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# 387

Adrian Chadi

**Regional Unemployment and  
Norm-Induced Effects on Life Satisfaction**

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# Regional Unemployment and Norm-Induced Effects on Life Satisfaction

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## *Abstract*

While rising unemployment generally reduces people's happiness, researchers argue that there is a compensating social-norm effect for the unemployed individual, who might suffer less when it is more common to be unemployed. This empirical study, however, rejects this thesis for German panel data and finds individual unemployment to be even more hurtful when aggregate unemployment is higher. On the other hand, an extended model that separately considers individuals who feel stigmatised from living off public funds yields strong evidence that this group of people does in fact suffer less when the normative pressure to earn one's own living is lower.

**JEL Classification Codes:** I3, J6

**Keywords:** social norms, unemployment, well-being, social benefits, labour market policies

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## INTRODUCTION

To be unemployed is one of the most significant causes of unhappiness. As does individual unemployment, aggregate unemployment affects utility levels, but the effect is less clear. Studies using macroeconomic data report that higher levels of unemployment generally lead to lower levels of happiness among a population, which researchers refer to as the fear-of-unemployment effect (see, e.g., Di Tella et al., 2001; 2003). On closer examination, aggregate unemployment may affect everyone, but surely not in the same way. While, in the case of rising unemployment, employed individuals suffer from reduced job security (see, e.g., Luechinger et al., 2010), the unemployed undergo a different experience, since they have no job to lose. At first glance, one could suggest that high unemployment rates have a particularly negative impact on the well-being of unemployed people; because the fewer jobs are available the worse are the prospects for an end to the distressing situation. Interestingly, although this argument is mentioned in the happiness literature, the focus is primarily on a different connection between individual and aggregate unemployment.<sup>1</sup>

“Unemployment as a social norm” by Clark (2003) is certainly the most well-known and oft-cited article in a research field in which it is argued that individual unemployment induces smaller reductions in well-being when more jobless persons are around. Using British panel data, Clark finds the well-being of the unemployed positively correlates with regional unemployment.<sup>2</sup> This positive interaction between the two disutility determinants, individual and aggregate unemployment, is regarded as a social-norm effect, which refers to a specific attribute commonly associated with norms. Because norm-conformity is determined by the level of conformity among those considered relevant others, the level of normative pressure often varies substantially between social groups or regions (see, e.g., Elster, 1989a; Young, 2007). Based on this aspect, researchers conjecture (regional) differences in the disutility caused by norm-violation, which then can be interpreted as evidence for the effect of a social norm. In concrete terms, non-compliance with the norm leads to greater unhappiness in regions with generally greater norm-adherence, while normative pressure and corresponding effects on norm-violators are weaker when fewer people adhere to the norm, so that norm-violation is more common.

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<sup>1</sup> For general surveys in happiness research, see, e.g., Frey and Stutzer (2002; 2005), Frey (2008) and van Praag and Ferrer-i-Carbonell (2008). Studies specifically investigating the disutility effects of individual unemployment include those of Clark and Oswald (1994), Winkelmann and Winkelmann (1998), Clark et al. (2001), Carroll (2007), Chadi (2010) and Knabe and Raetzl (2011).

<sup>2</sup> While Clark (2003) also examines the role of unemployment among other reference groups, namely unemployment at the partner and household levels, the discussion in this study focuses only on the relationship between individual unemployment and others' unemployment at the regional level.

In the meantime, there are a number of empirical studies about this happiness-increasing interaction between the effects of individual and aggregate unemployment (e.g., Powdthavee, 2007; Shields and Wheatley Price, 2005; Shields et al., 2009). Nevertheless, after reproducing this finding with German panel data (see Clark et al., 2009), Clark et al. (2010) go a step further by introducing an approach they expect to be more appropriate. While this obviously raises questions about potential shortcomings of the standard approach, it is noteworthy that the authors integrate information about the job prospects of the unemployed into their analysis. For certain, the standard model with only one interaction variable for the social-norm effect suffers a major problem. While there may be a mitigating effect when one's own unemployment is not an isolated incident, increasing regional unemployment simultaneously reduces the prospects of getting out of the misery, which might be even more painful than the general fear-of-unemployment effect experienced by the still employed. Therefore, it can be assumed there are two countering effects that cannot be identified appropriately by the use of only one variable. In order to solve this problem, this paper proposes a novel and more complex approach that is based on a specific understanding of the social norm to be examined.

In another empirical study of regional differences in unemployment-induced unhappiness, Stutzer and Lalive (2004) refer to philosopher and social scientist Elster (1989b, p. 121) for a definition of the norm they are out to investigate: "There is a social norm against living off other people and a corresponding normative pressure to earn one's income from work." At first glance, one might deduce that violation of such a norm is equivalent to being unemployed. However, a social norm against living off other people could also be violated in the case of employed individuals who receive social benefits in addition to their earned income when they otherwise would have less than the subsistence level.<sup>3</sup> Hence, it is quite possible to distinguish between unemployment and norm-violation at the individual level. Regarding the regional level, the Stutzer and Lalive (2004) study actually gives an example of how the norm aspect can be separated from the issue of unemployment. Utilising the results of a Swiss referendum, the authors argue that votes in favour of a reduction in unemployment benefits can be connected to the belief that it is not right to live off public funds. Hence, the higher the regional percentage of voters approving the benefit cut, the stronger the social norm, which is thereby measured not by unemployment rates, as it is usually done.

The insertion of a separate measure for norm strength allows using the information about unemployment rates for a different purpose, which here is to capture the impact of varying job

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<sup>3</sup> Note that, for reasons of simplicity, and in accordance with the original definition of the social norm, the term "living off other people" is used throughout the paper despite its negative connotations.

prospects on unemployed people's well-being. Consequently, this empirical study focuses on multiple interactions in order to yield convincing evidence for the so-called social-norm effect. On the one hand, the utility effect of the interaction between aggregate and individual unemployment is expected to yield a negative outcome, demonstrating the unhappiness-increasing impact of worse job prospects on unemployed people in particular. On the other, the interaction between the strength of the social norm in a region and individual non-compliance with the norm, which is the case for those living off public funds, is expected to demonstrate the norm effect, implying that stronger/weaker normative pressure leads to larger/smaller reductions in well-being for those violating the norm.

The paper proceeds as follows. Section I offers information on the data and the empirical framework, including a detailed discussion of how to measure norm-violation at the individual level and how to find an appropriate measure for the strength of the social norm at the regional level. Section II gives the empirical results, which are interpreted and discussed in Section III, also with respect to potential conclusions for labour market policies.

## I. DATA AND EMPIRICAL FRAMEWORK

The dataset used in this empirical investigation covers the period from 1999 to 2009 and comes from the German Socio-Economic Panel Study (SOEP), a large representative survey of German households (see Wagner et al., 2007). In the SOEP questionnaire, respondents evaluate their general life satisfaction on a scale ranging from 0 ("completely dissatisfied") to 10 ("completely satisfied"), which then can be used as a proxy for individual utility levels. Since changes in life satisfaction are triggered by a series of relevant factors, such as differences in income, this study conducts a multiple regression analysis that includes a control set of factors potentially determining individual well-being in order to isolate unemployment-induced disutility effects as well as the impact of being in non-compliance with the norm against living off other people.

One of the most important factors influencing well-being levels is the time-invariant personality trait, which results from genetic inheritance (see Lykken and Tellegen, 1996; De Neve *et al.*, 2010). From a methodological perspective, this suggests the use of fixed-effects models that take into account these given, but unobservable factors (see, e.g., Frijters et al., 2004; Knabe and Raetzl, 2011). In their methodological discussion, Ferrer-i-Carbonell and Frijters (2004) argue that the consideration of fixed individual effects is indeed substantial, and likely to be more important than the ordinality of the life satisfaction

responses. Hence, the standard ordinary least squares (OLS) method is certainly an appropriate tool in happiness research, although economists, in particular, have always been rather reluctant to interpret satisfaction data as cardinal. In order to address suchlike scepticism, and to confirm the robustness of the findings, the standard OLS method is supplemented here by the use of the van Praag and Ferrer-i-Carbonell (2008) probit-adjusted ordinary least squares (POLS) method. Before running the regression, POLS requires a transformation of the discrete happiness scores into values on the real axis by considering the actual sample distribution. Since interaction variables play a major role in the empirical analysis, the POLS method is regarded here as superior to non-linear regression models with their well-known pitfalls (see Ai and Norton, 2003).

Analysing the interaction between unemployment-induced disutility effects and aggregate unemployment levels is quite simple from a technical perspective. For the latter, publicly available data from the German Employment Office is used. In concrete terms, aggregate unemployment is the annual unemployment rate at the (federal) state level in Germany.<sup>4</sup> On the other hand, the measurement of the regional strength of the social norm, as well as the precise distinction between individuals in compliance with the norm and those violating it, requires a detailed discussion, especially against the background of the given social system in the country to be examined.

#### *Individual (Non-)Compliance with the Social Norm*

In order to analyse disutility effects from living off other people, it is necessary to establish exactly when this is the case. For instance, as long as it is not means-tested, the receipt of child benefits surely does not conflict with the norm of earning one's own living. In Germany, nearly all parents would otherwise become norm-violators simply by virtue of having children. Therefore, in order to understand which benefits are relevant to the present investigation, it is necessary to take a brief look at the German social system.

In Germany, individuals initially receive benefits called "Arbeitslosengeld" (ALG) from the quasi-governmental unemployment insurance if they become unemployed and the requirements are met. Until 2004, unemployed persons received unemployment assistance after a limited period of ALG receipts. This follow-up benefit programme was subsequently merged with the social assistance programme into one transfer scheme referred to as ALG2,

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<sup>4</sup> As can be seen in Table 2, the division of Germany into regions in this study differs (slightly) from the official classification of the German federal states. Note that, in contrast to the SOEP data, the available unemployment data are not reported separately for East and West Berlin. On the other hand, the federal states of Rhineland-Palatinate and Saarland are not reported separately by the SOEP.

as part of the recent German labour market reforms. Since this package of legislation (the so-called Hartz concept) came into effect fully on January 1, 2005, ALG2 has assumed the central role in the German social system. While eligibility is calculated on a household basis, this benefit also targets low-income earners when household income is below a certain level.<sup>5</sup> Because of the option of topping up low earnings, ALG2 allows wages to fall, while a minimum level of income (needed for basic necessities) is always guaranteed, if necessary, by additional payments from public funds.

Further relevant types of social benefits for which households in Germany can be eligible are housing assistance, social assistance<sup>6</sup> and basic protection for the elderly or those with a reduced capacity to work, the latter having been paid since 2005. Concerning the unemployment assistance, as the predecessor of ALG2, it must be mentioned that this benefit was not determined on a household, but on an individual basis. On the other hand, since most benefits are not paid to individuals but to households, the best way to distinguish between those who comply with the social norm against living off public funds and those who do not is to compare households. Therefore, the group of norm-violators consists of individuals living in households that receive at least one of the abovementioned benefits (see Table 1).<sup>7</sup>

It is significant that, because of its particular nature, the unemployment insurance benefit ALG is not in the bundle of benefits classified as relevant to the social norm to be investigated here. Per definition, when people receive social benefits financed by the community, i.e., by “others”, the norm against living off other people is violated. This seems to be the case with ALG as well, but because of its configuration as a payment from an insurance system, into which the unemployed individual has previously contributed on a mandatory basis, it is certainly perceived differently. While recipients of taxpayer-funded welfare benefits, such as social assistance, are typically seen as those who are living off others, ALG benefits are rather regarded as “citizens’ rights” (Lindbeck, 1995, p. 481). Therefore, people are less stigmatised and less reluctant to live on unemployment insurance benefits.

*[Table 1 about here]*

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<sup>5</sup> The law defines persons as either directly eligible or as part of a “Bedarfsgemeinschaft”, which, in order to reduce complexity, is treated here as a regular household.

<sup>6</sup> Since the labour market reforms have been implemented, many employable persons who would previously have been eligible for social assistance are receiving ALG2, but a small number of households still participate in the “Sozialhilfe”.

<sup>7</sup> With regard to the empirical investigation, this means all members of households with at least one recipient of the individually paid unemployment assistance (in the period up to 2005) are treated technically just as those in ALG2-receiving households (in the period since 2005).



For each year and each category, Table 1 gives observation numbers in the SOEP data sample, which consists of 123,239 observations from 24,371 (either employed or unemployed) individuals aged 18 to 65 who lived and stayed in one region during the entire period of investigation. The categories of interest in this study are unemployed registered individuals (UNEMP) and those living in households that receive benefits classified as relevant to the social norm against living off other people (SN). While relevant numbers of unemployed people receive ALG or even do without any of the previously mentioned payments, about half of them live in benefit-receiving households, so that the groups of the unemployed and those violating the norm logically overlap (UNEMP x SN). Nevertheless, in the context of a particular national social system, this segregation into two categories is quite possible at the individual level. Similarly, the distinction between the aspects at the regional level requires a thorough discussion of the issue of measurement as well.

#### *The Strength of the Social Norm at the Regional Level*

There are basically two ways to determine the strength of a social norm in a given region. One is to establish people's beliefs, i.e., what they actually think in regard to the behavioural rule to be examined. The other is to use information on people's actual behaviour, for which, according to researchers, the unemployment rate can be utilised as a proxy. For the above reasons, the latter idea is considered inappropriate. Instead, the interplay between individual norm-conformity and strength of the social norm needs to be separated from the one between individual and aggregate unemployment, for which unemployment rates are better used. Hence, a separate measure for the regional strength of the social norm must be found for the empirical analysis.

A first and simple idea for a norm proxy suggests itself due to the novel design of this investigation. When individual unemployment and norm-violation are not regarded as one and the same, the aggregation of norm-violation at the state level is in fact the observed group behaviour commonly used as a proxy. Accordingly, for every region, the weighted percentage of people living in benefit-receiving households, thus not complying with the norm, is determined for the entire period and given in the second column of Table 2. In accordance with the common interpretation of the unemployment rate as a norm proxy, a higher percentage of norm-violation reflects a weaker norm.

*[Table 2 about here]*

As mentioned above, Stutzer and Lalive (2004) suggest capturing people's beliefs about the social norm in a more direct way, instead of using group behaviour as a proxy. Since their idea to look at differences in the views on social security seems quite plausible, similar information is used to generate a second norm measure here. In the year 2002, SOEP participants were asked, "Do you think the social security contributions or premiums that you pay are too high, appropriate or too low?" In line with the Stutzer and Lalive argument, it can be assumed that the more people in a state favour the first answer, and regard their contribution as too high, the stronger the pressure to earn one's own living for each citizen of that region. Besides, the same SOEP questionnaire from 2002 offers a second opportunity to capture people's beliefs on the financing of social security. By responding that "financial security in the case of unemployment" is a private rather than a public responsibility, people may signal a stronger belief that it is wrong to live off public funds. Accordingly, the percentage of responders demanding that only the state is responsible indicates the weakness of the norm. Presented in the third column of Table 2, the data on the two questions is merged into a norm measure by determination of the geometric mean values for each state. Note that for the sake of comparability, larger numbers again indicate weaker normative pressure.

Another aspect often associated with social norms is religiosity. In his study on benefit morale, Heinemann (2008) suggests in reference to other empirical studies that more religious people generally might hold in higher esteem morality and norm-guided behaviour. This positive correlation is particularly found in studies on tax morale, indicating that religiosity supports the enforcement of social norms (e.g., Torgler, 2005; Alm and Torgler, 2006). Therefore, the idea is to use information on church attendance to generate a third potential measure for the strength of the social norm. Based on SOEP data from 2001, the weighted percentage of people who attend neither church nor religious events is used as a norm proxy and is given in the fourth column of Table 2.

Given the difficulties of empirical research on social norms, the use of different measures for the strength of the social norm should make it possible to obtain valid findings. In addition to the regression models for each separate measure, a further model in this investigation uses one derived from the information of all three, i.e., aggregate norm-behaviour, views on social security and level of religiosity. Accordingly, for each region, the geometric mean of these three values is formed and presented in the last column of Table 2. Since the strength of a norm can be considered constant over this rather short period of time, these values are actually used in the empirical analysis, contrary to the average unemployment rates, which are

shown in the first column. In fact, the state unemployment rates in the econometric models vary from year to year simply because employment prospects are expected to do so as well.

### *East–West Disparity*

A closer look at regional unemployment rates reveals a fundamental economic disparity between East and West Germany, even after the many years since reunification (see Table 2). Regarding the objective of comparing the effects of varying job prospects on individual well-being, the consideration of this basic difference may be relevant to building a properly specified regression model. When the regional unemployment rate is set in relation to the unemployment-induced disutility effect, this initially implies that, even in well-performing eastern regions, the unemployed may perceive their situation as more hopeless than in economically weak regions in the West. Hence, the use of an additional interaction variable for being unemployed in one or the other half of Germany is expected to yield significant outcomes and thereby increase the accuracy of the specification. The same disparity problem could exist in regard to the norm strength measure, especially when the level of norm-behaviour is captured on the basis of benefit receipts in each region.

A retrospective view of the two different systems in Germany, prior to 1990, reveals further support for the idea of additional interaction variables capturing the basic differences in the norm- and unemployment-induced disutility effects. Since social norms are formed and determined by “norm senders” that can also have an institutional character (Lindbeck and Nyberg, 2006), it is important to note that, according to Article 24 of the constitution of the GDR, there was not only a right to work, but also a duty to work in East Germany. In practice, despite enormous differences in economic status, nearly everyone could earn a living from work in the socialist half of Germany, while in the West more and more citizens suffered unemployment. After the reunification, unemployment has become a reality in the eastern states, but certainly the perception has never been the same. While the view of unemployment as the unemployed person’s own fault is expected to be more widespread in societies with a free-market tradition, the East German tradition would rather allow pushing at least some responsibility onto the state and the government, which previously ensured full employment. On the other hand, in view of the constitutional duty to work, the individual contribution to the common good is more likely to be perceived as an obligation of each citizen. Not being in compliance with social duties, such as the social norm against living off others, could therefore be seen as more of an offense in the eastern regions.

One might argue these considerations are irrelevant to this study because of the many years between the fall of the GDR and the period investigated. However, empirical research on German people's attitudes and beliefs support the notion of a prolonged disparity between East and West in regard to the issues to be examined here (e.g., Alesina and Fuchs-Schuendeln, 2007). Hence, while the above considerations lead to the expectation of an additional disutility effect of norm-violation in the East, a significant disutility effect of being unemployed in the western states would indicate a stronger perception of unemployment as the unemployed person's own failure. Significant outcomes could also increase the accuracy of the regression models, which are primarily designed to examine whether and how disutility from non-conformity with the social norm varies with the regional strength of the norm, while unemployment-induced disutility is expected to increase with rising unemployment and thereby worsening job prospects.

## II. RESULTS

This study's main objective is to design and implement a comprehensive regression model capable of showing how the disutility determinants, individual and aggregate unemployment, interact and how unhappiness from non-compliance with the norm against living off other people is affected by the regionally varying pressure to follow such a norm. Nevertheless, it is perhaps very revealing to first leave out the novel elements designed to isolate norm effects from the impact of changing job prospects, and to look at the results of the Clark (2003) model that has been implemented in most of the previous studies. Hence, the empirical analysis starts without separate norm measures, either at the individual or at the aggregate level, but with only one variable for the interaction between individual and aggregate unemployment, which is, according to Clark and other researchers, capable of demonstrating the social-norm effect.

*[Table 3 about here]*

The general essence of previous studies has been seemingly clear: Individual unemployment is less hurtful when more people around are in the same unfortunate situation. Researchers argue that empirical evidence for this is found when the variable for the interaction between

the disutility determinants, individual and aggregate unemployment, is positive, so that higher regional unemployment implies overall less disutility from being unemployed. Accordingly, Table 3 gives the results of the implementation of the standard model, which is admittedly no exact replication of any previous study (since at least the period of investigation is different here). Nevertheless, it is quite intriguing that the OLS method results, presented in the first column, include a significant interaction coefficient of -0.010, suggesting that the unemployed suffer even more, and not less, when aggregate unemployment is higher. Using the POLS method, this coefficient is less significant, but still negative.

As a matter of fact, this result, as striking as it may look, is not an immediate contradiction of the previous research. In some studies, including those on the basis of German data, the norm effect has been found only for men. Indeed, a restriction on male persons would lead to a positive, albeit insignificant interaction between regional unemployment levels and unemployed people's well-being. However, in addition to a lack of theoretical foundation for these essential gender differences and the notion that only men are affected by such a norm, there is another and even more fundamental problem with this finding. As can be seen in the last four columns of Table 3, once a distinction is made between East and West Germany, there is no positive interaction term, not even for men. Furthermore, the utility effects from individual and aggregate unemployment are very different in the two former halves of Germany. Although these outcomes have to be handled with care, due to the rather small number of observations, this also suggests considering the disparity between East and West Germany, as argued in Section I.

### *The Extended Model*

Nevertheless, this study's objective is not to disprove the relevance of social-norm effects, but to give more conclusive empirical evidence by presenting a comprehensive model that allows distinguishing between the disutility caused by individual unemployment and the disutility of not complying with a social norm against living off other people. For the latter, a second interaction term can be formed by using the measures for the strength of the social norm that are described in Section I. Hence, Tables 4a and 4b present the results for aggregate norm-behaviour, views on social security and level of religiosity as norm-proxy variables. In fact, the interaction between these measures and individual norm-violation is positive throughout the specifications. Thanks to the norm measures being generated analogous to the unemployment rates, so that lower values imply higher levels of norm strength, this finding corresponds to the notion of a positive social-norm effect, for which researchers seek to

deliver convincing evidence. People suffer less from not being in conformity with the norm the weaker the norm strength and thus the more norm-violation takes place. In contrast, the interaction between individual and aggregate unemployment is negative in all models, showing that the people experience additional distress from being unemployed when unemployment levels are high.

*[Table 4a about here]*

*[Table 4b about here]*

Closer examination of the results in Tables 4a and 4b, the second with further interaction terms for being unemployed in the East and individual norm-violation in the East, reveals some noteworthy differences concerning the use of each separate measure of norm strength. To begin with, aggregate behaviour, measured by the share of norm-violators in each region, seems very appropriate in order to capture norm effects in this empirical framework. In fact, the interaction between individual norm-violation and level of norm strength is in all specifications significant at the 5% level. While the findings are the same, the significance is somewhat smaller when using religiosity as a proxy for the norm strength. Nevertheless, in the OLS case, the extended model with all interaction terms shows a positive norm effect that is significant at the 5% level. Hence, it seems useful to have an interaction term for non-compliance in the eastern regions when using religiosity as a norm proxy. As can be seen in Table 2, there is no such East–West disparity in the values of the social-beliefs measure, which goes along with the fourth interaction term being insignificant for both methods, while the other interaction between individual norm-violation and norm strength is clearly more significant in the results presented in Table 4a. Certainly, the fourth interaction variable does make the most sense when using aggregate norm-violation as a proxy for the strength of the norm at the regional level. The actual percentages of norm-violators and unemployed people are so very different between East and West that the additional interaction terms are necessary to consider the enormous disparity. As a matter of fact, the variable for being unemployed in the eastern regions is not only significant throughout the specifications, thanks to its integration, the significance of the first interaction between individual and aggregate unemployment becomes considerably stronger, compared to the results in Table 4a. This also confirms the above argument and demonstrates again that the well-being effect of rising

unemployment levels is clearly negative for unemployed people in Germany. Note that for those unemployed individuals living in benefit-receiving households, admittedly, the two opposing interaction effects must be offset against each other. Hence, the significant additional disutility effect from higher unemployment can be compensated in terms of general life satisfaction when living off public funds is a smaller deviation from the norm.

### *Robustness Checks*

In order to check the robustness of the results, a fourth measure for the strength of the social norm is used. Taken from the last column of Table 2, the geometric mean values can be regarded as another norm proxy, which integrates the information from all other measures. Accordingly, the results in Table 5 again confirm that unemployed people suffer additionally from higher levels of regional unemployment (first interaction term) and that living off public funds is much less distressing in regions with weaker normative pressure to earn one's own living (third interaction term). These relationships are even more marked when additional interaction terms are used for being unemployed in the eastern regions (second interaction term) and being in non-compliance with the social norm in the eastern regions (fourth interaction term).

*[Table 5 about here]*

There are a number of further robustness checks that one may consider, but not all can be reported here. To begin with, restrictions in the data sample could be relaxed, which refers to the focus on only employed and unemployed individuals as well as the drop of all those who moved from one region to another during the period of investigation. Although these restrictions make a lot of sense, for instance, to allow a comparison of more homogenous groups of people, the results for a larger data sample are very similar.

Another aspect worthy of a second look is the measurement of norm strength at the regional level. First note that the norm proxies used in this study can come close to, but cannot be exact measures of the normative pressure to earn one's own living. With respect to the level of religiosity, the question on church attendance has been part of the SOEP questionnaire more than once, so that further robustness checks are possible here. While the findings are the same throughout all the regressions, the significance of the results differs, so that the

interaction between individual norm-violation and norm strength is in some cases more significant, in others less. A measure of religiosity, generated on the basis of all available information on church attendance, yields results similar to those presented in Tables 4a and 4b. Also note that, in technical terms, it would be possible to have varying measures of norm strength. However, although norms can indeed change over time, for this rather short period of investigation predetermined here, the assumption of time-invariance is certainly justified. An empirical analysis of norm evolution would require a much longer data set, which is not part of the research objectives here.

Finally, the validity of the norm measure at the individual level can be substantiated by some further checks. As discussed in Section I, some significant changes in the German social system took place in 2005, which could imply that there is a true break in the data in the wake of the labour market reforms. However, a further variable generated to capture the potential structural break in the impact of norm-violation on individual well-being is insignificant in all specifications and has no impact on the empirical results. A variable that is one when the individual is a recipient of ALG, and zero otherwise, is insignificant as well, which substantiates the theoretical argument from Section I. Accordingly, those people do not feel stigmatised as if they were living off other people, so that ALG is rightly not in the bundle of benefits classified as relevant to the social norm. Concerning this, one might argue that the classification of norm-violators includes too many individuals who may not be conscious of their non-compliance with a norm. Hence, in some final robustness checks, only those who individually reported being recipients of ALG2 are classified as living off other people. Despite the effect that this leads to a much smaller group of norm-violators, the results are almost the same as those given in Table 5.

### III. DISCUSSION

The findings presented in this empirical study question the appropriateness of the standard approach in the research on the interplay between norm effects and unemployment-induced unhappiness. To date, economic researchers argue that unemployed individuals are less negatively affected by aggregate unemployment than those who are employed. Sometimes it is even suggested that rising unemployment has a positive impact on unemployed people's well-being, in addition to the negative effect of individual unemployment. Or, to put it another way, "Unemployment always hurts, but it hurts less when there are more unemployed people around" (Clark, 2003, p. 346). However, using German panel data from 1999 to 2009,



regression results on the basis of the standard model cannot be regarded as consistent with such a social-norm hypothesis. Quite the contrary: the basic relationship is clearly negative, which implies that being unemployed is even more distressing the higher the regional unemployment rate.

Looking at the previous studies on this topic, there is indeed potential for improvement, for example in terms of methodology. In particular, empirical models designed to explain happiness should consider fixed individual effects, insofar as this is possible. Furthermore, the positive effect of unemployment on the unemployed is in some studies found only when women are dropped from the sample. As long as there is no theoretical foundation for such significant differences between the sexes, this is certainly rather unsatisfactory. In contrast, this study tries to address all these issues and to identify the true relationship between individual and aggregate unemployment, at least for the people of Germany, while simultaneously yielding evidence for a social-norm effect. The basic idea of distinguishing the disutility of living off other people from the disutility caused by unemployment allows addressing the problem of the two countering effects. On the one hand, a person's own non-compliance with the norm against living off public funds is easier to bear when more people in the reference group also deviate from the norm. While this has a mitigating effect on people's unhappiness, there is another effect capable of countering it and thus potentially outweighing any positive impact. This disutility effect from higher unemployment can be linked to the worse job prospects, from which unemployed people might suffer considerably. The regression results presented in the tables allow a subsequent step, namely to calculate regional differences in unemployment-induced unhappiness and disutility from norm-violation. By way of illustration, the OLS coefficients in the third column of Table 5 reveal that citizens in regions with a 20% unemployment rate lose on average more than 0.6 on the life satisfaction scale from being unemployed. At the same time, with only 4% aggregate unemployment, the unemployment-caused drop in life satisfaction is about 0.4 points on the 11-point scale. However, these differences in well-being reductions for unemployed individuals are much more pronounced when the East–West disparity is considered. According to the results in the fifth column of Table 5, the same gap in unemployment rates (in one of the two former halves of Germany) would make a difference of almost 0.6 points on the life satisfaction scale.

Beside the unhappiness-increasing effect experienced in economically weak regions, those living off public funds experience some reduction in their misery, which is commonly referred to as the social-norm effect. In other words, disutility from being in non-compliance

with the social norm against living off other people is smaller when regional economic conditions are worse, which usually goes along with a weaker normative pressure to earn one's own income and therefore makes the individual misfortune easier to put up with. Note that the latter disutility effect is generally much smaller, so that non-compliance with the social norm in states with weak norms might even be negligible to people's well-being. Based on the OLS coefficients from the fifth column in Table 5, in which the disparity between East and West is considered, the outcome for norm-violation in Bremen is even slightly positive. Hence, while the unemployed suffer strongly from high levels of unemployment and the consequent bad job prospects, they basically do not suffer from living off other people, which can be linked to weak normative pressure. On the other hand, being one of the few Bavarians in non-compliance with the social norm causes on average considerable well-being reductions of almost 0.3 points. As a matter of course, this apparent disadvantage is outweighed for unemployed individuals who benefit from better job prospects in Bavaria.

These insights lead to the issue of labour market policies. Economic researchers regard empirical evidence for a social-norm effect as a contribution to explaining unemployment hysteresis. In fact, the argument for a strong association between normative pressure to earn one's income and regional economic conditions is confirmed in this study. Moreover, the relationship between unhappiness with one's employment status and willingness to work is empirically valid, so that smaller reductions in well-being go along with less motivation to search for employment (Chadi, 2010). However, with regard to the discussion of the empirically indisputable, but theoretically less well substantiated phenomenon of multiple unemployment equilibria, the aspect of employment prospects must definitely be considered. In sum, it may well be that the two factors, changing job opportunities and social-norm effect, outweigh each other in regard to the overall utility effect.

Nevertheless, social norms in the labour market must be taken seriously with good reason. For example, the analysis of the interplay between disutility effects from living off other people and employment status might be very revealing for the discussion of labour market concepts. Imagine that policymakers would like to promote a low-wage sector with jobs that are subsidised if necessary with additional payments from public funds. The success of such a policy would be at risk when the people in those jobs experience significant reductions in well-being from non-adherence to the social norm against living off other people. A further issue that could be addressed by an approach like the one presented here is the crowding-out of non-pecuniary incentives to follow social norms when policymakers try to bring people into employment by implementing extrinsic incentives.

The findings presented here will hopefully contribute to the growing field of research on social norms connected to the labour market. While this study is based on German data, it must be noted that, just as there are significant differences between East and West Germany, the results can be very different in other regions in the world. Most recently, researchers have started to compare unemployment-induced unhappiness and related norm effects on a cross-national basis (see Stavrova et al., forthcoming). Thus, the findings here are first and foremost representative of the German people. It could very well be that the aspect of reduced job prospects is less important to unemployed individuals in other countries, so that the social-norm effect may indeed prevail, just as has been suggested in previous studies.

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## APPENDIX

Table 1  
Observation Numbers for Each Category

Year	EMP	UNEMP	SN	UNEMP x SN	ALL
1999	7,029	862	679	342	7,891
2000	11,719	1,327	1,025	597	13,046
2001	10,683	1,221	886	531	11,904
2002	11,720	1,228	850	527	12,948
2003	10,673	1,293	942	586	11,966
2004	10,266	1,265	1,026	637	11,531
2005	9,755	1,224	986	627	10,979
2006	10,178	1,308	1,212	798	11,486
2007	9,762	1,056	1,025	672	10,818
2008	9,245	875	885	553	10,120
2009	9,587	963	921	605	10,550
	110,617	12,622	10,437	6,475	123,239

Explanation of the categories:

- EMP individuals who are employed either full-time or part-time
- UNEMP individuals who are registered as unemployed
- SN individuals living in households in which at least one individual receives one of the following as norm-related identified benefits:
  - unemployment assistance (“Arbeitslosenhilfe”)\*
  - ALG2 (“Arbeitslosengeld 2”)\*\*
  - social assistance (“Sozialhilfe”)
  - housing assistance (“Wohngeld”)
  - basic protection for the elderly or those with a reduced capacity to work (“Grundsicherung im Alter und bei Erwerbsminderung”)\*\*

\* denotes the period from 1999 to 2004; \*\*denotes the period from 2005 to 2009.

Data: SOEP waves from 1999 to 2009 with individuals aged 18 to 65

Table 2  
Regional Levels of Unemployment and Strength of the Social Norm

region	mean unemployment in %**	1. behaviour	2. social views	3. religiosity	geometric mean values
Saxony-Anhalt*	19.78	18.84	36.12	80.24	37.94
Mecklenburg- Vorpommern*	19.39	19.59	33.04	76.63	36.74
West Berlin	18.56	17.22	30.98	74.48	34.12
East Berlin*	18.56	13.17	38.23	86.83	35.23
Brandenburg*	18.09	20.07	35.41	81.61	38.71
Saxony*	18.01	16.91	31.55	74.47	34.12
Thuringia*	16.17	19.46	32.75	73.08	35.98
Bremen	14.57	11.92	40.30	61.77	30.96
Hamburg	10.81	6.82	33.46	66.52	24.76
North Rhine- Westphalia	10.79	8.62	32.53	49.45	24.02
Lower Saxony	10.47	7.92	33.30	51.47	23.85
Schleswig – Holstein	10.23	11.15	29.61	52.61	25.90
Hesse	8.69	6.10	34.08	49.11	21.69
Rhineland-Pal./ Saarland	8.54	8.74	30.83	45.08	22.99
Bavaria	6.87	5.06	26.12	38.90	17.26
Baden- Wuerttemberg	6.32	6.03	31.94	43.34	20.29

Explanation of the measures for norm strength:

1. behaviour weighted percentage of individuals in the data sample not conforming with the social norm against living off benefits (according to the classification in Table 1)
2. social views geometric mean of (a) the weighted percentage of individuals who do not regard social security contributions as too high (in the year 2002) and (b) the weighted percentage of individuals seeing only the state as responsible for providing financial security in the case of unemployment (in the year 2002)
3. religiosity weighted percentage of individuals who attend neither church nor religious events (in the year 2001)

\* denotes former GDR regions.

Data: German Employment Office (\*\*); SOEP waves from 1999 to 2009

Table 3  
Regional Differences in the Disutility Effects of Individual Unemployment

Territory: Method:	All Germany		Only Western Regions		Only Eastern Regions	
	OLS FE	POLS FE	OLS FE	POLS FE	OLS FE	POLS FE
Dependent Variable	Life Satisfaction		Life Satisfaction		Life Satisfaction	
UE: Individual Unemployment	-0.400*** (0.076)	-0.210*** (0.039)	-0.573** (0.246)	-0.286** (0.116)	0.221 (0.472)	0.155 (0.209)
L1: Level of Unemployment	-0.025*** (0.008)	-0.018*** (0.004)	-0.015 (0.014)	-0.014 (0.008)	0.074** (0.026)	0.039** (0.011)
Interaction Term (UE x L1)	-0.010** (0.005)	-0.004* (0.002)	-0.016 (0.024)	-0.009 (0.011)	-0.026 (0.025)	-0.015 (0.011)
Gender Controls	Both Yes	Both Yes	Only Men Yes	Only Men Yes	Only Men Yes	Only Men Yes
Observations	123,239	123,239	50,388	50,388	15,527	15,527
Adjusted R <sup>2</sup>	0.1175	0.1119	0.1339	0.1252	0.1217	0.1141

Notes: \* denotes significance at the 10% level, \*\* at the 5% level and \*\*\* at the 1% level.

Controls include variables for employment status, marital status, number of children, health, age, German nationality, individual income level, year dummies as well as regional GDP per capita. Clustered standard errors (by region) are in parentheses.

Data: SOEP waves from 1999 to 2009 with employed and unemployed individuals aged 18 to 65

Table 4a  
Regional Differences in the Disutility Effects of Individual Unemployment  
and Non-Compliance with the Social Norm:  
Separate Measures for the Strength of the Norm (a)

Norm Proxy: Method:	Aggregate Behaviour		Social Security Beliefs		Religiosity	
	OLS FE	POLS FE	OLS FE	POLS FE	OLS FE	POLS FE
Dependent Variable	Life Satisfaction		Life Satisfaction		Life Satisfaction	
UE: Individual Unemployment	-0.349*** (0.085)	-0.184*** (0.044)	-0.360*** (0.087)	-0.191*** (0.046)	-0.350*** (0.086)	-0.185*** (0.045)
SN: Individual Non-Compliance	-0.232*** (0.068)	-0.120*** (0.037)	-0.841*** (0.244)	-0.413** (0.154)	-0.317** (0.116)	-0.163** (0.062)
L1: Level of Unemployment	-0.025*** (0.008)	-0.017*** (0.004)	-0.025*** (0.008)	-0.017*** (0.004)	-0.025*** (0.008)	-0.017*** (0.004)
Interaction Term 1 (UE x L1)	-0.012** (0.005)	-0.005* (0.003)	-0.012** (0.005)	-0.005* (0.003)	-0.012** (0.005)	-0.005* (0.003)
Interaction Term 2 (UE x EAST)						
Interaction Term 3 (SN x L2)	0.010** (0.004)	0.005** (0.002)	0.022*** (0.007)	0.011** (0.005)	0.003* (0.002)	0.002* (0.001)
Interaction Term 4 (SN x EAST)						
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Observations	123,239	123,239	123,239	123,239	123,239	123,239
Adjusted R <sup>2</sup>	0.1179	0.1121	0.1179	0.1121	0.1179	0.1121

Notes: \* denotes significance at the 10% level, \*\* at the 5% level and \*\*\* at the 1% level.

Controls include variables for employment status, marital status, number of children, health, age, German nationality, individual income level, year dummies as well as regional GDP per capita. Clustered standard errors (by region) are in parentheses. Classification of the social norm (SN) category is in accordance with the explanations in Table 1. Regional levels of norm strength (L2) correspond with the values in the three middle columns of Table 2.

Data: SOEP waves from 1999 to 2009 with employed and unemployed individuals aged 18 to 65



Table 4b  
Regional Differences in the Disutility Effects of Individual Unemployment  
and Non-Compliance with the Social Norm:  
Separate Measures for the Strength of the Norm (b)

Norm Proxy: Method:	Aggregate Behaviour		Social Security Beliefs		Religiosity	
	OLS FE	POLS FE	OLS FE	POLS FE	OLS FE	POLS FE
Dependent Variable	Life Satisfaction		Life Satisfaction		Life Satisfaction	
UE: Individual Unemployment	-0.166 (0.127)	-0.078 (0.060)	-0.177 (0.131)	-0.083 (0.061)	-0.162 (0.130)	-0.078 (0.061)
SN: Individual Non-Compliance	-0.376*** (0.095)	-0.181*** (0.056)	-0.846*** (0.276)	-0.402** (0.171)	-0.630*** (0.208)	-0.280** (0.127)
L1: Level of Unemployment	-0.021** (0.008)	-0.015*** (0.004)	-0.021** (0.008)	-0.015*** (0.004)	-0.021** (0.008)	-0.015*** (0.004)
Interaction Term 1 (UE x L1)	-0.036*** (0.012)	-0.019*** (0.006)	-0.035** (0.012)	-0.018*** (0.006)	-0.036*** (0.012)	-0.019*** (0.006)
Interaction Term 2 (UE x EAST)	0.323** (0.119)	0.186*** (0.056)	0.311** (0.122)	0.181*** (0.056)	0.326** (0.121)	0.187*** (0.057)
Interaction Term 3 (SN x L2)	0.032** (0.011)	0.015** (0.006)	0.023** (0.009)	0.011* (0.005)	0.010** (0.004)	0.004* (0.003)
Interaction Term 4 (SN x EAST)	-0.290** (0.121)	-0.129* (0.068)	-0.004 (0.037)	0.004 (0.020)	-0.258* (0.124)	-0.102 (0.073)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Observations	123,239	123,239	123,239	123,239	123,239	123,239
Adjusted R <sup>2</sup>	0.1181	0.1124	0.1181	0.1124	0.1181	0.1124

Notes: \* denotes significance at the 10% level, \*\* at the 5% level and \*\*\* at the 1% level.

Controls include variables for employment status, marital status, number of children, health, age, German nationality, individual income level, year dummies as well as regional GDP per capita. Clustered standard errors (by region) are in parentheses. Classification of the social norm (SN) category is in accordance with the explanations in Table 1. Regional levels of norm strength (L2) correspond with the values in the three middle columns of Table 2. The indicator variable EAST is 1 in the case of the former GDR regions (see Table 2) and 0 otherwise.

Data: SOEP waves from 1999 to 2009 with employed and unemployed individuals aged 18 to 65

Table 5  
Regional Differences in the Disutility Effects of Individual Unemployment  
and Non-Compliance with the Social Norm:  
Generated Measure for the Strength of the Norm

Method:	OLS FE	POLS FE	OLS FE	POLS FE	OLS FE	POLS FE
Dependent Variable	Life Satisfaction		Life Satisfaction		Life Satisfaction	
UE: Individual Unemployment	-0.510*** (0.032)	-0.253*** (0.017)	-0.347*** (0.086)	-0.183*** (0.045)	-0.156 (0.129)	-0.074 (0.061)
SN: Individual Non-Compliance	-0.111*** (0.028)	-0.055*** (0.015)	-0.341*** (0.107)	-0.177*** (0.059)	-0.745*** (0.155)	-0.346*** (0.101)
L1: Level of Unemployment	-0.027*** (0.008)	-0.018*** (0.004)	-0.025*** (0.008)	-0.017*** (0.004)	-0.021** (0.008)	-0.015*** (0.004)
Interaction Term 1 (UE x L1)			-0.013** (0.005)	-0.005* (0.003)	-0.037*** (0.012)	-0.019*** (0.006)
Interaction Term 2 (UE x EAST)					0.333** (0.122)	0.190*** (0.057)
Interaction Term 3 (SN x L2)			0.008** (0.003)	0.004** (0.002)	0.027*** (0.007)	0.012** (0.004)
Interaction Term 4 (SN x EAST)					-0.325*** (0.104)	-0.141** (0.063)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Observations	123,239	123,239	123,239	123,239	123,239	123,239
Adjusted R <sup>2</sup>	0.1177	0.1120	0.1179	0.1121	0.1182	0.1124

Notes: \* denotes significance at the 10% level, \*\* at the 5% level and \*\*\* at the 1% level.

Controls include variables for employment status, marital status, number of children, health, age, German nationality, individual income level, year dummies as well as regional GDP per capita. Clustered standard errors (by region) are in parentheses. Classification of the social norm (SN) category is in accordance with the explanations in Table 1. Regional levels of norm strength (L2) correspond with the values in the last column of Table 2. The indicator variable EAST is 1 in the case of the former GDR regions (see Table 2) and 0 otherwise.

Data: SOEP waves from 1999 to 2009 with employed and unemployed individuals aged 18 to 65