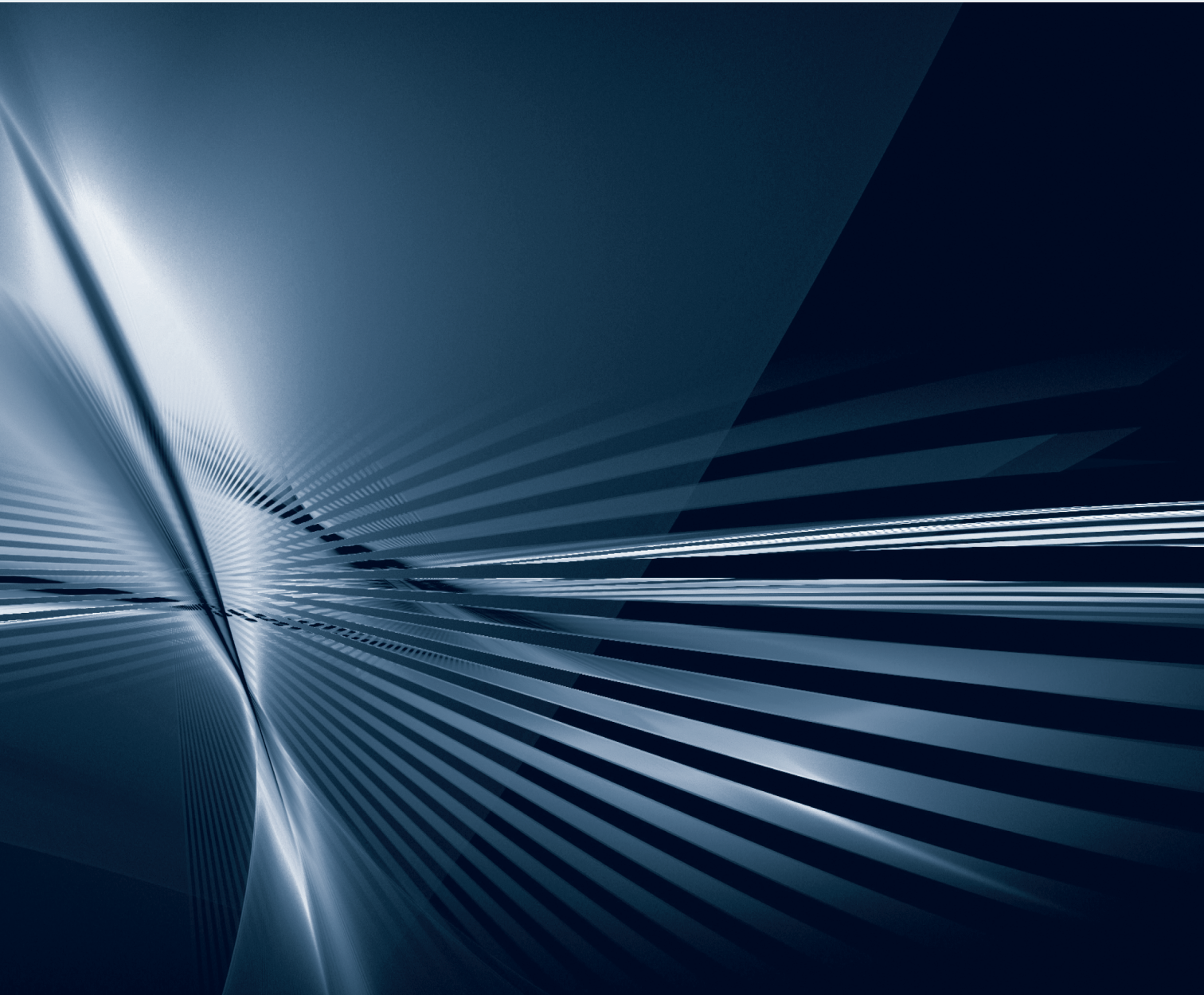


ORGANIZACIJA

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ORGANIZACIJA

Organizacija (Journal of Management, Informatics and Human Resources) is an interdisciplinary peer-reviewed journal which is open to contributions of high quality, from any perspective relevant to the organizational phenomena.

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- management človeških virov (kot so organizacija in razvoj zaposlenih, vodenje, ustvarjanje vrednosti s pomočjo človeških virov, organizacijski pojavi na delovnem mestu itd.);
- vodstveni in podjetniški vidiki izobraževanja;
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- podjetniški inženiring (npr. organizacijsko oblikovanje, upravljanje poslovnih procesov, paradigme preoblikovanja podjetij itd.);
- članki, ki analizirajo organizacijsko uspešnost in prizadevanja za izboljšanje le-te.

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Motherhood Gap and Employer Discrimination. A Qualitative Investigation in the German Context

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Background: Motherhood penalty has often been considered the base for the wage gap and the glass ceiling phenomena. It represents a delicate topic in gender equality since its effects tend to persist over medium to long time periods and its validity holds in most countries. The study has been designed to investigate the specific contribution of employer discrimination to the overall motherhood penalty in socioeconomic contexts characterized by the archetype of the “male breadwinner model”, which has been further exacerbated by the recent Covid-19 pandemic.

Methods: The employer discrimination phenomenon has often been treated as a black box, since longitudinal data and panel regression modelling were unsuitable to assess the magnitude of the effect of this variable on the overall motherhood penalty. For this study, we addressed this gap by focusing on employer discrimination in the specific context of Germany. The work is based on data generated from a survey conducted among 2,130 working mothers and it is presented as a qualitative content analysis.

Results: Our qualitative angle on the employer discrimination phenomenon confirmed previous quantitative investigations. Firstly, the employer attitude toward working mothers conformed to the “second shift” hypothesis, with highly skilled mothers in managerial roles in particular experiencing the largest motherhood gap in our sample. Secondly, we found confirmation for the theory of human capital, with working mothers seeing their career progression come to a halt or temporary slowdown, and pending salary increases not implemented as originally planned. Finally, we found employer discrimination taking various forms, the most frequent being a mismatch between skills level of the working mothers and the suggested new role post parental leave.

Conclusion: Our study confirms the previous academic investigations on the topic discussing the antecedents of the motherhood gap, namely the “second shift” hypothesis and the work-effort hypothesis. Ultimately, employers seem to trigger, voluntarily or not, certain career choices for working mothers (e.g., “mother-friendly” arrangements) which cause the motherhood gap to increase, and thus further reinforce the traditional male breadwinner model.

Keywords: *Gender studies, Motherhood penalty, Employer discrimination, Glass ceiling, Content analysis*

1 Introduction

In recent years, considerable efforts have been made to investigate the negative wage effect of motherhood, the so-called motherhood penalty (Adda et al., 2017). This phenomenon, which could be summarised as a lower hourly

pay for working women, is partly explained by mothers’ work interruptions and subsequent re-entry into the workforce. Parental leave represents a delicate topic in gender equality, having been found to be more detrimental than any other form of work interruption (Baum, 2002). In addition, the wage gap triggered by motherhood also tends to

persist over medium to long timeframes (Abendroth et al., 2014; Lundberg & Rose, 2000).

Academic studies have confirmed that motherhood penalty is an almost universal phenomenon. In their meta-analysis, Cukrowska-Torzewska and Matysiak (2020) analysed 208 wage effects of having one child and 245 wage effects of the total number of children and found that, while each child of mothers with multiple children is associated with an average wage drop of 3.6 percent, having only one child will lead to a wage decline of around 3.8 percent.

Of course, differences in sampling and model specification originate from country-specific peculiarities regarding the motherhood penalty, namely:

- In the UK, a wage penalty equal to 9 percent for the first child and 16 percent for the second child has been reported (Waldfogel, 1997). A recent study in the same geographical context compared mothers to childless women, estimating that the medium- and long-term earnings penalty for working mothers was 46 percent (Vagni & Breen, 2021);
- In Sweden, wage costs amount to 2 percent per year of child-related work interruption (Albrecht et al., 1999) while in Denmark, the investigations on residual wage penalty seem to be inconclusive (Gupta & Smith, 2002). In this regard, a recent comprehensive study on employment and earnings trajectories in Europe confirmed that the geographical context matters, with smaller wage gaps reported in countries with higher female labour force, such as the Scandinavian region (Muller et al., 2020);

In the specific context of Germany, Ondrich et al. (2003) estimated that each month of parental leave reduces post-break wage growth by 1.5 percent. A subsequent study by Ziefle (2004) confirmed a persistent wage loss of 5 percent per year of work interruption. Finally, Harkness and Waldfogel (2003) estimated a significant wage loss of 10 percent and more after a second birth. Parental leave regulations can, however, mitigate the negative effects related to work interruptions (Baum, 2002; Gangl & Ziefle, 2009; Ziefle, 2004).

Germany, in particular West-Germany, represents a very interesting scenario for motherhood wage gap analysis because of the dominance of the “male breadwinner model”, with the man usually taking on the paid work and the woman shouldering the bulk of unpaid work at home, including childcare (Adema et al., 2017; Barnes, 2015; Ziegler, Graml, Khachatryan, & Uli, 2022). On this basis, the motherhood gap constitutes a strong antecedent for the broader gender gap and glass ceiling phenomena (Guillaume & Pochic, 2009). In addition, the recent Covid-19 pandemic has exacerbated the caregiving responsibilities of working parents, in general, and mothers, more specif-

ically, and, therefore, the gender gap has widened even further (Clark et al., 2020; Collins et al., 2021). In this regard, a recent literature review by Ziegler et al. (2022) found that the Covid-19 pandemic did not produce strong and consistent macrodynamic changes on gender gap, thus contradicting both the backlash and the gender convergence hypotheses. Other major findings include: i) There seems to have been a general increase in equal childcare responsibilities, even though, on average, mothers still carry the heavier load; ii) Mothers in dual-career couples were more exposed to work-hour reductions or losing their job completely; iii) Temporary gender convergence shifts were largely motivated by female working arrangements and/or necessity; iv) A new gap in psychological distress emerged for working mothers compared to both men and childless women (Ziegler, Graml, & Uli, 2022).

Extant literature has found that the main drivers responsible for the motherhood gap are the loss of job experience, the decrease in productivity at work, accepting mother-friendly jobs, and being discriminated against by employers. While the first three antecedents, as we discuss at length in the theoretical framework section, have been extensively investigated, employer discrimination has always been treated as a black box. Indeed, motherhood penalty studies normally adopted longitudinal data and panel regression modelling to assess the magnitude of the penalty. Employer and institutional discrimination present two main methodological issues. Firstly, the evidence of employer bias to date is indirect at best (Correll et al., 2007), providing only a partial view of employer biases in hiring, promotions, and other work practices. Secondly, we lack compelling evidence on how different job contexts shape employers’ perceptions of mothers’ fitness for a particular job (Glass & Fodor, 2018).

The goal of this paper, positioned within the research field on female labour supply, untangle the black box represented by the employer discrimination phenomenon – and its related implications – within the more general framework of motherhood penalty in the specific context of Germany. By doing so, the authors hope to provide a more comprehensive interpretation of the impact of motherhood penalty on working mothers’ professional avenues.

The research, based on data generated from a survey conducted among 2,130 working mothers, is presented as a qualitative content analysis (Mayring, 2015). In this regard, the material collected has been organised and analysed according to a set of codes, adopting both deductive and inductive approaches and resulting in the creation of a category grid with several main and sub-categories (Hahn, 2008).

This paper is structured as follows: In Section 2, we present the theoretical framework of motherhood penalty, focusing on the most relevant and recent sub-streams of the topic (i.e. human capital theory, work-effort theory, compensating differential theory and employer discrimina-

tion); in Section 3, we outline the methodology; in Section 4, we present the results obtained through our content analysis; and, finally, in Section 5, we promote a discussion on this subject by comparing our results with essential findings from previous works.

2 Theoretical background

Over the years, scholars have intensely investigated the antecedents of the motherhood penalty phenomenon. The most recent meta-analysis on the topic (Arena Jr et al., 2023; Cukrowska-Torzewska & Matysiak, 2020; Kelley et al., 2020) confirmed that working mothers may earn less than other women with similar skill sets and employed in similar job roles, because having children would imply, at least from a theoretical standpoint, the following outcomes:

- i) Losing job experience, which stems from the human capital theory and is a direct consequence of taking time off work (Gangl & Ziefle, 2009; Napari, 2010);
- ii) Being less productive at work, which depends upon dividing their focus between their job and child rearing (Anderson et al., 2003);
- iii) Accepting mother-friendly jobs, which would entail making potentially detrimental career decisions based on their role as mothers (Felfe, 2012);
- iv) Being discriminated against by employers (Budig & England, 2001; Correll et al., 2007; Cukrowska-Torzewska & Matysiak, 2020; Kelley et al., 2020).

The motherhood penalty therefore constitutes a well-investigated phenomenon in developed countries; recently it has also been tested and verified in developing countries, demonstrating that it represents a topic of interest on a global scale (Gao & Tian, 2022; Kim & Hahn, 2022; Querejeta & Bucheli, 2023).

In the following four sub-paragraphs, we will discuss each of the aforementioned implications to gain a better understanding of the theoretical underpinnings of the motherhood gap. In this regard, we decided to present all determinants discussed in literature for two reasons: Firstly, as anticipated in the introduction, the phenomenon of employer discrimination has always been considered as residual compared to the other antecedents. Therefore, the specific literature to date about the impact of employer discrimination on motherhood penalty is, to the best of our knowledge, still limited. Secondly, the analysis of our sample suggests that the effects of employer discrimination tend to overlap with the effects of other determinants. Therefore, presenting the entirety of the theoretical framework would be advantageous when “connecting the dots” with earlier investigations on the topic.

2.1 Human capital

As anticipated above, the human capital descriptor can be immediately traced back to the theory of human capital (Becker, 1985), which implies that the motherhood wage gap could be explained by the accumulated work experience divide between mothers and non-mothers caused by child-related employment breaks or reduced working hours.

Most of the academic research agrees on the human capital theory as the major driver behind the motherhood wage gap penalty, although some studies show that human capital only explains part of the wage gap (Budig & England, 2001) and differs across countries, with the UK and the US well explained, but not Germany (Gangl & Ziefle, 2009). In any case, the research on pre- and post-birth periods has clearly identified a wage penalty around the time of a birth and only for women.

The intuitive explanation behind this phenomenon is that employment interruptions (or periods of part-time work) trigger skills-depreciation dynamics (i.e., slowing the acquisition of job experience), which have a negative impact on both short- and long-term occupational gains for working mothers (Abendroth et al., 2014). In addition, work interruptions may lead to post-birth lower occupational status, especially if women accept part-time jobs (Dex et al., 2008).

Some studies analysed the impact of the length of maternal leave on the magnitude of the gap; in this regard, Felmler (1995) concluded that women who maintained continuous employment, even changing their pre-birth employers, were less exposed to the motherhood gap, and ultimately saw an increase in wages compared with women who were out of the labour force between jobs.

Finally, there is still an open debate in literature regarding the relationship between skills level and motherhood penalty, conventionally expressed as a percentage wage gap between working mothers and childless women. Work-effort theory implies that highly skilled women suffer a higher wage penalty than less qualified working mothers (Anderson et al., 2003; England et al., 2016; Wilde et al., 2010). On average, more educated women tend to have jobs in which effort is relatively important and where employers promote visibility rather than performance in the context of performance appraisal. On the other hand, research has also found support for the opposite argument, i.e., that wage gaps are, in fact, not lower, but even greater among women working in low-skilled job roles (Budig & Hodges, 2010).

2.2 Reduced productivity

A further driver behind motherhood penalty is reduced productivity, which possesses the same determinants that

have a negative effect on working mothers as human capital does. In this instance, however, the loss of job experience depends upon the child-bearing activity, which leads to exhaustion or distraction at work, and consequently makes working mothers less productive. This loss of productivity would therefore raise the amount of overtime and, ultimately, result in loss of job experience. Moreover, the loss of productivity could also be a by-product of the so-called “second shift” that working mothers are normally subject to in the traditional male breadwinner model. This hypothesis originates from the assumption that non-mothers do not have to spend their time off work dealing with family-related duties and therefore have more energy for their paid work (Budig & England, 2001). The second shift phenomenon may also be one of the possible explanations behind the decision of working mothers to be relegated to less demanding occupations. Worrying about children while at work (e.g., calling them at home, planning their time and activities, etc.) can also impact productivity (Parrott, 2014).

Despite being such an important determinant for motherhood penalty, in literature the measure of productivity has always been treated as a black box, with residual effects of motherhood penalty not explained by other variables (Kelley et al., 2020).

If we subscribe to the effort hypothesis notion, then better educated women with important job roles and small children should report the highest motherhood penalty gap. In this regard, Anderson et al. (2002) found that the wage gap is highest for mothers with small children, but not for highly skilled mothers. The same conclusion was reached by Azmat and Ferrer (2017), who showed that “billable hours” (i.e., a measure of productivity commonly accepted in U.S. law firms because of its direct effect on revenue) explain a substantial share of the motherhood gap, since childbearing directly and negatively impacted billable hours for working mothers.

2.3 “Mother-friendly” jobs

The concept of “mother-friendly” jobs revolves around the theory of compensating differentials. This broad definition comprises all those work-related arrangements which are aimed at reducing the workload of women. More specifically, reduced time or part-time jobs, flexible arrangements in terms of working time windows, reduced travelling and a low-stress work environment may all be classified as mother-friendly occupations. In those instances, higher wages and positions are traded in for employment that is more suitable to family and parenting duties. Dex et al. (2008) found that motherhood often implies a shift for working mothers away from high-status jobs to less demanding occupations. Multiple investigations carried out in Norway, the UK, the US, and Germany have concluded that the motherhood wage gap is often due to

different occupations rather than intra-differences in pay between mothers and non-mothers (Gangl & Ziefle, 2009; Petersen et al., 2010). As anticipated above, childbirth may reinforce the traditional male breadwinner model, with working mothers often opting for reduced work hours (Drobnič et al., 1999), more secure and predictable jobs (Desai & Waite, 1991) and, more generally, family-friendly work arrangements (J. Glass, 2004; Österbacka & Räsänen, 2022). Recent trends, however, have confirmed that these supply-side dynamics have been challenged by the quick re-entry of working mothers in the labour market. In addition, it has recently been shown that parenthood exerts a positive effect on transformational leadership behaviour, thus fostering the leadership attitude after the period of parental leave (Stellner, 2022).

The contribution of the “mother-friendly” jobs descriptor to the motherhood gap seems inconclusive. Some studies have maintained that only a marginal portion of the gap is explained by work adjustments (Budig & England, 2001; Felfe, 2012; Waldfogel, 1997). Others, however, have shown that pre-school children are an obstacle to career progression, as they reduce the mobility of working mothers (Looze, 2017). Ultimately, mothers tend to choose family-friendly employment, often within the public sector, in order to find the best work-life balance (Simonsen & Skipper, 2006).

2.4 Employer discrimination

Anderson et al. (2003) found that, collectively, the antecedents discussed in the previous sections (i.e., human capital, occupational, and household resource variables) only account for 24 percent of the total wage penalty for women with one child and 44 percent for women with two or more children. In the same vein, Budig and England (2001), after checking for occupational variables, concluded that the residual wage gap originates from a combination of decrease in productivity (Correll et al., 2007; England, 2010) and employer discrimination against mothers.

Employer discrimination can manifest in peculiar outcomes such as assigning mothers to fewer rewarding jobs or hindering their chances to be hired or promoted (Aranda & Glick, 2014). These employer attitudes may constitute the base for the so-called “glass ceiling” phenomenon, where women, in general, and working mothers, more specifically, are prevented from reaching management positions and wage equality (Gough & Noonan, 2013). In addition, these demand-side discriminations cause motherhood costs which never vanish completely, even in the long-run (Abendroth et al., 2014).

As one would expect, testing for employer discrimination has always been a very delicate and sensitive topic in research. In this regard, the experiment performed by Correll et al. (2007) seems to confirm that mothers are perceived as less competent than childless women. Evidence

of employer bias has been studied in the U.S. context, where some women have been forced to pull back or drop out of paid work, while some mothers have been able to sustain careers (Damaske, 2011).

Ultimately, scholars concur that employer bias contributes to the motherhood gap, with most quantitative investigations focusing on measurable occupational variables and most qualitative studies focusing on mothers' perceptions about employer bias.

3 Methodology

The authors conducted the survey for the 2nd Frankfurt Career Study on Career Perspectives of Working Mothers, following a similar survey conducted in 2010. The working mothers were approached via major women's associations, unions, and social network interest groups in Germany. Both the associations and the interest groups were asked to distribute the link to our survey to their members.

The relevant data on working mothers were collected using an online survey created with the survey tool Survey Monkey and carried out between 13 January 2017 and 11 May 2017. A total of 2,130 women took part in the survey. 1,879 of them were currently employed. The adjusted sample includes 2,000 mothers who were either employed at the time of the survey or had been employed at some point in the past.

Compared to the national average, the sample includes working mothers who were younger, better educated, had more children and worked predominantly for larger companies. The composition of the sample of working mothers is consistent with the geographical distribution between West and East Germany. The authors are nevertheless aware that the results cannot be readily compared with the underlying population, as the sample of the online survey was self-selecting. Nevertheless, we believe that the results are particularly meaningful for the segment of highly qualified mothers working for larger companies.

The results presented in the following sections were not influenced by the data collection period, since socio-demographic changes would require longer timeframes to manifest. In addition, the qualitative approach adopted in this work has been found to be particularly time-consuming; however, as discussed previously, it was the most fitting methodological approach to effectively investigate the phenomenon under analysis.

The survey used several partially closed-ended questions to allow for detailed analysis of as broad a range of expressions of disadvantage among working mothers as possible.

In this paper, qualitative analyses of the open-ended response option "Other" are presented in addition to quantitative analyses of the pre-written response categories. In the case of the additional open categories, the survey participants were able to enter their own response option,

which differed from the pre-formulated categories.

We performed our qualitative content analysis using the summarizing procedure according to Mayring (2015). This methodology implied, firstly, the determination of category definitions for inductive categories based on our research questions; then we proceeded with a step-by-step formulation of inductive categories from the material, continuously testing and revising the categories we established. Ultimately, several (inductive) categories emerged during this coding process. Open answers to the analysis items were paraphrased, systematically shortened, and reduced to essential content. For each research question or theme presented in the following Section 4, "Results", we have included the category grids we adopted with the different levels of abstraction and sub-categories identified.

4 Results

4.1 Characteristics of the surveyed sample

The following table exemplifies the characteristics of the surveyed sample.

Age groups: Most participants (43 percent) were between 31 and 40 years old. 37 percent were 41-50 years old, and 14 percent were aged 51-60. The average age of our sample is 42 years old. Much younger and older age groups were represented only in a very small proportion, which is probably due to the topicality of the issue of having children or not for these groups.

Number of children and their age distribution: Eighty-six percent of the women surveyed were in a marriage or partnership. On average, the mothers surveyed had 1.8 children. Eleven percent of the children were between 0 and 2 years old, while 18 percent were 3-5 years old. Twenty-six percent were in the age group 6-10 at the time of the survey, and 27 percent were aged 11-18. Nineteen percent of the children were over the age of 19.

Level of education: The mothers surveyed had above-average qualifications. Eight percent of the respondents had a doctorate and 62 percent had completed (specialised) university studies.

Geographical distribution: 81 percent of the working mothers came from West Germany and 19 percent from East Germany including Berlin, which is a representative sample of the population in terms of East-West geography.

Employment situation: At the time of the survey, 94 percent of the women covered by the study were currently employed. The other six percent were housewives, retirees, students, or job seekers. The average workweek for mothers at the time of the survey was 31 hours. This data is consistent with the Gender Equality Index 2019, which states that, on average, women in Germany worked 30 hours per week that year (EIGE, 2019). Forty-one percent

of the mothers surveyed were employed as clerks and 16 percent as consultants in a company. Seventeen percent held a leadership position such as team leader, general manager, department or division manager.

Employer size: Sixty-five percent of the study participants were employed in a large company and 35 percent in a small or medium-sized company.

Before we begin our analyses of possible consequences of pregnancy and motherhood for the further professional career of future mothers, we feel it would be instructive to understand the perceived general attitude of managers towards pregnant employees and working mothers.

Table 1: Characteristics of the surveyed sample

Sociodemographic characteristics	
Age groups	
21-30 years old	6%
31-40 years old	43%
41-50 years old	37%
51-60 years old	14%
Over 60 years old	1%
Number of children (mean)	1,8
Partnership / marriage	86%
Highest level of education	
Secondary school leaving certificate	1%
Realschulabschluss ¹	5%
A-levels	3%
Completed training	22%
Completed studies	62%
Doctorate	8%
Geographical distribution	
West Germany	81%
East Germany	14%
Berlin	5%
Employment situation	
Employed	94%
Unemployed/Job seeker	6%
Average workweek (n. hours)	31
Employer size	
Large companies	65%
Small-Medium companies	35%

4.2 Perceived attitudes of managers towards working (expectant) mothers

In the following table, we present the coding strategy we followed, according to the protocol set out by Mayring (2015), regarding managers' attitudes towards working (expectant) mothers.

A large majority of study participants reported neutral to positive manager attitudes toward pregnant employees. Just under half of the study participants confirmed that pregnancy and children were normal for the respective manager and that the associated absence of the employee was bridged in the best possible way. Another 20 percent stated that their company recognised the socio-political importance of family and enabled employees to achieve a

¹ School-leaving certificate usually awarded after ten years of schooling and comparable with the British GCSE.

Table 2: Coding strategy – Managers' attitudes toward working (expectant) mothers

Category	Sub-categories
C1: Working mothers are not as present as other employees	C1a: Working mothers are not as present or reliable as other employees C1b: Working mothers are sick more often than other employees
C2: Working mothers perform as well as other employees	C2a: Working mothers show equal or more commitment compared to other employees C2b: Output at work depends on personal attitude rather than the mother status C2c: The superior has prior positive experience with working mothers
C3: Working mothers perform worse than other employees	C3a: Working mothers show a lower degree of flexibility C3b: Working mothers are often not available for duty travels, short-notice and evening meetings C3c: Working mothers often misuse home office arrangements C3d: Working mothers don't take on voluntary additional tasks or overtime
C4: Working mothers are not career-oriented	C4a: Working mothers require part-time positions C4b: Working mothers' time schedules are more difficult to manage C4c: Working mothers have more responsibilities toward family and children
C5: Mothers should not work (male bread-winner model)	C5a: Mothers should not work (male bread-winner model)

good work-life balance. However, a different picture could be discerned among nearly 30 percent of the female study participants: They confirmed the statement that, for the manager, pregnancy was an unwelcome complication of the work organisation.

The content analysis we performed on this specific subset of closed-ended questions revealed further interesting aspects. In summary, managers seem to view working mothers as i) frequently absent from the workplace, ii) not particularly well organised, and iii) someone who has to take more time off due to illness. The associated absence of the employees was accepted grudgingly, or it was even attempted to do without such female employees.

In addition to the general attitude of managers towards pregnant employees, several other factors naturally also play a role in the question of whether and how the expectant mother's further professional career in the company should proceed. The possibility of finding a replacement for the employee after the birth of the child, and keeping her job open for her, often depends on resources, which not every company can afford.

Reiterating what has been stated above, the most frequent statements were on the topic of presence in the company and flexibility (see, in particular, categories "C1: Working mothers are not as present as other employees" and "C3: Working mothers perform worse than other employees" and their sub-categories).

"Due to childcare, mothers are not flexible or only partially deployable; the promotion chances of childless women are therefore much higher" (CaseNo. 5240856843).

A common stereotype is that working mothers are often absent, while their time schedules are perceived as more difficult to manage than those of their male colleagues due to unpredictable and frequent sick leaves (in this regard, refer to categories C1 and C3, but also "C4: Working mothers are not career-oriented").

"They never schedule me for 100 percent of my working hours, because I might be absent more often due to the children. Yet they plan 100 percent of my (male) colleague's hours even though he, too, has a school-aged child. But according to my supervisor, the women (mothers) are mainly responsible for childcare, e.g., in case of illness, meaning that the men's full hours can be considered during worktime planning." (CaseNo. 5244878628).

Furthermore, many managers believe that family is or should be the first priority for working mothers and maintain that working mothers are, on average, not career-oriented.

"Working mothers are often seen as "Muttis", who are not primarily career-oriented, but instead 'doing a bit of work'" (CaseNo. 5188160380).

The social and parental role of the mother, and consequently the confirmation of the male breadwinner model (please refer to category "C5: Mothers should not work (male bread-winner model)", seems prevalent among our sample.

"Working mothers are normally seen as bad mothers who don't really care about their children" (CaseNo. 5216652037).

In the same vein, managers seem to equate being a

working mother with being an employee with low career aspirations and for whom work is mostly a sideline activity.

“Mothers automatically decided against career advancement when they decided to have children. Mothers should be glad they even have a job, the most important thing is that the content is right; money doesn’t matter so much. It has always been the case that women do not earn as much as their male colleagues.” (CaseNo. 5310292253).

“My manager thinks women belong in the kitchen – and if they do work, then only in clerical positions or part-time” (CaseNo. 5188034696).

However, part-time work often seems to be one of the main problems for working mothers (i.e., “C4a: Working mothers require part-time positions”).

“The role as mother tends to go unnoticed at work, working part-time is the much bigger issue” (CaseNo. 5289286645).

“Unfortunately, working part-time is currently seen as something negative in my department, because you are not available every day” (CaseNo. 5201185067).

Part-time employees are not looked upon favourably because they are deemed to cause more organisational work and are supposedly never around when you need them (e.g., C4b: Working mothers’ time schedules are more difficult to manage). Some managers also hold the view that part-time work is not compatible with a management position, meaning part-time employees are not promoted (e.g., C3b: Working mothers are often not available for duty travels, short-notice and evening meetings).

“Mothers who worked part-time had to make a disproportionate effort [...] to be noticed” (CaseNo. 5295961443).

“Behind closed doors, HR departments and decision-makers always have a worse opinion of mothers”

(CaseNo. 5223312597).

There were also statements about the positive image of mothers among managers, as identified in category “C2: Working mothers perform as well as other employees”. Some respondents reported good time management skills and a higher degree of loyalty.

“Though working mothers were not around as much, their output was good, they worked efficiently and were well organised. Their life experience benefits them” (CaseNo. 5189995468).

“Yes, mothers have to leave at some point, they can’t just stay late, travel, etc. But they also don’t change jobs at the drop of a hat; instead, they and their expertise stay with the company” (CaseNo. 5175791181).

4.3 Managers’ reactions during pregnancy in relation to upcoming career steps

In the following table, we present the coding strategy we followed, according to the protocol set out by Mayring (2015), regarding managers’ reactions during pregnancy in relation to upcoming career steps.

What happens to upcoming career moves when a company is informed about a pregnancy? Only one-fifth of the mothers who participated in the survey were able to execute impending career moves. Forty-five percent of the study participants had upcoming career developments put on hold for the time being and another 27 percent had their career prospects cancelled altogether.

One of the most-reported impacts of pregnancy on career advancements was that, in many cases, the career steps for the working mothers were put on hold (i.e., “C2:

Table 3: Coding strategy – Managers’ reactions during pregnancy in relation to upcoming career steps

Category	Sub-categories
C1: Pending career steps were implemented	C1: Pending career steps were implemented
C2: Pending career steps were put on hold	C2: Pending career steps were put on hold
C3: Pending career steps were cancelled	C3: Pending career steps were cancelled
C4: Job re-entry was hindered	C4a: Re-employment was not possible after parental leave C4b: Part-time was not possible after parental leave C4c: Abandonment/reduction of responsibility
C5: Predetermined career steps	C5a: Civil servant C5b: Collective bargaining agreements (i.e. union negotiations)
C6: Employment contract was terminated	C6a: Settlement agreement C6b: Position was filled with the temporary replacement employee C6c: Fixed term contracts was not extended

Pending career steps were put on hold”).

“I have been in the talent pool three times. During my first pregnancy, [my employer] took me out of the talent pool. After my first child, I managed to get back into the talent pool. Then I became pregnant with my second child and was again taken out of the talent pool. Even now, I am still in the talent pool, but unfortunately, in the last five years there has been no salary increase, no advancement, ...”. (CaseNo. 5189757179)

Some study participants also reported some more nuanced negative experiences with regard to further career steps, in the form of responsibilities being reduced or in the assignment of inferior tasks, resulting in career regression (e.g., in particular, “C4c: Abandonment/reduction of responsibility”).

“I had a project management position before my pregnancy. I was told to give up this position even while I was still pregnant” (CaseNo. 5197210224).

“After giving birth and taking one year of parental leave, I was forcibly transferred to a position that has little to do with my actual training and skills. That was a step backward” (CaseNo. 5313303450).

“After the birth and my maternity leave, I was assigned other (inferior) work, covering for absences (illness, vacation). I was told that, “after all, nobody else would be able to do all these different tasks...” – this continued until I took on another job in a different division of the company.” (CaseNo. 5305819037)

For some mothers, the demotion was so significant that it resulted in job loss or hindered job re-entry (i.e., categories “C6: Employment contract was terminated” and “C4: Job re-entry was hindered”, respectively).

“The option of further employment at this office location was excluded” (CaseNo. 5197277491)

“Re-employment after parental leave was even obstructed” (CaseNo. 5189104519)

Finally, for certain specific contract types, such as fixed-term contracts, the consequences of pregnancy for professional careers can often be quite drastic, with most

contracts not extended or terminated (i.e., category “C6: Employment contract was terminated”).

4.4 Managers’ reactions during pregnancy with regard to upcoming salary increases

In the following table, we present the coding strategy we followed, according to the protocol set out by Mayring (2015), regarding managers’ reactions during pregnancy with regard to upcoming salary increases.

For about half of the mothers to whom this question applied, upcoming salary increases were implemented as planned. For 8 percent, they were implemented at a reduced level, and for about one-third, they were cancelled completely.

For certain groups of working mothers, clustered under category “C4: Predetermined salary increase”, such as civil servants (sub-category C4a) or employees subject to collective bargaining agreements (sub-category C4b), salary increases were obviously not an issue.

“Salary steps are predetermined and linked to specific points in time” (CaseNo. 5294396209) (civil servant)

“Salary [...] is paid according to the collective bargaining agreement; the direct supervisor had no influence on this” (CaseNo. 5348840843) (collective bargaining agreement)

In government agencies, a salary increase is normally associated with a promotion, yet pregnancy-related time off was found to result in a lack of proactive promotion.

“Often, however, one is overlooked when the time comes for promotions, or the assessment is more neutral than positive because one has not been there for a long time” (CaseNo. 5307586531).

The perception of managers that working mothers are less present or reliable than other employees negatively impacts the performance appraisal and consequently the salary increase perspectives of working mothers (e.g.,

Table 4: Coding strategy – Managers’ reactions during pregnancy with regard to upcoming salary increases

Category	Sub-categories
C1: Pending salary increase was implemented as planned	C1: Pending salary increase was implemented as planned
C2: Pending salary increase was put on hold or implemented at a reduced rate	C2a: Pending salary increase was put on hold C2b: Pending salary increase was implemented at a reduced rate
C3: Pending salary increase was cancelled	C3a: Pending salary increase was cancelled (i.e. parental leave caused the motherhood gap)
C4: Predetermined salary increase	C4a: Civil servant C4b: Collective bargaining agreements (i.e. union negotiations)

“C2b: Pending salary was implemented at a reduced rate” and “Pending salary increase was cancelled (i.e., parental leave caused the motherhood gap”).

“Next appraisal will be difficult due to lack of time. Without a good appraisal, no promotion, no raise :-(“ (CaseNo. 5240855970).

“Last salary increase had already been approved. Then, for two years no raise due to one-year absence.” (CaseNo. 5333627080).

Another recurrent theme among our respondents which directly impacted decisions on salary increases were the type/responsibility of tasks performed. As discussed, job re-entry after maternal leave is often associated with reduced responsibilities for working mothers.

“Tasks that would have led to my upgrading [...] were cancelled” (CaseNo. 5197277491)

Another aspect that was frequently presented in our sample was the reduction of working hours, normally associated with the request for more flexible work arrangements, such as part-time.

“By reducing my working hours, any claims I had become void” (CaseNo. 5352976379).

“They wanted to put me in a lower pay grade when I returned from parental leave because, from the manager’s point of view, it was not possible to keep me on as a

part-time employee with the same pay grade.” (CaseNo. 5311410565)

“During my time with my children, I am sure that I often did not receive a salary increase even though I was entitled to it, just as a part-time employee. In the situation following the birth of my last child, I did receive a salary increase again after a while, but only because of my extraordinary commitment during that time.” (CaseNo. 5295970377).

Finally, the topic of visibility, perceived by our respondents as face time at work, is often one of the most important antecedents for salary increases.

“At our company, so-called ‘performance-related changes’ are not performance-related at all, but in fact visibility-related: half the hours, half the visibility.” (CaseNo. 5296032132).

4.5 Managers’ reactions during pregnancy in relation to position

In the following table, we present the coding strategy we followed, according to the protocol set out by Mayring (2015), regarding managers’ reactions during pregnancy in relation to the woman’s actual position.

Table 5: Coding strategy – Managers’ reactions during pregnancy in relation to position

Category	Definition	Coding rules
C1: The position was kept vacant and remained temporarily unoccupied	The position should: - be vacant - temporarily unoccupied - still exist	All three aspects of the definition must hold true, otherwise - C2, if not vacant and temporarily filled - C3, if filled permanently by another employee - C4, if eliminated
C2: The workplace was temporary filled by another employee	The position should: - be filled temporarily - still exist	Both aspects of the definition must hold true, otherwise - C1, if vacant and temporarily unoccupied - C3, if filled permanently by another employee - C4, if eliminated
C3: The position was permanently filled by another employee	The position should: - be filled permanently - still exist	Both aspects of the definition must hold true, otherwise - C1, if vacant and temporarily unoccupied - C3, if filled permanently by another employee - C4, if eliminated
C4: The position was eliminated	The position ceased to exist	The single aspect of the definition must hold true, otherwise - C1, if vacant and temporarily unoccupied - C3, if filled permanently by another employee - C4, if eliminated

Following the birth of their child, working mothers in Germany are entitled to take up to three years leave from work². In our sample, 64 percent of the working mothers took between 3 and 12 months parental leave.

The results of our study show that in one-fifth of the cases, the job was kept open and remained temporarily vacant. In 43 percent of the cases, the job was kept open and there was a temporary replacement solution. The picture is more negative for one-third of the study participants, whose job was either permanently filled by another employee (28 percent) or even cut completely (4 percent).

In addition, it is common for mothers to be offered other jobs within the company after parental leave. Some of our study participants reported that their wishes were taken into account when choosing a department or job.

“My position was filled, but after 2 years of maternity leave I was able to return to the department of my choice (I no longer wanted my old position)” (CaseNo. 5257906970)

Others reported that new jobs with equivalent tasks were offered.

“My place was filled by another employee, but I was given an adequate job with similar tasks after 10 months. There was enough work for both positions. We got along well” (CaseNo. 5308099050).

Some mothers saw these changes as an opportunity to acquire additional professional qualifications (“...I was assigned to a different department. This was positive for me, as it allowed me to become acquainted with new and welcome activities” (CaseNo. 5197434984)) or to have a somewhat stress-free job (“Transferred (voluntarily) during parental leave to a less stressful job after parental leave” (CaseNo. 5324656423).

However, there were also quite a few reports that tasks given after parental leave either did not match the qualifications or were undemanding and uninteresting.

“They kept my position open for me, but not my actual job. I was then assigned another job (with the same pay), but it had nothing to do with what I was good at or wanted to do” (CaseNo. 5309305727).

“A position was held open for me, but not the one I had before pregnancy. The tasks were made up of all the ones the others didn’t want to do. At least that was my impression” (CaseNo. 5197260127).

Frequently, the mother’s former job was permanently filled by another employee, while another, part-time position was created for her.

“Pressed by my boss, I arranged for full-time care for the baby at an extremely early stage. Nevertheless, my position was permanently filled by another employee. The explanation: even with full-time care, there was no guarantee that I would actually be available full-time (key words:

the child falling ill, days when the day-care centre was closed, nursery teachers going on strike, the need to work overtime at short notice...). They told me the position absolutely needed to be filled full-time and working overtime had to be possible at all times.” (CaseNo. 5315961944)

In some cases, jobs were reorganised, and mothers were given only a fraction of their former duties.

However, it was not uncommon for the mothers to hand in their resignations themselves. This was often done so they could take care of the children, but also because of negative reactions in the company. In some cases, professional reorientation was the reason for leaving the old job.

5 Discussion and implications

This work has been aimed at investigating one of the most overlooked determinants of the motherhood gap, employer discrimination. Indeed, in existing literature, most of the work done to explain this phenomenon has been of a quantitative nature. Therefore, the key determinants behind the perception of employer bias have been largely understated.

Our analysis profoundly resonates with the relevant literature presented in the theoretical framework. More specifically, the quotes generated through our content analysis originated from a large sample of observations accurately coded.

In general terms, respondents perceived their employer as biased against working mothers (i.e., Section 4.2, “Managers’ attitudes toward working (expectant) mothers”).

Being a mother seems to project the idea of less flexibility and mobility, and even when full availability is offered, they are often not scheduled for the whole working day (see, in particular, Section 4.2, categories “C1: Working mothers are not as present as other employees” and “C3: Working mothers perform worse than other employees”, and their sub-categories). This phenomenon can be explained by the “second shift” hypothesis: The employer, anticipating the high burden of family/maternal duties, would automatically assume a loss in productivity (Parrott, 2014) and therefore relegate working mothers to less demanding tasks (Budig & England, 2001) [Click here to enter text..](#)

Employers seem to subscribe to the notion that working mothers are implicitly not completely job-oriented as, otherwise, they may be deemed bad mothers (Section 4.2, “C4: Working mothers are not career-oriented”). In other words, the role of the mother often seems to be derived from the male breadwinner model (Section 4.2, category “C5: Mothers should not work (male bread-winner model”).

²In addition to parental leave, in Germany there is also financial support for parents who want to care for their child together after the birth. There are basically three types of benefits: 1. basic parental allowance, 2. parental allowance plus, 3. partnership bonus (BMFSFJ (2020).

Reduced work hours seem to be the most widespread solution for working mothers, although part-time arrangements normally require more organisational efforts and investments from the employer and are generally not perceived as compatible with managerial positions. In this regard, our inductive coding strategy shows that the sub-categories “C4a: Working mothers require part-time positions” and “C4b: Working mothers’ time schedules are more difficult to manage” are inherently intertwined with the category “C4: Working mothers are not career-oriented” and therefore trigger a negative attitude or perception in the manager. The effort hypothesis notion offers a compelling explanation for the results obtained. Highly skilled mothers with managerial roles, especially when they have small children, did indeed experience the largest motherhood gap in our sample, confirming previous investigations on the reduced productivity topic (Anderson et al., 2003; Azmat & Ferrer, 2017). In addition, our working mothers often found themselves in a position where they had to accept such part-time arrangements, which eventually widen the motherhood gap, causing negative career loops (Dex et al., 2008)Click here to enter text.. This was particularly evident in Section 4.3, where we analysed the reactions of managers during pregnancy in relation to upcoming career steps. We found that job re-entry was somehow hindered due to reduced responsibilities (C4c) or flexible work arrangements (C4b).

From the employer standpoint, we did, however, find some perceived positive attributes related to being a mother, such as a higher level of “life experience” and a higher degree of loyalty compared to other employees. While the former feature should encourage a generally positive attitude toward managing the complexity of a company, the latter characteristic ensures that working mothers, despite being less flexible in terms of job mobility and working hours, normally have little desire to frequently change jobs or employers in order to climb the corporate ladder.

As discussed in the Section 4.3, “Reaction of the manager during pregnancy in relation to upcoming career steps”, unfortunately only a marginal number of working mothers included in our sample had their upcoming career steps realised. The vast majority saw their career progression come to a halt or temporary slowdown after communicating the pregnancy. Employer discrimination can, indeed, occur in multiple configurations, such as being temporarily suspended from a promotion cycle (especially after the second pregnancy), being assigned a less important role or being re-assigned to a different department/role with a downgrade of duties (e.g., “C4c: Abandonment/reduction of responsibility”). Some of the working mothers simply decided to opt out of career advancements due to feeling demotivated by their employer’s behaviour. Similar effects were previously verified by Aranda and Glick (2014). We also found that in many instances the employment contract was indeed terminated (i.e., “C6: Em-

ployment contract was terminated”) through a settlement agreement (C6a), replacement (C6b) or the very common case of a fixed-term contract not being extended (C6c). These common career paths find their partial justification in the context of the theory of human capital, where employment interruption causes skill-depreciation effects, and consequently impacts occupational gains, even in the long term as the women’s children grow up (Abendroth et al., 2014). The combination of the aforementioned effects constitutes the basis for the so-called glass ceiling phenomenon (Guillaume & Pochic, 2009), largely responsible for wage inequality between genders (Gough & Noonan, 2013). In this regard, keeping the parental leave modest in length would lead to a reduced motherhood gap (Felmlee, 1995)Click here to enter text..

Pending salary increases (Section 4.4) followed a similar path, with approximately 50 percent being implemented as originally planned and the rest suspended, reduced or cancelled. However, we were able to report a lower degree of employer discrimination compared to planned promotions, since salary increases are normally predetermined in the case of civil servants or in the case of collective bargaining agreements (i.e., category “C4: Predetermined salary increase”). Furthermore, we observed a general difficulty in time allocation for performance appraisals by the employer, which, in the instances analysed, eventually led to delayed promotion paths. This problem seems to be accentuated for high-skilled professionals who often see their promotion paths delayed or cancelled because they lack the continuity needed for such high-responsibility roles; in these specific instances, employer discrimination normally translates into lower importance of tasks assigned or a biased assessment mechanism. According to the extant literature about work-effort theory (Anderson et al., 2003; England et al., 2016; Wilde et al., 2010), highly skilled working mothers, in particular, suffer a higher wage penalty compared to other groups of employees. These findings are opposed to those of Budig and Hodges (2010), who stated that low-skilled employees would suffer the most from motherhood penalty. In any case, our analysis shows that performance-related promotions are motivated by visibility rather than performance itself (i.e., “C2a: Pending salary increase was put on hold” and “C2b: Pending salary increase was implemented at a reduced rate”). This implies that part-time employees are put at a relevant disadvantage compared to full-time colleagues, i.e., men or childless women.

Finally, in Section 4.5, we investigated the reaction of managers during pregnancy in relation to the position held by the woman. In theory, the German labour law makes it possible for working mothers to take up to three years of parental leave. In practice, however, presence and visibility in the workplace always plays a crucial role. Indeed, some respondents felt threatened and preferred to keep working even during parental leave. On average, re-entry

was perceived as quite traumatic in our sample. Employer discrimination took various forms, the most frequent being a mismatch between skills level of the working mothers and the suggested new role post parental leave. This resonates with previous academic works on the topic, where work interruptions were found to lead to lower occupational status post birth (Dex et al., 2008). Other forms of discrimination may include unanticipated organisational changes in the team or division/department level and, in the most extreme situations, job cuts. In our sample, in one out of three instances, the job opening caused by parental leave was permanently filled by a colleague ("C3: The position was permanently filled by another employee"), or the job was cut completely ("C4: The position was eliminated"). In addition, resignation was often an option chosen by working mothers; opting out in this situation may look like a unilateral, voluntary decision, but it is indirectly triggered by the discrimination behaviours. A minority of respondents, however, reported positive outcomes for post-pregnancy re-entering as they took their parental leave as an opportunity to re-think their careers and agreed to being reassigned to other departments/divisions of their choice, working in new roles with equivalent tasks or opting for a more stress-free job in the same company/division. These "mother-friendly" arrangements seem to be in line with the theory of compensating differentials, where working mothers decide to trade career steps for a better work-life balance. However, if these career choices are implicitly triggered by the employer, the motherhood gap increases (Gangl & Ziefle, 2009; Petersen et al., 2010), further reinforcing the traditional male breadwinner model.

6 Limitations and future research

The authors acknowledge that the present work presents several limitations, mainly connected to the sample investigated. Firstly, a potential source of bias is represented by the fact our respondents were educated above-average. This could imply that our interviewees are more likely than average to strive for higher responsibilities and increasingly important job roles, not always fulfilled by their managers. Secondly, while our sample reflects the overall German population in terms of geographical characteristics, our work is limited to one country only. Finally, our respondents predominantly worked in larger companies.

Future research could address the aforementioned limitations by i) investigating a more normally distributed sample in terms of education level, and/or ii) extending the analysis to other countries or suggesting a comparison between two relevant and diverse countries, and/or iii) also factoring into the analysis small and medium-sized enterprises operating in different industries/sectors. Another interesting research avenue would be the comparison between working mothers and childless women in the same

working context with the same theoretical and methodological lenses we adopted in our study.

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Vrzel v materinstvu in diskriminacija delodajalcev. Kvalitativna raziskava v nemškem kontekstu

Ozadje: Kazen za materinstvo je pogosto šteta za osnovo razliko v plačah pri moških in ženskah in za fenomen steklenega stropa. Predstavlja občutljivo temo pri enakosti spolov, saj njeni učinki ponavadi trajajo v srednjem do dolgem časovnem obdobju in veljajo v večini držav. Študija je bila zasnovana z namenom preučitve prispevka diskriminacije delodajalcev k posledicam materinstva v socialnoekonomskih kontekstih, ki so zaznamovani s stereotipnim modelom »moškega hranilca družine«, ki ga je nedavna pandemija Covid-19 še poslabšala.

Metode: Pojav diskriminacije delodajalcev je bil pogosto obravnavan kot črna skrinjica, saj longitudinalni podatki in panelno regresijsko modeliranje niso bili primerni za oceno obsega učinka te spremenljivke na celotno kazen za materinstvo. V tej študiji smo to vrzel odpravili tako, da smo se osredotočili na diskriminacijo delodajalcev v posebnem kontekstu Nemčije. Delo temelji na podatkih, pridobljenih iz ankete, opravljene med 2130 zaposlenimi materami, in je predstavljeno kot kvalitativna vsebinska analiza.

Rezultati: Naš kvalitativni pogled na pojav diskriminacije delodajalcev je potrdil prejšnje kvantitativne raziskave. Prvič, odnos delodajalca do zaposlenih mater je bil v skladu s hipotezo o »drugi izmeni«, pri čemer so zlasti visoko usposobljene matere na vodstvenih vlogah imele največjo vrzel v materinstvu v našem vzorcu. Drugič, našli smo potrditev za teorijo človeškega kapitala, saj zaposlene matere vidijo, da se njihovo napredovanje v karieri ustavi ali začasno upočasni, čakajoče povišanje plač pa ni izvedeno, kot je bilo prvotno načrtovano. Nazadnje smo ugotovili, da je diskriminacija delodajalcev v različnih oblikah, najpogostejša pa je neuskkljenost med ravno spretnosti zaposlenih mater in predlagano novo vlogo po starševskem dopustu.

Zaključek: Naša študija potrjuje prejšnje akademske raziskave na temo, ki razpravlja o predhodnikih vrzeli v materinstvu, in sicer o hipotezi »druge izmene« in hipotezi o delovnem naporu. Navsezadnje se zdi, da delodajalci sprožijo, prostovoljno ali ne, določene karijerne izbire za zaposlene matere (npr. »materam prijazne« ureditve), ki povzročijo večanje vrzeli v materinstvu in tako dodatno okrepijo tradicionalni moški model preživljanja družine.

Ključne besede: Študije spola, Kazen za materinstvo, Diskriminacija delodajalca, Stekleni strop, Analiza vsebine

Can Machiavellianism and Money Intentions Influence Entrepreneurial Intention?

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Background and purpose: The purpose of this research is to examine how Machiavellianism and the desire for money can influence entrepreneurial intentions. It could be assumed that the desire for money and Machiavellian tendencies can develop the desire for success in people and eventually entrepreneurial intention.

Methodology: Respondents were surveyed using a questionnaire. Four hundred students from three faculties at two universities in Serbia responded to the questionnaire. The study utilized Smart PLS software.

Results: It was shown that there is a statistically significant positive impact of Machiavellianism and money intention on entrepreneurial intentions. Money intention is also a mediator in the relationship between Machiavellianism and entrepreneurial intentions. The theoretical contribution of the research is that these influences on entrepreneurial intentions have not been sufficiently examined so far, especially the influence of money intention. The practical significance of the research is the observation of the possibility that people who have a high level of Machiavellianism and money intention can be identified, understood, and systematically directed towards entrepreneurship.

Conclusion: Although the observed characteristics can be considered negative, people who possess them also possess entrepreneurial potential, and can create social good. These motives are not desirable, but such people can be useful for society: it is certainly better to spend energy on entrepreneurial ventures and further development of their own company, than on something else, less useful, or even destructive.

Keywords: *Machiavellianism, Money intention, Entrepreneurial intention, Students, Serbia*

1 Introduction

Entrepreneurship represents one of the most important elements for sustainable economic growth and development, not only through the creation of new jobs, but also because it encourages consumption on the market and thus prevents recession, and encourages the exchange of knowledge and innovation (Meyer & de Jongh, 2018).

Economic growth and development no longer rests on large multinational companies, but innovations are created through startups and new business models. Based on a sample from 55 countries, Doran, McCarthy, O'Connor, and Nsiah (2018) point out that entrepreneurship is important for the economic growth of a country, while entrepreneurial intentions also have a positive impact on GDP in developed countries. For example, GDP growth and economic development in Hungary can be attributed to the

development of entrepreneurship (Dudin et al., 2016). The importance of entrepreneurship in developing countries such as Serbia is the key to the country's prosperity and economic growth has grown. The effort to improve and empower entrepreneurship is done through education as well (Kayed, Al-Madadha & Abualbasal, 2022).

Entrepreneurial intentions are one of the key drivers in the creation of new ventures (Kautonen et al., 2015) and are considered the most important predictor of entrepreneurship. This is precisely why entrepreneurial intentions are of utmost importance for the development of the economy and competitiveness, so the influence of various factors on entrepreneurial intentions must be studied carefully and in detail in order to get a clear picture of how they can be encouraged in the population. In addition to creating new jobs and having a positive impact on economic growth and development, entrepreneurial intentions have a positive effect on the work performance of employees (Katami & Tang, 2019), and are of great importance for the quality of work of potential employees. According to Hueso et al. (2020), entrepreneurial intentions are one of the growing interests in scientific research and are gaining more and more importance. To be entrepreneurial means to be able to recognize and use the opportunities that would allow a person to develop a business (Leong, 2022). Entrepreneurial intentions are very complex and multidimensional, so there is a need to establish relations with various components of persons' characteristics. These components include Machiavellianism and money intentions, which are the research problems of this paper.

Machiavellianism and narcissism, along with psychopathy, represent the dark triad or malevolent traits characterized by aggressiveness, ruthlessness, and concern for self-interest (Paulhus & Williams, 2002). People with high dark triad values cope more easily with situations that are uncertain, are achievement-oriented, and have more self-confidence (Wu et al., 2019). If it is also taken into account that people with high values of Machiavellianism and narcissism are more prone to risks (Mathieu & St Jean, 2013), the positive influence of these traits on entrepreneurial intentions can be assumed. According to Bouncken et al., (2020), people with a high level of Machiavellianism are people who strive for higher social status and are highly motivated by monetary gain, and in addition show selfishness, emotional indifference and a tendency to be duplicitous. All these qualities can be desirable in a person who manages people and money and has a lot of responsibility. Machiavellianism is characterized by the willingness to manipulate and exploit others (Hmieleski & Lerner, 2016), while according to Chatterjee and Hambrick (2007), narcissism in an individual also represents egoism and a lack of empathy. Thus, in references (Al-Ghazali & Afsar, 2020; Leung et al., 2020; Leung et al., 2021) the positive connection of narcissism with entrepreneurial intentions was confirmed. The positive influence of Machia-

vellianism and narcissism on entrepreneurial intentions is also confirmed by Tucker et al. (2016), and they find that the dark triad has a positive effect on the recognition of business opportunities and their better use.

To start an entrepreneurial venture, it is certainly necessary to have adequate financial resources. What's more, the difficulty of providing financial resources can demotivate people to start a business. It is clear that money can be a constraint on entrepreneurial intentions, but the question can be asked in the opposite direction: can the lack of money and the desire for money produce strong entrepreneurial intentions? Money as a predictor of entrepreneurial intentions has been observed in Singapore (Ang & Hong, 2000). Also, Li-Ping Tang et al., (2008) find that love of money is strongly correlated with willingness to take risks and Machiavellianism, which can further be assumed to have a positive effect on entrepreneurial intentions, based on the previously mentioned references. It is interesting that the desire for money, although apparently a very clear motive for starting a business, has not been sufficiently investigated as a factor and influence on entrepreneurial intentions.

This paper examines the influence of Machiavellianism and money intention on entrepreneurial intentions among students in Serbia. This research is significant because the influences of Machiavellianism and money intention on entrepreneurial intentions have not yet been examined in Serbia, but they have not been sufficiently examined on a global level as well. The influence of money intention on entrepreneurial intentions is particularly poorly researched on a wider level. This research contributes to filling the described gap in existing, similar research. Also, what has not been done so far is that the influences of Machiavellianism and money intention on entrepreneurial intentions are combined at the same time, and the way money intentions were examined is also original, which will be discussed in the instruments section. It can be said that the existing theory of Machiavellianism and money intention has been applied in a new context, to research how it can influence entrepreneurial intentions. Accordingly, the theoretical contribution of this paper consists in providing insight into the relationship between Machiavellianism, money intentions, and entrepreneurial intentions. In addition, the results of the research are such that, by themselves, they justify the research and provide an original scientific contribution to the paper. The practical contribution of this paper consists in a better understanding of the mechanisms that, in certain circumstances, lead to the emergence of entrepreneurial intentions, and then in giving recommendations that can generally contribute to the development of entrepreneurial intentions and the improvement of entrepreneurship, which ultimately leads to a strong positive impact on economic growth and development.

2 Theory And Hypotheses

2.1 Machiavellianism and entrepreneurial intention

Machiavellianism and narcissism have a positive effect on unethical organizational behavior (Yu et al., 2020). Similarly, according to Kurniawan and Anjarwai (2020), the desire for money and Machiavellianism have a negative impact on an individual's ethics. Thus, in general, Machiavellianism, as a negative trait of manipulative people, is often seen as a bad characteristic of employees. Machiavellianism can have a negative impact on work, as the desire to control reduces opportunities for cooperation and teamwork. As cooperation and teamwork are very important for the development and progress of business, it can be assumed that people with pronounced machiavellian attitudes will not be successful in entrepreneurial endeavors in the long term, because manipulative behaviors are revealed over time.

However, modern research shows that some dimensions of Machiavellianism can have a positive influence on entrepreneurial intentions, such as "amoral manipulation" and the sub-dimension "desire for control", while "desire for status" and the sub-dimension "distrust of others" show a negative influence (Schippers et al., 2019). Machiavellianism contributes to a better recognition of business opportunities and exploitation of workers (Kraus et al., 2020). According to (Bownell et al., 2021), Machiavellianism encourages the formation of entrepreneurial intentions, however, hinders entrepreneurial performance. According to the same authors, individuals with higher levels of Machiavellianism are often attracted to the idea of entrepreneurship because they see it as a medium that allows them to quickly acquire wealth, power, and control over others.

In the research in Portugal, carried out by Peixoto et al. (2021), entrepreneurs show a higher level of Machiavellianism compared to non-entrepreneurs and are more inclined to tolerate unethical behavior, which according to these authors, can be important for business success. Tsai et al. (2021) find that narcissism, psychopathy, Machiavellianism, and sadism positively and strongly influence entrepreneurial behavior and entrepreneurial intentions. Research in China (Wu et al., 2019) showed that Machiavellianism has a positive effect on entrepreneurial intentions. Also, narcissism and Machiavellianism among top managers and CEOs positively affect business and entrepreneurial intentions in Russia (Shirokova et al., 2022). According to Calic et al. (2021), machiavellian rhetoric in the presentation of an entrepreneurial project can contribute to the number of investors and the amount of investment.

2.2 Money intention and entrepreneurial intention

Some research shows that motivation for money (love of money) has a positive effect on entrepreneurial intentions. According to Astungkara and Widayanti (2020), entrepreneurship education among students does not have a large impact on entrepreneurial intentions, while love of money has a strong positive impact. Love of money is a significant entrepreneurial predictor among students in Singapore as well (Ang & Hong, 2000). According to Li-Ping Tang et al. (2008), the love of money is significantly correlated with Machiavellianism and willingness to take risks, and they can be related to entrepreneurial intentions as stated earlier in the paper.

People who love money very much (high money worshippers) have high values of desire for achievement and power, as well as organizational self-esteem, job satisfaction, work ethic, and self-actualization (Li-Ping Tang et al., 2005), and it is entrepreneurship that gives these people the opportunity to achieve all this. Cassar (2007) finds that the desire for independence is the strongest motivator among entrepreneurs, but money also plays an important role as a motive for further growth and business development. On the other hand, according to (Amit et al., 2001), money is neither the only nor the strongest motivator for entrepreneurs. Based on the above, it can be assumed that there is a certain positive correlation between money intentions and entrepreneurship intentions.

Based on previous theoretical considerations, in this paper, three hypotheses are proposed:

H1: There is a statistically significant relationship between Machiavellianism and Entrepreneurial intentions.

H2: There is a statistically significant relationship between Money intention and Entrepreneurial intentions.

H3: Money intention is a statistically significant mediator in the relationship between Machiavellianism and Entrepreneurial intentions.

3 Method

3.1 Survey instruments (measures)

Machiavellianism was measured based on a questionnaire that was developed by Pekdemir and Turan, (2015). This questionnaire was developed by them and based on previous studies (Dahling et al., 2009; Valentine & Fleischman, 2003). The questionnaire has 7 items that make up 1 dimension: Machiavellianism. Respondents were evaluated using a seven-point Likert scale.

Money intention was measured via one dimension. That dimension was formed on the basis of 6 items, which make up the entrepreneurial intention dimension according to the Entrepreneurial Intention Questionnaire (EIQ)

(Liñán & Chen, 2009). These items were reworked analogously by replacing entrepreneurial intention with money intention and desire for wealth. We believe that in this way, solid intentions to make money are very well defined. This makes a difference in relation to some other questionnaires related to money motivation, where motivation and desire is somewhat more moderate (Tang, 1995; Mitchell & Mickel, 1999; Pekdemir & Turan, 2015). The aim was to look at the influence of the uncompromising desire to acquire wealth, along with the influence of other negative phenomena, such as Machiavellianism. Respondents rated these items on a seven-point Likert scale.

The Entrepreneurial intention dimension was measured using the Entrepreneurial Intention Questionnaire (EIQ), developed by Liñán and Chen (2009). The questionnaire has 6 items that make up 1 dimension: Entrepreneurial intention. Respondents evaluated the questionnaire using a seven-point Likert scale. It should be noted that this questionnaire also measures the Theory of Planned Behavior (TPB) dimensions: Personal attitude, Subjective norm, and Perceived behavioral control, which refer to personal attitudes, desires, opportunities, and abilities to engage in entrepreneurship, and which represent antecedents of the entrepreneurial behavior (Ajzen, 1991; Liñán, 2004; Liñán & Chen, 2009). However, these three TPB dimensions were not used in this paper.

All dimensions and items used in this research are listed in Table 1.

3.2 Participants and data collection

This research was carried out at three faculties in Serbia (University Union Nikola Tesla, Faculty of Engineering Management in Belgrade, and University of Novi Sad, Technical faculty “Mihajlo Pupin” in Zrenjanin and Faculty of Economics in Subotica), and students participated in it as respondents. Respondents filled out the questionnaires electronically, using the Google Forms platform, and a certain number were questioned by directly filling out the questionnaires. All the questionnaires were in English and were back-translated into Serbian by two linguists. In the end, all answers were combined into one database and a total of 400 valid questionnaires were collected.

4 Results

Descriptive statistics for all items and dimensions of entrepreneurial intentions, Machiavellianism, and money intention are shown in Table 1.

The study utilized the software Smart PLS to present findings on the correlation between Machiavellianism (MAK), Money Intention (MOIN), and Entrepreneurial Intention (EI). A PLS-SEM analysis was conducted to investigate the relationship between the constructs, exam-

ining both the measurement model and structural model parameters, and generating bootstrap estimates. The aim of the study was to assess the direct effects of Machiavellianism and Money Intention on Entrepreneurial Intention, as well as to investigate the potential mediation effect of MOIN in the relationship between MAK and EI. After collecting the data through questionnaires, the analysis was divided into two parts. Firstly, the authors examined the measurement model, followed by the testing of research hypotheses on the structural model.

In the initial stage, the reflective indicator loadings, internal consistency reliability, convergent validity, and discriminant validity in the measurement model (outer model) were examined. This form of measurement is recommended for reflective constructs within the model. (Grubor et al., 2020). In addition to the aforementioned techniques, a common method bias test (CMB) was conducted. Berber et al. (2020) established a threshold of 0.708 as the minimum eligibility limit for factor load. Load factors ranging from 0.4 to 0.7 should only be kept if their removal does not affect the Average Variance Extracted (AVE) and Composite Reliability (CR) (Gašić & Berber, 2021; Hair et al., 2017). Some items had to be removed from further analysis because their load values were too low. Accordingly, Figure 1 displays the items that were retained for analysis, each having loadings above 0.666 (refer to Figure 1).

Table 2 displays the results of the reliability test, which was conducted using Cronbach's Alpha, Composite Reliability, and Average Variance Extracted. Internal consistency was assessed by calculating Cronbach's Alpha, which yielded values of 0.761 (MOIN), 0.921 (EI), and the highest value of 0.944 for MAK. All three values met the criterion of CA above 0.7.

Composite Reliability (CR) measures how well variables underlying constructs function in structural equation modeling. The CR values for the constructs ranged from 0.836 (MOIN) to 0.957 (MAK). Some experts suggest that the minimum acceptable threshold for CR is 0.7 (Hair, Hult, Ringle, Sarstedt, Kuppelwieser, 2014; Sabi, Uzoka, Langmia, Njeh, 2016). From the results displayed in Table 2, it can be concluded that the CR criterion has been met.

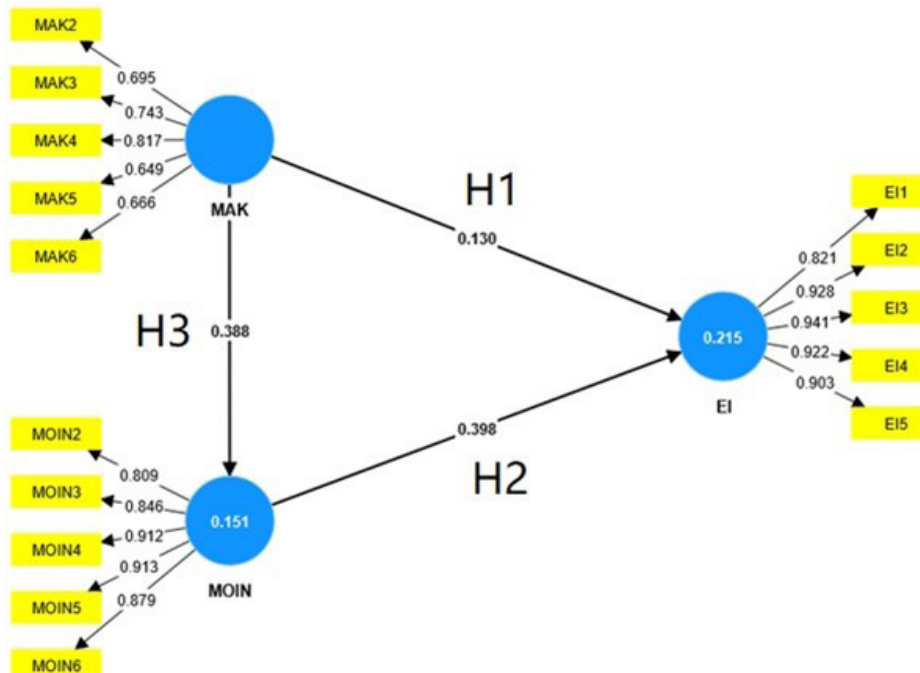
To evaluate convergent validity, the Average Variance Extracted (AVE) measure was used, which reflects the amount of variance captured by a construct in relation to the amount of variance attributed to measurement error. The AVE values are presented in Table 2, ranging from 0.513 (MOIN) to 0.818 (MAK). The minimum acceptable limit for AVE is 0.5 (Fornell, Larcker, 1981; Rouf, Akhtaruddin, 2018) and based on the data in Table 2, this threshold has been met for all three constructs. Therefore, it can be concluded that convergent validity is established.

Discriminant validity can be evaluated using various indicators, including Cross-loadings, Fornell & Larcker criterion, and Hetero-trait-monotrait correlation ratios (Ab Hamid et al., 2017). Table 3 shows the results of the Fornell-Lacker criterion for assessing discriminant validity.

Table 1: Descriptive statistics

Dimensions and items	Abbr.	N	Min	Max	Mean	Std. Deviation
Dimension Entrepreneurial intention	EI	400	1.00	7.00	4.31	1.75
I am ready to do anything to be an entrepreneur	EI1	400	1	7	3.93	1.923
My professional goal is to become an entrepreneur	EI2	400	1	7	4.18	1.971
I will make every effort to start and run my own firm	EI3	400	1	7	4.33	1.903
I am determined to create a firm in the future	EI4	400	1	7	4.42	1.892
I have very seriously thought of starting a firm	EI5	400	1	7	4.47	1.991
I have the firm intention to start a firm some day	EI6	400	1	7	4.53	1.941
Dimension Machiavellianism	MAK	400	1.00	7.00	3.62	1.21
The best way to handle people is to tell them what they want to hear	MAK1	400	1	7	3.77	1.939
I am willing to sabotage the efforts of other people if they threaten my own goals	MAK2	400	1	7	2.77	1.813
The only good reason to talk to others is to get information that I can use to my benefit	MAK3	400	1	7	3.06	1.859
Never tell anyone the real reason you did something unless it is useful to do so	MAK4	400	1	7	3.43	1.895
If I show any weakness at work, other people will take advantage of it	MAK5	400	1	7	4.58	1.748
It is wise to flatter important people	MAK6	400	1	7	3.64	1.766
It is hard to get ahead without cutting corners here and there	MAK7	400	1	7	4.08	2.021
Dimension Money intention	MOIN	400	1.00	7.00	4.37	1.51
I am ready to do anything to earn money (acquire wealth)	MOIN1	400	1	7	3.04	1.908
My professional goal is to make as much money as possible	MOIN2	400	1	7	4.24	1.914
I will make every effort to earn money (acquire wealth)	MOIN3	400	1	7	4.17	1.866
I am determined to earn money (acquire wealth) in the future	MOIN4	400	1	7	5.03	1.705
I have very seriously thought about making money (getting rich)	MOIN5	400	1	7	4.87	1.821
I have the firm intention to be rich some day	MOIN6	400	1	7	4.86	1.810
	Valid N (listwise)	400				

Legend: Machiavellianism (MAK), Money intention (MOIN), and Entrepreneurial intentions (EI)



Legend: Machiavellianism (MAK), Money intention (MOIN), and Entrepreneurial intentions (EI)

Figure 1. Path coefficient estimates

Table 2: Indicator reliability and construct reliability and validity

	Cronbach's Alpha	rho_A	CR	AVE
MAK	0.944	0.944	0.957	0.818
MOIN	0.761	0.776	0.836	0.513
EI	0.921	0.939	0.940	0.762

Legend: Machiavellianism (MAK), Money intention (MOIN), and Entrepreneurial intentions (EI)

Table 3: Discriminant Validity – Fornell-Lacker criterion

	EI	MAK	MOIN
EI	0.904		
MAK	0.284	0.717	
MOIN	0.448	0.388	0.873

Legend: Machiavellianism (MAK), Money intention (MOIN), and Entrepreneurial intentions (EI)

Table 3 presents the results of the Discriminant Validity analysis using the Fornell-Lacker criterion. This criterion requires the square root of the Average Variance Extracted (AVE) for a latent variable to be greater than the correlation value of that variable with other latent variables in the model (Fornell & Larcker, 1981). Based on the data presented, it can be concluded that Discriminant Validity

is established, as the diagonal AVE values are greater than the values below them for each variable. Table 4 presents the results of the Discriminant Validity analysis using the Heterotrait-monotrait (HTMT) criterion.

The study examined the Common Method Bias (CMB) using the full collinearity approach (Kock, 2015). Hair et al. (2019) set the threshold value of VIF factors at 3, while

other authors accept VIF values less than 5 or even 10. Nonetheless, in all cases, high VIF values are considered harmful and indicative of collinearity (O'Brien, 2007; Wong, 2013; Iqbal et al., 2021).

Table 4 displays the results of the multicollinearity analysis, indicating that most of the VIF values are below 3. However, a few values are slightly above 3, but they are deemed acceptable according to some authors who consider VIF values up to 5 as tolerable.

The final step of the analysis involves examining the relationship between the independent variables (MAK and MOIN) and the dependent variable (EI) in the structural model. R² (R-squared), a statistical measure indicating the proportion of variance in the dependent variable that is explained by the independent variables, suggests that the model explains 21.5% of the variance in EI. Table 5 presents the means, standard deviations, T-statistics, and p-values of the variables in the model. Based on Table 5, it was concluded that there is a significant positive relationship between MAK and EI ($\beta=0.130$; $T=2.287$; $P=0.022$)

and a significant positive relationship between MOIN and EI ($\beta=0.398$; $T=7.823$; $P=0.000$). Furthermore, there is a significant positive relationship between MAK and MOIN ($\beta=0.388$; $T=8.450$; $P=0.000$). MOIN mediates the relationship between MAK and EI, leading to a significant indirect effect ($\beta=0.155$; $T=5.715$; $P=0.000$).

5 Discussion

First of all, the results pointed to the positive effects of MAK - Machiavellianism and MOIN - Money intention on EI - Entrepreneurial intentions. In this way, hypotheses H1 and H2 were confirmed.

People with pronounced Machiavellianism develop entrepreneurial intentions more easily. This result is consistent with most existing research on this relationship, for example (Bownell et al., 2021; Cai et al., 2021; Wu et al., 2019; Shirokova et al., 2022). This phenomenon should be understood by the fact that people with Machiavellian

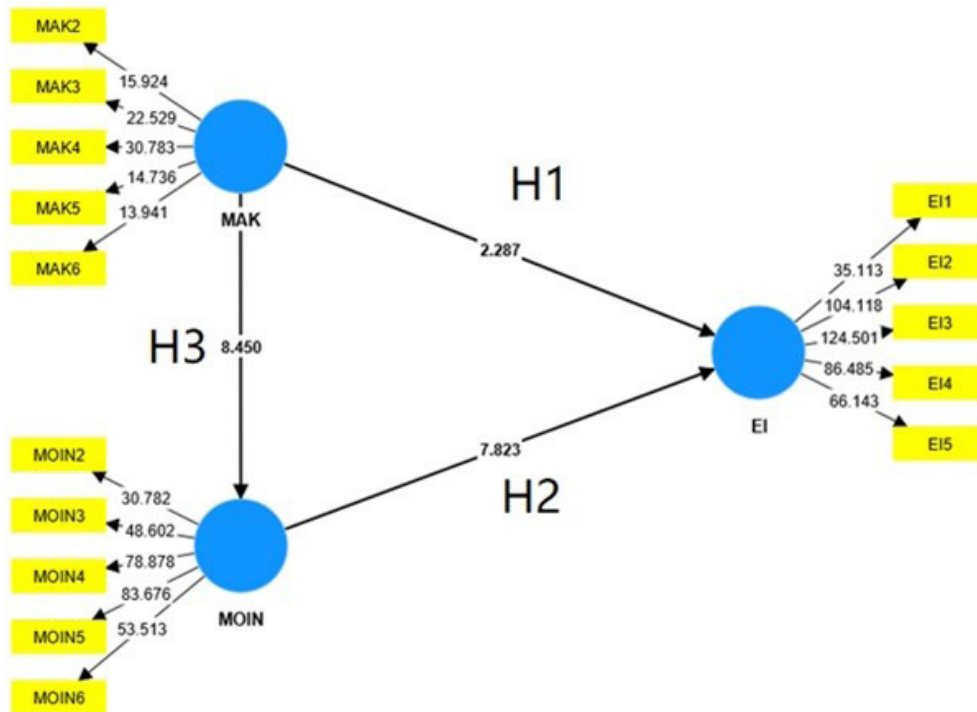
Table 4: Collinearity statistics

	VIF
I am ready to do anything to be an entrepreneur	2.327
My professional goal is to become an entrepreneur	4.986
I will make every effort to start and run my own firm	5.051
I am determined to create a firm in the future	5.000
I have very seriously thought of starting a firm	4.946
I am willing to sabotage the efforts of other people if they threaten my own goals	1.456
The only good reason to talk to others is to get information that I can use to my benefit	1.570
Never tell anyone the real reason you did something unless it is useful to do so	1.792
If I show any weakness at work, other people will take advantage of it	1.239
It is wise to flatter important people	1.381
My professional goal is to make as much money as possible	2.277
I will make every effort to earn money (acquire wealth)	2.465
I am determined to earn money (acquire wealth) in the future	4.429
I have very seriously thought about making money (getting rich)	4.386
I have the firm intention to be rich some day	3.040

Table 5: Mean, Standard deviation, T-statistics, and P-values

	Original sample (O)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values	Hypotheses
H1: MAK -> EI	0.130	0.057	2.287	0.022	Confirmed
H2: MOIN -> EI	0.398	0.051	7.823	0.000	Confirmed
H3: MAK -> MOIN -> EI	0.155	0.027	5.715	0.000	Confirmed

Legend: Machiavellianism (MAK), Money intention (MOIN), and Entrepreneurial intentions (EI)



Legend: Machiavellianism (MAK), Money intention (MOIN), and Entrepreneurial intentions (EI)

Figure 2: The Path model with bootstrapping results

attitudes can see a chance and possibility to realize some of their ambitions in entrepreneurship. Observed according to the items that make up the MAK - Machiavellianism dimension, these are people who have no problem telling people what they want to hear, sabotaging other people's efforts, "extracting" the necessary information from other people, and keeping quiet if it is to their advantage, to flatter important people and to sometimes do something that can be considered not completely right and fair. Basically, these are people who are willing to do almost anything to achieve their goals, and entrepreneurship can often be a good way to do that.

Similarly, people with expressed money motivation, that is, the desire and intention to earn money, can also have expressed entrepreneurial intentions. As it was said, this relationship has not been sufficiently researched, but some rare studies come to a similar result, according to which love of money is a significant predictor of entrepreneurial intentions (Astungkara & Widayanti, 2020; Ang & Hong, 2000). The explanation of this relationship can be found in the items defined to measure money motivation: if people have a professional goal that is focused on money, if they are ready to make any effort to earn money if they are determined to earn money and have the intentions to be rich in the future, then it is quite clear that entrepreneurship can be a good vocation and commitment for such

people. Here also, it can be assumed that people, who have a lower desire for money, probably are more satisfied with what they have, which can result in a lower entrepreneurial intention.

In addition, there is an indirect effect of MAK - Machiavellianism on EI - Entrepreneurial intentions through MOIN - Money intention. Practically, MAK - Machiavellianism may contribute to increasing MOIN - Money intention, and in turn, MOIN - Money intention contributes to increasing EI - Entrepreneurial intentions, too. In this way, MOIN - Money intention mediates this observed relationship, and students who expressed a higher level of MAK - Machiavellianism may experience a higher EI - Entrepreneurial intentions when they have high MOIN - Money intention. Based on this, it can be said that hypothesis H3 is confirmed.

Some other existing research shows a statistically significant positive influence of MAK - Machiavellianism on MOIN - Money intention (Li-Ping Tang et al., 2008; Bouncken et al., 2020). Some studies indirectly indicate a proportional relationship between MAK - Machiavellianism and MOIN - Money intention (Kraus et al., 2020; Bownell et al., 2021). People with pronounced Machiavellianism naturally usually strive for higher social status, wealth, power, control over others, and success, and the common denominator for all these desires and needs is

money. It is clear that, apart from Machiavellianism, there are certainly other influences on money intentions.

6 Conclusion

The research showed that people with highly expressed Machiavellianism and money intentions have a significant chance of developing entrepreneurial intentions. Also, money intention is a mediator in the relationship between Machiavellianism and entrepreneurial intentions. Business opportunities, success, reputation, and money, are things that are often associated with entrepreneurship, so the revealed relationships seem natural and expected. With that in mind, it is justified to conduct such research, especially in the part that refers to the effects of money motivation on entrepreneurial intentions, which have not been sufficiently examined so far. In this case, the presented research is important, not only because similar research has not been done enough, but also because the results just obtained point to important conclusions, which were discussed. The novelty of the paper is that the influences of Machiavellianism and money intention on entrepreneurial intentions, as well as the mediating relationship through money intentions, were examined at the same time. All this can be considered a theoretical (scientific) contribution of the work. A proposal for further research could be related to additional research on the connection between money intention (motivation) and entrepreneurship and putting it in relation to some other influences on entrepreneurial intentions.

In a practical sense, the importance of the research may be that people who have a high level of Machiavellianism and money intention should be given special attention in terms of understanding and orientation towards entrepreneurship. Although the observed characteristics can be considered negative, people who possess them also possess entrepreneurial potential. Their motives might not be the best, but people with these characteristics can certainly be useful for society and create good. Thus, starting their own business can be a good way to do this: it is certainly better to spend energy on an entrepreneurial venture and further development of the established company than on something else, less useful, or even destructive. It is recommended that the appropriate state institutions (such as employment services and similar government bodies that already deal with employment in general) develop early detection programs for such persons and direct them to entrepreneurship through education and appropriate courses.

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Ali lahko makiavelizem in denarne namere vplivajo na podjetniške namere?

Ozadje in namen: Namen naše raziskave je preučiti, kako lahko makiavelizem in želja po denarju vplivata na podjetniške namere. Lahko bi domnevali, da lahko želja po denarju in makiavelistična nagnjenja pri ljudeh razvijejo željo po uspehu in sčasoma podjetniško namero.

Metodologija: Zbiranje podatkov je potekalo z anketnim vprašalnikom. Anketiranih je bilo štiristo študentov na treh fakultetah dveh univerz v Srbiji. Študija je uporabila programsko opremo Smart PLS.

Rezultati: Pokazalo se je, da obstaja statistično značilen pozitiven vpliv makiavelizma in denarne namere na podjetniške namere. Denarni namen je tudi posrednik v razmerju med makiavelizmom in podjetniškimi nameni. Teoretični prispevek raziskave je, da ti vplivi na podjetniške namere doslej še niso bili dovolj raziskani, še posebej vpliv denarne namere. Praktični pomen raziskave je opazovanje možnosti, da se osebe z visoko stopnjo makiavelizma in denarne namere prepoznajo, razumejo in načrtno usmerjajo v podjetništvo.

Zaključek: Čeprav opazovane lastnosti lahko štejejo za negativne, imajo ljudje, ki le-te posedujejo, tudi podjetniški potencial in lahko ustvarjajo družbeno dobro. Obravnavani motivi niso zaželeni, so pa takšni ljudje lahko koristni za družbo: vsekakor je bolje energijo porabiti za podjetniške podvige in nadaljnji razvoj lastnega podjetja, kot za kaj drugega, manj koristnega ali celo uničujočega.

Ključne besede: *Makiavelizem, Denarna namera, Podjetniška namera, Študentje, Srbija*

Relationship Between Environmental Reports and Environmental Performance: A case of the Processing Industry in the Republic of Slovenia

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Background/Purpose: Environmental protection issues faced by companies constitute a challenging research topic. The main objective of the study was to research if companies' environmental performance relates to the quality of information contained in the environmental reports.

Methods: In order to assess the environmental performance of companies involved we develop the Environmental Performance Index based on the Slovenian Environment Agency's data on emissions in air, water and waste. We measured the correlation between the Environmental Performance Index and quality of environmental reporting using Spearman's correlation coefficient.

Results and Conclusion: The results of our analyses revealed that there is no significant correlation between companies' environmental performance and the quality of their environmental reporting. However, the reasons for the obtained result can be at least partially attributed to the low quality level of analysed environmental reports. This is a reason why the calculated correlation is not as tangible as it would be if company reports would provide more information and therefore more data for analysis. Our findings suggest that voluntary environmental reporting should be complemented by legally defined mandatory elements for such reporting.

Keywords: *Environmental performance, Environmental reports, Environmental Performance Index, Manufacturing*

1 Introduction

As a society, we are exposed to various forms of industrial pollution, which affects almost all environmental areas, primarily the emission of greenhouse gases and other emissions into the air, water and soil (MOP 2010). Furthermore, the EPA (EPA, 2017) reports that manufacturing is one of the three economic activities representing the greatest source of greenhouse gas emissions. According to the facts presented in the publication, monitoring industrial pollution caused by manufacturing activity is very

important, especially when considering that information asymmetry is the central concern in assessing the environmental performance of manufacturing enterprises (Beaver, 1998). Buyers, investors and other stakeholders are not able to make an objective assessment of the attempts that businesses put into addressing environmental issues due to the fact that they do not have accessibility to what is considered the most relevant information (Windolph, 2011).

Researchers face similar problems. For instance, Braam, Uit De Weerd, Hauck and Huijbregts (2016), for the analysis of environmental performance, use available

data on emissions, waste etc., which they acquire from companies' environmental reports. Many comments in the literature about sugar-coated information on environmental subjects appear in several companies' business reports or environmental reports (Deegan & Rankin, 1996; GRI, 2009; Swift, 2001). For example, the reluctance of these companies to reveal real information about their environmental performance happens mainly due to the fear that it would affect their reputation (Knez-Ried, 2001).

Other researchers aiming to determine the companies' environmental performance use objective environmental data; however, there often needs to be better access to this information (Clarkson et al., 2011; Hertin et al., 2004). A thorough level of data about the environment is required to assess the environment's performance quantitatively. Several writers use precompiled indices to obtain information on the companies' environmental performance. For example, the Emissions Efficiency Index, based on the ratio between the Toxic Release Inventory (TRI) and the revenues of the company, is used by Filbeck and Gorman (2004) and Hart and Ahuja (1996). Al-Tuwaijri, Christensen and Hughes (2004) and Clarkson, Li, Richardson and Vasvari (2008), among others, use the proportion of hazardous waste these companies recycle based on TRI. On the other hand, Nakao, Amano, Matsumura, Genba and Nakano (2007) use the ranking system created by the audit agency Nikkei Environmental Management Survey to assess the companies' environmental performance. The use of precompiled data is not without criticisms because auditing agencies adopt a number of techniques for different understandings of the companies' environmental performance, and a series of interests exists in this matter (Windolph, 2011).

Due to the problems in obtaining and using data for environmental performance assessment, as mentioned above, we have developed an innovative approach using original environmental data. This data was not pre-processed or pre-calculated. The data was obtained from the ARSO (Agencija Republike Slovenije za okolje). The database represents a credible, publicly available database in Slovenia where emissions are collected according to a controlled methodology. Based on emission data obtained for air, water and waste, we created an index of environmental performance that represents a proxy for a company's environmental performance.

Besides open questions regarding the measurement of environmental performance in the literature is not yet an agreement as to whether there is a correlation between environmental performance and environmental reporting, i.e. if it is positive (Deswanto & Siregar, 2018; Iatridis, 2013), negative (Braam et al., 2016; Fontana et al., 2015; Guidry & Patten, 2012) or non-existent (Freedman & Jaggi, 2010; Sutantoputra et al., 2012). This issue represents the main research question of our research.

Due to various findings in the research, Patten (2002) concluded that a failure to find a stable relationship between environmental performance and environmental reporting suggests that such a relationship does not exist. In order to find a proper answer to this question, we elaborated an original methodology based on the Theory of Voluntary Disclosures, which predicts a positive link between the companies' environmental performance and the level of their environmental reports. Therefore, our hypothesis is as follows:

Hypothesis H: There is a positive correlation between the quality of environmental reporting and the environmental performance index of manufacturing companies in the Republic of Slovenia

This paper is divided into five sections. The introductory section presents the issue that is the subject of our research, clarifies why the research on environmental performance and environmental reporting is relevant and refers to the research findings of other authors. In the empirical section, we present the environmental reporting quality assessment methodology and environmental performance assessment/evaluation methodology. The quality of environmental reports relates to the diversity and thoroughness of information. In the results section, we present the achieved results of the Index of Environmental Performance and Index of Environmental Reporting. The last section is the discussion, where we discuss the results of the correlation between environmental performance and environmental reporting, along with recommendations for further research.

2 Theoretical background and the development of a hypothesis

2.1 Environmental Performance and Environmental Reporting

Environmental performance refers to how a company manages the environmental impacts of its activities, products and services and their effect on the environment (ISO 14001 2015). However, Guenther and Orlitzky (2012) explain that this concept has no ultimate understanding. According to Trumpp, Endrikat, Zopf and Guenther (2013), although there are differences in the definitions of environmental performance, they have some common features: environmental performance focuses on the results of management activities related to the natural environment, as well as to the activities themselves. The definition proposed by ISO 14001 can be considered a consensual definition that combines the key elements of various academic definitions (Trumpp et al., 2013). This definition also clarifies that an organisation's environmental performance can be improved by diminishing its negative impact or, conversely, by expanding its positive impact on

the environment. Thus, Klassen and Whybark (1991) came to a definition of a company's environmental performance based on the quantitative reduction of pollutants released by the company. This definition is the closest to ours since our research with the environmental performance index determines changes in emissions in relation to the output volume and, thereby, determines whether the company is environmentally effective.

Environmental reporting is the communication process organisations use to provide environmental performance documentation to their stakeholders, including impact on the environment, performance in managing that impact and contribution to ecological and sustainable development. Environmental reporting is crucial if companies want to recognise and understand their environmental footprint and how to reduce risks and improve their status quo when faced with new challenges (KPMG 2008). Under that aspect, the environmental report is thus a process derived from a set of assets that can be adopted to assess how an organisation is and is influenced by the environment.

Environmental reports are public reports made by organisations that provide various aspects of interactions between the environment, organisation and society (da Rosa, Guesser, Hein, Pfitscher and Lunkes 2015) in order to present the impact of an organisation's activities on the environment.

Environmental reports are mostly carried out in the final part of annual business reports. However, some companies publish their environmental information together with information related to quality, employees and participation in the wider society, i.e. sustainability reports. Compared to sustainability reports, which disclose broad and thorough data from a social point of view, environmental reports are often rather brief and insufficient (Fink Babič et al., 2011, 2012; Bennett et al., 2017). This may be because more extended sustainability tracking enables companies to keep sensitive figures around the environment private in favour of sharing with the public the positive impact some of their activities have had, albeit on sustainable development areas which are not particularly problematic. In addition to the significant need for environmental reporting (Liu & Anbumozhi, 2009; Skouloudis et al., 2014; Sutantoputra et al., 2012), researchers are also wondering about their authenticity. Thus, Braam, Uit De Weerd, Hauck and Huijbregts (2016), Lu and Abeysekera (2017), and Schultze and Trommer (2012) explain that reports on the environment are discretionary and not standardised. Hence, the accessibility of factual and equivalent data in the reports is low, and the credibility of the information disclosed in these reports is questionable. Windolph (2011) expresses the same opinion, explaining that the credibility of information disclosed by companies is questionable since top management is motivated to publish reports most favourable to itself. Although some organisations, such as GRI or ISO, provide measurable

guidelines to facilitate companies to take action (Bennett et al., 2017), compliance with these guidelines is voluntary and optional. Therefore, according to Knez-Riedl (2001), voluntary environmental reports provided by the companies to the stakeholders are very different from each other, and the method and frequency of publishing them are left to the free choice of a company. That the availability and quality of data between companies vary can also be found in the research of the Environment Agency (2013), Fink Babič and Biloslavo (2011, 2012), GRI (2009), UNCTAD (2002), Wensen, Broer, Klein and Knopf (2011).

As mentioned above, internationally recognised guidelines for formulating sustainability reports, like the GRI (Global Reporting Initiative), have been accessible since 2000 and are updated regularly. However, in our research, these indicators and similar guidelines, such as the GRI G4 (2013), UNCTAD (2004), and WBCSD (2002), were only used as an orientation for the assessment of environmental reports since most of the Slovenian company's reports far below what is required, so we relied on GRI guidelines only as a reference. Fink Babič and Biloslavo (2011, 2012), who analysed the environmental reports of Slovenian companies published on their websites, found that their scope and the diversity and quality of the information provided are limited.

2.2 The connection between environmental performance and environmental reporting

Socio-political theories indicate that the scope and comprehensiveness of reporting result from the company's exposure to public pressure subjected to the social and political environment in which the company is located. This is because companies that are environmentally less effective, facing increasing social and political pressure and jeopardised legitimacy, seek to "artificially" improve their environmental reports and thereby influence the perception of stakeholders on the current environmental performance of the company (Braam et al., 2016; Gray et al., 1995; Patten, 2002). This created a negative correspondence between the businesses' environmental performance and the quality of environmental reports (Braam et al., 2016; Doan & Sassen, 2020; Fontana et al., 2015; Guidry & Patten, 2012; Patten, 2002).

On the contrary, the Theory of Voluntary Disclosures (Dye, 2001; Verrecchia, 1983), which predicts a positive link between the companies' environmental performance and the level of their environmental reports, is contested. Thus, companies with good environmental performance would have to disclose more environmental information (in quantity and quality) than those with lower environmental performance (Al-Tuwaijri et al., 2004). The basic message of this theory is that environmentally successful

companies will publish higher-quality reports and disclose more information by focusing on objective indicators of environmental performance, which environmentally less successful companies will need help imitating.

Empirical research offers very different and contradictory evidence in establishing the relationship between the companies' environmental performance and the quality of their environmental reports.

Belkhir, Bernard, and Abdelgadir (2017). Freedman and Wasley (1990) and Tadros, Magnan and Boulianne (2020) in their research did not detect any significant correspondence between the quality of environmental reports and environmental performance, and Freedman and Jaggi (2010) did not detect any correspondence between the environmental performance and disclosure of companies around the environment. The impact of environmental performance on the quality of voluntary environmental reports has not been confirmed by Brammer and Pavelin (2008) either, who explains that environmental reporting, in addition to the size of a company, depends primarily on the industry; companies from industries that have a burdensome impact on the environment, publish better quality reports. Sutantoputra, Lindorff and Johnson (2012) also found no significant correspondence between the companies' environmental performance and the level of their environmental reporting.

The results of empirical research of Acar and Temiz (2020), Ahmadi and Bouri (2017), Al-Tuwaijri, Christensen and Hughes (2004), Clarkson, Li, Richardson and Vasvari (2008), Deswanto and Siregar (2018), Giannarakis, Konteos, Sariannidis, Chaitidis (2017), and Iatridis (2013), Lu and Taylor (2018) and Nazari, Hrazdil and Mahmoudian (2017) have shown that there is a meaningful positive correlation between environmental reporting and environmental performance. They found that more environmentally successful companies publish higher-quality environmental reports than less successful ones. On the contrary, research results of Doan and Sassen (2020), Fontana, D'Amico, Coluccia and Solimene (2015), Guidry in Patten (2012), Hughes, Anderson and Golden (2001) and Patten (2002) found a negative correlation between environmental reporting and the environmental performance of a company.

3 Methodology

3.1 Sample selection

We selected companies from the manufacturing sector because they provide a suitable population for analysis, as there is a direct impact on pollution, i.e. emissions into the air, water and soil, that are well visible and measurable. In addition, the authors such as Clarkson, Overell and Chapelle (2011) highlight that manufacturing enterprises have

a high propensity to pollute and publish environmental reports.

3.2 Evaluating the standard of environmental reports

To assess the quality of environmental reports, we have developed our methodology, the central part of which is a scheme of 27 indicators that enable an exhaustive assessment of environmental reports. We looked at the approaches used in the Davis Walling and Batterman research (1997). Below, we explain our model for analysing the quality of the companies' environmental reports.

The factors for the evaluation of environmental reports are divided into three categories.

1. Reporting on the activities of the company in order to reduce industrial pollution at a strategic level.

The composition contains five indicators that deal with environmental issues. With them, we determine whether companies in their reports have environmental statements with which the company displays its focus on solving environmental problems; whether the companies in their reports reveal that they have started sharing with the broader public what are the environmental issues of the company; whether the reports contain data on the financial support of various environmental activities, organisations, as well as indications on the active participation in activities or projects related to environmental protection.

2. Report on the endeavour of a company to mitigate the environmental impact at an operational level.

We used twelve indicators to analyse the quality of the companies reporting on their endeavours to mitigate industrial pollution. This spanned from the proper handling of hazardous materials and other waste, noise management, the use of renewable energy sources, the improvement of existing treatment plants, and cooperation with suppliers to investments and changes in technologies, products and services with the intention of reducing the environmental impact.

3. Reporting of companies on achieved environmental results.

The composition consists of ten indicators, which examined the reporting segment where companies presented their (in)effectiveness in mitigating industrial pollution, such as changes in emissions into the air and water, in the amount of hazardous materials and other waste and noise generated, reports on the consumption of energy, water, fossil fuels and dangerous substances and possible changes in the consumption of feedstock.

The quality of environmental reporting was assessed by assigning appropriate ratings to the above-specified indicators.

To evaluate the specific elements of environmental reporting, we used the ratings 0, 1, 2 and 3 assigned to each indicator.

- A rank of 3 indicates an ideal state, that is, a state that reflects complete information in relation to the selected report element, i.e. published quantitative data reflecting changes in individual elements related to individual years of the observed period.
- In cases where the change was else expressed in quantitative terms, but it was not possible to indicate without doubt which period it refers to, and in cases where the change per individual year of the observed period was expressed only descriptively and without quantitative data, we assigned to the assessed element a rating of 2.
- In cases of very modest information, i.e., descriptive changes, we assigned a rating of 1 to the assessed element.
- In the event that the company did not provide any information in relation to the individual item in the report, we gave the assessment element a rating of 0.

In their evaluation of environmental reports, Zeng, Xu, Dong and Tam (2010) also used a ranking from 0 to 3, but the basic criterion for assigning the rating was, in particular, whether the information was monetary or not. Skouloudis, Jones, Malesios and Evangelinos (2014) gave three types of ratings, namely, whether or not the item received an estimate of large-scale publication, general publication, or no publication. Based on the previous research of Fink Babič and Biloslavo (2012), we concluded that the published data on, e.g. emitted emissions over a certain period of time provided the most comprehensive reflection of environmental (in)efficiency for the environmental indicator concerned, which is why we found such information the most convincing and gave it the highest rating.

Based on the ratings obtained for 27 parameters in the previous research, we attained a combined assessment of the reports for 2008-2011 for every company. After that, we calculated the mean score of the quality of environmental reporting for four years together. For further analysis, we converted the initial rankings 1, 2 and 3 to percentages 33%, 66%, and 100%, reflecting the corresponding content of the information in relation to the widest possible range that the individual report should (must) contain.

We applied the same methodology to the 2018 annual reports, with the aim of presenting the situation in 2018 and seeing whether there has been progress in the quality of published environmental reports between 2011 and 2018.

3.3 Determination of environmental performance

It should be emphasised that the companies' environmental performance, as defined in the research, needs to

reflect a comprehensive assessment of the companies' environmental performance, as this could be achieved only on the basis of detailed quantitative and qualitative analysis for each company separately.

The purpose of the research was to create an approach that could track the modification in the score of pollutants that companies release into the environment. That being said, we used publicly available emission data. The increase (or decrease) in the score of pollutants during a set timeframe, as a relative value in relation to revenues, indicates the (in)efficiency of companies in resolving environmental issues, therefore describing their environmental performance. With that goal in mind, we drafted an Index of environmental performance. Because our goal was to measure the dynamics of the companies' environmental performance through the Index of Environmental Performance over a four-year period while ensuring that we could monitor the values of the same environmental indicators over the entire four-year period, we had to confine ourselves to those pollutants that are detected in most companies, and to omit those that are prevalent in certain sections, while in others they are not recognised.

Presentation of environmental indicators for the analysis of environmental performance

By analysing the selected pollutants, which the companies emitted into the environment over a four-year period, we wanted to determine the environmental performance of these companies. We picked the following environmental indicators: contaminant waste for the earth, chemical oxygen demand (COD) for the water and the total dust for the air, and formed the Index of Environmental Performance separately for air, water and soil.

In the development of our analysis, we used ISO 14001 as our main guideline on how to measure the emissions of the various media pollutants (water, air, waste). Since hazardous waste materials represent only one aspect of industrial pollution (Clarkson et al., 2011), in addition to hazardous waste, we have opted for non-hazardous substances as environmental indicators of air and water, as they are nonetheless very burdensome for the environment and occur in most companies.

Hazardous waste

The environmental indicator of hazardous waste is very characteristic of the manufacturing industry since most hazardous waste is primarily generated in the manufacturing sector (ARSO 2014). Hazardous waste is also a current subject due to its environmental impact since it poses a risk to the territory and the well-being of the human population. Therefore, this requires more stringent control than non-hazardous waste (ARSO 2014). While the reporting limit for non-hazardous waste is 10 tonnes of waste generated per year, generators of hazardous waste must report when they exceed the limit of 5 kg per year. In accordance with the regulations, generators must label hazardous waste separately and keep a separate record of

it (Šarc 2013¹). Authors such as Al-Tuwaijri, Christensen and Hughes (2004) and Clarkson, Li, Richardson and Vasvari (2008) have used in the same way the environmental indicator of hazardous waste in their research.

Total dust

Total dust is a general environmental indicator and occurs in most companies. Total dust is a very important indicator of air quality, as this is the biggest problem of air pollution in Slovenia. Namely, a level of air pollution exceeding what is allowed has been detected, while firewood, transport and manufacturing are the main contributors to total dust (ARSO 2013; Fašing 2014²). According to the Decree on the emission of substances into the atmosphere from stationary sources of pollution, total dust is defined as the sum of all particles in waste gases, regardless of their chemical composition and size. Earnhart and Lizal (2007) used dust, among other factors, to determine environmental performance.

Chemical oxygen demand, COD

There are significant differences in wastewater in different departments of the companies in the presence of different environmental parameters, and the range of choice for the appropriate environmental indicator that would occur in most companies is very narrow. Chemical Oxygen Demand, COD, is one of the indicators that are present in the majority of companies (Tomažević 2010³). COD is one of the mandatory indicators and one of those that companies should always be required to measure and report on (Žitko Štemberger, 2014⁴). Authors Berkhout et al. (Bl) and Wagner, van Phu, Azomahou and Wehrmeyer (2002), in addition to other environmental indicators, used chemical oxygen demand, COD.

By selecting the listed environmental indicators, we intended to cover both dangerous substances and non-hazardous emissions, which are discarded by companies in larger quantities and are burdensome for the environment. While the Hazardous Waste Indicator represents a heterogeneous group of wastes stored in the Slovenian Environment Agency (ARSO) database, separated from non-hazardous waste, water and air indicators are individual, homogeneous environmental indicators.

In Slovenia, businesses have the duty to report their environmental figures to the Slovenian Environment Agency, ARSO. Hence, the ARSO archive is the sole reference of publicly available data in Slovenia, where the emissions are collected according to a controlled methodology. ARSO's data is available at the level of a company for each

individual pollutant. For our research, such a collection is the essential source of facts and figures since these are unprocessed and are shared with these companies. This allowed our research to evaluate the environmental performance of individual companies.

Quantitative assessment of environmental performance requires detailed figures. A number of researchers use pre-compiled indices to obtain information on the companies' environmental performance. The use of precompiled data is not without criticisms because auditing agencies use different approaches according to the perception of the companies' environmental performance, who have their own interests in this field (Windolph, 2011). Due to the exposed problems in obtaining data for environmental performance assessment, we have used original, credible and not pre-compiled environmental data, which gave us a reason to expect that our research would yield conclusive results.

4 Results

4.1 Results of the Index of Environmental Performance

In our research, a problem we faced was the need for more data for certain air, water or waste emissions for four years, which led to a reduction of the initial number of 110 sample companies. Thus, for the environmental indicator of hazardous waste in the final sample of 87 companies (or 79.0% of the total), the total number of observations for hazardous waste in four years (2008-2011) was 348. The number of observations over the four-year period for COD-water was 204, as 51 companies (or 46.4% of the total number) were within the sample companies for this indicator. For the indicator for total dust air, the final number of sample companies was 55 (or 50.0% of the total number), and the number of observations in four years was 220. Table 1 presents the results of the Index of Environmental Performance for all three environmental indicators.

The research was repeated in 2018. We have produced an Environmental Performance Index for the period 2011-2018. The sample of companies used was an initial sample of the same companies that were included in the previous survey. This leaves 91 companies in the current sample out of the 110 companies in the sample from the previous survey. Out of this sample of 91 companies, 81 companies (or

¹ Šarc, B., an expert in the area of waste management at ARSO (Slovenian Environment Agency). (2013). Phone interview with the author. Ljubljana, 3 June.

² Fašing, J., an expert in the area of air quality at ARSO (Slovenian Environment Agency). (2014). Interview with the author. Ljubljana, July 16th.

³ Tomažević, E., an expert in the area of water quality at ARSO (Slovenian Environment Agency). (2010). Phone interview with the author. Ljubljana, July 14th.

⁴ Žitko Štemberger, N., an expert in the area of water quality at ARSO (Slovenian Environment Agency). (2014). Interview with the author. Ljubljana, July 16th.

89.0%) are included for the hazardous waste environmental indicator, 46 companies (or 50.5%) are included for the COD-water indicator and 50 companies (or 54.9%) are included for the total dust-air indicator. Table 2 shows the re-

sults of the environmental performance index for all three environmental indicators for the period 2011-2018. Table 2 shows the results of the environmental performance index for the period 2011-2018.

Table 1: Value of the Index of Environmental Performance for hazardous waste $G_{IU\ waste}$, for COD-water $G_{IU\ water}$ and total dust-air $G_{IU\ air}$ for the period 2008 - 2011

	Values of the Index of Environmental Performance			TOTAL
	value of G_{IU} over 100	value of G_{IU} equals 100	value of G_{IU} under 100	
$G_{IU\ waste}$	35 (40%)	13 (15%)	39 (45%)	87 (100%)
$G_{IU\ water}$	16 (31%)	3 (6%)	32 (63%)	51 (100%)
$G_{IU\ air}$	26 (47%)	7 (13%)	22 (40%)	55 (100%)

Table 2: Value of the Index of Environmental Performance for hazardous waste $G_{IU\ waste}$, for COD-water $G_{IU\ water}$ and total dust-air $G_{IU\ air}$ for the period 2011 - 2018

	Values of the Index of Environmental Performance			TOTAL
	value of G_{IU} over 100	value of G_{IU} equals 100	value of G_{IU} under 100	
$G_{IU\ waste}$	50 (62%)	4(5%)	27(33%)	81 (100%)
$G_{IU\ water}$	17 (37%)	2 (4%)	27 (59%)	46 (100%)
$G_{IU\ air}$	15 (30%)	3(6%)	32(64%)	50 (100%)

The results of the Index of Environmental Performance for hazardous waste show the following:

- In 40% of companies, the Index of Environmental Performance for GIU waste exceeded 100. In this four-year period (2008 to 2011), these companies increased the quantity of discarded hazardous waste relative to the change in the volume of their business, measured in revenue.

- In 45% of companies, GIU waste reached values below 100, which consequently defines companies with higher environmental performance.
- The share of companies with a GIU waste value equal to 100, where the amount of emissions did not change, is 15%.

The results of the Index of Environmental Performance for the COD-water indicator demonstrate the following:

- 31% of the companies relatively increased their emission of COD in water compared to the change in production volume and were unsuccessful for this indicator.
- 63% of companies had a value of GIU water below 100, which identifies companies with higher Indicator of Environmental Performance for COD emissions to water.
- In 6% of companies, the emissions in the analysed

period remained unchanged.

The results of the Index of Environmental Performance for the total dust-air indicator demonstrate the following:

- 47% of the companies were environmentally unsuccessful, with GIU air values above 100.
- - Environmental performance shows that 40% of enterprises have achieved GIU air values below 100.
- Changes were not observed in 13% of companies.

The results of the Index of Environmental Performance for hazardous waste show the following:

- In 62% of companies, the Index of Environmental Performance for GIU waste exceeded 100. In the period 2011 - 2018, these companies increased the quantity of discarded hazardous waste relative to the change in the volume of their business, measured in revenue.
- In 33% of companies, GIU waste reached values below 100, which consequently defines companies with higher environmental performance.
- The share of companies with a GIU waste value equal to 100, where the amount of emissions did not change, is 5%

The results of the Index of Environmental Performance for the COD-water indicator demonstrate the following:

- 37% of the companies relatively increased their emission of COD in water compared to the change in production volume and were unsuccessful for this indicator.
- 59% of companies had a value of GIU water below 100, which identifies companies with higher Indicator of Environmental Performance for COD emissions to water.
- In 4% of companies, the emissions in the analysed period remained unchanged.

The results of the Index of Environmental Performance for the total dust-air indicator demonstrate the following:

- 30% of the companies were environmentally unsuccessful, with GIU air values above 100.
- Environmental performance shows that 64% of enterprises have achieved GIU air values below 100.
- Changes were not observed in 6% of companies.

4.2 Analysis results of the quality of environmental reports

Of the 110 companies in the sample, three did not publish annual business reports in all four years. The results of the analysis of the annual reports over the four-year period were therefore presented for 107 companies. The number of all observations in the four-year period (2008-2011) was, therefore, 428.

We repeated the research for 2018. For the sample companies, we used the initial sample of the same companies listed in the previous research. As such, from the 110 initial samples of the previous research, 91 companies remained as part of the current sample. 19 companies closed during the period. All 91 companies published yearly reports for 2018.

The results given in Table 3 are presented in % and arranged in sections. Table 3 presents an assessment of the average value of the quality of environmental reporting for individual departments in manufacturing in the period 2008-2011 and for the year 2018.

The results of the assessment of companies' environmental reporting reveal a significant shortcoming in the environmental reporting of manufacturing companies. The average value of the quality of environmental reporting does not exceed 35%. In 2018 as well the average value was far below the maximum possible range of reporting quality (100%).

4.3 Results of the analysis of the correlation between environmental performance and the quality of environmental reporting

Results of the analysis of the correlation between environmental performance and the quality of environmental reporting are shown in Table 4 and Table 5.

Table 3: Assessment of the quality of environmental reports of the companies by sections for the period 2008-2011 and for the year 2018

	2008-2011	2008-2011	2018	2018
	The average score of the quality of environmental reporting in %	Number of companies with environmental reports in the department	The average score of the quality of environmental reporting in %	Number of companies with environmental reports in the department
C24	14.52	10	11,87	9
C23	13.80	8	6,45	7
C25	9.43	12	4,64	10
C26	3.93	5	9,19	4
C27	10.92	16	7,70	15
C28	10.56	9	3,84	8
C29	13.41	10	9,69	8
C20	9.55	13	7,25	11
C21	20.37	2	34,46	2
C11	16.63	4	11,65	2
C10	11.68	12	3,23	11
C17	16.94	6	16,41	3

Table 4: Correlation between the Index of Environmental Performance GIU for three environmental indicators and the quality of environmental reporting for the period 2008 - 2011

Environmental performance indicators	Quality of environmental reporting	
	Spearman's correlation coefficient	Degree of relevance of the test of correlation (double-sided test)
GIU waste	.152	.163
GIU water	-.017	.905
GIU air	-.074	.590

Table 5: Correlation between the Index of Environmental Performance GIU for three environmental indicators and the quality of environmental reporting for the period 2011 - 2018

Environmental performance indicators	Quality of environmental reporting	
	Spearman's correlation coefficient	Degree of relevance of the test of correlation (double-sided test)
GIU waste	-.136	.225
GIU water	-.235	.116
GIU air	-.272	.056

The assessment of the correlation between the average environmental performance of waste and the average quality of environmental reports is 0.152. The assessment of the correlation between the average environmental performance of COD water and the average quality of environmental reports is -0.017 . The assessment of the correlation between the average environmental performance for total dust air and the quality of environmental reports is -0.074 .

The results of the analysis of the correlation between environmental performance and the quality of environmental reporting do not demonstrate statistical significance.

The assessment of the correlation between the average environmental performance of waste and the average quality of environmental reports is -0.136 . The assessment of the correlation between the average environmental performance of COD water and the average quality of environmental reports is -0.235 . The assessment of the correlation between the average environmental performance for total dust air and the quality of environmental reports is -0.272 .

The results of the analysis of the correlation between environmental performance and the quality of environmental reporting do not demonstrate statistical significance.

5 Discussion

With the results we obtained on the performance and the standard of environmental reporting, the hypothesis we brought at the core of our research is H: There is a positive correlation between the quality of environmental reporting and the environmental performance index of manufacturing companies in the Republic of Slovenia. With the outcome of the study on the correlation between the three environmental factors, hazardous waste, COD-water and total dust-air, hypothesis H was refuted.

Gray, Kouhy and Lavers (1995) and Patten (2002) observed a negative correlation between the companies' environmental performance and the quality of their environmental reports. Gray, Kouhy and Lavers (1995) conducted research on sample companies in the field of the oil industry. In his research, Patten (2002) analyses companies from the chemical, metal, paper and petroleum industries; environmental performance data was obtained from emission data on toxic substances TRI⁵. Provided by the EPA, Environmental Agency of America. The emissions data was captured for one year (1988) and then normalised with corporate income. Environmental performance is calculated as a ratio to the expected environmental performance, which is based on how large the company is and its industry. Environmental reports of the company refer to the year 1990.

⁵ Toxics release inventory, TRI (TRI listing of the top 500 companies from United States Environmental Protection Agency EPA).

The positive correspondence between the companies' environmental performance and the quality level of their environmental reports was found by the authors Al-Tuwaijri, Christensen and Hughes (2004), who used the data for the year 1994 for the research on the samples of their companies. To measure environmental performance, they used a ratio based on the relative amount of recycled hazardous waste. Clarkson, Li, Richardson and Vasvari (2008)

Looked into the environmental reports of companies in the area of paper, chemical, metal, oil and mining industries for 2003. As did Al-Tuwaijri, Christensen and Hughes (2004), for determining environmental performance, they used the ratio of the relative amount of recycled hazardous waste for their research. In addition, they used the ratio of TRI to the total sales of the company (TRI/sales). They also focused on determining the companies' environmental performance within the industry.

Sutantoputra, Lindorff and Johnson (2012) did not identify a significant correspondence between the companies' environmental performance and the standard of their environmental reports. Freedman and Wasley (1990), and Freedman and Jaggi (2010), did not find any either. The latter has determined whether there is a correlation between the change in greenhouse gas emissions of companies over a period from 2004 to 2006 and the standard of environmental reports for greenhouse gases in these businesses, i.e. whether the environmental reports reveal the environmental (un)performance of greenhouse gas companies. Freedman and Wasley (1990) carried out a survey based on the use of information from the research organisation Council on Economic Priorities (CEP)⁶ in defining the companies' environmental performance from the metal, paper, oil and electrical industries. Environmental performance researchers did not use calculations based on their methodology but used previously calculated estimates.

In terms of the time frame considered by individual research, the authors Al-Tuwaijri, Christensen and Hughes (2004), Clarkson, Li, Richardson and Vasvari (2008), and Patten (2002) focused on a single year, and in our study, we covered the period from 2008 to 2011. Similarly, the research conducted by Freedman and Jaggi (2010) covered a period of two years.

In terms of determining the companies' environmental performance, the monitoring of emissions over a period of several years is appropriate because that is the only way to determine a change in the quantity of emissions.

Clarkson, Li, Richardson and Vasvari (2008) and Patten (2002) put the environmental performance of a company into relation to the industry, and in our study, the emphasis was on establishing the environmental performance of individual companies.

In our survey, the sample companies were selected exclusively from the manufacturing sector; however, other authors, in addition to manufacturing companies, also included mining companies such as Clarkson, Li, Richardson and Vasvari (2008). Determining the companies' environmental performance is difficult because companies, due to the different production processes, also pollute in different ways, representing a significant problem in designing a common approach for identifying environmental performance. Therefore, it is more appropriate to develop a specific approach for each sector, such as manufacturing, energy, tourism, etc.

In order to determine the environmental performance, we have selected both general pollutants (total dust for air, COD for water) and toxic substances (hazardous waste). Clarkson, Li, Richardson and Vasvari (2008), and Patten (2002) focused on the data of emissions of toxic substances TRI, i.e. hazardous waste such as Al-Tuwaijri, Christensen and Hughes (2004), Clarkson, Li, Richardson and Vasvari (2008). Freedman and Jaggi (2010) focused on greenhouse gas emissions. In Slovenia, we have a non-hazardous and hazardous emissions database, which is collected by the Slovenian Environmental Agency (ARSO). Therefore, in addition to toxic substances, it is also appropriate to take into account the general, non-hazardous, non-polluters, especially those that, due to their intensity of pollution, pose a significant problem to the environment, such as total dust.

Many authors such as Al-Tuwaijri, Christensen and Hughes (2004), Clarkson, Li, Richardson and Vasvari (2008), Filbeck and Gorman (2004), Hart and Ahuja (1996), Nakao, Amano, Matsumura, Genba and Nakano (2007), used pre-processed environmental information from various institutions to determine the companies' environmental performance. In our research, however, we have developed an original approach to determine the companies' environmental performance, i.e. the Index of Environmental Performance. Extensive databases from ARSO offer researchers the challenge of how to develop models that would enable the creation of a successful presentation of environmental performance based on the vast amount of raw emission data to be presented to the interested members of the public.

6 Conclusion

Our research did not affirm the socio-political theories about social and environmental disclosures of businesses that set a negative relationship between the companies' environmental performance and the quality of environmental

⁶ CEP, the Council on Economic Priorities, established in 1969, is a research organisation for the social and environmental recording of companies

reports. On the other hand, it also did not affirm the theory of voluntary disclosures that sets a positive relationship between the companies' environmental performance and the standard of their environmental reports.

The outcome of our study joins the findings of authors such as Freedman and Jagga (2010), Freedman and Wasley (1990), Sutantoputra, Lindorff and Johnson (2012), who did not detect a strong enough correlation between the quality of environmental reporting and performance.

Thus, the contribution of our research is revealed in the finding that the quality of environmental reporting is not related to the environmental effort of companies, which is demonstrated by the reduction of pollution, nor the other way around, with worse environmental outcomes. Therefore, we find that environmental reports do not try to conceal poor environmental performance, nor do they necessarily produce qualitative environmental reports due to good environmental results, i.e. the reduction of emissions. Thus, it would be appropriate to create theoretical starting points in the direction of tolerance of differences between variables to existing theories which explain contradictory possibilities regarding the connection between environmental reporting and environmental performance.

On top of elucidating that there is no existing correspondence, the explanations for the outcome we obtained also reside in the fact that the study's conclusion of the environmental reporting quality shows the quality of environmental reports of processing companies in the Republic of Slovenia. We found little information in environmental reports and thus little data to analyse. The inferior quality of environmental reports, however, contributes to the fact that the correlation we drew is not as visible as it would have been had the company reports been more thorough, as the reports would have provided us with wider information and, hence, more data to analyse. The outcome of the connection could remain unaffected, but its relevance would be higher.

An important contribution of our research is seen in the fact that the environmental performance assessment has been addressed in a unique way, using original environmental data. This data was not pre-processed or pre-calculated. Recognising the importance of keeping in mind that environmental indicators do not enclose all the environmental impacts a company has but are limited to a representative selection (Schultze & Trommer, 2012), we have made a selection of parameters for the evaluation of environmental performance. The Index of Environmental Performance for Environmental Indicators hazardous waste, COD-water and total dust-air reflects the business's environmental performance in terms of general pollution. Our selection also has shortcomings, especially in water and

air indicators, as these were only found in some companies from the full sample. As a result, the sample of companies eligible for our analysis was very much restricted, and this impacted the relevancy of our research, as per the environmental reports. Broad environmental parameters cannot be embedded into the overall pollution of companies, which is also shown in the emission of specific pollutants.

Nonetheless, the development of such a parameter would restrict us from determining the environmental performance of companies within a certain type of industry, namely exclusively amongst those companies that are much resemblant to each other, as for the type of production, and where consequently the range of emissions that they discharge into the environment is consistent. In establishing the correlation between the environmental performance and the quality of environmental reporting, such a specific index of environmental performance would raise problems related to environmental reporting since, due to the need for a high enough figure of companies in the sample (with similar production and pollution), additionally to large and medium-sized companies in Slovenia, small ones should be included too. Research by authors Brammer and Pavelin (2008), Dey and Dey (2018), Iatridis (2013), Ismail, Rahman and Hezabr (2018), Oryzalin and Mahmood (2020), Patten (2002) show that size is a key element that impacts the quality of environmental reports. As a result of our analysis of the low standard of environmental reports of large and medium-sized Slovenian businesses, we would reasonably infer that smaller businesses show even lower standards. Therefore, The possibility of conducting such a survey in the Slovene territory would be questionable.

From the point of view of environmental reporting, based on the results of our research, we can conclude that the rationale for the companies' lack of reporting on their environmental impact should be looked for in the absence of adequate regulations that would encourage companies to produce comprehensive environmental protection analyses and to inform the interested members of the public through their annual reports. Companies have all the required information on emissions into water, air and waste disposal, as they have to be provided to the Environmental Protection Agency of the Republic of Slovenia annually. Directive on the disclosure of non-financial information and information on the diversity of certain large companies and groups⁷ require the disclosure of non-financial information by large companies.

Besides the Directive published in 2014, 2017 have been published optional guidelines to help companies disclose environmental and social information. However, the standard of these reports remains questionable, as the di-

⁷ DIRECTIVE 2014/95 / EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

rectories on the methodology for publishing non-financial information are non-binding, which raises the question of the quality of such reports and their comparability. For this reason, we welcome the Corporate Sustainability Reporting Directive (CSRD) of 14 December 2022⁸, which modernises and strengthens the rules about the social and environmental information that companies have to report. A broader set of large companies and listed SMEs will now be required to report on sustainability (EU Finance, 2023).

Considering that the most pressing global problems at the moment are climate change and loss of biodiversity, the emissions selected for this study (hazardous waste, COD, and total dust) do not address this issue directly, as tackling these two problems would require a different research approach. Biodiversity loss needs to be assessed in the field for an individual location where an industrial plant is located. This approach would not fit our research as we have used publicly available data. Regarding the impact on climate change, studies performed by ARSO (2012) and MOP (2010) indicate that greenhouse emissions mostly characterise the energy sector, transport industry, consumption of fossil fuels for industrial and household use, the manufacturing industry does not substantially contribute to greenhouse gases with its industrial processes on which this research is focused. However, we acknowledge this as a limitation of our research.

For future research, we recommend monitoring the Index of Environmental Performance over a longer period of time (up to 20 years). These findings would give us a more credible picture of the companies' environmental performance. The conclusion that companies continuously improve their environmental performance over the years could be a statement of their strategic commitment to environmental issues. If improvement is detected only in the short term, this may result from a one-time change in the company (e.g., the replacement of technology). We also recommend the use of environmental data published by the Environmental Agency of the RS. This publicly available and original data enable the researcher to further develop in the area of the assessment of environmental performance, to compile a selection of the environmental indicators by industry, and by integrating both general and industry-specific environmental indicators, to take a comprehensive approach to determine the companies' environmental performance by industry.

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⁸ DIRECTIVE (EU) 2022/2464 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 14 December 2022

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Povezava med okoljskimi poročili in okoljsko uspešnostjo: Primer predelovalne industrije v Republiki Sloveniji

Izhodišče/Namen: Raziskati povezanost med kakovostjo okoljskega poročanja in okoljsko uspešnostjo podjetij predelovalne industrije v Republiki Sloveniji.

Metode: Za ugotavljanje okoljske uspešnosti smo zasnovali lasten Indeks okoljske uspešnosti, ki temelji na podatkih Agencije Republike Slovenije za okolje o emisijah v zrak, vode in odpadke. Povezanost med indeksom okoljske uspešnosti in kakovostjo okoljskega poročanja smo izmerili z uporabo Spearmanovega korelacijskega koeficienta. Raziskava je bila izvedena na vzorcu podjetij predelovalne industrije v Republiki Sloveniji.

Rezultati in zaključek: Rezultati analize povezanosti med okoljsko uspešnostjo in kakovostjo okoljskega poročanja ne izkazujejo statistične pomembnosti. Poleg pojasnitve, da povezanost ne obstaja, lahko vzroke za dobljeni rezultat naše raziskave iščemo tudi v tem, da rezultati analize kakovosti okoljskega poročanja kažejo na nizko kakovost okoljskih poročil. Slednje prispeva temu, da izračunana povezanost ni tako oprijemljiva kot bi bila, če bi bila poročila podjetij izčrpnjša, saj bi bilo tako informacij in s tem podatkov za analizo več. Naše ugotovitve kažejo na potrebo, da se prostovoljno okoljsko poročanje dopolni z obveznimi elementi za tovrstno poročanje.

Ključne besede: *Okoljska uspešnost, Okoljsko poročanje, Indeks okoljske uspešnosti, Predelovalna industrija*

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Role of Hotel Management Crisis in Covid-19 and Post-Covid-19 Period: A Case Study of Opatija Riviera Micro-Region in Croatia¹

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Background/Purpose: Due to the COVID-19 pandemic, interest in studying crisis influences grew in the last three years since it significantly impacted tourism and hospitality. Observing adaptations and transformations in hotel business models is necessary for tourism and hospitality firms to remain successful and competitive. The purpose of this qualitative case study is to critically analyse crisis management processes and management decisions regarding changes and adaptations in strategies and business model innovations to facilitate recovery, resilience, and sustained growth of hotels in the Croatian micro-region Opatija Riviera in Covid-19 and post-Covid-19 period.

Method: Semi-structured interviews were conducted with hotel managers and tourism and hospitality consultants. The transcriptions were checked, and collected data was interpreted based on the narrative analysis. Thematic content analysis (TCA) was applied in the study.

Results: Hotels in Opatija Riviera adapt their crisis business models to ensure long-term and sustainable growth and development of hotels and the destination itself. The primary focus is increasing the quality of services and guest satisfaction, achieving competitiveness in the tourist market.

Conclusion: The paper includes an exploratory qualitative research study on the impact and consequences of Covid-19 on business and organisational changes in the hotel industry in the Opatija Riviera area, which will have a medium- and long-term impact on the design of resilience and sustainable growth policies. The disruption caused by the pandemic is also important for hotel managers and management from the point of view of introducing crisis management processes, the results of which can be seen in the protection of the well-being of guests, employees and the general reputation of hotels. Therefore, hotel management needs to emphasise the importance of identifying business strategies and practices in business strategies and thus form the basis for effective crisis management.

Keywords: *Business models, Covid-19, Hotel industry, Opatija Riviera, Strategies, Risk management, Tourism micro-region*

¹ Preliminary results of this research were presented at the International conference on Tourism and Business ICTB. The conference was held from 24th-27th August 2022 in Luzern, Switzerland, and organized by HSLU-Lucerne University of Applied Sciences and Arts, Edinburgh Napier University and Mahidol University International College.

1 Introduction

In the past three years, numerous studies worldwide have focused on the crisis and consequences of COVID-19 on the tourism and hospitality industry. However, insufficient attention has been given to the changing business models in the tourism and hospitality industry, as Breier et al. (2021) noted. Chanyasak et al. (2022) have specifically examined how hotels adapt their business models during times of crisis. Therefore, researchers must conduct further studies that specifically address the adaptations and transformations of business models, focusing on small and medium-sized hotel firms, to mitigate the consequences of Covid-19. The pandemic has exposed the vulnerability of these smaller tourism firms during tourism crises, as highlighted by Gursoy and Chi (2020). We conducted research in three large hotels (two five stars and one four-star) and six four stars medium-sized hotels.

Additionally, Ferreras-Méndez et al. (2021) have provided evidence of the mediating role of business model innovation in the relationship between environmental turbulence and performance. More research is urgently needed to fully explore the potential of business model innovations in mitigating the adverse effects of Covid-19 and fostering resilience and sustainable growth in hotel businesses. It is important to consider preventing and reducing the risk of potential new diseases in future. For this reason, we conducted a study that focuses on crisis management processes during the Covid-19 pandemic and includes management decision-making regarding organisational adoption and changes that impact hotel firms' strategic development in the medium and long term. The primary focus was examining business models, and strategy changes from 2000 to 2023. The research was conducted in the Croatian tourism micro-region of Opatija Riviera, employing a qualitative case study design. Semi-structured interviews were prepared with hotel managers, tourism and hospitality consultants, and researchers as part of the study.

The Opatija Riviera is situated in Kvarner Bay on the eastern coast of the Istrian peninsula. It stretches 25 km along the coastal belt from Volosko to Mošćenička Draga, under Učka Mountain. Made popular in the 19th century by the Austro-Hungarian elite, the Opatija Riviera remains a tourism micro-region that exemplifies style and class. Opatija Riviera is a four-star tourism micro-region. It has 16,500 beds in 47 hotels, another 6,905 beds in private rooms, apartments and holiday homes, and three auto camps for 1,680 people. Most medium and large hotels are owned by two hotel chains, Amadria and Liburnija. Small hotels include family hotels with 3 or 4 stars and luxury boutique hotels with 4 or 5 stars. The Opatija Riviera has joined the Croatian national project Safe Stay in Croatia. The project includes the implementation of security protocols in the tourism and hospitality industry (Alkier et al., 2022).

The study aimed to critically analyse crisis management processes and management decisions regarding changes and adaptations in strategies and business model innovations to facilitate recovery, resilience, and sustained growth of hotels in the Covid-19 and post-Covid-19 period. Based on these objectives, the following research questions were formulated:

RQ1: What strategic changes occurred and why within the crisis management processes during the COVID-19 pandemic, and how do they impact hotel industry recovery, resilience, and future sustainable growth?

The paper is structured as follows: after the introduction, the second part includes the theoretical background. The third part of the paper discusses the research methodology, and the fourth part consists of the results. The last part provides a discussion and conclusions.

2 Theoretical background

2.1 Hotel firms' risk management in the time of disease: Covid-19 case – implications on tourism

According to the professional and scientific literature findings, which focus on hotels' crisis management during the pandemic, hotels had to adapt or change business models to survive, ensure resilience, and further sustainable business growth (Alonso et al., 2022). As an example of disease risk, Covid-19 is only one of the risks that threatened the hotel industry during the pandemic and in the post-pandemic period (Kenny & Dutt, 2022). By changing strategies and business models, hotels ensure resilience, which is defined in the literature as crisis management and business continuity and responding to risks that hotels may face, from cyber threats to natural disasters, supply chains disruptions, wars, diseases, and others (Corrales-Estrada et al., 2021).

The study is focused on the problem of hotel crisis management related to the Covid-19 pandemic, in the context of which it was shown that there is a segment of small and medium-sized hotel firms (family hotels, boutique hotels, city hotels, etc.) that are considered very vulnerable and exposed to various risks. For example, hotel firms must introduce innovative business models to remain competitive. However, when firms are faced with an economic crisis and health risk (while this also applies to other risks such as natural disasters, climate changes, human resource management, and digital and green transformation, which ran parallel to the pandemic and continued even in the period after, and represent one of the essential competitive advantages of hotels, which also affected the reduction of business risk) with Covid-19, it becomes obvious how much smaller hotel firms (family hotels, city hotels) are more vulnerable concerning the larger ones. The reasons

are the size (limited personnel, financial and professional capacities) and the ownership structure, which under normal circumstances represents a risk to liquidity and profitability. However, unlike larger firms, private ownership and distribution of ownership, small size, and generally flat organisational structure allow small hotels greater flexibility during business interruptions (Crovini et al., 2021). Otherwise, small hotels are usually considered less resilient than larger hotel firms because they take longer to return to normal functioning (if they survive at all) after a disruption (Engeset, 2020).

To recover from significant disruptions in hotel firms' internal and external business environment, it is necessary to ensure business resilience related to the firm's ability to adapt to changes in the background and new circumstances that led to disruptions (Margherita & Heikkilä, 2021). Given all the impending current risks, hotels face the challenge of existence and resilience to ensure medium- and long-term enterprise growth. It is necessary to be aware that the more hotel firms are exposed to disruptions, the more resilience it needs to survive and ensure business (Hu & Xu, 2022). Saad et al. (2021, 6) define firm resilience as: 'the firm's adaptability to disruptions, growth (positive performance), and ability to seize the business opportunity amid a challenging business environment.' The authors point out that core capabilities (i.e., flexibility, growth, and seizure of opportunities) also include the concept's operative and dynamic features. At the same time, it is necessary to ensure the development of SMEs to make them more resilient. The goal of action is to build capacity to a higher level. Zighan and Ruel (2023) thus emphasise that ensuring firms' continuous improvement increases short- and long-term resilience. Therefore, resilience can be transformed into tangible working constructs for firms in visualising and making decisions about risks, adapting, absorbing changes, and prevailing over time. The concept of hotel firms' growth is essential because it strengthens SDG 8 (decent work and economic growth) and SDG 16 (peace, justice, and strong institutions).

2.2 Crisis hotels management measures

Crisis management in the hotel industry encompasses a range of comprehensive measures to identify, assess, and respond to potential crises, particularly those arising from various health conditions. These measures consist of proactive and reactive strategies that hotels can adopt to minimise the impact of disruptions and ensure the continuity of their business operations (Le & Phi, 2021; Pforr & Hosie, 2008).

Proactive crisis management involves implementing preventive measures to reduce the risk of disease outbreaks in the hotel (Pforr & Hosie, 2008). It includes establishing sound health and safety protocols, such as regular sanitation and disinfection procedures, implementing strict

hygiene practices, and training staff on disease prevention and response protocols. In addition, proactive crisis management includes conducting risk assessments, monitoring global health trends, and being informed about emerging diseases to anticipate potential threats and take appropriate preventive measures (Lai & Wong, 2020). Reactive crisis management focuses on how hotels respond during a disease outbreak (Çoban & Özel, 2022). Effective communication with guests, employees, and competent authorities is crucial. Hotels should establish clear lines of communication, including designated spokespersons, to disseminate accurate and timely information, address concerns, and guide guests and employees (Chalupa et al., 2021). In addition, hotels must establish flexible cancellation policies, adopt guest tracking systems, and work closely with local health authorities to implement necessary quarantine or isolation measures (Chan et al., 2021).

The role of crisis management does not end with implementing processes to prevent the spread of infection (Sasangohar et al., 2020). Because its important, if not critical, function is also to prepare strategies and changes to business models that will ensure recovery from the crisis and strengthen resilience (Liu-Lastres & Cahyanto, 2023). Hotels must implement specific measures to facilitate recovery and increase their ability to withstand future crises (Ho & Law, 2023). The following are the key actions that hotels can undertake to promote recovery and resilience:

- **Assessing and adapting:** conduct a thorough assessment of the crisis's impact on the hotel's operations, financials, and reputation (Nhamo et al., 2020). This evaluation will help identify areas requiring immediate attention and guide decision-making. Use the findings to adapt and update crisis management plans, incorporating lessons learned from the crisis to enhance future resilience (Ghaderi et al., 2022).
- **Financial Planning and Resource Management:** develop a robust financial recovery plan that includes cost-saving measures, revenue generation strategies, and contingency funds for future crises (Garrido-Moreno et al., 2021). Prioritise expenses based on their importance and potential impact on recovery efforts (Lai & Wong, 2020). Efficient resource management is crucial during recovery to ensure optimal utilisation of available resources (Agarwal, 2021).
- **Marketing and Communication:** implement targeted marketing campaigns to rebuild customer confidence and attract guests. Highlight safety measures, enhanced cleanliness protocols, and any certifications or accreditations obtained during the recovery (Tiong et al., 2021). Utilise various communication channels, such as social media, email marketing, and website updates, to inform guests about the hotel's recovery progress and any new

services or offerings (Nguyen et al., 2023).

- **Guest Experience Enhancement:** focus on providing exceptional guest experiences to regain customer loyalty and trust—train staff to deliver personalised and attentive service, paying attention to guest preferences and needs. Implement feedback mechanisms, such as guest surveys, to improve services and address concerns promptly and continuously (Beverland et al., 2023).
- **Diversification of Revenue Streams:** explore new revenue streams and business opportunities to reduce dependency on a single market or segment. This could involve targeting new customer segments, expanding conference and event services, or partnering with local businesses for joint promotions or packages (Garrido-Moreno et al., 2021). Diversification can help hotels withstand future disruptions by mitigating the impact of a single crisis on their operations (Yuan et al., 2022).
- **Employee Support and Engagement:** invest in employees' well-being and professional development to build a resilient workforce (He et al., 2019). Provide training on crisis management, health and safety protocols, and stress management (Giousmpasoglou et al., 2021). Foster open communication channels to address employee concerns and encourage them to contribute ideas for recovery and resilience (Garrido-Moreno et al., 2021; Giousmpasoglou et al., 2021).
- **Collaborations and Partnerships:** form strategic alliances with industry stakeholders, such as tourism boards, travel agencies, and local businesses. Joint efforts can generate synergies, promote destination recovery, and strengthen the hotel's position in the tourist market (Peiró-Signes et al., 2015). Collaborations may include joint marketing campaigns, shared resources, or coordinated crisis response plans (Filimonau & De Coteau, 2020).
- **Continuous Monitoring and Preparedness:** maintain a proactive approach to crisis management by continuously monitoring global health trends, emerging risks, and regulatory changes (Lai & Wong, 2020). Stay informed about industry best practices and participate in relevant training programs or conferences. Update crisis management plans regularly to reflect new knowledge and ensure preparedness for future crises (Verma & Gustafsson, 2020).
- **Technology adoption:** embrace solutions that enhance operational efficiency, guest experiences, and crisis response capabilities (Kenny & Dutt, 2022). This may include contactless check-in/out systems, mobile apps for communication and service requests, and advanced data analytics for

demand forecasting and resource allocation (Seyitoğlu & Ivanov, 2022).

- **Sustainability and environmental considerations:** incorporate sustainability practices into hotel operations to promote long-term resilience (Chen et al., 2022). This includes adopting energy-efficient measures, reducing waste, and supporting local communities and smart ecosystems (Buhalis et al., 2023)—emphasising sustainable marketing practices to attract environmentally conscious guests.

By implementing these measures, hotels can effectively recover from crises, build resilience, and position themselves for long-term success. Crisis management should be an ongoing process, with continuous evaluation and adaptation to address evolving challenges and ensure the sustainability of the hotel industry (Sharma et al., 2022). As part of crisis management, there are changes in strategies and business models. We present the key meanings of business models, business model innovation, and the differences between business models and strategies.

2.3 Hotel industry measures for recovery, resilience, and sustainable growth

Covid-19 affected the business conditions of most tourism firms, and the hotel industry was no exception. If we look at hotel firms, the pandemic has increased organisational inefficiencies. According to French and Bell (1999), organisational inefficiencies arise at the individual level and in organisational processes (communication patterns, ways of setting goals, making decisions, resolving conflicts, leadership, and organisational learning). The pandemic deepened the otherwise structural tourism problems, reflected in below-average added value, personnel and quality deficits. In the medium and long term, this can hinder the recovery and preservation of the industry's competitiveness and, of course, the hotel industry within it (de Vries et al., 2021). If we look at the hotel industry's response to recovery measures, we see that the answer to the pandemic requires a two-step strategy (Li et al., 2022). In the first step, we distinguish between short-term measures for recovery and reaching markets from long-term elimination of structural problems and strengthening of resilience (Hynes et al., 2022). In the period between and after the pandemic (when the hotel industry had to be prepared for a future crisis), hotel firms began to formulate customised strategies for products and (macro) destinations (Huang et al., 2023). It is necessary to be aware that the success of adapting to the new normal will depend on the well-thought-out direction of further incentives and the innovation, boldness and efficiency of moves towards an even more sustainable and digitally oriented operation of

the hotel industry. During the pandemic, hotels introduced strategies as part of changes to their business models (Rappacini et al., 2020), which they supplement in the period after the pandemic is over. These measures will significantly reduce future disease risks (Rajić et al., 2023). During the pandemic period and after, the hotels did the following:

- Improvement of health and safety measures. The key objective is to ensure guests' and employees' health and safety (Sharma et al., 2021). To this day, cleaning protocols have been improved, the frequency of disinfection has increased, and new technological solutions have been introduced, such as contactless check-in/check-out, digital room keys, chatbots and robots—all to reduce physical contact (Aguiar-Castillo et al., 2021).
- Change in operational procedures. The hotel management had to implement operational adjustments, thus aligning the operation following the capacity limitations and social distancing guidelines (Alonso et al., 2022). I.e. in hotels, there was a transformation of common areas, distance measures in restaurants and bars, and restrictions on the number of guests in elevators or fitness centres (Arica et al., 2023).
- Prepare flexible cancellation policies that eliminate uncertainty and limit travel. The flexibility of cancellation policies allows guests to change or cancel a reservation with minimal change costs, resulting in greater peace of mind (Chanyasak et al., 2022).
- Becoming aware of remote work and extended stay is important in accelerated digitisation and the limitation of social contacts (Di Marino et al., 2023). There has been an increase in the number of people working remotely. This trend is also growing in the post-pandemic period, and individual hotels have therefore adapted their offer and created the so-called remote work packages that include an extension of stay (Sánchez-Vergara et al., 2023). To this end, hotels have offered guests benefits, including high-speed internet and customised workspaces. In this way, hotels want to attract a new structure of guests, the so-called digital nomads, looking for alternative work and living environments (Pacheco & Azevedo, 2023).
- Emphasis on local and domestic markets and sustainable policies: it is worth mentioning that during international travel restrictions, the focus was placed on regional tourism (domestic demand) and local attractions (Panzer-Krause, 2022). In the post-pandemic period, accepting this offer of a domestic environment as a competitive advantage is necessary, which provides the guest with an authentic experience (Afrić Rakitovac & Urošević, 2023). Because guests increasingly seek genuine

and personal contact with local culture and community, COVID-19 has brought greater awareness of personal well-being and environmental sustainability. Thus, sustainable services and products are coming to the forefront of guest demand after the pandemic (Dang-Van et al., 2023). For this purpose, the hotel management must provide a strategy of sustainable development, which tailors both practices of food procurement and processing as well as the entire facility maintenance protocol and care for the well-being of guests and the relationship with the local community (Elkhwesky et al., 2022). They cooperate with local food producers, which includes selecting local and seasonal products of the highest quality. The sustainable effects of the efforts are reflected in shorter supply chains (no middlemen) and a smaller carbon footprint while stimulating the small local economy (Meuwissen et al., 2021). It is also important that hotels promote the surrounding locally owned restaurants, activities and services to their guests. It is also important for hotels to take care of reducing waste, reducing water consumption, taking measures to reduce energy consumption and having a vision for a holistic reduction of the environmental impact (Abdelhady, 2023).

- Begin with preparing measures to recruit personnel due to the increased outflow of personnel from tourism during the pandemic and the actual decrease in the interest of young people in pursuing professions in the field of tourism and hospitality (Bardukova, 2022). It is necessary to provide: (i) scholarships for deficit professions. Thus, in addition to the secondary vocational education program in gastronomy and hotel services (including apprenticeship), following the state of the labour market, it is also necessary to include education programs in the field of tourism at all other levels (middle, higher, high), including new programs that develop; (ii) in parallel with measures for the activation and development of local personnel, due to the demographic situation, it is necessary to increase flexibility and simplify the mechanisms for recruiting foreign labour, especially seasonal ones (Chen, 2022).
- Begin with the diversifying revenue streams that involve exploring alternative revenue streams, including partnering with local businesses to create new packages and promotions (Balasubramanian & Hanafiah, 2022).

3 Research methodology

This research focuses on conducting an investigative or exploratory case study (Yin, 2012) of a relatively new

field, problem, or phenomenon. Given the lack of empirical research in this field, the research is designed as a qualitative case study (Stake, 2013), where the case is “the impact of Covid-19 crisis on hotel industry organisational changes and future development in Opatija Riviera”. It is widely used in social sciences and is particularly useful in practice-oriented fields (management, public administration). A case study helps us gain new insights when we want to answer the “how” and “why” questions; when we cannot influence the behaviour of those involved in the study; when we also want to capture the circumstances in context because we believe they are important for exploring the phenomenon within the survey, or when we cannot draw clear boundaries between phenomenon and context (Yin, 2012).

As part of the research, we conducted fourteen semi-structured interviews with hotel managers and tourism and hospitality consultants who are professionally connected with the Opatija Riviera. The interviews were prepared from 15th April until 30th June 2023. The authors jointly developed the research design and triangulated the questionnaire design and analysis in their previous research. Face-to-face open-questioning interviews were conducted in the study. The interviews lasted between 40 and 55 minutes. According to Patton (2002), only these offer more flexibility and freedom during the conversation. The purposive sample had to be relevant to our research questions (Engel & Schutte, 2005). For this purpose, we chose a sample of managers and experts to deepen the knowledge about the issue of the impact of Covid-19 on changes in the hotel business because the knowledge and

experience gathered will be useful in new challenges related to disease risks and other risks that can potentially threaten tourism, and hotel industry in the future. For this purpose, even today, in the first phase of the post-pandemic period, it is necessary to prepare strategies and develop business models that will influence the reduction of the consequences of potential future risks. All the interviewees agreed with the publishing of the content in the article. Their identity is not revealed in the study. Data on the respondents are selected in Table 1. All interviews were digitally recorded using a mobile phone. In the next step, the interviews were transcribed. When all the data were collected and analysed, we sent them to the respondents and asked them for corrections or comments.

These comments were taken into account in the final interpretation of the data. We analysed and interpreted the collected data based on the narrative analysis. We followed a systematic approach that included the following steps (Richmond, 2002): (i) review of interviews and selection of important information; (ii) we defined topics based on keywords; (iii) coding the data allowed us to capture the essence of each theme; (iv) data analysis allows us to select important findings, contradictions, different patterns and variations; (v) data interpretation and connection to existing theories; (vi) validation of narrative based on feedback from respondents. Qualitative data were quantified for data interpretation, and in vivo evidence citations were added (Langley, 2012). Non-numerical review and interpretation lend themselves to processing large amounts of unstructured primary data to explore underlying meaning, perception, reflection and relational patterns (Babbie,

Table 1: Respondents' demographical data

Demography		Frequency
Gender	Male	9
	Female	5
Age group	Up to 20	0
	21-30	0
	31-40	4
	41-50	8
	Above 50	2
Education level	Bachelor's degree	9
	Master of Arts	3
	PhD	2
Occupation	Senior hotel manager	9
	Hotel board member	2
	Consultant	2
	Researcher	1

topics appear most often in the respondents' interviews: health, firm (hotel), employees, business, tourists (guests), measures, Opatija Riviera (tourism micro-region), Covid, safety, management, investments, and quality.

4 Results

Based on the analysis of the interviews, we combined certain topics proposed by QDA Miner based on their con-

tent similarity (for example, Covid-19 was combined with the topics of health, employees, Opatija Riviera, safety, management, investments, and quality). In this way, seven themes were identified. The key themes are shown in Table 3. They are described below, and individual interviewee quotes are added.

Table 3: Interview themes

Sr. No.	Main themes	Sub-themes	Concepts
1	Health	Education, employees, measures, guests, Covid-19, hygiene, safety	implementing adequate hygiene measures; education safety; preserving the general level of health of all stakeholders in the process
2	Employees	Education, safety, work, workforce	Implementation of protection measures and showing openness to new information and knowledge; the importance of employee health and their protection at the workplace; an increase of material rights and paying monetary rewards to full-time and seasonal workers; employee benefits (e.g., hot meals for all employees); talent management and career development.
3	Opatija Riviera	Cooperation, community, Covid-19, development, destination, safety, tourists	Preparing a strategic shift in tourism development - further improvements and upgrading of tourist products and experiences; importance of cooperation between all stakeholders on the Opatija Riviera; safe destination.
4	Safety	Health, measures, guests, employees, destination, pandemic, risk	The current level of security for tourists staying on the Opatija Riviera is very high; no security risks (disease, terrorism, robberies) have been recorded; the Opatija Riviera, due to its proximity, pleasant climate, clean air and sea and certainly a high level of safety can be among the main destinations for tourists to visit on the Adriatic and beyond; to prevent new outbreaks, it is necessary to properly and regularly maintain a high level of hygiene in the facilities, as well as through training of staff and guests.
5	Management	Data, business, employees, hotel, responsible, services, stakeholders, strategic, sustainability, risk	Risk management; principles of socially responsible business; further promotion of the creation of added value and instil confidence in the stakeholders, inflationary trends.
6	Investments	Energy improvement, development, hotel, future, services	Investments in digital transformation and sustainability projects; the importance of guest experience.
7	Quality	Business, Covid-19, hotel, services, standards	Hotels provided Covid-19 prevention measures intending to enable the quality of services; in the post-pandemic period, hotels strive for continuous improvement in the quality of services, which is also positively influenced by the constant improvement and increase in the efficiency of energy use; the importance of adapting the daily diet to the needs of modern people using the HACCP, halal, and kosher quality systems.

4.1 Theme 1: Health

According to the respondents, Croatia is safe in terms of health to the extent that people are aware of their responsibility for their health through their lifestyle. Health is indirectly considered only by implementing adequate hygiene measures in different parts of the organisation. As far as employees are concerned, there are certain guidelines on safety at work, which indirectly concern health. As far as the guests are concerned, and if we are not discussing hygiene - no. Namely, health is a very individual thing that consists of several factors, and health is entirely the responsibility of each individual and not any organisation. Responders so exposed:

» It's hard to be smart in this situation. The best preservation is for the guest to take care of himself. We, as hotel workers, primarily me as the director, make sure that we enable all disinfection, that means washing clothes with special disinfectant detergents, the rooms are aired every day, we have a special climate, ventilation systems, I don't know what they are called, but to kill Covid-19, and everything else being said, the guests should take care of themselves, keep some distance. Everyone is treated individually. Someone is complying. Today, masks are no longer visible. Yesterday a group of ten Spaniards came to me, all wearing masks. I haven't seen anyone wearing a mask in the last two months«.

The issue of education on disease prevention in hotels was also highlighted. Thus, the interviewees pointed out:

»Although my primary interest is related to the academic community, my job allows me to be in constant contact with the hotels. As part of this cooperation, numerous programs are created, primarily education for employees and tourists related to increasing the offer quality, safety and preserving the general level of health of all stakeholders in the process«.

4.2 Theme: Employees

The interviewees highlighted the importance of protecting workers from infections and educating employees on this topic. The employees must propose introducing new measures and adopting workplace health protection policies to the hotel management. We highlight a few quotes that touch on the issue of hotel employees and otherwise more or less overlap with topic 1, i.e., health:

»According to my knowledge, employees in hotel firms participated mostly in implementing protection measures and showed openness to new information and knowledge provided to them on that occasion. Unfortunately, some employees were not interested in actively participating in implementing or enforcing policies, especially those related to the COVID-19 pandemic. Employees expressed dissatisfaction under the influence of social networks, unver-

ified information, and supporters of conspiracy theories. According to my knowledge, the hotel management has done everything to ensure that they also respect the specified parameters and get involved in implementing safety and health measures. To strengthen the awareness of the employees, but also of the guests of our facilities, we held, in cooperation with hoteliers, several panels where the importance of preserving health, safety and general reliability of our firm in the tourist market was discussed«.

In addition to the importance of employee health and their protection at the workplace, the managers also highlighted the importance of ensuring a quality workforce, which hotels need to continue to provide year-round quality services and guest satisfaction. Employees ensure stability, quality, and long-term sustainable growth. For this purpose, the hotel owners and management must agree with the employee unions on increasing material rights and paying monetary rewards to full-time and seasonal workers.

For a hotel firm, one of the primary goals of the firm's operations must be to ensure employee satisfaction. For this purpose, it must provide them with material, working and temporary living conditions because only satisfied employees will ensure high service quality for guests. As one of the managers says:

“In addition to the commitment to respect all legal requirements and internal standards for protecting the health and safety of employees, contractual partners and guests, providing additional employee benefits (i.e., hot meals for all employees), talent management and career development, our firm continuously invests in facilities for accommodation of seasonal workers.

4.3 Theme 3: Opatija Riviera

The vision of the Opatija Riviera is to position itself as one of the best Mediterranean tourism micro-regions. However, this is why the tourism micro-region needs a strategic shift in tourism development, which will bring further improvements and upgrading of tourist products and experiences in the final phase. To this end, tourism firms must speed up internal reorganisation processes, improve business models, renovate existing capacities, and add new ones in line with competitive trends and guest demands. In Croatia as well, Covid-19 harmed all economic and tourist flows, and thus the cash flow of tourism firms on the Opatija Riviera. Therefore, in the last three years, there has been a decrease in the volume of planned investments compared to the original expectations and developmental plans. However, the trends in 2023 show that tourism firms on the Opatija Riviera have begun to realise the importance of a strategy to stimulate growth and create new added value. Thus, both acquisitions and reorganisation processes took place as the first step towards building

the foundations for sustainable investments, which also includes taking care of talent and introducing innovative solutions, which will enable the marketing of services with high added value and the recognition of the tourism micro-region itself as an international brand. A great advantage of the Opatija Riviera is its partial natural protection from tourist disturbances due to its convenient location and the geographical location of the tourism micro-region, which is primarily a traditional car tourism micro-region of the most important tourism generating markets (Germany, Austria, Hungary, Czech Republic, Slovenia, Italy, Serbia). It is also important for the tourism micro-region that, in the past, there has been good integration and cooperation between all stakeholders. Here, it is worth mentioning the role of the local community and the Faculty of Tourism and Hospitality Management (which is situated in Opatija Riviera), which plays an important role in preparing tourism micro-region development strategies and caring for the development of personnel needed by tourism firms on the Opatija Riviera and beyond. Thus, one of the interviewees emphasised the importance of the stakeholders of the tourism micro-region during the pandemic and the role of the faculties within the University of Rijeka:

“In my opinion, the management of the Opatija Riviera acted responsibly from the beginning of the Covid-19 pandemic and applied all the recommendations to preserve the health of tourists and employees who live and work in our tourism micro-region. The destination management regularly informed all stakeholders about the protection measures implemented and ways to improve the existing health protection system. I hope that with our activities, we have also contributed to the success of preserving the health and perception of the Opatija Riviera as a safe tourism micro-region in the time of Covid-19, which, among other things, is shown by the successful tourism data achieved during the past three pandemic years.

Our cooperation with all stakeholders on the Opatija Riviera was excellent from the beginning, so we coordinated health protection measures and tried to provide our employees with the best protection. We actively participated in programs to promote health protection. We created workshops and educational seminars for stakeholders in tourism so that everyone was aware of the risks and ways to prevent the spread of Covid-19 while we tried to present additional health risks. Our study program, dedicated to health and designed in cooperation with the Faculty of Medicine in Rijeka, also testifies that we think about health actively and systematically.”

4.4 Theme 4: Safety

The current level of security for tourists staying on the Opatija Riviera is very high, as evidenced by the large number of tourists already in our tourism micro-region,

and no security risks have been recorded. However, stakeholders must not be deceived and think security, health, or other crises cannot happen here. The awareness of possible future crises gives destination stakeholders a chance for development and an opportunity to be faster and better and to create security policies that will not threaten any negative consequences. For the modern tourist, safety is the basis for deciding on choosing a certain destination, and the interviewers' opinion is that the Opatija Riviera, due to its proximity, pleasant climate, clean air and sea, and certainly a high level of safety, can be among the main tourism micro-regions for tourists to visit on the Adriatic and beyond.

Interviewers exposed:

»Security on the Opatija Riviera is at a high and enviable level. In cooperation with the Ministry of Interior of the Republic of Croatia, the destination management must pay further attention to preserving security, public order and peace in the tourism micro-region of Opatija (Riviera). Regarding Covid-19, it is necessary to ensure additional general activities with the Department of Public Health Primorje-Gorski Kotar County, educate visitors and employees, and ensure a greater number of places for free testing of tourists. The proposal is to introduce the so-called service at the tourism micro-region level. Community police officers who, through educational activities for all stakeholders in the tourism micro-region, will contribute to increasing security, both general and health, by their very presence. As for the scientific and educational segment, there is constant and active cooperation between the management of the tourism micro-region Opatija and the scientific and professional community. «

»Although currently the situation with Covid-19 is much more favourable than last year and the level of safety is extremely high, in general, in my opinion, it can be considered a medium level of security because we cannot claim with complete certainty that some bottom layer of Covid-19 will not appear or some other epidemics/pandemics that may hit us in the future. However, hoteliers can achieve this by properly and regularly maintaining a high level of hygiene in the facilities, as well as through training of staff and guests. «

»Well, we coped like everyone else, it wasn't easy, but we tried to move forward day by day. Thank God there were not many infected employees here, which means that we complied as much as we could and as much as it allowed in the house, and now, outside the house, who acted how, remains an enigma. And as far as tourism is concerned, we cooperated very well with the participants of the tourism micro-region. The tourist board was also available, so here we are; we fought like everyone else, as they say«.

4.5 Theme 5: Management

The interviewees pointed out that their hotel firms are exposed to many risks in their daily operations. Therefore, one of the main goals of management is to take care of risk management and further promote the creation of added value and instil confidence in the stakeholders. During the pandemic, intending to reduce the risk of disease, hotels increased the policy of active management to adapt the business to the pandemic's effects and aim for an increase in demand. For this purpose, there was an adjustment to the daily prices of tourist facilities and the creation of packages that included additional services, which certainly contributed to the realisation of a significant increase in the average daily expenses in the high season. The management of the hotel firm is also aware of the political risk of the Russian-Ukrainian crisis and, based on the available facts, knowledge, and circumstances, constantly assesses all possible negative impacts on business and implements all measures intending to minimise negative aspects of the firm. The interviewees also point out the inflationary trends, which affect the too-rapid growth of prices of basic products and energy because only the limitation of inflation will enable tourism to gain accelerated business empowerment and ensure the impact of multiplier effects of the recovery on the national economy as well, while at the same time encouraging investments in key business resources (mainly workforce and assets).

The interviewees also highlighted the importance of the principles of socially responsible business. Thus, they highlighted the importance of zero tolerance for corruption, protection of the privacy of employees, guests and partners, no discrimination against employees or guests, environmental programs to decrease pollution and cooperation with stakeholders in developing the local community.

4.6 Theme 6: Investments

Soon after COVID-19 appeared in Croatia, hoteliers promptly introduced strict cost control, primarily by reducing the cost of employees, closing the hotels and/or postponing capital investments. Interviewers exposed that 2022 began with preparing investments in digital transformation and sustainability projects, which is crucial for further development, especially in Opatija Riviera. As the interviewees point out, within the investment cycle, they focus on the "new" guest who wants to experience travel and interaction with nature. At the same time, the hotel industry has become a trend of changing hotel architecture in terms of larger spaces, more open spaces, spacing, etc. Investments in services, technologies, and infrastructure must be directed to the needs and demands of the modern guest (for example, enabling the guest to perform work from the hotel). Thus, it will be possible to develop a new

way of doing business that puts the guest first. The hotel industry must become more of a service industry that is not product-oriented but service-oriented. Instead of the previous 4Ps (product, place, price and promotion), marketing activities should include additional 3Ps: people, processes, physical evidence and create a virtual community through activities on social networks. For hotels, innovating business models are increasingly coming to the fore. According to Martin-Rios and Ciobanu (2019), only 19% of hotel organisations follow an intensive innovation strategy in formulating a business model. It is noticeable that there is a strong positive relationship between business model innovations and all performance indicators, except the average bed occupancy rate because seasonal fluctuations and external socio-economic factors have important economic implications for hotels (Martin-Rios & Ciobanu, 2019).

4.7 Theme 7: Quality

The interviewees pointed out that during the pandemic, their hotels improved the quality of the guests' well-being and ensured the quality of the services. They implemented activities that, in addition to general information about the spread of Covid-19 and prevention measures, also included the implementation of crisis procedures. Occurrence and control of the reach of respiratory viruses, limitation of the number of seats in catering establishments following prescribed measures, mandatory wearing of masks by all employees in contact with guests, possibility of testing guests and delivery of results, required temperature measurement of employees and constant disinfection of all public spaces and accommodation units, including additional disinfection measures after guest departure (which they adhere to even in the post-pandemic period).

In the post-pandemic period, according to the interviewees, hotel firms strive for continuous improvement in the quality of services, which is also positively influenced by the constant improvement and increase in the efficiency of energy use (electricity, heating oil, gas, water) and the procurement of energy-efficient products and services. In the context of quality assurance, the interviewees mentioned the importance of adapting the daily diet to the needs of modern people using the HACCP, halal, and kosher quality systems.

5 Discussion and conclusions

Effective crisis management is crucial for protecting the well-being of guests, employees, and the overall reputation of hotels. The focus should be identifying key strategies and practices hotels can employ to navigate crises effectively (Chanyasak et al., 2022). The emergence of diseases like the COVID-19 pandemic has highlighted the need for hotels to have robust crisis management plans (Le

& Phi, 2021).

The hotel industry is particularly vulnerable due to its characteristics, such as large numbers of people congregating in common areas and a constant influx of guests from different regions (Le, Phi & Le 2021). As a result, hotels must be prepared to respond swiftly, efficiently, and successfully to reduce risks and protect the health and safety of all stakeholders (Permatasari & Mahyuni, 2022; Sharma et al., 2021).

When a hotel firm is exposed to risks in times of crisis or challenging circumstances, it must adapt or completely change its business models to survive and recover and ensure resilience and sustainable growth (Giousmpasoglou et al., 2021). During the Covid-19 pandemic hotel industry was also dealing with climate change, natural disasters, digital and green transformation, staff shortages, and other risks (e.g., liquidity risk). It is so important that hotel firms implement crisis approaches and business models (Hao & Chon, 2022).

For this reason, during the pandemic period, the hotels on the Opatija Riviera made several strategic decisions in the framework of which they changed their business models and strategies with the aim not only of the hotels surviving the crisis but also of recovering, becoming resistant to disruptions, and enabling further sustainable growth. During the pandemic, hotel management dealt with the issue of reducing the risk of Covid-19. For this purpose, it had to adopt strategic guidelines for providing health protection to its employees and guests. To decrease business risks and their consequences, hotel management after the year 2000 focused on: (i) cost optimisation, which affects the increase of financial resilience. To this end, management rationalises operations, introduces a business model of lean management, reduces overhead costs and optimises costs related to external suppliers (Crepic et al., 2021); (ii) diversification of income streams during crises can mitigate risk and reduce dependence on a single source (alternative options for monetising assets, introduce new services/products, and change supply chain management (new suppliers, shorter delivery routes, new markets for finding guests, etc.) (Alkier, Milojica & Roblek, 2023; Strange, 2020); (iii) crisis communication with stakeholders, because maintaining good relations with stakeholders is considered to be of key importance in times of crisis (Ritchie, 2004); (iv) Digital transformation, because crises and the Covid-19 crisis were no exception, sped up the introduction of digital solutions in hotel operations (Sharma, Thomas & Paul, 2021); (v) cooperation (formation of consortia and acquisitions as a form of ownership takeover) enables hotels (specially hotel chains) and other tourism firms to acquire the human resources they lack, gain new professional skills, access new segments of guests and suppliers, and new innovative solutions (Konovalova et al., 2020); (vi) focusing on the main services that guests demand the most or to satisfy critical needs. For this

purpose, the management has the opportunity to transform the offer, change existing resources or introduce solutions that are intended to specifically address the emerging demands of guests during the crisis (the need for sustainable and green solutions) (Mzembe et al., 2021); (vii) use of government support measures - for business liquidity and keeping the current level of headcount which almost all hotel companies used (González-Torres et al., 2021); (viii) scenario planning and risk management because crisis business models include robust scenario planning and risk management (Sax & Andersen, 2019); (ix) sustainable practices and social responsibility because the time of crisis raises the awareness and importance of sustainable business models and social responsibility. The hotel industry thus strives to promote socially responsible business concerning key stakeholders with whom hotels maintain continuous communication. The strategies of hotel firms are aimed at the sustainable development (e.g., circular economy, waste management, sharing economy, reducing the consumption of energy and natural resources, sustainable architecture) of the tourism micro-region and the support of the local community, as well as care for the protection of the environment, the satisfaction of employees and guests (Camilleri, 2022).

The hotel industry also takes care of the sustainable development of the local community. Thus, it invests in the construction of sustainable tourist infrastructure and provides financial support for cultural, gastronomic, educational and entertainment programs, projects and initiatives that improve the attractiveness and competitiveness of the tourism micro-region and contribute to the extension of the tourist season and thus nurturing the cultural identity and values of the local community (Bacari et al., 2021; Liang, T. C., & Wong, 2020). As part of the investments, hotels also want to connect better with the local community and provide their guests with a better experience. Hotels in the Opatija Riviera survived the Covid-19 crisis relatively successfully. The tourism micro-region's proximity to the main markets, from which mainly car guests come, helped significantly. For guests who arrived at a tourism micro-region during the pandemic, all stakeholders in the tourism micro-region needed to decide on appropriate hygiene and safety measures. The tourism micro-region is also attractive for guests due to the relatively mild climate and low risks of natural disasters, environmental disasters, terrorism and robberies.

In conclusion, it should be mentioned that 2022 was the first post-pandemic year in which hotel companies operated normally and restarted the investment cycle. We can conclude that, in the post-pandemic period, hotels focus mainly on adapting existing crisis business models. Their improvement is primarily aimed at ensuring a long-term sustainable concept of growth and future development of both hotels and the tourism micro-region itself. In their current operations, hotels focus on achieving a further in-

crease in the level of service quality and guest satisfaction. To this end, they started a new investment program focusing on (i) optimal positioning, segmentation, and development of the tourism portfolio, prioritising year-round operations, ii) definition and realising long-term strategic business goals, iii) corporate management, culture and climate. The aforementioned active approach includes the utilisation of existing and the creation of additional expertise in the development of the tourism portfolio and the management of hotel capacities to actively create added value for all stakeholders of hotel companies (owners, creditors, local communities and tourism micro-regions, business partners and employees).

5.1 Practical implications

It is important to note that specific changes in business models differ between hotels, depending on their size, location (city, rural environment), target market and existing infrastructure. It should be emphasised that the pandemic has accelerated the adoption of new digital technologies (e.g. localised guest services, IoT, mobile app check-ins, contactless payments, rich guest data and analytics, Cloud PMS, the revenue management system), innovative approaches (smart rooms that enable lower energy and water consumption smart and source locally produced, sustainable food for restaurants) and innovative strategies that satisfied guests' and evolving needs and expectations in a post-Covid world. The pandemic has intensified the effects of disruption, which requires greater flexibility in business strategies. For this purpose, management must adapt strategies more often. Hotel firms must realise that radical changes need to be made before they are forced to do so by disruptions in the external business environment and competitors. In the post-pandemic period, hotels must adopt business models to consider new executive management functions, focusing on resilience and growth, business transformation and sustainable development. At the same time, it is becoming increasingly important that strategies treat all stakeholders equally, and for successful business in an uncertain future, hotels must also form partnerships with competitors. It is expected that in certain future, management teams will have to consider a wider range of stakeholders that will influence their strategy, accept the fact that ecosystems and competitive relationships are changing at an increasingly rapid pace, include new leadership positions that will influence strategy formation, and through reorganisation, improve the firms' speed and agility to keep up with changes in strategy.

5.2 Study limitations and future research proposals

A possible limitation of the research is its geographi-

cal limitation and the homogeneity of the interviewees. In addition, only a qualitative survey was conducted, covering fewer respondents. In the future, it will be necessary to conduct studies in the hotel industry following their changes and adaptation of business models, risks, innovation, and relations with internal and external stakeholders. In addition, it will be essential to implement quantitative approaches that illustrate complementary aspects but require a correspondingly larger number of respondents. Research should be carried out throughout the country and compared with the countries (tourism micro-regions) with the biggest competitors.

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Vloga kriznega managementa hotelov v in po obdobju Covid-19: študija primera mikroregije Opatijske riviere na Hrvaškem

Pandemija Covid-19 je vplivala na povečanje proučevanja vplivov krize v okviru turizma in gostinstva. Rezultati opravljenih študij kažejo, da mora management v turističnih organizacijah v okviru procesov kriznega managementa osredotočati se na prilagoditve in spreminjanje hotelskih poslovnih modelov, če želi zagotoviti njihovo nadaljno uspešno poslovanje in konkurenčnost.

V okviru kvalitativne študije primera smo se lotili kritične analize procesov kriznega upravljanja in upravljaljskih odločitev v zvezi s spremembami in prilagoditvami v strategijah in inovacijah poslovnih modelov. Vsi ti procesi in odločitve so bile oziroma so namenjene okrevanju, zagotovitvi odpornosti in nadaljne trajnostne rasti v hrvaški mikroregiji Opatijska riviera v obdobju pandemije Covid-19 in v času po Covidu-19.

Opravljeni so bili polstrukturirani intervjuji z vodilnimi kadri hotelov in svetovalci za turizem in gostinstvo. Prepise smo preverili, zbrane podatke pa interpretirali na podlagi narativne analize. V študiji je bila uporabljena tematska analiza vsebine.

V okviru rezultatov je potrebno poudariti, da so hoteli na Opatijski rivieri prilagodili svoje krizne poslovne modele v času pandemije in da se v post pandemskem obdobju osredotočajo na strategije, ki bodo omogočale dolgoročno in vzdržno rast poslovanja in razvoj hotelov ter same destinacije. Primarna usmeritev je dvig kakovosti storitev in zadovoljstva gostov ter doseganje konkurenčnosti na turističnem trgu.

Motnje, ki jih je povzročila pandemija, so za poslovodstvo hotelov pomembne tudi z vidika uvajanja procesov kriznega upravljanja, katerih rezultati se kažejo v zaščiti dobrega počutja gostov, zaposlenih in splošnega ugleda hotelov. Zato mora hotelski menedžment poudariti pomen prepoznavanja poslovnih strategij in praks v poslovnih strategijah in tako oblikovati osnovo za učinkovito krizno upravljanje tako za izbruhe bolezni kot za naravne in druge nesreče.

Ključne besede: Poslovni model, Covid-19, Hotelska industrija, Opatijska riviera, Strategije, Management tveganja, Turizem mikroregije

Born Globals and Born Sustainables: Motives of Accumulating Wealth and of Making a Difference in the World

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Background/Purpose: This study investigates the distinct entrepreneurial motivations driving export activities and sustainability pursuits in Slovenian businesses, with a particular focus on differences between newborns and mature enterprises. The study proposes that entrepreneurs who prioritize wealth accumulation are more likely to engage in export activities, particularly those running startups, under the pressures of global trade. Conversely, in light of the shifting cultural values towards sustainability, it is hypothesized that entrepreneurs who are committed to making a difference in the world will be more inclined towards sustainability engagement, a tendency that may be more pronounced in startups.

Methods: To test these hypotheses, linear regression modelling, using data collected from the Global Entrepreneurship Monitor survey of businesses in Slovenia was employed.

Results: Newborns, in comparison to mature businesses, are more engaged in both exporting and sustainability pursuits. Interestingly, the motives behind these activities differ significantly. Exporting is primarily driven by the pursuit of wealth accumulation, while sustainability engagement is motivated by the desire to make a positive difference in the world.

Conclusion: These findings provide valuable insights into the unique characteristics of internationalization and sustainability pursuits in startups versus mature businesses. They highlight the role of distinct entrepreneurial motivations in shaping business practices, contributing to the literature on entrepreneurship and business sustainability.

Keywords: *Startups, Newborn businesses, Mature businesses, Born globals, Export activities, Sustainability engagement, Entrepreneurial motives.*

1 Introduction

In the era of globalization, firms worldwide grapple with the challenge of survival and growth, where cross-border trade stands as a vital component. Research indicates a strong inclination towards internationalization among startups, mainly motivated by the desire to accumulate personal wealth (Moen, 2002; Knight & Cavusgil, 2004). As entrepreneurs and their new ventures feel the

pinch of globalization, export activities become a lucrative avenue for their aspirations.

However, a noteworthy shift in societal values has been discerned over the last few years, transitioning from an emphasis on wealth accumulation to the greater appreciation for sustainability (Elkington, 1998). This cultural transition raises intriguing questions about entrepreneurial motives that push towards embracing sustainability within their businesses. In this context, we posit that entrepreneurs can be driven by the aspiration to effect a significant

change in the world, motivating them to adopt sustainability in their business practices (Schaltegger & Wagner, 2011). Arguably, this proclivity towards making a difference is especially prominent among nascent entrepreneurs, leading to an emerging category of ventures that are ‘born sustainable.’

These observations frame our research questions: What are the underlying motivations that drive entrepreneurs towards embracing sustainability? Do newborn businesses exhibit a greater inclination towards sustainability compared to their mature counterparts?

In order to shed light on these questions, we delve into the dichotomy of motives driving the internationalization and sustainability endeavors of businesses at different maturity stages. By doing so, this study contributes to the body of knowledge concerning the distinctive motives that underpin the internationalization and sustainability engagements of newborn businesses, contrasting mature businesses.

2 Theoretical perspectives

To set the stage for our investigation, we first discuss theories relevant to business exporting, paying particular attention to the role of startups or ‘born global’ businesses. We then transition to the topic of sustainability, placing emphasis on its importance for new businesses, also known as ‘born sustainable’ businesses.

2.1 Exporting by businesses

Traditional economic theories have often portrayed exporting as a largely economic pursuit, motivated primarily by profit maximization and wealth accumulation (Ricardo, 1817; Krugman, 1980). Over time, research has expanded upon this view, considering the role of strategic and competitive forces in driving businesses towards international markets (Porter, 1980; Barney, 1991). In the globalized economy, an entrepreneur’s desire to accumulate wealth can be a significant motivator for engaging in exporting (Buckley & Ghauri, 2004). Therefore, we propose our first hypothesis:

Hypothesis 1. The motive of accumulating wealth promotes exporting.

Although not a groundbreaking proposition, this hypothesis serves as an essential benchmark against which we can juxtapose the motivations for sustainability pursuits.

2.2 Born globals

In the wake of intensifying globalization, businesses, particularly those driven by wealth accumulation motives,

are increasingly impelled to venture into exporting (Cavusgil & Knight, 2009). This phenomenon is partly driven by advancements in technology and communication, making it easier for startups to operate globally (McDougall & Oviatt, 2000). While mature businesses may face structural and cultural inertia, making it difficult to adapt to the dynamic demands of international markets (Autio et al., 2000), newborn businesses have the advantage of agility and lack of constraints, allowing them to design business models that inherently include exporting (Coviello, 2006). Thus, we propose our second hypothesis:

Hypothesis 2. Newborn businesses, compared to mature ones, engage more in exporting activities.

Like the first hypothesis, this idea is not new but serves as a basis for comparing sustainability pursuits among newborn and mature businesses.

In addition to this, recent research has begun to question the universality of these assumptions. For instance, studies have shown that different markets and cultural contexts might impact the extent to which wealth accumulation and newness drive exporting (Manolova et al., 2010). This adds another layer of complexity to our investigation and demonstrates the importance of considering contextual factors in our analysis.

2.3 Sustainability engagement by businesses

The question of whether businesses should prioritize profits or contribute to society’s sustainability has sparked debates among economists, policymakers, and activists alike. On one end of the spectrum, we have the traditional capitalist view, exemplified by Milton Friedman, asserting the supremacy of profit maximization (Friedman, 1970). On the other, we have voices like Greta Thunberg’s that advocate for the crucial role businesses play in sustainable development (Thunberg et al., 2020).

The sustainability movement has generated pressure on societies, governments, and businesses alike to take tangible action towards sustainability (Schönherr et al., 2017; Singer et al., 2022). Businesses differ significantly in their response to this pressure, and their engagement with sustainability varies widely (Figge and Helm, 2012; Tiba et al., 2019).

The tension between the pursuit of wealth and the drive for sustainability could lead to loosely coupled strategies and practices in businesses, with some businesses merely paying lip service to sustainability without implementing meaningful changes, a practice known as ‘greenwashing’ (Weick, 1976; Orton and Weick, 1990; Schött and Wickstrøm, 2008). In contrast, businesses genuinely committed to making a difference might ‘walk the talk’ by aligning their strategies and practices with sustainability (Hockerts, 2015; Sarango-Lalangui et al., 2018; York et al., 2016).

The global sustainability movement, as exemplified by the adoption of the UN Sustainable Development Goals, further underscores the increasingly central role businesses play in achieving these goals (UNCTAD, 2019). This pivotal role is recognized by national authorities, including governments, who are actively engaging with these goals (Sachs et al., 2021; Schramade, 2017). Moreover, there's a growing expectation from both governments and business leaders for businesses to actively support sustainable development pursuits (Agarwal et al., 2017). The Harmonious Entrepreneurship Society, founded on the principle of promoting entrepreneurial training and enterprising for sustainable development, is a notable example of this trend (Harmonious Entrepreneurship Society, 2023).

Cultural norms and societal expectations also play a crucial role in promoting sustainability. In many societies, businesses are expected, if not required, to adopt sustainability efforts. This expectation is particularly pronounced in post-materialist cultures, which are especially favorable for sustainable development (Hechavarría et al., 2017; Rosati and Faria, 2019a, 2019b).

In light of these arguments, we propose the following hypothesis:

Hypothesis 3. The motive of making a difference in the world promotes sustainability pursuit.

2.4 The born sustainable business

Recent shifts in societal values and norms, along with increasingly stringent regulations, have placed sustainability at the forefront of business considerations. While established businesses may grapple with inertia and sunk costs, inhibiting their transition towards sustainability (Hockerts, 2015), startups can be more agile and proactive in incorporating sustainability in their strategies and practices from inception (Cohen & Winn, 2007; Dean & McMullen, 2007). Given the burgeoning societal expectation and regulatory requirements for sustainability, newborn businesses have a greater dynamic capability to engage with sustainability compared to mature businesses (Fischer et al., 2020). This argument leads us to the following hypothesis:

Hypothesis 4. Newborn, compared to mature businesses, engage with sustainability more.

Furthermore, it's critical to note the influence of cultural, regulatory, and societal factors in shaping the sustainability practices of businesses (Rosati & Faria, 2019a, 2019b; Hechavarría et al., 2017). These factors can moderate the relationships proposed in our hypotheses and add further nuance to our understanding of sustainability pursuits in businesses.

3 Research design

A representative sample of businesses has been surveyed by the Global Entrepreneurship Monitor (GEM) team based at University of Maribor (sample sizes differ across analyses, listed in the tables). GEM will make the data publicly available on its website www.gemconsortium.org.

3.1 Measurements

3.1.1 Exporting

Exporting is measured by asking the entrepreneur,

- What percentage of your annual sales revenues will usually come from customers living outside your country?

The percentage is logged to reduce skewness.

3.1.2 Sustainability pursuit

Engagement with sustainability in a business was measured in the GEM survey of entrepreneurs by posing six questions,

- Are you aware of the 17 United Nations Sustainable Development Goals – the 2030 agenda for sustainable development – published in 2015?
- When making decisions about the future of your business, you always consider social implications

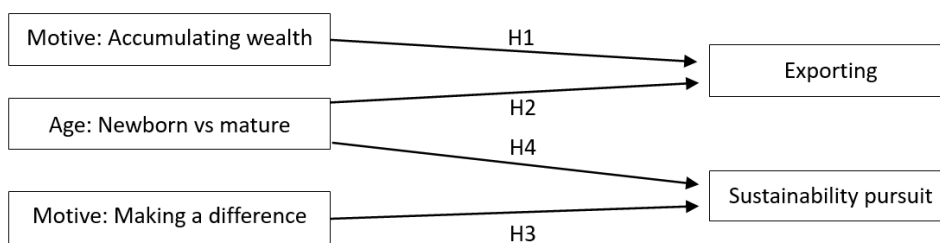


Figure 1: Hypothesized effects

such as access to education, health, safety, inclusive work, housing, transportation, quality of life at work, etc.

- When making decisions about the future of your business, you always consider environmental implications such as preservation of green areas, reduction of the emission of pollutants and toxic gases, selective garbage collection, conscious consumption of water, electricity and fuels, etc.
- You prioritize the social and/or environmental impact of your business above profitability or growth.
- Have you taken any steps to minimize the environmental impact of your business over the past year? This could include energy saving measures, measures to reduce carbon emissions or introducing more efficient machinery, take care of the solid waste generated, use of recyclable material, use of alternative means of transportation, such as cycling, walking, collective rides, public transportation, etc.
- Have you taken any steps to maximize the social impact of your business over the past year? This could include creating posts for young unemployed and other groups with limited access to the labor market; including social enterprises into your supply chain; ensuring a diverse workforce; prioritize companies and/or suppliers that take actions that respect human rights and the environment, when buying a product or service; fight against any form of child or slave labor; invest or support projects or social organizations that develop the community and include less favored groups.

The six variables are positively correlated so we combine them by standardizing each variable and then averaging the six for an index of engagement with sustainability. The standardized measure of sustainability engagement, with mean 0 and standard deviation 1 across all businesses, is used to ascertain differences (Table 3) and is a dependent variable in our analysis (Table 4). These indicators of sustainability have been used in several recent analyses (Ismail et al., 2022; Liu et al., 2021).

3.1.3 Age of business: Newborn and mature business

Age of business is here considered dichotomously, as newborn contrasted mature. A business is here considered newborn if compensation has not yet been provided or has been provided for only less than three months. By contrast, a business is considered mature if compensation has been provided for more than three months.

3.1.4 Motives

Four motives are measured by asking the entrepreneur,

- Please tell me the extent to which the following statements reflect the reasons you are trying to start a business.

To make a difference in the world.

To build great wealth or a very high income.

To continue a family tradition.

To earn a living because jobs are scarce.

The respondent rated each motive on a five-point Likert scale going from 'strongly disagree' to 'strongly agree', coded 1 to 5.

3.1.5 Control variables

The multivariate analysis should control for conditions that may be related to business age and to engagement with sustainability. The GEM survey enables us to control for (Bosma, 2013),

- sector, measured as four categories, extractive sector, transformative sector, business service sector, consumer-oriented sector.
- owners of the business, the number of owners, logged to reduce skewness.
- employees of the business, the number of employees, logged to reduce skewness.
- gender of the entrepreneur, recorded as male (coded 1) or female (coded 0).
- age of the entrepreneur, the number of years of age of the entrepreneur.
- education of the entrepreneur, as years of schooling.

Furthermore, exporting around the world was severely disrupted in 2020 by the COVID-19 pandemic. Therefore, we do not include the 2020-survey in the analysis of exporting. Moreover, we take the subsequent recovery of exporting into account by including a dummy variable for 2021 and a dummy variable for 2022.

4 Results

Here we first describe the background of the businesses and then test our hypotheses.

4.1 Background of the businesses

The businesses are briefly described by summary statistics of their characteristics, Table 1. The big difference between newborn and mature businesses is their age, by definition. Accompanying differences are their size in

terms of employees, and the younger age of entrepreneurs in newborns. Perhaps more surprisingly is the difference in the entrepreneurs' motives for running a business. The motive of making a difference in the world is much stronger in newborn than in mature businesses.

The background can be described further by the correlations among variables of interest, Table 2.

4.2 Exporting and sustainability pursuits

Newborn and mature businesses differ in both exporting and sustainability, Table 3. As many as 24% of the newborn businesses are exporting whereas only 18% of

the mature business are exporting. The newborns, compared to the mature businesses, are much more engaged with sustainability. The difference is .26 standard deviations of sustainability pursuit, a considerable difference.

The effects of age – newborn versus mature – are better ascertained by multivariate modeling with controls for other conditions, Table 4.

Hypothesis 1 posits that newborn, compared to mature businesses, export more. The coefficient in the model of exporting in Table 4 is positive, showing that newborn export more than mature businesses, also when other conditions are held constant. This supports H1. The effect is notable, .13 standard deviations of exporting.

Table 1: Frequencies and means (standard deviations) of characteristics of businesses in Slovenia

	Newborn businesses	Mature businesses	Significance
Motive: Make a difference in world	3.3 (1.6)	2.8 (1.6)	***
Motive: Accumulating wealth	3.0 (1.5)	2.7 (1.5)	**
Motive: Continuing family tradition	2.1 (1.6)	2.5 (1.8)	**
Motive: Earning a living, jobs scarce	3.5 (1.5)	3.7 (1.5)	†
Sector: Extraction	5%	7%	*
Sector: Transformation	27%	35%	***
Sector: Business services	31%	32%	
Sector: Consumer services	37%	26%	***
Age of the business	0 (0) years	9.8 (9.1) years	***
Owners	2.2 (2.0) owners	2.1 (3.2) owners	
Employees	7.1 (35.0) employees	17.5 (50.9) employees	***
Gender: Male	68%	68%	
Age of entrepreneur	36.9 (11.2) years	43.5 (10.6) years	***
Education	13.4 (3.5) years	13.1 (3.8) years	**

† p<.10 * p<.05 ** p<.01 *** p<.001

Table 2: Correlations

	Sustainability	Exporting	Newborn	Motive: Make diff	Motive: Wealth	Motive: Family
Sustainability						
Exporting	.05					
Newborn	.11 *	.09 ***				
Motive: Make a difference	.37	.03	.13 ***			
Motive: Accumulate wealth	-.03	.08 *	.09 **	.19 ***		
Motive: Family tradition	.09 *	-.09 **	-.06 †	.02	-.01	
Motive: Earn a living	.12 **	-.09 *	-.09 **	.11 ***	.10 **	.09 **

† p<.10 * p<.05 ** p<.01 *** p<.001

Table 3: Exporting and sustainability pursuit in newborn and mature businesses

		Newborn	Mature	Significance
Exporting	Share of exporting. Mean (SD)	24 (33) %	18 (28) %	***
Sustainability pursuit	Standardized measure. Mean (SD)	.20 (.90)	-.06 (1.02)	***

Table 4: Exporting and sustainability pursuit depending on motives and age (newborn vs mature)

	Exporting	Sustainability pursuit
Newborn (contrasted mature)	.13 † H1	.25 * H2
Motive: Making a difference in the world	.00	.33 *** H4
Motive: Accumulating wealth	.06 † H3	-.10 *
Motive: Continuing a family tradition	-.09 *	.06
Motive: Earning a living, jobs scarce	-.04	.05
Gender of entrepreneur: Male	.23 ***	-.07
Age of entrepreneur	.01	.10 *
Education	.04	.05
Sector: Extracting	.06	.25
Sector: Transforming	.03	-.03
Sector: Business services	.10	-.20 †
Owners	.08	.15 *
Employees	.15 *	.15 *
Year 2021	.05	
Year 2022	.17 †	
Constant	-.40	.07
R-square	.07 ***	.22 ***
N businesses	680 businesses in 2019, 2021, 2022	464 businesses in 2021-22

Linear regression.

Reference for sector is the consumer-oriented sector.

Dependent variables are standardized.

Numerical independent variables are standardized.

Dichotomous independent variables are 0 and 1 dummies.

† $p < .10$ * $p < .05$ ** $p < .01$ *** $p < .001$

Hypothesis 2 claims that newborn, compared to mature businesses, engage with sustainability more. The positive coefficient show that newborn pursue sustainability more than mature businesses, supporting H2. The effect is considerable .25 standard deviations of sustainability pursuit. Thus, the effect of being newborn upon sustainability pursuit is much stronger – about twice as strong – than the effect on exporting.

Hypothesis 3 asserts that the motive of accumulating wealth promotes exporting. The effect of this motive upon exporting is estimated as positive, supporting H3 (albeit significance is only marginal). The effect is of notable magnitude. Exporting is not discernibly affected by the motive of making a difference in the world.

Hypothesis 4 says that the motive of making a difference in the world promotes sustainability pursuit. The ef-

fect of this motive upon sustainability engagement is positive, supporting H4. The effect is strong. Sustainability pursuit is negative affected by the motive of accumulating wealth.

In short, the analyses support the hypotheses. Newborns, compared to mature businesses, are both more exporting and more sustainability engaged. But exporting and sustainability pursuits have different motives. Exporting is promoted by a motive of accumulating wealth, and sustainability pursuits is promoted by a motive of making a difference in the world.

5 Discussion

The analyses address the research questions, What motivates entrepreneurs to pursue sustainability, and is sustainability pursued more by newborn businesses than by mature businesses? Here we discuss findings, contributions, relevance, limitations, and further research.

5.1 Findings

This study provides robust support for the hypothesized relations between age of business (newborn vs mature), the entrepreneurial motives, and their respective impacts on exporting and sustainability pursuits. The findings underscore the significance of the entrepreneurial mindset and the lifecycle stage of the business in determining its orientation towards exporting and sustainability.

Our analysis revealed that newborn businesses, when compared to their mature counterparts, were both more engaged in exporting and more sustainability-focused. Specifically, 24% of newborn businesses were involved in exporting, compared to 18% of mature businesses, indicating a higher propensity among newly formed enterprises to venture beyond domestic markets. This not only supports Hypothesis 1, but also highlights the potential of newborn businesses to rejuvenate economies through internationalization. In the realm of sustainability pursuits, the difference between newborn and mature businesses was even more pronounced, measured at .26 standard deviations. The newborn businesses showed a significantly greater inclination to engage with sustainability issues, bolstering the assertion made in Hypothesis 2. Such a commitment to sustainability is indicative of a shifting entrepreneurial ethos, emphasizing a balanced pursuit of economic gains and societal benefits.

In exploring the motivational aspects of these engagements, we found a divergence in the forces driving exporting and sustainability pursuits. Exporting activities, as anticipated in Hypothesis 3, were primarily fueled by a motive of accumulating wealth. The influence of this motive was statistically significant, even though it was

only marginal. This finding reaffirms the conventional economic premise that businesses are motivated by profit maximization. Conversely, the pursuit of sustainability was found to be significantly influenced by the motive of making a difference in the world, in line with Hypothesis 4. This motive yielded a strong positive effect, implying that entrepreneurs who align their values with making a societal impact are more likely to engage in sustainable business practices. Interestingly, the pursuit of sustainability was negatively impacted by the motive of accumulating wealth, suggesting a tension between traditional wealth-driven entrepreneurship and the emerging ethos of sustainable entrepreneurship.

Our findings present a nuanced picture of the entrepreneurial landscape. They affirm the dichotomous motives driving exporting and sustainability pursuits and underscore the catalytic role of newborn businesses in both these domains. Importantly, they highlight the growing prominence of sustainability in entrepreneurial pursuits, a trend driven by businesses 'born sustainable,' which seek to balance wealth accumulation with making a positive difference in the world.

5.2 Contribution

The findings from this study significantly extend our understanding of entrepreneurial motivation and its manifestations in business activities, particularly in the context of newborn and mature businesses. By highlighting the distinct motivations driving internationalization and sustainability pursuits, the research illuminates a new facet of entrepreneurial orientation. It uncovers the juxtaposition of the traditional wealth-driven motive for exporting and the contemporary world-change-driven motive for sustainability engagement, thereby adding to the entrepreneurship literature.

Moreover, by substantiating the unique propensity of newborn businesses towards both exporting and sustainability engagement, this study contributes to the ongoing discourse on 'born globals' and 'born sustainables'. It underscores the transformative potential of such businesses, who exhibit agility and responsiveness to evolving economic and societal expectations.

5.3 Relevance

In a world characterized by global interdependencies and mounting environmental and social challenges, these findings hold profound relevance for both policy and practice. For policymakers, understanding the motivations and proclivities of businesses at different lifecycle stages can inform initiatives aimed at fostering sustainable internationalization. For practitioners, especially budding en-

trepreneurs, these insights can guide strategic decisions regarding internationalization and sustainability engagement.

5.4 Limitations

While this study provides substantial insights, it is not without limitations. The sample consisted solely of businesses in Slovenia, limiting the generalizability of the findings. Furthermore, this research only considered two dimensions of entrepreneurial motivation and did not account for the potential influence of other motivational factors. Additionally, the study focused on the motives of the entrepreneurs, which might not fully capture the complete organizational dynamics influencing exporting and sustainability pursuits.

5.5 Further Research

Further research could aim to address the limitations of the present study. It would be valuable to replicate this research in different geographical and cultural contexts to test the robustness of the findings. Studies could also consider a broader range of motivational factors, including intrinsic and extrinsic motivations, and their impact on exporting and sustainability pursuits. Additionally, longitudinal studies could provide insights into how these motives and pursuits evolve as businesses move from the newborn to the mature stage. Investigating these aspects will enrich our understanding of the nuanced interplay between entrepreneurial motives and business activities.

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Rojeni globalno in rojeni trajnostno: Motivi za ustvarjanje bogastva in spreminjanje sveta

Ozadje in namen: Prispevek proučuje različne podjetniške motive, ki spodbujajo izvozne dejavnosti in prizadevanja za trajnostni razvoj v slovenskih podjetjih, s posebnim poudarkom na razlikah med novonastalimi in zreli podjetji. Študija predlaga, da se podjetniki, ki dajejo prednost ustvarjanju bogastva, pod pritiski svetovne trgovine pogosteje ukvarjajo z izvoznimi dejavnostmi, zlasti tisti, ki vodijo zagonska podjetja. Nasprotno pa v luči spreminjanja kulturnih vrednot v smeri trajnosti predpostavlja, da bodo podjetniki, ki so zavezani k spreminjanju sveta, bolj nagnjeni k trajnostnemu udejstvovanju, pri čemer je ta težnja lahko izrazitejša v zagonskih podjetjih.

Metodologija: Za preverjanje hipotez je bilo uporabljeno linearno regresijsko modeliranje z uporabo podatkov, zbranih v raziskavi Global Entrepreneurship Monitor med podjetji v Sloveniji.

Rezultati: Novonastala podjetja so v primerjavi z zreli podjetji bolj vključena tako v izvoz kot tudi v trajnostna prizadevanja. Zanimivo je, da se motivi za te dejavnosti bistveno razlikujejo. Pri izvozu jih vodi predvsem težnja po ustvarjanju bogastva, medtem ko jih pri trajnostnem udejstvovanju motivira želja po pozitivnih spremembah v svetu.

Zaključek: Te ugotovitve zagotavljajo dragocen vpogled v edinstvene značilnosti internacionalizacije in prizadevanj za trajnost v zagonskih podjetjih v primerjavi z zreli podjetji. Poudarjajo vlogo različnih podjetniških motivacij pri oblikovanju poslovnih praks in prispevajo k literaturi o podjetništvu in trajnosti podjetij.

Ključne besede: *Startupi, Novo nastajajoča podjetja, Zrela podjetja, Podjetja rojena globalno, Izvozne dejavnosti, Trajnostna naravnost, Podjetniški motivi*

Narcissistic Leadership and Project Success: The Role of Knowledge Sharing and Collectivism in IT Firms

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Purpose: In the quest of exploring specific developments in contemporary management research, this study highlights the prevalence of narcissistic leadership in IT firms. We employed the upper-echelon framework to analyze the impact of narcissistic leadership on project success. This study considered the dark side of a leader's narcissism while analyzing how narcissistic leadership affects a project's success through knowledge sharing and collectivism.

Design/methodology/approach: Structural equation modeling is employed to investigate this proposition. Using convenience sampling, approximately 370 questionnaires were dispensed out of which 272 completed questionnaires were utilized for performing the analysis of IT firms.

Findings: Narcissistic leadership affects project's success through knowledge sharing and collectivism. The results indicate that narcissistic leadership negatively predicts project success. Moreover, knowledge sharing fully mediated the relationship between narcissistic leadership and project success. Whereas, collectivism moderates the relationship between knowledge-sharing and narcissistic leadership.

Originality: Our assumptions are based on the upper-echelon theory indicating that narcissistic leadership affects project success through knowledge-sharing and collectivism. This has been proved by the empirical analysis carried out in Pakistan's IT sector.

Keywords: *Narcissistic leadership, Project success, Knowledge sharing, Collectivism*

1 Introduction

'Narcissism' is a unique individual difference. This character trademark is also a leadership trait related to power, affectedness, exorbitant self-esteem, and inflated self-views (Campbell et al., 2011). A narcissist's behavior is highly focused on the self instead of focusing on the needs of others (Ames et al., 2006). Being a negative leadership trait, narcissistic leaders' values, strategies, and actions are intended to meet their own psychological needs (Foster et al., 2003). Additionally, it is characterized by differences among individuals such as conceit and personal opinion (Campbell et al., 2011). According to research,

narcissists in executive positions might be grandiose narcissists; excessive in self-esteem, predominant, seekers of attention, resistant to accept criticism, lack empathy, aggressive, exploitative, and manipulative in relationships (Ham et al., 2018).

Researchers have shown a significant amount of interest in narcissistic leadership (Owens et al., 2015). Although recent advancements and rising trends in personality and management studies, there is a growing academic interest in narcissism, particularly in top leadership positions (Braun, 2017; Rosenthal & Pittinsky, 2006). However, the subject of whether narcissistic leadership is appropriate or not for working environment remains unanswered. (Padil-

la et al., 2007)

Narcissistic leadership has both positive and negative aspects (Hogan & Kaiser, 2005a). Narcissistic personality traits are more likely to have negative implications for organizations as compared to positive implications as it is associated with psychological distress, anxiety, negative emotions, entitlement, interpersonal dominance, and a distrustful approach to interpersonal relations (Kaufman et al., 2020). Narcissistic leadership is perceived as a negative leadership trait that may be attributed to negative interpersonal behavior inside the working environment (Gauglitz, 2022; Neumann et al., 2021; Wang et al., 2021). Therefore, this study intends to advance the extant knowledge regarding how narcissistic leadership affects project success.

Recently project success has been the central attention of project management literature (Prabhakar & Duda, 2009). Prior research focused on the project success with respect to completion of the task, customer satisfaction, end user and project team (Hughes et al., 2004) in addition to the standardization of important factors such as scheduling, cost and quality, performance efficiency, and working environment (Cheng et al., 2012). Similarly, the success of a project depends on employee commitment, creativity, innovation, good communication between leader and follower, and genuine effort to achieve goals. (Ramlall, 2008). Moreover, several research studies indicate that project managers' attributes, leadership overall performance, and management styles make contributions to the achievement of various kinds of projects at different phases (Lee-Kelley & Loong, 2003; Nixon et al., 2012). Research on leadership shows that leadership traits can either enhance or negatively affect project performance (Hu & Judge, 2017; Kaiser et al., 2008). Narcissistic leadership is a negative trait that leads to negative employee attitudes, increased intention to quit, undesirable behavior, and poor work performance (Labrague et al., 2020). Williams (2017) suggested that narcissism is like a disease that hinders performance which in return negatively influences the success of the project. Although the majority of previous studies employed institutional frameworks to examine the influence of narcissistic leadership on firm-level outcomes (Luo et al., 2017); in this study the upper echelon framework has been integrated by considering internal factors, such as knowledge sharing and collectivism to investigate how narcissistic leaders affect project success.

There is ample evidence in the prior literature that focuses on the significance of personality traits for leadership, leaders, and their followers, jointly determining the leadership process. Furthermore, both have the potential to influence the performance of the other. (Frieder et al., 2018). Previous project management research has further elaborated on how project success is related to the psychological factors of individuals who are in leading roles (Cooke-Davies, 2002; Hassan et al., 2017). The idea of

leadership reflects individual abilities to impact the followers and to execute changes that will benefit the organization in return. Most of the prior studies on leadership consistently focused on the positive attributes of the leader (Hogan & Benson, 2009; Kellerman, 2004) and did not consider the negative attributes of the leadership; thus requiring further investigation to achieve a holistic view of leadership. Thus there is a need for future research to investigate the negative effects of narcissistic leadership (Braun, 2017). It is also emphasized to investigate the mechanisms through which a leader's narcissism affects project performance in numerous settings (Wisse et al., 2018). There is abundant literature that has investigated individual and organizational elements that promote knowledge sharing (Jiang & Gu, 2016). However, studies focusing on the barriers to knowledge sharing remain limited (Kim et al., 2015a; Wu & Lee, 2016). For instance, many studies have supported the impact of advantageous leadership styles in enhancing knowledge sharing (Le & Lei, 2018; Yadav et al., 2019; Yang et al., 2018), however few if none research studies have tried to investigate the effect of adverse leadership on knowledge sharing (Feng & Wang, 2019). The arguments above indicate a significant gap in research on project management and leadership that needs to be addressed.

Project management sector in Pakistan is struggling consistently to create positive interpersonal relationships between project leaders and the associated workforce, in order to make successful project implementation possible. Prior studies in Pakistan were carried out to depict the effect of narcissistic leadership on workers' behavior in various sectors i.e. banking, service, hospital, and academic. Banking sector is one of the fastest-growing sectors of Pakistan (Asrar-ul-Haq & Kuchinke, 2016); the literature suggests that mental anguish among banking professionals has increased dramatically over the previous decade (Stough et al., 2017), which had a negative impact on their performance and caused turnover. Unsupportive leadership is considered to be one of the main causes for this alarming change however there may be other contributing elements as well (Asrar-ul-Haq & Kuchinke, 2016). Narcissism has long been studied, but its association with project success has received less attention, particularly in the Pakistani context (Fouzia & Khan, 2013). Fouzia et al. (2013) examined how narcissistic leadership affected employees' psychological contracts, including their motivation, commitment, ownership of their work, and behavior in Pakistan's public and private sector organizations. The results demonstrated that narcissistic employers lead to a decline in the psychological contracts of the employees. According to Turkalj & Fosis (2009) and Akehurst et al. (2009), many aspects within the organisation can influence employee satisfaction with their work. However, an employee's satisfaction with his work and the manager's leadership style are two key factors that distinctly affect an

organization's performance (Asrar-ul-Haq & Kuchinke, 2016). The leadership style of the manager has influenced organizational performance through employees' behavior (Yassin Sheikh Ali et al., 2013). Although narcissism has long been examined in psychology, but in IT sector its research on narcissistic leadership and its impact on organizations has emerged recently (Al-Abrow et al., 2019). Furthermore, very few studies have considered the role of narcissism on project success (Ali et al., 2021). In IT industry context, Brooker (2020) states that narcissistic leaders influence an organization's performance extremes, resulting in quick returns on assets. Similarly, Cragun et al. (2020) support the idea that narcissism can be related to firm performance only if it is controlled by many factors, such as organizational risks, organizational resilience, and so on, resulting in the successful completion of IT projects and thus increasing an organization's overall performance (Tupa et al., 2017). Personality traits associated with narcissistic leadership have been found to hinder project success, which increases the likelihood that projects will fail if not properly managed. Therefore, it is vital to assess and investigate narcissism's negative aspects and how these personality traits can be managed and used in favor of project success (Brooker, 2020).

As already stated, earlier research focused on good leadership patterns and their relationship with project achievement. However, this empirical research analyses the negative aspect of leadership i.e narcissism. This study attempts to achieve four objectives which are as follows; first is to investigate the relationship between narcissistic leadership and project success in IT sector in Pakistan. The second goal is to ascertain whether knowledge-sharing mediates the relationship between narcissistic leadership and project success. The third goal is to determine the moderated role that may be played by collectivism in the relationship between narcissistic leadership and knowledge sharing. The fourth goal is to investigate the impact of narcissistic leadership on project success through knowledge-sharing conditions on the level of employee's collectivistic orientation.

Theoretically, current study makes a valuable contribution to the limited literature on leadership and personality research; as it tries to identify the mechanism through which narcissistic leaders influence project success. The investigation of these mechanisms for leadership-project success is crucial and to counter narcissistic qualities among individuals in positions of authority, it is vital to manage them in fast-growing project-based organizations. This study attempts to explain the black box between narcissistic leadership and the detraction of project success. The present study pursues to fill the above-mentioned knowledge gap by investigating the interrelationship between narcissistic leadership, knowledge sharing, and project success in the IT sector of Pakistan.

2 Theoretical Framework and Hypothesis Development

Upper Echelon theory suggests that leaders' psychological behavior affects their strategic choices. More precisely cognitive biases and personal choices of the leadership determines how they understand and evaluate the business situation and act subsequently influencing firm or project success (Hambrick, 2007; Hambrick & Mason, 1984). Thus, upper echelon theory proposes that personal traits of the leadership influence strategic choices and decisions (Campbell et al., 2019). Research evidence suggests the role of executive narcissism in firm-level outcomes by using upper echelon theory (Petrenko et al., 2016; Tang et al., 2018). Blank et al. (1990) postulated that there should be alignment between the follower's readiness and leadership task that determines the performance of the followers and leader. However, an appropriate match depends upon the situation in which leaders and followers are operating. In this perspective, recent work carried out by Yang et al. (2021) in China, drawing on the conservation of resource theory, highlighted that psychological resources could be utilized as a mediating factor between narcissistic leadership and employee resilience. Yang et al. (2020) unusually focused on the positive side of narcissism in a leadership role. The study proposed that knowledge sharing and collectivism are the factors that may mitigate the negative or dark side of narcissism which ultimately influences the project's success.

The way a leader heads a project can have a significant impact on the project, team behavior, operations, productivity, and new product development processes (Darawong, 2020). As the leader is the person who makes the most important decisions about how to plan the project from the beginning to the end; therefore, it is important to look at the behavior trait of leaders (Pinto & Patanakul, 2015). An organization can face serious consequences if a project fails. There is plenty of literature emphasizing the importance of connecting personality and leadership from a research perspective. Any project's leadership must take into consideration both followers and leaders role in the project; doing so can increase the likelihood that the project will be successful (Zaman et al., 2020).

Narcissistic leadership is one of the leadership styles that may cause projects to fail and needs the attention of employers, practitioners, and researchers despite the fact that numerous leadership styles and their association with success or failure of projects have been documented in the literature (Asad & Sadler-Smith, 2020; Germain, 2018). Narcissistic leader's only priority is to promote himself and has no empathy for the followers. These leaders exhibit traits like arrogance, dominance, aggressiveness, etc (Aboramadan et al., 2021). This behavior has negative effects on different segments of life including family, so-

ciety, and the working environment (Germain, 2018). Narcissistic leaders prioritize their own admiration and power over emotional concern for individuals and organizations they lead (Rosenthal & Pittinsky, 2006). In narcissistic leadership, leaders primarily behave in accordance with their own selfish needs and interest (Fatfouta, 2019).

According to literature, a leader's narcissism has both destructive and constructive sides (Hogan & Kaiser, 2005b). Currently, studies increasingly focus on the destructive side of narcissistic leadership (Spain et al., 2014). The destructive side of Narcissists leads to a lower-quality working environment and unethical behavior (Khoo & Burch, 2008). Narcissistic leaders display traits such as grandiosity, envy, dominance, aggression toward employees, lack of empathy, manipulative behavior, and a lack of concern for others in the organization (Pan & Yu, 2017). Additionally, such leadership can lead to self-centeredness, deceit, lack of empathy, and exploitation of others. These factors may create a negative impact on organizational culture by causing a competitive and unstable environment (Ong et al., 2016). In the end, this leadership has negative consequences such as hindering followers' professional growth and decreasing work performance (Ghislieri et al., 2019).

A project is a series of activities that work together towards achieving a specific goal, resulting in a unique product (Tonchia, 2008). Wang (2006) refers to the project as a collaborative effort by employees to discover innovative methods of setting and achieving goals within a specified timeframe and budget. The project's success is determined by three important elements: cost, quality, and time, all of which are critical to the project's effectiveness (Ika, 2009). According to Gallagher (2015) team members' performance, team motivation, good scheduling, and project dedication are all aspects that can contribute to project success. Project teams are the most important assets for success. It is quite difficult for the organization to locate individuals in managerial positions in project teams who are not aggressive (Richard et al., 2020). Projects need to be supervised properly as Ika (2015) identified some of the critical factors for project success that include supervision as one of the major factors. For the project success it is important and critical that it should be supervised properly so that the project's desired outcome can be achieved. Every project needs strong leadership since it is linked to a number of positive outcomes, such as high motivation levels, strong team and individual accomplishments, favorable attitudes of employees towards their work, and providing guidance for improving organizational practices (Fransen et al., 2018). Narcissistic leadership is regarded as an adverse or dark leadership in the context of the project (Saleh et al., 2018).

Knowledge sharing is a system in which individuals share their extraordinary skills, experiences, and expertise with people inside or outside a project team (Wang & Noe,

2010). The level of information exchanged across organizational boundaries is represented by knowledge sharing (Liao & Chuang, 2004). Knowledge sharing is an organized practice that involves the exchange of information and experiences among members of a community or organization working towards a common objective. Knowledge exchange is the process of discovering, transferring, and applying existing knowledge to address issues. An organization that values loyalty, tolerance, openness to share knowledge, support availability creates knowledge sharing culture (Swanson et al., 2020).

Leaders who are narcissistic and in positions of authority in the workplace frequently lack support and engage in socially damaging behavior (Smith & Webster, 2017), which is likely to demotivate staff because it limits their ability to share innovative ideas, opinions, and project-related information. Additionally, such leadership has a direct impact on employees' cognitive and emotional resources (Barling & Frone, 2017); which in turn affects project performance. Hence, when employees are mistreated by their leaders; internal resources of employees' are affected, thus preventing them from sharing knowledge with their leaders and coworkers. According to Kim et al. (2016), narcissistic leadership demoralizes employees from sharing knowledge. In conclusion; for a successful project, knowledge sharing is a key resource and lack of knowledge sharing will affect project performance negatively.

Anantamula (2015) posited a project as an entity that has unique features and offers a solution to a problem that may only be temporary. This project is a team effort, and the team consists of individuals with diverse backgrounds. Culture is vital in achieving a unified aim within an organization. Each team member has unique talents and knowledge, but their beliefs and emotions are equally important. When someone joins an organization, they bring not only their knowledge but also their attitudes and beliefs. Brewer et al. (2012) revealed that in collectivist cultures, individuals tend to value loyalty and trust towards their peers. Within any given society, there are typically two types of people: those who prefer to work independently, and those who feel more at ease working within a group. Collectivists are those individuals who prioritize the benefits that can be gained through cooperation and mutual support (Smith, 1990). People in a collectivist culture prioritize community benefits over individual interests (Brewer & Chen, 2007). Existing research indicates that a supportive atmosphere in which individuals help one another improves goal achievement (Gelfand et al., 2011). Corbitt et al. (2000) concluded that collectivism in a employee community has a greater positive impact on projects than high power distance cultures or individualistic culture. People who belong to a collectivistic culture are more willing to share their information to apply additional endeavors to achieve organizational success and goals than those

whose behavior is not emphatically collectivistic (Triguero-Sánchez et al., 2022).

2.1 Narcissistic leadership and Project Success

Narcissistic leadership has attracted a lot of interest from researchers (Owens et al., 2015). From a workplace perspective, narcissists exhibit arrogance, self-importance, overconfidence, superficial power, a sense of pride, a feeling of superiority, a desire for attention, and a superior state of mind toward subordinates (Chatterjee & Hambrick, 2007). Narcissists act selfishly and are willing to take advantage of others to fulfill their objectives (Norouzinik et al., 2022)

According to Turner et al. (2005), project managers' leadership styles largely contribute to project achievement and the study observes that "the literature has largely ignored the impact of the project manager's leadership style and competence on project performance". The success of a project is based on the project leader's attributes, as the leadership traits rigorously affect the subordinate team (Hassan et al., 2017); which in turn affect the outcome of the project (Kirkpatrick & Locke, 1991).

Several factors affect employee performance, which is critical to project success (Frieder et al., 2018). Researchers have examined that employee performance is important to improve organizational flexibility, innovation ability, and acquiring helpful information (Detert & Burris, 2007), accomplishing job-related activities, employee sharing ideas or information competency, employee efficiency, meeting deadlines and effectiveness in executing work (Iqbal et al., 2015). The positive behavior of leaders improves the personal working relationship between employees fulfils their psychological needs resulting in satisfaction and thus enhancing employee performance and improving project success (Reb et al., 2014). Project performance is also enhanced when leaders give appraisals and support to their employees (Salanova et al., 2005). Thus narcissistic leadership is said to have a strong influence on project's failure or success (Tett et al., 1991).

According to research, narcissistic leaders' self-interest and controlling behavior lead to destructive and offensive conduct, characterized by verbal and nonverbal aggression toward others (Krasikova et al., 2013). Hence, the following hypothesis can be established.

H1: Narcissistic leadership has a negative impact on project success.

2.2 Narcissistic leadership and Knowledge sharing

Studies confirmed that narcissistic leaders possess self-centeredness and demand for higher admiration that

may not leave a positive impact on employees (Carnevale et al., 2018; Gauglitz, 2022). While knowledge sharing in a team is not an automatic process, the team's leader has great capability to strongly influence knowledge sharing (Khalid et al., 2018)

Furthermore, literature shows the impact of destructive or dark leadership on various components like turnover intentions, job satisfaction, lifestyle dissatisfaction, and job performance (Tepper, 2000). Recently, few attempts have been made to investigate the effects of destructive leadership on knowledge-sharing behavior among employees (Kim et al., 2015b). Although knowledge sharing is a significant citizenship behavior shown by the willingness of an employee (Kim et al., 2016), there are also such situations when an employee may resist sharing knowledge. Such a situation occurs when leaders mistreat or abuse employees, which damages their commitment, morale, and willingness to share knowledge and make contributions to the organization (Wu & Lee, 2016). Recent studies reflect that narcissistic leadership largely impedes knowledge sharing (Feng, 2019). In the working environment employee's decisions about knowledge sharing largely depend on how they are treated by coworkers, and especially leaders (Karim, 2020). Hence, it can be concluded that narcissistic leadership may harm knowledge sharing because narcissistic leaders do not consider the needs and requirements of their employees, and belittle or abuse them (Rosenthal & Pittinsky, 2006). This behavior can destroy the interpersonal relationships between followers and leaders. Therefore, the following hypothesis can be established.

H2: Narcissistic leadership has a negative impact on employee knowledge-sharing behavior.

2.3 Knowledge sharing and project success

Knowledge sharing is the process by which individuals or organizations exchange knowledge, such as skills, experience, expertise, or information (Jiacheng et al., 2010). Knowledge sharing is considered an important resource for predicting team and project performance (Mesmer-Magnus & DeChurch, 2009) as well as generating new innovative capabilities within the organization (Darroch & Mcnaughton, 2002). Knowledge-sharing capacity is prerequisite to fulfill the objectives of the project, deal with unforeseen circumstances, and creating new information (Dietrich, 2007). Knowledge sharing can influence individuals within an organization by facilitating learning from external sources as well as from each other. Therefore, it causes employees to become more creative and more committed to the organization. (Ham, 2018). Thus, the following hypothesis can be established.

H3: Knowledge sharing is positively associated with project success.

2.4 The mediating role of Knowledge Sharing

Past management literature has long recognized the value of positive interpersonal relations and knowledge sharing between employees and leaders to achieve desired goals (Ritala et al., 2015). It is found that there are different ways through which destructive leadership can negatively impact employees' knowledge sharing (Feng & Wang, 2019). As knowledge sharing is an essential requirement for project success (Zhu & Chen, 2015), therefore lack of sharing knowledge will limit the performance of the project. Narcissistic leadership hinders employees' ability to share knowledge, restricts them from establishing good interpersonal relationships, and limits their ability to meet goals related to project performance (Zhu & Chen, 2015) thus negatively affecting project performance. Thus, the following hypothesis can be established.

H4: Knowledge sharing mediates the relationship between narcissistic leadership and project success.

2.5 The Moderating Role of Collectivism

There is limited research on the relationship between leadership and knowledge sharing while taking into consideration workers' collectivistic orientation. This study enhances the body of knowledge by taking into consideration the supporting role of collectivism between narcissistic leadership and employee knowledge sharing. When individuals join a workforce, organization, or project they bring in their own beliefs, values, and culture (Hofstede & Hofstede, 2005). According to a study, individuals who belong to a collectivistic culture mostly prefer to maintain interpersonal group relations and like to remain harmonious within the group (Schwartz, 1990). Thus, these workers are more enthusiastic to share their information to apply additional endeavors and achieve organizational success as compared to those workers whose behavior isn't emphatically collectivistic. However, it has been found that workers with strong collectivism when subjected to job stress due to narcissistic leadership share their knowl-

edge and experiences with coworkers to boost collective achievements. On the contrary employees with individualistic orientation under narcissistic leadership are more focused on their own needs and wants (Triandis & Gelfand, 1998). Thus the following hypothesis can be established:

H5: Collectivism mitigates the relationship between narcissistic leadership and knowledge sharing.

On the other hand, knowledge sharing is fundamental to project success because it helps people gain knowledge, make them more creative, and also helps them to contribute to enhancing the performance of the organization (Wang & Noe, 2010). Narcissistic leadership damages employees' knowledge-sharing behavior as narcissistic executives have no concern about their employees' wants or needs (Rosenthal & Pittinsky, 2006). As a result of this leadership behavior, social exchange phenomenon between workers and leaders is greatly affected because workers do not want to repay their leaders with the additional role of knowledge-sharing.

People with collectivistic behavior are willing to work as a team which facilitates loyalty and compliance. In a collectivistic culture, employees are more inclined to accomplish group objectives, and this encompasses a positive effect on knowledge sharing (Pangil & Chan, 2014). Under narcissistic leadership, employees having strong collectivism share their skills and abilities to enhance overall organizational performance. Thus, the following hypothesis can be established.

H6: Collectivism moderates the mediation effect of knowledge sharing on the relationship between narcissistic leadership and project success.

The current study conceptualizes the effect of narcissistic leadership on project success through knowledge sharing. Negative organizational environments have a negative effect on an individual's performance (Padilla et al., 2007). Due to this adverse environment, personal social exchanges at organizational level are negatively impacted resulting in cover up of all kinds of data from leadership by employees of organizations (Riaz et al., 2019); which further reduces organizational performance (Karabati, 2021). Based on the previously mentioned hypotheses, the proposed model of this research is shown in figure 1:

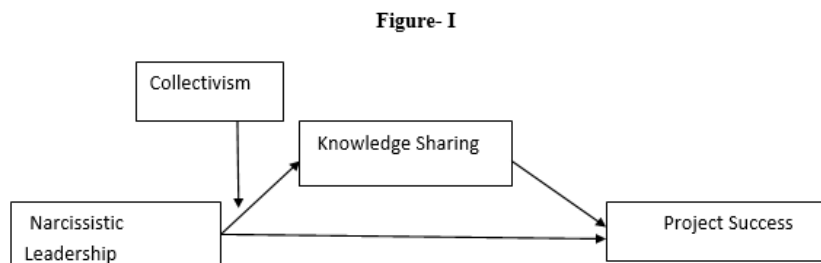


Figure 1: Conceptual Model of Impact of narcissistic leadership on project success with mediating role of knowledge sharing and moderating role of collectivism

3 Methodology

3.1 Sample and Data collection procedure

This study employs a quantitative research approach to the empirical data collected from employees and managers working on different IT sector projects in Islamabad and Rawalpindi. 10 project-based organizations working in Rawalpindi and Islamabad provided the data for the current study. The employees for the study were chosen based upon convenience sampling.

The research team obtained a list of employee contacts from each company's human resources department. We sent an email to 370 employees with a URL survey link and a letter assuring confidentiality. Each organization's HR department also sent an email encouraging staff to participate in the survey. The survey was divided into four sections (details in the appendix). The first section discussed narcissistic leadership, the second, project success; the third, knowledge sharing and the final part addressed collectivism. Respondents for narcissistic leadership, knowledge sharing, collectivism were project team mem-

bers working on projects. Respondents for project success were project managers. Out of 370 questionnaires, 272 complete responses were received. Response rate turned out to be 73% percent. A total of 272 respondents 204 (75.0%) were male and 68 (25.0%) were female. In terms of education, 64.3% had a bachelor's degree, while 32% had a master's degree. The details of the respondents are given in the Table -I below.

3.2 Research Instruments

All the measures in the study were adapted from previous research. The present study used a five-point Likert scale: 1=strongly disagree, 2= disagree, 3=neutral, 4=agree, 5=strongly agree.

Narcissistic Leadership

In terms of narcissistic leadership, measures were adapted from Burns (2017). For this construct, 16 items were used. The scale's reliability was 0.90. Examples of the items are: 'My current supervisor has a sense of personal entitlement', 'My current supervisor thinks that he/she is more capable than others', and 'My current supervisor believes that he/she is an extraordinary person'.

Table 1: Demographics

Questions	Options	Frequency	Percentage (%)
Gender	Male	204	75
	Female	68	25
Age	20-29 ages	167	61.4
	30-39 ages	104	38.2
	40-49 ages	1	.4
	50-59 ages		
Education	Intermediate	2	7
	Bachelors	175	64.3
	Master	87	32.0
	Doctoral	5	1.8
	Others	3	1.1
Experience	<1 year	63	23.2
	1-3 years	160	58.8
	4-6 years	42	15.4
	7-10 years	5	1.8
	>10 years	2	.7

Table 2: Mean and Standard Deviation

Variables	Mean	Standard Deviation
Narcissistic Leadership	3.5588	.88158
Project success	3.1131	.79694
Knowledge sharing	3.3597	.76559
Collectivism	4.1342	.64737

Table 3: Correlation Analysis

Variables	Narcissistic leadership	Project success	Knowledge sharing	Collectivism
Narcissistic leadership	1			
Project success	-.311**	1		
Knowledge sharing	-.193**	.613**	1	
Collectivism	.279**	.129*	.226**	1

CA: Cronbach Alpha

Project Success

We used 8 items to measure project success with a scale designed by Cao et al., (2020). The following are examples of the items: 'The progress of the project is on schedule', 'The project is within budget', and 'The project passed the acceptance check and was successfully delivered'. The reliability coefficient was 0.94.

Knowledge sharing

For knowledge sharing, measures were adapted from Park & Lee (2014). This scale contains six elements that assess the role of Knowledge Sharing in improving project creativity. Examples of the items include: 'We shared the minutes of meetings and discussion records in an effective way' and 'We always provided technical documents, including manuals, books, training materials to each other'. The reliability for this scale was 0.89.

Collectivism

We used 6 items to measure collectivism with a scale developed by Culpepper & Watts (1999). Examples of the items are: 'Group welfare is more important than individual's rewards' and 'Group success is more important than individual's success'. The scale's reliability was 0.91.

4 Results and Data Analysis

To analyse the data, a two-step procedure was used. The first is measurement model analysis, which examined the validity and reliability of each measure. The second step is structural model analysis, which involves examining the research model using a structural equation model (SEM) approach. Further information on these steps is provided below. To generate descriptive statistics, SPSS software was employed. To assess the measurement and structural model, the partial least squares (PLS) technique was applied.

Descriptive Statistics

Descriptive statistics include the mean and standard deviation of the variables which are given in Table II.

Analysis of correlation was used to assess whether there is a relationship between the study's variables. The relationship between the constructs was determined by Pearson's correlation analysis. The linear dependency of the two variables is shown by the correlation analysis. Correlation ranges from -1 to +1, with +1 indicating complete positive correlation, -1 indicating complete negative correlation, and 0 indicating no connection between the variables. The correlation between the variables is given in Table III.

The values stated above show that there is a relationship between the independent, dependent, mediating, and moderating variables. The results show that narcissistic leadership and project success has a negative relationship with a correlation value of -.311**. Moreover, narcissistic leadership has an unfavorable relationship with knowledge sharing i.e., -.193**. In addition, a positive association exists between project success and knowledge sharing i.e., .613**. A positively significant relationship exists between project success and collectivism i.e., .129*. Furthermore, there is a positive significant relationship between knowledge sharing and collectivism i.e., .226**.

4.1 Measurement Model

Validity and Reliability

To confirm the validity and reliability of all measures (dimensions, indicators, and variables), the measurement model was examined. This research employed standardized factor loading as a validity threshold, with a good validity being larger than 0.6 (Barclay, 1995).

Table 4: Factor Loadings

Variables	Item	Factor loadings
Narcissistic leadership	1. My current supervisor has a sense of personal entitlement.	0.870
	2. My current supervisor thinks that he/she is more capable than others.	0.934
	3. My current supervisor believes that he/she is an extraordinary person.	0.939
Project success	1.The progress of the project is on schedule	0.865
	2.The project is within budget	0.867
	3.The project passed the acceptance check and was successfully delivered	0.864
	4. Most problems encountered in the implementation of the project can be addressed.	0.820
	5. The project process is satisfactory.	0.856
	6. The owner is satisfied with the project results.	0.864
	7. The project meets the special requirements of client.	0.799
	8. We look forward to cooperating with the other party again in the future.	0.798
Knowledge sharing	1. We shared the minutes of meetings and discussion records in an effective way.	0.710
	2. We always provided technical documents, including manuals, books, training materials to each other.	0.756
	3. We shared project plans and the project status in an effective way	0.826
	4. We always provided know-where or know-whom information to each other in an effective way	0.853
	5. We tried to share expertise from education or training in an effective way.	0.854
	6.We always shared experience or know-how from work in a responsive and effective way	0.819
Knowledge sharing	1. We shared the minutes of meetings and discussion records in an effective way.	0.710
	2. We always provided technical documents, including manuals, books, training materials to each other.	0.756
	3. We shared project plans and the project status in an effective way	0.826
	4. We always provided know-where or know-whom information to each other in an effective way	0.853
	5. We tried to share expertise from education or training in an effective way.	0.854
	6.We always shared experience or know-how from work in a responsive and effective way	0.819
Collectivism	1. Group welfare is more important than individual rewards.	0.862
	2. Group success is more important than individual success.	0.783
	3. Being accepted by the members of your work group is very important.	0.842
	4. Employees should only pursue their goals after considering the welfare of the group.	0.868
	5. Managers should encourage group loyalty even if individual goals suffer.	0.776
	6. Individuals may be expected to give up their goals in order to benefit group success.	0.834

Table 5: Validity and Reliability

Variables	Cronbach's alpha	Composite reliability	AVE
Narcissistic leadership	0.905	0.939	0.837
Project success	0.941	0.951	0.709
Knowledge sharing	0.890	0.917	0.648
Collectivism	0.910	0.929	0.686

Table 6: Fornell Larcker analysis

	AVE	C	KS	NL	PS
C	0.686	0.828*			
KS	0.648	0.231	0.805*		
NL	0.837	0.267	-0.208	0.915*	
PS	0.709	0.135	0.615	-0.318	0.842*

Table 7: Cross Loadings analysis

	C	KS	NL	PS
C1	0.826	0.222	0.164	0.141
C2	0.783	0.117	0.230	0.070
C3	0.842	0.185	0.294	0.127
C4	0.868	0.223	0.167	0.128
C5	0.776	0.186	0.230	0.047
C6	0.834	0.179	0.278	0.137
KS1	0.266	0.710	-0.073	0.423
KS2	0.203	0.756	-0.109	0.456
KS3	0.179	0.826	-0.162	0.542
KS4	0.139	0.853	-0.195	0.549
KS5	0.169	0.854	-0.243	0.504
KS6	0.177	0.819	-0.203	0.482
NL1	0.297	-0.086	0.870	-0.252
NL2	0.254	-0.178	0.934	-0.266
NL3	0.208	-0.265	0.939	-0.336
PS1	0.120	0.541	-0.292	0.865
PS2	0.089	0.517	-0.285	0.867
PS3	0.099	0.488	-0.264	0.864
PS4	0.071	0.530	-0.322	0.820
PS5	0.100	0.521	-0.278	0.856
PS6	0.082	0.481	-0.291	0.864
PS7	0.178	0.540	-0.245	0.799
PS8	-0.480	0.515	-0.152	0.798

* Questionnaire items are presented in the Appendix

This study used composite reliability (CR) and average variance extracted (AVE) to ensure measurement reliability. Reliability is termed as good when $CR \geq 0.70$ and $AVE \geq 0.50$. The factor coefficients presented in Table IV and V indicated homogeneity within scales.

The values of Average variance extracted (AVE) for each latent variable are shown above. Each construct should have an AVE greater than 0.5 to demonstrate acceptable validity (Chin, 1998). Additionally, Cronbach's Alpha (α) was used to assess all constructs' internal consistency. Cronbach's Alpha for all constructs is above 0.7 as shown in Table V, indicating that they are internally consistent. In conclusion, all the standards of Cronbach's alpha, Average variance extract and Composite reliability were found to be in acceptable range.

Discriminant Validity:

The extent to which a construct differs from other constructs according to empirical standards is known as discriminant validity. Researchers have often used two criteria for discriminant validity that is Fornell Larcker criterion and cross-loadings.

Fornell Larcker criterion

Fornell Larcker compares the correlations between the latent variable and the square root of the AVE values. To ensure discriminant validity, the square root of each con-

struct's AVE should be greater than the construct's highest correlation. Table VI values indicate that discriminant validity has been established.

Cross Loadings

An indicator's outer loading on the related construct should be greater than any of its cross-loadings on other constructs when assessing discriminant validity. Cross-loadings values are mentioned in Table VII.

4.2 Structural Model and Hypotheses testing

The PLS-SEM technique was used to test various hypotheses through SmartPLS software package. PLS-SEM relies on bootstrapping for testing the significance of their coefficients. The process involves a great number of bootstrap samples that are drawn with replacements from the original sample. The PLS path model is estimated through bootstrap samples. It is also used for statistical hypothesis testing. T-values and p-values are also estimated for determining the significance of path co-efficient. P-value should be less than 0.05 for being significant. In this study, six hypotheses were tested. The outcomes of the bootstrapping are shown in Figure 2 given below.

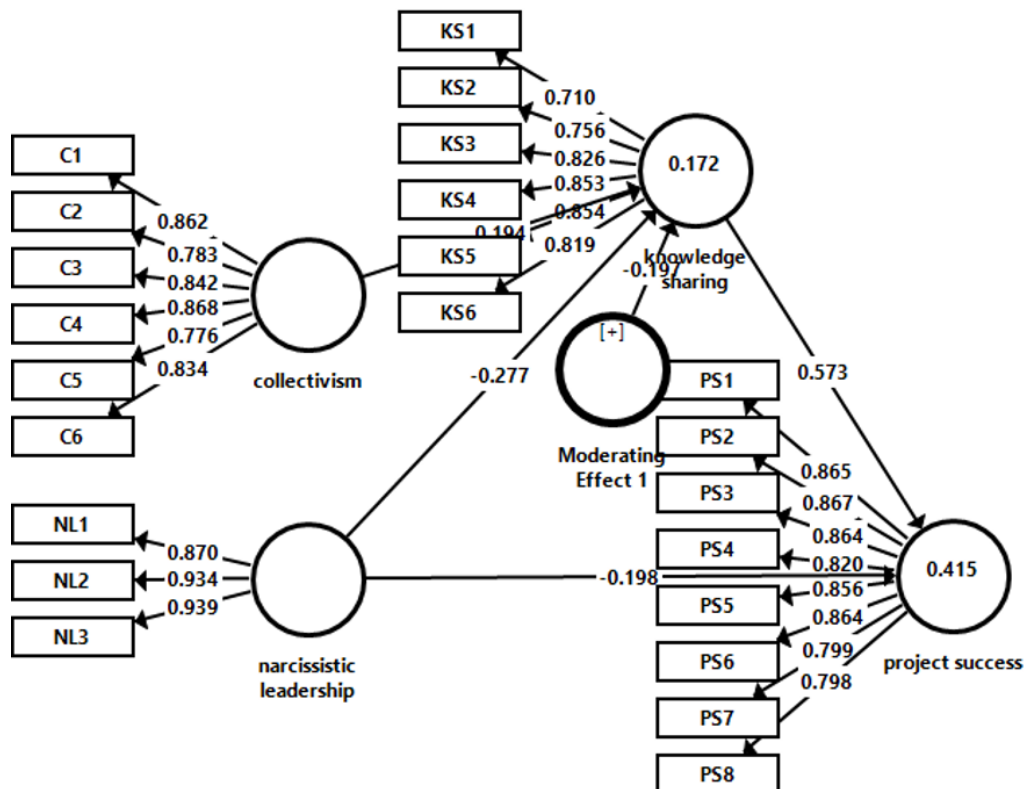


Figure 2: Structural Model

Table 8: Results of Structural Model and Hypothesis testing

	B value	Sample mean	Standard deviation	T statistics	P value	Result
NL->PS	-0.198	-0.203	0.051	3.901	0.000	supported
NL->KS	-0.277	-0.281	0.058	4.768	0.000	supported
KS->PS	0.573	0.572	0.057	10.096	0.000	supported
NL->KS->PS	-0.159	-0.163	0.033	4.826	0.000	supported
C->KS->PS	0.111	0.123	0.046	2.399	0.017	supported
C x NL->KS->PS	-0.113	-0.106	0.040	2.852	0.004	supported

NL= Narcissistic leadership; PS= Project success; KS= knowledge sharing; C= collectivism

Table 9: Mediation Analysis

Direct effect of IV on DV		Indirect effect of IV on DV via knowledge sharing			
B	M	B	M	LL95%CL	UL95%CL
-0.198	-0.203	-0.159	-0.163	-0.233	-0.108

First hypothesis, which states that there is a negative relation between narcissistic leadership and project success is supported ($B = -0.198$, $P = 0.000$). The p-value for the test is 0.000 which is less than 0.05 which means it is significant. The negative sign depicts the negative relationship between narcissistic leadership and project success. Similarly, the second hypothesis, that narcissistic leadership can have a negative impact on employee knowledge-sharing behavior is also supported ($B = -0.277$, $P = 0.000$). The negative sign depicts the adverse connection between narcissistic leadership and knowledge sharing. Findings of structural model are given in Table VIII.

Furthermore, third hypothesis which states that knowledge sharing is positively associated with project success is also accepted ($B = 0.573$, $P = 0.000$).

Indirect effect

To test the hypothesis related to mediating role of knowledge sharing, the approach suggested by Baron & Kenny (1986) was adopted. As per this approach, there are few steps involved to determine the mediation effect. Firstly, dependent and independent variables are required to be significantly related. Secondly, the mediator must be strongly related to the independent variable. Lastly, dependent and the mediator variables are also required to be significantly related in the proposed relationship. If these conditions are satisfied, then partial mediation is concluded. Results suggested that first hypothesis of the study provides support for the first condition of mediation. Furthermore, the association between narcissist leadership and information sharing also provides support for the second

criterion for mediating effects ($B = -0.277$, $P = 0.000$). Furthermore, the relationship between dependent variable and mediator is also found significantly related and provides support for third criterion of mediation test. The bootstrap results indicate that narcissistic leadership has a total indirect influence on project success through knowledge sharing ($B = -0.159$, $M = -0.163$, -0.233 , -0.108). The results demonstrate that the bootstrapped 95% confidence interval for the effect of narcissistic leadership on project success through knowledge sharing does not contain zero because it has an upper limit of -0.233 and a lower limit of -0.108 . As a result, the findings show that knowledge sharing acts as a mediator between narcissistic leadership and project success. Mediation analysis are given in Table IX.

For moderation ($B = 0.111$, $M = 0.123$, $T = 2.399$), the statistical significance of this finding is supported by p-value of 0.017, which is below the threshold 0.05. The results show that collectivism plays a significant role in moderating the relationship between narcissistic leadership and knowledge sharing. It is also depicted in results that when an employee has high levels of collectivism, the negative effect of narcissistic leadership on knowledge sharing is weakened. To establish the direction of this moderation effect, slope analysis (see Figure 3) was performed at one standard deviation above and below the mean of the employee's collectivistic behavior. The slope of the association between narcissistic leadership and sharing knowledge was strong for employees who evaluated low on collectivism, as expected. whereas the slope was weak for employees who assessed high collectivism.

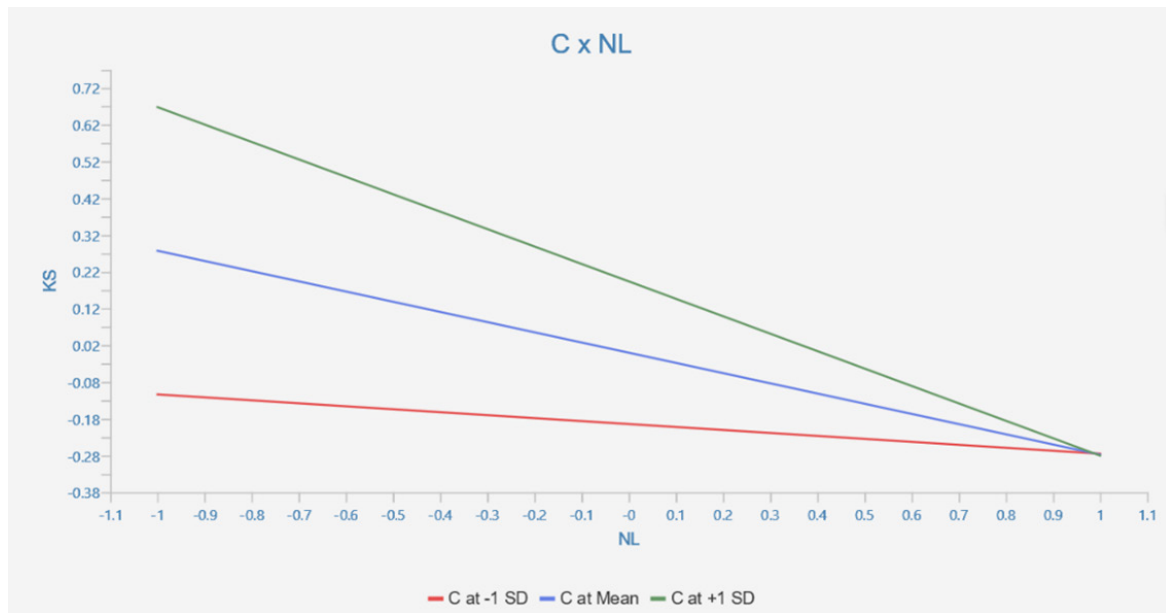


Figure 3: Interaction of narcissistic leadership and collectivism on knowledge sharing

For moderated mediation ($B = -0.113$, $M = -0.106$, $p = 0.004$), the p -value is 0.004 which is less than 0.05 thus indicating its significance. This states that collectivism moderates the mediation effect of knowledge sharing on the relationship between narcissistic leadership and project success. The higher the collectivism is, the weaker the indirect effect of narcissistic leadership on project success through knowledge sharing will be observed.

5 Discussion

The aim of this research was to comprehend how narcissistic leadership influences project success. It also investigated the role of “knowledge sharing” in mediating this relationship, and explored how “collectivism” moderates the association between narcissist leadership and knowledge sharing. For this purpose, an upper-echelon theoretical framework was proposed to explain the research hypotheses. According to the findings of this study, narcissistic leadership is negatively associated with project success, implicating that narcissistic leadership restricts employee performance and limits the smooth functioning of the project. Strong evidence from the literature indicates that narcissists in positions of authority are particularly harmful to workers as their inappropriate and potentially unstable attitude limits the project’s success (Whetten, 2006). This research confirms that narcissistic leadership has a negative impact on project success. Few researchers have previously examined the ‘productive’ side of narcissistic leaders, which includes their charismatic and attrac-

tive personality which may attract employees (Maccoby, 2004; Tepper, 2007). However, literature indicate that even narcissists’ positive traits are only advantageous to organizations in regard to their capacity to persuade employees to collaborate towards common objectives; but it remains toxic for employee knowledge-sharing behavior (Martinko et al., 2013). According to the literature, narcissistic leadership has a long-term negative influence on employees’ psychological health as well as their ability to grow personally and creatively. This is because narcissistic leaders frequently use coercion and power to undermine their employees’ performance (Campbell et al., 2011). This study focuses on the negative characteristics of narcissistic project leaders, and it has been demonstrated that the results are damaging. Narcissistic leaders are arrogant and highly dependent on their intelligence in decision-making. The findings of this study are in line with Al-Abrow et al., (2019) and O’Reilly et al., (2018) that narcissistic leaders negatively influence the organizational outcome as they do not consider negative aspects of their decisions while making a strategic organizational decision.

According to the findings of this study, narcissistic management has a negative impact on sharing knowledge. This relationship aligns with the findings of Xiao et al. (2018). Organizations are working in an interconnected environment where social skills, communication, and information sharing are crucial for winning performance. This elaborates on how teamwork, knowledge sharing, and the convenience of feedback are integral for organizations. It has been found that narcissistic leaders are not compassionate in their dealings with subordinate management

which subsequently create an obnoxious attitude among the employees that leads to less effective and efficient project outcome (Paulhus & Williams, 2002). Dark characteristics of narcissistic leaders include openness to criticism, a lack of empathy, a need for power and the ability to manipulate others, as well as an unwillingness to accept failure. These are the characteristics that hinder an employee's capacity to confidently share knowledge, hence lowering their productivity. (Martinko et al., 2013; Schyns & Schilling, 2013). Because of their inappropriate behavior and perhaps unstable attitudes, narcissists often cause stress and pressure in their employees, which limits their ability to succeed. (Sleep et al., 2017; Wisse et al., 2018). Yet, another study proposes that negative aspects of narcissistic leadership may be mitigated by enhancing knowledge sharing and employee collectivism (Salanova et al., 2005).

Our results further suggest that knowledge sharing positively affects the project's success. Transfer of knowledge among the employees is the key to success. This fosters the creation of novel information that ultimately leads to project success. New knowledge is created by project managers when they encourage team members to work together. Validating the claims of this study, results have revealed that knowledge sharing has a positive effect on project success. Besides, this study adds to the literature by addressing the mediating role of sharing knowledge between narcissistic leadership and project success. It states that when leaders are narcissistic, they negatively influence employees' knowledge-sharing intention, thus damaging project success. Nevertheless, if an organization has collective culture, more employees will engage in knowledge-sharing behavior.

5.1 Theoretical Implications

There is limited research that has investigated the effect of narcissistic leadership on project success. Subsequently, this study provides important implications that tend to be effective for project-based organization in numerous ways. Theoretically, this study enhances the extant literature on leadership and personality traits research in the field of project management. This leads to new path and measurements in project management. In the context of upper echelon theory, this study highlights the personality characteristics such as knowledge sharing and collectivism that may influence narcissistic leadership to execute a successful project. The findings of the research are effectively significant and applicable because it has been demonstrated in this study that knowledge sharing play a mediating role between narcissistic leadership and project success. There has been little empirical research on negative leadership styles, with prior researchers focusing on the relationships between effective leadership and sharing knowledge (Wu & Lee, 2016). However, it is also critical

to identify the factors that encourage or inhibit employee information sharing. Furthermore, the majority of previous study has concentrated on how narcissism affects the relationship between a leader and a follower instead of how a narcissistic style of leadership influences connections within and across employee teams. The outcome variables of narcissistic leadership have been extended and diversified in the current study by proving that it negatively impacts project success. Research has been carried out on narcissistic leadership for a long time but due to the complex nature of the phenomenon, critical questions related to this leadership are by no means truly answered. This study's findings confirmed that narcissistic leadership can impede employee's knowledge-sharing behavior, which negatively predicts project success. Besides, this study looked into a little-studied topic of the moderating function of collectivistic orientation between narcissistic leadership and knowledge sharing. Furthermore, researching the dynamics of narcissistic leadership and sharing knowledge will contribute to revamping and enhancing current project management practices, along with helping and training project leaders for appropriate workplace behavior. This can be accomplished by outlining policies for the effective implementation of projects in Pakistan.

5.2 Practical Implications and Conclusion

The findings of the study will be applicable in IT Project Management. Narcissistic leaders may restrict the subordinates from exhibiting their potential which negatively influences the project success. Organizations can opt for knowledge-sharing and collectivist approaches to mitigate the negative aspects of narcissist leadership. However, it may appear to be a viable option for avoiding narcissistic individuals in positions of leadership. The current study's findings are consistent with those of Belschak et al. (2018) and Xiao et al. (2018), that narcissistic leadership negatively impacts employee outcomes resulting in low knowledge-sharing behavior, high turnover intention and workplace silence. The results highlight the characteristics of narcissistic leadership that harm project outcomes. Individuals with high narcissistic personalities are more inclined to exploit others and act unethically (Belschak et al., 2018). These findings highlight the necessity of both leader selection and establishing an ethical context in terms of implications for organizations; Particularly, to prevent narcissistic leaders from flourishing in organizations. It is critical to keep an ethical framework in place. Behaviors are likely to be more silent and to be perceived adversely by coworkers in an unethical or interpersonally ineffective situation (Erkutlu & Chafra, 2018). Project-based settings can also utilize narcissists for their positive characteristics that could be beneficial for projects. Training employees

to manage such difficult situations can lower the risk of project failure. This research indicated that high collectivism mitigates the negative impact of narcissistic leadership on sharing knowledge. Managers ought to pay closer attention to employees who exhibit low collective behavior and workplace silence. According to this study, managers should create a workplace where employees and their managers may collaborate to establish common values; especially, if their organization's top priorities are to promote knowledge sharing and reduce silence. The presence of a highly collectivistic culture provides an ideal environment for increasing employee engagement. Additionally, organizational managers should also hire and promote people who have a strong collectivist orientation. Organizations should promote collective consciousness among staff members and place a high value on helping them acquire values that will lead them to put the interests of the group before their own. Organizations should provide support systems for employees, such as emotional support and communication channels that reassure employees who choose to expose their narcissistic leader's behavior, given the difficulty in solving the situation (Lipman-Blumen, 2010). Also, training programs can be designed to foster the development of abilities that help employees manage pressure from their superiors. On a broader scale, senior management should encourage their workers to shift away from considering their personal ambitions in terms of hierarchical status. Instead, they should encourage employees to see their managers as "partners" with whom they share a set of common goals and interests, with the ultimate objective of assisting the organization in meeting its goals.

5.3 Research Limitations

Despite extensive literature on narcissistic leadership, this field of study is still in its early beginnings. Because this study was undertaken with restricted time and resources, a medium sample size was chosen. The data gathering technique utilized was convenience sampling, which limits the generalization potential of the findings to some extent. Due to time and resource constraints, this study is conducted in Rawalpindi and Islamabad cities of Pakistan only. The results cannot be generalized for the whole IT sector of Pakistan. Another limitation of the current study is that this research study looked at the adverse aspects of narcissistic leadership, however, the positive sides can also be considered.

5.4 Future Research

The findings open fresh avenues for future research in a new dimension. This can entail investigating narcissists for their positive traits such as captivating personalities and establishing appealing visions in certain contexts that

could be valued in the corporate sector (Anninos, 2018). According to researchers, these characteristics enable narcissistic leaders to hold steady in the face of failure and manage crisis in the best possible way. As a result, the beneficial aspects of a narcissistic leader should be considered for future research in project-based contexts. This research is based on cross-sectional data analysis which allows researchers to collect data at a single point in time, but it is possible to conduct longitudinal research in the future as it allows data to be collected at different intervals of time. Furthermore, it is proposed to analyse the phenomena with the support of 'organizational commitment'. Employees with a strong organizational commitment may be able to minimize the negative consequences of narcissistic leadership.

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Narcistično vodenje in uspeh projekta: vloga izmenjave znanja in kolektivismu v IT podjetjih

Namen: V iskanju posebnega razvoja v sodobnih raziskavah managementa ta študija poudarja razširjenost narcističnega vodenja v IT podjetjih. Za analizo vpliva narcističnega vodenja na uspeh projekta smo uporabili okvir višjega sloja. Ta študija je obravnavala temno plat voditeljevega narcizizma, medtem ko je analizirala, kako narcistično vodenje vpliva na uspeh projekta prek izmenjave znanja in kolektivismu.

Oblikovanje/metodologija/pristop: Za namen raziskave smo uporabili metodo modeliranja strukturnih enačb. S priročnim vzorčenjem je bilo razdeljenih približno 370 vprašalnikov, od katerih je bilo 272 izpolnjenih vprašalnikov uporabljenih za izvedbo analize IT podjetij.

Ugotovitve: Narcistično vodenje vpliva na uspeh projekta prek izmenjave znanja in kolektivismu. Rezultati kažejo, da narcistično vodenje negativno napoveduje uspeh projekta. Poleg tega je izmenjava znanja v celoti posredovala odnos med narcističnim vodenjem in uspehom projekta. Medtem ko kolektivismu ublaži razmerje med deljenjem znanja in narcističnim vodenjem.

Izvirnost: Naše predpostavke temeljijo na teoriji višjega sloja, ki kaže, da narcistično vodenje vpliva na uspeh projekta prek izmenjave znanja in kolektivismu. To je dokazala empirična analiza, izvedena v sektorju IT v Pakistanu.

Ključne besede: *Narcistično vodenje, Uspeh projekta, Izmenjava znanja, Kolektivismu*

Appendix: List of Measurement Items

Narcissistic leadership

NL1: My current supervisor has a sense of personal entitlement.

NL2: My current supervisor thinks that he/she is more capable than others.

NL3: My current supervisor believes that he/she is an extraordinary person.

Project success

PS1: The progress of the project is on schedule.

PS2: The project is within budget.

PS3: The project passed the acceptance check and was successfully delivered.

PS4: Most problems encountered in the implementation of the project can be addressed.

PS5: The project process is satisfactory.

PS6: The owner is satisfied with the project results.

PS7: The project meets the special requirements of client.

PS8: We look forward to cooperating with the other party again in the future.

Knowledge sharing

KS1: We shared the minutes of meetings and discussion records in an effective way.

KS2: We always provided technical documents, including manuals, books, training materials to each other.

KS3: We shared project plans and the project status in an effective way.

KS4: We always provided know- where or know-whom information to each other in an effective way.

KS5: We tried to share expertise from education or training in an effective way.

KS6: We always shared experience or know-how from work in a responsive and effective way.

Collectivism

C1: Group welfare is more important than individuals rewards.

C2: Group success is more important than individuals success.

C3: Being accepted by the members of your work group is very important

C4: Employees should only pursue their goals after considering the welfare of the group

C5: Managers should encourage group loyalty even if individual goals suffer.

C6: Individuals may be expected to give up their goals in order to benefit group success.

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