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Factors Affecting Job-Loss Anxiety: The Influence of Decent Work Policies and Corporate Sustainability in a Case Study of Economic Crises

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Abstract: This study examined the factors affecting the fear of job loss, which is characteristic of various phases of an economic crisis. We used a representative sample of data from the Russia Longitudinal Monitoring Survey-Higher School of Economics for 2007, 2009, 2013, 2015, 2019, and 2021. It was assumed that the factors that determine the level of layoff anxiety are dynamic. The current economic conditions caused by both the COVID-19 pandemic and the growing prerequisites of a new economic crisis in Russia have promoted increased interest in this area. Method: Binary choice models were estimated using the maximum likelihood method with the calculation of average marginal effects. State ownership in the capital of an organization, a high income, job satisfaction, good qualifications, and a positive assessment of one's health reduce layoff anxiety. The fear of job loss was found to peak at 45 years of age. The factors associated with job insecurity can be permanent or temporary, depending on the phase of the economic cycle. The conclusions of this study may be of interest to the management of organizations interested in increasing the efficiency of labor and production.

Keywords: job loss; unemployment; socio-economic factors; economic crisis; COVID-19

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1. Introduction

Job insecurity is not a new trend; it was described by K. Marx using the following terms: "a reserve army of workers, which is ready to replace a working person in the event that his efficiency decreases". The increased flexibility in the labor market has extended this problem to all levels of employment. Fear of being unemployed is an inner experience that has no institutionalized support. A person who fears job loss may experience stress due to the problems associated with job loss and uncertainty about the future (Heaney et al. 1994; Joelson and Wahlquist 1987; Bert et al. 2020). As a result of globalization and international competition, the labor market has undergone a rapid change over the last decade (Sora et al. 2010). Recent macroeconomic changes have meant that no one is immune to instability at work (Elman and O'Rand 2002; Schmidt 2000). Organizations have resorted to a variety of methods to reduce costs and improve efficiency, such as downsizing, restructuring, mergers, privatization, and outsourcing. As a result of these transformations, new forms of labor relations based on flexibility, which can increase workers' sense of work-related insecurity, have emerged (Sverke and Hellgren 2002; Chirumbolo and Hellgren 2003). Moreover, according to Green (2020), the fear of job loss has intensified in recent years due to COVID-19. His research confirmed that the fear of job loss affects both the physical and mental health of individuals, although the fear is less when employees feel they can easily

find work again. This reinforces the need for effective and stable macroeconomic policies, especially in this post-pandemic period, because the health of employees is a matter of public policy.

Layoffs are most commonly triggered by periods of financial stress and changes in a firm's position in the industry as a response to shifts in demand. The economic logic behind layoffs is that in order for a firm to make money, it should either cut costs or increase revenue. Since future costs, such as the salary of an employee, are more predictable than future revenue, some employers choose layoffs under times of economic constraint. Technological progress significantly changes the labor market inputs and production processes that firms use. Such shifts have led to warnings in recent decades that significant numbers of jobs will be eliminated and replaced by technology, and automation and robotization will reduce overall production and labor costs (Thomas 2017). As firms start laying off employees, however, their reputation is affected. Even so, at times, when the company is undergoing hardship, layoffs have to be made to cut costs. These layoffs may enhance the company's competitive position (Ginsburg 2010; Eberts 2005).

Actions such as work restructuring and wage and employment freezes in response to recessions are widely assumed to decrease employees' job security and detrimentally affect perceptions of the management's trustworthiness (Wood et al. 2020).

Fear of job loss may also have a positive aspect since employees might increase efforts to protect themselves (Staufenbiel and König 2010). Therefore, studying the fear of job loss can have a tangible practical effect on the organization's management. However, we must not forget the identified negative consequences, since for some types of activities, stress is a destructive factor in efficiency. Research shows that layoff anxiety affects worker productivity (Greenhalgh and Rosenblatt 1984). In addition, it can influence their future career (Peiro et al. 2012) and lead to a decrease in satisfaction (Sora et al. 2010; Yeves et al. 2019; Buitendach and De Witte 2005).

In such times of crisis, employee behavior is critical to the survival of many organizations (Yu et al. 2021). At the same time, employees may feel threatened by the prospect of unemployment or a reduction in the quality of their jobs in the future, especially during periods of crises. This was apparent during the financial crisis and the COVID-19 pandemic (Vo-Thanh et al. 2021). The 2008–2009 financial crisis led to intense and widespread feelings of job insecurity that were less manageable for organizations (De Cuyper et al. 2018). Job insecurity can lead to a decrease in job involvement, a drop in the level of trust in the organization (Richter and Näswall 2019), and an increase in employee turnover (Bernhard-Oettel et al. 2011). We believe that the factors determining the level of layoff anxiety are dynamic and depend on the characteristics of the market, the evolutionary processes taking place within it, and the objective socio-economic characteristics of employed people. Therefore, we studied this problem in the context of financial and economic crises in Russia in 2008–2009, 2014–2015, and 2020–2021, which became significant sources of macroeconomic uncertainty and should have objectively had an impact on the level of fear of job loss among employed people.

2. Literature Review

In 2008, a serious economic crisis began in the USA and soon spread to Europe and the rest of the world, affecting all major economies. This financial and economic crisis had a serious impact on the labor market and the welfare of workers. These macroeconomic changes became an important stressor that negatively affected the mental health of employees. Research confirmed that the loss of a job, as well as an increased workload or a reduction in workers' salaries, were associated with an increased rate of anxiety, depression, and suicide. This fueled an ongoing fear of job loss, especially among those people who worked in sectors where many layoffs had already taken place. The layoffs themselves also led to stressful conditions in the workplace, increased workload with less rest, and reduced wages (Mucci et al. 2016; Lee et al. 2010; Rachiotis et al. 2014).

Shoss (2017) provided an in-depth literature review on the fear of job loss. She gave various definitions and considered approaches to determining the relevant factors, as well as methods for testing hypotheses. We will consider the most common definitions associated with job loss in the scientific literature. According to Greenhalgh and Rosenblatt (1984), job insecurity is perceived by employees as the inability to maintain job continuity in the context of a threatened workplace. Van Vuuren and Klandermans (1990) claimed that the fear of job loss is closely associated with the fear of job stability in the future, as well as with the fear of deteriorating working conditions. Hartley et al. (1990) defined it as "a discrepancy between the level of security a person experiences and the level she or he might prefer". According to Heaney et al. (1994), job insecurity is defined as the worker's perception of a threat to current job continuity.

It can be emphasized that the fear of job loss is expressed in the subjective perception of uncertainty, as a result of which the subject expects to lose their job, which will directly negatively affect their well-being; otherwise, layoff anxiety would not have such a significant negative impact.

The fear of job loss is associated with certain negative consequences. According to the theory of transactional stress (Lazarus and Folkman 1984), employees may react differently to stressors because they have different sets of strategies and resources. Therefore, increasing attention is being paid to minimizing the negative consequences of stressful staff conditions, with the help of specific procedures for stress management (Rudaleva and Mustafin 2017). There is a link between lack of job security and employee health (Cheng and Chan 2008), which makes some groups more vulnerable than others. Job insecurity is associated with psychological factors, burnout, and depressive symptoms when controlling for age, sex, and education (Blom et al. 2015; Aybas et al. 2015). Ashford et al. (1989) identified factors influencing layoff anxiety, among which were declines in commitment, trust in an organization, and job satisfaction. Some analysts have pointed to long-term growth in structural insecurity to the growth in short-term contracts (Cappelli et al. 1997; Kalleberg 2011). Particularly interesting in relation to the analysis of the fear of job loss in Russia is the article by Gallie et al. (2017), in which age factors were found to be associated with the family, and employment in the public sector was also considered a specific option for reducing risk and uncertainty. Vermeylen (2005) noted in his work that, in general, high-skilled workers are less concerned about the risk of job loss than low-skilled workers. Job insecurity varies by race, ethnicity, and immigration status (Landsbergis et al. 2014). It can also be differentiated by generation: representatives of the Y generation are more likely to show less layoff anxiety (Mohapatra et al. 2017).

The issue of the relationship between crises and job loss has been covered in a number of studies. Using the example of Greece, Nella et al. (2015) emphasized that a crisis in a country's economy increases layoff anxiety. Frone (2018) showed that job insecurity among US workers increased during the Great Recession. The COVID-19 pandemic has caused further development in this area, thus new studies assessing the impact of crises on job loss have emerged. According to the International Labor Organization (ILO) (International Labor Organization 2020), about 38% of the world's workforce is at risk of losing their jobs, leading to various negative consequences. For example, layoff anxiety increased due to a lack of job security during the COVID-19 pandemic, especially among young people in the US (Ganson et al. 2021).

Hobfoll's COR (Conservation of Resources) theory (Hobfoll 1989) supports the idea of acquiring, maintaining, cultivating, and protecting resources. Stable employment has been conceptualized as a valuable resource because people value stable employment for its own purpose and for its ability to provide other valued resources (e.g., housing, food, clothing, social connection, and social status). Therefore, job insecurity (a threat to one's stable employment) represents the potential loss of valuable resources (Jahoda 1981; Shoss 2017; Jiang and Probst 2017).

Overall, according to Laubinger et al. (2020), the labor market is likely to be affected by four mechanisms: changes in production patterns, demand patterns, aggregate income,

macroeconomic conditions, and changes in trade and competitiveness. Through these mechanisms, the economy can have a variety of effects on labor markets, including job creation, job replacement, job loss, and job redefinition, that promote job loss uncertainty. Since the labor market plays a major role in every economy, it is important and useful to study the effects of both macroeconomic and microeconomic perspectives on the labor market. Each view can provide different information on employment policies and measures. At the macroeconomic level, the supply and demand for labor are affected by domestic and international market dynamics, as well as by factors such as immigration, population age, and education level. At the microeconomic level, individual firms interact with employees, hire them, fire them, and increase or decrease wages and working hours. The relationship between supply and demand affects the number of hours employees work, changes in working times, changes in duties/tasks, and the compensation they receive in the form of wages, salaries, and benefits (Kenton 2023).

From the point of view of access to employment, access to business ownership is also important. State ownership is still important in Russia, despite extensive privatization. These are enterprises where the state retains significant control through full, majority, or significant minority ownership. The main government objective of state ownership is industrial development, innovation, and diversification of the economy (Sprenger 2008). Low productivity and competitiveness of Russian firms have been among Russia's primary economic challenges over the past decade. State-owned enterprises contribute a significant share of output and employment to Russia's economy, and recent academic research shows that they have lower productivity compared with private sector firms. In Russia, the taxonomy of state-owned enterprises is twofold: wholly state-owned enterprises, which have 100 percent state ownership, and mixed state-owned enterprises, which have some share of state ownership below 100%. Russian state-owned enterprises pay a compensatory premium, and this premium in turn contributes to labor shortages in the private sector. State-owned enterprises provide more generous benefits, such as paid vacation, maternity leave, and training, compared with private sector firms, which undoubtedly also has an impact on layoff anxiety (World Bank Group 2019).

3. Materials and Methods

The identified factors allowed us to form several research hypotheses. It is important to note that layoff anxiety can also have a positive effect, which can be highlighted through the management of a particular organization by extrapolating the conclusions obtained from the results of work and their implementation in the management policy of the organization.

Hypothesis H1. *An individual's layoff anxiety is associated with a subjective physical assessment of the state of health.*

Hypothesis H2. *There is a correlation between job satisfaction and layoff anxiety.*

Hypothesis H3. *Employees with good qualifications are less worried about losing their jobs compared with those with lower qualifications.*

Hypothesis H4. *Age, as a regressor, has a nonlinear effect on an individual's job loss anxiety.*

Hypothesis H5. *An individual's income and satisfaction with their financial situation have an impact on their concern over job loss, and the effects of income are nonlinear.*

Hypothesis H6. *Gender and other socio-demographic factors of an individual have a significant impact on layoff anxiety.*

Hypothesis H7. *State ownership in the capital of the organization has an impact on layoff anxiety.*

State ownership inefficiency in a market economy and the operating conditions of such enterprises in Russia may be a negative factor affecting the fear of job loss. On the other hand, when achieving poor financial and economic results, such enterprises can count on attracting state funding, which should significantly reduce their employees' anxieties.

This study utilized data from the Russia Longitudinal Monitoring Survey-Higher School of Economics (RLMS-HSE) (n.d.) collected in 2007, 2008, 2013, 2015, 2019, and 2021, drawing from a representative sample of individuals.

The data underwent comprehensive preprocessing that involved the removal of gaps and ambiguous responses. Only responses from individuals employed at the time of the survey were retained for analysis. The dependent variable was determined based on responses to the question, "How concerned are you about the possibility of losing your job?" "Concerned very much" and "Concerned a little" were coded as "1", while all other response options, excluding undefined ones, were assigned the code "0".

Table 1 presents the key characteristics of the selected factors for the two categories of the dependent variable. Through preliminary visual analysis of the data, initial insights into the potential impact of these factors on the target variable were formed.

Table 1. Exploratory data analysis.

Indicator/Values	2007	2009	2013	2015	2019	2021
Sample size	4087	3588	6296	4207	4088	3963
			Not worried about losing their jobs			
Share of respondents	0.41	0.43	0.43	0.35	0.39	0.41
Age, average	40.33	41.13	41.26	41.95	43.07	43.00
min/max	14/72	15/78	17/87	17/83	17/86	17/84
Income	8755	15,740	25,649	28,212	35,369	39,980
min/max	0/59,580	0/174,400	0/725,000	300/402,300	1200/340,000	2000/220,000
Gender: share of women	0.54	0.55	0.54	0.53	0.54	0.54
Health: share of "good"	0.41	0.36	0.44	0.44	0.47	0.50
Satisfaction with their financial situation, share	0.31	0.25	0.28	0.26	0.24	0.26
Overall job satisfaction	0.00	0.66	0.68	0.66	0.72	0.74
Share of state-owned enterprises	0.56	0.52	0.48	0.5	0.46	0.46
			Worried about losing their jobs			
Share of respondents	0.59	0.57	0.57	0.65	0.61	0.59
Age, average	41	42.26	41.88	42.24	43.23	44.28
min/max	15/80	17/80	17/79	18/80	18/80	18/75
Income	12,039	14,836	22,400	27,456	34,724	37,830
min/max	0/110,000	0/1,846,250	0/404,907	175/1,226,000	3000/2,550,000	2500/587,000
Gender: share of women	0.54	0.56	0.52	0.55	0.54	0.53
Health: share of "good"	0.28	0.29	0.38	0.40	0.44	0.46
Satisfaction with their financial situation, share	0.25	0.17	0.18	0.19	0.19	0.19
Overall job satisfaction	1	0.64	0.68	0.66	0.71	0.75
Share of state-owned enterprises	0.55	0.50	0.48	0.45	0.44	0.45

It is important to note that the years 2007, 2013, and 2019 corresponded to periods of economic prosperity when individuals and the overall economy were not anticipating a crisis. In contrast, the years 2009, 2015, and 2021 represent phases marked by acute economic crises.

On average, in all years except 2015, the level of anxiety about job loss among respondents was at the 55–58 level in the entire workforce. The value for 2015 demonstrates serious post-crisis processes in the economy that significantly affected the confidence of the employed (Table 1).

In terms of age, older workers in the labor market were more worried about losing their jobs. This may be primarily due to the fact that this group of employees has higher professional experience but greater social obligations and responsibilities.

Satisfaction with an individual's financial situation is a significant factor in reducing anxiety about job loss. A higher-paid job is associated with the use of specific skills and abilities, which makes it more in demand in the labor market. Additionally, one has the opportunity to create a financial safety cushion, which can be a factor in reducing layoff anxiety.

The reliability of the discrimination assumption in the labor market in Russia could already be observed at the stage of data review. Based on the distribution, our suggestion of discrimination is likely to be refuted. The number of women among individuals with job insecurity was constant.

The physical health of individuals emerged as a significant factor in the models, and their average values varied across the analyzed periods.

Binary logistic regression models are typically formulated in terms of a latent dependent variable:

$$Y_i^* = X_i'\beta + \varepsilon_i, \tag{1}$$

where the actual observable dependent variable is given as:

$$Y_i = \begin{cases} 1, \; if \; Y_i^* > 0 \\ 0 \; otherwise \end{cases} \tag{2}$$

The real value is 1 if the latent variable is greater than 0, and the corresponding expression can be represented as:

$$P(Y_i = 1) = P(Y_i^* \geq 0) = P\left(X_i'\beta + \varepsilon_i \geq 0\right) \tag{3}$$

If we make an assumption about the symmetry of the distribution of the error ε, then it can be represented in the form:

$$\begin{array}{c} P(Y_i = 1) = P\left(\varepsilon_i \geq -X_i'\beta\right) = P\left(\varepsilon_i < X_i'\beta\right) = F\left(X_i'\beta\right) \\ P(Y_i = 0) = P\left(\varepsilon_i < -X_i'\beta\right) = 1 - P\left(\varepsilon_i \geq X_i'\beta\right) = 1 - F\left(X_i'\beta\right) \end{array} \tag{4}$$

We used the logical distribution function as the error distribution function.

Logistic distribution (logit):

$$F(z) = \frac{e^z}{1 + e^z} \tag{5}$$

where "z" represents a linear form constructed based on the factors analyzed.

The conditional probability was estimated based on this model. The model was estimated using the maximum likelihood method. The independence of the observations was assumed. The likelihood function was represented as:

$$L(\beta) = \prod_{i=1} [P(Y_i = 1)]^{Y_i} [P(Y_i = 0)]^{1-Y_i} \tag{6}$$

After expressing the probabilities in terms of the error distribution function, we had:

$$L(\beta) = \prod_{i=1} \left[F\left(\frac{X_i'\beta}{\sigma}\right)\right]^{Y_i} \left[1 - F\left(\frac{X_i'\beta}{\sigma}\right)\right]^{1-Y_i} \tag{7}$$

The logarithm of the likelihood function in this case was:

$$lnL(\beta) = \sum_i y_i \ln F\left(\frac{X_i'\beta}{\sigma}\right) + \sum_i (1 - y_i) \ln\left[1 - F\left(\frac{X_i'\beta}{\sigma}\right)\right] \tag{8}$$

In addition, the estimates of the logistic model could not be directly interpreted; we could only interpret the signs and significance of the coefficients. Marginal effects make economic sense.

Estimates of the coefficients and their significance were obtained using the model, and the model itself was tested for violation of the prerequisites described above, suggesting that our results were significant.

4. Results

The mid-2008 crisis in Russia was characterized by a drop in oil prices from USD 145 to USD 37 per barrel in 2008–2009, an obvious "overheating" in the labor market, as evidenced by unequally high wages, a decrease in unemployment below the natural level, an overvalued national currency, and huge external debt. However, the availability of significant foreign exchange and budget reserves significantly mitigated the acute phase of the crisis and helped to support the economy until oil prices returned to reasonable levels (at the end of 2009).

If the crisis of 2008–2009 passed quite smoothly, then the fall in prices in 2014 led to the outward trade component of the runway falling below 0 and becoming negative in 2015.

Between the end of 2014 and the beginning of 2015, the Russian economy experienced a crisis caused by a 50% drop in oil prices (from USD 110–115 in the first half of 2014 to USD 48–49 by December 2014). In December, the exchange rate of the Russian currency fell by about 50%, while the annual inflation rate exceeded 16%. The real income of the population fell for the first time since the beginning of 2000, and the country's GDP growth rate was negative in 2015. In addition to these negative economic developments, Russia fell under sanctions of the European Union and the United States, significantly worsening the investment climate and increasing capital outflow from the country.

In 2014 and 2015, Russia faced three crises simultaneously: structural and cyclical (internal market), and external.

The structural crisis in Russia was characterized by a slowdown in the rate of renewal of fixed assets in the structure of GDP production, e.g., updating machine parts and equipment and modernizing obsolete equipment (Mustafin 2016). This reduced the level of the country's potential GDP. The impact on the labor market could be assessed by the unemployment rate either remaining at the same level or increasing.

The internal (cyclical) component of the crisis was characterized by a slowdown in investment growth, a slowdown in the growth of bank loans given to the non-financial sector, an increase in the share of "bad" bank debts, an increase in consumer demand from the population due to consumer lending, a decrease in the share of profits in the economy, and a decrease in the number of small and medium-sized enterprises. The external component of the crisis consisted of a drop in oil prices.

In early 2020, the global population faced a significant challenge in the form of the new COVID-19 pandemic. On 31 January 2020, the World Health Organization (WHO) officially recognized the coronavirus outbreak as a public health emergency of international concern.

One of the most detrimental aspects of this crisis for the Russian Federation was the substantial decline in global oil prices. This decline was primarily attributed to a significant reduction in worldwide consumption, exacerbated by the termination of Russia's agreement with OPEC.

During the initial phase of COVID-19 infections in Russia, which was closely tied to plummeting oil prices, the value of the ruble depreciated to over 80 rubles per US dollar by March 2020, marking a decrease of more than 30% compared to the January 2019 exchange rate.

Simultaneously, the accumulation of reserves, which included both financial resources and the experience gained from past crises, provided financial authorities with the capacity to mitigate significant shocks in the financial market. They were also able to conduct foreign exchange interventions where necessary.

Another adverse factor affecting the Russian economy was the extended production downtime, which was a result of "holidays" and restrictions on the operations of numerous companies (Balashov and Elkin 2021). These measures were initially imposed by federal authorities at the onset of the pandemic and subsequently extended by regional authorities until 31 May 2020 as part of efforts to curb the spread of coronavirus infections. Small and medium-sized businesses bore the brunt of this, and household incomes experienced a significant decline, leading to reduced consumption and decreased aggregate demand for goods and services.

Based on data from the Federal State Statistics Service of the Russian Federation (FSSSRF) (n.d.), the gross domestic product of the Russian Federation experienced a 4% contraction in 2020 compared to the preceding year (2019). Notably, during the first three months, specifically from April to June, the GDP faced a more substantial decline, dropping by approximately 9.5–10% compared to the same period in 2019, primarily due to the influence of adverse economic factors.

A brief analysis of the characteristics of the labor market should demonstrate the objectivity of our hypotheses. We note that the labor market is the main source of capital accumulation and wealth in the country and, hence, serves as an incentive for interest from investors (Zubakov and Mustafin 2015). Preliminary analysis indicated that there was a notably higher growth rate in unemployment in 2008–2009 compared with 2014–2015. Additionally, there was a substantial increase in unemployment during the COVID-19 period. In Table 2 we present the main characteristics of the labor market in Russia in the periods 2008–2010, 2014–2016, and 2019–2021.

Table 2. The main characteristics of the Russian labor market in 2008–2010, 2014–2016, and 2019–2021.

Indicator	2008	2009	2010	2014	2015	2016	2019	2020	2021
Labor force (15–72 years), thousand people	71,003	69,411	69,934	71,539	72,324	72,393	71,765	70,461	71,598
compared with the previous year's level, %		−2.24	0.75		1.10	0.10		−1.82	1.61
Unemployed (15–72 years), thousand people	4697	6284	5544	3889	4264	4243	3461	4316	3625
compared with the previous year's level, %		33.78	−11.77		9.63	−0.48		24.70	−16.02

Source: Federal State Statistics Service of the Russian Federation (FSSSRF) (n.d.).

The crises of 2008–2009, 2014–2015, and 2019–2020 resulted in significant upsurges in unemployment rates. These subsequently returned to more typical levels in the following years; therefore, the crises under consideration cannot be considered the same in terms of their impact on the economy. Consideration of the general characteristics does not give us an answer to the question about possible structural changes; therefore, it is necessary to refer to Table 3.

A visual inspection of the table shows that there were no significant structural changes in the labor market in Russia in the 2008–2010, 2014–2016, and 2019–2021 periods. This may indicate that the results of analyses of the factors under study and their influence on layoff anxiety are significant and, accordingly, can be used for interpretation.

Based on the results of the evaluation of the model's coefficients, we calculated the average marginal effects; their values are provided in Table 4 and show the marginal effects of significant coefficients in the model.

Table 3. The structure of the employed population in Russia by type of economic activity in 2008–2010, 2014–2016, and 2019–2021.

Indicator	2008	2009	2010	2014	2015	2016	2019	2020	2021
Total	100	100	100	100	100	100	100	100	100
Agriculture, hunting and forestry, and fishing	8.5	8.3	7.7	6.7	6.7	6.7	5.8	6.0	5.9
Mining	1.9	2.0	2.0	2.1	2.1	2.2	2.3	2.3	2.3
Manufacturing industries	16.0	14.9	14.9	14.2	14.0	14.0	14.3	14.2	14.2
Production and distribution of electricity, gas, and water	3.2	3.6	3.7	3.7	3.7	3.6	3.3	3.5	3.3
Building	7.6	7.1	7.2	7.6	7.6	7.2	6.9	6.6	6.8
Wholesale and retail trade; repair of motor vehicles, motorcycles, household goods, and personal items	15.0	15.1	15.4	15.8	15.7	15.7	15.6	15.4	15.6
Hotels and restaurants	2.1	2.1	2.0	2.4	2.5	2.5	2.6	2.4	2.6
Transport and communication	8.2	8.3	8.2	8.3	8.5	8.4	8.8	8.8	8.8
Financial activities	1.9	1.8	1.9	2.2	2.2	2.2	2.3	2.2	2.2
Real estate transactions, rent, and provision of services	6.5	6.4	6.3	6.9	7.1	6.8	7.5	7.8	7.7
Public administration and military security, social insurance	7.6	8.0	8.1	7.3	7.4	7.4	7.0	7.1	6.9
Education	9.1	9.4	9.4	9.2	9.2	9.4	9.5	9.5	9.5
Health care and social services	7.2	7.7	7.7	7.6	7.7	7.8	7.9	7.8	7.8
Other services	5.4	5.5	5.5	5.8	5.9	5.9	6.2	6.4	6.4

Source: Federal State Statistics Service of the Russian Federation (FSSSRF) (n.d.).

Table 4. Values of the model parameters.

Indicator	2007	2009	2013	2015	2019	2021
Const	−1.887 ****	−0.818 **	−1.250 ****	−0.439	−0.166	−1.771 ****
Age	0.044 ****	0.093 ****	0.092 ****	0.072 ****	0.067 ****	0.107 ****
Age^2	-6.69×10^{-4} ****	-1.03×10^{-3} ****	-1.04×10^{-3} ****	-8.14×10^{-4} ****	-7.64×10^{-4} ****	-1.10×10^{-3} ****
Income	-6.09×10^{-5} ****	-1.01×10^{-5} ***	-7.34×10^{-6} ****	-5.05×10^{-6} *		-7.73×10^{-6} **
Income^2	6.69×10^{-10} ****	6.55×10^{-12} **	7.41×10^{-12} *	1.96×10^{-11} *		3.25×10^{-11} *
Education background	−0.074 *	−0.113 ****	−0.058 *	−0.111 ****	−0.127 ****	
Level of proficiency	−0.127 ****		0.032 **			
Satisfaction with financial situation	−0.905 ****	−0.374 ****	−0.400 ****	−0.342 ****	−0.215 ***	−0.299 ****
Health satisfaction	−0.600 ****	−0.205 ***	−0.197 ****	−0.154 **	−0.118 *	
Job satisfaction			0.218 ****	0.175 **		
State property				0.184 ***		

The factor is significant at levels **** < 0.001, *** < 0.01, ** < 0.05, * < 0.1. Note: missing values mean that the factor was not significant for the given year and was excluded from the model.

The modeled variable, which represents concerns about job loss, had only two possible values. Consequently, it was appropriate to employ a binary choice model (Formula (5)). The conditional probability was estimated based on this model:

$$\hat{y}_i = P(y_i = 1 | \, x_i) = F(x_j \beta_j) \tag{9}$$

The model was estimated using the maximum likelihood method. Subsequently, the calculated value $\hat{y}_i$ was utilized as a discriminant function. A threshold value of 0.5 was employed: when ($\hat{y}_i$) was greater than 0.5, the choice was "1" and when ($\hat{y}_i$) was less than 0.5, the choice was "0".

The interpretation of the coefficients in the linear form of the logit model differed from that in the linear regression model. To address this, marginal effects were employed:

$$\frac{\partial P(y_i = 1 | \, x_i)}{\partial \, x_{ik}} = F(x_{ij} \beta_j) \left(1 - F(x_{ij} \beta_j)\right) \beta_k \tag{10}$$

The marginal effect is a measure of how the probability responds to small changes or increments in a specific factor, denoted as "*k*". Estimation of model parameters was conducted using the IBM SPSS statistical package.

Marginal effects for typical or average observations were computed using the results obtained from estimating the model coefficients (Table 5).

Table 5. Marginal effects for average observations.

Indicator	2007	2009	2013	2015	2019	2021
Age	0.008	0.022	0.022	0.016	0.015	0.025
Age^2	−0.00012	−0.00025	−0.00025	−0.00018	−0.00018	−0.00026
Income	-1.13×10^{-5}	-2.40×10^{-6}	-1.75×10^{-6}	-1.10×10^{-6}		-1.82×10^{-6}
Income^2	1.24×10^{-10}	1.56×10^{-12}	1.76×10^{-12}	4.28×10^{-12}		7.65×10^{-12}
Education background	−0.014	−0.027	−0.014	−0.024	−0.029	
Level of proficiency	−0.024		0.008			
Satisfaction with financial situation	−0.168	−0.089	−0.095	−0.075	−0.049	−0.070
Health satisfaction	−0.111	−0.049	−0.047	−0.034	−0.027	
Job satisfaction			0.052	0.038		
State property				0.040		

Note: missing values mean that the factor was not significant for the given year and was excluded from the model.

Individuals' assessments of their financial situations in response to the crises of 2008, 2014, and 2020 were similar.

A positive assessment of an individual's health had an effect on layoff anxiety. People who assessed their health as not very good had illnesses that, due to the stress of losing their jobs, may have worsened and prevented them from finding another job with similar working conditions.

Individuals who were satisfied with their current jobs had lower layoff anxiety. However, the data in the table supported this hypothesis only for the 2014–2015 crisis. This may reflect the general well-being of the employees at their jobs, demonstrating good relationships with colleagues and management as well as a positive assessment of working conditions and rewards.

Socio-demographic factors (marital status and gender) were insignificant in our model based on the data under consideration. In some studies of the fear of job loss in Russia, however, the described factors were significant. Married men were found to feel less protected compared with single men. Married women, however, were found to be less afraid of losing their jobs compared with single women. In Russian society, men are considered the main breadwinners and, therefore, responsible for the well-being of the family. For a married man, the loss of a job often leads to a shock to the family budget.

The data in the table confirmed the hypothesis on employment stability in enterprises with state ownership only for the post-crisis phase of 2015. In Russia, this factor is of great importance, since there are a significant number of state-owned enterprises and organizations in the economy.

The data provided in the Table 6 show that individuals reach the peak of professional experience at about 40–50 years of age when anxiety over the possibility of losing their jobs starts to decrease. An increase in anxiety over losing a job at the age of 20–40 is most likely due to the lack of professional experience or family obligations. In addition, we can see that the anxiety over losing a job at the age of 50–80 is associated with the fact that a large number of workers in Russian society are trying to retire as late as possible in order to receive higher pensions. The state introduced an employment guarantee for this age group after 2018, thus the reduction in anxiety is an interesting phenomenon.

Table 6. Table of average marginal effects based on age.

AME at Age	2007	2009	2013	2015	2019	2021
20	0.0078	0.0227	0.0225	0.0174	0.0165	0.0256
25	0.0080	0.0230	0.0226	0.0169	0.0162	0.0265
30	0.0082	0.0227	0.0223	0.0163	0.0158	0.0264
35	0.0082	0.0223	0.0219	0.0159	0.0155	0.0259
40	0.0081	0.0220	0.0216	0.0156	0.0153	0.0253
45	0.0078	0.0219	0.0216	0.0155	0.0152	0.0249
50	0.0074	0.0220	0.0217	0.0157	0.0154	0.0248
55	0.0069	0.0223	0.0221	0.0160	0.0156	0.0251
60	0.0062	0.0227	0.0225	0.0165	0.0160	0.0256

5. Discussion

The fear and uncertainty over losing a job is one of the most common stressors during working life. This sense of uncertainty has a detrimental effect on the health of employees, regardless of whether their concerns are justified. Economic uncertainty related to layoffs stems from a likely period of unemployment in the future, which is associated with lower income. A fundamental problem arises here for those people who have little savings to rely on, and thus are significantly at risk of losing their income after losing their jobs. It is undeniable that income has a significant relationship with health, and thus it can be argued that any loss of income due to job loss has an impact on health. Research in this area has confirmed that the impact of unemployment on workers' health is much greater than can be explained simply by the loss of income due to unemployment. The stress associated with the uncertainty of job loss is a significant psychological aspect, as long-lasting stress has adverse effects on both physical and mental health. In addition, research has also confirmed other interesting connections, for example, that a high degree of uncertainty from job loss leads to lower compliance with safety measures, and therefore to a higher number of accidents in the workplace (Green 2020).

A study by Lee et al. (2023) also offered interesting conclusions on this topic. They concluded that a decisive aspect for mitigating the negative psychological consequences on workers is the dismissal process itself. Their findings also led to important practical suggestions and recommendations for the field of human resource management. Since downsizing and layoffs are common, communication about organizational changes should become a regular responsibility of leaders and managers themselves. The authors concluded that honest and appropriate communication about the dismissal process, as well as respect, dignity, and courtesy from management, are increasingly important factors in times of recession.

A less frequent but important aspect of this research is the impact of job insecurity on consumer behavior. This topic was the subject of a study by Chirumbolo et al. (2021) using the COR (Conservation of Resources) theory as a framework. They examined a model in which the fear and uncertainty over job loss had a negative impact on individuals' daily consumption and significant life projects. The results of their research confirmed that job insecurity had an adverse effect on consumer behavior, as the fear of job loss was significantly associated with a tendency to reduce daily short-term consumption, as well as the realization of long-term projects.

Economic recessions are often characterized by high unemployment rates and job insecurity. They impact the quality of life of the working population (Begum et al. 2022). From a macroeconomic as well as a microeconomic point of view, it would be desirable to implement a policy to increase the chances of unemployed people being re-employed. They also include social security policies, which to a certain extent, eliminate the loss of income from unemployment, thereby reducing economic risk (Green 2020). It is an indisputable fact that recessions and unemployment are related. For many individuals, unemployment describes their primary experience of a recession. When people become unemployed, they have less money to spend on goods and services. Therefore, a recession

in one sector of the economy can cause unemployment, and that unemployment can cause a recession in another part of the economy. Although recessions certainly cause unemployment, the relationship between recessions and unemployment is complex. A rise in unemployment alone can start a downward spiral that deepens and prolongs the recession. Higher unemployment leads to a decrease in consumer spending. This leads to a further slowdown in economic activity and growth, which in turn leads to more layoffs and fewer jobs.

6. Conclusions

Based on the data, we can draw the following conclusions regarding the hypotheses:

Hypothesis H1. *An individual's layoff anxiety is associated with a subjective physical assessment of health state: confirmed.*

Hypothesis H2. *There is a correlation between job satisfaction and layoff anxiety: partially confirmed since this was a significant factor in the 2014–2015 crisis only.*

Hypothesis H3. *Employees with good qualifications (educational backgrounds) are less worried about losing their jobs compared with those with lower qualifications: confirmed. A similar result was obtained in Europe by Näswall and De Witte (2003)*, where blue-collar workers exhibited higher levels of layoff anxiety. *Lokshin et al. (2012) showed that more highly educated workers are less afraid of losing their jobs.*

Hypothesis H4. *Age, as a regressor, has a nonlinear effect on an individual's job loss anxiety. Previous studies have also confirmed this dependence in some countries. Fullerton and Wallace (2007) identified a curvilinear relation between age and layoff anxiety in the US. However, other studies conducted in European countries and Canada showed that layoff anxiety is higher among young people and older people (Näswall and De Witte 2003; Roskies and Louis-Guerin 1990).*

Hypothesis H5. *An individual's income and satisfaction with their financial situation affect their concern over the loss of their job. People with higher incomes and satisfaction with their financial situation are less afraid of losing their jobs. This may be due to the fact that a higher-paying job allows one to accumulate a financial safety cushion. In addition, complex work often requires more skills and abilities, which means it is more in demand, hence allowing an individual to quickly get re-employed under similar working conditions.*

Hypothesis H6. *The gender of an individual has a significant impact on layoff anxiety. This hypothesis was not confirmed as no significant statistical relationship was found; therefore, the labor market in Russia may be more gender democratic. We also did not find a significant statistical link with marital status, which may have been due to either the data or the model we used; therefore, this factor was not included in the final table. Similar results were obtained for European countries: gender and marital status were not significant variables (Muñoz de Bustillo and De Pedraza 2010).*

Hypothesis H7. *State ownership in the capital of the organization in which the individual works has an impact on layoff anxiety. This hypothesis was confirmed for the post-crisis phase of 2015. Thus, the form of ownership affects the individual's layoff anxiety. This means that if an individual works in an organization that has state ownership in its capital, then their layoff anxiety during a crisis is lower.*

In this study, we investigated the influence of various factors on the fear of job loss by employees during various phases of economic crises in Russia based on data from 2007–2009, 2013–2015, and 2019–2021. The hypotheses in the framework of the study were based on findings by researchers studying this phenomenon in other countries. This study may be relevant to the management of various organizations in 2023 since in many industries, labor efficiency is associated with minimizing employees' stress so that they

can fully focus on fulfilling their work duties. In future research, the focus could be on confirming or refuting the constancy of the influence of certain factors. Some factors were found to have an impact only during certain phases of a crisis.

In summary, we noted one observation indicating that the factors relevant to the fear of job loss can be permanent, temporary, or significant only during a certain phase of the crisis. Constant factors such as age, income, educational background, satisfaction with their financial situation, and assessment of physical health have approximately the same average effect on job insecurity. Temporary factors include state ownership, job satisfaction in general, and qualifications. However, further research on these factors is required since only three crises in the modern history of Russia can be considered on the basis of available data, two of which were investigated in this study.

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References

Ashford, Susan J., Cynthia Lee, and Phillip Bobko. 1989. Content, causes, and consequences of job insecurity: A theory-based measure and substantive test. *Academy of Management Journal* 32: 803–29. [CrossRef]

Aybas, Meryem, Sevgi Elmas, and Gönen Dündar. 2015. Job insecurity and burnout: The moderating role of employability. *European Journal of Business and Management* 7: 195–203.

Balashov, Alexey M., and Stanislav E. Elkin. 2021. The economic crisis of 2020 and the problems of further economic development of the Russian Federation. *Theoretical Economics* 11: 28–34. [CrossRef]

Begum, Asma, Shafaghi Mathew, and Ayesha Adeel. 2022. Impact of Job Insecurity on Work–Life Balance during COVID-19 in India. *Vision: The Journal of Business Perspective* 22: 1–22. [CrossRef]

Bernhard-Oettel, Claudia, Nele De Cuyper, Bert Schreurs, and Hans De Witte. 2011. Linking job insecurity to wellbeing and organizational attitudes in Belgian workers: The role of security expectations and fairness. *The International Journal of Human Resource Management* 22: 1866–86. [CrossRef]

Bert, Fabrizio, Maria Rosaria Gualano, Robin Thomas, Guglielmo Vergnano, Gianluca Voglino, and Roberta Siliquini. 2020. Exploring the possible health consequences of job insecurity: A pilot study among young workers. *Gaceta Sanitaria* 34: 385–92. [CrossRef] [PubMed]

Blom, Victoria, Anne Richter, Lennart Hallsten, and Pia Svedberg. 2015. The associations between job insecurity, depressive symptoms and burnout: The role of performance-based self-esteem. *Economic and Industrial Democracy* 39: 48–63. [CrossRef]

Buitendach, Joey, and Hans De Witte. 2005. Job insecurity, extrinsic and intrinsic job satisfaction and affective organisational commitment of maintenance workers in a parastatal. *South African Journal of Business Management* 36: 27–37. [CrossRef]

Cappelli, Peter, Laurie Bassi, Harry Katz, David Knoke, Paul Osterman, and Michael Useem. 1997. *Change at Work*. New York: Oxford University Press. 276p.

Cheng, Grand H.-L., and Darius K.-S. Chan. 2008. Who suffers more from job insecurity? A meta-analytic review. *Applied Psychology: An International Review* 57: 272–303. [CrossRef]
Chirumbolo, Antonio, and Johnny Hellgren. 2003. Individual and organizational consequences of job insecurity: A European study. *Economic and Industrial Democracy* 24: 217–40. [CrossRef]
Chirumbolo, Antonio, Antonino Callea, and Flavio Urbini. 2021. The Effect of Job Insecurity and Life Uncertainty on Everyday Consumptions and Broader Life Projects during COVID-19 Pandemic. *International Journal of Environmental Research and Public Health* 18: 5363. [CrossRef] [PubMed]
De Cuyper, Nele, Beatrice Piccoli, Rita Fontinha, and Hans De Witte. 2018. Job insecurity, employability and satisfaction among temporary and permanent employees in post-crisis Europe. *Economic and Industrial Democracy* 40: 173–92. [CrossRef]
Eberts, Randall W. 2005. After the doors close: Assisting laid-off workers to find jobs. *Economic Perspectives* 29: 75.
Elman, Cheryl, and Angela M. O'Rand. 2002. Perceived job insecurity and entry into work-related education and training among adult workers. *Social Science Research* 31: 49–76. [CrossRef]
Federal State Statistics Service of the Russian Federation (FSSSRF). n.d. Available online: https://eng.rosstat.gov.ru/ (accessed on 20 October 2023).
Frone, Michael R. 2018. What happened to the employed during the great recession? A U.S. population study of net change in employee insecurity, health, and organizational commitment. *Journal of Vocational Behavior* 107: 246–60. [CrossRef] [PubMed]
Fullerton, Andrew, and Michael Wallace. 2007. Traversing the flexible turn: US workers' perceptions of job security, 1977–2002. *Social Science Research* 36: 201–21. [CrossRef]
Gallie, Duncan, Alan Felstead, Francis Green, and Hande Inanc. 2017. The hidden face of job insecurity. *Work, Employment and Society* 31: 36–53. [CrossRef]
Ganson, Kyle T., Alexander C. Tsai, Sheri D. Weiser, Samuel E. Benabou, and Jason M. Nagata. 2021. Job insecurity and symptoms of anxiety and depression among U.S. Young adults during COVID-19. *Journal of Adolescent Health* 68: 53–56. [CrossRef] [PubMed]
Ginsburg, Joshua. 2010. Layoffs and Alternatives to Layoffs. Worcester Polytechnic Institute. Available online: https://web.wpi.edu/Pubs/E-project/Available/E-project-121410-110306/unrestricted/Layoffs_4.3.pdf (accessed on 20 June 2023).
Green, Francis. 2020. Health effects of job insecurity. *IZA World of Labor* 212v2: 1–10. [CrossRef]
Greenhalgh, Leonard, and Zehava Rosenblatt. 1984. Job insecurity: Toward conceptual clarity. *Academy of Management Review* 9: 438–48. [CrossRef]
Hartley, Jean, Dan Jacobson, Bert Klandermans, and Tinka Van Vuuren. 1990. *Job Insecurity: Coping with Jobs at Risk*. London: Sage Publications Ltd. 256p.
Heaney, Catherine A., Barbara A. Israel, and James S. House. 1994. Chronic job insecurity among automobile workers: Effects on job satisfaction and health. *Social Science and Medicine* 38: 1431–37. [CrossRef] [PubMed]
Hobfoll, Stevan E. 1989. Conservation of resources: A new attempt at conceptualizing stress. *American Psychologist* 44: 513–24. [CrossRef] [PubMed]
International Labor Organization. 2020. COVID-19 and the World of Work–Updated Estimates and Analysis. ILO Monitor. Available online: https://www.ilo.org/wcmsp5/groups/public/@dgreports/@dcomm/documents/briefingnote/wcms_740877.pdf (accessed on 3 November 2020).
Jahoda, Marie. 1981. Work, employment, and unemployment: Values, theories, and approaches in social research. *The American Psychologist* 36: 184–91. [CrossRef]
Jiang, Lixin, and Tahira Probst. 2017. The rich get richer and the poor get poorer: Country-and state-level income inequality moderates the job insecurity-burnout relationship. *Journal of Applied Psychology* 102: 672–81. [CrossRef] [PubMed]
Joelson, Lars, and Leif Wahlquist. 1987. The psychological meaning of job insecurity and job loss: Results of a longitudinal study. *Social Science and Medicine* 25: 179–82. [CrossRef] [PubMed]
Kalleberg, Arne L. 2011. *Good Jobs, Bad Jobs: The Rise of Polarized and Precarious Employment Systems in the United States, 1970s to 2000s*. New York: Russell Sage Foundation. 292p.
Kenton, Will. 2023. *Labor Market Explained: Theories and Who Is Included*. New York: Investopedia.
Landsbergis, Paul A., Joseph G. Grzywacz, and Anthony D. LaMontagne. 2014. Work organization, job insecurity, and occupational health disparities. *American Journal of Industrial Medicine* 57: 495–515. [CrossRef]
Laubinger, Frithjof, Elisa Lanzi, and Jean Chateau. 2020. *Labour Market Consequences of a Transition to a Circular Economy: A Review Paper*. OECD Environment Working Papers 162. Paris: OECD Publishing.
Lazarus, Richard S., and Susan Folkman. 1984. *Stress, Appraisal and Coping*. New York: Springer Publishing. 445p.
Lee, Sanghyun, Hong Sounman, and Bong Gyou Lee. 2023. Is There a Right Way to Lay Off Employees in Times of Crisis?: The Role of Organizational Justice in the Case of Airbnb. *Sustainability* 15: 4690. [CrossRef]
Lee, Sing, Wan-Jun Guo, Adley Tsang, Arthur D. P. Mak, Justin Wu, King Lam Ng, and Kathleen Kwok. 2010. Evidence for the 2008 economic crisis exacerbating depression in Hong Kong. *Journal of Affective Disorders* 126: 125–33. [CrossRef] [PubMed]
Lokshin, Michael, Vladimir Gimpelson, and Aleksey Y. Oshchepkov. 2012. *Explaining the Dynamics in Perceptions of Job Insecurity in Russia*. IZA Discussion Paper 6422. 31p. Available online: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2031950 (accessed on 21 September 2023).
Mohapatra, Amiya K., Ankur Saxena, Deepak Joshi, and Nishant Chaturvedi. 2017. Does job security matter for generation Y? A behavioural analysis. *Pacific Business Review International* 10: 92–98.

Mucci, Nicola, Gabriele Giorgi, Mattia Roncaioli, Javier Fiz Perez, and Giulio Arcangeli. 2016. The correlation between stress and economic crisis: A systematic review. *Neuropsychiatric Disease and Treatment* 12: 983–93. [CrossRef]
Muñoz de Bustillo, Rafael, and Pablo De Pedraza. 2010. Determinants of job insecurity in five european countries. *European Journal of Industrial Relations* 16: 5–20. [CrossRef]
Mustafin, Askar N. 2016. Incentives and factors affecting the improvement of the human capital quality in the innovative economy. *Journal of Economics and Economic Education Research* 17: 128–37.
Näswall, Katharina, and Hans De Witte. 2003. Who feels insecure in Europe? Predicting job insecurity from background variables. *Economic and Industrial Democracy* 24: 189–215. [CrossRef]
Nella, Dimitra, Efharis Panagopoulou, Nikiforos Galanis, Anthony Montgomery, and Alexis Benos. 2015. Consequences of job insecurity on the psychological and physical health of Greek civil servants. *Biomed Research International* 20: 1–9. [CrossRef]
Peiro, José M., Beatriz Sora, and Amparo Caballer. 2012. Job insecurity in the younger spanish workforce: Causes and consequences. *Journal of Vocational Behavior* 80: 444–53. [CrossRef]
Rachiotis, George, Christos Kourousis, Maria Kamilaraki, Emmanouil K. Symvoulakis, George Dounias, and Christos Hadjichristodoulou. 2014. Medical Supplies Shortages and Burnout among Greek Health Care Workers during Economic Crisis: A Pilot Study. *International Journal of Medical Sciences* 11: 442–47. [CrossRef] [PubMed]
Richter, Anne, and Katharina Näswall. 2019. Job insecurity and trust: Uncovering a mechanism linking job insecurity to well-being. *Work Stress* 33: 22–40. [CrossRef]
Roskies, Ethel, and Christiane Louis-Guerin. 1990. Job insecurity in managers: Antecedents and consequences. *Journal of Organizational Behavior* 11: 345–59. [CrossRef]
Rudaleva, Irina A., and Askar N. Mustafin. 2017. The impact of stress stability on job satisfaction and the quality of human capital. *Journal of History Culture and Art Research* 6: 333–41. [CrossRef]
Russia Longitudinal Monitoring Survey-Higher School of Economics (RLMS-HSE). n.d. Available online: https://rlms-hse.cpc.unc.edu/ (accessed on 18 October 2023).
Schmidt, Stefanie R. 2000. *Job Security Beliefs in the General Social Survey: Evidence on Long-Run Trends and Comparability with Other Surveys, on the Job: Is Long Term Employment a Thing of the Past?* New York: Russell Sage Foundation, pp. 300–31.
Shoss, Mindy K. 2017. Job insecurity: An integrative review and agenda for future research. *Journal of Management* 43: 1911–39. [CrossRef]
Sora, Beatriz, Amparo Caballer, and José María Peiró. 2010. The consequences of job insecurity for employees: The moderator role of job dependence. *International Labour Review* 149: 59–72. [CrossRef]
Sprenger, Carsten. 2008. *State-Owned Enterprises in Russia. Presentation at the OECD Roundtable on Corporate Governance of SOEs*. Moscow: ICEF, Higher School of Economics.
Staufenbiel, Thomas, and Cornelius J. König. 2010. A model for the effects of job insecurity on performance, turnover intention, and absenteeism. *Journal of Occupational and Organizational Psychology* 83: 101–17. [CrossRef]
Sverke, Magnus, and Johnny Hellgren. 2002. The nature of job insecurity: Understanding employment uncertainty on the brink of a new millennium. *Applied Psychology: An International Review* 51: 23–42. [CrossRef]
Thomas, Maja K. 2017. The Rise of Technology and its Influence on Labor Market Outcomes. *Gettysburg Economic Review* 10: 3.
Van Vuuren, Tinka, and Bert Klandermans. 1990. An integrated model for the study of individual reactions to job insecurity. *European Perspectives in Psychology* 3: 133–46.
Vermeylen, Koen. 2005. Job insecurity, reallocation and technological innovation in a self-fulfilling prophecy. *The B.E. Journal of Macroeconomics* 5: 1–38. [CrossRef]
Vo-Thanh, Tan, Thinh-Van Vu, Nguyen Phong Nguyen, Duy van Nguyen, Mustafeed Zamanf, and Hsinkuang Chi. 2021. How does hotel employees' satisfaction with the organization's COVID-19 responses affect job insecurity and job performance? *Journal of Sustainable Tourism* 29: 907–25. [CrossRef]
Wood, Stephen, George Michaelides, and Ogbonnaya Chidiebere. 2020. Recessionary actions and absence: A workplace-level study. *Human Resosurce Management* 59: 501–20. [CrossRef]
World Bank Group. 2019. *State-Owned Enterprises in the Russian Federation. Employment Practices, Labor Markets, and Firm Performance*. Washington, DC: Weltbankgruppe. [CrossRef]
Yeves, Jesus, Mariana Bargsted, Lorna Cortes, Cristobal Merino, and Gabriela Cavada. 2019. Age and perceived employability as moderators of job insecurity and job satisfaction: A moderated moderation model. *Frontiers in Psychology* 10: 799. [CrossRef]
Yu, Jongsik, Junghyun Park, and Sean Sunghyup H. 2021. Impacts of the COVID-19 pandemic on employees' work stress, wellbeing, mental health, organizational citizenship behavior, and employee-customer identification. *Journal of Hospitality Marketing and Management* 30: 529–48. [CrossRef]
Zubakov, Vyacheslav M., and Askar N. Mustafin. 2015. The controlling process of the human capital through the effective redistribution of the general welfare. *Mediterranean Journal of Social Sciences* 6: 270–73. [CrossRef]