

DISSERTATION REVIEW

on a dissertation work for the educational and scientific degree "Doctor" under the doctoral program 05.02.21 "Organization and production management (industry)", 5.13 "General engineering"

Dissertation Topic: "Complexity Reduction and Operationalization of the GDPR: Conceptualization of a User-Oriented Online Privacy Control System and Evaluation of its Effects on Corporate Trust"

Author of the dissertation: Kadir Ider

**Reviewer: Assoc. Dr. Eng. Kapka Yordanova Manasieva,
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1. Relevance of the problem developed in the dissertation work in scientific-applied and scientific terms. Degree and scale of the actuality of the problem and the specific tasks developed in the dissertation.

The topic "Complexity Reduction and Operationalization of the GDPR: Conceptualization of a User-Oriented Online Privacy Control System and Evaluation of its Effects on Corporate Trust" is relevant for both science and practice. The scientific and research potential is related to the problems and tasks arising in organizational systems as a result of the large volume of data and the operation of privacy control systems. The practical utility is also apparent and is expressed in the development of a control system focused on data privacy and in accordance with the requirements related to the General Data Protection Regulation (GDPR).

The relevance of the problem is proven by the dissertation in the first part in the review of the literature in the field, the analysis of what has been achieved so far in a global and local aspect and the identified problems of the existing security systems. The applied research methodology includes an international web-based survey aimed at understanding the system and its changes: user awareness, trust in organizations and the assessment of data privacy control elements. The inclusion of an assessment of its effects on organizational reliability also makes the tasks serious and with reservations both in terms of scale and potential for real scientific and practical results.

2. Degree of knowledge of the state of the problem and creative interpretation of literary material

The author has done research and a literature review (67 literature sources) of the problems related to the organizational nature of security systems, the development of the general regulation of personal data protection in general and, accordingly, the modern challenges in the operation of these systems, their effectiveness and requirements. What has been achieved so far in this area has been analyzed and, on the basis of well-defined conclusions, the goals and objectives of the dissertation work have been formulated. The formulated goal and analytical research correspond to the content developed in the dissertation, and there is an author's interpretation in the analysis regarding the application of development principles and the problem of personal data security in these systems.

The author offers a good structure and sequence developed in 4 chapters determined as a result of the good overview, with a consistent focus on a theoretical setting, an examination of the conditions and environment for application, and ends with an experiment. In the proposed form, the dissertation completely fulfills the pre-set condition to meet the requirements for obtaining the educational and scientific degree "Doctor". I appreciate his work in bringing out the root problem. The doctoral student knows the state of the problem well and evaluates and interprets the materials analytically and creatively.

3. Correspondence of the chosen research methodology with the set goal and tasks of the dissertation work

The main theoretical and methodological approaches used in the design of the privacy control system concept and assessment of its effects on organizational reliability as a management component are successfully chosen and suitable for this kind of scientific research. The methodology chosen by the doctoral student corresponds to the set goal of the research and accurate formulations and good analytical information are used. The tasks and their sequence are in line with the purpose, and the research of modern security systems helps to develop an approach and system to protect personal data for the needs of organizations. Development contributions are protected by the well-chosen and clarified theoretical-methodological aspects of the proposed approach to solving the problem, with an emphasis on new forms and ways of incorporating new solutions. The author has well justified theoretically the choice of the approach and the requirements for its application. The trial was successful and proves the applied contribution of the approach. The limits of the scope and the possibilities for evaluating its practical applicability are excellently defined. The evaluation of the effect of a proposed concept for practical implementation and use is done, which adds theoretical-applied value.

4. Assessment of the nature and credibility of the material

The material is reliable, it is based on current and reliable productions, both theoretical and practical. The problems of bringing the existing approaches to control with the intelligent forms and methods of preserving the confidentiality of data are current and the development proves the need for continuous monitoring, analysis and the search for solutions based on new technologies and cyber-security systems.

5. Contributions of the dissertation work

The contributions of the dissertation "Complexity Reduction and Operationalization of the GDPR: Conceptualization of a User-Oriented Online Privacy Control System and Evaluation of its Effects on Corporate Trust" are: discovering new sides to existing theories and scientific problems and using of new means of proving their relevance to organizational reliability.

Their nature is reduced to scientific-applied and applied as follows:

5.1. Scientific and applied contributions

1. A new unifying framework for GDPR compliance has been introduced to help simplify the implementation process for organizations and improve user control over personal data through a privacy control system.

2. A methodology was developed to survey user awareness of privacy, trust in organizations, assessment of privacy controls, and survey quality feedback using internal and external data validation methods.

3. Based on the proposed methodology, data was collected through a large-scale web-based survey of citizens and organizations. They contain the GDPR implementation practices

for assessing users' privacy awareness, trust in organizations, assessment of privacy controls and feedback on research quality.

4. A system is proposed, enabling citizens to control their personal data, counteracting the tendency to transfer control to data processing organizations

5. The conclusion on the impact of personal data control on processes, systems and organizational reliability emphasizes the importance of the impact on society by focusing on the impact of personal data control, processes and systems on reliability.

5.2. Applied Contributions

1. For research purposes, web-tools have been created to collect and analyze data from a variety of sources, providing a comprehensive and nuanced understanding of GDPR compliance issues.

2. On-line conditions have been created and information on over a thousand fines has been collected, which is analyzed and contextualized to identify trends in GDPR compliance.

Nature of Contributions

The contributions are of a scientific and applied nature. They are of such a nature that apart from their theoretical usefulness they can also be used in practice. Their applicability will undoubtedly be useful to professionals dealing with these issues.

Significance of Contributions

The contributions would contribute to the expansion of knowledge in the field of application of evaluation and control forms and enrich the research in this field. They will also contribute to the clarification and formation of requirements for creating conditions for increasing competences in the application of innovations in the protection of confidential information, reducing the complexity of applying the GDPR and increasing the efficiency of using the approach and method for the controlled flow of this process. This is undoubtedly the great theoretical-practical usefulness of the dissertation work, and the experimental results clearly prove the effectiveness of its future application in practice.

6. Assessment of the degree of personal participation of the dissertation student in the contributions

I believe that the dissertation work and the contributions are the personal work of the doctoral student, supported by his scientific supervisors. The proposed concept and the described toolkit have been tested and the results are positive. I believe that they are sufficient for this kind of research and will enrich the knowledge of the application of this methodology in the management of processes related to the security of personal data.

7. Evaluation of the publications in the dissertation work

The presented six publications related to the Ph.D. Four of them are independent, and two - in co-authorship. One of the publications is indexed in Scopus.

8. Use of the results of the dissertation work in scientific and social practice

The results of the experiment are positive and can be used in practice and the learning process. Scientific conclusions and statements have the potential to be used as a basis for continuing scientific work on the application of the model in security systems.

9. Future use of scientific and scientific-applied contributions

The proposed methodology and concept can be further developed into a practical model facilitating organizations in using a privacy control system. The doctoral student can

consider applying the approach in the practice of organizations that need effective solutions to the problem under consideration.

10. Abstract

The abstract was prepared in accordance with the requirements of the law on the conduct of the academic staff in the Republic of Bulgaria and the Regulations for its application at TU-Varna for obtaining the educational and scientific degree "Doctor". It contains all the provisions and requirements of the law and regulations.

11. Critical Notes

The PhD student worked on the notes from the preliminary reviews and I have no comments on the proposals for the final review.

12. Other matters

1. The awareness of the PhD student is very good.
2. I have not noticed improperly used foreign approaches, definitions, or borrowed material to be referred and classified to the category of "plagiarism".
3. I believe that the PhD student can maintain his work and the future practical use of the contributions of the development.

13. Conclusion

My final conclusion is positive and I consider the dissertation completed. Through the dissertation and publications, the doctoral student convincingly demonstrates that he has very good knowledge and is competent in analyzing and using modern research methods. He proves that he can independently solve scientific problems. In conclusion, I propose to the members of the scientific jury to award Kadir Ider the educational and scientific degree "Doctor" on the doctoral program 05.02.21 "Organization and management of production (industry)" in professional direction 5.13 General engineering.

13.12.2023

Reviewer:
/ Assoc. Dr. Eng. Kapka Manasieva/