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WORK MOTIVATION AND PROFESSIONAL LIFE IN TURBULENT TIMES

Irina Zinovieva[1], George Mengov[2]

[1), 2)] Sofia University St. Kliment Ohridski, Sofia, Bulgaria

e-mails: [1]zinovieva@phls.uni-sofia.bg, [2]g.mengov@feb.uni-sofia.bg

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ABSTRACT

Objectives: *When the speed of socioeconomic transformation is too high, professional life and work motivation may change erratically. The employee's inner motives and attitudes towards their job might evolve in unknown directions. This could be happening in our turbulent time, as has happened in the past. Here we seek to understand which aspects of motivation remain stable and which become unpredictable.*
Methods: *We examine anew data from a longitudinal study in Bulgaria, collected before and after the 1997 hyperinflation and radical economic reforms. At the time, a research project investigated work motivation and professional life in several European countries. A measurement instrument of 53 psychological and demographic variables, composed of 370 items, was administered in two waves to nation-wide representative samples of the working populations. Because of the period's uniqueness, two additional study waves were conducted in Bulgaria only. Now we perform a lagged-panel regression analysis of that data.*
Results: *Analysing statistical links among the psychological variables we find that, in hard times, people retain their personal dispositions and performance levels yet rethink unpredictably their relationship with the organization. In particular, the strength of each Maslow-type need, which is a personal characteristic, remains stable. However, the opportunity to satisfy a need – a feature of the organization – can change in times of transformation and become less predictable. Finally, the actual need satisfaction, which is the outcome of the interplay between the above two, also varies considerably, and so does its predictability.*
Conclusions: *Underpinned by period studies across Europe, we believe that our findings are rather country-invariant and can carry over to other kinds of economic shocks. It may be that when the speed of change is quite high, phenomena similar to what we report here might reoccur. Drawing insights for today's AI-driven restructuring, we anticipate employees to become more autonomous in the job and less loyal to their employers' values and goals. On the other hand, professional communities could grow in influence.*

Keywords: work motivation, socioeconomic predictability, professional life, artificial intelligence, professional communities

JEL classification: M12, M15, F66, D84, D91
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INTRODUCTION

As the world is going through a period of uncertainty and turbulence, the issues of stability and predictability in the workplace are becoming more important. Understanding work motivation and quality of professional

[1] Corresponding author, **George Mengov** – g.mengov@feb.uni-sofia.bg.

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life has always been essential for the organizations' optimal performance (Kanfer et al., 2008; Deci & Ryan 1985). Yet, the impact on the nature of work of the early 2020s shocking events – COVID pandemic, wars, and the advent of Artificial Intelligence – has made that understanding even harder.

Difficult under normal circumstances, forecasting the different aspects and trends of working life faces additional challenges when the speed of change is higher than usual. Thus, it is worthwhile looking back into history when similar instances have happened and can offer insights for addressing today's problems.

Here we examine anew data from a study conducted at a special moment in the past of an East European country. During the 1990s, Bulgaria experienced economic hardships, culminating in a hyperinflation of 1058% in 1997 (National Statistical Institute, 2023). Within a short time, the country had then to reshuffle its financial system by introducing a currency board, impose new regulations on its banks, conduct a massive privatization, and start reforming its healthcare and pension systems. All of that was unprecedented and had a huge impact on the population.

At the time, a research project investigated work motivation and professional life in three European countries. A two-wave longitudinal design used a measurement instrument of 53 psychological and demographic variables, composed of 370 items in total (Roe et al., 1997). That data served as a foundation for a comprehensive model of work motivation, which included variations for The Netherlands, Bulgaria, and Hungary (Roe et al., 2000).

Aware of the period's uniqueness, part of the researchers conducted two additional study waves in Bulgaria only. Eventually, data were collected over five years (1994–1999), which – in view of the timing – can be considered 'from the eye of the hurricane'. Wave three was done months after the hyperinflation peak when all reforms were just beginning. Wave four came full two years later and captured the attitudes and dispositions of the working people as they were adapting to the new realities.

In this paper we ask the following research question: Amidst a profound socioeconomic transformation, which elements of work motivation and professional life remained as predictable as they used to be, and which lost predictability? Decades later, it is likely that such insights could be relevant for some of today's challenges. It may be that when the speed of change is quite high, phenomena similar to what we report here might reoccur. Therefore, another objective of this study is to try to figure out some of the consequences of Artificial Intelligence for the workplace of the future.

METHODOLOGY

Previous Studies

In the 1990s, the European Union (then European Economic Community) was finding its way with the countries of Eastern Europe, which were undergoing a transition towards democracy and market economy. It was important to know how much the workers and employees in those countries resembled their West European colleagues with respect to organizational commitment, performance, job satisfaction, turnover, and work motivation in general (Zinovieva et al., 1993). At the time, substantial differences were hypothesized

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(Bures, 1992; Tzenova & Dalbokova, 1992), and some were found, e.g., in the East Germans showing less work initiative than their West German counterparts (Frese et al., 1996).

After further studies however, within a decade a changed picture prevailed. The observed variations among East European countries emerged as big and unexpected as those between each of them and a benchmark such as The Netherlands (Roe et al., 2000). The latter was used as a reference point in another cross-cultural study of Central Europe reaching similar conclusions (Kolman et al., 2003). Those researchers discovered among other things, that even Czechia and Slovakia were widely different from one another. No definitive after-effect of communism on work attitudes and motivation could be identified. While it was stated that the set of motivation-affecting situational factors was different, the structure of work motivation in East and West Europe was established to be quite similar (Roe et al., 2000). Bearing in mind the decades of radically different historical experiences across the Iron Curtain, it was remarkable to find such a resemblance. If patterns of work attitudes have been widespread and stable in the past, then informative cases may teach us something useful for the future.

An additional challenge before this analysis was the 1997 shocking hyperinflation in Bulgaria. Of course, hyperinflations all over the world in general, and in Eastern Europe in particular, are not unknown, and are well-documented and well-understood. The emphasis, however, is virtually always on the reasons and circumstances of their occurrence (Bastian et al., 2024; Siklos & Bohl, 2018; Lopez & Mitchener, 2021; McIndoe-Calder et al., 2019; Martinelli & Antonio 2018). Upon this background, an exception is a study on the inflation effects on human capital (Heylen et al., 2003), finding that moderate rates paradoxically have some positive impact, yet a hyperinflation influences it negatively.

It is easy to understand why the effects of such an economic malaise on professional life can hardly become a major research topic. A comprehensive survey examining 56 episodes of hyperinflation all over the world enlists the difficulties of studying it (Hanke & Krus, 2013). Indeed, this is a phenomenon arising under extreme conditions like wars, political upheavals etc, when publication and even recording reliable economic statistics may not be possible. Even the usual price indices often become unavailable.

Naturally, in such times research funding is highly problematic and could hardly be allocated to studies of organizational behaviour, or working life in general. The irony is that when the object of social science is most interesting due to exceptional circumstances, its investigation becomes nearly impossible to conduct. That explains why the available scientific literature has essentially nothing to say about intricate issues like how work motivation evolves when the world around is turning upside down. It was pure luck, therefore, that during and after the Bulgarian hyperinflation some European Union funding was available for the study reported here.

Research Hypotheses

Forecasting in the domain of work and organizational psychology during tectonic shifts is not only hard, but also made even more difficult due to the lack of previous empirical studies. One could, therefore, base one's

predictions on general conceptual considerations mostly. Thus, there is sound reason to expect that all personal characteristics would remain stable and predictable. The present study offers extensive information about each employee's Maslow-type needs. In particular, we have interval-scale data on the need strengths, the opportunities to satisfy them in the organization, and the actual degree of their satisfaction. Our main hypothesis is that the need strengths would remain mostly stable, the actual satisfaction would likely change a lot, and the opportunities would be in-between.

Authoritarian attitudes of the employees are another key concept relevant in difficult times, for which we also have data. Authoritarianism has been defined as the belief in imposing discipline, subordination, and the effectiveness of firm personalized leadership (Adorno et al., 1950; Stone et al., 1993). It is known that it has a strong negative correlation with the degree of education, yet it does not correlate with employment characteristics (Ten Horn et al., 2003). Our second hypothesis is that authoritarianism, being a characteristic of the personality, would also be one of the most stable variables.

Next, we hypothesize that the individual's contribution to the organization in terms of expenditure of effort and work performance in general, would retain stability even under turbulent transformation in the environment.

Finally, our fourth hypothesis would be that amidst the economic restructuring the contribution of an employee for the organization success would likely change. That would make a number of personal outcomes like General Job Satisfaction, Job Involvement, and Organizational Commitment more unpredictable.

Sample

The survey in Bulgaria was conducted with 1107 people and was nation-wide representative as the sample was balanced with respect to gender, age, job level, sector of the economy, and geographical region. However, a longitudinal investigation in such a dynamic period had to pay a price – the attrition effect of losing respondents was stronger than usual. By the time of wave four, only a third of them could be found (Table 1).

Table 1. Sample Size and Attrition

	I **Spring 1994**	**II** **Autumn 1995**	**III** **Autumn 1997**	**IV** **Autumn 1999**
Participants	1107	1102	688	467
Regression Sample	877	877	583	384

Source: Own calculations

Under the circumstances, drawing conclusions about relationships within a complex model would be methodologically problematic. Thus, we abandon the original linear structural equation model and examine the data differently. We assess the predictability change of each variable separately. We want to know which among them remain stably predictable and which do not, and what do the two sets have in common.

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Lagged-Panel Regression

Due to data limitations (sample sizes and attrition) this analysis cannot examine the validity of previous findings and by extension, does not seek to establish causal relationships. Technically, the question we ask is, did the statistical association between a dependent variable and a set of predictors remain as it used to be, or did it deteriorate over the turbulent years.

For this reason, we do not perform Granger causality tests, nor study cross-lagged panel models, and therefore avoid all complications surrounding them (Hamaker et al., 2015). Studying each variable, the following lagged-panel model is used:

$$y_{t+1} = \beta_0 + \sum_{i=1}^{n} \beta_i x_{i,t} + \varepsilon_{t+1} \quad (1)$$

In Eq. (1), y is a psychological dependent variable taken at time $t+1$, and x_i are the independent variables, $i = 1, \dots, n$. Note that x_i are taken at time t, the previous wave of the study. Here, n denotes the number of statistically significant predictors remaining after backward elimination. The error term ε_{t+1} is assumed to vary stochastically. The number of participants, for which records are available at both moments t and $t+1$ is given in Table 1. Instead of t it is convenient to use the actual years of the study, i.e., $\boldsymbol{x}_{1994}, \boldsymbol{x}_{1995}, \boldsymbol{x}_{1997}$ for the vector of independent variables, and $y_{1995}, y_{1997}, y_{1999}$ for the dependent variable.

We denote by $\boldsymbol{X}_{1994}, \boldsymbol{X}_{1995}$ the vectors of all 53 independent variables (49 psychological and 4 demographic) at the start of the elimination procedure. The in-sample data set (also called training, calibration, or derivation set/sample) is constructed by collating the pairs $(\boldsymbol{X}_{1994}, y_{1995})$, which are 877 in number, with the pairs $(\boldsymbol{X}_{1995}, y_{1997})$, 583 in number, to obtain 1460 observation pairs in total. The in-sample for a psychological variable y therefore, are the lagged-panel data $\left(\boldsymbol{X}_{1994/5}, y_{1995/7}\right)$. The differences between the two lines in Table 1 are due to two issues. First, some data cleaning was needed, but more importantly, participants disappeared and reappeared along the survey years. A person could be included in a $(\boldsymbol{X}_t, y_{t+1})$ subsample, only if they were present in the two consecutive waves t and $t+1$.

Once the insignificant variables at $\alpha = 0.05$ are eliminated, coefficient vector $\boldsymbol{\beta} = (\beta_0, \dots \beta_n)$ is used alongside $\boldsymbol{x}_{1997}$, to produce forecast $\hat{y}$ as specified by Eq. (1). It must be noted that $\boldsymbol{x}_{1997}$ are data from the 384 people who were there to respond in the last two waves, 1997 and 1999. These predictions $\hat{y}$ are compared with the y_{1999} data, available from wave four. This is the out-of-sample test. The procedure is carried out for all psychological variables.

An efficient way to assess the quality of prediction is to examine how $\hat{y}$ correlates with y_{1999} for each variable. Then we compare the out-of-sample correlation between true and predicted y values, on one hand, with the in-sample correlation for the same variable, on the other. Should the former turn out considerably smaller, that would be tantamount to predictability loss due to socioeconomic transformations.

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RESULTS

What is originally more predictable and what less, is shown in Figure 1. The employee's assessment of issues related to their physiological needs and the physical conditions to satisfy them occupy the positions at the top of the list. That may be explained as follows. Times have changed but people have retained their current jobs or found new ones, offering roughly the same working environment. Indeed, office workers have predictably continued with office jobs and construction workers have gone on working on building sites.

Least predictable are the psychological variables at the bottom of Figure 1. Dealing with the subtle needs to belong to a group and be respected by colleagues, this set of issues has always been difficult to measure in organizational context, and consequently, even harder to forecast. *Need for sense* turns out yet more elusive to capture.

Table 2. Top Twelve Variables Retaining Predictability When Tested Out-of-Sample

No	Variable	$R_{(1994,95,97)}$ (N = 1460)	$R_{(1999)}$ (N = 384)	Absolute Change	Relative Change
1	Feedback from the job itself	0.3795	0.4054	0.0259	0.0682
2	Strength of security need	0.4298	0.4519	0.0221	0.0514
3	Strength of belongingness need	0.2941	0.3150	0.0209	0.0711
4	Optimism about own employment	0.4598	0.4803	0.0205	0.0446
5	Predictability in the work situation	0.4810	0.4934	0.0124	0.0258
6	Satisfaction with predictability	0.4177	0.4295	0.0118	0.0282
7	Satisfaction of physiological needs	0.5613	0.5646	0.0033	0.0059
8	Authoritarianism	0.5132	0.5085	-0.0047	-0.0092
9	Expenditure of effort	0.5290	0.5161	-0.0129	-0.0244
10	General performance	0.5378	0.5242	-0.0136	-0.0253
11	Strength of growth need	0.4294	0.4151	-0.0143	-0.0333
12	Role performance	0.5257	0.5093	-0.0164	-0.0312

Source: Own calculations

Note: Absolute change of predictability is computed as $\Delta R = R_{(1999)} - R_{(1994,95,97)}$. *Relative change of predictability is computed as* $\Delta R / R_{(1994,95,97)}$.

A dozen variables with unchanging predictability

The most important insights are shown in Figure 2, which puts on display how exactly predictability is lost over the period of reforms. We now consider the top twelve most 'stable' variables, meaning that for them the in-sample and out-of-sample correlations (between actual and forecasted values) are roughly the same. Table 2 gives a closer look. As the absolute and the relative change of predictability are equally interesting, we present them both.

The first seven variables show not a decline but a slight correlation increase, which can be attributed to chance as well as to the relatively small test sample size (384). It would be reasonable to treat the first twelve about equally and ask what they have in common. To answer that question, we examine them in more detail.

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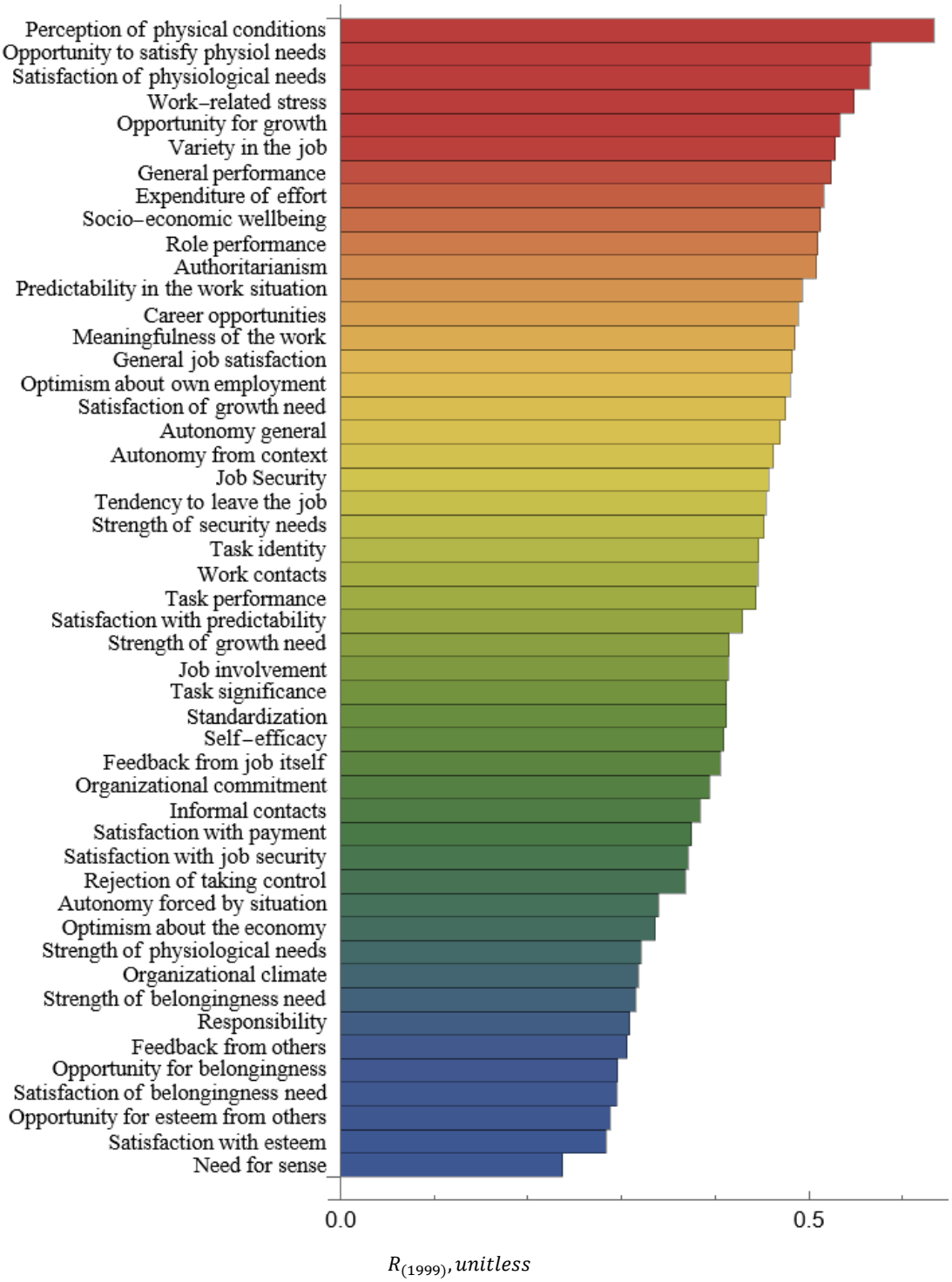

Figure 1. Ranking of Psychological Variables by Predictability. The plot shows what each variable's lagged-panel model, developed using the 1994, 1995, 1997 (in-sample) data, achieves when tested with the out-of-sample 1999 data. The abscissa gives the correlation $R_{(1999)}$ between model-predicted $\hat{y}$ values and actual y_{1999} values. For example, most predictable is *Perception of physical conditions* in the workplace. Its model achieves $R_{(1999)} = 0.6340$. At the opposite end is *Need for sense*, with $R_{(1999)} = 0.2374$.

Source: Authors' illustration

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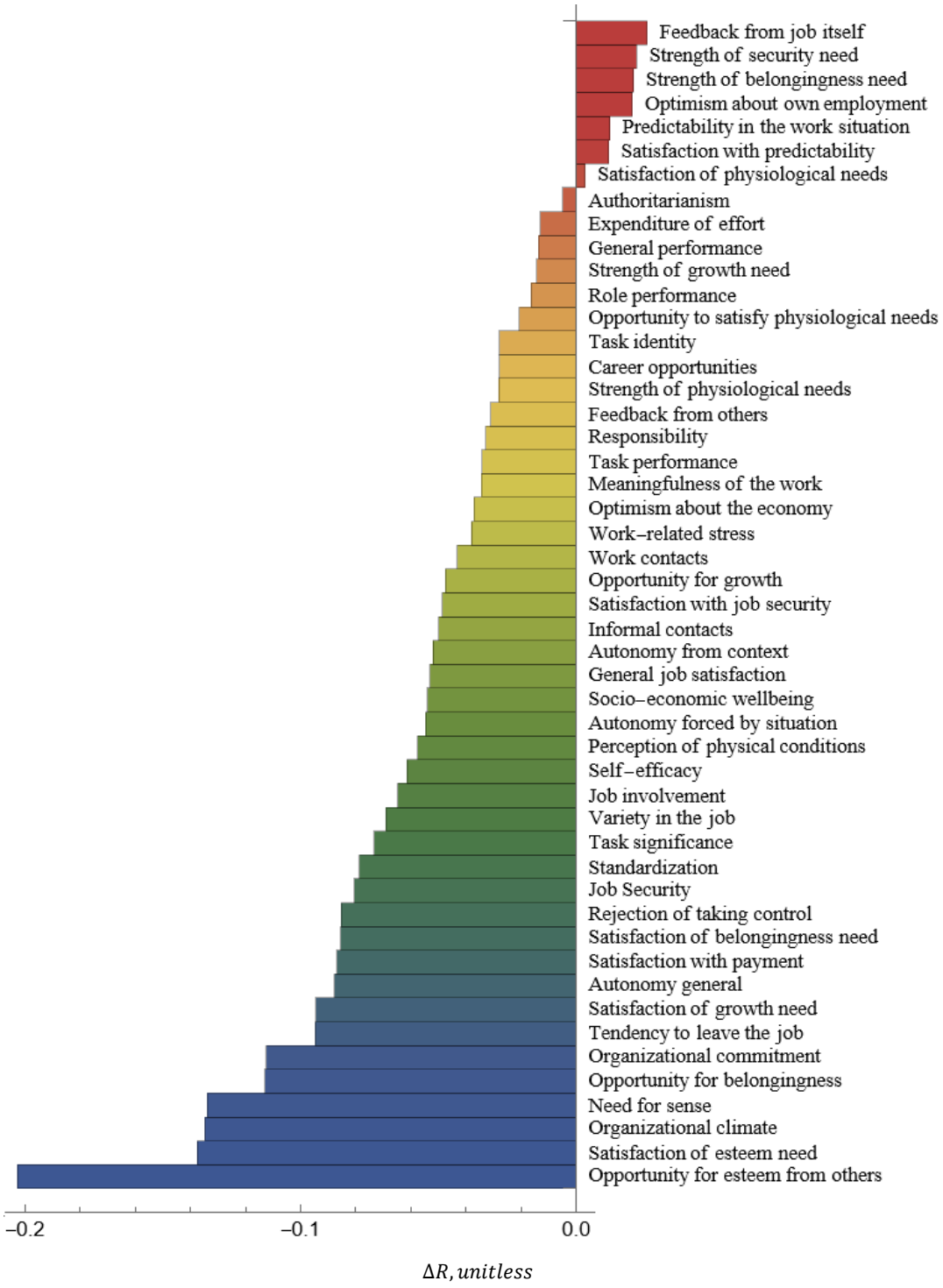

Figure 2. Predictability Change, as measured by $\Delta R = R_{(1999)} - R_{(1994,95,97)}$, the difference between model-achieved correlations for the calibration (in-sample) data (1994, 1995, 1997) and the test (out-of-sample) data from 1999. The abscissa shows that difference in percentage points. For example, the variable with the largest predictability loss, *Opportunity for esteem from others*, has $R_{(1994,95,97)} = 0.4908$ and $R_{(1999)} = 0.2879$. The plot shows this drop of -0.2029. At the opposite end is *Feedback from the job itself*, whose model achieves $R_{(1994,95,97)} = 0.3795$ and $R_{(1999)} = 0.4054$, a rise of 0.0259.

Source: Authors' illustration

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Most stable is the variable *Feedback from the job itself*. Looking at its content (Roe et al., 1997), we find there Likert-scale items like, "*To what extent does doing the job itself provide you with information about your work performance? That is, does the actual work itself provide clues about how well you are doing – aside from any 'feedback' co-workers or supervisors may provide?*". Another item is, "*After I finish a job, I know whether I performed well*". It is clear why such a variable can be relatively 'resistant' to socioeconomic change – it is too much tied to the core of the professional activity, whatever that might be, in any profession.

In the same light one may view *Predictability in the work situation* (at position №5) and *Satisfaction with predictability* (at №6). Like *Feedback* above, these two are dealing with work circumstances relatively independent of the wider societal context. Similar in that respect is *Satisfaction of physiological needs* (№7). Also far from the global issues are the two *need strengths* (for security and belongingness to a group) at positions №2 and №3.

As expected, a set of variables describing a person as a worker – *General performance* (№10), *Role performance* (№12), and *Expenditure of effort* (№9) also belong to the 'stable prediction' list. These are features, again characterizing the individual rather than the organization or society.

In addition, *Authoritarianism* (№8) and *Optimism about own employment* (№4) are two different attitudes having in common a degree of remoteness from the practical daily issues. Somewhat related is the *Strength of [personal] growth need*, at position №11. Immediately after the top twelve there is the *Opportunity to satisfy physiological needs*, which reinforces the general picture.

To sum up, all variables retaining predictability can be put under the loose umbrella of basic characteristics of professional activity and personal dispositions of the employee. Regardless of the circumstances, one continues to be the same person and to act similarly in all working situations. That remains true even in harsh times.

Coming back to our initial hypotheses, we find much support for them, but also a few interesting surprises. First, as we expected, all Maslow-type Need Strengths belong to the group of predictable variables. The least predictable Strength is that of physiological needs, at position №16. A possible explanation is that this longitudinal study was spread over five years, within which people have changed physically. Moreover, the final 1999 wave interviewed only about a third of the original sample, where statistical biases could have occurred beyond the researchers' control. For example, in 1997 about 11% were people reporting their own general performance to be below average. Two years later more than half of them were missing, while new 'under-performers' came down from the higher levels of the scale.

Somewhat surprisingly, in the ranking the need strengths were overtaken by the Feedback from the job itself, the two job Predictability variables at positions №№5 and 6, and the Optimism about one's own employment. Those, taken together with the Effort and Performance variables №№9, 10, 12 suggest that work-related psychological variables are more strongly linked to the employee's personality than previously thought.

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As hypothesized, at position №8 Authoritarianism finds itself among the most stably predictable variables. If there is something unexpected here, it is that it manages to overtake even one of the Need Strengths, that for Personal Growth. The numbers are quite close, however, and could be due to the effects of chance and relatively small 1999 sample.

Variables losing predictability

Now let us look at the bottom of Figure 2. Because some variables lose more in absolute terms and others in relative, the overlapping set amounts to 15 elements. They are presented in detail in Table 3. Although this group of psychological features is larger, what unites it is easy to understand. From the bottom of Table 3 upward, all variables characterize the relationship between the employee and their organization, in the eyes of the employee.

Table 3. Fifteen Variables Showing Greatest Loss of Predictability When Tested Out-of-Sample

No	Variable	$R_{(1994,95,97)}$ (N = 1460)	$R_{(1999)}$ (N = 384)	Absolute Change	Relative Change
35	Task significance	0.4856	0.4122	-0.0734	-0.1512
36	Standardization	0.4910	0.4122	-0.0788	-0.1605
37	Job Security	0.5374	0.4570	-0.0804	-0.1496
38	Rejection of taking control	0.4539	0.3686	-0.0853	-0.1879
39	Satisfaction of belongingness need	0.3808	0.2953	-0.0855	-0.2245
40	Satisfaction with payment	0.4617	0.3748	-0.0869	-0.1882
41	Autonomy general	0.5574	0.4696	-0.0878	-0.1575
42	Satisfaction of growth need	0.5699	0.4754	-0.0945	-0.1658
43	Tendency to leave the job	0.5487	0.4541	-0.0946	-0.1724
44	Organizational commitment	0.5064	0.3939	-0.1125	-0.2222
45	Opportunity for belongingness	0.4086	0.2956	-0.1130	-0.2766
46	Need for sense	0.3713	0.2374	-0.1339	-0.3606
47	Organizational climate	0.4526	0.3178	-0.1348	-0.2978
48	Satisfaction of esteem need	0.4212	0.2838	-0.1374	-0.3262
49	Opportunity for esteem from others	0.4908	0.2879	-0.2029	-0.4134

Source: Own calculations

Note: Absolute loss of predictability is computed as $\Delta R = R_{(1999)} - R_{(1994,95,97)}$. *Relative loss of predictability is computed as* $\Delta R / R_{(1994,95,97)}$.

The economy has changed and so has the employer. The *Opportunity for esteem from others* (Table 3, variable №49) is now much less predictable – maybe the organization was privatized and the new owners have new priorities, business practices, or values. It could be that the employee found another job where their new colleagues have more respect for them, or maybe less. Similarly, and naturally, *Satisfaction of esteem need* (№48) has also lost its previous degree of predictability. So have the other variables measuring various kinds of satisfaction – *to belong to a group* (№39), to experience *personal growth* (№42), to be *satisfied with one's income* (№40).

As a consequence, a huge loss of predictability is observed in *Organizational commitment* (№44), and in *Tendency to leave the job* (№43). Perhaps inevitably, *Organizational climate* (№47) and *Need for sense* (№46)

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follow suit. Amid the shifting ground all around, the employee is now seeing the world differently, and their relationship with their employer has become less predictable.

Our initial hypothesis was that the satisfaction of Maslow-type needs would be mostly unpredictable. Indeed, that turned out to be the case for Belongingness (№39), Personal Growth (№42), and Esteem from others (№48). It is not easy to understand why Satisfaction with job security found itself in the middle of the scale (№25). Perhaps, looking around and seeing economic turmoil, many people have lowered their expectations for security in the workplace.

Where a hypothesis of ours got really off the mark was with Satisfaction of physiological needs. Being a 'Satisfaction', it was expected to be a lot less predictable, yet it appeared near the very top of the ranking. Post-hoc, it is not too difficult to understand that phenomenon. As we discussed above, regardless of the changes around, people have either retained their jobs or found new ones offering them the same level of physical comfort. Health concerns are apparently dominating over any social or psychological need.

We correctly anticipated Organizational Commitment (№44) to lose predictability. Quite surprisingly however, its 'sister variable' Job Involvement found itself 11 positions higher. Both are known to be intermediary factors between antecedent and consequent motivational variables (Pinder, 1998; Aryee et al., 1991; Katzell, 1980; Lance, 1991; Roe et al., 2000) and are highly correlated. In fact, regressing one on the other takes the regression line straight through the origin, a rare phenomenon with work and organizational psychology variables. One possible explanation for the distance between them here could be a rising tendency for divergence, whereby one may be deeply involved in the job, yet may feel increasingly less loyal to the employer. In later years that phenomenon was to become widespread among many software developers for instance.

DISCUSSION

In sum, during periods of economic upheaval employees retain their personal and professional characteristics yet rethink their relationship with the organization. Hardly anything in these findings seems to be country-specific. Hypothetically, a study in another place during a turbulent time could produce other numbers and perhaps rankings; qualitatively though, the picture would likely be rather similar.

The set of Maslow-type needs remains important in all three aspects captured by our measurement instrument: 1) need strength, which is individual-specific; 2) opportunity to satisfy it – a characteristic of the organization; and 3) actual satisfaction of the need, which is the interplay between the individual's and the organization's peculiarities (Roe et al., 1997). While need strengths remain stable under any circumstances, the opportunities for, and actual degree of satisfying them vary considerably, and so does predictability.

Let us think of these points in the light of today's workplace realities. COVID-19 forced millions to work from home via digital connectedness and that tendency remained after the pandemic. A lot of people spend currently only two or three days in the organization's premises which is likely to continue. Seeing one's colleagues less often is a natural nudge to become more and more autonomous at work.

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The nature of the academics' labour may be insightful for understanding a deeper reason behind those trends. Their work contract is with a university, yet to survive and thrive they must belong to an international research community providing the ultimate assessment of their achievements, which their institution then acknowledges. The example has been so attractive that many hi-tech corporations have developed internal 'universities' and introduced academic-mimicking titles like 'fellows', 'staff scientists' etc. This fashion could see a boost now.

On the other hand, in many workplaces the new-generation AI introduces tools, effectively equivalent to an assistant doing tasks previously allotted to humans. Indeed, this is another reinforcer of the tendency to work more autonomously. At this early stage of AI presence, however, its dominant role seems to be mainly cost-cutting and replacing people with machine-learning systems. Consequently, millions of workers do their job expecting to be made redundant in the coming months or years. While their performance may remain relatively stable, their loyalty and commitment to the organization's goals and values will inevitably erode.

What trends might be anticipated under these circumstances? A detailed recent study found that AI threatens a lot of high-skilled occupations, unlike previous technological advances, targeting low- and mid-level skills (Webb, 2019). Nonetheless, the same study concluded that jobs of all levels of sophistication are relatively immune to AI if they require as a key element the interpersonal communication skill. However, equipped with easily attainable AI assistance and internet-available resources, increasing numbers of people may venture to create their own employment or even their own new professions in pursuit of autonomy and self-fulfilment.

CONCLUSION

A statistical analysis of a large number of psychological variables revealed that in times of hyperinflation and fundamental economic reforms, people retain their personal characteristics. Their personal dispositions and performance levels remain as foreseeable as they used to be. However, employees reassess in unpredictable ways their relationship with the organization employing them. In particular, the strengths of the Maslow-type needs remain stable. However, the opportunities to satisfy them – variables strongly tied to the organization – become less predictable. Finally, the actual satisfaction, which is the outcome of the interplay between the need and the opportunity, also varies considerably, and so does its predictability.

The Bulgarian example suggests that the need for personal growth remains (predictably) stable even in difficult times. Likewise, the desire for professional development and achievement cannot be expected to diminish. People will also continue to need to belong to groups, to be respected, to enjoy the company of others, to maintain their social contacts. One outcome of the AI-driven restructuring might be that the organization will be less able to satisfy those needs. Then something else will fill the gap. More people could choose to be self-employed; others may self-organize in new kinds of modern 'guild'-like associations supported by social networks.

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Perhaps the role of professional societies will rise, somewhat at the expense of the firms and corporations. Such a tendency would not be entirely new. For many decades 'the professionals' – lawyers, medical doctors, architects, psychotherapists, and a lot of others have organized their own communities. Many thousands of people belong to, for example, the Association of Chartered Certified Accountants (ACCA), The Institute of Electrical and Electronics Engineers (IEEE), The American Economic Association (AEA), etc. Inevitably, the digital connectedness among colleagues will flourish in new varieties. We may see the rise of new kinds of virtual social networks, serving individuals and global communities in unexpected new ways.

What could be recommended to employers in these interesting times? This difficult question is made harder still by the current AI-driven industrial revolution, yet in its beginning. Which new trends will emerge and prevail, is not possible to tell. Organizations will naturally seek to retain their best staff. However, another aspect of today's reality is the "employee market" – the brightest, most qualified, and most creative are those who easily find better jobs on their own terms. In addition, AI is making things more complicated as it empowers not only the organization but also the individuals. They may be less ready to serve the employer, but rather expect to be served, to satisfy their needs and aspirations. Organizations might find themselves facing a double challenge: Seek efficiency by integrating AI, and at the same time take care about the employees' personal characteristics, dispositions, and values.

Conflict of interests:

The authors declare no conflict of interest.

Author Contributions:

Conceptualization, I.Z. and G.M.; methodology, I.Z. and G.M.; software, G.M.; validation, I.Z. and G.M.; formal analysis, I.Z. and G.M.; investigation, I.Z. and G.M.; resources, I.Z.; data curation, I.Z. and G.M.; writing—original draft preparation, G.M.; writing—review and editing, I.Z.; visualization, G.M.; supervision, I.Z.; project administration, I.Z. and G.M.; funding acquisition, I.Z.

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About the authors

Irina ZINOVIEVA,

PhD, DSc, is Professor of Psychology at Sofia University St. Kliment Ohridski, Sofia. She did consultancy work for the Brussels Regional Government, was visiting scholar at Oxford University, The Netherlands Academy of Sciences etc. She has authored and co-authored eight books and about 150 scientific papers.

Research interests: differential psychology, organizational behaviour, human resources management.

ORCID ID: 0000-0002-1193-2423

George MENGOV,

PhD, is Professor of Decision Sciences at the Faculty of Economics and Business Administration of Sofia University St. Kliment Ohridski. He is an advisory board member of Swiss Innovation Valley. Author of about 80 peer-reviewed papers and three books.

Research interests: neural networks, decision science, behavioural and experimental economics

ORCID ID: 0000-0001-8157-3246

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