{it}) may bias the result. There could be time-varying factors that affect both unease and the economic factors. For example, if the governments decides to raise the income tax, people may become more uneasy due to the decision itself, while their net income decreases due to the tax increase. In this case both variables change in an opposite direction, but not due to a causal effect of income on unease. Some if the time-variant heterogeneity is controlled for by the control

² This paper does not conduct the alternative random effects specification, as the required assumption of independence between the independent variables and individual error terms is unlikely to hold. The choice of fixed effects over random effects is also supported by the Hausman test (Wooldridge, 2015). The null hypothesis (saying that random effects is to be preferred over fixed effects due to higher efficiency) was rejected.

variables (X_{it}), but there will likely remain some omitted variable bias. A second potential pitfall is the problem of reversed causality. Income, unemployment or cultural variables may affect societal unease, but there may also be some effect of unease on the independent variables, which the fixed effects model is unable to distinguish between. The extent to which the various models in this paper are liable to these biases will be discussed in the limitation section. An additional consideration when using fixed effects models is that sufficient variation in the data is required. This will be discussed in the data section.

5. Data

To answer the research questions, this paper makes use of the “longitudinal Internet Studies for the Social Sciences” (LISS) panel. It consists out of a random sample of 8000 Dutch citizens. Having been in operation since 2008, this panel contains 10 years of data, up to 2017. The panel is based on a true probability sample of households drawn from the population by Statistics Netherlands (CBS) (LISS, 2018). The participants of the panel have been contacted every year, personally or by phone, to answer a wide range of questions. All questions were asked in Dutch, and have been translated in this paper. The dataset is of a high quality because its non-commercial approach and use of participation payments to collect the data. As the effect on changes in economic variables is the main concern, this paper focusses on individuals who are active on the labor market. Besides the main variables of interest, the LISS data set includes a variety of background variables which serve as control variables, and enable this paper to include a behavioral and cultural analysis.

As a proxy for societal unease, this paper uses the level of trust in political institutions, including the government, parliament, political parties and politicians. Limiting the proxy for societal unease to a single political institution would make it liable to shocks that only apply to the particular political institution, but not so much to societal unease in general. Taking all four political institution together provides information on a general distrust in politics. The question asked in this regard was: “can you indicate, on a scale from 0 to 10, how much confidence you personally have in each of the following institutions” after which respondents answered for the Dutch government, Dutch parliament, political parties and politicians. The answers to these questions are highly correlated (between 0.76 and 0.90), which indicates that the respondents tend to interpret these different political institutions as ‘Dutch politics’ in general. Considering that societal unease should be about a general feeling, this is a suitable interpretation. Over a period of 9 years (2013 is a gap year), 12,229 respondents answered the questions, for 4.15 waves on average. The number of respondents is higher than the yearly number of 8000, while the average amount of years with a response is smaller. This is because some individuals started receiving the questionnaire later on, while others stopped receiving the questionnaire before 2017. As more trust implies less unease, societal unease is defined as follows:

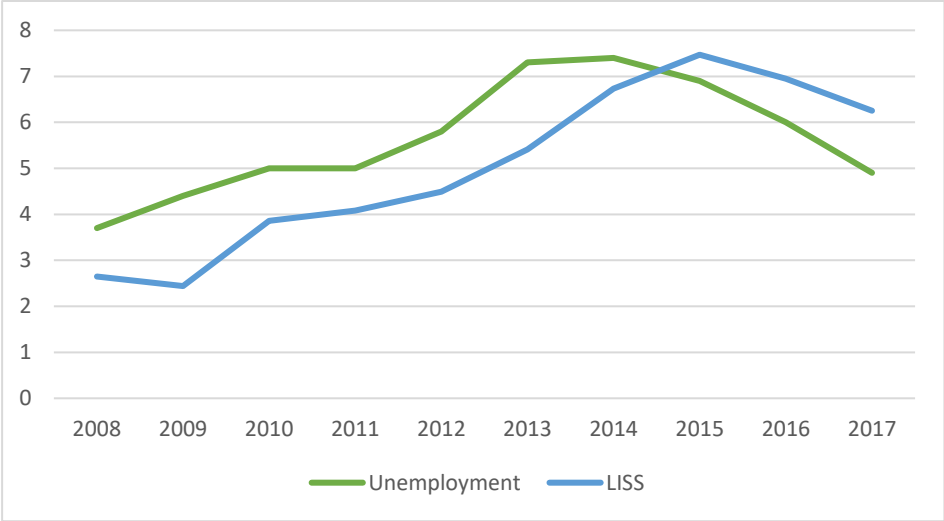
$$\text{Societal unease} = 10 - [\text{trust in government (0 - 10)} + \text{trust in parliament (0 - 10)} + \text{trust in politicians (0 - 10)} + \text{trust in political parties (0 - 10)}] / 4$$

The main independent variables are income and employment status. The employed measure for income is the natural logarithm of net monthly household income. The focus is on the household rather than the individual, because household income is what ultimately affects individual consumption and savings. Furthermore, the natural logarithm is used because this captures the effect of a percent change in income, rather than an absolute change of which the impact differs significantly between income levels. Changes in household income due to changes in the household composition are

corrected for by controlling for household size. To fill in gaps in the reported income, the data has been imputed. In total, there is data on the income of 11,662 individuals over an average of 9 waves. 95 individuals are dropped from the data as they reported to have 0 income. Furthermore 25 extreme outliers with a net household income above 18,500 are dropped from the data, who most likely incorrectly reported their income or reported yearly instead of monthly income.

For the employment status, the available data allows to distinguish between 14 categories of an individual’s main occupation: paid employment, works in family business, autonomous professional/freelancer, job seeker following job loss, first-time job seeker, exempted from job seeking following job loss, attends school or is studying, takes care of the housekeeping, is pensioner, has a (partial) work disability, performs unpaid work while retaining unemployment, performs voluntary work, does something else, is too young to have an occupation. To isolate the group of interest, a dummy variable is has been created which takes the value 1 if the individual falls into the categories job seeker following job loss, first-time job seeker or performs unpaid work while retaining unemployment. The variable has value 0 when the individual is in paid employment, works in a family business or is an autonomous professional/freelancer. All other categories are excluded. On average, this unemployment dummy contains 8,305 individuals per year, of which 375 are unemployed. Graph 3 shows the actual unemployment rate from CBS and the unemployment rate according to the unemployment dummy. For most years, the actual unemployment rate appears to be slightly higher than the LISS unemployment rate. This difference is likely due to different definitions of being unemployed. Some individuals in the dataset who are looking for a job might have answered ‘takes care of the housekeeping’ or ‘does something else’ as their main occupation.

Graph 3: actual unemployment and unemployment in LISS



To test for loss aversion in employment status, the unemployment variable is not applicable, as it does not make a distinction between acquiring a job and losing a job. Therefore this variable has been split up into two dummies variables, for instances where a respondent lost a job and got a job. The lost job dummy is 1 if the respondent is unemployed at T, while employed at T-1. The got job variable takes value 1 if the respondent is employed at T, while unemployed at T-1. Both dummies take value 0 for the rest of the working population as defined above. Between 2008 and 2017, there were 769 instances of job loss, while there were 715 instances in which someone found a job. A second approach to test for loss aversion is based on the respondent’s own perceptions. Respondents were asked “can you indicate, on a scale from 0 to 10, whether your financial situation has gotten better or worse

compared to 1 year ago?”. The answer to this questions is divided into 5 categories: Got a lot worse (0 or 1), got a little worse (2, 3 or 4), unchanged (5), got a little better (6, 7 or 8) and got a lot better (9 or 10).

In addition to the question whether the financial situation has improved in the previous year, respondents were also asked to look ahead one year: “do you expect your financial situation to get better or worse over the coming 12 months?”. The combination of expectations and (subjective) reality is used to assess the role of expectations for societal unease. For this, an ‘expected’ dummy is created, which interacts with the actual (subjective) development of the previous year. The expected dummy takes value 1 if the outcome is what the respondent expected in the previous year, and 0 if the outcome was not expected. Lastly, this paper tests for adaption by including lags of the job loss variable, which take value 1 if the respondent lost job and is still employed. Four lags are included in total, following Hanglberger & Merz (2011) who use a similar method to test for adaption with respect to self-employment.

Finally, the cultural section makes use of data on cultural preferences and attitudes. Over the 10 years, respondents were given several propositions in the context of attitudes towards immigration. Oesch (2008) conducts a similar analysis for other European countries by use of the European social survey, which contains a similar set of questions as the LISS database. He provides a theoretical backing to test the cultural backlash thesis along three lines: cultural protectionism, attitudes towards immigration and differential nativism (meaning a certain native group of people should be treated differently than non-natives). Three propositions that fit these three dimensions have been used for the cultural analysis of this paper. The first one being: “it is good if society consists of people from different cultures”, which is a measure for cultural protectionism. The second proposition is: “there are too many people of foreign origin or descent³ in the Netherlands”, which directly relates to immigration. The third proposition is: “Legally residing foreigners should be entitled to the same social security as Dutch citizens”, which is a measure of the extent to which there should be differences in treatment between natives and non-natives. These propositions were answered on a 5-point-scale. The scales have been recoded in a way that the higher numbers are less lenient towards immigration, so the signs of the variables can be interpreted in the same way. In line with Oesch (2008) and Inglehart & Norris (2016), income and employment status are used for the economic insecurity thesis. Additionally however, data on the extent to which a respondent is satisfied with his or her income is included. Adding this subjective dimension makes the economic effects on unease better comparable with the cultural effects on unease, which are all based on subjective measures.

Table 1 shows the summary statistics for the main variables of interest. This table includes the within variation, which should be sufficient for the fixed effects estimation to produce reliable estimates. This seems to be the case. Furthermore, table 2 in the appendix shows the correlation between all variables, while table 3 in the appendix provides an overview of all survey questions on which the employed variables are based.

³ People of foreign origin or descent is translated from the Dutch ‘allochtonen’.

Table 1: summary statistics for the main variables

Variable		Mean	Std. Dev.	Min	Max	Observations
Societal unease	overall	4,92	1,85	0	10	N = 50.703
	between		1,64			n = 12.229
	within		0,99			T-bar = 4,15
Life satisfaction	overall	7,46	1,38	0	10	N = 45.624
	between		1,25			n = 11.593
	within		0,78			T-bar = 3,94
Household income	overall	2.998,-	1.545	1.216,-	20.000,-	N = 105.120
	between		1.473			n = 11.662
	within		4.995			T-bar = 9.01
Unemployed	overall	0,05	0,22	0	1	N = 73.604
	between		0,20			n = 8.305
	within		0,12			T-bar = 8,86
Xenophobia	overall	3,27	1,05	1	5	N = 53.139
	between		0,95			n = 12.406
	within		0,53			T-bar = 4,28
Differential nativism	overall	2,52	1	1	5	N = 53.140
	between		0,83			n = 12.406
	within		0,61			T-bar = 4,28
Differential nativism	overall	2,52	1	1	5	N = 53.140
	between		0,83			n = 124.06
	within		0,61			T-bar = 4,28
Cultural conservatism	overall	2,44	0,89	1	5	N = 53.140
	between		0,80			n = 12.406
	within		0,47			T-bar = 4,28
Financial dissatisfaction	overall	2,41	0,89	1	5	N = 52.829
	between		0,78			n = 11.096
	within		0,51			T-bar = 4,76

T-bar represents the average number of observed years per respondent.

6. Results

This section discusses the regression results and answers the six hypothesis presented in section 2. First, an analysis of the influence of economic factors will provide answers for hypothesis 1 and 2, which say that income is negatively related to societal unease (1), and unemployment is positively related (2). This analysis is based on pooled OLS and fixed-effects regression, both with and without socio-economic controls. The fixed effects estimation includes year dummies to control for time effects. Consequently, a behavioral analysis will test hypothesis 3 (social comparison), 4 (adaption), 5 (loss aversion) and 6 (expectations). This part makes use of fixed-effects regressions (including socio-economic controls and time controls) for societal unease and life satisfaction. By comparing the results to the existing literature on behavioral effects on life satisfaction, the latter measure is included to test the validity of the employed techniques. The final part answers hypothesis 7 by comparing cultural determinants of societal unease to economic determinants. Fixed-effects regression are conducted for both determinants separately, combined, and interacted. Section 7 provides a conclusion and discussion of the results, including the limitations and policy relevance.

6.1 Economic aspect

Model 1 in table 2 is a simple pooled OLS regression of societal unease on the economic factors of interest in hypothesis 1 and 2, income and unemployment. To give a better sense of the scope of the outcome, a standardized coefficient is also given, which represents the difference compared to the mean in terms of standard deviations (SD). Model 1 shows that societal unease is positively associated

with unemployment, while negatively with income. The coefficient for the logarithm of income can be interpreted as follows: a 1% increase in income, is associated with a 0.0054 out of 10 decrease in unease. While the effect of income in the simple regression appears to be limited, the effect of unemployment is considerable. Unemployment is associated with a 0.14 SD increase relative to the mean of unease.

The simple OLS regression, however, is far from depicting a causal association. There are both time variant and time invariant variables biasing the outcome. In a first bid to correct for some of this bias, model 2 in table 2 adds a set of socio-economic controls to the simple pooled OLS regression. While the coefficient for unemployment remains unaffected, the effect of income diminishes. This means that some of the effect of income on unease in model 1 was due to omitting one or more factors that affect both income and unease (mainly education in this case). Model 2 also shows the significance of education in societal unease, and there puts the effect of unemployment on unease in perspective. It shows that the effect of unemployment roughly equals the difference between low and middle educated individuals, corrected for all other included variables.

Model 3 in table 2 corrects for the time invariant heterogeneity by looking at the effect of changes in employment status and income. Given that there is sufficient within person variation in employment status and income, the fixed-effects models are closer to causality by correcting for this time invariant influences (e.g. personality, family influences, genetics). While the effect of unemployment is slightly stronger compared to model 2, income now appears to have an opposite effect, decreasing unease. Model 4 adds control variables and time dummies to the fixed-effects regression, and shows that changes in income have no effect on societal unease, while becoming unemployed still appears to matter, though less than we concluded from the models 1 to 3. Only the number of children, degree of urbanization and civil status affect the result in model 4 compared to model 3, as the fixed-effects method does not account for time variant heterogeneity. Almost all change from model 3 to model 4 however, is caused by the inclusion of the time dummies.

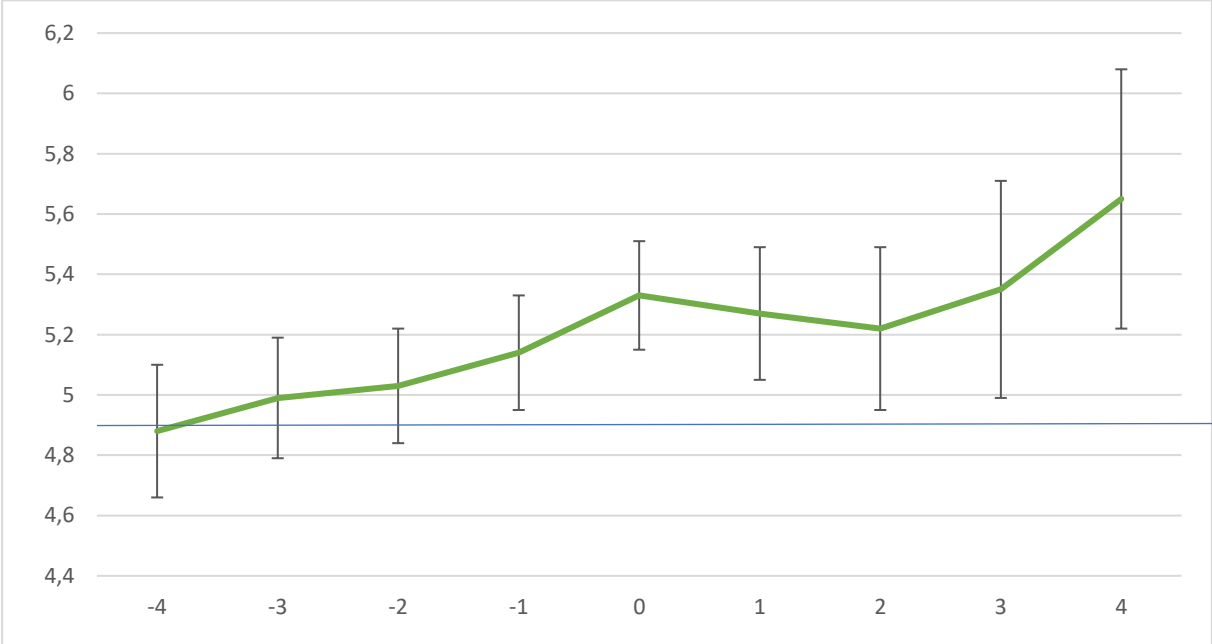
While becoming unemployed has a substantial effect on societal unease, it appears from the fixed-effects regression that changes in income do not affect societal unease. Table 4 in the appendix contains two models that serve as a robustness check for this result. Model 1 accounts for the possibility that it is the *change* in income that matters for societal unease, by replacing \ln income with the first difference of \ln income (i.e. the difference between one's current \ln income and the \ln income of the previous year). Model 1 however, shows an equally small effect of income on societal unease. Model 2 interacts the first difference of \ln income with a dummy variable with value 1 if the change in income is larger than 3% (either positive or negative), and 0 otherwise. This model accounts for the possibility that most of the effect of income on unease is driven by the large quantity of small yearly increments in income. Here again however, no effect of income on societal unease is found.

These results may contain some bias in the form of omitted time variant variables and reversed causality. On the basis of this analysis however, we can ultimately conclude that hypothesis 1 (on income) can be rejected, and hypothesis 2 (on unemployment) is not rejected. To gain more insight in the relation between unemployment and societal unease, graph 4 depicts the average level of unease for people who lose their job (the 0-point), and four years before (-4 to -1) and after job loss while still being unemployed (1 to 4). In this graph, the scope of the fixed-effects regression is between -1 and 1. The blue horizontal line indicates the average level of unease for the working population. It appears

that the respondents had increasing levels of unease in the years leading up to unemployment. However, only the average level of unease for people who are one year for job loss (-1) and afterwards (0 to 4) significantly differ from the average with 95% certainty. This can be seen from the vertical intervals at each point.

There are two reasons why people may become uneasy even before the year they lose their job: (1) some event tends to happen in the years before unemployment that increases unease, while it also leads to job loss. For example, people may get sick or become addicted, possibly leading to unease as well as job loss (2) People anticipate job loss, knowing it will happen in the future, and already become uneasy. Dutch contract legislation may foster this, as employers are obliged to turn temporary contracts in permanent contracts after two years. In many cases, employees on a flexible contract lose their job before that moment arrives. Employees on a flexible contract, which make up most of the people that lose their job, may anticipate these practices (Muffels, 2013). Interestingly, the same graph for life dissatisfaction instead of societal unease, shows a similar anticipation effect (see graph 2 in the appendix). In the years after job loss, the average level of unease remains more or less the same. People who lose their job and remain unemployed for several years do not seem to get much more uneasy, but consistently show a higher average level of unease than people who haven't lost their job.

Graph 4: average levels of unease around moment of job loss.



The blue horizontal line indicates the average level of unease for the working population.

Table 2: Pooled OLS and fixed effects regression output

Societal unease	Model 1: Pooled OLS				Model 2: Pooled OLS				Model 3: fixed effects				Model 4: fixed effects			
	β	St. β	SE	Sig	Beta	St. β	SE	Sig	Beta	St. β	SE	Sig	Beta	St. β	SE	Sig
Economic variables																
Unemployed	0,25	0,14	0,06	****	0,25	0,14	0,06	****	0,29	0,16	0,06	****	0,15	0,08	0,06	**
In income	-0,54	-0,27	0,03	****	-0,36	-0,18	0,03	****	0,17	0,08	0,05	****	0,03	0,02	0,05	n.s.
Controls																
Age					0,00	0,00	0,00	**								
Number of children					0,02	0,01	0,01	**								
Female																
Education (ref. = middle)																
Low					0,30	0,16	0,03	****								
High					-0,57	-0,32	0,03	****								
Degree of urbanization (ref. = moderate)																
High urbanization																
Low urbanization					-0,10	-0,05	0,03	**								
Civil Status (ref. = married)																
Divorced					0,11	0,06	0,04	**					-0,26	0,14	0,1	***
Widow(er)																
Never been married					-0,08	-0,04	0,03	**					0,17	0,10	0,08	**
Constant	9,11		0,21	****	7,72		0,24	****	3,43		0,40	****	4,85		1,13	****
Year dummies	No				No				No				Yes			
R ² (overall)	0,02				0,06				0,0075				0,007			
N	21.985				21.985				21.985				21.985			
n	6.057				6.057				6.057				6.057			
Significance indicated by: * p < 0,1; **p < 0,05; ***p < 0,01; ****p < 0,001.																
Controls are included in model 2 and model 4; results for insignificant controls are not shown.																
St. β (standardized beta) represents the difference compared to the mean in terms of standard deviations.																

6.2 Behavioral aspect

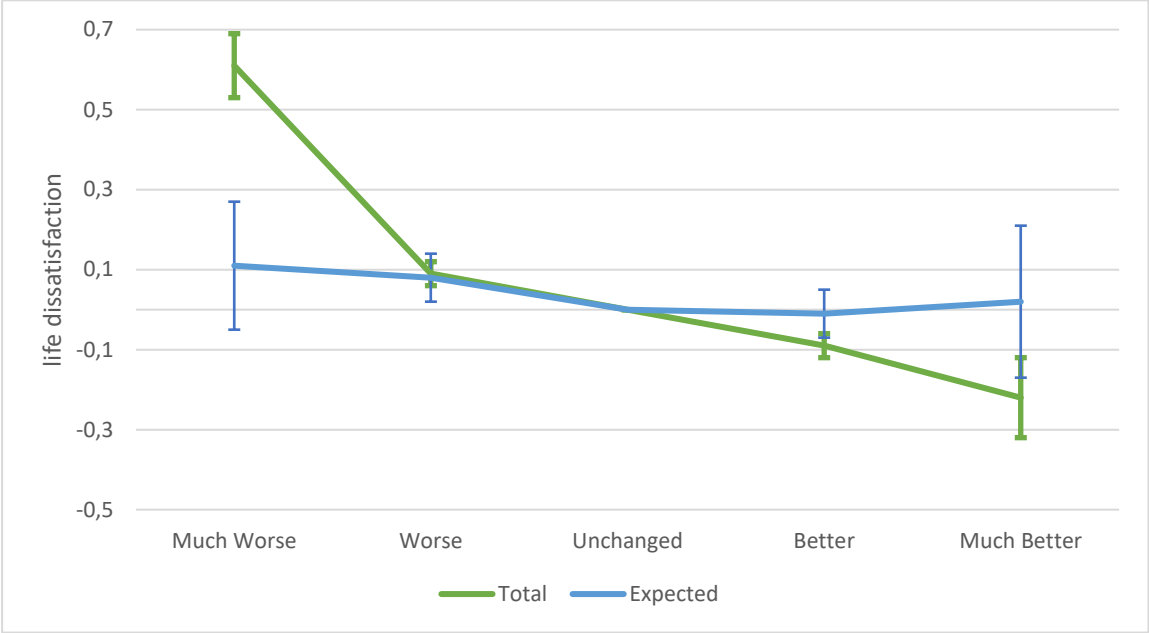
Table 3 shows the result of a set of fixed-effects regressions for loss aversion (model 1 and 2), the role of expectations (model 3) and loss aversion (model 4). Table 4 shows the same regressions, but for life satisfaction instead of societal unease. All four models contain the same control variables as used in table 1, including time dummies. Concerning loss aversion, model 1 in table 3 separates the effect of losing a job from the effect of acquiring a job. While losing a job increases unease by 0.11 SD relative to the mean, getting a job decreases unease by only 0.05 SD. Moreover, losing a job has a statistically significant effect, while getting a job doesn't. The loss aversion factor of around 2 is remarkably similar to the loss aversion factor of 2 to 2.5 which Kahneman and Tversky originally found (Kahneman & Tversky, 1971). Strangely however, table 4 (where life satisfaction is the dependent variable instead of societal unease) shows an increase in life satisfaction after job loss. Model 5 on adaption will (partly) clarify this, to which we will turn later. Model 2 confirms the existence of loss aversion by looking at subjective experiences of changes in the financial situation. If the financial situation got much worse compared to 1 year ago, unease increases. If the financial situation improved, unease decreases to a lesser extent. For some reason this effect is not present if the financial situation got a little worse. Judging from the regressions in model 1 and 2, hypothesis 3 (on loss aversion) is not rejected.

Concerning the role of expectations, graph 5 and 6 depict the effects of changes in the financial situation compared to one year ago for life dissatisfaction⁴ and societal unease respectively (these are graphical representations of model 2 and 3 in table 3 and 4). The vertical lines depict the 95% certainty interval. The blue line shows the fixed-effects results for the complete dataset, while the green line shows the effect when the outcome was expected one year earlier. For life dissatisfaction, having the right expectation about the financial situation has a strongly mitigating effect; expected bad outcomes lead to a smaller increase in life dissatisfaction, and expected good outcomes leading to no additional life satisfaction. The blue line in graph 6 also shows that loss aversion is also present for life satisfaction.

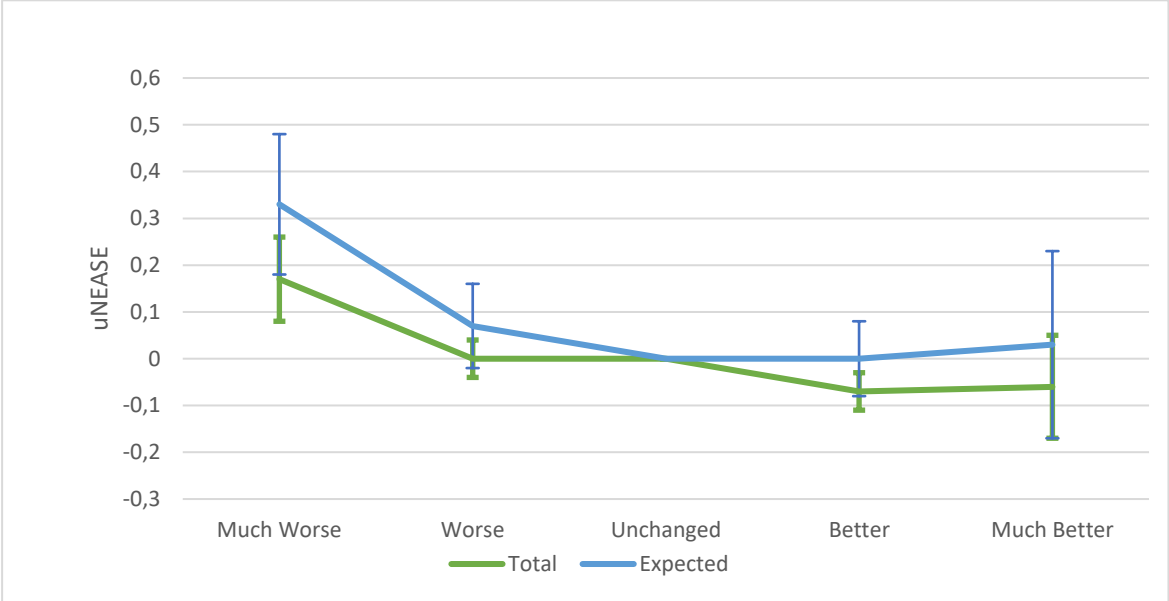
Turning to graph 6 on societal unease, right expectations now have a much weaker effect. To a lesser extent, the right half in graph 6 shows a similar result to graph 5: the positive outcome is undone when expected. Given the small difference and the large confidence intervals, no meaningful conclusion can be taken on that area of the graph. The left half of graph 6 leads to an opposite conclusion as taken from graph 5: if someone rightly expected their financial situation to get worse in the next year, their level of unease increases compared to the average scenario. In this case, there is an amplifying effect from right expectations, rather than a mitigating effect. One possible explanation for this is that people may expect their financial situation to get worse because of the political status quo. If that outcome is realized, people may blame the political system (whether the political system is actually to blame or not). Here again, the outcome is less certain than the outcome concerning life satisfaction in graph 5. In any case, while the hypothesized mitigating effect of right expectations is found for life (dis)satisfaction, hypothesis 6 is rejected.

⁴ To make graph 5 and 6 easier to compare, life satisfaction was recoded to life dissatisfaction.

Graph 5: effect of expectations for life dissatisfaction



Graph 6: effect of expectations for societal unease

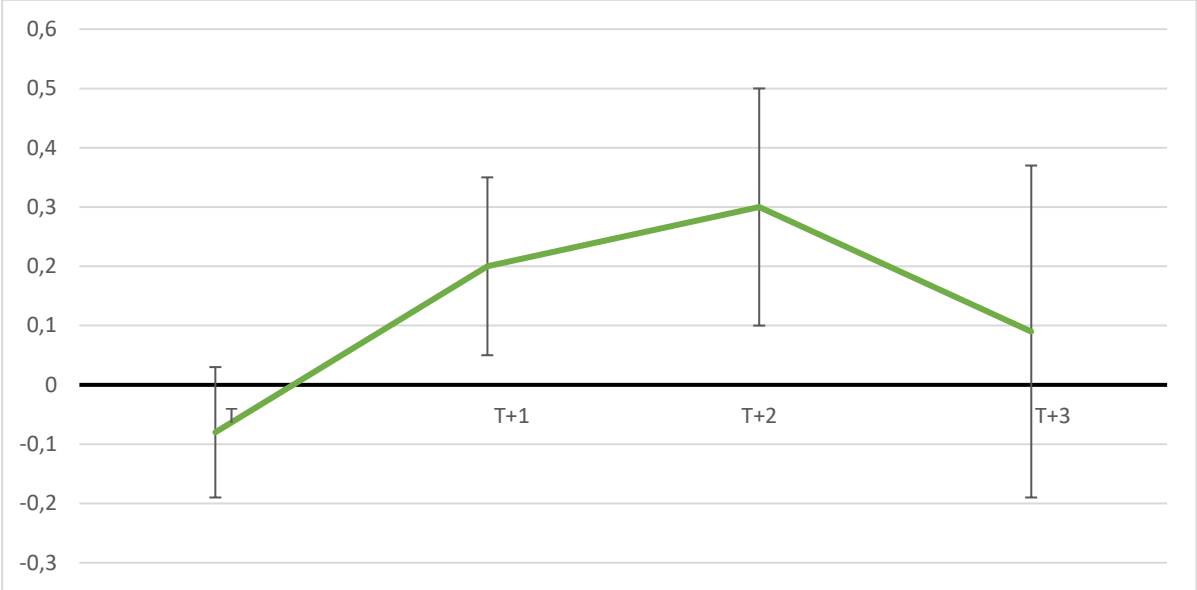


Graph 7 and 8 depict the results of model 4 in table 3 (societal unease) and 4 (life dissatisfaction). The graphs show the fixed effects regression results of life satisfaction and societal unease respectively on job loss in the year of job loss (T) and three consecutive years of unemployment (T+1, T+2 and T+3). The vertical lines represent the 95% certainty intervals. Note that the intervals become wider per year of unemployment; this is due to a decreasing number of respondents in the dataset that have the right number of consecutive years of unemployment after job loss.

Surprisingly, graph 7 shows no negative effect of job loss on life satisfaction at T. For two years after however, job loss has a considerable impact, indicating that people are slow to adapt to job loss. This

slow adaption to unemployment corresponds to similar studies for other countries, showing that people take several years to adapt in Germany (Lucas et al., 2004) and Britain (Clark & Georgellis, 2007). In graph 8 for societal unease, only the year of unemployment is associated with a level of unease that significantly differs from the mean with 95% certainty. This could mean that people adapt to job loss after the first year, but the certainty intervals are too wide to come to such a conclusion with a satisfying degree of certainty. Hypothesis 4, which says that people adapt to job loss, can therefore not be treated.

Graph 7: adaption effects for life dissatisfaction after job loss



Graph 8: adaption effects for societal unease after job loss

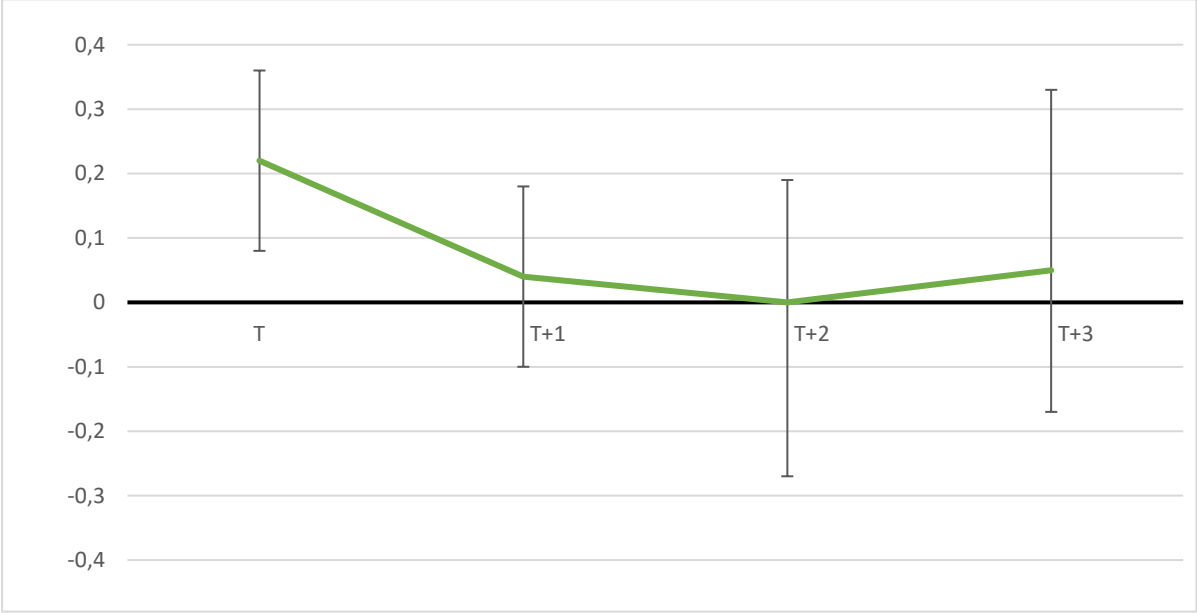


Table 3: fixed effects regression results of societal unease on behavioral variables

Societal unease	Model 1				Model 2				Model 3				Model 4			
	Beta	St. β	SE	Sig	Beta	St. β	SE	Sig	Beta	St. β	SE	Sig	Beta	St. β	SE	Sig
Loss aversion																
Lost job T	0,20	0,11	0,07	***									0,22		0,05	***
Got job T	-0,09	-0,05	0,09	n.s.												
Financial situation (ref. = unchanged)																
Got a lot worse					0,17	0,09	0,06	***	-0,03	-0,02	0,10	n.s.				
Got a little worse					0,00	0,00	0,02	n.s.	-0,02	-0,01	0,03	n.s.				
Got a little better					-0,07	-0,04	0,18	****	-0,08	-0,04	0,03	***				
Got a lot better					-0,06	-0,03	0,07	n.s.	-0,04	-0,02	0,10	n.s.				
Expectations																
Got a lot worse * expected									0,33	0,18	0,12	***				
Got a little worse * expected									0,07	0,04	0,05	n.s.				
Got a little better * expected									0,00	0,00	0,04	n.s.				
Got a lot better * expected									0,03	0,02	0,14	n.s.				
Adaption																
Out of job since T-1													0,04	0,02	0,1	n.s.
Out of job since T-2													0,00	0,00	0,12	n.s.
Out of job since T-3													0,05	0,03	0,15	n.s.
Constant	4,92		1,13	****	4,83		0,50	****	5,03		0,6	****	4,90		1,13	****
N	21.985				32.048				32.048				21.985			
n	6.057				8.219				8.219				6.057			

Significance indicated by: * p < 0,1; **p < 0,05; ***p < 0,01; ****p < 0,001.
 All models have the same controls as table 1, including time dummies.
 The number of observations in model 1 and 2 is smaller than the number of observations in model 2 and 3. This is because the former models concern the working population, while the latter models also apply to the non-working population (students, pensioners, housemen/housewives).
 St. β (standardized beta) represents the difference compared to the mean in terms of standard deviations.

Table 4: fixed effects regression results of life satisfaction on behavioral variables

Life satisfaction	Model 1				Model 2				Model 3				Model 4			
	Beta	St. β	SE	Sig	Beta	St. β	SE	Sig	Beta	St. β	SE	Sig	Beta	St. β	SE	Sig
Loss aversion																
Lost job T	0,12	0,09	0,06	*									0,10		0,06	n.s.
Got job T	-0,05	-0,04	0,08	n.s.						1.386						
Financial situation (ref. = unchanged)																
Got a lot worse					-0,61	-0,44	0,05	****	-0,55	-0,40	0,08	****				
Got worse					-0,09	-0,06	0,02	****	-0,05	-0,04	0,03	*				
Got better					0,09	0,06	0,01	****	0,08	0,06	0,02	****				
Got a lot better					0,22	0,16	0,06	****	0,27	0,19	0,09	***				
Expectations																
Got a lot worse * expected									-0,11	-0,08	0,1	n.s.				
Got a little worse * expected									-0,08	-0,06	0,04	**				
Got a little better * expected									0,01	0,01	0,03	n.s.				
Got a lot better * expected									-0,02	-0,01	0,12	n.s.				
Adaption																
Out of job since T-1													-0,18	-0,13	0,08	**
Out of job since T-2													-0,24	-0,18	0,1	***
Out of job since T-3													-0,06	-0,04	0,14	n.s.
Constant	7,50		1,00	****	7,87		0,39	****	7,98		0,39	****	7,60		1,00	****
N	19.329				30.526				25.360				19.329			
n	5.768				8.704				7.351				5.768			

Significance indicated by: * $p < 0,1$; ** $p < 0,05$; *** $p < 0,01$; **** $p < 0,001$.

All models have the same controls as table 1, including time dummies.

The number of observations in model 1 and 2 is smaller than the number of observations in model 2 and 3. This is because the former models concern the working population, while the latter models also apply to the non-working population (students, pensioners, housemen/housewives)

St. β (standardized beta) represents the difference compared to the mean in terms of standard deviations.

6.3 Cultural aspect

This section compares the influence of economic factors on societal unease to the influence of cultural factors. Table 5 contains fixed-effects estimation models, which again contain the same control variables as used in table 1, including time dummies. Model 1 tests for the economic insecurity thesis. In addition to the previously included income and unemployment variable, the subjective measure financial dissatisfaction is included. Model 2 then tests the cultural backlash thesis, including variables for cultural protectionism, attitude towards immigration (xenophobia) and differential nativism. All cultural variables and financial dissatisfaction are measured on a 5-point-scale and hence interpretable in the same way. Model 3 combines the first two models to see if this increases the explanatory power. Model 4 adds interactions between unemployment and the cultural variables to model 3.

In addition to the previously found strong effect of unemployment, model 1 shows a highly significant effect for financial dissatisfaction. This effect remains unchanged when cultural or interaction variables are added. Model 2 shows that all cultural variables are highly significant, although the coefficients differ in size. Cultural protectionism and xenophobia appear to be larger contributors to societal unease than differential nativism. As these are fixed-effects models, it should be kept in mind that these models estimate the effect of changes. Model 2, for example, estimates that if someone changes his attitude from 'neither agree nor disagree' to 'agree' when asked if it is good if society consists of people from different cultures, his unease increases by 0.05 SD relative to the mean. Concerning model 4, only the interaction of unemployment and xenophobia has a (relatively large) effect. The inclusion of the interaction terms renders unemployment insignificant.

The Akaike information criterion (AIC) and Bayesian information criterion (BIC) are suitable measures to compare the explanatory power of different models. The AIC tends to underfit the model, and the BIC tends to overfit the model (Coffman et al., 2018). Therefore, both measures are used to compare the four models in table 5. The lower the number of the AIC and BIC, the better the fit. According to Burnham & Anderson (2002), differences larger than 2 points can be considered insignificant. Table 5 shows that both the AIC and BIC of the cultural model is 33 points smaller than the economic model, meaning that cultural values explain differences in societal unease better than economic factors. While economic variables are of importance to explain societal unease, cultural values therefore seem to be of greater importance. This finding is in line with Inglehart & Norris (2016) and Oesch (2008), who conduct a similar analysis on the European level. Hypothesis 6, which says that economic factors are of greater importance than cultural factors, is therefore rejected. The combined and interaction model both have a lower AIC and BIC than the cultural model, meaning that the causes of societal unease are to be found in cultural as well as economic variables. The interaction model has a slightly lower AIC, and a larger BIC than the combined model. Between these two it is therefore ambiguous which one is to be preferred.

Table 5: fixed effects regression results of societal unease on economic and cultural variables

Societal unease	Model 1: Economic insecurity thesis				Model 2: Cultural backlash thesis				Model 3: Combined				Model 4: Interacted			
	Beta		SE	Sig	Beta		SE	Sig	Beta		SE	Sig	Beta		SE	Sig
Economic variables																
Unemployed	0,15	0,08	0,07	**					0,15	0,08	0,07	**	0,28	0,16	0,2	n.s.
In income	0,03	0,02	0,06	n.s.					0,03	0,02	0,06	n.s.	0,03	0,02	0,06	n.s.
Financial dissatisfaction	0,09	0,05	0,02	****					0,09	0,05	0,02	****	0,09	0,05	0,02	****
Cultural variables																
Cultural protectionism					0,10	0,05	0,01	****	0,08	0,05	0,02	****	0,08	0,04	0,02	****
Xenophobia					0,08	0,04	0,10	****	0,07	0,04	0,02	****	0,07	0,04	0,02	****
Differential nativism					0,04	0,02	0,01	****	0,04	0,02	0,01	****	0,04	0,02	0,02	****
Interaction variables																
Unemployed*Cultural prot.													-0,13	-0,07	0,07	n.s.
Unemployed*Xenophobia													0,13	0,07	0,06	**
Unemployed*Differential nativ.													-0,09	-0,05	0,06	n.s.
Summary statistics																
Constant	3,76		1,21	***	4,13		0,88	****	3,37		1,21	***	3,36		1,21	***
Year dummies	Yes				Yes				Yes				Yes			
R ²	0,031				0,046				0,062				0,061			
AIC	45815,98				45782,58				45748,17				45743,09			
BIC	45971,05				45937,65				45926,50				45944,68			
N	17.214				17.214				17.214				17.214			
n	4.987				4.987				4.987				4.987			
Significance indicated by: * p < 0,1; **p < 0,05; ***p < 0,01; ****p < 0,001.																
All models have the same controls as table 1, including time dummies.																
St. β (standardized beta) represents the difference compared to the mean in terms of standard deviations.																

7. Conclusion & discussion

Societal unease is characterized by a deep discontent and loss of faith in the political status quo. In a political context, this phenomenon is related to anti-establishment parties – especially in cases where such parties are fostered by protest votes. More generally, societal unease appeals to the perception that society is heading in the wrong direction, which is the belief of almost half of the Dutch population (Bijl et al., 2017). The aim of this paper was to shed more light on the significance of economic factors on societal unease in the Netherlands. Six hypotheses were formulated, concerning an economic, behavioral and cultural aspect.

Looking at the development of societal unease and the economy since 2008, there are some strong indications of a connection. Societal unease is strongly correlated with unemployment, and is increasingly anti-cyclical for lower levels of education – groups in which more people become unemployed and get flexible contracts during crises. The first two hypotheses were therefore that a lower income (H1) and unemployment (H2) would lead to unease. Using a pooled OLS estimation, a small negative effect of income on unease was found, corresponding to previous literature of unease in the Netherlands (Steenvoorden, 2016; Dekker et al., 2013). However, the longitudinal nature of the available data allowed to control for time-invariant heterogeneity, such as social background and personality, by using fixed effects estimation. While this is particularly important for a subjective measure as societal unease, this is the first Dutch paper to use this specification. Surprisingly, no effect of income on societal unease was found. As a robustness check for this result, the same analysis was conducted with the first difference of income, and for changes in income larger than 3%. As no effect of income could be found, the first hypothesis was rejected. Nevertheless, becoming unemployed has a considerable effect on societal unease. This is in line with previous literature, showing an unambiguous effect of unemployment on trust in political institutions and populism. The second hypothesis was therefore accepted. Given the absence of a relation between changes in income and societal unease, and given the presence of an effect from unemployment, status or the meaning attained from practicing a profession is likely the connecting factor between economic fluctuations and societal unease.

This paper furthermore considered the effect of behavioral aspects. As no effect was found from income, this part only focused on unemployment. Societal unease is based on perceptions, which means it also depends on the way unemployment is perceived. Therefore, three behavioral explanations for the Easterlin Paradox were considered. The first one being loss aversion (H3), of which there are clear signs. Losing a job was found to be twice as consequential for societal unease as getting a job. Furthermore, people who indicate that their financial situation has gotten worse compared to one year ago, undergo an asymmetric change in unease compared to people who experience an improvement. The so-called loss aversion factors corresponds to the originally found factor by Kahneman and Tversky of 2 – 2,5. The third hypothesis was therefore not rejected.

Having the right expectations (H4) about one's financial situation in the coming year has a mitigating effect on life dissatisfaction. Negative incomes become less bad, and positive outcomes less good. For societal unease however, right expectations have a less significant effect. If anything, having the right expectation about one's future financial situation, will increase unease if the financial situation becomes worse. A potential explanation for this is that people who think that their financial situation

will worsen due to external circumstances see there supposition confirmed, and consequently lose faith in society. In any case, there no indication that right expectations have a mitigating effect when it comes to societal unease. The fourth hypothesis was therefore rejected.

Moreover, this paper considered the extent to which people adapt to changes in economic factors in terms of unease (H5). After losing a job, people need several years to recover in terms of life satisfaction, corresponding to similar studies that find that people take several years to adapt to job loss in Germany (Lucas et al., 2004) and Britain (Clark & Georgellis, 2007). For societal unease however, only the first year of job loss is associated with an increase. While it may be possible that people adapt afterwards, the result is too uncertain to treat the fifth hypothesis. Further research on adaption effect regarding societal unease would be required.

The final part of this paper addressed whether economic variables or cultural variables are more consequential for the level of societal unease in the Netherlands. In line with international findings, cultural factors with respect to immigration and cultural values appear to explain changes in unease better than economic factors. The sixth hypothesis was therefore rejected. Nevertheless, unemployment and financial satisfaction are important determinants of societal unease.

Several policy implications follow from these conclusions. First of all, this paper confirms the importance of reducing unemployment for the mitigation of societal unease, while changes in income appear to be unrelated to unease. This implies that active labor market policy, such as employment subsidies or training schemes, may be more effective in reducing societal unease than policy that merely looks to protect income during unemployment. Furthermore, the presence of loss aversion stresses the importance of economic stability. A healthy financial sector (e.g. banks having larger reserves) and anti-cyclical fiscal policy are therefore also important to reduce the level of societal unease. Economic stability is even more important for people's life satisfaction, which is associated with a stronger loss aversion. Moreover, the effect of job loss on life satisfaction is felt years after the event. Stability of life satisfaction can be attained by fostering right expectations of one's future financial situation. For example by means of clear communication of the consequences of government policy. Lastly, this paper confirms the conventional wisdom that societal unease largely stems from issues related to immigration, cultural protection and identity. Economic policy alone will therefore not suffice to curb societal unease. It remains an open question to what extent the government can and should attempt to mitigate societal unease by focusing on cultural factors like identity and cultural conservatism.

This paper contains several limitations that stress the importance of further research. First of all, given the low rate of unemployment, a larger dataset is desirable when it comes to unemployment. Second, it would be useful to find a reliable instrumental variable to assess the relation between societal unease and economic factors. The fixed effects method likely contains some bias from unobserved time-variant heterogeneity. In some cases, reversed causality may be at play; especially in cases where both the dependent and independent variable are subjective measures. For example, feeling uneasy may affect the extent to which someone is satisfied with his or her financial situation, or the wish for cultural protection. Third, this paper does not consider the effect of inequality on societal unease, while inequality is often regarded as the main economic driver behind societal unease. If this is the case, this paper's finding that changes in income have no effect on unease may be incomplete. Further research will need to point out whether this is true.

8. Bibliography

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9. Appendix

Graph 1: share of flexible contracts by educational level

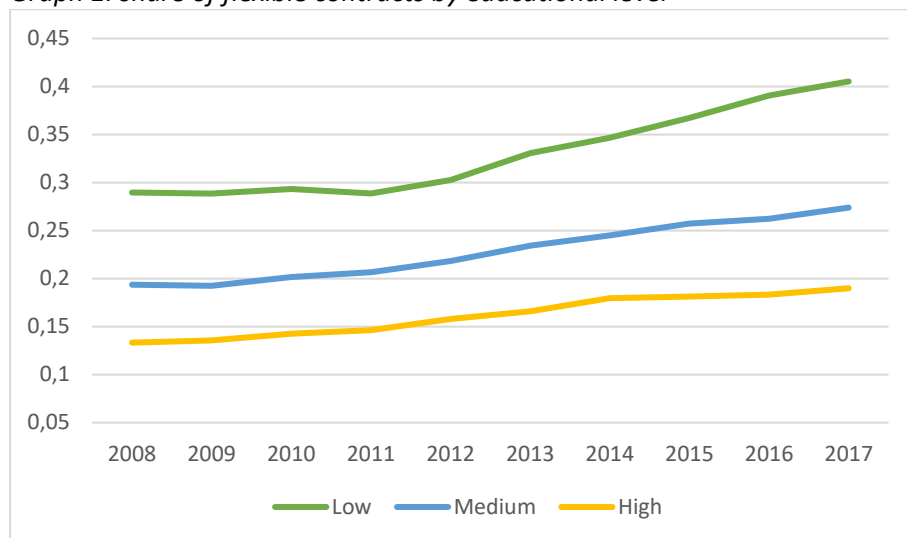


Table 1: average levels of unease per subgroup

	mean	Δ	N
Income			
<2000	5.24	-0.32*	11302
2000 - 4000	4.85	0.07	21348
4000 - 6000	4.48	0.44	6063
6000 - 8000	4.32	0.60	1369
Work status			
employed	4.85	0.07	26974
unemployed	5.35	-0.43*	1374
Sex			
male	4.92	0.00	24157
female	4.92	0.00	26546
Age			
15 - 30	4.64	0.28	7932
30 - 45	4.86	0.06	11887
45 - 60	5.05	-0.13*	14824
60 - 75	5.03	-0.11*	12934
75 - 90	4.72	0.10	3126
Education			
low	5.29	-0.37*	16779
middle	4.96	-0.04*	17331
high	4.49	0.43	16493
Party			
VVD	3.85	0.91	4038
CDA	4.66	0.10	2269
PvdA	4.40	0.36	2724
PVV	4.92	-0.16*	2328
SP	4.95	-0.19*	2024
D66	4.41	0.35	2013
GL	4.38	0.38	1127
CU	4.39	0.37	523
Would not vote	5.87	-1.11*	1763
An asterisk indicates that the difference represents a significant difference from the mean on the 95% level.			

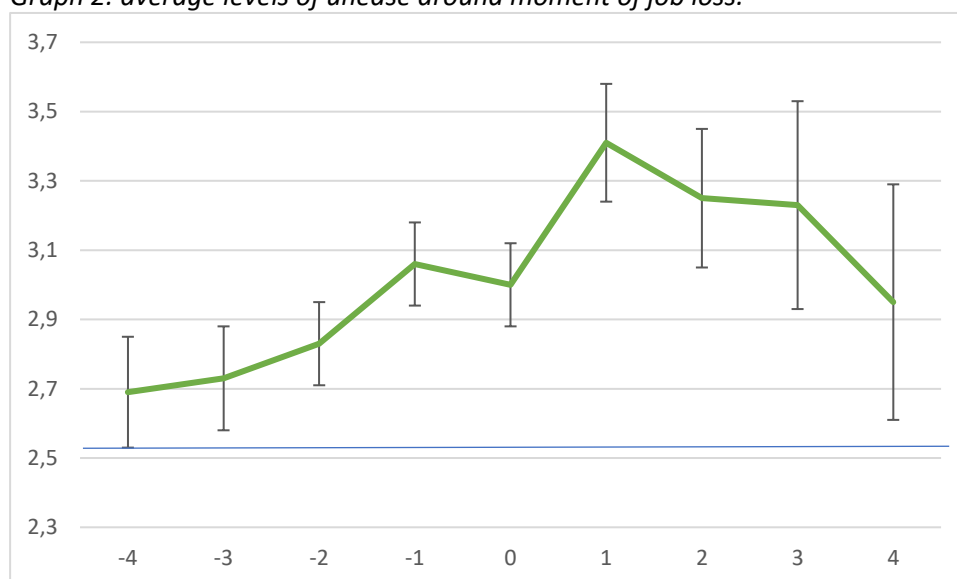
Table 2: correlation table for the main variables

	Societal unease	Income	Unemployed	Xenophobia	Dif. nativism	Cult. Conservatism	Education
Societal unease	1	/	/	/	/	/	/
Income	-0,15	1	/	/	/	/	/
Unemployed	0,06	-0,16	1	/	/	/	/
Xenophobia	0,21	-0,09	0,01	1	/	/	/
Dif. Nativism	0,18	-0,06	0,01	0,39	1	/	/
Cult. Conservatism	0,21	-0,1	0	0,53	0,41	1	/
Fin. Dissat	0,26	-0,25	0,19	0,09	0,08	0,07	
Education	-0,17	0,25	-0,06	-0,24	-0,15	-0,23	1

Table 3: description of variables

	Original question or description of variable	LISS code
Dependent variable		
Trust in government	Can you indicate, on a scale from 0 to 10, how much confidence you personally have in each of the following institutions: government.	013
Trust in parliament	Can you indicate, on a scale from 0 to 10, how much confidence you personally have in each of the following institutions: parliament.	014
Trust in politicians	Can you indicate, on a scale from 0 to 10, how much confidence you personally have in each of the following institutions: politicians.	017
Trust in political parties	Can you indicate, on a scale from 0 to 10, how much confidence you personally have in each of the following institutions: political parties.	018
Life satisfaction	How satisfied are you with the life you lead at the moment?	011
Independent variables		
Income	Imputed monthly net income of all household members combined.	nettohh_f
Main occupation	Choice between 14 categories, including 'job seeker following job loss' and 'paid employment'	belbezig
Financial improvement	Can you indicate, on a scale from 0 to 10, whether your financial situation has gotten better or worse compared to one year ago?	243
Financial expectation	Do you expect your financial situation to get better or worse over the coming 12 months?	261
Financial satisfaction	How satisfied are you with your financial situation?	006
Cultural protectionism	It is good if society consists of people from different cultures (answers on a 5-point-scale from fully disagree to fully agree)	116
Xenophobia	There are too many people of foreign origin or descent in the Netherlands (answers on a 5-point-scale from fully disagree to fully agree)	120
Differential nativism	Legally residing foreigners should be entitled to the same social security as Dutch citizens (answers on a 5-point-scale from fully disagree to fully agree)	119
Control variables		
Number of children	Number of living-at-home children in the household	aantalki
Education	Level of education in CBS (Statistics Netherlands) categories	oplcat
Degree of urbanization	The variable has been constructed based on the postal code of the household. 5 categories, from extremely urban to not urban	sted
Civil status	Using the list below, can you please indicate the civil status of each member of your household? Married, separated, divorced, widow(er), never been married	burgstat
Year of birth	Please enter your birth data. (used to derive age)	gebjaar

Graph 2: average levels of unease around moment of job loss.



The blue horizontal line indicates the average level of unease for the working population

Table 4: first difference of income

Societal unease	Model 1: first difference			Model 2: large changes		
	Beta	SE	Sig	Beta	SE	Sig
Economic variables						
Unemployed	0,15	0,06	**	0,15	0,06	**
First difference ln income	0,04	0,05	n.s.			
First difference ln income: changes > 3%				0,01	0,05	n.s.
Year dummies	Yes			Yes		
R ² (overall)	0,007			0,007		
N	21.985			21.985		
n	6.057			6.057		

Significance indicated by: * p < 0,1; **p < 0,05; ***p < 0,01; ****p < 0,001.
Control variables for both models: level of education, age, urbanization, number of kids, civil status, sex and year dummies.