

## Secondary Publication



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Date of secondary publication: 14.11.2023

Version of Record (Published Version), Article

Persistent identifier: urn:nbn:de:bvb:473-irb-917104

#### Primary publication

Senghaas, Monika; Osiander, Christopher; Stephan, Gesine; Struck, Olaf (2022): „Fairness perceptions regarding in-work benefits : a survey experiment“. In: The international journal of sociology and social policy, Vol. 42, Nr. 13/14, pp. 30-49, Bingley: Emerald, doi: 10.1108/ijssp-04-2022-0101.

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# Fairness perceptions regarding in-work benefits: a survey experiment

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## Abstract

**Purpose** – In many countries, individuals can receive welfare support whilst simultaneously being employed. The level of earned income that welfare recipients are allowed to keep has long been a subject of debate. Core issues include whether in-work benefit regulations provide incentives for individuals to expand labour market participation and are thus also socially effective and whether the population perceives welfare benefits for individuals who earn own income as fair. This article contributes to the debate about the social legitimacy of in-work benefit regulations by shedding light on the principles guiding judgements about an adequate amount of in-work benefit receipt.

**Design/methodology/approach** – The authors use a factorial survey experiment to investigate which factors guide judgements about an adequate level of in-work benefit receipt. In the authors' factorial survey, the household composition, health status, and monthly earnings of a hypothetical in-work benefit recipient were varied experimentally. The study investigates Germany's basic income support programme, a means-tested social policy programme that targets both unemployed and employed individuals.

**Findings** – The results show that respondents consider higher earnings retention rates for lower-income earners to be fair. This preference mirrors the German legislation, which is based on the principle of need. Furthermore, the presence of children and of physical as well as mental health impairments are associated with support for higher earnings retention rates.

**Originality/value** – The findings suggest that citizens support the core features of in-work benefit regulations but do not consider in-work benefit recipients as a homogenous group when assessing the adequate level of benefit receipt.

**Keywords** Deservingness, Factorial survey, Fairness, Germany, In-work benefits

**Paper type** Research paper

## Introduction

In-work benefits are an increasingly popular social policy instrument. The core idea behind such schemes is to support low-income earners with state-financed welfare benefits, thereby

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The research was financially supported by the "Support Network for Interdisciplinary Social Policy Research" (FIS) of the German Federal Ministry of Labour and Social Affairs (BMAS) (grant number FIS.00.00117.19). The BMAS had no influence whatsoever on the design, execution, analysis and interpretation of data and the content of this article. We thank Richard Wolff for his cooperation and the Data and IT-management unit of IAB – in particular, Lina-Jeanette Metzger and Theresa Hämmerl – for their excellent support in conducting the survey.



alleviating poverty whilst also maintaining incentives to work (Immervoll and Pearson, 2009). Implemented via either a tax or benefits system, in-work benefit schemes differ considerably in their profiles and generosity. In many cases, eligibility requires working a certain number of weekly hours or earning a minimum income from paid work (OECD, 2011, p. 67f.). Such regulations are intended to provide incentives not only to take up employment but also to increase work hours or to move to better paid jobs. Some schemes specifically address families by linking eligibility to the presence of children.

Economic analyses have provided insights into the incentive effects and distributional consequences of different in-work benefit schemes (e.g. Brewer and Hoynes, 2020; Immervoll and Pearson, 2009). A focal point of these analyses has been the effects of these schemes on the labour market participation of mothers (e.g. Blundell *et al.*, 2016; Mogstad and Pronzato, 2012) and low-skilled workers (van der Linden, 2016). Social policy research has placed in-work benefits into the wider policy context of work-first policies. Rubery *et al.* (2018), for example, discuss the potential of in-work benefits to normalise precarious employment through state subsidies that define precarious work “as an acceptable or required alternative to unemployment” (p. 520). This tendency is reinforced if a refusal to take up work leads to financial sanctions. Moreover, sociological analyses of in-work benefits have referred to the contradictions associated with the division of unpaid caretaking responsibilities. Rooney and Gray (2020) argue that despite a political agenda geared towards encouraging full-time work, the design of in-work benefit schemes may unintentionally promote the single breadwinner model or having one household member engage in part-time work whilst also providing care for family in dual-income households.

Despite their increasing popularity, little is known thus far about the social legitimacy of welfare programmes that target the working poor or about the factors that influence which benefit level is regarded as adequate. The question of the level of earned income that welfare recipients are allowed to keep is much debated. Core issues include whether in-work benefit regulations provide incentives for individuals to expand labour market participation and are thus also socially effective and whether the population perceives welfare benefits for individuals who earn their own income as fair.

The study presented in this article draws on the conceptual framework of distributive justice principles and perceptions of deservingness to formulate hypotheses on factors influencing which benefit level is considered adequate in certain circumstances. Using a factorial survey experiment, we investigate in particular how different levels of monthly earnings and a benefit recipient’s illness affect the benefit level considered adequate. The study investigates Germany’s basic income support programme, a means-tested social policy programme that targets both unemployed and employed individuals.

The next section gives a brief overview of the German institutional context. The subsequent section presents hypotheses on how the principle of need and perceptions of deservingness shape judgements about an adequate in-work benefit receipt. After a brief account of the data and methods, the results are presented and their implications for understanding public perceptions of in-work benefit recipients are discussed.

### **In-work benefit regulations in Germany**

Germany’s means-tested basic income system – often referred to as “Hartz IV” – is widely known for its role in securing subsistence for unemployed individuals who are not entitled to benefits from unemployment insurance, whose unemployment benefits are not sufficient to cover their needs, or whose entitlements have expired (e.g. Fleckenstein, 2008; Clasen and Goerne, 2011). The basic income system is also, however, Germany’s most important national in-work benefit programme (Clasen, 2020). The basic income (“unemployment benefit II”) is means-tested at the household level and can be granted as an income supplement if earnings do not cover the minimum living expenses of the household. Benefit recipients who are

engaged in paid work are colloquially referred to as *Aufstocker*, which literally means those who “top up” their working income with unemployment benefits. In 2019, there were more than 1 million *Aufstocker*, then representing more than a quarter of all basic income claimants of working age who were considered capable of working (Statistik der Bundesagentur für Arbeit, 2022). In-work benefit recipients can keep earnings of up to €100 in addition to benefits granted to meet the legally defined minimum for physical and sociocultural existence and housing costs. If monthly earnings are above this €100 threshold, a portion of these earnings is subtracted from the amount of the benefit when it is calculated. This portion increases from 80 to 100% depending on the amount earned.

In-work benefit regulations have been controversial ever since the basic income system was introduced in 2005. Trade unions and left-wing political parties reference in-work benefit recipients with (nearly) full-time employment to illustrate the increasing benefit dependence of wage earners linked with the growth of low-wage employment and in-work poverty (e.g. Adamy, 2008). Economists, by contrast, have argued that for larger households, it is rarely financially worthwhile for benefit recipients to increase their working hours and therefore criticise the regulations for not offering sufficient incentives to expand employment and leave the benefit programme (e.g. Schöb, 2020, p. 82; Bruckmeier et al., 2018a). In-work benefit regulations themselves have remained relatively stable over the last 15 years. A political reform initiative in 2009 ultimately resulted in only minor amendments (Clasen, 2020, p. 8; Peichl et al., 2011). The issue is, however, still on the political agenda. The liberal party (FDP, 2019) and the Green party (Bündnis 90/Die Grünen, 2018; Deutscher Bundestag, 2021) in particular are proposing changes, and several economists have presented alternatives to the existing regulations (e.g. Blömer et al., 2019; Bruckmeier et al., 2018b; Schöb, 2020).

These criticisms raised by different actors illustrate the ambiguity of an in-work benefit scheme, which “may occasionally be a political asset for policy reform but is likely to challenge or even hinder policymaking at other times” (Clasen, 2020, p. 4). Each in-work benefit scheme requires a decision about the relative weights to place on the (partly competing) goals of reducing poverty and providing work incentives for low-income workers (OECD, 2011, p. 67f.). Additional trade-offs exist between motivating nonworking individuals to take up jobs and encouraging working benefit recipients to increase their working hours (Clasen, 2020, p. 4). Debates about the institutional design of in-work benefit schemes therefore touch upon general principles of justice and related perceptions of fairness. At a more abstract level, the debates refer to the question of whether resources should be distributed according to the recipients’ individual needs, their efforts to live independently of public support, and their personal accountability for their situation. The literature on justice principles and perceptions of deservingness therefore provides a useful conceptual framework from which to develop hypotheses on principles that guide judgements about adequate in-work benefit receipt.

### **Fairness perceptions of in-work benefit receipt**

Welfare institutions and programmes allocate and distribute societal goods and burdens such as taxes and welfare payments. Thereby, they translate normative ideas about distributive principles into social reality (Liebig and Sauer, 2016, p. 38). The literature on welfare state principles mostly refers to three core normative principles of distributive justice implying different logics of allocating benefits, goods and services (Clasen and van Oorschot, 2002; Sachweh, 2016): While the principle of *equality* posits that welfare support should be granted equally to all citizens when they are confronted with a certain risk, e.g. illness, the principle of *need*, in contrast, implies that benefits should be granted to those in most need of assistance. According to the principle of *equity*, benefits, goods and services should be distributed according to individual contributions.

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### *The principle of need*

Among the core principles of distributive justice mentioned above, the principle of need is the predominant organising logic of the means-tested basic income system that provides the institutional framework for in-work benefit receipt in Germany. Benefits cover the minimum level of income needed for subsistence, reflecting the principle of need-based distributive justice to allow “people to lead a minimally decent life in their society” (Miller, 1999, p. 210). The provision of resources is combined with institutional mechanisms to prevent free riding. In-work benefit receipt in Germany is subject to the conditionality requirements for basic income receipt (Graf, 2013). For example, as is the case for unemployed basic income recipients, in-work benefit recipients must attend appointments with job centres and accept job offers that would reduce their benefits or end their benefit receipt. In cases of noncompliance, the recipients face financial sanctions.

The definition of what is required for individuals to live a minimally decent life is determined by the appointed authorities. Every five years, the Federal Statistical Office calculates “standard need levels” for single and cohabitating adults and children at different age levels, which are supposed to ensure that the sociocultural minimum of existence is met. The means-tested benefits covering those standard needs are granted as a flat rate according to household composition (€449 for a single person and €808 for couples as of 1 January 2022). “Additional needs” are considered, for example, for single parents or during pregnancy. In accordance with the principle of need-based distributive justice, resources are thus allocated neither equally nor proportionally, but recognising “individual particularities as a reason for departing from strict proportionality” (Kittel, 2020, p. 104).

The principle of need as the core mechanism underlying the calculation of basic income benefit levels also extends to the rules on supplementary earnings, which acknowledge different levels of need related to individual barriers to (gainful) employment. As noted before, benefit recipients completely retain earnings of up to €100, whilst earnings above the €100 threshold are subject to a benefit withdrawal rate that rises from 80 to 100%. The legislation also acknowledges the specific needs of households with children. In households without children, the benefit withdrawal rate is 90% over the income interval €1,000 to €1,200, and income above the €1,200 threshold is fully accounted for when calculating benefit levels. This threshold increases to €1,500 in households with at least one child. In total, an employed basic income recipient without children can thus receive a maximum of €300 more than an unemployed basic income recipient without children, whilst an in-work benefit recipient with at least one child can top up his or her out-of-work benefits with a maximum of €330.

Assuming that the public supports the principles of need-based distributive justice that underlie the in-work benefit regulations, the following hypotheses can be formulated:

- H1a.* Fairness perceptions vary with the composition of benefit recipient households. More generous in-work benefits are more likely to be considered adequate for households with children than for households without children.
- H1b.* Fairness perceptions vary with the monthly earnings of benefit recipients. More generous in-work benefits are more likely to be considered adequate for individuals with lower monthly earnings than for individuals with higher monthly earnings.

### *In-work benefit receipt and perceptions of deservingness*

Research in the tradition of deservingness theory provides a fine-grained perspective on how the public assesses the deservingness of individuals and groups (e.g.; van Oorschot *et al.*, 2017; Meuleman *et al.*, 2020). The central claim of deservingness theory is that people use certain criteria as decision heuristics when assessing the deservingness of potential welfare claimants. The literature refers to five core criteria: (1) the extent to which potential

welfare claimants have *control* over their situation, (2) whether their *attitude* displays gratefulness and compliance, (3) whether they give or do something in return for benefit receipt (*reciprocity*), (4) the perceived proximity of the potential welfare claimants to the person assessing deservingness (*identity*), and (5) the level of *need*. For example, deservingness theory relates the finding that across countries and social categories, unemployed people are regarded as less deserving of public support than elderly, sick or disabled individuals to the assessment that unemployed persons are considered to have more control over their situation (van Oorschot, 2006). Among the unemployed, perceived deservingness has been shown to vary with, e.g. the cause of unemployment (control) or contributions made to society as a whole such as through parenting or care for relatives (reciprocity) (Buss, 2019; Osiander *et al.*, 2022).

Within the institutional framework of in-work benefits described above, individuals are eligible for in-work benefits in a variety of situations. These include but are not limited to (nearly) full-time work in the low-wage sector, low earnings because of few working hours, or high need due to many household members (Rudolph, 2014). Between 2007 and 2014, approximately half of all in-work benefit recipients in Germany were marginally employed only, with an additional income of less than €450 (Bruckmeier *et al.*, 2015). One essential reason why individuals work only a few hours is a limited ability to work. In a representative survey, more than 40% of unemployed as well as employed basic income recipients in Germany reported having serious health impairments. Self-reported health impairments were more common amongst unemployed benefit recipients than amongst those who were employed, but both groups were found to be significantly worse off than employed persons who did not receive benefits (Eggs *et al.*, 2014).

From the perspective of deservingness theory, individuals who are sick are more likely to be perceived as victims of uncontrollable events than other individuals and are therefore intuitively regarded as being more deserving of public support (Jensen and Petersen, 2017). In light of these previous findings, we formulate the following hypothesis:

*H2a.* Fairness perceptions vary with the health status of in-work benefit recipients. More generous in-work benefits are more likely to be considered adequate for individuals with health impairments than for healthy individuals.

A related question concerns whether judgements of an adequate level of in-work benefit receipt differ for recipients with physical and mental illnesses. Respondents of the abovementioned representative survey amongst basic income recipients in Germany reported having physical health problems more often than mental health problems (Eggs *et al.*, 2014). There is, however, broad cross-national empirical evidence on the specific negative impacts of unemployment on mental health (Paul and Moser, 2009). Although public knowledge about mental disorders has increased considerably in recent decades, that extended knowledge has apparently not translated into increased social acceptance of mentally ill persons. Instead, the literature notes that negative stereotypes about mentally ill people and the obstacles to societal participation that they face remain unchanged (Pescosolido, 2013; Schomerus *et al.*, 2012). Moreover, there may be important variation within the categories of physical and mental illness. In a recent vignette study on the perceived deservingness of disability benefit claimants, Geiger (2021) observed a “hierarchy of deservingness” amongst the different symptoms included in the vignettes, with wheelchair use being viewed as the type of impairment associated with the greatest level of deservingness, followed by schizophrenia, back pain, chronic widespread pain and depression.

We use back pain and depression as indicators for physical and mental illness. Both are comparatively widespread within the German population (Busch *et al.*, 2013; von der Lippe *et al.*, 2021). Given the background of specific negative stereotypes about mentally ill people, we assume that more generous in-work benefits are considered adequate if individuals suffer from a physical illness rather than from a mental illness:

*H2b.* Fairness perceptions vary with the health status of in-work benefit recipients. More generous in-work benefits are more likely to be considered adequate for individuals with a physical illness (back pain) than for individuals with a mental illness (depression).

## Data and methods

We use a factorial survey experiment (see e.g. [Auspurg and Hinz, 2015](#)) to investigate which factors guide judgements about an adequate level of in-work benefit receipt. In a factorial survey, respondents evaluate descriptions of fictitious persons, objects or situations, also called vignettes. The scenarios presented to respondents randomly combine different characteristics along several dimensions. Factorial surveys investigate attitudes or justice principles by means of concrete, real-life scenarios. The random variation in vignette characteristics (“dimensions”) allows us to identify the influence of the different scenario features (“levels”) on the respondents’ evaluations. Vignette studies are a well-established instrument in empirical justice research and in research on the perceived deservingness of welfare claimants (see e.g. [Buss, 2019](#); [Geiger, 2021](#), [Liebig et al., 2015](#)).

### *The vignette design*

This vignette study consisted of a short scenario describing a fictitious in-work benefit recipient with an initial monthly earning of €50 who increases his or her working hours so that his or her monthly earnings also rise. Respondents received information about (1) the initial household income (i.e. the sum of the monthly €50 income and the supplementary basic income), (2) the hypothetical sum of the new monthly income and the initial supplementary basic income, and (3) the sum of the new monthly earnings and supplementary basic income granted according to the current in-work benefit regulations. Each of the respondents evaluated a set of four randomly assigned vignettes from a vignette universe of 96 possible combinations. For each scenario, the respondents were asked to indicate the sum of monthly earnings and supplementary basic income that they considered appropriate given the situation described. As we were able to present each vignette multiple times, we did not draw a (d-efficient) subset for our analysis.

[Table 1](#) provides an overview of the vignette dimensions and the levels that varied across the scenarios. The fictitious benefit recipient was either single, living with a partner, living with a partner and a child or a single parent ([H1a](#)). The fictitious person was either healthy or

Dimension	Level
Gender	Female Male
Household composition	Single individual Single parent with child Cohabiting couple without children Cohabiting couple with child
Health status	No health restrictions Frequent back pain Depressive episodes
Monthly net earnings after increase in working hours	€100 €400 €600 €1,000

**Table 1.**  
Dimensions and levels  
of the vignettes

was experiencing either frequent back pain or depressive episodes (H2a, H2b). The monthly earnings of the fictitious recipient after increasing his or her working hours amounted to €100, €400, €600 or €1,000 (H1b).

The gender of the fictitious benefit recipient was also varied to control for an alternative explanatory factor for differences in fairness perceptions. While full-time employment is the dominant employment pattern amongst childless women in Germany, the different gendered employment patterns of mothers in East and West Germany have converged into a “modified male breadwinner model” with male full-time and female part-time work (Trappe *et al.*, 2015). Given these different gender role expectations, the shared normative beliefs about work and earning one’s own living may be weaker for women than for men (Roex and Rözer, 2018, p. 1,058).

A sample vignette reads as follows:

*A **single woman living with her child** receives about €1,300 in monthly basic income for living expenses and housing costs. This sum includes the child allowance [Kindergeld]. The woman earns €50 per month from a part-time job. In total, she has about €1,350 per month at her disposal. The woman suffers from **frequent back pain**.*

*The woman extends her working hours. Her new net income from labour is €400 per month (after the deduction of any taxes or contributions that may be due). **The sum of her monthly basic income and new earnings would be €1,700.** This amount is reduced by about €240 according to current regulations. **After increasing her working hours, the woman thus has a total of about €1,460 per month at her disposal.***

*Regardless of the current regulations: how much money do you think the woman should receive in total?*

Key words related to the dimensions that were varied, the hypothetical household income and the new household income according to current legislation were printed in bold as shown above. Before the vignettes were introduced, the respondents received some basic information about in-work benefit receipt via Germany’s means-tested basic income system. Furthermore, the respondents were asked to bear in mind that basic income is financed through taxes when evaluating the scenarios to make it clear that a more generous in-work benefit design would be associated with costs for the taxpayer.

#### *Sample and estimation strategy*

The random survey sample was drawn from a two-percent sample of the Institute of Employment Research’s “Integrated Employment Biographies” (IEB) (IEB V14.01.00-190927, Nürnberg, 2019). On a daily basis, the IEB captures all spells of employment registered through social security contributions, unemployment benefit receipt, basic income receipt, unemployment, job search and participation in labour market programmes. The sample was restricted to individuals living in Germany who were between 18 and 70 years old at the time of data collection and had at least one IEB spell during 2018 (see Stephan *et al.*, 2021 for details). Our survey thus covers core parts of the German labour force with the exception of the self-employed and public servants.

The survey was conducted between 2 November and 17 December 2020. From a gross sample of approximately 42,500 persons drawn from the register data, 30,000 of whom were contacted by email and 12,500 of whom were contacted by post, a final sample of 1,120 completed questionnaires was obtained. Although this response rate may seem low, this procedure is preferred to, e.g. commissioning an online panel provider: It enables us to investigate in detail selection into survey participation (Stephan *et al.*, 2021) and to control the estimates for factors driving this selection. The analysis was restricted to respondents with no item nonresponse who evaluated at least one of the four vignettes presented to them and who agreed to merge their survey answers with their IEB data [1].

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Linking the survey responses and IEB data enabled us to obtain detailed information about the respondents' labour market history. The resulting analysis sample encompassed 868 respondents [2].

The mean age of the respondents in this sample was 43 years. A majority (58%) were male, of German nationality (95%), and had completed vocational training or had received an upper secondary school degree (53%). According to self-reports from the questionnaire, 71% were employed at the time of the survey; 8% were attending school, were in vocational training or were students; 7% were unemployed; and 5% were retired. Further descriptive statistics of the respondents are presented in the supplementary material (Table A1).

Our main purpose is to identify how respondents' assessments vary if vignette features are experimentally varied. While we do not have a representative sample of respondents, we are able to control for relevant characteristics (based on survey as well as on administrative information) that may exert an impact on assessments as well as on selection into survey participation. To account for the nested data structure resulting from the fact that each respondent evaluated four vignettes, models with random intercepts across individuals were estimated (Auspurg and Hinz, 2015).

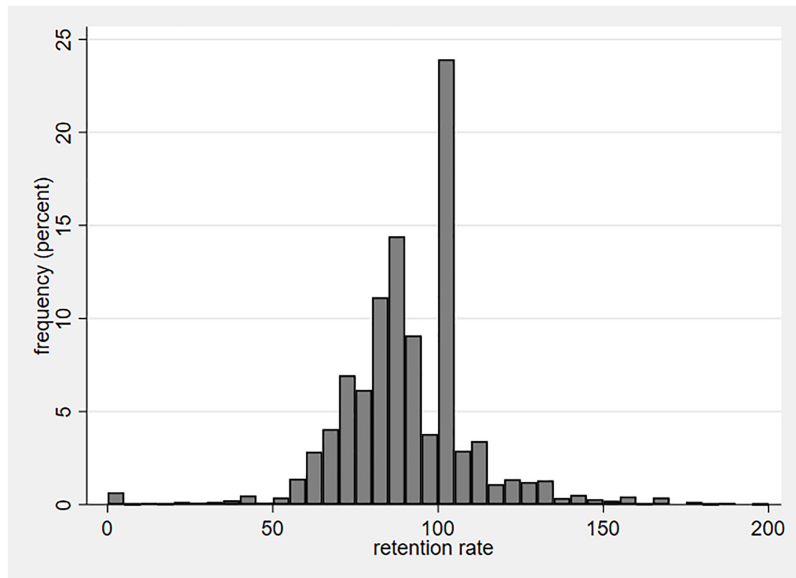
## Results

Across the whole pool of vignettes about the fictitious in-work benefit recipients with different attributes (3,456 scenarios), the respondents considered a household total, i.e. the sum of earnings and supplementary basic income, of between €0 and €3,500 to be adequate, with the average adequate total amounting to €1,593 [3]. For comparison, the household incomes determined by the current legislation that were specified in the scenarios ranged from €900 to €2,010.

The multivariate analyses used the "earnings retention rate" as the outcome variable. It is computed as the ratio of the total income (earnings + benefits) specified by respondents to the unreduced sum of earnings and supplementary basic income mentioned in the scenarios (€1,700 in the vignette example shown above). For approximately 23% of the scenarios, the respondents specified an amount that corresponded to the total unreduced sum of earnings and welfare benefits, and for approximately 62% of the scenarios, the respondents chose an amount below 100%. For 15% of the scenarios, the respondents specified an amount that was above the unreduced sum of earnings and welfare benefits, which most likely expresses a preference for generally higher benefit levels in the means-tested basic income system. Figure 1 shows the distribution of the outcome variable [4].

In most cases described in the vignettes, the total income specified by the respondents was identical to or higher than the total income that would result from current legislation. These descriptive results, however, should be interpreted with caution as they refer only to the scenarios described in the vignettes. Moreover, it is not possible to determine whether the respondents who specified an amount exceeding the total income resulting from current legislation were expressing a preference for higher benefit levels in general (which would also apply to *unemployed* benefit recipients) or a preference for more generous public support for *employed* benefit recipients.

Table 2 presents the findings of the multivariate analyses. The first specification includes only the vignette features. The reference scenario is a woman without health impairments living with her partner. She increases her monthly earnings from €50 (the initial value in all scenarios) to €100. The constant for this scenario is an earnings retention rate of 103%. For the reference scenario, survey participants would therefore be slightly more generous than the current legislation, according to which the earnings retention rate would be 100 (earnings of up to €100 remain entirely with the welfare benefits recipient).



**Note(s):**  $N$  (respondents) = 868;  $N$  (responses) = 3,456; bin = 5  
**Source(s):** Authors' own illustration

**Figure 1.**  
Distribution of the earnings retention rate (in percent)

As seen in column (1), the respondents varied their judgements according to the composition of the fictitious benefit recipient household described in the vignettes. Single parents were granted a slightly yet significantly higher benefit retention rate than a childless couple. There is, however, no significant difference between the earnings retention rate considered adequate for a couple with a child and for a childless couple. The results therefore provide partial support for the assumption formulated in [H1a](#) that more generous in-work benefits are considered adequate if children are living in the household.

No significant difference was found between the respondents' judgements for female benefit recipients and that for male recipients. The respondents' assessments of an adequate level of public support, however, differed significantly with the monthly income of the fictitious person described in the scenarios. For monthly earnings of €400/€600/€1,000, the household income specified by respondents corresponded to a retention rate approximately 14/19/28% points lower than that in the €100 scenario. These variables have by far the strongest impact on the earnings retention rate amongst all the vignette dimensions. The effects mirror the existing regulations according to which the benefit reduction rate increases with income. As shown in [Figure 2](#), however, the absolute household income that respondents considered adequate increased with monthly earnings, i.e. respondents granted higher household incomes if the fictitious person described in the vignettes had a higher monthly income than if he or she had a lower monthly income. Moreover, the higher the monthly income was, the more the respondents' average assessments deviated from the amount granted by the current legislation. Overall, the results support the assumption that the principle of need guides fairness perceptions of in-work benefit receipt, although it seems that the respondents also rewarded a benefit recipient's labour market participation more than current legislation does.

How are fairness perceptions affected if a benefit recipient has health impairments? The earnings retention rate considered adequate for recipients who suffer from frequent back

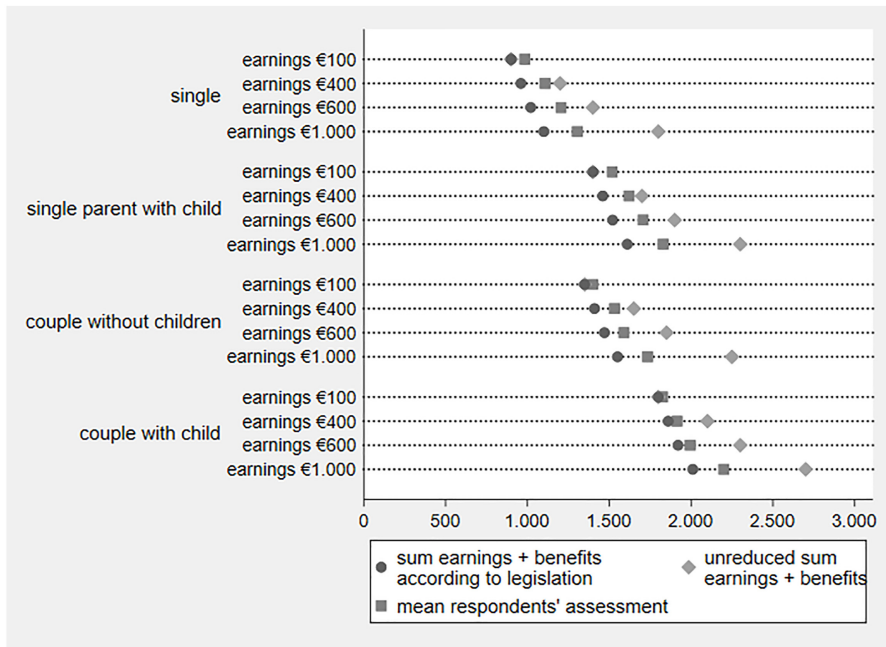
	Model 1		Model 2		Survey experiment on in-work benefits
	Coef	SE	Coef	SE	
<i>Vignette dimensions</i>					
Male (ref: female)	0.594	0.449	0.645	0.454	
Cohabiting couple (ref)	—	—	—	—	
Single individual	0.693	0.702	0.663	0.711	
Single parent	3.255**	0.629	3.281**	0.639	
Cohabiting couple with child	1.010	0.543	1.024	0.548	
No health impairments (ref)	—	—	—	—	
Frequent back pain	1.794**	0.544	1.764**	0.543	
Depressive episodes	2.064**	0.580	2.034**	0.583	
Monthly earnings €100 (ref)	—	—	—	—	
Monthly earnings €400	13.675**	0.695	13.713**	0.696	
Monthly earnings €600	18.919**	0.701	18.935**	0.702	
Monthly earnings €1,000	28.162**	0.785	28.171**	0.783	
<i>Respondent attributes</i>					
<i>Age</i>					
29 years or younger			0.165	2.032	
30–39 years (ref)			—	—	
40–49 years			0.957	1.427	
50–59 years			0.882	1.803	
60 years or older			0.432	2.042	
Female (ref: male)			0.187	1.171	
Children (ref: yes)			0.293	1.525	
Eastern Germany (ref: Western Germany)			0.047	1.207	
German nationality (ref: yes)			1.045	2.674	
<i>Education</i>					
No vocational degree			8.939	4.609	
Vocational training or upper secondary school degree (ref)			—	—	
University degree			0.905	1.200	
No information on education			0.514	4.723	
<i>Monthly net household income</i>					
Less than €1,000			3.990	3.194	
€1,000 to less than €2,000			0.169	1.795	
€2,000 to less than €3,000 (ref)			—	—	
€3,000 to less than €4,000			0.214	1.921	
€4,000 to less than €5,000			1.148	1.881	
€5,000 or more			2.197	1.840	
No information on net income			1.956	3.311	
<i>Number of persons in household</i>					
1-Person household			1.540	1.610	
2-Person household (ref)			—	—	
3-Person household			0.935	1.607	
4-Person household			1.243	2.071	
5-Person household			1.774	1.803	
<i>Party preference</i>					
Christian conservative party			5.292**	1.651	
Social democratic party			0.983	1.563	
Right-wing populist party (AfD)			6.333	3.263	
Liberal democratic party			4.474*	2.215	
Left-wing party (DIE LINKE)			1.033	1.978	
			(continued)		

	Model 1		Model 2	
	Coef	SE	Coef	SE
Green party (ref)			—	—
Other party			1.519	2.608
No party preference			5.967**	1.867
Apolitical			2.358	1.898
No information on party preference			7.241*	2.989
<i>Employment status</i>				
Regular employment (including short term work) (ref)			—	—
Civil servant			6.853	9.102
Self-employed			6.608	8.441
Marginally employed			1.945	5.541
School/vocational training/student			1.583	2.501
Pensioner			0.070	2.409
Unemployed			2.900	2.068
Other			2.312	2.333
<i>Labour market history</i>				
Regular employment, 2014–2019 (in years)			0.753	0.420
Marginal employment, 2014–2019 (in years)			0.265	0.436
Never received unemployment benefits (ref: received unemployment benefits)			1.661	1.159
Ever received means-tested basic income support (ref: no)			2.539	1.554
Dummy: last position = part time			2.032	1.385
Last daily wage			0.012	0.014
Constant	103.392**	1.055	105.635**	3.925
Responses (vignettes)	3,456		3,456	
Respondents	868		868	
Pseudo R <sup>2</sup>	0.25		0.31	
<b>Note(s):</b> Coef = coefficient, SE = standard error (clustered on the level of individuals), * $p < 0.05$ , ** $p < 0.01$ . Vignette position was controlled for in both models and had no effect				
<b>Source(s):</b> Authors' own calculations, random intercept models				

Table 2.

pain or depression was slightly higher than that for healthy benefit recipients, and the differences are statistically significant. The coefficient is larger for depression than for back pain, but the difference between the two types of illness is not statistically significant. These results indicate support for H2a insofar as in-work benefit recipients with an illness are granted somewhat more generous public support. However, contrary to the expectations formulated in H2b, mental illness (depression) was associated with public support equally as generous as that for physical illness. Individuals with health impairments are seen as more deserving than those without them, but we do not find strong differentiation within the group of individuals with impairments.

The model presented in column 2 also includes the respondents' characteristics as explanatory variables. The results for the vignette variables remain virtually unchanged. Compared to those respondents who indicated a preference for the Green party, those who indicated a political preference for the conservative Christian parties or the liberal party and those who indicated no party preference or did not provide information on party preference were less generous. These results are in line with those of a previous analysis of justice principles and party preferences in Germany that revealed that voters for the Green party show particularly strong support for the principle of need-based distributive justice (Eisnecker *et al.*, 2018). Sociodemographic and labour market characteristics at the respondent level were not found to affect fairness perceptions.



**Note(s):**  $N$  (respondents) = 868;  $N$  (responses) = 3,456

**Source(s):** Authors' own illustration

**Figure 2.**  
Household income  
according to current  
legislation and  
according to  
respondents'  
assessments (in euros)

## Conclusion

In-work benefits are an increasingly popular social policy programme. However, thus far, little is known about the social legitimacy of these specific welfare programmes that address the working poor. Using the example of Germany's most important in-work benefit scheme, this article examined which principles guide judgements of an adequate level of public support for individuals in paid employment.

In a factorial survey, the household composition, health status, and monthly earnings of a hypothetical in-work benefit recipient were varied experimentally. The results show that slightly more generous public support is more likely to be considered adequate for in-work benefit recipients with a physical or a mental illness than for healthy recipients. In contrast to the literature on the enduring stigmatisation of mental illness (Pescosolido, 2013; Schomerus *et al.*, 2012), respondents considered an equal level of public support to be adequate if the person described in the vignettes suffered from depression as when the hypothetical in-work benefit recipient suffered from back pain. Apparently, both types of illness decrease the perceived control of benefit recipients over their situation. The described benefit recipients suffering from back pain and from depression both seem to refer to the "sick role" which, as described by Parsons (1951), legitimises the nonfulfilment of common role obligations, as illness interferes with normal role capacity.

Another group that is regarded as being particularly deserving of generous in-work benefits are single parents. Among the different household constellations included in the vignettes, single benefit recipients with a child were granted the most generous earnings retention rate by the respondents, although the difference from the reference scenario is not

particularly large. These findings are similar to the results of a factorial survey on public deservingness perceptions of unemployed individuals in Germany, in which the respondents granted on average a more generous level of public support to unemployed individuals with children than to single individuals, with even more generous support for single than for married parents (Buss, 2019).

The level of monthly income from paid work had by far the strongest impact on the benefit level considered adequate. The preferred earnings retention rate corresponding to respondents' assessments significantly decreased with an increase in monthly earnings. This mirrors the existing legislation and demonstrates support for the principle of need-based distributive justice that underlies Germany's means-tested basic income support. However, the vignettes presented to the respondents included the amount granted according to the current legislation as an anchor for their assessments. Given this context, it is worth noting that the higher the income, the more the respondents' assessments deviated from the current legislation. One possible explanation is that respondents' assessments additionally considered the extent to which the fictitious benefit recipients described in the vignettes complied with social norms. When living in societies where paid work is associated with status and identity, unemployed individuals may experience external (e.g. social exclusion and gossip) and internal sanctions for not complying with the social norm to work and to make one's living (Stam *et al.*, 2016; Sage, 2019; for in-work benefit receipt, see Hetschko *et al.*, 2020). From a policy perspective, the findings suggest that recent proposals, which grant greater rewards for higher additional earnings than the current system (e.g. Blömer *et al.*, 2019; Bruckmeier *et al.*, 2018b; Schöb, 2020), are not entirely in opposition to public fairness perceptions.

The findings presented in this article do not consider mandatory requirements linked to benefit receipt, such as job search activities or participation in labour market programmes to reduce benefit reliance (see, e.g. Graf, 2013). Such mechanisms of "in-work conditionality", which have also been introduced, for example, in the UK (Abbas and Chrisp, 2021), may be another factor that affects fairness perceptions of welfare benefits and thus of in-work benefit receipt. Potential interactions between perceptions of adequate retention rates and compliance with mandatory requirements are an aspect that might be considered by future studies.

Furthermore, as mentioned in the introduction, in-work benefit schemes differ considerably in their specific designs. Every country that has implemented a means-tested basic income scheme, however, is faced with the challenge of combining out-of-work benefits with work incentives. The approach presented in this article could therefore be extended to other institutional settings to create a more comprehensive picture of the social legitimacy of in-work benefit receipt.

#### Notes

1. Data protection rules require the respondent's consent to link records. Approximately 81 percent (902 respondents) of the respondents with completed questionnaires agreed to the record linkage.
2. A more recent version of the IEB (V15.00.00-201912) was used for the analyses than was used to draw the sample. Eight observations had to be excluded because the person identifiers were corrected across the IEB versions.
3. Eight outliers (retention rate > 200) were excluded from the analyses.
4. Note that the retention rate does not have a normal distribution. In linear regressions, this could result in nonnormally distributed error terms and invalid test statistics. As a robustness check, we grouped the dependent variable into categories (<100, 100, >100) and estimated an ordered logit model. The results (see Table A2) are very similar to the results of the random effects model.

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Variable	Measurement	Mean
Male (ref: female)	0/1 = no/yes	0.58
Age	Years	43.16
Children (ref: none)	0/1 = no/yes	0.54
Western Germany (ref: Eastern Germany)	0/1 = no/yes	0.79
German nationality	0/1 = no/yes	0.95
<i>Education</i>		
No vocational training	0/1 = no/yes	0.03
Vocational training or upper secondary school degree	0/1 = no/yes	0.53
University degree	0/1 = no/yes	0.43
No information	0/1 = no/yes	0.16
<i>Household size</i>		
1-Person household	0/1 = no/yes	0.23
2-Person household	0/1 = no/yes	0.40
3-Person household	0/1 = no/yes	0.18
4-Person household	0/1 = no/yes	0.15
5-Person or larger household	0/1 = no/yes	0.04
<i>Monthly household net income</i>		
Less than €1,000	0/1 = no/yes	0.04
€1,000 to less than €2,000	0/1 = no/yes	0.19
€2,000 to less than €3,000	0/1 = no/yes	0.22
€3,000 to less than €4,000	0/1 = no/yes	0.20
€4,000 to less than €5,000	0/1 = no/yes	0.17
€5,000 or more	0/1 = no/yes	0.17
No information on net income	0/1 = no/yes	0.01
<i>Employment status at the time of the survey</i>		
Regular employment (including short term work)	0/1 = no/yes	0.71
Civil servant	0/1 = no/yes	0.01
Self-employed	0/1 = no/yes	0.01
Marginally employed	0/1 = no/yes	0.01
School/vocational training/student	0/1 = no/yes	0.08
Pensioner	0/1 = no/yes	0.05
Unemployed	0/1 = no/yes	0.07
Other	0/1 = no/yes	0.05
<i>Party preference</i>		
Christian conservative party	0/1 = no/yes	0.17
Social democratic party	0/1 = no/yes	0.10
Right-wing populist party (AfD)	0/1 = no/yes	0.03
Liberal democratic party	0/1 = no/yes	0.04
Left-wing party (DIE LINKE)	0/1 = no/yes	0.07
Green party	0/1 = no/yes	0.26
Other party	0/1 = no/yes	0.05
No party preference	0/1 = no/yes	0.15
Apolitical	0/1 = no/yes	0.10
No information on party preference	0/1 = no/yes	0.02
<i>Labour market history</i>		
Regular employment, 2014–2019	Years	4.49
Marginal employment, 2014–2019	Years	0.59
Ever received unemployment benefits	0/1 = no/yes	0.55
Ever received means-tested unemployment benefits	0/1 = no/yes	0.18
Last position = part time	0/1 = no/yes	0.30
Last daily wage	Euros	112.26

**Table A1.**  
Sample means

**Note(s):**  $N = 868$   
**Source(s):** Authors' own calculations

Earnings retention rate considered adequate	Model 1		Model 2	
	<100	>100	<100	>100
<i>Vignette dimensions</i>				
Male (ref: female)	0.002 (0.008)	0.001 (0.005)	0.003 (0.008)	0.002 (0.005)
Cohabiting couple (ref)	0.032** (0.010)	0.022** (0.007)	0.027** (0.010)	0.018* (0.007)
Single individual	0.037** (0.011)	0.025** (0.008)	0.039** (0.011)	0.027** (0.008)
Single parent	0.015 (0.011)	0.010 (0.008)	0.015 (0.011)	0.010 (0.008)
Cohabiting couple with child	—	—	—	—
No health impairments (ref)	0.021* (0.009)	0.014* (0.006)	0.019* (0.009)	0.013* (0.006)
Frequent back pain	0.022* (0.010)	0.015* (0.007)	0.020* (0.010)	0.013* (0.007)
Depressive episodes	—	—	—	—
Monthly earnings €100 (ref)	0.189** (0.010)	0.129** (0.010)	0.194** (0.010)	0.132** (0.010)
Monthly earnings €400	0.236** (0.011)	0.161** (0.011)	0.238** (0.010)	0.161** (0.011)
Monthly earnings €600	0.345** (0.018)	0.235** (0.011)	0.347** (0.018)	0.235** (0.012)
Monthly earnings €1,000	—	—	—	—
<i>Respondent attributes</i>				
<i>Age</i>				
29 years or younger	—	—	0.016 (0.022)	0.011 (0.015)
30–39 years (ref)	—	—	—	—
40–49 years	—	—	0.003 (0.018)	0.002 (0.012)
50–59 years	—	—	0.002 (0.018)	0.002 (0.012)
60 years or older	—	—	0.009 (0.024)	0.006 (0.017)
Female (ref: male)	—	—	0.007 (0.013)	0.005 (0.009)
Children (ref: yes)	—	—	0.009 (0.017)	0.006 (0.011)
Eastern Germany (ref: Western Germany)	—	—	0.012 (0.014)	0.008 (0.009)
German nationality (ref: yes)	—	—	0.010 (0.030)	0.007 (0.021)
<i>Education</i>				
No vocational degree	—	—	0.028 (0.032)	0.021 (0.026)
Vocational training or upper secondary school degree (ref)	—	—	—	—
University degree	—	—	0.000 (0.014)	0.000 (0.010)
No information on education	—	—	0.029 (0.058)	0.018 (0.033)

(continued)

**Table A2.**  
Effect of recipient and respondent characteristics on the earnings retention rate considered adequate (below 100%, 100%, above 100%); average marginal effect

Earnings retention rate considered adequate	Model 1		Model 2	
	<100	>100	<100	>100
<i>Monthly net household income</i>				
Less than €1,000			0.012 (0.036)	0.020 (0.060)
€1,000 to less than €2,000			0.006 (0.020)	0.010 (0.033)
€2,000 to less than €3,000 (ref)			—	—
€3,000 to less than €4,000			0.002 (0.020)	0.001 (0.014)
€4,000 to less than €5,000			0.004 (0.021)	0.003 (0.014)
€5,000 or more			0.004 (0.023)	0.003 (0.015)
No information on net income			0.088** (0.031)	0.084* (0.040)
<i>Number of persons in household</i>				
1-Person household			0.011 (0.019)	0.017 (0.031)
2-Person household (ref)			—	—
3-Person household			0.016 (0.017)	0.012 (0.012)
4-Person household			0.005 (0.020)	0.003 (0.014)
5-Person household			0.045* (0.023)	0.035 (0.019)
<i>Party preference</i>				
Christian conservative party			0.056** (0.018)	0.039** (0.013)
Social democratic party			0.007 (0.023)	0.004 (0.014)
Right-wing populist party (AfD)			0.046 (0.033)	0.031 (0.024)
Liberal democratic party			0.063* (0.027)	0.044* (0.021)
Left-wing party (DIE LINKE)			0.008 (0.028)	0.004 (0.016)
Green party (ref)			—	—
Other party			0.013 (0.035)	0.007 (0.019)
No party preference			0.055** (0.018)	0.037** (0.013)
Apolitical			0.037 (0.022)	0.024 (0.015)
No information on party preference			0.108** (0.025)	0.092** (0.029)
				(continued)

Earnings retention rate considered adequate	Model 1		Model 2	
	<100	>100	<100	>100
<i>Employment status</i>				
Regular employment (including short term work) (ref)				
Civil servant			0.020 (0.036)	0.052 (0.096)
Self-employed			0.017 (0.046)	0.038 (0.101)
Marginally employed			0.016 (0.037)	0.038 (0.083)
School/vocational training/student			0.008 (0.021)	0.019 (0.052)
Pensioner			0.013 (0.022)	0.030 (0.049)
Unemployed			0.035* (0.015)	0.092* (0.043)
Other			0.029 (0.017)	0.077 (0.046)
<i>Labour market history</i>				
Regular employment, 2014–2019 (in years)			0.005 (0.003)	0.013 (0.008)
Marginal employment, 2014–2019 (in years)			0.000 (0.003)	0.000 (0.008)
Never received unemployment benefits (ref: received unemployment benefits)			0.007 (0.008)	0.018 (0.021)
Ever received means-tested basic income support (ref: no)			0.017 (0.017)	0.028 (0.029)
Dummy: last position = part time			0.014 (0.016)	0.023 (0.027)
Last daily wage			0.000 (0.000)	0.000 (0.000)
<i>Responses (vignettes)</i>			3,456	
<i>Respondents</i>			868	
<i>Pseudo R<sup>2</sup></i>			0.21	
<b>Note(s):</b> * $p < 0.05$ , ** $p < 0.01$ . Estimated marginal effects and standard errors (in parentheses). Vignette position was controlled for in both models and had no effect				
<b>Source(s):</b> Authors' own calculations, ordered logit models				
===== (see footnote 4)				

Table A2.