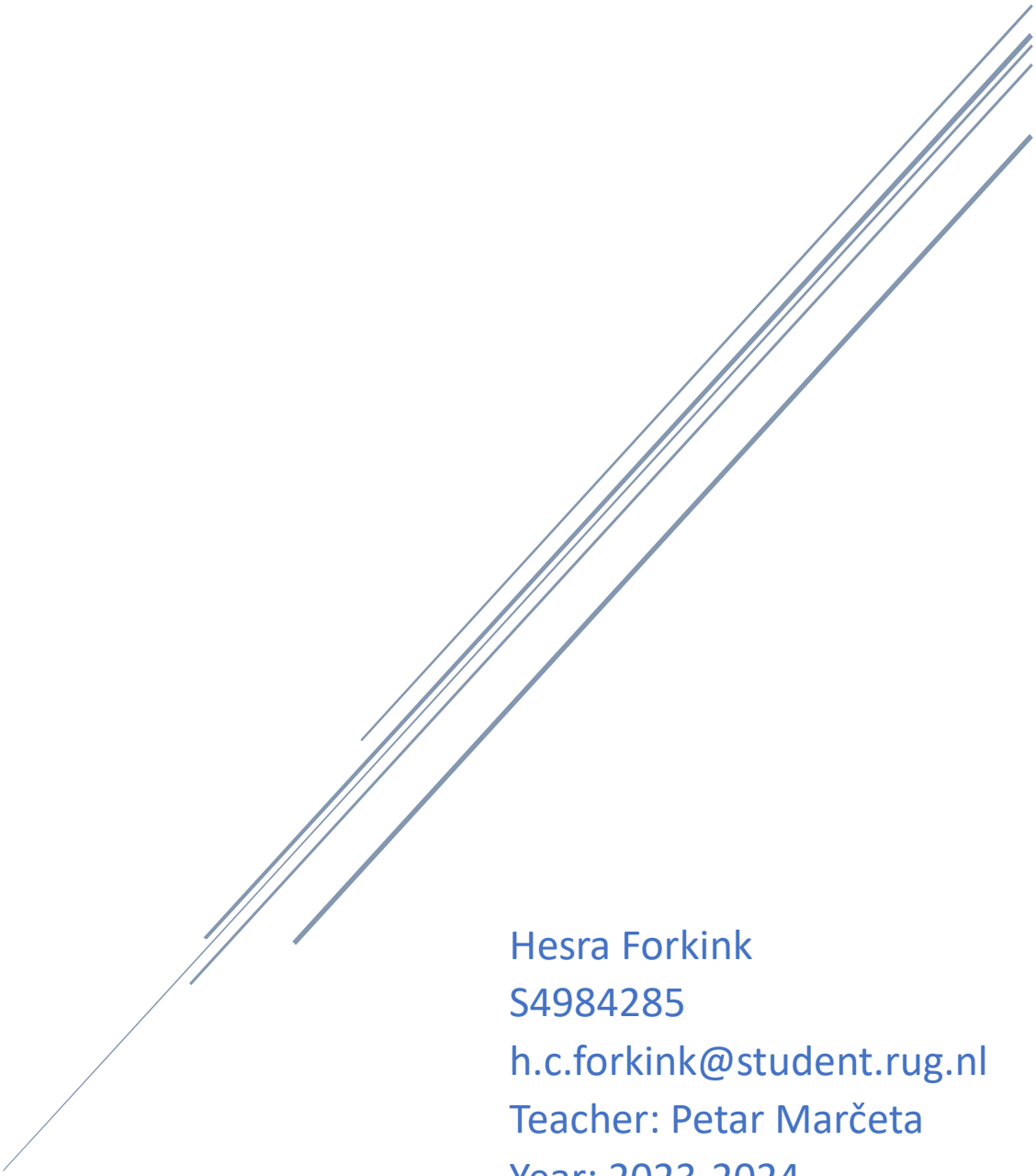
PERSERVERING PRECARITY THROUGH PASSION

Does more passion in work lead to more precarious working conditions, and how does this differ between men and women?



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Abstract

This paper researches the relationship between passion and precarious working conditions, and how that differs between genders.

The main concepts are precarious working conditions which are defined by insecurity and passion which is defined by intrinsic work values. Two hypotheses are constructed: '*Having more passion in work leads to more precarious working conditions'* and '*The relationship between passion and precarious working conditions is more positive for women'*.

Data is retrieved from the EWCTS (2021). The used method is linear regression. Results give no support for both the hypotheses. The variable passion does not seem to have effect on precarious working conditions. Passionate workers are not choosing their passion above a job that is not precarious. Inflation and cost of living is high, that might be why the first hypothesis is not supported. For the second hypothesis, the interaction variable is positive but only slightly and not significant. Emancipation might also be further than previously thought and there could be a different view on precarity between men and women. Limits of this research are uncertainty of independent respondents and high number of non-response, influence of data collection during COVID-19, violation of the assumption of homoscedasticity and a low Cronbach's Alpha.

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Introduction

The way we view work has changed. It used to be something that was only necessary and a worker didn't need to like the job (Cremer, 2023). Now, people want to enjoy their job, because they are spending and investing quite a big chunk of time in it. And because of that time investment, workers also want to develop themselves in their work. As well as that their work makes a person develop in other areas of their lives (Dumitrache & Lazăr, 2023). Work is seen as much more of an extension of the character of the person, it is not simply something only to earn money. It is not only the intrinsic value of work itself, but also social relationships play a part in making a job likeable. As the saying goes: colleagues make or break it (Nagoji & Mackasare, 2023). The job that workers choose is also dependent on if they have passion for the job. Passion refers mostly to liking or even loving the work itself (Baum & Locke, 2004; Vallerand et al., 2003; Vallerand et al., 2014). Examples are of this are that in healthcare, workers want to help their patients. Healthcare workers are most of the time not choosing the field of healthcare because of the extrinsic rewards, but more of the intrinsic values that jobs in that field have. These workers are more empathic and would like to see their patients thrive (Hochwarter et al., 2023; Meyer et al., 2020; Moreno-Jiménez et al., 2023).

Precarious work has always existed, only what is defined as precarious work has changed. In the industrial age, precarious work could be working in a factory where labour laws did not really apply. Or working in the houses of the upper class where workers could be fired at will. Views have also changed but that is a normal development (Bobek et al., 2018). It used to be an individual's own fault that (s)he had a poor job. This is coined in the term meritocracy: an individual's caste is defined by their merits. Merits are based on ability and talent, not wealth or social class (Young, 2011). And in present times, some workers are still unhappy in the jobs that they have. This unhappiness is not all that different from what it was previously, workers dealing with uncertainty throughout their professional careers.
In these modern times, flexible contracts are becoming more and more prevalent as Battisti and Vallanti showed in Italy (2013) and according to the OECD (2017). Especially the younger generation, the one that just starts in the work field, is critical of these flexible contracts (Standing, 2011). They start to see that the uncertainty impacts a lot of aspects of their lives. Such as not being able to buy a house or start a family, simply because they cannot anticipate if their financial resources are sufficient. A solution to this problem was, according to policy makers, to make women work (more) (Machovec, 2023). The research of Machovec (2023) showed that this was the case in the United States.

As a result, more and more women are entering higher education and are employed. It has not been that long ago that women were not allowed to have their own banking account, there still is a long path ahead. Some think that women and men have achieved equal standing in the working area. This is not (yet) true in everything. Youngjoo (2007) showed that men are more expected to overwork. The term 'glass ceiling' refers to this, women are not able to surpass a certain limit in pay or working hours but men are able to. Men and women earn different salaries for the same work that they do (Kronberg, 2020; Wysieńska-Di Carlo & Karpiński, 2024). Especially when looking at jobs that are high-earning and/or involve a management position, women are still -in a lot of ways- treated as the lesser counterpart (Parker, 2018).

This research aims to contribute to the discussion and debate around (precarious) work. Not every member of society knows what the struggle is for workers that 'have heart' for their job but do not have (financial) security to make ends meet (Kim et al., 2020). Passionate workers can show more resilience and adaptability to overcome these kind of challenges of job insecurity/instability. They do so by leveraging their passion or intrinsic motivation. In another light, the intense emotional investment in their work may add to the negative effects of precariousness, leading to more stress, burnout, and less overall well-being. It could lead to the feeling of not being good enough, failure to make enough money could give the idea to not doing one's job adequately (McDougald Scott, 2021).

Based on these phenomena, the research question that has been constructed:

'Does more passion in work lead to more precarious working conditions, and how does this differ between men and women?'

This research uses older and newer literature to support the claims that are being made. The dataset that will be used, is the European Working Conditions Telephone Survey (EWCTS) that was administered in 2021. The analyses will be a linear regression analysis.

Theoretical framework

Research model

As noted in the introduction, the research question is: 'does more passion in work lead to more precarious working conditions, and how does this differ between men and women?'. The question will have a tentative answer in this chapter. Later on, the hypothesis will be further researched with data and analyses.

The research model is presented in figure 1. In this model there are three variables: passion, precarious working conditions and gender. The variables parttime, sector and age are control variables. The main relation in this model is the path between passion and precarious working conditions. Gender is a moderating variable in that relationship.

Figure 1. Research model.

First, the term passion will be explained. Passion knows multiple definitions. Some of these are quite similar because they contain positive factors. A couple of these definitions will be presented. Zigarmi, Houson, Diehl, and Witt's (2010) definition describes passion as an enduring, positive, internalized state of contentment resulting from favorable cognitive and affective work appraisals. Not too different from the definition of Vallerand et al. (2003): work passion in terms of time and energy investments focusing on activities that are enjoyed and considered important. Maslach and Leiter (2008) define passion in terms of vigorous immersion in rewarding activities that build self-efficacy. Lastly, Perrewé et al. (2014) define passion as follows: passion in work is the emotional and persistent state of desire on the basis of cognitive and affective work appraisals. This results in consistent work

intentions and behaviours. These intentions and behaviours include everything, such as demonstrating organisational citizenship behaviours and taking initiative to solve problems at work.

Passionate individuals desire to engage in their chosen work. The result is a fairly uniform pattern of behaviour. Intrinsic work values is an important part of the broader term passion (Zigarmi et al., 2016). To have passion in the work that an individual does, there need to be intrinsic work values. Intrinsic work values are most of the time defined as that workers want autonomy in work, to be able to develop their skills and that workers get a sense of fulfillment from their job (Gesthuizen et al., 2019). Intrinsic work values is something that workers want, it is not necessarily that they have it. Passion is usually something that workers more or less have in their job (DePalma, 2020; Chen et al., 2019).

Because the concept of intrinsic work values does not take into account that one is actually happy with their job and passion does imply that, this research will use passion. The definition of passion from Perrewé and colleagues (2014) has been chosen for this research. Aspects of this definition refer to consistent and/or uniform work behaviours. This is more easily measured because responses on items about behaviour, will generally be in the same direction. This definition will be used to choose items in the questionnaire to measure the variable passion.

Precarious working conditions or precarious work conditions have a clearer definition. A job is precarious when it is temporary. Workers have less protection against being fired, but also that their hours, and most of the time their pay, are not guaranteed. The defining characteristic of precarious work is uncertainty. A job is uncertain if the employee is not paid enough for the work that they do and not on the agreed time, as lined out by Pun and colleagues (2024). The term precarious working conditions gives a negative connotation, but it does not need to be. Some people thrive in the flexibility that some jobs offer. They do not seek stability, but freedom is what these workers want (Bustelo et al., 2023; Mazzucchelli, 2017; Bridges, 2018). Context is also important in this. Someone with a more (financial) supportive network, has less issues with losing their job than a worker that does not have that network. And this is not only on the individual's level. The survival of an individual depends on how social welfare is regulated in a country. Some countries have generous welfare programmes, others lack those entirely. Precarious work hits people who have less of a social safety net around them, harder. In this research, it will not be necessarily about dangerous working conditions, although it can be a part of earlier mentioned criteria (Hewison & Kalleberg, 2013; Kalleberg & Vallas, 2017; Ornstein, 2021). In this research, precarious working conditions can also be called precarious work and precarious work conditions. These three terms refer to the same concept.

The final variable is gender. This variable will be treated as how an individual sees themselves, not their biological sex.

Passion and precarious working conditions

If an individual has more passion, than this could lead to more precarious working conditions. The person is in this case less attached to material things such as salary and more to how much the job makes the person feel good. This person will choose a job that brings fulfillment and will focus less on the material rewards, as seen in the research of Cinque (2021). It is not that these workers want to live in poverty, they find it more important to look at what the job brings in terms of more personal development than material rewards or extrinsic work values. The antagonist of extrinsic work values is intrinsic work values.

If one would think about labourers that are passionate but also work in precarious conditions, people like artists come to mind. Artists are textbook examples of precarity and precarious work. Most artists know that there is a big chance that they do not make a sustainable wage, as written by Alacovska (2022). Artists feel so much passion in their work that, while living cent to cent, they do not want to do anything else (Been & Keune, 2020). They have a dream, and they want to fulfill that dream. Even if that means barely getting by. In times like the Covid-19 pandemic, when the data for this research was collected, these people were amongst the first to lose their job because the cultural sector was closed. Pun and colleagues (2024) found that these artists had retrained themselves to find work in other sectors.

This is quite a specific example, but also people that set up their own (small) business do not have a lot of room for setbacks. They are not protected by a (massive) company that has (mostly) financial buffers, because their business has not yet grown to that size. But these self-employed business starters also work hard for very little (Auguste et al., 2023; Hoff, 2023). A starting company does not start big, it needs to grow. In that growth phase, it is usually necessary to put as much money as possible back into the company and not into yourself according to Miroshnychenko and colleagues (2021). These business starters are seeing the bigger picture, knowing where they want their company to end up. In order to make that happen, sacrifices in terms of time and money need to be made. It is unsure what the future holds for the business starter. What one wants for their business, might not happen. This is also precarity, the uncertainty if enough money will flow in and if your job/company will exist in the future.

The two examples of artists and self-employed people shows that passionate workers can fall in precarious work in all layers of society. Precarious work is not only in the bottom layer, but it can also exist in the 'upper' layer.

This leads to the first hypothesis:

"Having more passion in work leads to more precarious working conditions."

Women, passion and precarious working conditions

It is known that women work in more precarious jobs than men (Carreri, 2022; Mosoetsa, Stillerman, Tilly & Betti, 2016). Women might attach greater importance to passion in a job that men (Marini, 1996; Harris & Earle, 1986). This could be because women have lower expectations of material rewards. They have held a poorer position in the labour market in comparison to men. Women are happy they can work, and do not expect the full pay for this as Marini found (1996). Women, like most people, are most of the time in search of happiness. But when one cannot find that within their job in the area of extrinsic rewards, they look for other areas to find that happiness such as what it brings a worker in terms of personal development.

This leads to the second hypothesis:

"The relationship between passion and precarious working conditions is more positive for women."

Parttime, sector and age

The control variable parttime is put into the model because more women than men work in parttime jobs. Standing (2011) wrote that also parttime work can be seen as more precarious work. If parttime

is not in the model as a control variable, a wrong conclusion could be made that women are working in more precarious working conditions just because they work in more parttime jobs.

Some sectors are more precarious than others. For instance, O'Neill and colleagues (2023) have found that in Ireland, the private sector has less protective measures than the public sector. The public sector has more job security than the private sector (Munnell & Fraenkel, 2013). In the private sector, companies can go bankrupt. The public sector has the backing of the government and the financial security of taxpayers to keep it afloat. Additionally, the public sector can have better secondary employment conditions. According to Cutler and Waine (2012), things like pensions and sick leave are organised better.

The final control variable age is part of the model because people that start their careers, often have precarious jobs. Also, the generation that is starting their careers, has more passion in comparison with older generations (Standing, 2011). If this control variable is not put into the model, then a wrong assumption could be made that there are more precarious working conditions even if this is a normal trajectory for starting workers.

Method

Data

Sample

The data is collected by Eurofound in the European Working Conditions (Telephone) Survey (EWC(T)S). The wave that is used for the analyses was administered in 2021, this wave was via telephone because of the COVID-19 pandemic while it is usually administered face-to-face. The sample is representative of those aged 16 years and over who are in employment and are a resident in the country that is being surveyed. The countries were EU-members and (potential) EU-candidates: Albania, Bosnia and Herzegovina, Kosovo, Montenegro, North-Macedonia, Norway, Serbia, Switzerland and the United Kingdom. In 35 of the 36 countries, a single-stage, un-clustered sampling design was used. The kind of design employed is known as Random Digit Dialing (RDD), which implies that a computer randomly generates telephone numbers that match the configuration of telephone numbers in a country. Random direct dialing to mobile telephones was used for all countries except Sweden, where both mobile and landlines from a population register were used (*EWCTS 2021 – Methodology*, n.d.). Respondents were called up to five times if the interview was not completed or if calls went unanswered. Data collection lasted from March 2021 to November 2021.

The proportion of mobile and landline telephones to be used in countries without a suitable population register was carefully considered when formulating the final designs. For each country included in the survey, Ipsos considered the characteristics and habits of telephone use of the general public, as well as of the working population. Besides relying on available statistics, Ipsos also took into account the opinions and recommendations of survey experts in the countries (Ipsos NV, n.d.).

Interviews lasted about 20 minutes and each respondent got certain modules: a core module, one of the three M1 modules and one of the two M2 modules. Respondents got a random variation of the six possible surveys. Not all six surveys will be used because of the chosen variables. These variables were not presented to the entire sample so the respondents who answered the M1A+M2A and M1C+M2A survey will be used in this research.

Non-response and removal

A total of 2.102.518 people were sampled, 1.460.498 people were successfully contacted. This leads to a non-response of 642.020. The aim was to collect 70.017 completed interviews in total. At the end of the data collection, 71.764 interviews were completed. The overall the response rate was 5%, in other words that 95% of the gross sample did not respond and is not represented in the net sample, the potential size of nonresponse bias is quite high (Ipsos NV, n.d.). For some variables in some countries there was non-response (where the amount of non-response was relatively small, i.e. less than 3%) then this non-response was assumed to be at random, and the non-respondents were reallocated proportionally between valid responses.

In the Technical Rapport from Ipsos NV (n.d.), there is information about removal of data. In Cyprus, all 1461 interviews were removed due to concerns regarding the sample source, which was the target achieved by the initial supplier for the country. All interviews were subsequently replaced by a new supplier. In Czechia and Slovakia, the local teams accidentally used another database of sample for both countries which led to the removal of 1048 interviews in Czechia and 524 interviews in Slovakia. In both countries the local teams conducted additional interviews to reach the original targets. In Portugal, 265 interviews were removed for the same reason and the local team also completed

additional interviews to achieve the initial target. In addition to the above, a total of 1390 interviews were removed due to quality reasons: these being 412 in Slovenia, 391 in Germany, 323 in Austria and 264 in Albania. Following this, all four countries completed additional interviews in order to make up this shortfall and achieve the set targets. Other issues included the following:

- 264 interviews (across all countries) failed quality control checks by Eurofound, an average of 7 per country.
- 69 interviews (across all countries) were removed due to the length of interview being below the threshold of half of the median length.
- 21 partial interviews were removed (20 in Belgium and 1 in Albania).
- 5 interviews (across all countries) were removed due to issues with the call history.

Operationalisation

Passion

The first variable is passion. For this concept, there will be a new variable made consisting of multiple items in the questionnaire. The answer options for these items is the same for each item.
The first one will be Q61. The question was 'Please tell me how often the following applies to your work situation?'

- 'Your job gives you the feeling of work well done' (Q61H)
- 'You have the feeling of doing useful work' (Q61J)

The first item (Q61H) was chosen because the item measures satisfaction with the job of the worker. Satisfaction is a part of passion (Gesthuizen et al., 2019). Item Q61J was chosen because if a worker is passionate, they have the feeling that they are doing useful work. If a worker is not passionate, they most likely only work at their job because it brings money, not because they see the bigger picture of their work (Walo, 2023).

Another variable used will be Q90. The question was 'For each statement, please tell me how often you feel this way ….'

- 'Full of energy at work' (Q90A)
- 'Enthusiastic about job' (Q90B)
- 'Time flies when working' (Q90C)
- 'Emotionally drained by work' (Q90G)

The direction of the variable will be, the higher the response category, the higher the score on passion. These items were chosen because they align with the definition made in the chapter 'theoretical framework'. The items contain what a person feels, they are focused on emotions and behaviour. Item Q90A and Q90G fall in the same category, they ask the respondent about their energy levels. Passion includes that someone is positive in their energy. Q90B also falls in line with this, it refers to positive feelings. Q90B is only about the job itself, it does not take the context of a person into account. Q90C is chosen because it is known that when people like doing something, they have the idea that time moves quickly or flies (Fung et al., 2021).

Item Q90G has a negative formulation. This means that when an individual gives a higher score on these items, it means more emotionally drained. The other items are positive, the higher one scores, the more energetic/enthusiastic/positive one is. It can be argued that Q90G can be interpreted as negative, while a respondent might not mean it that way. An example of this, is a nurse that has to

deal with (deadly) sick patients. This takes an emotional toll. But nurses are known for their heart in their job, they really love to help people even though it is tough. Nevertheless, for most people, being more emotionally drained tells a story of less passion.

Below are the options for every item for the variable passion. For writing reasons, this scale will be named scale of passion.

Refusal	MISSING
Don't know	MISSING
Not Applicable	MISSING
Never	1
Rarely	2
Sometimes	3
Often	4
Always	5

Gender

The second variable is gender. For this variable, gender recoded will be used. Respondents were presented with the question 'Would you describe yourself as …?'.

1	Man
2	Woman

A note should be made that the original variable gender consisted of three options with the third option being other. In the recoded variable, respondents that chose option 3 in the original variable were randomly distributed across option 1 and 2. The reason for the choice of the recoded variable is that 'other' could mean a variety of things and that would make it difficult to generalise the analyses.

Precarious working conditions

The third variable is precarious working conditions. Again, with this variable, multiple questions in the questionnaire will be used to make a new variable. The question (Q89) was 'To what extent do you agree or disagree with the following statements about your job?'.

- 'Considering all my efforts and achievements in my job, I feel I get paid appropriately' (Q89A)
- 'I am expecting an undesirable change in my work situation' (Q89C)
- 'I might lose my job in the next 6 months' (Q89G)

Q89C and Q89G are reversed, so that the direction of the item corresponds with the other two items and that a higher score reflects a higher degree of precarious work. A note should be made that the Cronbach's Alpha is higher when item Q89A is not included in the variable (for the exact numbers, see Appendix I, subsection Descriptives of variables: Precarious working conditions). The choice to include it is based on the definition. It is quite precise in its formulation: naming 'efforts' and 'achievements'. Not being paid appropriately for the work that is done by a skilled worker, is a sign of precarious work. If a worker/employee is going the 'extra mile', it is most likely that (s)he is rewarded for that (Ge et al., 2022). If that is not the case, this could indicate lack of willingness to invest in the worker and could be a sign of precarity. On the other hand, someone could be working in a job/sector that has a relatively high wage but is still underpaid, it is not necessarily a precarious job but it can still be a sign of precarity. Auguste, Roll and Despard (2023) show that self-employed workers in

moderate income households are in greater economic insecurity. In this research, it is interpreted that being paid appropriately is part of having a wage that can sustain a living. Q89G is a good indicator of precarious work because it shows the insecurity that the worker is facing. Q89C is a more general indication of Q89G, losing your job is most of the time quite undesirable. But Q89C could also mean for example that a worker is expecting a cut in pay. This indicates insecurity.

Below are the answer options for items of the variable precarious working conditions. This scale will be named scale of pwc.

Refusal	MISSING
Don't know	MISSING
Not Applicable	MISSING
Strongly agree	1
Agree	2
Neither agree nor disagree	3
Disagree	4
Strongly disagree	5

Sector

The first control variable is sector. Sector refers in which sector the individual is working, such as the private sector or public sector. Q14 will be used for this concept. The question was 'Are you working in …..?'. This item is chosen for this variable because this distinguishes between sectors. As earlier mentioned, people that work in the private sector, are more likely to be precarious.

Don't know	MISSING
Refusal	MISSING
5	MISSING
1	Private sector
2	Public sector
3	Joint private-public organisation or company
4	Not-for-profit sector or an NGO

This variable is split up in four dummy variables. The first dummy variable is for the private sector. The name is 'private' and if a respondent works in the private sector, (s)he scores 1 on this variable. If (s)he works in another sector, the score on that dummy variable will be 0. The same structure is followed for the dummies 'public', 'joint' and 'NGO'. NGO stands for non-governmental organisation.

Parttime work

The second control variable is parttime work. Parttime means parttime work, which is less than 32 hours a week. Q2D will be used for this concept. The question reads 'In your job, do you work part-time or fulltime?'. This item is chosen for this variable because it is the only item in the survey that refers to parttime work. It is sufficient because it is only relevant if someone is working parttime or not.

Don’t know	MISSING
Refusal	MISSING
1	Parttime
2	Fulltime

Age

The third and last control variable is age. Age is the age in decades. SCR_Age will be used. The question was ‘Now would you mind telling me how old you are?’. Respondents could answer their age in years. This number is divided by 10 to get the respondents age in decades. Respondents below 16 years of age will not be taken into the analyses because then survey is terminated. Respondents below 16 also have a higher chance of doing work because they want some money to spend, not because their livelihood is dependent on it.

Analysis planning

The analysis will be done in steps. First, a bivariate analysis will be done. Correlations between all the variables will be reviewed. Second, multivariate analysis will be done. This multivariate analysis consists of linear regression.

The first step in this analysis is that the model will be made with only the independent variable passion. In this model, the main effect from passion to precarious working conditions can be seen. Secondly, the control variables sector, parttime and age will be added. This makes visible what part of precarious working conditions is explained via the controls. Third, the variable gender is added to the model. This third model is to test the main effect of gender. Finally, the interaction term of gender and passion is added to see if gender has an influence on the relationship between passion and precarious working conditions. The fit of the model will be evaluated, the assumptions for linear regression will be checked, outliers and missing cases are reviewed and multicollinearity will be examined.

Results

Descriptives

Table 1. Descriptive statistics of de variables in the analysis: mean (standard deviation), minimum and maximum values, and total respondents. N = 21796

Variable	*Mean (standard deviation)*	*Minimum*	*Maximum*	*Median*
Precarious working conditions (scale 3 items)	2,204 (0,885)	1,000	5,000	2,000
Passion (scale 6 items)	4,019 (0,607)	1,000	5,000	4,000
Passion_c (scale 6 items)	0,000 (0,607)	-3,020	0,980	-0,019
Gender (male=1; female=2)	1,480 (0,499)	1,000	2,000	1,000
Age_new (in decades)	4,190 (1,213)	1,600	8,400	4,200
Private (dummy)	0,655 (0,475)	0,000	1,000	1,000
Public (dummy)	0,282 (0,450)	0,000	1,000	0,000
Joint (dummy)	0,043 (0,203)	0,000	1,000	0,000
NGO (dummy)	0,020 (0,139)	0,000	1,000	0,000
Parttime (parttime=1; fulltime=2)	1,840 (0,365)	1,000	2,000	2,000

Table 1 shows the descriptive statistics of the variables in the model(s). The variable precarious working conditions has its mean (μ = 2,204) above the middle (3,000), this means that more people are in the upper echelon of the scale. Also, the mean is very close to the median (η = 2,000). The same goes for passion (μ = 4,019; η = 4,000) and passion_c (μ = 0,000; η = -0,019). When looking at gender, men are a little more present in the sample. This can be seen in the mean (μ = 1,480). If there was a perfect distribution then the value would be 1,500. When looking at age, there is not a lot of skewness. The mean (μ = 4,190) is very close to the median (η = 4,200). The four dummies of sector show that most of the respondents work in the private sector. This can be seen in a mean (μ = 0,655) that is higher than 0,5 and in the median (η = 1,000). The standard deviations for the dummies private and public are quite big (σ = 0,475; σ = 0,450). Respondents work the least in the not-for-profit sector or for a NGO. This variable has a mean that is close to 0 (μ = 0,020). As for the variable parttime, there are more respondents that work fulltime than parttime. This can be seen in de median (η = 2,000*)* but also in the mean (μ = 1,840). The *N* for every variable is quite big.

Table 2. Bivariate statistics for variables in linear regression. N =21796

	Pwc	Passion_c	Gender	Age_new	Private	Public	Joint	NGO	Parttime
Pwc	-	-0,309**	0,007	-0,040**	0,021**	-0,014*	-0,009	-0,014*	-0,003
Passion_c		-	0,000	0,110**	0,007	-0,013	0,013*	0,001	-0,015*
Gender (male=1; 2=female)			-	0,027**	-0,179**	0,0167**	0,009	0,057**	-0,165**
Age_new (in decades)				-	-0,107**	0,101**	0,017*	0,014*	0,004
Private					-	-0,864**	-0,292**	-0,195**	0,034**
Public						-	-0,133**	-0,089**	0,004
Joint							-	-0,030**	-0,038**
NGO								-	-0,073**
Parttime (parttime=1; fulltime=2)									-

**significant at p<0,05; **significant at p<0,01*

Table 2 gives the correlations between all the variables. No variable has a significant correlation with all of the other variables. Almost all of the correlations have a weak effect. The strongest correlation is between private and public. This suggests that a worker that works in the private sector, does not work in the public sector, and vice versa (ρ = -0,864). The second strongest correlation is between passion and precarious working conditions (ρ = -0,309). This could imply that more passion a worker has, the more precarious his/her work is. 19 of the correlations are negative and 17 are positive. 20 of the correlations are significant at a level of p<0,01, 6 correlations are significant at a level of p<0,05.

Precarious working conditions does not have a strong effect with most of the other variables. The correlation that is of medium strength, is with passion_c. There does not seem to be a lot of influence on the other variables from precarious working conditions and the influence from the other variables on precarious working conditions is also quite weak. Gender does not seem to have a big effect on precarious working conditions (ρ = 0,007), although women are in a little more precarious working conditions than men. The reason for this might be that women are still working in jobs that offer less stability and income. Review the theoretical framework for more information about this relation. The relation between age_new and precarious working conditions seems negative (ρ = -0,040), the reason for this could be that older people have a more established career and are therefore in less precarious working conditions. Three of the four sectors have a negative relationship with precarious working conditions (ρ = -0,014; ρ = -0,009; ρ = -0,014), one (private) does have a positive (ρ = 0,021). This suggests that people working in de private sector are more at risk to work in precarious working conditions. A cause for this is that in the other three sectors workers are more protected. Nevertheless, all four of the sectors do not have a strong correlation with precarious working conditions. Parttimers seem to have a little more risk to work in precarious conditions (ρ = -0,003).

Passion_c also has weak correlations with the other variables. With gender it is the smallest (ρ = 0,000). This implies that women and men are equal in their amount of passion. The relation between passion_c and age_new seems positive (ρ = 0,110). The older a worker gets, the more passionate (s)he is about their work. The cause of this, could be that older people know better what they like in their work and act on those preferences. There is a negative correlation between passion_c and public (ρ = -0,013). This could be because the work in the public sector does not offer workers the aspects of work that makes it likeable. The other sectors have a slight positive relation (ρ = 0,007; ρ =

0,013; ρ = 0,001). Again, the correlations between the sectors and passion_c do not differ greatly. Fulltimers are a little more passionate about their job than parttimers (ρ = -0,015). This could be simply caused by that fulltimers like their job that much, they want to spent more time at their work.

Women are a little older in the sample than the men are, this can be seen in the positive correlation (ρ = 0,027). More women than men are working in the public, joint or NGO sector. Women work more in parttime jobs than men do in this sample (ρ = -0,165). This is probably caused by housework, women still spend more time raising children and doing household chores than men, and might choose to work parttime because of those chores.

Older workers are more likely to be employed in the public sector (ρ = 0,101) and the least likely to be employed in the private sector (ρ = -0,107). The public sector gives more stability than the private sector. Older people seem to have a preference for that stability. Older people work a little more in parttime jobs than younger people do, the correlation is slightly negative (ρ = 0,004).

The correlations between sectors are not that relevant, they show how likely it is that someone who works in sector A, also works in sector B. Parttimers are more prevalent in the joint and NGO sector.

Model evaluation

Linear regression analysis

Table 3. Results of a linear regression with precarious working conditions as dependent variable, passion as independent variable and gender as moderating variable. N = 21796.

	Model 1		Model 2		Model 3		Model 4	
	b	*SE*	*b*	*SE*	*b*	*SE*	*b*	*SE*
Intercept	2,204**	0,006	2,271**	0,036	2,236**	0,041	2,235**	0,041
Passion_c	-0,450**	0,009	-0,450**	0,009	-0,450**	0,009	-0,457**	0,029
Age_new			-0,002	0,005	-0,002	0,005	-0,002	0,005
Public			-0,040*	0,013	-0,043**	0,013	-0,043**	0,013
Joint			-0,037	0,028	-0,039	0,028	-0,039	0,028
NGO			-0,104*	0,041	-0,108**	0,042	-0,108**	0,042
Parttime			-0,023	0,016	-0,018	0,016	-0,018	0,016
Gender					0,019	0,012	0,019	0,012
Passion_c*Gender							0,005	0,019
R^2 *adjusted*	0,095		0,096		0,096		0,096	
F change	2295,597**		3,452*		2,704		0,070	

*significant by p<0,05; **significant by p<0,01.

Table 3 gives the results of a linear regression. In this table, coefficients are presented of a linear regression in 4 models. The variable private is the reference category for the four dummies. What stands out, is that for the intercept and for all the variables, the standard error is not big. This means that dispersion of the data seems to be quite centred. There are few extremes according to this table.

The intercept is significant with each model and has approximately the same value in each model. The intercept gives the value of y when all other variables have the value zero. This is not possible in

most of the variables because of how they are coded. Only the dummies can have attain the value zero.

Passion is significant in all the models. The slopes of passion stay consistent across all the models, in the fourth model the slope is a little more negative (*b* = -0,457). The slopes of age are not significant and are close to 0 in all four models. The slopes of the three named sectors stay quite consistent over the four models. In the first model, public and NGO are significant at p<0,05 and are significant at p<0,01 in the models that follow. NGO has the strongest effect on precarious working conditions of all the sectors. Parttime has small negative effect on precarious working conditions and this is not significant. Gender has a slightly positive slopes, it is also not significant. The moderator gender does not change over model 3 and model 4. Gender is not significant. The interaction-term has a positive slope that is not significant. Its effect is also quite small, the other coefficients do not change drastically in terms of strength or in significance.

The R^2 *adjusted* gives a number between zero and one. Zero means that none of the variance can be explained by the variables in the model, one means that all of the variance can be explained by the variables. If the R^2 *adjusted* is multiplied by 100, it gives a percentage of explained variance. R^2 *adjusted* is very low for each of the models. The added variables after model 1 do not explain more of the variance of precarious working conditions. The R^2 result of 0,095 is quite low.
The *F*-change describes the test for the R^2 adjusted. The *F*-change is high in the first model and is significant, it drops in model 2 but is still significant, although at a lower level (*p*<0,05). It continues dropping and loses its significance. Especially in model 4, the *F*-change is very low.

It should be noted that significance is more easily attained when the *N* is large. The sample size is 21796, this is quite a large sample size so conclusions should be made with this in mind.

Assumptions of linear regression

For more extensive review of the assumptions of linear regression and how the conclusions have been made, please refer to Appendix II, subsection Assumptions of linear regression. To summarise, the assumptions of linearity and normally distributed residuals are not violated. It is not clear if the assumption independent observations is violated because the information is not available from Eurofound. It will probably not be much of a problem, the sample is quite big so randomness should counter this problem. The assumption homoscedasticity is violated. The consequence of this is that the predictions are not as exact as wanted. And then conclusions could be made in the wrong direction, so the conclusions should be interpreted with caution.

Outliers

In the data, there are some cases identified as outliers via the boxplot and calculating Cook's Distance and leverage. The descriptives of these outliers do differ from the descriptives from the entire sample. The regression has been run again without these outliers. The results differ, but the choice to include the outliers is because they seem valid responses. Also, the conclusion for the first hypothesis does not change because the coefficient in model 3 is negative. For the second hypothesis, the conclusion is different but only slightly. The coefficient is positive but weakly and is not significant. For extensive review of these outliers and the regression with it, please review Appendix III 'Outliers'.

Multicollinearity

Table 4. VIF-scores of a linear regression with precarious working conditions as dependent variable, passion as independent variable and gender as moderating variable. N = 21796.

	Model 1 VIF	Model 2 VIF	Model 3 VIF	Model 4 VIF
Passion_c	1,000	1,013	1,013	9,611
Age_new		1,025	1,025	1,025
Public		1,039	1,072	1,073
Joint		1,023	1,023	1,023
NGO		1,016	1,020	1,020
Parttime		1,007	1,035	1,035
Gender			1,064	1,064
Passion_c*Gender				9,600

In table 4, the VIF scores of each variable is presented. What stands out, is that most of the VIF scores are quite low and such non problematic. VIF scores that are around one mean that the variables are not really correlated. In this research, a VIF of more than four is seen as problematic. Passion and the interaction in model 4 are above four. This does not give any problems because passion and its product with gender are in that model, so it makes sense that the VIF is higher in model 4.

Testing the hypotheses

Now, the hypotheses will be evaluated. The two hypotheses that were constructed were:

1. *"Having more passion in work leads to more precarious working conditions."*
2. *"The relationship between passion and precarious working conditions is more positive for women."*

In all the models is the first hypothesis not supported. The negative effect on precarious working conditions is slightly stronger in model 4 than in the previous three models. The effect in those models stays the same. Passion is significant and has a negative slope. This slope means that when there is a 1 point increase on passion, precarious working conditions decreases with 0,450 or 0,457, depending on which model is used, controlling for all other variables. Having more passion does not seem to lead to work that is more precarious according to these statistics. Passionate workers are not more at risk of having a precarious job that workers that have less passion. It is not relevant that passion was centered, the change happens in the intercept. The intercept gives the value on precarious working conditions if all other variables are 0 and the respondent has the mean (μ = 4,019) on passion.

The second hypothesis is not supported. Precarious working conditions is random across gender, women are not more precarious than men or the other way around. Gender seems to have a slight positive effect on precarious working conditions in model 3 but this is not significant. Here, a positive effect means that men are more in more precarious working conditions than women. But the effect is too weak to say anything definitive about the influence on precarious working conditions and it is not significant. The interaction-term is not significant and has slightly positive effect. This means that the direction of the coefficient is supporting the hypothesis, but this is only a very weak effect. In other words, passionate women are in slightly more precarious working conditions than passionate men. However, because the interaction-term is not significant, the hypothesis is not supported. It cannot be said with certainty if the statistics that are found, are the case of chance or that the effect is real.

Conclusion

In this final section, problems that were encountered during research will be discussed and conclusions will be made.

The non-response of the sample was high, 95% did not respond. The 5% that is left, could not have been truthful about their answers. The interview duration was quite long, 20 minutes on the phone. When answering questions on a phone for 20 minutes, respondents could get tired or just wanted to be done with it. There is little to no check if someone is actually paying attention or just answers a random answer-option. Additionally, respondents were sampled via random selection of telephone numbers. This does not entirely prevent that people were sampled that work in the same company or live in the same household. They might not be completely independent from each other.

Another problem with the data is that it is collected during the COVID-19 pandemic. This has an effect especially on two questions: expecting to lose your job in the coming 6 months and expecting undesirable change. Many people were laid off during the pandemic, although they might not work in precarious jobs. It was just that the whole world came to a standstill.

Methodical problems are also present. When constructing the concepts precarious working conditions and passion, Cronbach's Alpha was calculated. Other items could have been chosen that have a bigger Cronbach's Alpha. For the concept of precarious working conditions, the item er_balance (Q89A) was included. The Cronbach's Alpha would be bigger if this item was deleted from the variable. The reason why the item was included, despite the lower Cronbach's Alpha, was because it gives the concept a better definition. The analysis would have a different method of analysis and would probably yield different results and so, different conclusions. Another methodical problem was that the assumption of homoscedasticity is violated. In the residual plot, the categories of the concept are clearly visible and so, a pattern is seen.

Suggestions for following research is to reselect a sample at present times or in the near future. It will be necessary to prevent the high number of non-response. Also, make sure that respondents are independent of each other. The reason to reselect a sample now, is that the effects of COVID-19 have mostly ebbed away. Asking different questions to try to measure the concepts of passion and precarious work might yield different conclusions and add more to the understanding of those concepts in the sociological field.

This research started with explaining that precarious work is getting quite contemporary, but also that the beginning of precarious work lies in the not so distant past. Following up on that, definitions of concepts used in this paper were given to make more clear what this research is about. The main concepts were passion and precarious working conditions.

For passion, a definition from Perrewé et al (2014) was chosen. They define passion as that passion in work is the emotional and persistent state of desire on the basis of cognitive and affective work appraisals. This results in consistent work intentions and behaviours. These intentions and behaviours include everything, such as demonstrating organisational citizenship behaviours and taking initiative to solve problems at work.

Passionate individuals desire to engage in their chosen work, the result is a fairly uniform pattern of behavior. Precarious working conditions used the definition of that a job is precarious when it is

temporary, it is uncertain if the employee is paid enough and on the agreed time. It's defining characteristic is uncertainty.

Also the theoretical relationship between the concepts was presented. This theoretical relationship was that the more passionate a worker is, the more precarious his or her working conditions are. It was hypothesised that this relationship was stronger for women than for men. From there, hypotheses were constructed and it was explained how these hypotheses were tested. Some information was given about the sample respondents and how these respondents were approached. The analyses were then done and results were presented.

In this section, conclusions will be made. To refer back to the first hypothesis, a relationship was expected (in theory) between passion and precarious working conditions. The reason behind this is that workers might choose a likeable job with precarious work conditions instead of an unlikeable job that offers stability. In other words, they love their work so much, they are willing to offer up stability for that. This hypothesis is not supported by the analysis in this paper. A possible reason for this could be that are more likely to select a job that pays the bills instead of choosing a job for emotional gratification. It is necessary to gain a living wage, especially when inflation and cost of living is sky high in comparison to salaries. Another reason that there was no relationship found, could that (potential) workers do not have to exclude passion to have a non-precarious job and the other way around, precious jobs are not filled by passionate people. Passion can also grow in the work someone does, one might start in a non-precarious work with little to no passion, but one can find passion in some aspects of their job and might end up even liking their job/work.

The second hypothesis constructed was that this relationship is more positive for women. It is possible that women attach greater importance to being passionate about their job/work instead of extrinsic rewards. They seek for more intrinsic rewards because women are still undervalued in the workforce and as a result, enjoy less of the extrinsic rewards that men have. This hypothesis is not supported by the analysis. Reason for this might be that emancipation is further than scientists thought. Women are working more and it could be that they suffer less of the sexism in the workforce. A lot of initiatives are made to lift the position of women in the workforce, according to Gaur and colleagues (2024). This is even on the agenda of the United Nations. Another reason could be that women see their work as less precarious because they are used to precarious work. Their perceived baseline of sufficient work could be seen as precarious for men. This could be because women have entered the workforce when sexism was still rampant and explicit (Temkin et al., 2024). Because of that, women started working when people around them viewed them as a lesser worker in comparison to men. The questions that were chosen for the concept precarious working conditions, are more subjective. For example, being paid appropriately can mean a variety of things for very different people. One worker might think (s)he is entitled to a higher wage than another worker who is exactly the same in terms of skills and experience. Men could think that they are entitled to this higher wage, because that is what they are used to (Eisnecker & Adriaans, 2024).

This paper aimed to contribute to the societal conversation about emancipation. Research in the direction of emancipation adds to our understanding of the current state. People like to believe that equality between men and women has come a long way and not many steps need to be taken (Cuadrado et al., 2024). This paper added to that understanding in the area of labour, which is at the forefront of emancipation (Hideg & Wilson, 2020; Parmer, 2021). And even though women are seen as more passionate workers that work in more precarious jobs, this is not what is found in this research. Passionate women are not more in danger of having precarious work than passionate men,

according to the data in this research. This paper also aimed to add to the discussion about how passionate people are not always rewarded with stable income/work. These workers are sometimes taken for granted and might be exploited (Antcliff, 2005). They work long hours and gain little for the time invested. This research might add to a little more understanding of the sacrifices made by some of the people who really love their job. It can paint these people in a different light and might get them a little more appreciation. This increase in appreciation could lead to better working conditions and more pay.

Bibliography

Alacovska, A. (2022). The Wageless Life of Creative Workers: Alternative Economic Practices, Commoning and Consumption Work in Cultural Labour. *Sociology*, *56*(4), 673–692. https://doi-org.proxy-ub.rug.nl/10.1177/00380385211056011

Antcliff, V. (2005) Broadcasting in the 1990s: Competition, Choice and Inequality? Media, Culture & Society, 27, 841-859. https://eprints.whiterose.ac.uk/92188/3/Umney%20Kretsos%20That%27s%20the%20Experience.pdf

Auguste, D., Roll, S., & Despard, M. (2023). The Precarity of Self-Employment among Low- and Moderate-Income Households. *Social Forces*, *101*(3), 1081–1115. https://doi-org.proxy-ub.rug.nl/10.1093/sf/soab171

Battisti, M., & Vallanti, G. (2013). Flexible Wage Contracts, Temporary Jobs, and Firm Performance: Evidence From Italian Firms. *Industrial Relations*, *52*(3), 737–764. https://doi-org.proxy-ub.rug.nl/10.1111/irel.12031

Baum, J. R., & Locke, E. A. (2004). The relationship of entrepreneurial traits, skill, and motivation to subsequent venture growth. *Journal of Applied Psychology*, 89(4), 587–598.

Been, W., & Keune, M. (2020). That is just part of being able to do my cool job: Understanding low earnings but high job satisfaction in the creative industries in the Netherlands. In V. Pulignano, & F. Hendrickx (Eds.), Employment Relations in the 21st Century: Challenges for Theory and Research in a Changing World of Work (pp. 59-76). (Bulletin of Comparative Labour Relations; Vol. 107). Wolters Kluwer.

Bobek, A., Pembroke, S., & Wickham, J. (2018). *LIVING WITH UNCERTAINTY: The Social Implications of Precarious Work*. Foundation for European Progressive Studies. Retrieved June 4, 2024, from

https://feps-europe.eu/wp-content/uploads/downloads/publications/feps%20tasc%20report_living%20with%20uncertainty_final.pdf

Bridges, L. E. (2018). Flexible as freedom? The dynamics of creative industry work and the case study of the editor in publishing. *New Media & Society*, *20*(4), 1303–1319. https://doi-org.proxy-ub.rug.nl/10.1177/1461444816688920

Bustelo, M., Díaz, A. M., Lafortune, J., Piras, C., Salas, L. M., & Tessada, J. (2023). What is the price of freedom? Estimating women's willingness to pay for job schedule flexibility. *Economic Development and Cultural Change, 71*(4), 1179–1211. https://doi.org/10.1086/718645

Carreri, A. (2022). Imagined futures in precarious working conditions: A gender matter? *Current Sociology*, *70*(5), 742–760. https://doi-org.proxy-ub.rug.nl/10.1177/00113921211001089

Chen, P., Lee, F., & Lim, S. (2019). Loving thy work: developing a measure of work passion. *European Journal of Work and Organizational Psychology, 29*(1), 140–158. https://doi.org/10.1080/1359432x.2019.1703680

Cinque, S., Nyberg, D., & Starkey, K. (2021). "Living at the border of poverty": How theater actors maintain their calling through narrative identity work. *Human Relations, 74*(11), 1755–1780. https://doi-org.proxy-ub.rug.nl/10.1177/0018726720908663

Cremer, D.J. (2023). How We View Work: A Historical Perspective. In: Marques, J. (eds) The Palgrave Handbook of Fulfillment, Wellness, and Personal Growth at Work. Palgrave Macmillan, Cham. https://doi.org/10.1007/978-3-031-35494-6_1

Cuadrado, I., Constantin, A. A., López-Rodríguez, L., & Estevan-Reina, L. (2024). Achieving Equality or Persisting Inequality: Effects of Framing of Equality on Attitudes Toward Women and Gender Equality Through Identity Threat and Cognitive Unfreezing. *Sex Roles*, *90*(1), 126–150. https://doi-org.proxy-ub.rug.nl/10.1007/s11199-023-01432-3

Cutler, T., & Waine, B. (2012). But is it 'Fair'? The UK Coalition Government, 'Fairness' and the 'Reform' of Public Sector Pensions. *Social Policy & Administration/Social Policy and Administration, 47*(3), 327–345. https://doi.org/10.1111/j.1467-9515.2012.00871.x

DePalma, L. J. (2020). The passion paradigm: professional adherence to and consequences of the ideology of "Do What You love." *Sociological Forum, 36*(1), 134–158. https://doi.org/10.1111/socf.12665

Dumitrache, S. D., & Lazăr, F. (2023). "I learned to better understand those around me and myself": The impact of an elective course of self-reflection, personal and professional growth on social work students. *European Journal of Social Work, 26*(4), 721–733. https://doi-org.proxy-ub.rug.nl/10.1080/13691457.2022.2128723

Eisnecker, P. S., & Adriaans, J. (2024). How do my earnings compare? Pay referents and just earnings. *European Sociological Review, 40*(1), 129–142. https://doi-org.proxy-ub.rug.nl/10.1093/esr/jcad002

EWCTS 2021 – Methodology. (n.d.). Eurofound. Retrieved April 3, 2024, from https://www.eurofound.europa.eu/lt/surveys/european-working-conditions-surveys/ewcts-2021/ewcts-2021-methodology

Fung, B. J., Sutlief, E., & Shuler, M. G. H. (2021). Dopamine and the interdependency of time perception and reward. *Neuroscience & Biobehavioral Reviews/Neuroscience and Biobehavioral Reviews*, *125*, 380–391. https://doi.org/10.1016/j.neubiorev.2021.02.030

Gaur, D., Gupta, K., & Pal, A. (2024). Transformational women leadership: a road to sustainable development goal of women empowerment. *Journal of Global Responsibility*, *15*(2), 193–214. https://doi-org.proxy-ub.rug.nl/10.1108/JGR-04-2023-0053

Ge, J.-J., Zhang, P., & Dong, D. (2022). Can Extrinsic Motivational State Hinder Good Behavior? The Mediating Role of Ambition and Competition in Relationships of Contingent Rewards and

Punishments with Work Performance. *Current Psychology*, *41*(4), 2162–2183. https://doi-org.proxy-ub.rug.nl/10.1007/s12144-020-00688-2

Gesthuizen M, Kovarek D, Rapp C. Extrinsic and Intrinsic Work Values: Findings on Equivalence in Different Cultural Contexts. *Annals of the American Academy of Political & Social Science*. 2019;682(1):60-83. doi:10.1177/0002716219829016

Harris, C. T., & Earle, J. R. (1986). Gender and Work Values: Survey Findings from a Working-Class Sample. *Sex Roles*, *15*(9–10), 487–494. https://doi-org.proxy-ub.rug.nl/10.1007/BF00288226

Hewison, K., & Kalleberg, A. L. (2013). Precarious Work and Flexibilization in South and Southeast Asia. *American Behavioral Scientist*, *57*(4), 395-402. https://doi-org.proxy-ub.rug.nl/10.1177/0002764212466235

Hideg, I., & Wilson, A. E. (2020). History backfires: Reminders of past injustices against women undermine support for workplace policies promoting women. *Organizational Behavior and Human Decision Processes*, *156*, 176–189. https://doi.org/10.1016/j.obhdp.2019.10.001

Hochwarter, W., Jordan, S., Kapoutsis, I., Franczak, J., Babalola, M., Karim Khan, A., & Li, Y. (2023). Sometimes enough is enough: Nurses' nonlinear levels of passion and the influence of politics. *Human Relations*, *76*(8), 1162-1190. https://doi-org.proxy-ub.rug.nl/10.1177/00187267221088535

Hoff, S. (2023). Werkende armen: Beleid en perspectief. *Tijdschrift Voor Arbeidsvraagstukken*, *39*(3), 342–350. https://doi-org.proxy-ub.rug.nl/10.5117/TVA2023.3.005.HOFF

Ipsos NV. (n.d.). European Working Conditions Telephone Survey 2021: Technical Report. In *Eurofound* (No. WPEF22050).

Kalleberg, A. L., & Vallas, S. P. (Eds.). (2017). Probing precarious work: Theory, research, and politics. In *Precarious work* (pp. 1-30). Emerald Publishing Limited.

Kim, J. Y., Campbell, T. H., Shepherd, S., & Kay, A. C. (2020). Understanding contemporary forms of exploitation: Attributions of passion serve to legitimize the poor treatment of workers. *Journal of Personality and Social Psychology, 118*(1), 121–148. https://doi.org/10.1037/pspi0000190

Kronberg, A.-K. (2020). Workplace Gender Pay Gaps: Does Gender Matter Less the Longer Employees Stay? *Work & Occupations*, *47*(1), 3–43. https://doi-org.proxy-ub.rug.nl/10.1177/0730888419868748

Machovec, C. (2023). Working Women: Data from the Past, Present and Future. In *U.S. DEPARTMENT OF LABOR BLOG. U.S. DEPARTMENT OF LABOR BLOG.* Retrieved June 3, 2024, from https://blog.dol.gov/2023/03/15/working-women-data-from-the-past-present-and-future#:~:text=Historically%2C%20women's%20labor%20force%20participation,participation%20rate%20have%20both%20fallen.

Marini, M. M., Fan, P., Finley, E., & Beutel, A. M. (1996). Gender and job values. *Sociology of Education, 69*(1), 49. https://doi.org/10.2307/2112723

Maslach, C., & Leiter, M. (2008). Early predictors of job burnout and engagement. *Journal of Applied Psychology, 93*, 498–512.

Mazzucchelli, S. (2017). Flexibility and work-family balance: a win-win solution for companies? The case of Italy. *International Review of Sociology*, *27*(3), 436–456. https://doi-org.proxy-ub.rug.nl/10.1080/03906701.2017.1377411

McDougald Scott, A. M. (2021). Examining the everyday life of child care workers: How low wages and the lack of benefits affect their lives and decisions about employment [ProQuest Information & Learning]. In *Dissertation Abstracts International: Section B: The Sciences and Engineering* (Vol. 82, Issue 12–B).

Meyer, G., Shatto, B., Kuljeerung, O., Nuccio, L., Bergen, A., & Wilson, C. R. (2020). Exploring the relationship between resilience and grit among nursing students: A correlational research study. *Nurse Education Today*, *84*, 104246. https://doi.org/10.1016/j.nedt.2019.104246

Miroshnychenko, I., De Massis, A., Miller, D., & Barontini, R. (2021). Family Business Growth Around the World. *Entrepreneurship Theory and Practice*, *45*(4), 682-708. https://doi.org/10.1177/1042258720913028

Moreno-Jiménez, J. E., Demerouti, E., Blanco-Donoso, L. M., Chico-Fernández, M., Iglesias-Bouzas, M. I., & Garrosa, E. (2023). Passionate healthcare workers in demanding intensive care units: its relationship with daily exhaustion, secondary traumatic stress, empathy, and self-compassion. *Current Psychology*, *42*(33), 29387–29402. https://doi-org.proxy-ub.rug.nl/10.1007/s12144-022-03986-z

Mosoetsa, S., Stillerman, J., Tilly, C., & Betti, E. (2016). Gender and Precarious Labor in a Historical Perspective: Italian Women and Precarious Work between Fordism and Post-Fordism. *International Labor & Working-Class History*, *89*, 64–83. https://doi-org.proxy-ub.rug.nl/10.1017/S0147547915000356

Munnell, A. H., & Fraenkel, R. C. (2013). Public sector workers and job security. *Issues in Brief.*

Nagoji, A., & Mackasare, S. (2023). How resilience, optimism and co-workers support predict faculty work engagement in private higher education institutions: empirical evidence from India. *Current Psychology, 42*(36), 32203–32217. https://doi-org.proxy-ub.rug.nl/10.1007/s12144-022-04196-3

OECD. 2017. OECD Employment Outlook 2017. Paris: OECD Publishing. doi:10.1787/empl_outlook-2017-en.

O'Neill, N., Mercille, J., & Edwards, J. (2023). Home care workers' views of employment conditions: private for-profit vs public and non-profit providers in Ireland. International Journal of

Sociology & Social Policy, 43(13/14), 19–35. https://doi-org.proxy-ub.rug.nl/10.1108/IJSSP-10-2022-0276

Ornstein, M. (2021). Precarious Employment in Canada. *Canadian Journal of Sociology*, *46*(3), 217–255.

Parker, K. (2018, March 7). *Women in majority-male workplaces report higher rates of gender discrimination*. Pew Research Center. Retrieved April 3, 2024, from https://www.pewresearch.org/short-reads/2018/03/07/women-in-majority-male-workplaces-report-higher-rates-of-gender-discrimination/

Parmer, L. L. (2021). The road to gender equality: Persisting obstacles for American women in the workforce. *The Psychologist-Manager Journal, 24*(2), 85-96. https://doi.org/10.1037/mgr0000115

Perrewé P, Hochwarter W, Ferris G, et al. (2014) Developing a passion for work passion: Future directions on an emerging construct. *Journal of Organizational Behavior* 35(1): 145–150.

Pun, N., Chen, P., & Jin, S. (2024). Reconceptualising Youth Poverty through the Lens of Precarious Employment during the Pandemic: The Case of Creative Industry. *Social Policy & Society, 23*(1), 87–102. https://doi-org.proxy-ub.rug.nl/10.1017/S1474746421000932

Standing, G. (2011). *The precariat: The New Dangerous Class*. A&C Black.

Temkin, S. M., Salles, A., Barr, E., Leggett, C. B., Reznick, J. S., & Wong, M. S. (2024). "Women's work": Gender and the physician workforce. *Social Science & Medicine*, *351*, N.PAG. https://doi-org.proxy-ub.rug.nl/10.1016/j.socscimed.2023.116556

Vallerand, R. J., Blanchard, C., Mageau, G. A., Koestner, R., Ratelle, C., Léonard, M., & Marsolais, J. (2003). Les passions de l'ame: On obsessive and harmonious passion. *Journal of Personality and Social Psychology*, 85(4), 756–767.

Vallerand, R. J., Houlfort, N., & Forest, J. (2014). Passion for work: Determinants and outcomes. In M. Gagne (Eds.), *oxford handbook of work engagement, motivation, and self-determination theory* (pp. 85–105). New York, NY: Oxford University Press.

Walo, S. (2023). 'Bullshit' after all? Why people consider their jobs socially useless. *Work, Employment and Society, 37*(5), 1123–1146. https://doi.org/10.1177/09500170231175771

Wysieńska-Di Carlo, K., & Karpiński, Z. (2024). Status and Just Gender Pay Gaps: Results of a Vignette Study. *Socius: Sociological Research for a Dynamic World*, 1–13. https://doi-org.proxy-ub.rug.nl/10.1177/23780231241227158

Young, M. (2011). *The rise of the meritocracy*. Transaction Publishers.

Youngjoo Cha. (2007). The Gendered Norm of Overwork and the Persistence of Gender Inequality. *Conference Papers - American Sociological Association*, 1.

Zigarmi, D., Houson, D., Diehl, J., & Witt, D. (2010). Employee work passion: A new look at engagement. *Chief Learning Officer, 48,* 24–27

Appendixes

Appendix I

Descriptives of variables

Passion

Recoding 2 items so their direction corresponds with the other items.

```
RECODE exhaust_emot (1=5) (2=4) (4=2) (5=1).

EXECUTE.

RECODE exhaust_phys (1=5) (2=4) (4=2) (5=1).

EXECUTE.
```

Calculating Cronbach's Alpha.

```
RELIABILITY
  /VARIABLES=work_welldone usefull_work eng_energy eng_enthusiastic eng_timeflies exhaust_phys
    exhaust_emot
  /SCALE('ALL VARIABLES') ALL
  /MODEL=ALPHA
  /STATISTICS=CORR
  /SUMMARY=TOTAL CORR.
```

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,703	,717	7

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Q61H [work_welldone] Your job gives you the feeling of work well done [Please tell me how often the following applies to your work situation?]	22,91	13,199	,500	,339	,651
Q61J [usefull_work] You have the feeling of doing useful work	22,77	13,696	,420	,297	,669
Q90A [eng_energy] At my work I feel full of energy [The following statements are about how you feel about your job. For each statement, please tell me how often you feel this way...]	23,39	12,554	,526	,324	,640
Q90B [eng_enthusiastic] I am enthusiastic about my job [The following statements are about how you feel about your job. For each statement, please tell me how often you feel this way...]	23,23	12,250	,536	,357	,636
Q90C [eng_timeflies] Time flies when I am working [The following statements are about how you feel about your job. For each statement, please tell me how often you feel this way...]	23,07	13,846	,321	,192	,691
Q90D [exhaust_phys] I feel physically exhausted at the end of the working day [The following statements are about how you feel about your job. For each statement, please tell me how often you feel this way...]	24,14	13,282	,269	,192	,714
Q90G [exhaust_emot] I feel emotionally exhausted by my work [The following statements are about how you feel about your job. For each statement, please tell me how often you feel this way...]	23,67	12,415	,388	,242	,679

Because Cronbach's alpha is higher when exhaust_phys (Q90D) is deleted, the analysis will continue without this item

Constructing the variable.

COMPUTE Passion=(work_welldone + usefull_work + eng_energy + eng_enthusiastic + eng_timeflies + exhaust_emot) / 6.

EXECUTE.

COMPUTE Passion_c=Passion – 4.0238.

EXECUTE.

Frequency distribution per item

Q61J [usefull_work] You have the feeling of doing useful work

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	258	1,2	1,2	1,2
	Rarely	438	2,0	2,0	3,2
	Sometimes	1705	7,8	7,8	11,0
	Often	6765	31,0	31,0	42,1
	Always	12630	57,9	57,9	100,0
	Total	21796	100,0	100,0	

Q90A [eng_energy] At my work I feel full of energy [The following statements are about how you feel about your job. For each statement, please tell me how often you feel this way...]

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	388	1,8	1,8	1,8
	Rarely	1475	6,8	6,8	8,5
	Sometimes	5359	24,6	24,6	33,1
	Often	9533	43,7	43,7	76,9
	Always	5041	23,1	23,1	100,0
	Total	21796	100,0	100,0	

Q90B [eng_enthusiastic] I am enthusiastic about my job [The following statements are about how you feel about your job. For each statement, please tell me how often you feel this way...]

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	492	2,3	2,3	2,3
	Rarely	1286	5,9	5,9	8,2
	Sometimes	4082	18,7	18,7	26,9
	Often	8651	39,7	39,7	66,6
	Always	7285	33,4	33,4	100,0
	Total	21796	100,0	100,0	

Q90C [eng_timeflies] Time flies when I am working [The following statements are about how you feel about your job. For each statement, please tell me how often you feel this way...]

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	333	1,5	1,5	1,5
	Rarely	855	3,9	3,9	5,5
	Sometimes	3439	15,8	15,8	21,2
	Often	8242	37,8	37,8	59,0
	Always	8927	41,0	41,0	100,0
	Total	21796	100,0	100,0	

Q61H [work_welldone] Your job gives you the feeling of work well done [Please tell me how often the following applies to your work situation?]

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	221	1,0	1,0	1,0
	Rarely	569	2,6	2,6	3,6
	Sometimes	2281	10,5	10,5	14,1
	Often	8531	39,1	39,1	53,2
	Always	10194	46,8	46,8	100,0
	Total	21796	100,0	100,0	

Q90G [exhaust_emot] I feel emotionally exhausted by my work [The following statements are about how you feel about your job. For each statement, please tell me how often you feel this way...]

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	1129	5,2	5,2	5,2
	Rarely	2943	13,5	13,5	18,7
	Sometimes	6520	29,9	29,9	48,6
	Often	5785	26,5	26,5	75,1
	Always	5419	24,9	24,9	100,0
	Total	21796	100,0	100,0	

Frequency distribution of variable and centred variable.

FREQUENCIES VARIABLES=Passion

/ORDER=ANALYSIS.

Passion

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1,00	5	,0	,0	,0
	1,17	4	,0	,0	,0
	1,33	14	,1	,1	,1
	1,50	10	,0	,0	,2
	1,67	31	,1	,1	,3
	1,83	30	,1	,1	,4
	2,00	55	,3	,3	,7
	2,17	60	,3	,3	1,0
	2,33	115	,5	,5	1,5
	2,50	172	,8	,8	2,3
	2,67	239	1,1	1,1	3,4
	2,83	340	1,6	1,6	4,9
	3,00	528	2,4	2,4	7,4
	3,17	664	3,0	3,0	10,4
	3,33	958	4,4	4,4	14,8
	3,50	1271	5,8	5,8	20,6
	3,67	1809	8,3	8,3	28,9
	3,83	2184	10,0	10,0	38,9
	4,00	2654	12,2	12,2	51,1
	4,17	2413	11,1	11,1	62,2
	4,33	2403	11,0	11,0	73,2
	4,50	1918	8,8	8,8	82,0
	4,67	1638	7,5	7,5	89,5
	4,83	1095	5,0	5,0	94,6
	5,00	1186	5,4	5,4	100,0
	Total	21796	100,0	100,0	

Passion_c

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	-3,02	5	,0	,0	,0
	-2,86	4	,0	,0	,0
	-2,69	14	,1	,1	,1
	-2,52	10	,0	,0	,2
	-2,36	31	,1	,1	,3
	-2,19	30	,1	,1	,4
	-2,02	55	,3	,3	,7
	-1,86	60	,3	,3	1,0
	-1,69	115	,5	,5	1,5
	-1,52	172	,8	,8	2,3
	-1,36	239	1,1	1,1	3,4
	-1,19	340	1,6	1,6	4,9
	-1,02	528	2,4	2,4	7,4
	-,86	664	3,0	3,0	10,4
	-,69	958	4,4	4,4	14,8
	-,52	1271	5,8	5,8	20,6
	-,36	1809	8,3	8,3	28,9
	-,19	2184	10,0	10,0	38,9
	-,02	2654	12,2	12,2	51,1
	,14	2413	11,1	11,1	62,2
	,31	2403	11,0	11,0	73,2
	,48	1918	8,8	8,8	82,0
	,64	1638	7,5	7,5	89,5
	,81	1095	5,0	5,0	94,6
	,98	1186	5,4	5,4	100,0
	Total	21796	100,0	100,0	

FREQUENCIES VARIABLES=passion_c

/STATISTICS=MINIMUM MAXIMUM MEAN MEDIAN STDDEV

/ORDER=ANALYSIS.

Statistics

Passion_c

N	Valid	21796
	Missing	0
Mean		-,0046
Median		-,0238
Std. Deviation		,60732
Minimum		-3,02
Maximum		,98

Statistics

Passion

N	Valid	21796
	Missing	0
Mean		4,0192

Precarious working conditions

Recoding 2 items so their direction corresponds with the other items.

RECODE undesirable_change (1=5) (2=4) (4=2) (5=1).

EXECUTE.

RECODE losejob (1=5) (2=4) (4=2) (5=1).

EXECUTE.

Calculating Cronbach's Alpha

RELIABILITY

/VARIABLES=er_balance undesirable_change losejob

/SCALE('ALL VARIABLES') ALL

/MODEL=ALPHA

/STATISTICS=CORR

/SUMMARY=TOTAL CORR.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,403	,407	3

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Q89A [er_balance] Considering all my efforts and achievements in my job, I feel I get paid appropriately [To what extent do you agree or disagree with the following statements about your job?]	4,12	4,192	,173	,030	,439
Q89C [undesirable_change] I am expecting an undesirable change in my work situation [To what extent do you agree or disagree with the following statements about your job?]	4,41	3,833	,286	,094	,217
Q89C [losejob] I might lose my job in the next 6 months [To what extent do you agree or disagree with the following statements about your job?]	4,77	4,187	,264	,086	,265

Making the variable.

COMPUTE Precarious_working_conditions=(er_balance + undesirable_change + losejob) / 3.

EXECUTE.

Note that the Cronbach's Alpha is higher when Q89A (er_balance) is deleted. For argumentation why this item is included in the variable, please refer to operationalisation.

Frequency distribution per item.

FREQUENCIES VARIABLES=losejob undesirable_change er_balance

/ORDER=ANALYSIS.

Q89A [er_balance] Considering all my efforts and achievements in my job, I feel I get paid appropriately [To what extent do you agree or disagree with the following statements about your job?]

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly agree	6094	28,0	28,0	28,0
	Tend to agree	7335	33,7	33,7	61,6
	Neither agree nor disagree	2178	10,0	10,0	71,6
	Tend to disagree	3433	15,8	15,8	87,4
	Strongly disagree	2756	12,6	12,6	100,0
	Total	21796	100,0	100,0	

Q89C [undesirable_change] I am expecting an undesirable change in my work situation [To what extent do you agree or disagree with the following statements about your job?]

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly agree	9063	41,6	41,6	41,6
	Tend to agree	5186	23,8	23,8	65,4
	Neither agree nor disagree	2909	13,3	13,3	78,7
	Tend to disagree	2934	13,5	13,5	92,2
	Strongly disagree	1704	7,8	7,8	100,0
	Total	21796	100,0	100,0	

Q89C [losejob] I might lose my job in the next 6 months [To what extent do you agree or disagree with the following statements about your job?]

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly agree	12150	55,7	55,7	55,7
	Tend to agree	4623	21,2	21,2	77,0
	Neither agree nor disagree	1968	9,0	9,0	86,0
	Tend to disagree	1674	7,7	7,7	93,7
	Strongly disagree	1381	6,3	6,3	100,0
	Total	21796	100,0	100,0	

Frequency distribution of variable.

```
FREQUENCIES VARIABLES=Precarious_working_conditions
 /STATISTICS=MINIMUM MAXIMUM MEAN MEDIAN STDDEV
/ORDER=ANALYSIS.
```

Precarious_working_conditions

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1,00	2780	12,8	12,8	12,8
	1,33	2912	13,4	13,4	26,1
	1,67	2517	11,5	11,5	37,7
	2,00	2976	13,7	13,7	51,3
	2,33	3345	15,3	15,3	66,7
	2,67	2332	10,7	10,7	77,4
	3,00	1598	7,3	7,3	84,7
	3,33	1425	6,5	6,5	91,2
	3,67	939	4,3	4,3	95,5
	4,00	412	1,9	1,9	97,4
	4,33	254	1,2	1,2	98,6
	4,67	168	,8	,8	99,4
	5,00	138	,6	,6	100,0
	Total	21796	100,0	100,0	

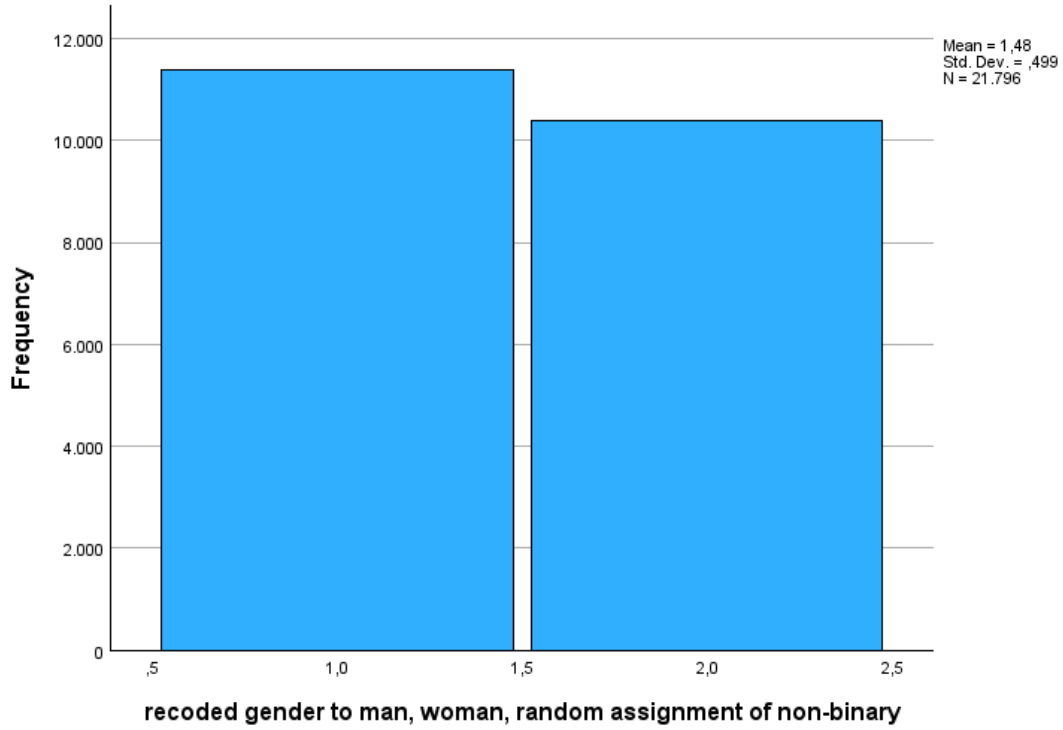
Statistics

Precarious_working_conditions

N	Valid	21796
	Missing	0
Mean		2,2042
Median		2,0000
Std. Deviation		,88474
Minimum		1,00
Maximum		5,00

Gender

```
GRAPH
 /HISTOGRAM=gender_recoded
```




```
FREQUENCIES VARIABLES= gender_recoded
  /STATISTICS=MINIMUM MAXIMUM MEAN MEDIAN STDDEV
/ORDER=ANALYSIS.
```

recoded gender to man, woman, random assignment of non-binary

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Man	11397	52,3	52,3	52,3
	Woman	10399	47,7	47,7	100,0
	Total	21796	100,0	100,0	

Statistics

recoded gender to man, woman

N	Valid	21796
	Missing	0
Mean		1,48
Median		1,00
Std. Deviation		,499
Minimum		1
Maximum		2

Sector

This variable is split into dummies.

RECODE private_sector (1=1) (2 thru 5=0) INTO private.

EXECUTE.

RECODE private_sector (1=0) (2=1) (3 thru 5=0) INTO public.

EXECUTE.

RECODE private_sector (1=0) (2=0) (3=1) (4=0) (5=0) INTO joint.

EXECUTE.

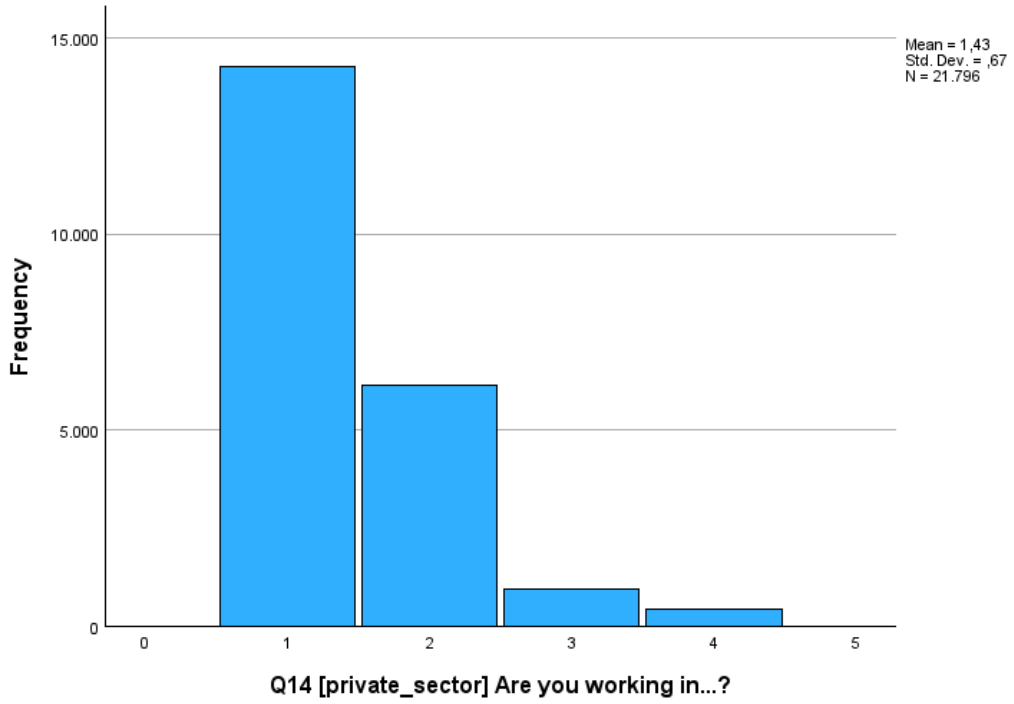
RECODE private_sector (1=0) (2=0) (3=0) (4=1) (5=0) INTO NGO.

EXECUTE.

The original variable is used for the histogram to present a good overview of the distribution.

GRAPH

/HISTOGRAM=private_sector



FREQUENCIES VARIABLES=private public joint NGO

/STATISTICS=MINIMUM MAXIMUM MEAN MEDIAN STDDEV

/ORDER=ANALYSIS.

private

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	,00	7521	34,5	34,5	34,5
	1,00	14275	65,5	65,5	100,0
	Total	21796	100,0	100,0	

public

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	,00	15641	71,8	71,8	71,8
	1,00	6155	28,2	28,2	100,0
	Total	21796	100,0	100,0	

joint

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	,00	20857	95,7	95,7	95,7
	1,00	939	4,3	4,3	100,0
	Total	21796	100,0	100,0	

NGO

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	,00	21369	98,0	98,0	98,0
	1,00	427	2,0	2,0	100,0
	Total	21796	100,0	100,0	

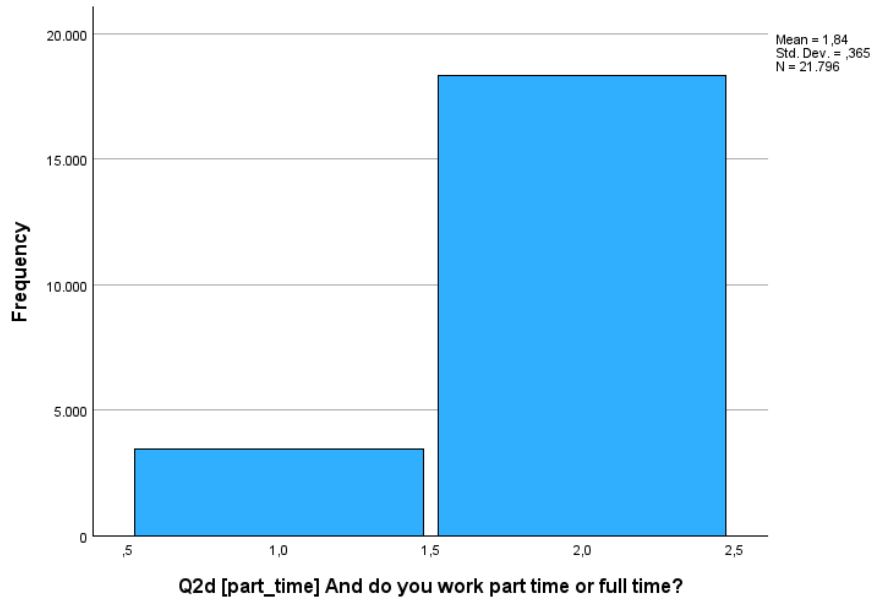
Statistics

		private	public	joint	NGO
N	Valid	21796	21796	21796	21796
	Missing	0	0	0	0
Mean		,6549	,2824	,0431	,0196
Median		1,0000	,0000	,0000	,0000
Std. Deviation		,47540	,45017	,20304	,13859
Minimum		,00	,00	,00	,00
Maximum		1,00	1,00	1,00	1,00

Parttime

GRAPH

/HISTOGRAM=part_time



FREQUENCIES VARIABLES= part_time

/STATISTICS=MINIMUM MAXIMUM MEAN MEDIAN STDDEV

/ORDER=ANALYSIS.

Q2d [part_time] And do you work part time or full time?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Part time	3438	15,8	15,8	15,8
	Full time	18358	84,2	84,2	100,0
	Total	21796	100,0	100,0	

Statistics

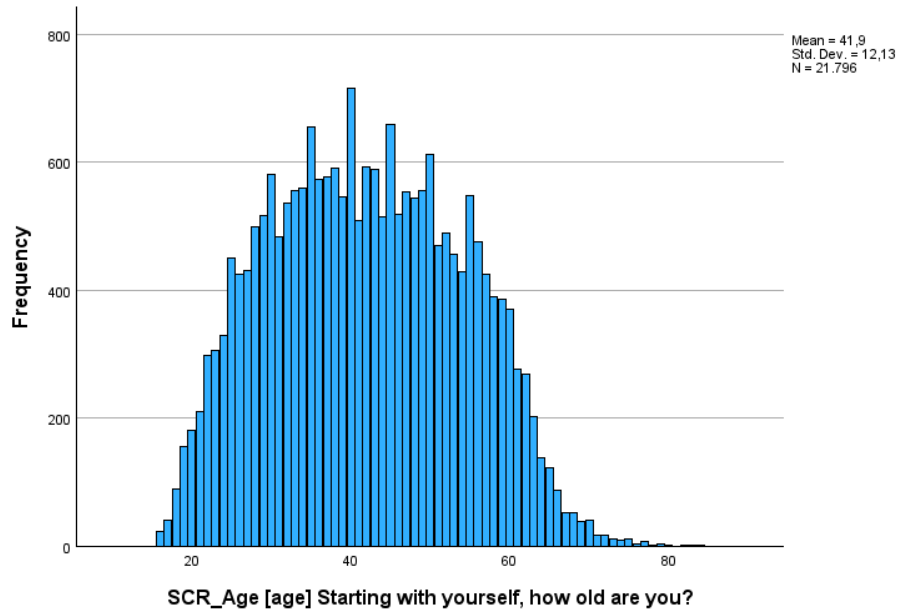
Q2d [part_time] And do you work

N	Valid	21796
	Missing	0
Mean		1,84
Median		2,00
Std. Deviation		,365
Minimum		1
Maximum		2

Age

GRAPH

/HISTOGRAM=age.



This is the original variable. Because when running the regression with this variable, the coefficients in the models were 0. To solve this problem, age has been recoded in decades.

COMPUTE Age_new=SCR_Age / 10.

EXECUTE.

FREQUENCIES VARIABLES= Age_new

/STATISTICS=MINIMUM MAXIMUM MEAN MEDIAN STDDEV

/ORDER=ANALYSIS.

Statistics

Age_new

N	Valid	21796
	Missing	0
Mean		4,1895
Median		4,2000
Std. Deviation		1,21304
Minimum		1,60
Maximum		8,40

Age_new

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1,60	23	,1	,1	,1
	1,70	41	,2	,2	,3
	1,80	90	,4	,4	,7
	1,90	155	,7	,7	1,4
	2,00	182	,8	,8	2,3
	2,10	211	1,0	1,0	3,2
	2,20	299	1,4	1,4	4,6
	2,30	307	1,4	1,4	6,0
	2,40	330	1,5	1,5	7,5
	2,50	450	2,1	2,1	9,6
	2,60	426	2,0	2,0	11,5
	2,70	431	2,0	2,0	13,5
	2,80	499	2,3	2,3	15,8
	2,90	517	2,4	2,4	18,2
	3,00	581	2,7	2,7	20,8
	3,10	484	2,2	2,2	23,1
	3,20	537	2,5	2,5	25,5
	3,30	556	2,6	2,6	28,1
	3,40	559	2,6	2,6	30,6
	3,50	656	3,0	3,0	33,6
	3,60	573	2,6	2,6	36,3
	3,70	578	2,7	2,7	38,9
	3,80	591	2,7	2,7	41,6
	3,90	546	2,5	2,5	44,1
	4,00	716	3,3	3,3	47,4
	4,10	509	2,3	2,3	49,8
	4,20	593	2,7	2,7	52,5
	4,30	590	2,7	2,7	55,2
	4,40	515	2,4	2,4	57,6
	4,50	659	3,0	3,0	60,6
	4,60	518	2,4	2,4	63,0
	4,70	554	2,5	2,5	65,5
	4,80	545	2,5	2,5	68,0
	4,90	556	2,6	2,6	70,5
	5,00	612	2,8	2,8	73,4
	5,10	470	2,2	2,2	75,5
	5,20	489	2,2	2,2	77,8
	5,30	457	2,1	2,1	79,9
	5,40	429	2,0	2,0	81,8
	5,50	548	2,5	2,5	84,3
	5,60	475	2,2	2,2	86,5
	5,70	426	2,0	2,0	88,5
	5,80	390	1,8	1,8	90,3
	5,90	386	1,8	1,8	92,0
	6,00	371	1,7	1,7	93,7
	6,10	276	1,3	1,3	95,0
	6,20	268	1,2	1,2	96,2
	6,30	203	,9	,9	97,2
	6,40	139	,6	,6	97,8
	6,50	122	,6	,6	98,4
	6,60	87	,4	,4	98,8
	6,70	52	,2	,2	99,0
	6,80	52	,2	,2	99,2
	6,90	38	,2	,2	99,4
	7,00	40	,2	,2	99,6
	7,10	18	,1	,1	99,7
	7,20	18	,1	,1	99,8
	7,30	11	,1	,1	99,8
	7,40	10	,0	,0	99,9
	7,50	11	,1	,1	99,9
	7,60	4	,0	,0	99,9
	7,70	8	,0	,0	100,0
	7,80	1	,0	,0	100,0
	7,90	3	,0	,0	100,0
	8,00	2	,0	,0	100,0
	8,20	1	,0	,0	100,0
	8,30	1	,0	,0	100,0
	8,40	1	,0	,0	100,0
	Total	21796	100,0	100,0	

Interaction term

```
COMPUTE passion_cxgender=Passion_c * gender_recoded.

EXECUTE.
```

Bivariate statistics

```
CORRELATIONS

  /VARIABLES=Precarious_working_conditions Passion_c gender_recoded Age_new private public
joint NGO part_time

  /PRINT=TWOTAIL NOSIG FULL

  /MISSING=PAIRWISE.
```

Appendix II

Linear regression

Selecting only the cases that have answered all the items.

```
RECODE Passion (MISSING=0) (1 thru 5=1) INTO Passion1.
EXECUTE.
RECODE Precarious_working_conditions (MISSING=0) (1 thru 5=1) INTO PWC1.
EXECUTE.
RECODE Age_new (MISSING=0) (1.6 thru 8.8=1) INTO Age1.
EXECUTE.
RECODE private_sector (MISSING=0) (1 thru 4=1) INTO sector1.
EXECUTE.
RECODE part_time (MISSING=0) (1 thru 2=1) INTO Parttime1.
EXECUTE.

USE ALL.
COMPUTE filter_$=(Passion1 = 1 AND PWC1 = 1 AND Age1 = 1 AND sector1 = 1 AND Parttime1 = 1).
VARIABLE LABELS filter_$ 'Passion1 = 1 AND PWC1 = 1 AND Age1 = 1 AND sector1 = 1 AND Parttime1
= '+
    '1 (FILTER)'.
VALUE LABELS filter_$ 0 'Not Selected' 1 'Selected'.
FORMATS filter_$ (f1.0).
FILTER BY filter_$.
EXECUTE.

USE ALL.
FILTER BY filter_$.
EXECUTE.

REGRESSION
 /MISSING LISTWISE
  /STATISTICS COEFF OUTS R ANOVA CHANGE COLLIN TOL
```

```
  /CRITERIA=PIN(.05) POUT(.10) TOLERANCE(.0001)

  /NOORIGIN

  /DEPENDENT Precarious_working_conditions

  /METHOD=ENTER Passion_c

  /METHOD=ENTER Passion_c Age_new part_time private public joint NGO

  /METHOD=ENTER Passion_c Age_new part_time private public joint NGO gender_recoded

  /METHOD=ENTER Passion_c Age_new part_time private public joint NGO gender_recoded
passion_cxgender

  /PARTIALPLOT ALL

  /SCATTERPLOT=(*ZRESID ,*ZPRED)

  /RESIDUALS HISTOGRAM(ZRESID) NORMPROB(ZRESID)

  /SAVE MAHAL COOK LEVER DFBETA DFFIT. /SAVE RESID.
```

Appendix III

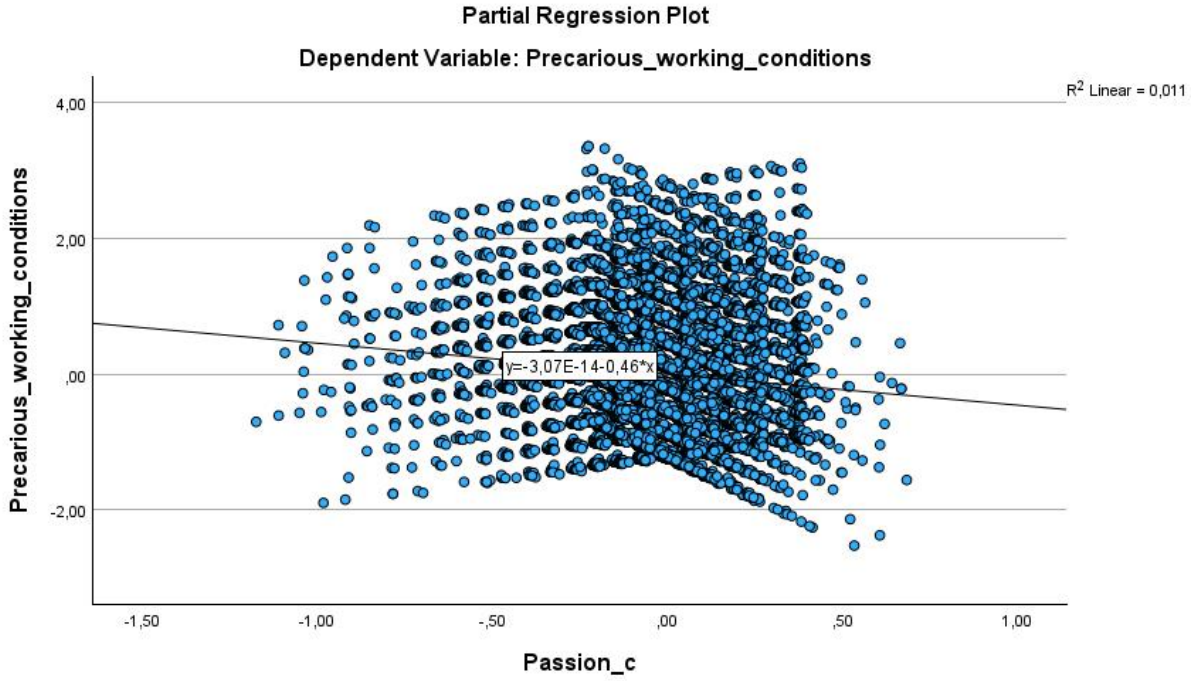
Assumptions of linear regression

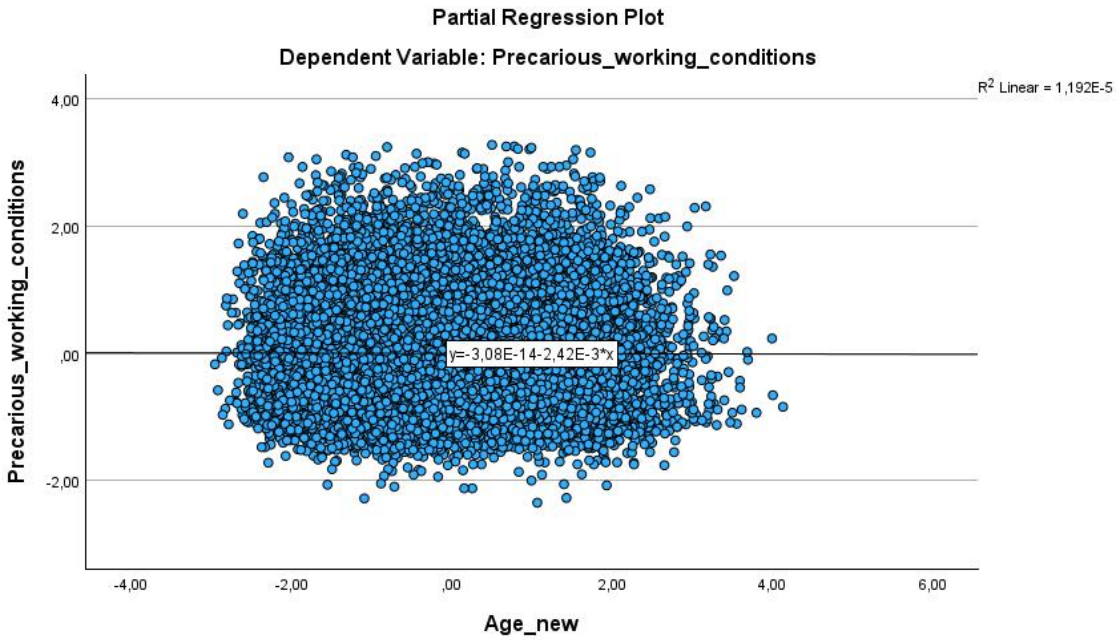
Independent observations

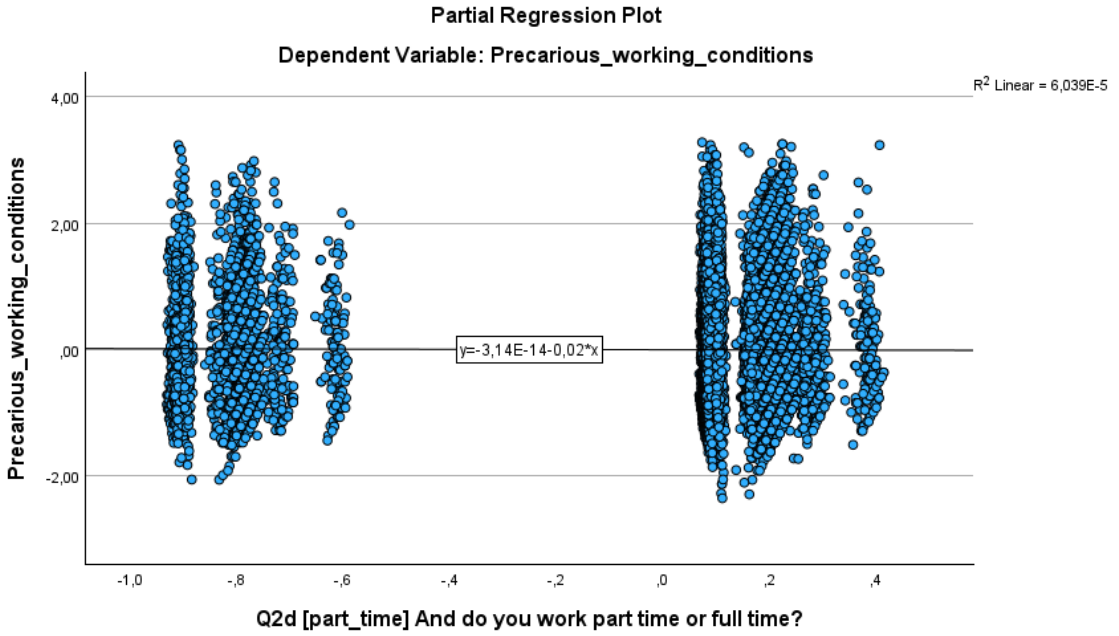
The data has not been collected by the author of this research, so There is not really a way to verify if Eurofound has made sure that the respondents are independent of each other. Nevertheless, the sample is quite big so randomness should counter this possible violation.

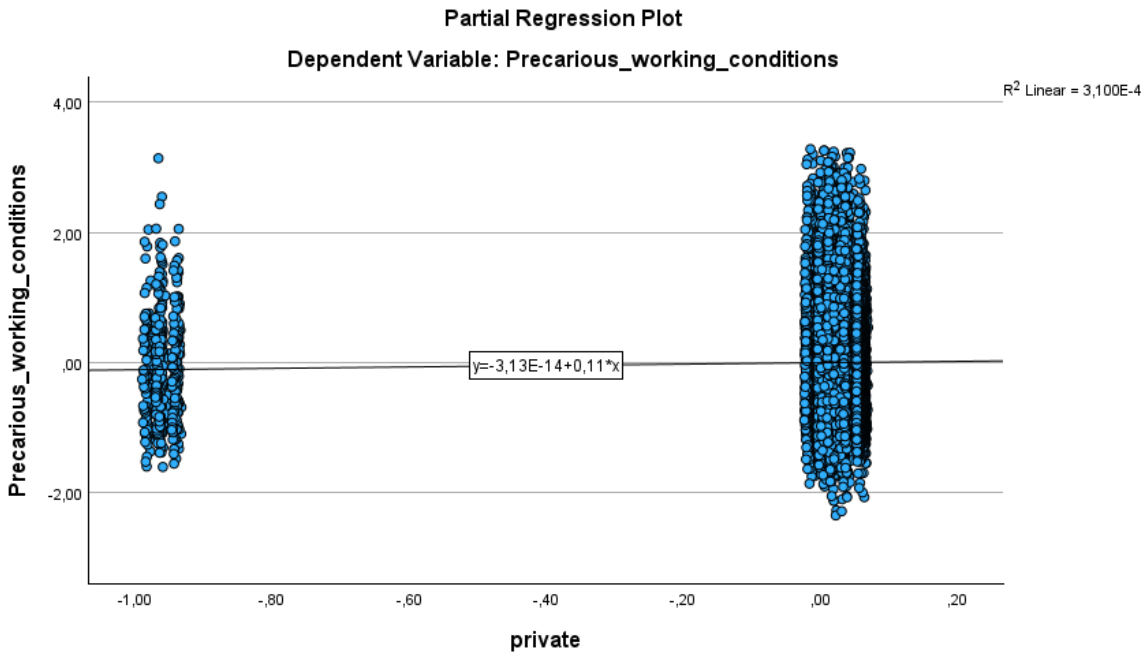
Linear relation

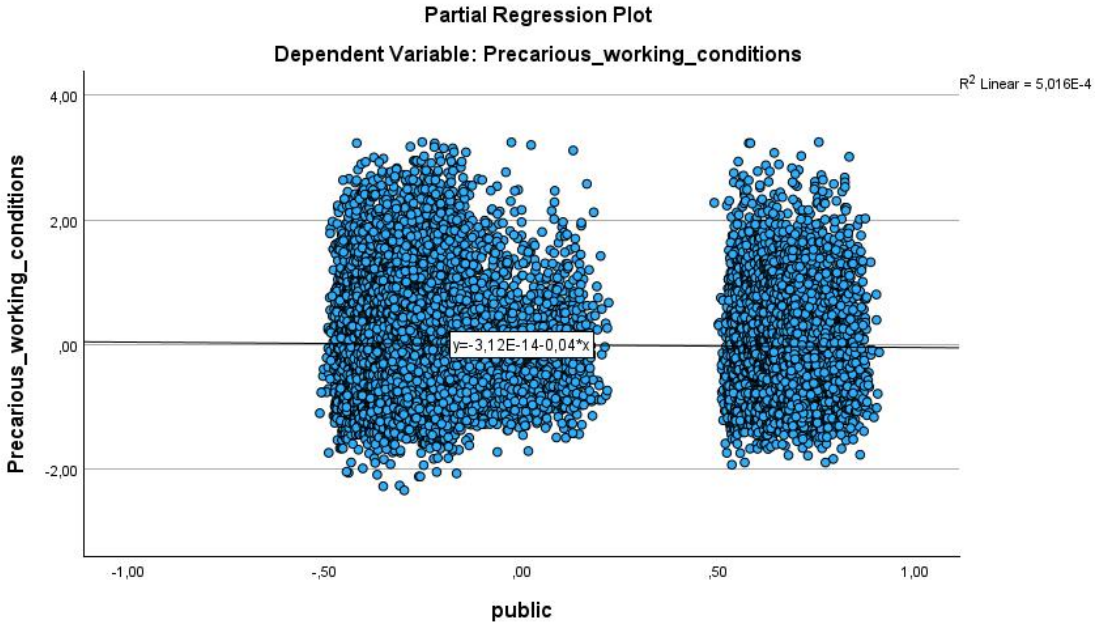
The assumption linearity assumes that there should be a straight line through the datapoints in a scatterplot. Below are the scatterplots for every variable with precarious working conditions.

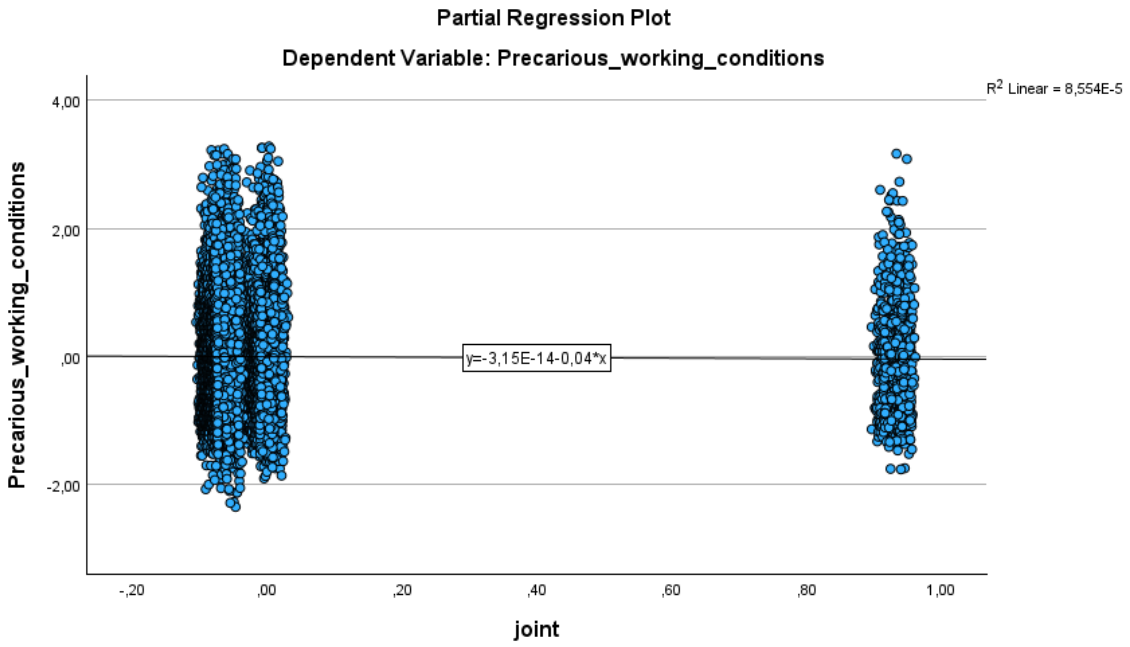


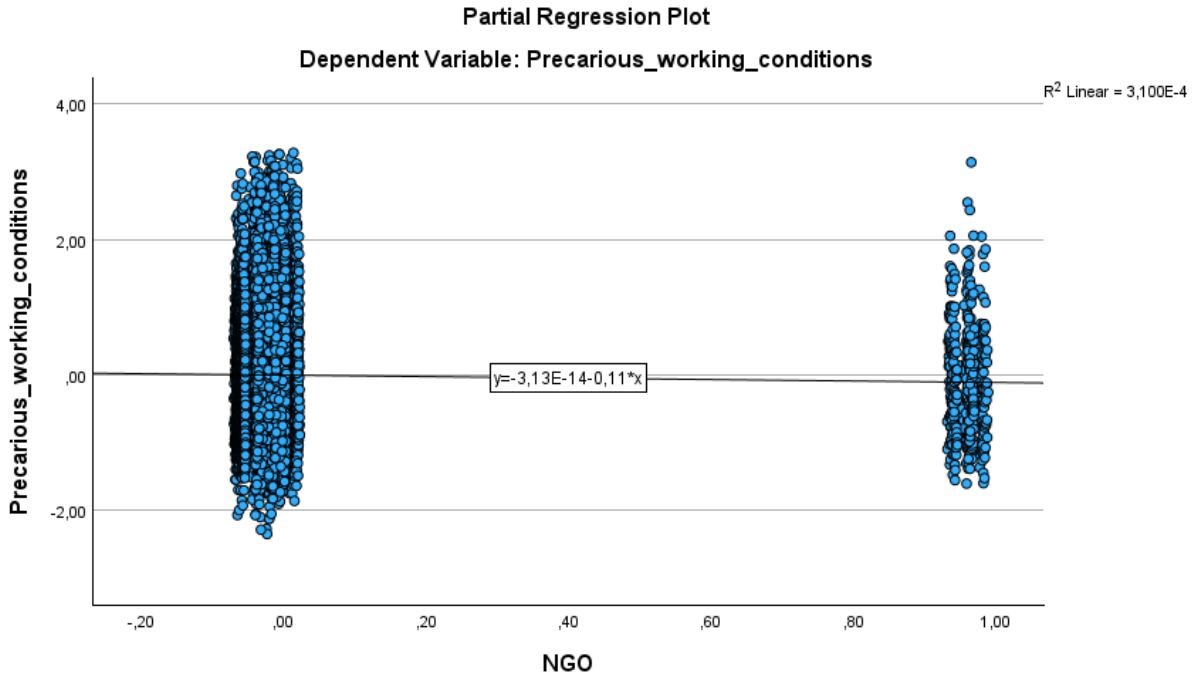

Partial Regression Plot
Dependent Variable: Precarious_working_conditions
R2 Linear = 1,192E-5
Precarious_working_conditions
4,00
2,00
,00
-2,00
y=-3,08E-14-2,42E-3*x
-4,00
-2,00
,00
2,00
4,00
6,00
Age_new

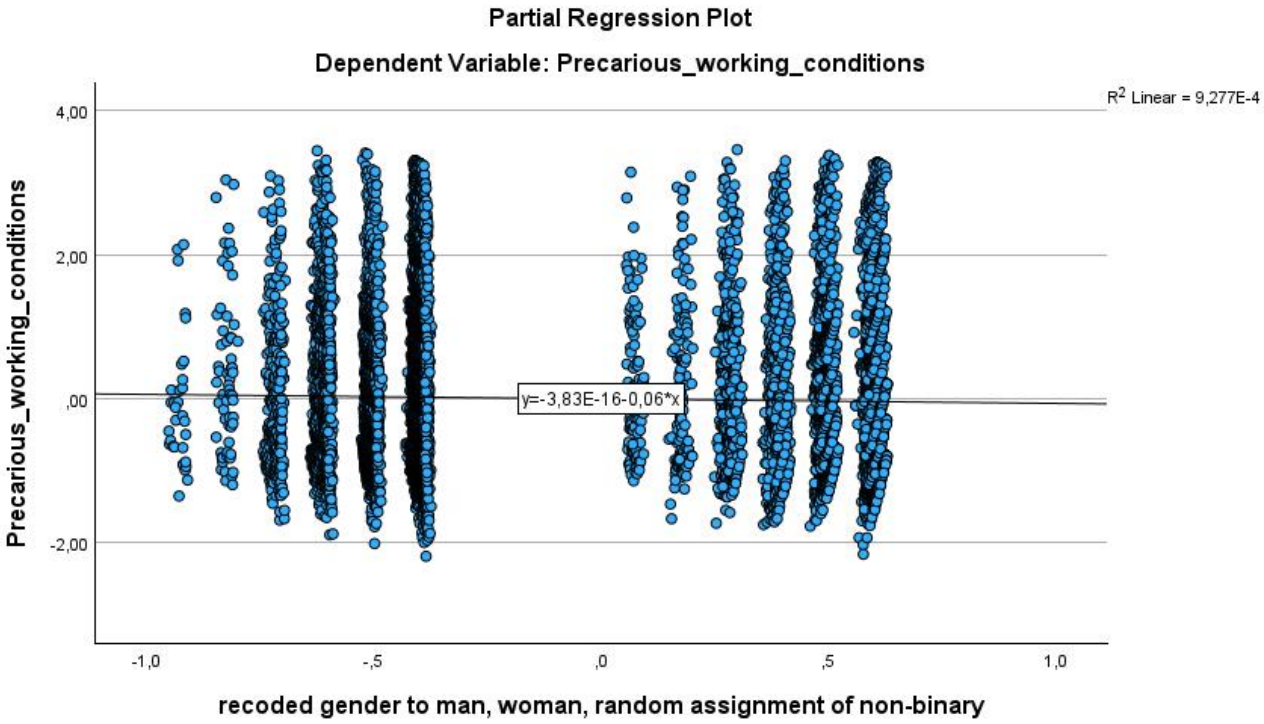

Partial Regression Plot
Dependent Variable: Precarious_working_conditions
R2 Linear = 6,039E-5
Precarious_working_conditions
4,00
2,00
,00
-2,00
y=-3,14E-14-0,02*x
-1,0
-,8
-,6
-,4
-,2
,0
,2
,4
Q2d [part_time] And do you work part time or full time?

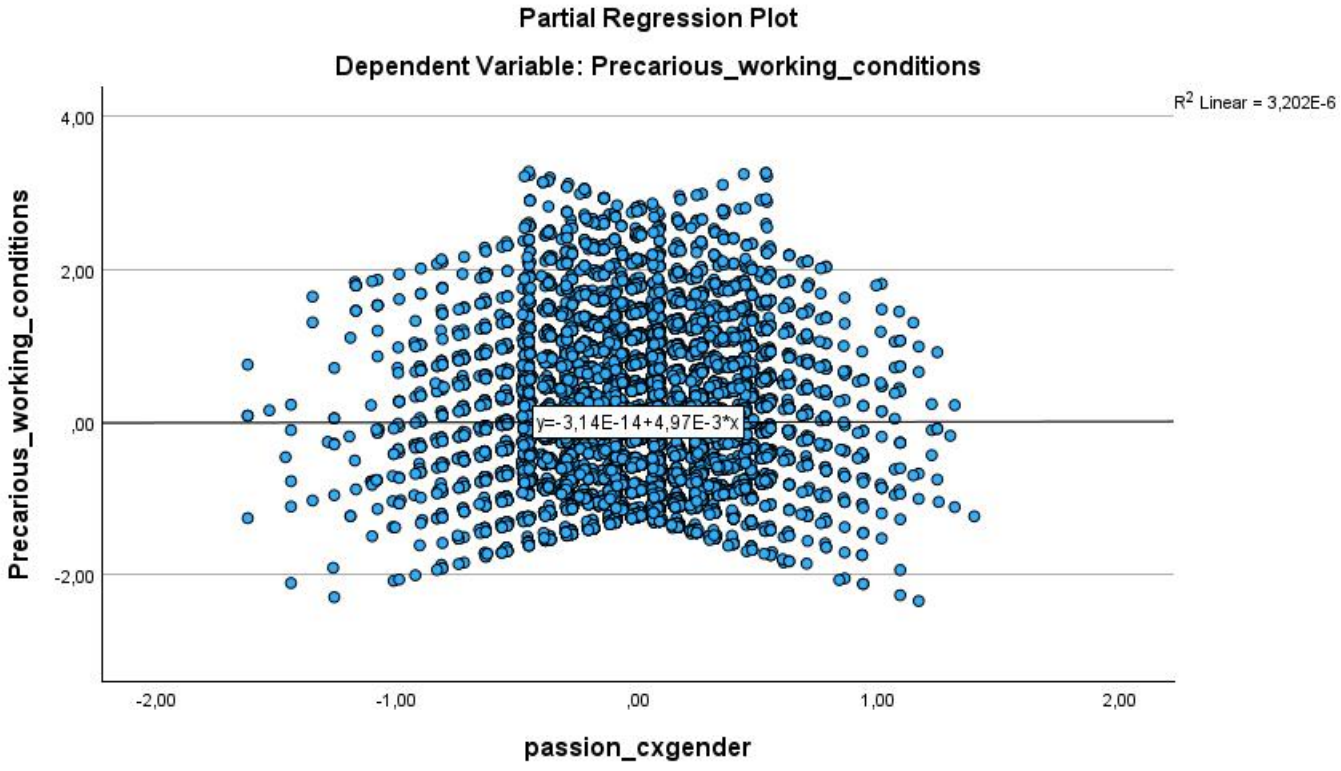

Partial Regression Plot
Dependent Variable: Precarious_working_conditions
R2 Linear = 3,100E-4
Precarious_working_conditions
4,00
2,00
,00
-2,00
y=-3,13E-14+0,11*x
-1,00
-,80
-,60
-,40
-,20
,00
,20
private


Partial Regression Plot
Dependent Variable: Precarious_working_conditions
R2 Linear = 5,016E-4
Precarious_working_conditions
4,00
2,00
,00
-2,00
y=-3,12E-14-0,04*x
-1,00
-,50
,00
,50
1,00
public

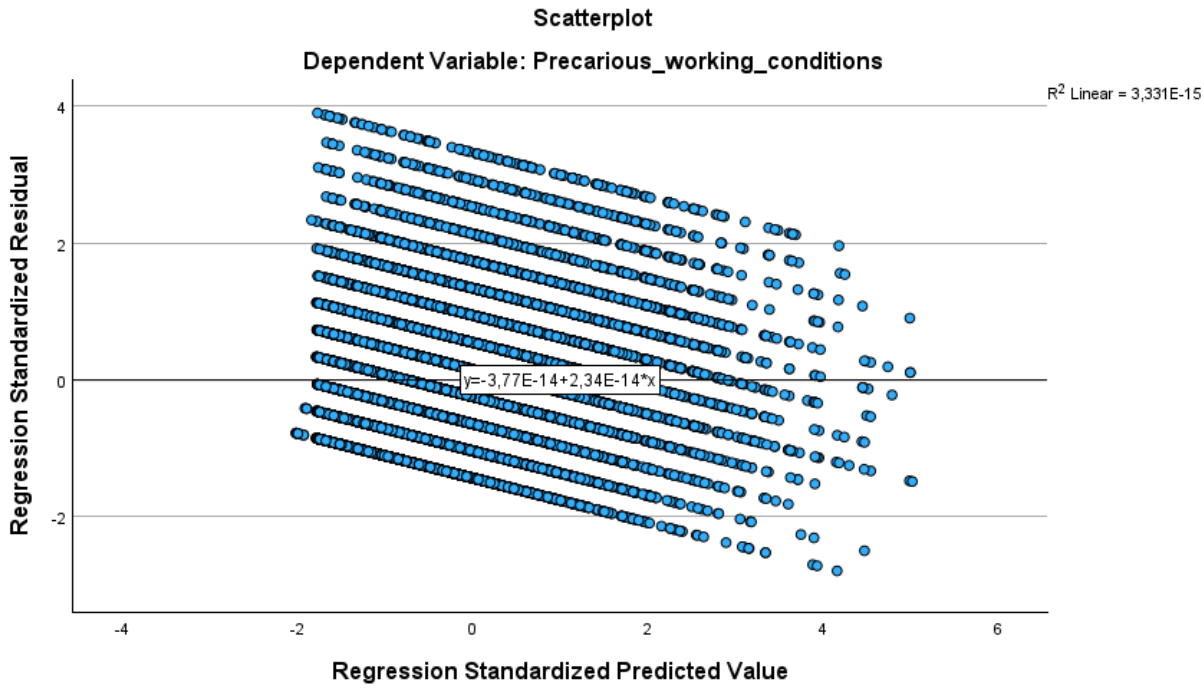

Partial Regression Plot
Dependent Variable: Precarious_working_conditions
R² Linear = 8,554E-5
Precarious_working_conditions
4,00
2,00
,00
-2,00
y=-3,15E-14-0,04*x
-,20
,00
,20
,40
,60
,80
1,00
joint


Partial Regression Plot
Dependent Variable: Precarious_working_conditions
R² Linear = 3,100E-4
Precarious_working_conditions
4,00
2,00
,00
-2,00
y=-3,13E-14-0,11*x
-,20
,00
,20
,40
,60
,80
1,00
NGO





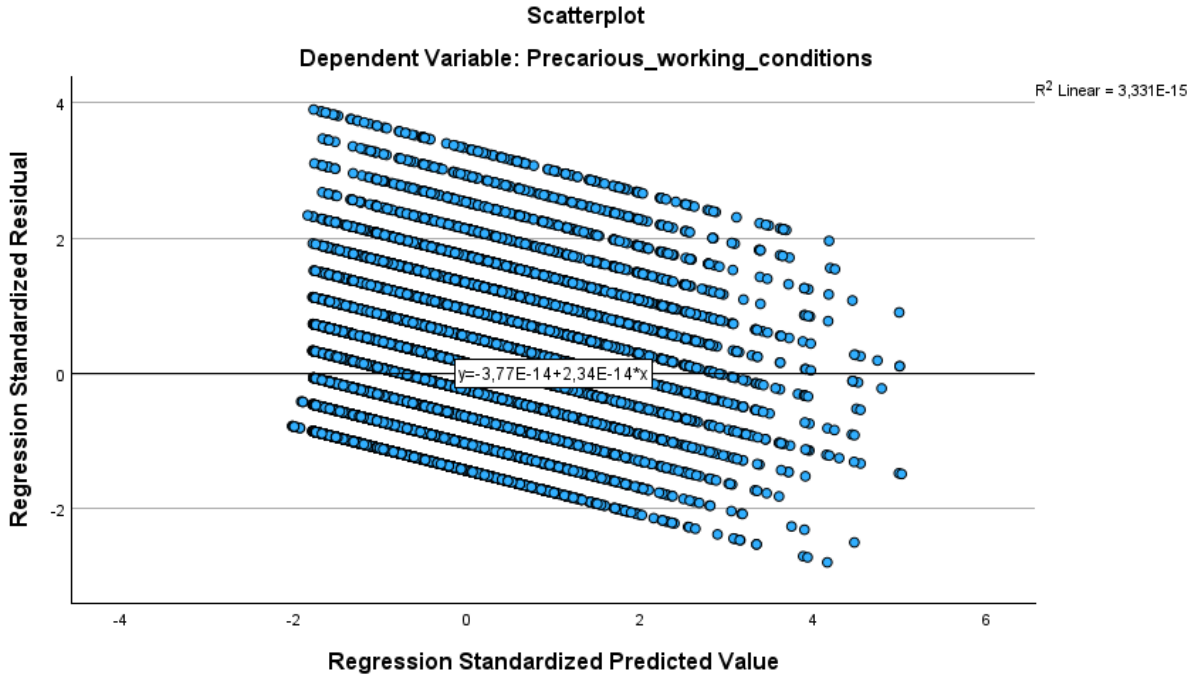
The assumption of linearity is that a line could be made through the datapoints. In the partial regression a line has been plotted that fits best to the datapoints. Most of these lines are close to zero, the partial regression plot of passion and precarious work conditions shows a line that is slightly different from zero. In the partial regression plots, some of the categories are visible, such as in precarious working conditions and gender. The plot shows that there are more men than women in the dataset.



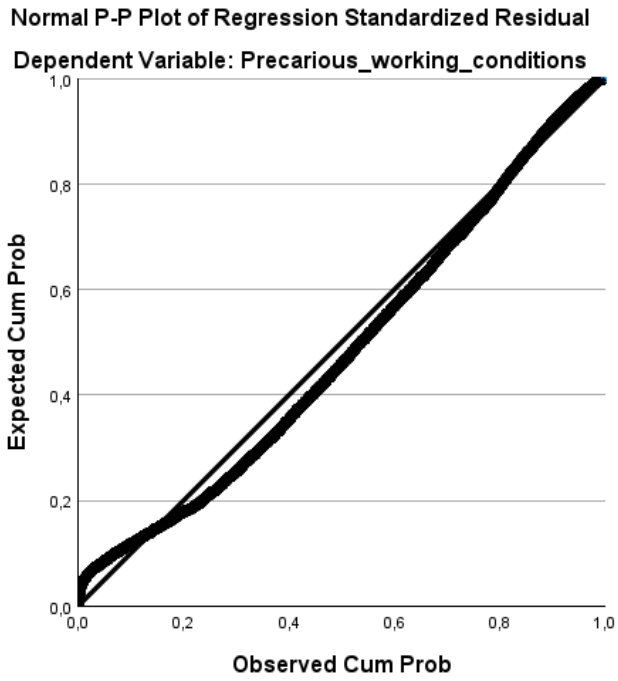
Linearity can be checked in a scatterplot like this. The same rule that the line should be close to zero, applies here. The line is very close to zero. To conclude, this assumption is not violated.

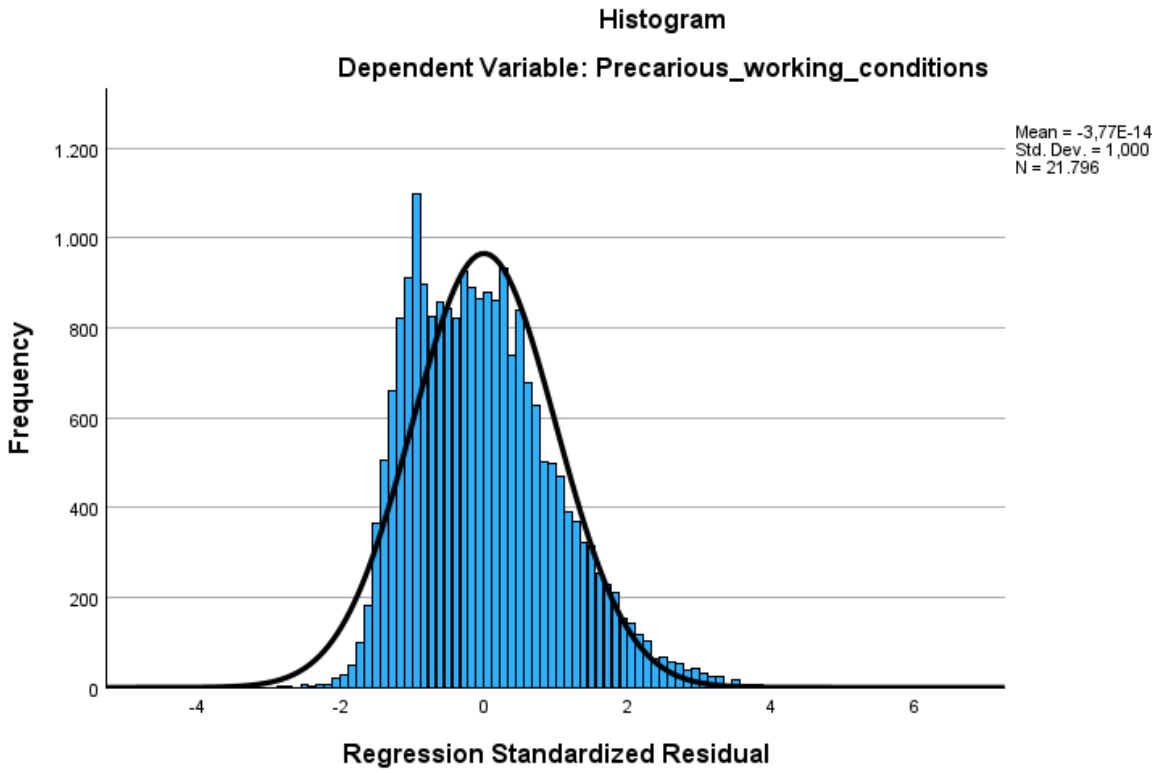
Constant residual variance (homoscedasticity)

This assumption refers to that there should not be systematic deviations around the line of zero in a scatterplot. Below is the same scatterplot as in the previous assumption. It is visible that there is a pattern. The dispersion is not equal across the entire scatterplot. To conclude, this assumption is violated. Consequences are that predictions might not be as exact as wanted. Following that, conclusions should be made with precaution.



Normal-distributed residuals

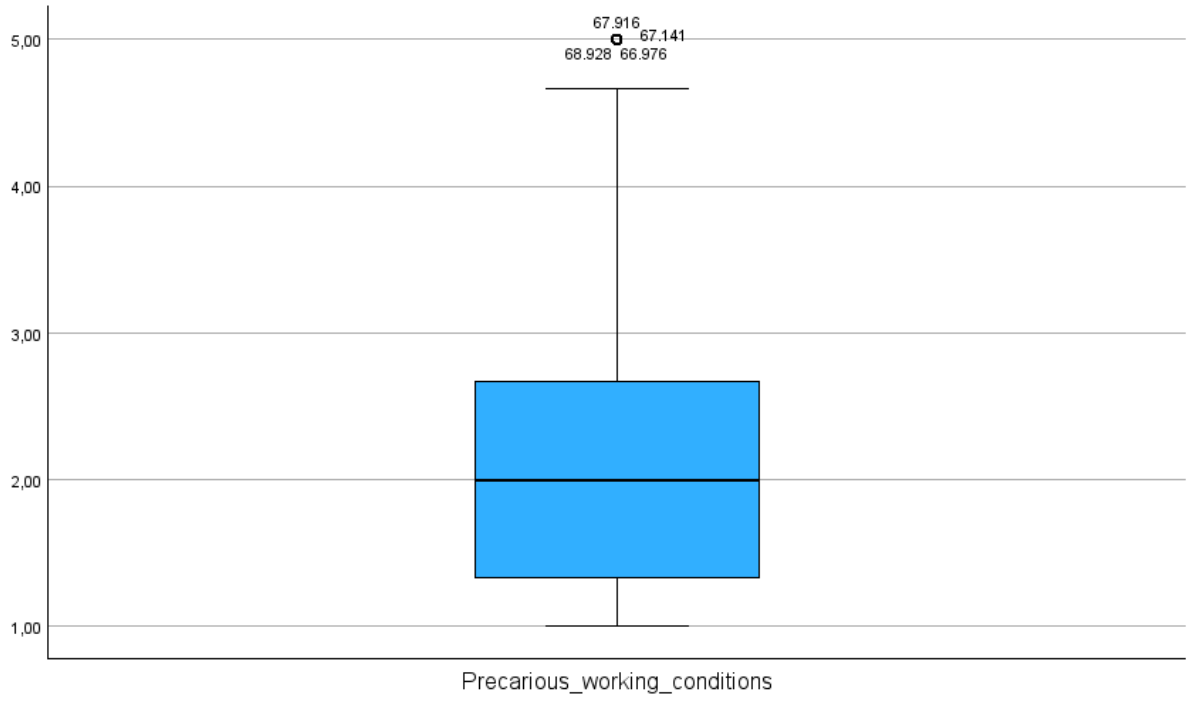


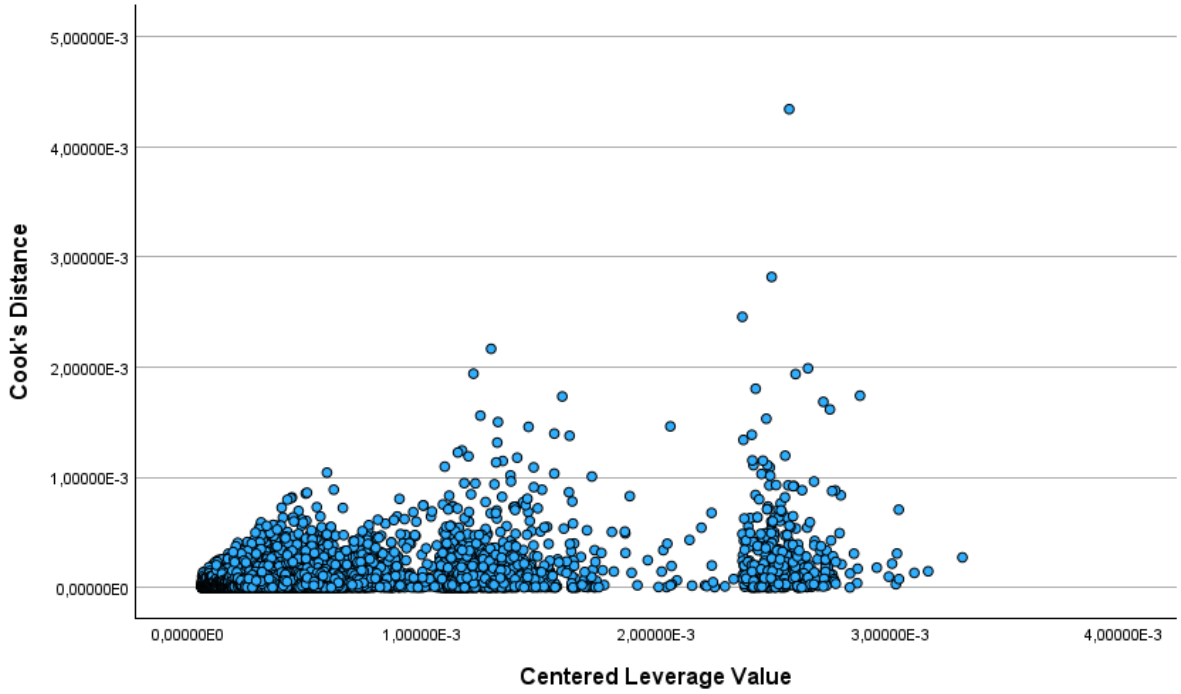


The assumption normality assumes that residuals have a normal distribution. The P-P plot shows that the distribution is close to normality. Especially in the end, the distribution follows the line of normality quite close. The histogram has a distribution that is more or less normal. The peak is to the left. To conclude, this assumption is not violated, because with big sample sizes like the one used, a perfect normal distribution is difficult to achieve.

Outliers

```
EXAMINE VARIABLES=Precarious_working_conditions
  /COMPARE VARIABLE
  /PLOT=BOXPLOT
  /STATISTICS=NONE
  /NOTOTAL
  /MISSING=LISTWISE.
GRAPH
  /SCATTERPLOT(BIVAR)=LEV_1 WITH COO_1
  /MISSING=LISTWISE.
```





There are a few outliers according to the boxplot, it concerns the cases 66976, 67141, 67916 and 68928. SPSS made these cases outliers because they are at a distance of 3 times the interquartile distance.

With N = 21796 and p = 7

Leverage: $H_c > 2p/n = 0{,}000642$

Cook's Distance: > 4/n = 0,000184

Statistics

		recoded gender to man, woman, random assignment of non-binary	Passion_c	Precarious_working_conditions	Age_new	public	private	joint	NGO	Q2d [part_time] And do you work part time or full time?
N	Valid	600	600	600	600	600	600	600	600	600
	Missing	0	0	0	0	0	0	0	0	0
Mean		1,58	-,5420	2,5589	4,1750	,0800	,2467	,3683	,3050	1,62
Median		2,00	-,1859	2,5000	4,2000	,0000	,0000	,0000	,0000	2,00
Std. Deviation		,495	,96312	1,40072	1,35203	,27152	,43143	,48275	,46079	,487
Minimum		1	-3,02	1,00	1,60	,00	,00	,00	,00	1
Maximum		2	,98	5,00	7,90	1,00	1,00	1,00	1,00	2
Percentiles	25	1,00	-1,3525	1,0000	3,1000	,0000	,0000	,0000	,0000	1,00
	50	2,00	-,1859	2,5000	4,2000	,0000	,0000	,0000	,0000	2,00
	75	2,00	,1475	3,6667	5,2000	,0000	,0000	1,0000	1,0000	2,00

This section only describes the more extreme differences. Outliers have a lower score on passion. Outliers are more often female and still work mostly fulltime, although fulltime workers are a little less overrepresented. Private, public and joint have a lower mean, this means there are less employees in these sectors in the outliers than in the entire sample. NGO has a higher mean, outliers

work more in this sector than in the entire sample. 600 cases are outliers according to SPSS, the influence of these cases will be discussed.

```
IF ((LEV_1 > 0,000642) | (COO_1 > 0,000184) ) Outliers=1.

IF ((LEV_1 <= 0,000642) | (COO_1 <= 0,000184) ) Outliers=0.

EXECUTE.
```

Cases are only classified as outliers if they have on both leverage and Cook's distance a value that is higher than the values described above.

Filter for outliers

```
USE ALL.

COMPUTE filter_O=(Outliers = 1).

VARIABLE LABELS filter_O 'Outliers = 1 (FILTER)'.

VALUE LABELS filter_O 0 'Not Selected' 1 'Selected'.

FORMATS filter_O (f1.0).

FILTER BY filter_O.

EXECUTE.

FREQUENCIES VARIABLES=gender_recoded Passion_c Precarious_working_conditions Age_new
    public private joint NGO part_time
  /NTILES=4
  /STATISTICS=STDDEV MINIMUM MAXIMUM MEAN MEDIAN
  /ORDER=ANALYSIS.
```

Filter for excluding outliers

```
USE ALL.

COMPUTE filter_eo=(Outliers = 1).

VARIABLE LABELS filter_eo 'Outliers = 1 (FILTER)'.

VALUE LABELS filter_eo 1 'Not Selected' 0 'Selected'.

FORMATS filter_eo (f1.0).

FILTER BY filter_eo.

EXECUTE.
```

Using filter for respondents that filled in every item used and excluding outliers

```
USE ALL.

COMPUTE filter_A=(filter_$ = 1 AND filter_eo = 0).

VARIABLE LABELS filter_A 'filter_$ = 1 AND filter_eo = 0 (FILTER)'.

VALUE LABELS filter_A 0 'Not Selected' 1 'Selected'.

FORMATS filter_A (f1.0).

FILTER BY filter_A.

EXECUTE.
```

Model Summary[e]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	,312[a]	,097	,097	,82052	,097	2284,898	1	21194	<,001
2	,314[b]	,099	,098	,82003	,001	6,079	5	21189	<,001
3	,314[c]	,099	,098	,82000	,000	2,506	1	21188	,113
4	,314[d]	,099	,098	,82000	,000	1,093	1	21187	,296

a. Predictors: (Constant), Passion_c

b. Predictors: (Constant), Passion_c, NGO, joint, Q2d [part_time] And do you work part time or full time?, Age_new, public

c. Predictors: (Constant), Passion_c, NGO, joint, Q2d [part_time] And do you work part time or full time?, Age_new, public, recoded gender to man, woman, random assignment of non-binary

d. Predictors: (Constant), Passion_c, NGO, joint, Q2d [part_time] And do you work part time or full time?, Age_new, public, recoded gender to man, woman, random assignment of non-binary, passion_cxgender

e. Dependent Variable: Precarious_working_conditions

As can be seen in the model summary, the *adjusted* R^2 does increase slightly. The *F-change* is also lower than in the analysis with the outliers in model 1 and 3. The differences in model 1 and 3 are relatively small. When looking at model 2 and 4, the differences are relatively big. For example, in model 2, the *F-change* is 3,452. When excluding the outliers, the *F-change* is almost double that. The significance does not really change. A small difference is that when excluding the outliers in model 2, the *F-change* is significant at a level of <0,001 and when including outliers, this is 0,004.

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	2,201	,006		390,438	<,001		
	Passion_c	-,459	,010	-,312	-47,801	<,001	1,000	1,000
2	(Constant)	2,249	,036		63,180	<,001		
	Passion_c	-,459	,010	-,312	-47,492	<,001	,987	1,013
	Age_new	-,001	,005	-,001	-,184	,854	,976	1,024
	public	-,037	,013	-,020	-2,952	,003	,969	1,033
	joint	-,137	,031	-,029	-4,351	<,001	,983	1,017
	NGO	-,131	,053	-,016	-2,461	,014	,991	1,009
	Q2d [part_time] And do you work part time or full time?	-,015	,016	-,006	-,922	,356	,996	1,004
3	(Constant)	2,215	,041		53,490	<,001		
	Passion_c	-,459	,010	-,312	-47,497	<,001	,987	1,013
	Age_new	-,001	,005	-,001	-,198	,843	,976	1,024
	public	-,041	,013	-,021	-3,189	,001	,937	1,067
	joint	-,138	,031	-,029	-4,386	<,001	,983	1,017
	NGO	-,134	,053	-,017	-2,531	,011	,989	1,011
	Q2d [part_time] And do you work part time or full time?	-,010	,016	-,004	-,647	,518	,969	1,032
	recoded gender to man, woman, random assignment of non-binary	,018	,012	,011	1,583	,113	,939	1,065
4	(Constant)	2,215	,041		53,473	<,001		
	Passion_c	-,488	,030	-,332	-16,456	<,001	,105	9,555
	Age_new	-,001	,005	-,001	-,198	,843	,976	1,024
	public	-,041	,013	-,021	-3,187	,001	,937	1,067
	joint	-,138	,031	-,029	-4,380	<,001	,983	1,017
	NGO	-,135	,053	-,017	-2,541	,011	,989	1,011
	Q2d [part_time] And do you work part time or full time?	-,010	,016	-,004	-,617	,537	,968	1,033
	recoded gender to man, woman, random assignment of non-binary	,018	,012	,011	1,561	,119	,939	1,065
	passion_cxgender	,020	,019	,021	1,045	,296	,105	9,548

a. Dependent Variable: Precarious_working_conditions

When excluding the (potential) outliers, the constants/intercepts, coefficients and significance of most of these coefficients do not change much. The directions of the coefficients stay the same across all variables. Some of the variables get a slightly stronger effect and some a slightly weaker effect. The significance changes in joint, this turns from not significant when including outliers to significant when excluding outliers.

Because there is no change in the directions of the variables and significance changes only in the variable joint, the analysis will continue with the outliers included. The responses also seem valid.

Multicollinearity

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	2,204	,006		386,693	<,001		
	Passion_c	-,450	,009	-,309	-47,912	<,001	1,000	1,000
2	(Constant)	2,271	,036		63,882	<,001		
	Passion_c	-,450	,009	-,309	-47,601	<,001	,987	1,013
	Age_new	-,002	,005	-,003	-,495	,621	,976	1,025
	public	-,040	,013	-,020	-3,064	,002	,962	1,039
	joint	-,037	,028	-,009	-1,320	,187	,978	1,023
	NGO	-,104	,041	-,016	-2,500	,012	,984	1,016
	Q2d [part_time] And do you work part time or full time?	-,023	,016	-,009	-1,441	,150	,993	1,007
3	(Constant)	2,236	,041		54,000	<,001		
	Passion_c	-,450	,009	-,309	-47,601	<,001	,987	1,013
	Age_new	-,002	,005	-,003	-,510	,610	,976	1,025
	public	-,043	,013	-,022	-3,305	<,001	,932	1,072
	joint	-,039	,028	-,009	-1,366	,172	,977	1,023
	NGO	-,108	,042	-,017	-2,599	,009	,980	1,020
	Q2d [part_time] And do you work part time or full time?	-,018	,016	-,008	-1,155	,248	,966	1,035
	recoded gender to man, woman, random assignment of non-binary	,019	,012	,011	1,644	,100	,940	1,064
4	(Constant)	2,235	,041		53,982	<,001		
	Passion_c	-,457	,029	-,314	-15,705	<,001	,104	9,611
	Age_new	-,002	,005	-,003	-,510	,610	,976	1,025
	public	-,043	,013	-,022	-3,307	<,001	,932	1,073
	joint	-,039	,028	-,009	-1,365	,172	,977	1,023
	NGO	-,108	,042	-,017	-2,599	,009	,980	1,020
	Q2d [part_time] And do you work part time or full time?	-,018	,016	-,008	-1,147	,251	,966	1,035
	recoded gender to man, woman, random assignment of non-binary	,019	,012	,011	1,646	,100	,940	1,064
	passion_cxgender	,005	,019	,005	,264	,792	,104	9,600

a. Dependent Variable: Precarious_working_conditions

As can be seen in VIF-values, there is little multicollinearity. Only passion and the interaction-term in model 4 have a high value of VIF. That could be because in that model, the interaction-term is added. It makes sense that passion correlates a lot with the interaction-term, because the same variable is in it. The rest of the values do not surpass 1,073.

Appendix IV

This section describes the use of Artificial Intelligence (AI) in this paper.

AI was used to generate ideas for the title. The assumptions of linear regression were retrieved and how to calculate the leverage, these things were also checked in the slides of the statistical course.