EXAMINING THE INTERCONNECTED DYNAMICS OF WORK ETHICS, JOB SATISFACTION, AND ORGANIZATIONAL COMMITMENT: AN INVESTIGATION WITHIN PRIVATE BANKING INSTITUTIONS IN PAKISTAN

Qurat-ul-ain Abro a, Aziz Ullah b, Safia Rehman c, Muhammad Asghar Khan d, Ferdos Jamal e

a Department of Business Administration, University of International Business and Economics, Beijing, China
b Institute of Management Sciences, University of Science and Technology, Bannu, Kpk, Pakistan
c Government College University Lahore, Punjab, Pakistan
d School of Economics and Management, Panzhihua University, Panzhihua, China
e School of Economics and Management, Nanjing University of Science and Technology, China

INTRODUCTION

Ethics is known as a branch of moral philosophy that involves systematizing, defending and recommending concepts of right and wrong manners. The term ethics is derived from the Greek word "ethos", which means "character" or "customs" (Plato and Aristotle). At all times, the significance and the power of ethical formula have shaped attitudes and constraining behaviours; ethics provides a base explaining the behaviour which we ought to expect from individuals, which, as a result, allows us to live together productively and in harmony (Qi et al., 2023). Ethics are the study of right and wrong and the beauty of choice made by a person and ethics can be defined as the set of moral values which distinguishes between the rights and wrongs (Mavis Sevim, 2021) that any company possessing ethical values promote the establishment and maintenance of standard that sketches "good" things to do and "bad" things to avoid which allows to set normative standards for employees.

Work ethics has become a very important factor which has diverted the attention of many researchers nowadays due to today's fast and human race era. Ethics are often neglected, which attain huge significance if maintained in workplaces. Work ethics, as described by Gupta and Sahoo (2020), is a set of characteristics and attitudes in which work is given importance and value by an individual. According to Wuttkeet al. (2020), the fundamental form of work ethics relates to the internal view of work as the natural phase and exposure of an individual's aptitude and energies. The high work ethics of employees benefit the employer because the business is economically benefited (Lloret, 2016), which describes the core importance of encompassing work ethics in any organization or business (Lefkowitz, 2017). Individuals possessing strong work ethics hold a positive attitude and worth on doing the job in the best way and explain work as having a fundamental value of its own. This explains that people with work ethics value their work. Many researchers have previously associated these characteristics, like a positive attitude towards work, honesty, and maximum exposure of energies and abilities, as an indication of high work ethics (Azmi et al., 2018). The term work ethics, which is well known, is derived from Raja et al. (2020). Protestant work ethics (PWE) theory is used in Western society to empower the concept of capitalism. As the literature mentions and highlights the importance and consequences of work ethics, it has become very necessary to provide employees a better workplace to continue their commitment towards the organization and to motivate and encourage them to enhance their performance in the organization as a matter-of-fact performance is the essential requirement of every organization.

Work ethics creates positive intention, exposure of abilities, and value and importance of their work. Ethics is defined as a set of moral principles or values; it differentiates between what is good and bad and, establishes moral duty and obligations, and ascertains principles of conduct for an individual and a professional group (Lasch, 2019). The concept regarding right and wrong standards is said to be ethics.
which is established by the group and is compulsory for them to follow and set limits on behaviour (Specchia et al., 2021). Belief of a person regarding his decision, his action and his behavior, whether it is right or wrong, is ethics. Authors further describe ethics as the moral obligation of individuals and also force that ethics is the study of human behavior good or bad in terms of values, beliefs and actions (Kumar et al., 2022). As explained by the above-mentioned authors, the concise concept revolves around ethics is a set of values principles, and behavior, whether right or wrong, good or bad, established by an individual or a group which is carried by them to believe, act or behave in a particular situation. Ethics refers to the dealing of what ought to be done; it is the way for the specialized, which includes managers and non-managers ought, to act regarding a given human-related issues. As Moore and Gino (2015) explain mostly ‘moral’ and ‘ethical’ are used equally to ’good’ or ’bad’ and which i opposed to ‘immoral’ and ‘unethical’. As explained by Wu et al. (2018), behavior, action, thinking or even feelings of a person is an indication of good values or ethics. Ethics, whether it can be seen or not, ought to be good etiquette, behaviours, and regulations of humans living in any field. Steger (2016) elaborates on ethics as beliefs of human behaviour, especially indications of those existing values having good nature. Zahree et al. (2018) explained that ethics are proper principles that help to know between good or bad, right or wrong and what is suitable or unsuitable in various situations or circumstances. The term ethics is defined as the activity of concerning moral guidelines to concrete problems (Huhtala et al., 2015).

Work ethics relates to the habits expected from employees regarding wanted work approaches and values (Omisore and Adeleke, 2015). So, it is necessary to treat employees at their workplaces in a better way to achieve better outcomes and performance from them. Emphasizing on work ethics can be a core important factor in employee workplace effectiveness. This all indicates that maintaining working ethics at workplaces is a key path towards change in working attitude with higher efficiency, which all collectively increases performance. As defined by Bijanga et al. (2018), work ethics are consistency and trustworthiness for work, willingness to learn, responsibility for one’s actions, willingness to work, and willingness to work cooperatively, and they also focus on beliefs, values, and principles. According to Trevino and Nelson (2021), willingness to work is said to be a work ethic, which is indicated by the completeness of job tasks, and the material rewards of work are evident through satisfaction. As simply stated by Hendri (2019), the willingness to stay employed in work ethics. As elaborated by Hendri (2019), within the work context at any given time, the way an individual interprets and acts upon their rights and responsibilities is guided by these elements or characteristics. As stated by Baer (2015), work ethics are associated with improved efficiency. These all above stated researchers have mainly focused on invention, consistent performance, or improvement. All researchers have indicated work ethics as a positive tool to increase efficiency and create a willingness to learn, work and cooperate, which directs the way towards satisfaction and positive performance.

Work Ethics and Job Satisfaction
This paper shows four variables and their relationship observed with the help of a literature review and previous studies for the hypothesis development; four respective variables and their relationship were studied, i.e., work ethics, job satisfaction, organizational commitment and employee performance are designed for the conceptual framework. The literature shows the evidence as the first hypothesis was developed according to the results and findings of Baer (2015). There is a significant relationship between work ethics and job satisfaction; work ethics is strongly linked to job satisfaction (Moore, 2017). A study in Singapore by De Cremer and Vandekerckhove (2017) revealed that support for the ethical behaviour of top management has a significantly positive effect on job satisfaction. These pieces of evidence prove that having values for work develops agreement or creates satisfaction in employees towards their jobs. If an employee worth’s and values his work and performs his work with willingness, responsibility, cooperation, creativeness with the assessment time factor; then it gradually develops satisfaction among the employees regarding their job. Thus, it was hypothesized as:

H1: Work ethics have a positive relation with job satisfaction

Work Ethics and Organizational Commitment
With the help of the previous literature, research indicated that work ethics is also linked with organizational commitment; according to Paais and Pattiruhi (2020) and Alshare and Sewalem (2018), the relationship exists between organizational commitment and work values. Many studies (Morales-Sánchez and Cabello-Medina, 2015; Pathardikar et al., 2016) have reported that work ethics have a positive effect based on religious values on an organizational commitment, both Protestant work ethics and Islamic work ethics. Researchers (Anitha and Begum, 2016; Luna-Arocas et al., 2020) have highly contributed to the organizational commitment among employees by acquiring work values and it shows that proper entitlement of work values at workplaces enables the employees to own their work with worth and responsibility with more learning desire and cooperation which lead them to become dedicated towards their organization. Thus, on the basis of these findings, it has hypothesized subsequent hypothesis.

H2: Work ethics have a positive relation with organizational commitment.

Work Ethics and Employee Performance
Ethics has become one of the key elements and a sophisticatedly essential dimension to be stressed at workplaces to attain improved employee performance. To affirm the relationship between work ethics and employee performance, literature has provided several pieces of evidence. It has been a very important aspect regarding the performance of employees to consider taking in ethical values to emphasize the workplaces in the organization, for the betterment of the organization’s workplace environment and to meet the strength of the competition in the business society. As we improve work ethics, it will highly support and have an impact on employee performance, and if we decline the level of work ethics, it will cause a decrease in employee performance.

Good ethics is good business because it generates positive externalities like trust and commitment, which in return helps ensure long-term performance. Yao et al. (2019) indicated that work ethics have a positive effect on employee job performance. Benevene et al. (2018) suggested that a deficiency of work ethics can lead to poor job performance; this is an indication that ignoring work values at the workplace can lead to deprived performance, whereas the enforcement of work ethics at a workplace increases the level of the performance of employees. It is found that an optimistic attitude towards job activities and a good organizational commitment enhance job satisfaction, which in return increases the performance of employees and also increases efficiency (Almeida and Coelho, 2019). These are the
indicators which show that imposing work values like proper rules and proper assigned duties with their responsibilities at a proper time is an essential need at working places, which further results in the enhancement of the performance of employee. As a matter of fact, every organization needs better outcomes as a result. As highlighted by Almeida and Coelho (2019) indicated that Pakistan with regard to corruption and poor ethical practices, continuously faces poor performance, as reported by Transparency International (TI) 2009. Thus, on those grounds, it has been hypothesized that:

H3: Work ethics have a positive relation with employee performance.

Job Satisfaction and Employee Performance
By going through a bulk amount of literature, a strong relationship between job satisfaction and employee performance was observed. According to (Balotić, 2016), employee satisfaction depends on the commitment of employees and the performance of employees. As highlighted by Asrar-ul-Haq et al. (2017), who emphasized that job satisfaction is the result of job performance and indicated that employee satisfaction and job performance are directly related to each other. Suppose employees of any organization are happy and retain in their jobs, and enjoy their tasks and duties assigned at work. In that case, they become satisfied with their jobs, which, as a result improves and increases the performance of employees. To enhance Employee Job Satisfaction and performance for such aim job is also designed, job satisfaction is considered the emotions of employees for their jobs or how much they worth and how they enjoy the tasks and duties they are asked to perform, which highly affects the level of performance if the employee is not satisfied or happy by the assignments duties or tasks he/she is asked to do certainly will not perform well which will be the cause of decrease in performance but while he/she is enjoying the work the level of his/her performance will also be increased (Sony and Mekoth, 2016). Thus, on the basis of the presented literature and mentioned evidence and findings, this paper has hypothesized the following hypothesis.

H4: Job satisfaction has a positive relation with employee performance.

Organizational Commitment and Employee Performance
Suggested work ethics ultimately affects organizational performance across four dimensions of relationship marketing: organizational trust, communication, job satisfaction and organizational commitment. George et al. (2021) exposed a strong and positive relationship between organizational commitment and employee performance. In the comparative analysis of dimensions of organizational commitment, normative commitment has a significant and positive correlation with employee performance. In order to have outstanding performance in the long term, it is necessary for every organization to retain a positive level of employee commitment; this expresses that increasing the level of commitment among employees ultimately or gradually enhances the margin of performance (Bailey et al., 2016). In order to improve the commitment level of employees in the organization and improve their productivity, job security is provided by the organization to its employees (Top et al., 2015). This previous sentence highlights that when the employees feel commitment, or they are provided such benefits that create commitment among them, their performance is affected positively and is increased. As employees are considered to be the main part of any organization and performance is the basic element for any organization to keep on increasing, then it is better to provide employees with such an environment that they create commitment for their organization. This evidence hints that creating commitment is a positive indicator to boost the level of performance in employees; on this basis, the following hypothesis has hypothesized that:

H5: Organizational commitment has a positive relation with employee performance.

Research Framework
Houghton et al. (2015) defined a conceptual framework as a diagram or written product, one that describes the important key factors, concepts, or variables and the assumed relationships between them and explains either graphically or in description form. There might be various aspects of any research and different linkages; the conceptual framework gathers the important and particular factors of the study, limits them, and shows as a design to help to stay within the research dimensions. Hence, this study observed four variables, which are conceptualized in the framework as follows (Figure 1).

![Figure 1. Research framework.](image)

METHODOLOGY
This research paper is quantitative in nature, and the primary data was collected through a survey questionnaire adopted from previous research and changed as a requirement of the current research. The questionnaire consisted of seven types of Likert scales ranging from strongly disagree towards strongly agree from the private banks in Pakistan. Simple random sampling was adopted to select private Banks in Pakistan. All the provinces were taken into consideration under random sampling techniques. Four private banks were selected: Allied Bank Ltd, Askari Bank Ltd, Habib Metropolitan Bank Ltd and Soneri Bank Ltd. Keeping in mind the nature of this research on work ethics, which inclines in the domain of managers to implement at the workplace, employees including top-level management, middle-level management, first-line management and non-management employees of private banks in Pakistan were taken under consideration, and data was collected from them. Work ethics was measured by using an instrument picked from the study of (Li et al., 2020), which consisted of 65 items from which 10 were adopted and changed with the perception of the current study. The reliability of Cronbach’s Alpha of scale in this paper appeared as .814.

Job Satisfaction was measured by using 4 items from Tapp (2021) and 3 item scale used by Rajagopalsingam et al. (2020), which also were adopted by Komari and Djafar; the reliability of Cronbach’s Alpha value scale appeared for this research paper.
was .816. To measure organizational commitment, items were adopted from the study of Damianus (2022), originally developed by Allen and Meyer with Alpha reliability .773. To measure employee performance, 6 items were adopted from the study of Damianus (2022). The reliability of Cronbach's Alpha of scale in this paper appeared as .854. Questionnaires were distributed for Piloting for this research paper among the employees of private banks, which were Allied Bank Ltd, Meezan Bank Ltd, Summit Bank Ltd, Habib Bank Ltd, Al Islamiya Ltd and Al Burj Bank Ltd. Top-level, middle-level, first – line and non-management employees were targeted for the pilot study. Whereas in these 6 banks, 40 questionnaires were distributed, and as a response, 25 questionnaires were returned with a response rate of 62.5%. The statistical reliability in a pilot study of 30 items used in the questionnaire, which was adopted from various previous studies, was indicated as 0.93. Jonck et al. (2016) noted that a pilot study is often used to pre-test or try out a research instrument. Dewua et al. (2021) noted that a pilot study facilitates improving the internal consistency of the instrument. It is helpful to conduct a pilot study to determine if the items support the kind of information that is needed before constructing the final form of the survey or questionnaire. One of the importance and need for the pilot study is that it provides an advance warning or information regarding the weakness of the instruments, and conformance the validity and assures the accuracy of the instruments used for the study.

RESULTS AND DISCUSSION
For the data collection, four private banks were selected: Allied Bank Ltd, Askari Bank Ltd, Habib Metropolitan Bank Ltd and Soneri Bank Ltd 450 questionnaires were distributed, and 255 questionnaires were returned with a percentage rate of 56.66%. The data was collected from top-level management, middle-level management, first-line managers and non-management employees working in respected private banks in Pakistan. The reliability of all 30 items was .902, as mentioned below in Table 1.

Table 1. Reliability statistics.

<table>
<thead>
<tr>
<th>Cronbach’s Alpha</th>
<th>No of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>.902</td>
<td>30</td>
</tr>
</tbody>
</table>

The data was analyzed using SPSS version 22.0, which included demographic information where male respondents were in the majority at 76.9%, most participants were married at 60.8%, most of the participants were between the age of 30 -39 at 41.2%, and majority of the participants hold master's degree with 72.2%. The number of respondents with experience ranged between 1 and 10 years at 66.3%, and most of the participants were first-line managers at 38.8%. Descriptive statistics to check the mean value of all 30 items, which should be above the mean value of 3.5; all items were found above the mean value. The next step was to further purify items; for that purpose, item analysis was conducted using corrected item-total correlations. Items should be above 0.19, and the items with negative or item-total correlations or below 0.19 need to be deleted because they are considered poor items and should be eliminated in order to clarify the conceptual identity of each construct (Primi et al., 2021). All items were found above 0.19 except 1 OC6, which was deleted as it was rated below 0.19. Then, for confirmatory analysis, the research was carried out by using SEM (Structural equation modelling), which was run by Smart PLS; we used SEM to simultaneously test the hypotheses as direct and indirect paths of the research model (Mallinckrodt et al. 2016).
The displayed Figure 2 shows the measurement model obtained from Smart PLS. Figure 2 shows the left items which were strongly loaded in their respective constructs. The acceptable value for factor loading should be above 0.6 (Jiang et al., 2016), as the rest of the items were not supported. They were removed automatically by the software. The values are displayed in Table 2.

The next step was to test Convergent-Discriminant validity. This shows greater connection is measured on their planned constructs, which indicates that the constructs were comparatively distinct and well adopted in their construct. This means that all items of the construct are strongly loaded in their own construct in convergent, whereas discriminant means that while comparing constructs, all are different from each other as they are well describing their own constructs; the results were positive. Then, further (AVE) Average Variance Explained shows the convergence of items, the value of which should be higher than 0.5 (Shinjo et al., 2021); all the values of AVE scored above 0.5. For composite reliability, which shows the internal consistency of the item, the value must be above 0.7 (Ferreira et al., 2017), and R² values of the model are satisfactory and suggest that the model provides a good fit to the data. All values obtained were positive and satisfactory. The results in the form of Table 3 AVE, Composite Reliability and R² are exemplified.

**Hypothesis Testing**

Hypothesis testing confirmed that there is a positive and significant relationship between WE and JS, which was hypothesis 1 with the value (β = 7.726, p<0.05). There is a positive and significant relationship between WE and OC as hypothesis 2 with a value (β = 9.473, p <0.05) and a positive and significant relationship between WE and EP hypothesis 3 with value (β = 2.143, p <0.05) and a positive and significant relationship between JS and EP hypothesis 4 with value (β = 2.254, p <0.05) and a positive and significant relationship between OC and EP which was hypothesis 5 with value (β = 2.160, p <0.05). This indicated that all the five hypotheses presented in this research paper were accepted. The results are presented in Table 4.

---

**Table 2. Factor loading.**

<table>
<thead>
<tr>
<th>Factor Loadings</th>
<th>EP</th>
<th>JS</th>
<th>OC</th>
<th>WE</th>
</tr>
</thead>
<tbody>
<tr>
<td>EP3</td>
<td>0.748</td>
<td>0.300</td>
<td>0.256</td>
<td>0.217</td>
</tr>
<tr>
<td>EP4</td>
<td>0.791</td>
<td>0.226</td>
<td>0.254</td>
<td>0.306</td>
</tr>
<tr>
<td>EP6</td>
<td>0.874</td>
<td>0.377</td>
<td>0.370</td>
<td>0.438</td>
</tr>
<tr>
<td>JS2</td>
<td>0.246</td>
<td>0.781</td>
<td>0.461</td>
<td>0.355</td>
</tr>
<tr>
<td>JS4</td>
<td>0.231</td>
<td>0.784</td>
<td>0.285</td>
<td>0.386</td>
</tr>
<tr>
<td>JS6</td>
<td>0.414</td>
<td>0.834</td>
<td>0.427</td>
<td>0.389</td>
</tr>
<tr>
<td>OC2</td>
<td>0.295</td>
<td>0.392</td>
<td>0.873</td>
<td>0.367</td>
</tr>
<tr>
<td>OC3</td>
<td>0.356</td>
<td>0.458</td>
<td>0.918</td>
<td>0.485</td>
</tr>
<tr>
<td>OC7</td>
<td>0.305</td>
<td>0.405</td>
<td>0.770</td>
<td>0.289</td>
</tr>
<tr>
<td>WE6</td>
<td>0.199</td>
<td>0.311</td>
<td>0.405</td>
<td>0.719</td>
</tr>
<tr>
<td>WE8</td>
<td>0.269</td>
<td>0.351</td>
<td>0.353</td>
<td>0.827</td>
</tr>
<tr>
<td>WE9</td>
<td>0.479</td>
<td>0.444</td>
<td>0.341</td>
<td>0.835</td>
</tr>
</tbody>
</table>

**Table 3. Convergent-discriminant validity.**

<table>
<thead>
<tr>
<th>Convergent-Discriminant Validity</th>
<th>EP</th>
<th>JS</th>
<th>OC</th>
<th>WE</th>
</tr>
</thead>
<tbody>
<tr>
<td>EP</td>
<td>0.920</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>JS</td>
<td>0.383</td>
<td>0.917</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OC</td>
<td>0.374</td>
<td>0.490</td>
<td>0.944</td>
<td></td>
</tr>
<tr>
<td>WE</td>
<td>0.416</td>
<td>0.471</td>
<td>0.455</td>
<td>0.915</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>AVE, Composite Reliability and R²</th>
<th>AVE</th>
<th>Composite Reliability</th>
<th>R Square</th>
<th>Cronbach's Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>EP</td>
<td>0.650</td>
<td>0.847</td>
<td>0.238</td>
<td>0.737</td>
</tr>
<tr>
<td>JS</td>
<td>0.640</td>
<td>0.842</td>
<td>0.222</td>
<td>0.722</td>
</tr>
<tr>
<td>OC</td>
<td>0.734</td>
<td>0.891</td>
<td>0.207</td>
<td>0.817</td>
</tr>
<tr>
<td>WE</td>
<td>0.633</td>
<td>0.837</td>
<td>0</td>
<td>0.712</td>
</tr>
</tbody>
</table>

**Table 4. Hypothesis testing.**

<table>
<thead>
<tr>
<th>Direct effect</th>
<th>Beta</th>
<th>Standard Error</th>
<th>T Statistics</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>JS -&gt; EP</td>
<td>0.180</td>
<td>0.079</td>
<td>2.254</td>
<td>Accepted</td>
</tr>
<tr>
<td>OC -&gt; EP</td>
<td>0.170</td>
<td>0.078</td>
<td>2.160</td>
<td>Accepted</td>
</tr>
<tr>
<td>WE -&gt; EP</td>
<td>0.253</td>
<td>0.118</td>
<td>2.143</td>
<td>Accepted</td>
</tr>
<tr>
<td>WE -&gt; JS</td>
<td>0.471</td>
<td>0.061</td>
<td>7.726</td>
<td>Accepted</td>
</tr>
<tr>
<td>WE -&gt; OC</td>
<td>0.455</td>
<td>0.048</td>
<td>9.473</td>
<td>Accepted</td>
</tr>
</tbody>
</table>
CONCLUSIONS AND RECOMMENDATIONS
The findings of this paper have influencing implications for the management of private banks regarding the importance of work ethics to achieve better performance of employees in banks. The study has contributed to the literature and private banks in the context of Pakistan. This paper has contributed significantly by developing measurement and structural models for private banks, which could also be used by other organizations to follow and benefit from boosting employee performance. The scales used in this research study could be used in the future for the predictable model by other organizations in Pakistan to improve performance among employees.

Finally, a few of the limitations and recommendations have been highlighted and need to be considered; firstly, the research was conducted on private banks in Pakistan, so the results are generalized only for private banks. Future studies should emphasize other organizations, too. Secondly, a simple approach was adopted for the data collection; a survey questionnaire, including other approaches, may cause variation in the results. Thirdly, the number of samples was small as the large sample would be more representative. Future research should enlarge the sample size to validate the findings. Based on the study’s findings, the author also recommends a multidimensional approach in future directions regarding the work dynamics within private banks in Pakistan. It is advised to do longitudinal research to track changes in organizational commitment, job satisfaction, and work ethics over time. These studies can offer important insights into maintaining favourable trends. Understanding how technological improvements affect employee views and commitment levels is the goal of research on the effects of technological integration on work dynamics, especially in banking operations.

Additionally, improving work ethics, satisfaction with work, and organizational commitment are facilitated by suggesting and assessing the efficacy of employee development programs like skill-building initiatives and leadership training. The recommendations include the creation of work ethics-focused training programs, the establishment of a reliable system for gathering feedback on job satisfaction, the introduction of recognition and reward programs, the investment in leadership development, and the consideration of flexible work schedules to promote a better work-life balance. These tactics are meant to improve organizational dedication and create a pleasant work environment.

REFERENCES


Publisher’s note: Science Impact Publishers remain neutral with regard to jurisdictional claims in published maps and institutional affiliations.

Open Access This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license and indicate if changes were made. The images or other third-party material in this article are included in the article’s Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the article’s Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this license, visit https://creativecommons.org/licenses/by/4.0/.