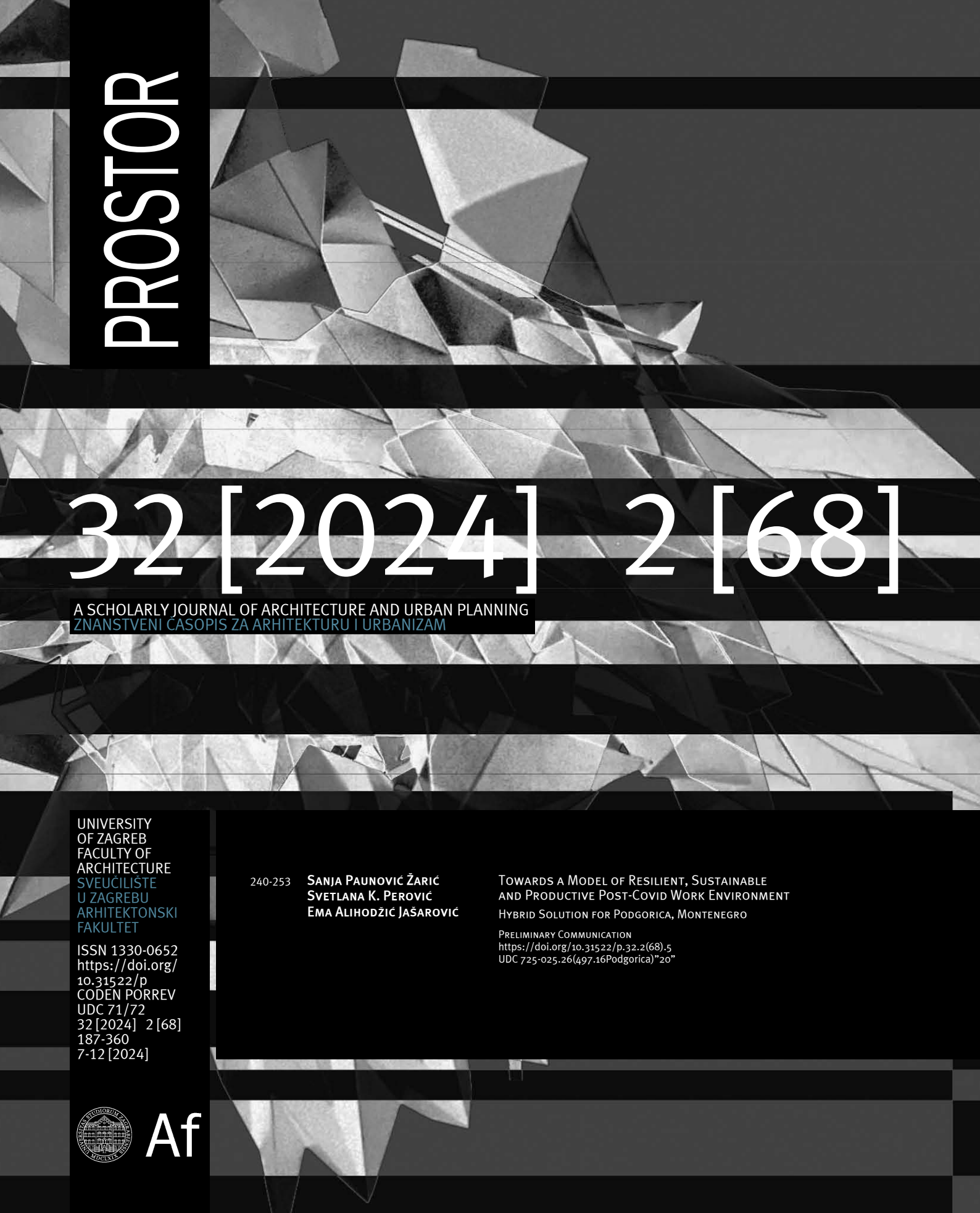

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ONLINE SURVEY QUESTIONNAIRE

Dear Sir or Madam,
Please find the survey questionnaire that examining working conditions during the Covid-19 pandemic, from March 2020 up to October 2020. The survey is conducted exclusively in the purposes of a scientific research at the Faculty of Architecture, University of Montenegro. This questionnaire includes only employed respondents from Podgorica. If you are not employed in Podgorica, please do not continue with the survey.
It is needed up to 5 minutes to complete the survey. It will be active until October 12, 2020.
Thank you for your participation and contribution to the scientific work!

I GENERAL INFORMATION

E-mail: _____
Year of Birth: _____
Gender: male / female / other
Place of employment: _____
Employment Status:
- ☐ Internship
- ☐ Employer / owner of the company
- ☐ Employed in the private sector
- ☐ Employed in the public sector

Education Degree:
- ☐ Primary school
- ☐ High School
- ☐ University degree or higher

Marital status:
- ☐ Not married
- ☐ Married
- ☐ Divorced
- ☐ In a cohabitation
- ☐ Widowed
- ☐ Other

The ages of your children:

Preschool	☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 4+
Primary school	☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 4+
High School	☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 4+
College / 18+ years	☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 4+
I have no kids	☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 4+

I live in:
- ☐ In rented apartment / house
- ☐ An apartment that is owned by me / owned by my family
- ☐ A house that is owned by me / owned by my family
- ☐ Other

II ORGANIZATION OF WORK SPACE IN OFFICES DURING THE PANDEMIC

1. How many employees do you share the work space with?
   - ☐ I don't share a workspace
   - ☐ 1-3 persons
   - ☐ 3-5 persons
   - ☐ 5-10 persons
   - ☐ more than 10 persons
2. The size in sq. m of your work space?
   - ☐ 5-10 m²
   - ☐ 10-20 m²
   - ☐ 20-40 m²
   - ☐ more than 40 m²
3. Rate the degree of satisfaction with the workspace / office? (1 – very dissatisfied, 5 – very satisfied)

Functionality	☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
Noise level	☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
Daylighting level	☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
Level of artificial lighting	☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
Office ventilation	☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

4. Air-condition of your workspace?
   - ☐ Single air conditioning units
   - ☐ Multi split system / central air conditioning
   - ☐ Recuperators / heat pumps
   - ☐ Radiators
   - ☐ Other
5. How is your workspace ventilated?
   - ☐ Natural ventilation / windows
   - ☐ Artificial ventilation / duct system
6. Did you have provided physical barrier between the workplaces in your office during the period of COVID-19
   - ☐ Yes
   - ☐ No
   - ☐ Partially
7. Is your workspace adapted for working conditions during the COVID-19 pandemic?
   Please describe _____

III WORKING LOCATION DURING COVID-19 PANDEMIC

1. How did you perform your work during the pandemic?
   - ☐ Physically in the office
   - ☐ Online
   - ☐ Combined
2. If you were in isolation due to the Covid-19 pandemic, did you work from home (online)?
   - ☐ Yes
   - ☐ No
3. Has your income changed during the Covid-19 pandemic?
   - ☐ has been reduced
   - ☐ has been increased
   - ☐ remained unchanged
4. For how long have you worked from home (period of time)?
   - ☐ Up to 1 month
   - ☐ 2-3 months
   - ☐ 3-6 months
   - ☐ 6-12 months
   - ☐ I didn't work from home
   - ☐ All the time

IV ORGANIZATION OF WORK FROM HOME

1. Have you been forced to work from home during the COVID-19 pandemic?
   - ☐ Yes
   - ☐ No
   - ☐ It was up to me / my choice
2. The structure of your living space:
   - ☐ studio apartment
   - ☐ one bedroom apartment
   - ☐ two bedrooms apartment
   - ☐ three bedrooms apartment
   - ☐ other
3. How many members of your family did some activity from home, including you (give a numerical value)?

Work from home	☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 0
Online classes	☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 0

4. Did you share your work space with other housemates during the working hours?
   - ☐ Yes
   - ☐ No
5. In which part of the living space did you work most often (living room, study, dining room...?)
   - ☐ living room
   - ☐ working room
   - ☐ bedroom
   - ☐ dining room
   - ☐ terrace / balcony
   - ☐ I didn't work from home
6. Did you have to adapt your living space to the needs of working from home?
   - ☐ Yes
   - ☐ It wasn't necessary
7. Did you use the state-provided right not to work as a parent of a child under the age of 11?
   - ☐ Yes
   - ☐ No
   - ☐ I don't have kids / I don't have kids of that age
8. Did you share time and space with kids during working hours?
   - ☐ Yes
   - ☐ No
   - ☐ I don't live with kids
9. Did you have to dedicate a part of your working time to helping children to learn during online classes?
   - ☐ Yes
   - ☐ No
   - ☐ I don't live with kids
10. Heating and cooling system of your living space:
    - ☐ Individual air conditioning units
    - ☐ Multi split system / central air conditioning
    - ☐ Pellets, wood and fuel oil
    - ☐ Radiators
    - ☐ Other
11. Rate the degree of satisfaction with the space you work from home? (1 – very dissatisfied, 5 – very satisfied)

Functionality	☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
Noise level	☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
Daylighting level	☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
Level of artificial lighting	☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
Internet connection stability	☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
Psychological impact	☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

12. How did working from home affect the quality of work? (1 – very dissatisfied, 5 – very satisfied)
    ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
13. Was your living space sufficient to meet your work-from-home needs?
    - ☐ Yes
    - ☐ No
14. How did working from home affect the electricity consumption in your home?
    - ☐ The bills have increased
    - ☐ Bills have decreased
    - ☐ It didn't affect
15. If you had the opportunity to choose your own way of working DURING the COVID-19 pandemic, what would you choose:
    - ☐ Physically in the office
    - ☐ Online
    - ☐ Combined
16. If you had the opportunity to choose your own way of working AFTER the COVID-19 pandemic, what would you choose:
    - ☐ Physically in the office
    - ☐ Online
    - ☐ Combined

* Thank you for your time and modest contribution to the scientific research work!!!

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Towards a Model of Resilient, Sustainable and Productive Post-Covid Work Environment

Hybrid Solution for Podgorica, Montenegro

HYBRID WORK SOLUTIONS
POST-PANDEMIC OFFICE
RESILIENT OFFICE
SUSTAINABLE OFFICE
WORK FROM HOME

The Covid-19 pandemic has significantly changed the work perception and attitudes of employees. The goal of this research is to identify the experience of the beneficiaries and provide guidelines to develop an optimal model of the working environment during and in the post-pandemic period. The study is focused on an anonymous survey comprising 34 combined questions conducted online among 202 responders, including general questions, the issue of working conditions in offices, manner of transforming working conditions during the pandemic and personal perception of comfort. The questionnaire is also related to transitive solutions, work from home and the accentuation of a favourite manner of work upon the end of the pandemic. The results of the questionnaire together with theoretical analyses of this research may be useful for creating a good basis for the definition of optimal work spaces in the post-pandemic period, in order to further direct the development of resilient work spaces on the territory of Podgorica, as a case study. The study may be also applied to other contexts.

Introduction

Decades ago, the office was transformed into a separate entity denoting spatial, physical and constructed environment in which people perform business activities (Dale, Burrell, 2007). With the creation of portable devices, office becomes virtual and changeable. Employers have been facing new challenges in the creation of simulative and productive working environment (Ross, 2012). The emphasis is also on extensive use of technology and certification of buildings by adoption of sustainability norms, as well as structural changes in the work organization (Gupta, Bajaj, 2023). The reengineering which entailed smart usage of information technologies, predominantly virtual organizations, has resulted in a range of alternative solutions ranging from tele-cottages up to alternative locations such as cafés (Van den Dobbelsteen, 2004). Ross (2022) developed a theory that "*Your Office Is Where You Are*", so no one has a fixed work position.

Geneses of work spaces evolved from "*cellular offices*" (Fig. 1a), offices grouped around central atrium or corridor (Jeska, 2002), to "*open plan offices*" (Fig. 1b) formed as spaces which negate prescribed conditions for lighting, aeration and thermal characteristics of a space. Combined systems (Fig. 1c) of cellular and open plan offices, lead to "*collaborative spaces*" which may ensure individuals the opportunity to choose not only the place of work and performance of tasks, but also the conditions and direct interior and exterior environment.

Nowaday, administrative buildings are reinforced by innovative spaces such as gardens, playrooms, cafeterias and recreation spaces. Borders such as public/private, home/work, work/recreation are being denied (O'Neill, 2014) by placing the emphasis on the possibility for interaction and transformability. In his contingency theory Joan Woodward (Zeller, 2020) introduces a simple principle of dichotomy of non-routine and routine for the identification of changes in the process, control and productivity. Tasks performance in the office can be related to the routine, while work from home is related to uncertainty.

The establishment of a relationship between hybrid virtual and traditional work environment is of paramount importance. All this requires a redefinition of recent organizational formats in which virtual manner of work should be set up as the assistance to the employees, with the traditional one as the basis; hierarchical formats are being replaced by horizontal structures (Zeller, 2020) in order to define roles, powers and responsibilities. The manner of measuring the progress in the performance of working assignment also has to be changed and the success has to be recognized and revisable (Zeller, 2017), although remote work has become a "*new normal*".

The Covid-19 pandemic has accelerated the process of transformation of the business environment, from physical, hybrid to virtual in different segments: workload distribution, the control and management of business process. In terms of competitiveness, the researches indicate that the survival of physical space entails its transformation from functional aspect – the size of the premise, shape of the work station, as well as comfort parameters. Design authenticity is moved from the focus for the benefit of the creativity of employees to create new offices. The new normal work environment was an opportunity to become a model that provides employees with flexibility and support, more autonomy and higher engagement (Nagy, Adnan, 2022). The recovery from the pandemic affected resilience and increased awareness of user comfort, as well as the increased role and use of energy-saving technologies and energy efficiency (Amir, Khan, 2022; Echegaray, 2021). However, to the best of our knowledge previous works related to the post-pandemic organization of work spaces did not consider the exact employees' perception of work spaces, comfort and habits during and after the pandemic. Thus, one of the main goals of this research was to create a questionnaire to address a realistic perception of different working conditions. In order to

Fig. 1 The genesis of workspaces
a) traditional system, b) open-plan system, c) combined system

achieve the stated goal, the questionnaire has been created and conducted through survey, among employees in the administrative sector. The questionnaire is created in a way to provide responses on organization of work space in offices during the pandemic, working location, work from home and preferable workspace after the Covid-19 pandemic. The results of the questionnaire together with the theoretical analyses from this research may support the creation of a solid ground for determining optimal workspaces in the post-pandemic period. This is key for directing further developments of workspaces on the territory of Podgorica, while the conclusions of the research may be also applied to other contexts. The aim of the research was also a comparative analysis of architectural solutions and comfort in the office as opposed to at home in order to provide new schematic office proposals in terms of comfort and energy use. The results have also led to the hybrid model as an optimal solution in the post-Covid era.

Materials and methods

The Context of the Research

Montenegro was the country with a record number of infected people in Europe, with regard to the number of citizens. This is considered relevant for the case study within this research. Federation of Employers of Montenegro (2021) in its questionnaire problematizes remote work that was mainly conducted during the lockdown period. Around 40% of the surveyed enterprises continued to apply remote work in the last quarter of 2020, while during the lockdown period, 60% of enterprises implemented remote work. More than a half of companies which had remote work faced the fall of productivity, out of which almost 60% considered such fall important or very important.

Upon the end of the pandemic, the majority of the sector would have rather returned the employees to the premises of the company. The sector of information, communications and design prefer the preservation or improvement of flexible work practices, while more than a half of enterprises expressed their intention to do so (Monstat, 2020). One fourth of the enterprises need guidelines on how to ensure the wellbeing of the employees and how to support them to achieve the balance between business and private life more easily. This analysis predominantly covers the private sector, small and medium-sized enterprises. There is a lack of analyses regarding the administration sector.

In addition to this, Podgorica as the capital city of Montenegro and leading administrative centre of the state, with the greatest percentage of business operations, administrative and public buildings, in 2020 had 13419 business buildings which represents 36.2% of the total number of business buildings in Montenegro (Monstat, 2021). This was an additional motivation to conduct research among employees in the administrative sector in Podgorica, capital of Montenegro.

Online Questionnaire and Statistical Analysis

The leading research method in this paper is the questionnaire, as a verified methodological procedure of the collection of data. Attitudes and opinions of work space users on the topic of individual perception of work under the Covid-19 conditions have been investigated. This method is obligatory when it comes to personal perception and comparative analysis of the work during pandemic. The survey is conceived as a written anonymous questionnaire composed of 34 combined questions (see *Survey questionnaire*) related to general questions, the issue of working conditions in offices, the manner of transformation of working conditions during the pandemic and personal perception of comfort conditions of working in the office or from home. Based on specific socio-cultural determinants, it has been noted that although the survey has been conducted in Podgorica, it can be applied as of universal relevance. The questionnaire was distributed by e-mail to 550 employees in the administration sector. Only 202 respondents answered the survey, i.e. 37% of the total contacted employees submitted the online questionnaire. The questionnaire was available on *Google drive* in the midst of the pandemic, from March 2020 up to October 2020. The first part of the questionnaire is related to general data such as: employment status, education degree, marital status, children's ages and the structure of the housing unit. The second part of the questionnaire was formed to provide responses on the organization of work space in offices during the pandemic, working location, work from home and preferable working environment after the pandemic. In addition, this part provides information about the structure of the space, an assessment of personal satisfaction with the space, economic and psychological impact on employees. The questionnaire entails contemporary questions requiring personal experiential attitude on the conditions of visual, thermal and acoustic comfort in the office and during work from home. The possibility of valuation on 1-5 scale (while 1 means that the responder is very disatisfied and 5 means that the responder is very satisfied) and interpretative questions which allow certain explanations in terms of the text have been used. Jointly with theoretical analyses, the results of the questionnaire from this research may support the creation of a solid ground for determining optimal work spaces in the post-pandemic period, which is key for directing further developments of work spaces, while the conclusions of the research may also be applied to other contexts.

The statistical data processing for the description of important parameters depending on their nature used the frequencies and percentage, sample average value with sample standard deviation. One-factor analysis of variance *(ANOVA)* was used for testing the differences between parameters, as well as Chi-square test with qualitative variables. Predictive features of independent variables were tested by univariant and multivariant binary logistic regression. The criterion variable was coded as k/+ variable (preference of office work = 0, preference of combined work = 1). Statistical processing and analysis were done in statistical package SPSS version 24 (*Statistical Package for the Social Sciences*) for Windows. The level of probability was defined at $p \leq 0.05$.

Results

General Data

The 54% of respondents were female. Age ranged from 22 to 57 years, with average age of 35.97±7.25 years. The majority of respondents had university degree (93.6%). There were 63.8% respondents married. 55% of respondents had children, while the same percentage of responders lived in their own flat or the property of their family (Table I).

Organization of Workspace in Offices

Organization of workspace in offices during the Covid-19 pandemic is examined in this part (Table II). The aim of the survey was to obtain data among the employees in different sectors (employer/company owner, public and private sector employee) since there was a difference in the organization of workspace.

Almost half of the responders work in the space that they share with 1 to 3 persons – which corresponds to traditional office premises (47%). The largest percentage of employers (45.5%) and public sector employees (47.6%) work in the space with a surface between 10 and 20 m^2, while the largest percentage of the employees in the private

Table I Demographic characteristics of the survey sample.

	All [N=202] percentage (no. of respondents)	Employment Status percentage (no. of respondents)			p
		employer / company owner [N=22]	Employed in the public sector [N=82]	Employed in the private sector [N=98]	
Gender, n (%)					
Male	46% (93)	59.1% (13)	32.9% (27)	54.1% (53)	0.008[a]
Female	54% (109)	40.9% (9)	67.1% (55)	45.9% (45)	
Age	35.97±7.25 (22-57)	37.82±5.95	37.48±8.58	34.3±5.84	0.006[b]
Degree of education, n (%)					
Elementary school	0% (0)	0% (0)	0(0%)	0% (0)	0.300[a]
Secondary school	6.4% (13)	4.5% (1)	3.7% (3)	9.2% (9)	
Higher education or higher	93.6% 3(189)	95.5% (21)	96.3% (v)	90.8% (89)	
Marital status, n (%)					
Married	57.9% (117)	68.2% (15)	67.1% (55)	48% (47)	
In an extramarital relationship	5.9% (12)	4.5% (1)	4.9% (4)	7.1% (7)	
Widower	0% (0)	0% (0)	0% (0)	0% (0)	0.130[a]
Free	27.7% (56)	27.3% (6)	17.1% (14)	36.7% (36)	
Divorced	4.5% (9)	0% (0)	6.1% (5)	4.1% (4)	
Other	4% (8)	0% (0)	4.9% (4)	4.1% (4)	
Do you have children, n (%)					
No	45% (91)	36.4% (8)	37.8% (31)	53.1% (52)	0.084[a]
Yes	55% (111)	63.6% (14)	62.2% (51)	46.9% (46)	
Number of preschool children	1.44±0.55 (1-3)	1.44±0.55	1.46±0.61	1.44±0.5	0.751[b]
Number of primary school children	1.57±0.57 (1-3)	1.57±0.57	1.52±0,59	1.38±0.5	0.004[b]
Number of high school children	1.29±0.59 (1-3)	1.29±0.59	1.33±0,65	1.25±0.5	0.866[b]
Number of adult children	1.65±0.7 (1-3)	1.65±0.7	1.69±0,75	1.33±0.58	0.665[b]
Living in, n (%)					
A house owned by me / my family	24.8% (50)	22.7% (5)	25.6% (21)	24.5% (24)	
Apartment owned by me / my family	55% (111)	63.6% (14)	56.1% (46)	51(52%)	0.134[a]
Apartment / house I'm renting	15.8% (32)	13.6% (3)	9.8% (8)	21.4% (21)	
Other	4.5% (9)	0% (0)	8.5% (7)	2% (2)	

Numerical variables are shown through mean ± standard deviation (Minimum-Maximum). Chi-square test; bANOVA test.

1 Natural ventilation / windows were a more frequent manner of ventilation in workspaces of company owners (90.9%) and in the public sector (93.9%), than in the private sector (78.6%), which indicates a much better aeration of traditional offices than those above 40 m², p=0.010. With regard to compared groups, barriers were not ensured for 75.6% of respondents from the public sector and a lower percentage of other respondents (employers/company owners: 40.9%, private sector employees: 42.9%), p<0.001.

2 There is no agreement among the three groups about whether the space was adjusted for work under the pandemic conditions. In fact, 77.3% employers think that workspace was adjusted; this percentage is significantly lower if we take into account the responses of the public sector employees (34.1%), but also private sector employees (66.3%), p<0.001.

3 The respondents evaluated the level of satisfaction on the Likert scale by different characteristics of the workspace. They were most satisfied with the natural lighting of the workspace (3.67±1.32 (1-5)), then with aeration of the workspace (3.64±1.29 (1-5)), then artificial lighting of the workspace (3.61±1.21 (1-5)) and functionality of the workspace (3.47±1.26 (1-5)), while noise level in the workspace received the lowest grade (3.23±1.37 (1-5)).

sector (37.8%) work in the space of 40 m², p<0.001, which corresponds to the landscape office type.

The basic way of air conditioning the space is single air conditioning unit or multi split systems, while ventilation mostly relies on natural ventilation.[1] There is alarming data indicating that there was no physical distance within the workspace and that the spaces were not adjusted to the Covid-19 recommendations, i.e. 113 responders (55.9%), indicate potentially greater transmission, which led to the multiplication of the number of collective isolations and shift of work into homes. A total of 54.5% responders think that the space in which they work was in some way adjusted to the working conditions during the Covid-19 pandemic.[2] Distance keeping was the most frequent way of adjusting in workspaces under the pandemic conditions (35.6%). Employers were most satisfied with the daylight and natural ventilation of the working units[3],

Table II Organization of workspace in offices during the COVID-19 pandemic

	All [N=202] percentage (no. of respondents)	Employment Status percentage (no. of respondents)			P
		Employer / company owner [N=22]	Employed in the public sector [N=82]	Employed in the private sector [N=98]	
How many employees do you share public space with, n (%)					
0	6.9% (14)	9.1% (2)	7.3% (6)	6.1% (6)	0.882[a]
1-3 people	47% (95)	54.5% (12)	46.3% (38)	45.9% (45)	
3-5 people	19.8% (40)	13.6% (3)	15.9% (13)	24.5% (24)	
5-10 people	16.8% (34)	13.6% (3)	19.5% (16)	15.3% (15)	
more than 10 people	9.4% (19)	9.1% (2)	11% (9)	8.2% (8)	
Total area of the office, n (%)					
5-10 m²	17.8% (36)	4.5% (1)	29.3% (24)	11.2% (11)	<0.001[a]
10-20 m²	36.1% (73)	45.5% (10)	47.6% (39)	24.5% (24)	
20-40 m²	21.8% (44)	13.6% (3)	18.3% (15)	26.5% (26)	
more than 40 m²	24.3% (49)	36.4% (8)	4.9% (4)	37.8% (37)	
Functionality of the workspace	3.47±1.26 (1-5)	3.82±1.05	2.88±1.3	3.88±1.08	<0.001[b]
Noise level of the workspace	3.23±1.37 (1-5)	3.59±1.37	3±1.32	3.35±1.39	0.103[b]
Natural lighting of the workspace	3.67±1.32 (1-5)	4.09±1.15	3.2±1.4	3.98±1.16	<0.001[b]
Artificial lighting of the workspace	3.61±1.21 (1-5)	3.73±1.2	3.23±1.2	3.91±1.15	0.001[b]
Ventilation of the workspace	3.64±1.29 (1-5)	4.14±1.04	3.29±1.33	3.82±1.25	0.004[b]
How is the workspace air conditioned, n (%)					
Single air conditioning units	52% (105)	81.8% (18)	65.9% (54)	33.7% (33)	<0.001[a]
Multi-split system / central air conditioning	43.1% (87)	18.2% (4)	26.8% (22)	62.2% (61)	
Recuperators / heat pumps	2% (4)	0% (0)	1.2% (1)	3.1% (3)	
Radiators	3% (6)	0% (0)	6.1% (5)	1% (1)	
Other	0% (0)	0% (0)	0% (0)	0% (0)	
How is the ventilation of the workspace, n (%)					
Natural ventilation / windows	86.1% (174)	90.9% (20)	93.9% (77)	78.6% (77)	0.010[a]
Artificial ventilation / duct system	13.9% (28)	9.1% (2)	6.1% (5)	21.4% (21)	
Did you provide a physical barrier between workplaces in the COVID-19 period, n (%)					
Yes	21.3% (43)	31.8% (7)	9.8% (8)	28.6% (28)	<0.001[a]
Partly	22.8% (46)	27.3% (6)	14.6% (12)	28.6% (28)	
No	55.9% (113)	40.9% (9)	75.6% (62)	42.9% (42)	
Is your workspace in some way adapted to the working conditions during the COVID-19 pandemic, n (%)					
Yes	54.5% (110)	77.3% (17)	34.1% (28)	66.3% (65)	<0.001[a]
No	45.5% (92)	22.7% (5)	65.9% (54)	33.7% (33)	
How is the workspace adapted to the working conditions during the COVID-19 pandemic, n (%)					
Not adapted	45.5% (92)	22.7% (5)	65.9% (54)	33.7% (33)	0.001[a]
Distance more than 2 meters	35.6% (72)	50% (11)	22% (18)	43 (43.9%)	
Separate entrance	0.5% (1)	4.5% (1)	0% (0)	0% (0)	
Working in shifts	2.5% (5)	4.5% (1)	3.7% (3)	1% (1)	
Working from home for a certain number of employees	4% (8)	9.1% (2)	3.7% (3)	3.1% (3)	
Smaller number of employees in the office in the same time	1.5% (3)	0% (0)	1.2% (1)	2% (2)	
Regular testing of employees	0.5% (1)	0% (0)	0% (0)	1% (1)	
Physical barriers set	5.9% (12)	4.5% (1)	1.2% (1)	10.2% (10)	
Increased disinfection, wearing masks	3.5% (7)	4.5% (1)	1.2% (1)	5.1% (5)	
The working rooms are separated	0.5% (1)	0% (0)	1.2% (1)	0% (0)	

Numerical variables are shown through mean ± standard deviation (Minimum-Maximum). Chi-square test; bANOVA test.

4 Workspaces (according to the responses of the responders) were adjusted as follows (Table II):
- reduction of the number of working hours, work in shifts;
- use of protection equipment: masks, visors, personal disinfection and disinfection of workspace;
- separation of workspaces by covers, boards; complete reorganization of space in order to achieve necessary two-meter distance between the employees;
- natural space aeration/ventilation;
- installation of working boxes in open space offices;
- organization of meetings via online platforms;
- working from home and movement of the employees from open plan offices into traditional ones.

Table III Working location during the COVID-19 pandemic

	All [N=202] percentage (no. of respondents)	Employment Status percentage (no. of respondents)			p
		Employer / company owner [N=22]	Employed in the public sector [N=82]	Employed in the private sector [N=98]	
How did you operate your business during the Covid-19 virus pandemic, n (%)					
In the office	38.6% (78)	18.2% (4)	41.5% (34)	40.8% (40)	0.211[a]
Online	7.9% (16)	13.6% (3)	4.9% (4)	9.2% (9)	
Combined	53.5% (108)	68.2% (15)	53.7% (44)	50% (49)	
If you were isolated due to the Covid-19 pandemic, did you operate your work from home (online), n (%)					
Yes	56.4% (114)	90.9% (20)	52.4% (43)	52% (51)	0.003[a]
No	43.6% (88)	9.1% (2)	47.6% (39)	48% (47)	
Did your earnings change during the Covid-19 pandemic, n (%)					
Reduced	5.4% (11)	9.1% (2)	6.1% (5)	4.1% (4)	0.043[a]
Increased	5.4% (11)	4.5% (1)	0% (0)	10.2% (10)	
Remained unchanged	89.1% (180)	86.4% (19)	93.9% (77)	85.7% (84)	
How long have you been working from home (period of time), n (%)					
up to 1 month	25.7% (52)	36.4% (8)	20.7% (17)	27.6% (27)	0.397[a]
2-3 months	24.3% (49)	31.8% (7)	25.6% (21)	21.4% (21)	
3-6 months	12.4% (25)	18.2% (4)	14.6% (12)	9.2% (9)	
6-12 months	6.9% (14)	4.5% (1)	8.5% (7)	6.1% (6)	
I didn't work from home	27.7% (56)	4.5% (1)	28% (23)	32.7% (32)	
All the time	3% (6)	4.5% (1)	2.4% (2)	3.1% (3)	

Numerical variables are shown through mean ± standard deviation (Minimum-Maximum). Chi-square test; bANOVA test.

while the employees in the private sector were more satisfied than the others with the functionality, artificial lighting and aeration of workspace. Spatial conditions for work, such as aeration, air-conditioning and lighting, may also have a stimulation impact on work. Thermal and visual comfort may be achieved by multiple approach including adopted bioclimatic architectural principles and energy performances of transparent elements, with the respect for expected requirements of the beneficiaries of workspaces under extraordinary circumstances – such as during the Covid-19 pandemic.

Responders provided possible interior solutions in their responses, which would represent the basic designer guidelines towards a more economic and encouraging working environment.[4]

Working Location during the Covid-19 Pandemic

During the pandemic, one-half of responders (53.5%) worked in combined manner (online and in the office), only 7.9% worked fully online, while 38.6% responders worked exclusively in the office. Percentage arrangement in three observed groups is without statistical differences. Work from home caused by isolation was carried out by 90.9% company owners, 52.4% public sector employees and 52% private sector employees, p=0.003. Almost one half of responders worked from home up to one month (25.7%) or 2-3 months (24.3%), as displayed in Table III.

This segment of the survey to the greatest extent indicates the justifiability of the thematic framework of the research. The highest percentage of responders during the Covid-19 pandemic, more or less, experienced a combined working system, i.e. work from home as an enforced model. In the follow-up of the research, this shall open numerous questions that indicate the need for changing and adjusting the manner of business operations to a certain extent to new circumstances. Although the results of the questionnaire show that work from home lasted for maximum one month.

Experiences under new working circumstances shall be the topic of the next chapter and they can offer a platform for the examination of possibilities and a new concept of business in the future and outside the pandemic framework.

Work from Home

28.7% responders were forced to work from home during the Covid-19 pandemic, while the majority of those who worked from home were public sector employees (39%), p<0.001. The majority of the employees lived in two-bedroom flats (36.1%), while one half of responders (52.5%) shared their workspace

Table IV Organization of work from home during the COVID-19 pandemic

	All [N=202] percentage (no. of respondents)	Employment Status percentage (no. of respondents)			P
		Employer /company owner [N=22]	Employed in the public sector [N=82]	Employed in the private sector [N=98]	
Were you forced to work from home during the COVID-19 pandemic, n (%)					
Yes	28.7% (58)	18.2% (4)	39% (32)	22.4% (22)	<0.001[a]
No	44.1% (89)	22.7% (5)	45.1% (37)	48% (47)	
It was my choice	27.2% (55)	59.1% (13)	15.9% (13)	29.6% (29)	
The living space in which you live is by structure, n (%)					
Studio apartment	2.5% (5)	0% (0)	1.2% (1)	4.1% (4)	0.332[a]
One bedroom apartment	26.7% (54)	18.2% (4)	23.2% (19)	31.6% (31)	
Two-bedroom apartment	36.1% (73)	40.9% (9)	32.9% (27)	37.8% (37)	
Three-bedroom apartment	27.2% (55)	36.4% (8)	34.1% (28)	19.4% (19)	
Other	7.4% (15)	4.5% (1)	8.5% (7)	7.1% (7)	
The number of household members who did the work from home	1.21±0.78 (0-4)	1.45±0.74	1.39±0.77	1.01±0.77	0.001[b]
Number of household members who had online classes	0.86±0.86 (0-4)	1.09±1.06	1.01±0.94	0.68±0.7	0.015[b]
Did you share your workspace with other housemates during the working day, n (%)					
Yes	52.5% (106)	59.1% (13)	56.1% (46)	48% (47)	0.445[a]
No	47.5% (96)	40.9% (9)	43.9% (36)	52% (51)	
In which part of the apartment did you work most often, n (%)					
Living room	42.6% (86)	50% (11)	43.9% (36)	39.8% (39)	0.116[a]
Working room	11.9% (24)	27.3% (6)	13.4% (11)	7.1% (7)	
Bedroom	11.9% (24)	9.1% (2)	13.4% (11)	11.2% (11)	
Dining room	13.4% (27)	9.1% (2)	12.2% (10)	15.3% (15)	
Terrace	0% (0)	0% (0)	0% (0)	0% (0)	
I didn't work from home	20.3% (41)	4.5% (1)	17.1% (14)	26.5% (26)	
Did you have to adjust the living space to the needs of working from home, n (%)					
Yes	26.2% (53)	18.2% (4)	31.7% (26)	23.5% (23)	0.302[a]
It was not necessary	73.8% (149)	81.8% (18)	68.3% (56)	76.5% (75)	
Have you exercised your right not to work as a parent of a child under the age of 11, n (%)					
Yes	12.9% (26)	13.6% (3)	15.9% (13)	10.2% (10)	0.655[a]
No	40.6% (82)	50% (11)	39% (32)	39.8% (39)	
I don't have children / I don't have children of that age	46.5% (94)	36.4% (8)	45.1% (37)	50% (49)	
Did you share time and space with the children during working hours, n (%)					
Yes	39.6% (80)	40.9% (9)	45.1% (37)	34.7% (34)	0.444[a]
No	19.3% (39)	27.3% (6)	18.3% (15)	18.4% (18)	
I don't live with children	41.1% (83)	31.8% (7)	36.6% (30)	46.9% (46)	
Did you have to dedicate a part of your working time to helping children learn during online classes, n (%)					
Yes	27.2% (55)	40.9% (9)	28% (23)	23.5% (23)	0.361[a]
No	31.7% (64)	27.3% (6)	35.4% (29)	29.6% (29)	
I don't live with children	41.1% (83)	31.8% (7)	36.6% (30)	46.9% (46)	
How do you heat and cool your living space, n (%)					
Single air conditioning units	57.4% (116)	54.5% (12)	53.7% (44)	61.2% (60)	0.271[a]
Multi split system / central air conditioning	16.3% (33)	31.8% (7)	19.5% (16)	10.2% (10)	
Pellets. wood and heating oil	15.8% (32)	4.5% (1)	17.1% (14)	17.3% (17)	
Radiators	7.4% (15)	4.5% (1)	6.1% (5)	9.2% (9)	
Other	3% (6)	4.5% (1)	3.7% (3)	2% (2)	
Degree of satisfaction with working conditions from home:					
Functionality	3.39±1.32 (1-5)	3.95±0.95	3.07±1.35	3.52±1.31	0.007[b]
Level of natural light	3.9±1.13 (1-5)	4.27±0.88	3.8±1.15	3.89±1.15	0.223[b]
Level of artificial lighting	3.74±1.19 (1-5)	4.23±0.87	3.55±1.25	3.8±1.17	0.048[b]
Noise level	3.23±1.42 (1-5)	3.91±1.27	3.06±1.42	3.22±1.43	0.045[b]
Internet connection / stability	4.04±1.08 (1-5)	4.55±0.74	3.88±1.14	4.06±1.06	0.034[b]
Psychological impact	3.2±1.34 (1-5)	3.73±1.03	2.98±1.39	3.28±1.34	0.049[b]
How work from home has affected the quality of work?	3.56±1.12 (1-5)	3.64±0.9	3.38±1.17	3.69±1.11	0.160[b]

Table IV Continued

	All [N=202] percentage (no. of respondents)	Employment Status percentage (no. of respondents)			P
		Employer /company owner [N=22]	Employed in the public sector [N=82]	Employed in the private sector [N=98]	
Was your living space sufficient to meet the needs of your work from home, n (%)					
Yes	70.3% (142)	90.9% (20)	64.6% (53)	70.4% (69)	0.057[a]
No	29.7% (60)	9.1% (2)	35.4% (29)	29.6% (29)	
How has working from home affected the electricity consumption in your home, n (%)					
bills have been increased	32.7% (66)	31.8% (7)	40.2% (33)	26.5% (26)	0.148[a]
bills have been reduced	0% (0)	0% (0)	0% (0)	0% (0)	
not affected	67.3% (136)	68.2% (15)	59.8% (49)	73.5% (72)	
If you had the opportunity to choose the mode of operation DURING the COVID-19 pandemic, what would you choose, n (%)					
In the office	33.7% (68)	50% (11)	26.8% (22)	35.7% (35)	0.288[a]
On line	9.9% (20)	9.1% (2)	12.2% (10)	8.2% (8)	
Combined	56.4% (114)	40.9% (9)	61% (50)	56.1% (55)	
If you had the opportunity to choose the mode of operation yourself AFTER THE END OF THE COVID-19 pandemic, what would you choose, n (%)					
In the office	54% (109)	72.7% (16)	56.1% (46)	48% (47)	0.096[a]
On line	0% (0)	0% (0)	0% (0)	0% (0)	
Combined	46% (93)	27.3% (6)	43.9% (36)	52% (51)	

Numerical variables are shown through mean ± standard deviation (Minimum-Maximum). Chi-square test; bANOVA test.

with other household members during the day[5] (Table IV).

Responders expressed the greatest level of satisfaction in the conditions of working from home when it comes to the Internet connection 4.04±1.08, then the level of daylight (3.9±1.13) and the level of artificial lighting (3.74±1.19). Responders showed less satisfaction with the following aspects: functionality (3.39±1.32), noise level (3.23±1.42) and psychological impact (3.2±1.34). According to the employees, working from home has also influenced the quality of work (3.56±1.12). Residential space was sufficient to respond to the needs of the work from home, according to 70.3% of responders. The right to paid leave as a parent of a child under the age of 11 was used more by the employees in the public sector (15.9%), against company owners (13.6%) and private sector employees (10.2%).

The majority of responders (56.4%) said that they would choose a combined manner of work, if they had an opportunity to choose the manner of work during the Covid-19 pandemic, while 33.7% of responders would not leave the office and 9.9% of responders would choose the work from home. After the pandemic, nobody would like to work exclusively from home, but 46% of responders would like to remain in the combined manner of work. The number of those who want to work only in the offices increased (54%). These figures reflect the attitudes of all employees, regardless of the sector of work.

Having analysed individual parameters as the results of experience of the work from home during Covid-19 pandemic, several conclusions may be deduced. Our homes are being tested on flexibility and adjustability, along with new reality to learn and work simultaneously, during isolation period. Although the greatest number of responders during the work from home stayed in two-bedroom flats, the work was predominantly carried out in the living room. Only a small percentage of responders worked within their workroom. This data may indicate the fact that in today's practice, flats do not have workroom. Beneficiaries are forced to use living room and dining space for work. As opposed to socialist residence concepts in these regions that has working unit, today's concepts of residence exclude even the dining room as autonomous space. It is interesting that the highest percentage of responders thought that spatial conditions under which they worked fulfilled the needs of the work from home.

Having analysed all results mentioned above, related to the experience of work from home during the Covid-19 pandemic, it can be concluded that although forced to partially adjust

5 The highest percentage of responders (42.6%) worked in the living room, while 73.8% responders did not need to adjust residential space to the needs for work from home. On average, one family member worked from home (1.21±0.78), while approximately the same number attended remote school from home (0.86±0.86). The right to be absent from work as the parents of children aged under 11 years was exercised by 12.9% of responders, while 39.6% of responders shared the time and space with their children. During their working time, support to children in learning was provided by 27.2% of responders.

their work and residential space to the new conditions, the respondents shared it with other family members.

However, they were mostly satisfied with such a concept of work which is based on a combined business model. Such parameters change in favour of office space, when it comes to the business model outside the pandemic conditions. The Federation of Employers of Montenegro (2021) indicate the possibility of examining future business practices. The complexity of work from home is closely related to the gender of the employee, position in the company, number of household members, presence of children against their age (Ipsen et al., 2021).

Consequences of Working from Home during the Covid-19 Pandemic

With the aim of examining which independent variable influences the attitude of responders on whether in the post-pandemic period they would choose to work from office or they prefer the combined manner of work, we used the binary logistic regression. At first, the influence of each individual variable was examined by the univariant logistic regression. For easy reference, we provided only the results of the variables that provided a statistically important contribution to the explanation dependent variable. The multivariant logistic regression was implemented, whereby independent variables were all those that show statistically important results in a univariant analysis.

Individual statistically important predictors were distinguished[6] (Table V). In a multi-variant analysis, a statistically important contribution to the explanation of the preferences of the work from home or combined manner of work is influenced by the age (Wald=9.630, p=0.002) and level of satisfaction with the functionality of the workspace (Wald=9.828, p=0.002). The direction Exp(B) did not move, so we can conclude that older responders and those satisfied with the functionality of the workspace prefer office work/workspace.

If all the findings of the regression analysis are taken into account, which preference of combined manner of work or office work depend on is what was examined, providing the conclusion that this preference depends on personal characteristics of the responders (age), characteristics of workspace (functionality), conditions of work from home (noise level and psychological impact) and the consideration whether working from home influences the quality of work or not.

Discussion

The Covid-19 pandemic has significantly changed the perception of work and work attitudes of employed people. The results of the research, in case of Podgorica, indicate that the post-Covid model, besides a combined (hybrid) manner of work, emphasizes the need of the employees for the return in physical offices.

Developing a framework to address the complexities of the post pandemic return to the physical office highlighted the hybrid way of working (Work from Home & Office) as sustainable in the post-pandemic period (Sailer et al, 2023; Simanjuntak et al., 2023). It has also impacted the management in terms of cost. Sailer et al. (2023) also points 5 main topics that should be solved in the post-pandemic period, such as: work place for the staff and existing facility, spatial reorganization, the management adoption into new practice and new supporting technology. The human resource trends and innovations are essential to examine (Utama, 2023), by introducing employee wellness programs, flexible diverse and inclusive workplace that supports employee communication, well-being, productivity and engagement (Dias et al., 2023). The new office design should respect dynamic working schedules and functional needs organized by private and public circulation (Aksamija, Milosevic, 2023). Close to the home unit, a new office should have great daylight and accessibility to adopt home habits. The existing offices should make a renovation design process to adopt hybrid office structure into existing layouts. The new needs of hybrid workplace, both physical and digital, have to meet the needs of the post-pandemic environment (Kamis et al., 2023). Perspectives on workplace provide well-functioning spaces and a more comfortable and inclusive working environment, developing a framework for returning to the physical office (Sailer et al., 2023). Richter (2024) suggests the 3P model of hybrid work: "Practices, Protocols and Persistency", as optimal hybrid

6 Age (Wald=4.944, p=0.026), level of satisfaction with the functionality of the workspace (Wald=4.159, p=0.041), level of satisfaction with the conditions of the work from home: noise level (Wald=3.761, p=0.052), level of satisfaction with the conditions of the work from home: psychological impact (Wald=4.514, p=0.034) and the impact of the work from home to the quality of work (Wald=5.111, p=0.024).

Older responders prefer office work (Exp(B)=0.936, 95% C.I.for EXP(B): 0.883-0.992). Higher satisfaction with the functionality of the workspace, the responders prefer office work (Exp(B)=0.614, 95% C.I. for EXP(B): 0.384-0.981). However, responders that were satisfied with the level of noise in the conditions of the work from home Exp(B)=1.413, 95% C.I. for EXP(B): 0.996-2.004),

Table V Relationship between choices of work operation and research variables

Independent variables:	Univariate binary logistic regression							
	B	S.E.	Wald	df	p	Exp (B)	95% C.I.for EXP(B)	
							Lower	Upper
Age	-0.066	0.030	4.944	1.000	0.026	0.936	0.883	0.992
Degree of satisfaction with the functionality of the workspace	-0.488	0.239	4.159	1.000	0.041	0.614	0.384	0.981
Degree of satisfaction with working conditions from home: noise level	0.346	0.178	3.761	1.000	0.052	1.413	0.996	2.004
Degree of satisfaction with working conditions from home: psychological impact	0.444	0.209	4.514	1.000	0.034	1.559	1.035	2.348
The impact of working from home on the quality of work	0.472	0.209	5.111	1.000	0.024	1.604	1.065	2.416
Independent variables:	**Multivariate binary logistic regression**							
	B	S.E.	Wald	df	p	Exp (B)	95% C.I.for EXP(B)	
							Lower	Upper
Age	-0.070	0.023	9.630	1.000	0.002	0.932	0.892	0.974
Degree of satisfaction with the functionality of the workspace from home	-0.441	0.141	9.828	1.000	0.002	0.643	0.488	0.848
Degree of satisfaction with working conditions from home: noise level	0.120	0.128	0.873	1.000	0.350	1.127	0.877	1.449
Degree of satisfaction with working conditions from home: psychological impact	0.084	0.140	0.362	1.000	0.547	1.088	0.827	1.431
The impact of working from home on the quality of work	0.286	0.155	3.415	1.000	0.065	1.331	0.983	1.802

Dependent variable: If you had the opportunity to choose the mode of operation after the end of the COVID-19 pandemic, what would you choose: Physical in the office = 0, Combined = 1.

work arrangements across various organizational contexts.

A direct influence and experience of responders, consideration of advantages and disadvantages of previous and new models, lead to the conclusion that the key is in the design of workspace which will ensure adequate distance, a smaller number of users along with the respect of sustainability idea and reduction of negative influences for public health and environment. The employees regard the return to their office as the ground for resocialization, interaction, sense of belonging to the community, intense cooperation and live communication, better access to equipment and concentration to work (Colenberg, Keyson, 2021). The manner of work shall never be the same as before the pandemic, from the organization of work place to the perception of work. Bhamra and Lofthouse (2016) in book *Design for Sustainability* point out that sustainability is an approach to architectural design, which offers a wide range of design inputs, such as: environmental efficiency, responsible, holistic, contextual, restorative, visionary and synergy design, along with solving problems such as comfort, aesthetics and costs. A new standard in the design of offices is increasingly closer to the cellular type, since again the accent is put on "I" space against the "WE" space (Tanis, 2008). In the combined system of work place organization, the number of users of the space may be controlled, appropriate ventilation of individual cells may be achieved, and thus thermic and visual balance better achieved.

The results of this research indicate that for less than a year, the ratio changed significantly in favour of responders who wanted to return to their offices, so the percentage of 33.7% of responders who opted only for office work increased to 54%. Others approved combined manner of work, while nobody wanted to continue their work only on online platforms.

Although work from home may help the employees avoid long and stressful commutes and have more time for family, reaching the balance between professional and private life is impossible. Keeping the balance between professional and private life may be a particular challenge for those obliged to take care of the family, due to the closure of kindergartens and schools, in the absence of alternative care providing systems. Work from home frequently leads to blurring the borders between professional and private life, increase of working time and intensification of work. Work from home denies the boundaries of private life which may have a negative influence on the

as well as those who perceived the psychological impact of working from home as positive (Exp(B)=1.559, 95% C.I. for EXP(B): 1.035-2.348), but also those who thought that work from home had a positive impact on the quality of work (Exp(B)=1.604, 95% C.I. for EXP(B): 1.065-2.416) would prefer combined work (Table V).

In the multi-variant analysis, a statistically important contribution to the explanation of the preferences of the work from home or combined manner of work is influenced by age (Wald=9.630, p=0.002) and level of satisfaction with the functionality of workspace (Wald=9.828, p=0.002). The direction Exp(B) did not move, so we can conclude that older responders and those satisfied with the functionality of workspace prefer office work/workspace.

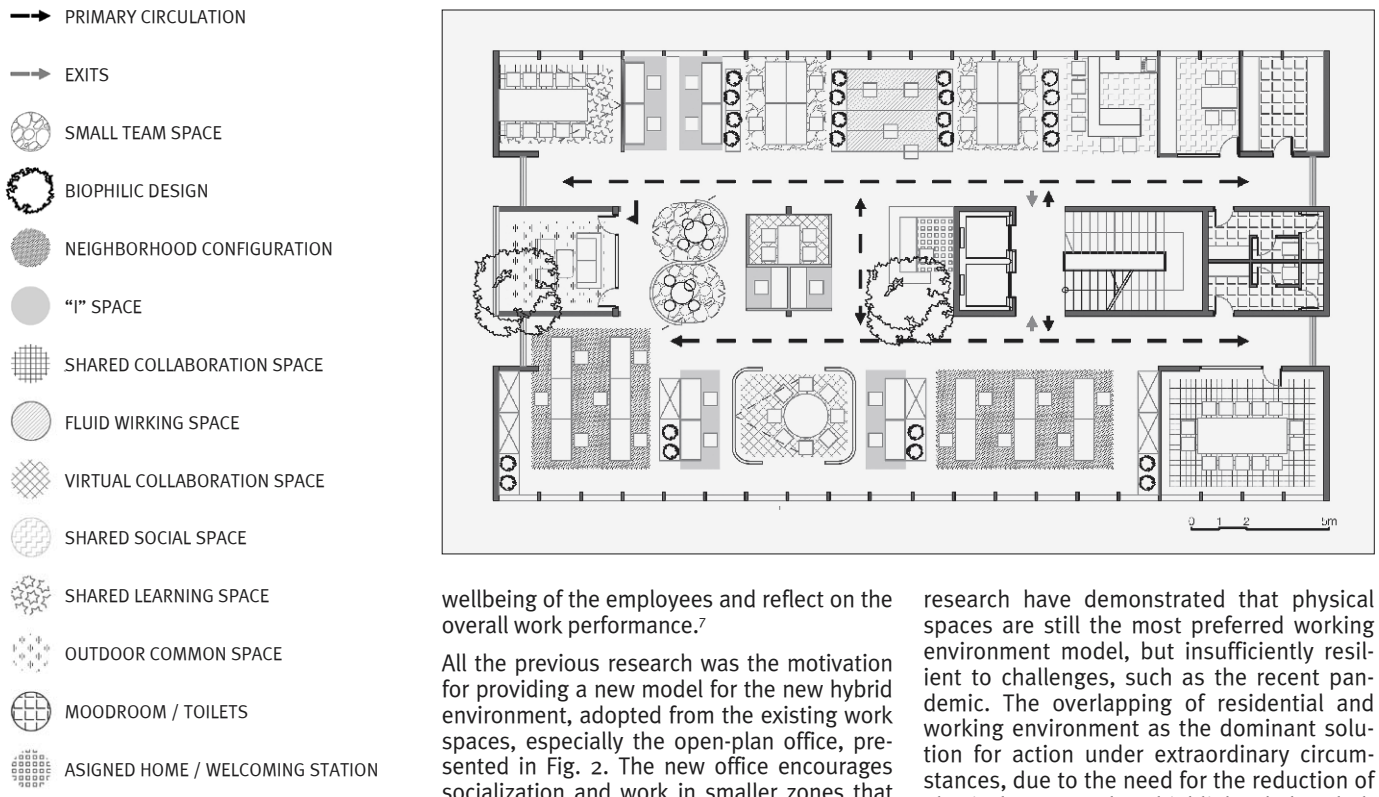

Fig. 2 From open-plan system to post-covid office that is environmentally friendly

wellbeing of the employees and reflect on the overall work performance.[7]

All the previous research was the motivation for providing a new model for the new hybrid environment, adopted from the existing work spaces, especially the open-plan office, presented in Fig. 2. The new office encourages socialization and work in smaller zones that can be properly conditioned. The primary workstations are located next to the openings and the employees are directed to each other. The scenes are resilient and changeable, the furniture is modular so that the employee can be alone or work in a group. There are open spaces, bars, kitchens, as well as reception areas. It also has elements for unconventional (fluid) work. Hybrid office should help to find balance between home and work, by finding possible shapes and variations of new offices, as well as those which might support desired organizational outcomes and strategies.

Thermal and visual comfort of workspaces may be achieved by a multiple approach including adopted bioclimatic architectural principles and energy performances, with the respect for expected requirements of the beneficiaries of workspaces under extraordinary circumstances – such as during the Covid-19 pandemic.

Conclusion

The Covid-19 pandemic has emphasized a number of limitations in the functioning of conventional workspaces. Such limitations are visible, even in advanced architectural working environments, particularly in terms of flexibility, adjustability, environmental and energy performances, microclimate and social and psychological wellbeing. The results of the questionnaire conducted within this research have demonstrated that physical spaces are still the most preferred working environment model, but insufficiently resilient to challenges, such as the recent pandemic. The overlapping of residential and working environment as the dominant solution for action under extraordinary circumstances, due to the need for the reduction of physical contact, has highlighted the challenges of other parameters such as: air quality, ventilation, thermic comfort, micro-climate, mental health, anxiety, relaxation and the like. The conducted study shows that it is necessary to define possible work scenarios under extraordinary circumstances, particularly in case of the overlapping of working, life and recreation activities. Virtual communication technologies, contactless activities, internet and similar may contribute to a more resistant organization of working conditions. The example of Podgorica in the results of the research has served to show that physical workspaces remain the preferred working model in the post-pandemic period with the possibility to adjust to the hybrid working regime. This indicates the need to question conventional models of architectural design of workspaces, as well as the need for the development of new design paradigm of these spaces with a considerably higher level of sustainability, resilience and safety. Based on the results of the questionnaire and a comprehensive analysis of available literature, a new hybrid model for resilient work environment has been proposed.

Future research should be conducted in order provide better conditions for employees in administrative offices, through architectural and design solutions, leading to well-being and a more productive work environment.

[Translated by Ivana Vučinić]

7 Parents who work might need to get involved in learning from home, monitoring and care of the children of school age, or there might be several family members who share the same space for online learning or work from home. 39.6% of employees had to share home workspace with children during the pandemic, while only 12.9% used the right to paid leave for parents with children under the age of 11. Family duties of workers, necessity of sharing workspace or even tension in a relationship or domestic violence may obstruct their working obligations, change the order of work and influence work performance and productivity.

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Source of illustrations

Figs. 1-2 Adapted from: Paunović Žarić, 2022

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