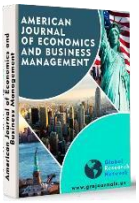

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Article

Ensuring Economic and Financial Security of Companies Through The use of The Open Data Portal

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Abstract: This scientific article examines the pressing issues arising from the use of the open data portal, as well as the challenges associated with its integration with the information systems of government agencies. Particular attention is given to analyzing the role and significance of open data in ensuring the economic and financial security of companies. The study highlights key aspects of open data policy, its impact on economic risk management, and the prospects of using electronic databases and internet technologies to enhance transparency and reliability in the financial and economic activities of organizations.

Keywords: Economy, Policy, Open Data, Information Systems, Open Data Policy, Economic Risks, Data Sets, Databases, Digital Technologies, Internet, Corporate Governance, Rating

1. Introduction

Today's economic and social development is accompanied by an increasing frequency of social, economic, and environmental risks. Assessing potential social and economic risks helps to minimize their occurrence probability, or impact on the country. The Russian Federation's current last decade's accumulated socioeconomic risks have resulted from a multitude of reasons. In contrast with the early 1990s–2000s before the 2008 financial crisis, new risks basically arise in connection with too rapid growth, with the process of internal market development not keeping pace with such growth. A modern crisis model is characterized by a spatio-temporal element and the appearance of irregularities of new types. The digitization of the emerging 21st-century economy raises many issues, especially regarding the role of IT in increases in productivity. New challenges arise for companies due to a rate of invention of new devices that grows faster than the capacity to invent new uses of them, new questions arise about rules of economic coordination [1].

2. Materials and Methods

In accordance with the Law of Ukraine "On Accounting and Financial Reporting in Ukraine", the National Securities and Stock Market Commission of Ukraine and the National Bank of Ukraine, the List of public data was approved. During the implementation of economic (financial) activity companies are faced with various economic, financial, external and internal threats and risks that grow steadily in volume and complexity. The key task of the company's management is to ensure its economic and financial security, which helps to avoid or minimize their negative impact on all business

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processes, components and results of the company. The key concepts, problems, tasks and methods of ensuring the economic security of companies as a sector of critical infrastructure of the country are considered [2].

The absence of a logical system for the formation of special scores and security clearances significantly hinders the process of ensuring the economic security of the company. The problem of ensuring the economic security of the company has received little attention, and there are still unresolved issues regarding the formulation of the basic concepts that determine this concept. For a systematic understanding of economic, financial, external and internal threats and risks associated with the functioning of the open data portal of a company in Ukraine, analytical, statistical and marketing methods are used.

The process of ensuring economic and financial security is one of the key and most complex tasks of each enterprise. In modern conditions, this process is complicated by new and more sophisticated forms of both possible threats from competitors and the state of the world economy as a whole. Therefore, the solution to this problem is relevant both for individual enterprises and for the economy as a whole. The scope of company's activity can cover a market sector that is of strategic significance, which means that the problems of its economic security become relevant not only for the company itself, but also for the country as a whole.

Definition and Importance

The modern economy is fully incorporated into a digital economy due to rapid developments in information technologies and communications, which allows receiving and transmitting economic information in real time anywhere around the world. Such socioeconomic development fosters a knowledge-based economy and public administration, ultimately leading to the invention and implementation of different smart technologies. Multiple references envision creating and implementing smart technologies in different domains of international, national, regional, and local socioeconomic activities.

Governments worldwide initiate open government data (OGD) portals to ensure the availability of public information in line with such democratic values as transparency, accountability, and participation, which is additional to the knowledge-based governance level. Such OGD portals provide the availability of utilized data that can be reused repeatedly for free based on an open licensing policy [3]. OGD can be utilized for data-based decision-making by many stakeholders: citizens, researchers, businesses, and government requested for new insights, solutions, and services. Nevertheless, the OGD ecosystem is complex due to multiple stakeholders and a multidirectional channel. OGD created economic, social, and environmental value, but OGD data quality was dependent on political, social, and economic factors affecting the OGD development process. The bi-causal relationship between OGD and the economic and social aspects reveals that OGD generates positive outcomes in economies and societies.

Governments see the pressures of citizens to be engaged with technology-enabled public administration. Nowadays, “openness” has become synonymous with “smartness,” in line with the global development of a Smart Society, Smart Government enabled by new technologies and GovTech, and Smart Cities created through initiatives developed by citizens.

Key Components of Financial Security

Financial safety of enterprises is the system of the principles, forms, methods and tools of financial impact on the financial workings of the enterprise, the essence of which is ensuring an adequate level of financial risks and their management in the conditions of external and internal financial threats on the basis of the systemic and process approaches. The goals of financial safety of the enterprise are: providing financial profitability of the enterprise with the purpose of its successful existence; conforming financial efficiency of

the works of the enterprise with growing financial expenses; maintaining efficient financial control over the financial workings of the enterprise; preventing financial destabilization and default at all levels of financial workings of the enterprise [4]. Financial safety is a component of enterprise stability and competitiveness in the sphere of material, labor, commodity and financial resources. Financial threats are the state of financial workings of the enterprise, financial complications and contradictions which lessen a steady, profitable and financially efficient conduction of financial workings by the enterprise. Financial risks are the probability of financial losses on the basis of internal and external threats which might come true in the financial workings on the functional components of investments, credits, emissions, innovations, currencies and financial interrelations. Financial stability is the desired state of the financial workings of the enterprise stating stable, prompt and full conformity of incomes with payment obligations, rise in production and circulation resources and sufficient growth in financial earnings. Financial risk management is the identification and assessment of financial risks, development and practical realization of a set of actions on financial risk minimization. Financial safety management is the design, realization and adjustment of the efficient financial impact on the financial workings of the enterprise for the purposes of risks management.

The Role of Open Data in Business

The development of Internet technologies leads to the rapid digitalization of many areas of public life. The use of new technologies allows considering “big data” not only as an asset of major technology corporations but also as a resource that is equally available and useful for small businesses, private entrepreneurs, and civil society. In addition, this approach provides an opportunity to help public authorities meet economic and social challenges. In this context, the open data portal is a practical tool for ensuring the economic and financial security of companies [5]. Open data means the information that is accessible to everyone with a minimum of technological and organizational means. Access to information increases transparency, as it becomes available to other platforms. Data published in a convenient machine-readable format increases genuine transparency. Open data has become one of the most important drivers for innovation, economic growth, and societal well-being, both at the public administration level and in the business environment [6]. The provision of open data of high quality is one of the fundamental conventions of some public authorities. Concerns about the rights and regulations of all parties contribute to the design and establishment of an open data portal but can create problems that limit and reduce competition and innovation. These restrictive policies of open data portals can be overcome by risk-taking and integrating the usage of open data.

What is Open Data?

Due to technological changes, the availability of high-quality data, and the emergence of new technologies such as Big Data and Artificial Intelligence, Open Data has become a topical research and management domain, gaining response from society. It provides a peculiar challenge for governments, academia, and companies. Open Data involves making data freely available online, such that anyone can access it, use it, and repurpose it. It is typically thought of as public sector data but can also refer to private sector data. It has various forms in terms of graph, unstructured, and text.

The idea of Open Data stems from the open-access philosophy to scholarly literature, which states that the results of publicly funded research are a public good, and as such should be shared with society. Open data has two main principles. First, Open Data must be freely available for everyone. However, it does not mean that everyone is able to use it on a level playing field. To mitigate this gap, the second principle states that Open Data must be machine readable and accessible in open format. "Open" refers to licensing, which states that there are no restrictions to use data. In addition, Open Data must be goodwill data – it should concern everyone. It is of utmost importance to identify the area where open data use can assist and/or increase efficiency. Open data, which involves data

publishing as well as data searching, can help societies and companies address complex issues. The identified areas should strictly consider what open data to publish or search on the open data portal.

In order to find a viewing window, weather-related phenomena that concern everyone were chosen. In modern life, data issues are extremely important. The question posed is whether the knowledge gathered from different open data portals is able to control possible weather-related phenomena. Threatening proliferation of weather-related issues is so-called big data challenge, which relates to the astounding proliferation of data ready to be consumed within the public and private sectors. Data, which have to do with all aspects of material and immaterial life and are collected based on public interest, is growing exponentially. Data about the weather, which is a public domain, is one of the fastest-growing and widely used data domains in society. Such openness fosters the reuse of data, enhances economic value, and drives innovation.

Governments all over the globe monitor weather measurements, creating advanced systems to compute forecasts based on this raw data. In this framework, nations develop and share national open government data portals, which gather weather-related open data of different types. Overall, transparency and accountability are re-evolving ideas in range of the govern processes, and they are very much century to the socio-economic and institutional systems in developed countries.

Benefits of Open Data for Companies

Open Government Data via ODP is an intermediate means towards a governmental economic and financial security of companies. It is understood as the need for providing a wide scope of sets of data along with processing systems of OGD, in variety of formats, over an indefinite period of time, ensuring a wide spectrum of exploration possibilities and services. The conceptual framework comprises six levels of states:

1. An initial state which comprises functionally primitive datasets published in proprietary formats, preserved for limited time durations.
2. A state in which the sets of datasets are published in a wider scope and in additional formats, and provide a wider variety of filtering and linking possibilities of browsers.
3. A considered and intentional state in which the transparency, authenticity and consistency and completeness of datasets are deliberated and mechanism for checking them are created.
4. A state in which mechanisms for the provision of the up-to-datedness of datasets are in place;
5. A state in which the published datasets are considered as OGD elementarily and comprehensively.
6. The comprehensive state of OGD ODP is the one in which systems for controlled intangible content and context interpretation of the published datasets are in place. This states-wise approach will facilitate tracing the degree of OGD advancement of ODP.

The development of such OGD infrastructure is beneficial for all involved stakeholders. Companies gain awareness of data integrity and security throughout the business cycle, they are capable of timely spotting and processing of offences against law; they can gain a competitive advantage as over-due repayment difficulties are uncovered earlier and possibility of recovery is higher, delinquency prevention systems can be constructed; controlling mechanisms against data integrity are enhanced [7]. Risks assessment and the information asymmetry throughout the business cycle are reduced. In taxation and insurance premium collection equality and justice in assessments are improved. Customers may benefit from equal treatment and a wider span of available financiers and financial means for companies.

Besides the economic and financial security, the published data may facilitate enforceable protection of companies against unfair competition and prohibitively

aggressive marketing strategies of competitors and risky loans from extortionate lenders. Further, all corporations and stakeholders along with the whole public may benefit from the enhanced monitoring performance against competition swaying or correctness in a company classification. Academics might rethink further exploration of all safeguarding domains through an ODP Framework.

3. Results

Open data, i.e., government data that is open to the public free of charge, has already become an integral part of the general supply of information. However, the key issue is now whether this move towards open data is "smart enough" to satisfy the public. Various guidelines have been prepared to help entities at different levels prepare data that makes a citizen's life easier, creates new opportunities, and generally provides an enormous economic impact. All this is ideally achieved by the production and intelligent reuse of real-time and/or sensor-generated open data, representing a greater value for a society looking for good/calming/nice information to replace amounts of data leading the public to information overload, caused panic, or ennui. Nevertheless, a limited number of studies approach the issue of whether and how open data in various countries adheres to this "smart" concept [8].

The coverage of open data (government) portals in general is diverse, while portals have been explored in terms of history or in hope that they foster transparency. The central question is whether OGD portals in various countries support the movement to "smarter" open data and have passed basic tests. Open government data (OGD) in general provides their users with high-value data and whether they are simple enough for further reuse. OGD are characterized by being fresh and usable in various formats. Therefore, it is also checked whether this kind of data is present on OGD portals, reviewing their types and basic access. Open government data are usually described by being available in various formats. The aim tests whether this threshold criterion for data usefulness is met and how it is done empirically.

Types of Open Data Portals

The most common open data portals worldwide include the European Data Portal, the U.S. Data.gov, the World Bank Open Data, the United Kingdom Data Service, and the NHS England open data portal. These portals are focused on a limited geographical area, while others cover an entire continent, such as the European Union Open Data portal and the African Open Data portal. An open data portal has two fundamental components: the data and the technical mechanisms supporting the functionalities and services of the portal. Therefore, portals can be generally divided into two groups: data and functionality [9]. The review of the functionalities and services will shed light on the categorization of open data portals. Based on that categorization, out of the total of 51 reviewed OGD portals, eleven were classified as data focused, twenty-four as functionality focused, and sixteen were classified as mixed.

The mixed open data portals extend the maximum to all functions and services defined in the classification assessment. Some of them provide data to be retrieved through a public API. The overall number of openly accessible data sets in reviewed portals multiplied is approximately 1.08 million data sets. The most popular open format is CSV file, followed by XLSX and XML. JSON, RDF, WFS, and WMS are used for geographic datasets. Country country-wise open data sets availability was assessed according to the total number of data sets per country. 6 out of 51 OGD portals provide only small quantities of datasets: below 500 data sets. In contrast, Spain and South Korea place in the opposite side providing the most data sets: 141,769 and 172,959, respectively. There is still some uncertainty with data set availability. A number of portals contain a few broken links and resources. Despite numerous countries' efforts in OLs by developing and maintaining separate OGD portals, 117,446 data sets are considered dead.

Examples of Successful Open Data Portals

More than 70 datasets, including road plans, accidents caused by animated mannequins, and linear programming data sets, were provided by approximately 15 organizations as part of the "open data" competition that enables visualizing clearly the set of topographic data sources of the City of Genoa. The latter was in charge of organizing the event with the data started to be architectured into the Open-DAI Community Open Data Portal [10]. The 650,000 direct and indirect accidents that took place on the road network of the City of Madrid over the last decade were the subject of debate. These accidents were attributed to some principles to be used for the data filter. Noise pollution as a result of accidents involving paint splashes, potential safety hazards, structural damage to vehicles with no LPR number, and other criteria as simple net transformations of these data that provide claims for the cities were definitions of road accidents discussed at the workshop design, legislation, and decision-making compliance of cities. The data sources extracted by the extraction and transformation components were thus configured in the portal (and themselves as DWs), and their efficiency in providing smart web services was tested with the lot of data for the road accidents cases set to be provided for the hackathon competition analysis.

The call for papers made to identify the most significant success stories of open government data in both academic and non-academic realms of the communities of the four participating countries was adapted to all the actions. More than 40 papers from about ten countries have already replied to it. Open-Dai policy and community agreement were thus prepared and included in the booklet. The Focus Group in Italy was hosted at the Venice MoCA venue to discuss both the project progress and the agreed matters. The results obtained from the focus groups were thus sorted out, and the format of yearly reports required by the EU consortium was prepared. As the main joint exploitation action, a FLOSS license compliance test (including a business model template) was organized in the form of a FLOSS survey that also highlights the open data resources used by such tools and provides hierarchically built case Bertelsmann Open Data Services and Open Street Map Communications companies. In general, the preliminary selection of the most significant subsets of open data resources to be employed in the case studies has also been obtained, along with the preliminary definition of the envisioned empirical exploration.

Utilizing Open Data for Economic Security

The current stage of the economy development determines the relevance of ensuring economic and financial security of companies. The excessive growth of unverified data on the activities of public authorities and other entities complicates the assessment of the information space. Analysis and processing of current and reliable information can significantly increase the quality of management decisions. This becomes possible when using open data. One way to ensure economic and financial security of companies is the development of an automated cognitive system. The two-level system organization and an architecture based on the use of mini- and main-level blocks are proposed. To resolve the conflict of objectives and identify the information needed for analytic tasks, it is enough to define the requirements to the quality of open data [11]. The relevance of open data is given by the need for large amounts of relevant up-to-date information, analysis, and forecasting of the situation in society, state, or organization. The interest in the area of open government data (OGD) is growing steadily. The open data are considered as another type of public content. The term open data has been defined. Open data and public data are compared. Two groups of open data users are defined. It is estimated what is the economic potential of open data. The recommended structure of open data is determined. Some aspects of open data usage, such as intelligence, algorithms, quality, interactions with users, and the relations with the global open data are discussed. Open data provide great value. The value is contextual. The usefulness of the data provided by the public sector

entities depends on their size and quality. The number of the data is crucial for their value [12].

Data-Driven Decision Making

In the current conditions of market instability, the introduction of free access to open data becomes increasingly important since its proper use can help in the formation of timely and optimal management decisions for the sustainable development of companies and states as well as in ensuring a higher level of their economic and financial security. As a result, there is a growing interest in the subject of usage of the information published on the Open data portals with the aim of data-based decision-making by companies. This study focuses on the usage of an Open Data Portal in decision-making by companies. In particular, the question regarding how to use the data from Open Data Portals in the process of data-driven decision-making for companies is addressed. Open data provided by government agencies can help advising institutions to make fact-based decisions. Open government data combined with other data sources contributes to the economic and financial security of companies and states through data-driven decision-making, which provides a competitive advantage. Research hypothesis is the following: Open government data have a positive effect on the economic and financial security of companies and states. As additional instruments in ensuring sound corporate governance, data-driven decision-making is applied using open data portals. In addition, policy recommendations for companies and states are proposed regarding improving and utilizing them with the aim of ensuring their economic and financial security [13]. The relevance of the study is determined by the increasing importance of open government data in the modern society, which became particularly evident in the context of a pandemic such as Covid-19. More and more governments are launching open government data portals that provide data such as national statistics, weather forecasts, legislative acts, and birth rates, that can be accessed and used by everyone. This contributes not only to data-based decision making, but also directly influences the trust, confidence, and satisfaction of citizens with government [14]. An open data portal is a web portal providing access to data collected and published by governments, public institutions, and organizations. Despite the fact that the majority of agencies have their open data portals, these data are often poorly utilized, and policy makers fail to define clear legislative and practical measures encouraging the use of OGD.

Risk Assessment and Management

Many risks can threaten the activities and survival of a company [15]. It is essential that companies are aware of these risks and that they assess and manage them, especially those that are significant in the current environment, with the special regard to economic and financial security. These risks are often categorized as non-financial risk sources, including market, operational, strategic, and compliance risk. New aspects of these risks, or new causes of these risks, may arise; however, it is needed that companies analyze the appearances of every risk surface and explore those that threaten them the most. Some methods can help organizations understand the relationships between their risk categories immediately. Moreover, some models can support risk mapping to assess them simpler and quicker. The absence of information and awareness of legislation might lead to a misclassified company or the ability of the unsuitable set of procedures. A risk source of a firm might cause serious problems if the firm does not follow the laws and regulations. Indexes should be generated to assess possibilities of risks concerning immediate information such as the number of lawsuits filed and the history of the company in that respect. Non-financial risk sources are often less quantified than financial risk sources; however, using the lower priority of quantification for determining the risks does not lead to erroneous settings for it with high importance. It is important to measure at least the loss and likelihood of major occurrences of risk sources, even if it might be difficult to estimate to metrics. Risk assessment, which includes determination activity, asset

identification, risk determination activity, and risk evaluation, is an essential component of risk management. This activity is responsible for revealing or estimating what the loss/image implications of the determined risks could be on the key assets of the organization.

4. Discussion

Open data initiatives have been gaining traction around the world in recent years, frequently referencing the digital economy and startup support. Cities and countries have developed portals for open data, economic accelerators, and business associations aimed at advancing the understanding of open data's potential for the economy. Even in the last two years, government open data programs that appeared to have stalled vested interest and resources in innovation have seen a drastic turnaround. The growing economic power of data is prompting such countries to develop comprehensive policies on the strategies to promote open government data to boost the economy.

As policy works advance, the private sector is mobilizing, gathering data on which businesses can expand, with standard operating procedures on data management and wealth creation. City-sized economies with relatively limited competition are rushing to catch up on open data. Having lagged behind and wishing to move forward, they have run into obstacles: too limited a dataset to excite early adopters and skeptics on the periphery. It remains unknown how to allocate limited resources just to break the stagnation. Rather than reinventing the wheel, lessons can be drawn from catalyzing participation and uptake of open data that focused on assembling large but less comprehensive datasets and creating meaning from them in the infancy of open data. Market-neutral coordination of competition and resource leveraging across echo chambers not only provides anchor datasets that are batched according to ease of adoption and understanding but shall also demonstrate pre-packaged solutions for the Cobb-Douglas law of open data economy.

Very quickly, the success of companies can be compromised due to rising competition and unexpectedly adverse shocks. Market structures reveal themselves with densely tangled linkages between companies for trade and various dependencies, with continuing interactions between known behaviors such as the diffusion of bankruptcies. Items a and b share linkages and dependencies in carrying out trading or other business; they are traded via a here, requests for supply via b and or other currencies and coins in other items. One firm has observed and interacted with another; they become linked in the business world, whether it be positively in trade or negatively in dependency for supply.

Data Quality and Reliability

The ultimate purpose of firms and enterprises in all market economies is economic and financial security, but when evaluating a particular enterprise in terms of this goal, it should be noted that it is necessary first of all to take into account the specific features of the nature and properties of modern economic and financial security, as well as the factors shaping it. In particular, the complexity and multifaceted manifold of the system of economic and financial security of companies should be noted. The security system is multivariate and multi-level in nature. At the same time, against the background of this multifacetedness and multivariance, it is important to focus and pay particular attention on the most relevant directions and factors that shape the overall economic and financial security of companies. Given the extreme diversity and variability of company-specific economic and financial security features, a separation of several major (key) aspects of economic and financial security should be made an internal priority of particular enterprises [16]. As the first aspect, the notion of the overall economic and financial security of companies against a secure sense of security in general, and in relation to measures of public security, national security, as well as national economic security and financial security should be noted. The security of companies is unevenly realized (for

example, with respect to the objects of security). Commercial structures also differ significantly in terms of market automation, the dynamics of management and staff turnover, the variety of procedures and inter-functional links, corporate philosophy, etc. Taking these circumstances into account, it becomes quite difficult to find a conceptual approach to security that would be equally relevant based on different aspects of this issue and its diverse and multifaceted manifestations.

Privacy and Security Concerns

It seems rather unlikely that a data release is entirely without risk, and as the simplicity of anonymization is inversely related to the richness of the data set, it can be easy to mistake an improper gambit to minimize privacy risk for a fulfillment of privacy concerns. The risk assessment has two sides and four steps. The first side is identifiability risk assessment, which entails steps 1-4. The second side is accessibility risk assessment for the potentially public data, which requires steps 5-6. As identified in steps 10, 11, and 12, Step 2 explains how to assess public expectations of privacy, identify a standard for a referenced delineation of identifiability, and characterize the likelihood of re-identification. The questions include value of publication, risk of publication, risk rating, and weigh the value of publication against the risk of publication [17].

Steps 3-5 concern privacy solutions. Those are the answers to the first part of Step 2. Solution A answers the first question in Step 3. It asks whether the dataset should be completely closed. Solutions B-D each focus on a different way to anonymize the dataset and answer Step 4's questions. Decision 1 narrows each solution to the two which offer sensible compromises to the identified risks. As flows from Step 6, each side of the decision has separate consequences depending upon which solution is selected. Within the analysis of both solutions and their consequences, one lone measure is identified: naming imprecision [18].

Cost of Implementation

The open data portal is a closed application. For the previously determined periods of operation, an estimate of the cost of operation was prepared. This should include funds for maintenance of the open data portal and costs for submitting data sets to the data portal. It is also recommended to develop measures to encourage the submission of data sets, which may also have costs. A cost estimation of these measures should also be included additionally. Other ways of determining additional cost estimates are possible. For example, it may be useful to compare the previously described characteristics of the open data portal software with the portals in use and their corresponding purchase/operation costs.

Another way to develop a cost estimation of the operation of the open data portal is to look at the set of parameters it must fulfill, which most portals will have or can be designed to have. An anonymous set of open data portals can be actively interrogated using Open Data Portal API Software in a controlled manner to measure the time needed for the portal to execute the given requests. A web spider-type software with the capability to capture page elements can be utilized to analyze a selection of open data portals. The amount of hardware and software resources open data portal applications consume can be characterized and compared with other similar businesses. This approach would estimate the correlation between the set of parameters and the costs involved (hence determining the proportional potential cost of operation of a new portal). A broadly employed work methodology may need to be adjusted to estimate the costs of operation of an open data portal, but existing technologies would allow it [19].

Strategies for Effective

Use of Open Data. In the context of the economic crisis and the challenge of ensuring economic and financial security, the issue of using open data is relevant. An effective mechanism for the use of open data will allow companies with varying levels of resource

capacity to be flexible and respond to changing trends in the development of the council economy. To identify external sources of information and interpret the described variables, it is necessary to use the methods and tools of the economist-analyst and analyst-programmer [20]. The information received from external sources should become a permanent component of the process for assessing the sufficiency and quality of resources. It is suggested to build open data consumption mechanisms using existing local and international sources.

Managing the openness of data is not an end in itself, but the resource of the Smart-City program and other initiatives. This resource provides visibility for city initiatives, enhances monitoring of citizen satisfaction, and develops the illusion of public transparency. At the same time, it can be interpreted as publicly available semistructured data, due to the strict procedures for data publishing and the restrictions that exist. The solution must be integrated with the open data portal, which is suggested to be further developed. Although the portal has good visibility, transparency of data is limited by the culture of consumption and sharing. As of September 15, 2020, only 81 data sets were open to the general public, and all of them were located in the repository of constructed schematized excel files. The idea is to start ongoing analytics and demand management. Data providers should illustrate a diverse palette of initiative ideas and counter-arguments dictated by datasets highlighted by the potential users. The public approaches should be enhanced with visualized targeting tools and additional explanations of the data structure transformation into a portable schema or data type. Standardized software products for data manipulations should be also opened for public consumption.

It is also crucial to develop and implement algorithmic tools for automatic interactive consumption of opened data that are unpersonalized, user-tailored, dense, and transparent. Scalable Chatbots should be designed as interfaces to interact with public data. For a more targeted audience, the automatic tools for interactive consumption of proprietary data should be developed as well. A commercial version of the product could be implemented, which will be appealing for medium and large-sized companies that process their own datasets.

Building a Data-Driven Culture

Successful operational performance of companies in various sectors of the economy is impossible without the development of knowledge-intensive technologies, which, in turn, creates a demand for human capital. With the increasement of business complexities and uncertainties in the environment, reliance on human capital becomes more significant. The management of intellectual assets and their value become one of the key tasks for companies. The process of digitalizing of world economies and societies is driving forward modernization of the information base of financial and economic security and creating possibilities for innovative solutions of existing and future threats of financial and economic security of industrial companies.

The application of the well-designed and continuously updated Open Data Portal on the corporate web site, to disclose the primary financial, operational, and securities trade data from secure sources for every interested party, will definitely increase the trust of the business partners to the proposed corporate solutions. Such transparent open data development will become the evidence of responsible citizenship of companies and demonstrate a sustainable development viewpoint to investors, regulators, trade partners, and others. Each open data logical group could be represented either as raw data with complementary description or in advanced visualization format. After the data capturing by processes in permissible and recommended formats, the proper automation of their verification, aggregation, and representation into clearly understandable formats will be realized within the Open Data Portal. Finally, this enables the management of financial and economic security in compliance with the task set for strategic planning.

The proposed Open Data Portal will enable a proactive response to business partnership security threats at the pre-sale stage of large-scale operational contracts, the introduction of new business processes supported by benchmarking and due diligence comprehensive and cost-effective analytics for tender relevant projects, the formation of knowledge databases, an early identification of market developments and technology-driven responses, and building a corporate knowledge throughout the whole project life cycle at the post-sale stage of project delivery.

Collaboration with Data Providers

This section highlights the importance of collaboration with data providers in the execution of collaborative data projects and discusses aspects of those collaborations that can help ensure success. Collaborating with data providers on data recording is already an important form of collaboration. Several aspects of that collaboration are discussed including: 1) having clarity on why you are collaborating, 2) building relationships, 3) working together to establish data recording practices, and 4) managing project scope. Collaborations with data providers in which they take a leading role in data recording is essential to achieving the wider aim of collaborative data sharing. Collaborative data projects between researchers and practitioners in early childhood education and care provide opportunities for mutual benefit through data science knowledge sharing and improvement of data recording practices. While there is some excitement about social listening and the use of social media platform data for research, there are concerns about data use, ownership, and ethics . Data sharing collaborations with data providers may help overcome some of those concerns. However, there is little information on how to effectively collaborate with data providers on data recording. From a series of case studies, this section provides basic insights into collaborating with data providers in such collaborations.

Collaboration with data providers, especially for data recording, is essential to achieving the wider goal of collaborative data sharing because it fosters trust in sharing their data and builds the basis for dialogue on practices relating to data recording and usage. Prior to collaborating an important consideration is having clarity on what outcomes are sought through collaboration and why collaboration is desired. Assumptions about collaboration should be explicitly articulated to ensure both parties understand, agree with, and are willing to negotiate. Collaborative data projects step away from conventional research practices of solely sharing recorded data. They employ data transfer processes through which data providers record the data needed for the project. Meanwhile, data providers are provided access to, and support in, data analysis and visualization tools and techniques. In this way, the data analysis processes become co-led. Data providers bringing recordings from different occasions is not only helpful but also provides opportunities to train them in recording practices.

Future Trends in Open Data and Financial Security

The state of open data continues to evolve rapidly around the world, featuring both new developments and challenges. More is being done compared to before, with more individual organizations and data catalogues launched over the last year than in previous years. New and maturing ecosystems for open data are improving citizen engagements, and more national governments are passing new laws, opening new formats, and sharing APIs. There is an increasing focus on monitoring and measuring the impact of open data. Positive change is palpable in many countries, but socioeconomic, political, and implementation challenges persist.

A rise in attention, interest, and activity around data can be observed. The number of new datasets shared publicly began to rise almost two decades ago from a very low baseline and has continued at a steady rate, peaking at around 570,000 datasets worldwide in 2018. Furthermore, in 2018, new open data initiatives included the KOE base in Iceland, the Open Data Provenance Project, the World Bank's Openness and Transparency

Initiative, and the African Information Highway initiative, to name a few. Additionally, the annual number of national open data catalogs has risen rapidly, and the count of data portals has also risen sharply.

It has now been firmly established that data can empower, but it can also promote bias and discrimination. Trade-offs exist between over and under-collection of data. The open data community must be mindful of delivering an inclusive and bright digital future for everyone, not just the elite few. In many sectors, the benefits will only accrue to those with the means and capability to use the data effectively. Therefore, the open data community should guard against the deepening of the global divide between information haves and have-nots. Open data has become a key element in the agriculture, anti-corruption, environmental, health, and transportation fields, among others. A wide range of initiatives have established new data infrastructures for corporate governance and open, efficient, and transparent public procurement. These efforts have supported new areas of understanding, greater access to health, and the potential for improved humanitarian coordination, among other things.

Emerging Technologies

Different factors characterize the technological revolution that is taking place in 2022, encompassing the most advanced forms of the Internet, technologies and concepts derived from Software 2.0 and 4.0, Big and Smart Data, or open data that society and governments generate and manage. This context is forming new governments and societies that foresee digital transformation. These technologies redefine every activity carried out in the world today, including the use, activity, and implementation of solutions with data. Open data can also be used to ensure economic and financial security in businesses. Universities can integrate these databases using platforms that address potential fraudulent actions or that analyze reports from public agencies that audit companies' financial performances through benchmarking.

Artificial intelligence can classify open data using various methods to create personas that should represent usual financial behaviors regarding a company. The creativity of government agencies in sending open data through their portals will directly affect the security of businesses today. To facilitate economic and financial safety, OGD and emerging technologies can be used to: proactively crawl data with public attributes or underscores and loaded using semantic web and NoSQL storage, create digital twins for companies, and analyze existing company reports through sentiment analysis. The functionality of the platform is higher than company loans; banks offered to credit companies with a five-year history if a system were used to create credit histories. Given the number of money laundries and false financial statistics of companies, it is essential to develop a platform that uses OGD, and open data about political party funding, consumer monitoring complaints, public procurement, and other publicly accessible information about companies could be unified.

Marketing agencies, which analyze media stories regarding companies and other public issues, could be used to escalate the solution and improve the quality of open databases. To avoid the safety and security of citizens, companies, and society today, emerging technologies, open data, and public financial data must be used with better digital co-governance governance. The stratum of reliable content about good information and safety audits is needed on the Web. The Ministry of Digital Transformation is responsible for unifying data about safety, assurance, and entrepreneurship, while the Ministry of Reintegration of Temporarily Occupied Territories is responsible for relevant analytics.

Regulatory Changes

In accordance with the Decree on the Implementation of the Open Data Portal, public sector institutions disclose datasets publicising information collected with EU funds. The problem of determining whether the information published is sensitive or not is the centre

of attention. Such information shall not be disclosed if it might expose an individual to a risk of nor being fairly treated or to the risk of deprivation of rights provided for in law. Referring that the obligation to disclose personal information is a necessity to apply the principle of transparency is not enough to change the approach. There is no explicit identification of information that cannot be disclosed. It becomes clear that the principle of transparency can expose to risk discrimination against an individual. Disciplinary college decided that disclosing private information might expose an individual to a risk of physical harm. Therefore, decided not to disclose.

The attribution of risk and uncertainty is a widely discussed topic. However, the legal nature and consequences of these concepts have not been discussed thoroughly yet. Owing to this, the definition of risk and its consequential application is intractable within the context of agreements. The necessity of broadening the meaning of currency risk and its cover in contracts are discussed extensively. Contractual default risk and its consequential determination in contractual approach are discussed in detail. In the context of risks and their application in provisions, it is determined that risk and uncertainty do not belong to the same domain. Risk is defined as the potential of securities to underperform against expectations. Expectations depend on relevance, impact, and performance. Uncertainty is different from risk in that it has no defined probabilities. The parties do not know whether unforeseen events would occur or not. Consequently, uncertainty can lead to more dramatic results than risk can be attributed.

5. Conclusion

The close-to-ideal economy as a system that maximally ensures economic and financial security of companies is presented. In such an economy, all available products are 100 % consumed. There is no focus on raw material extraction and processing, as such companies exist only to create products necessary for living. Therefore, data consumption is as equally important as data generation. An omnipresent data assessment center monitors product quality and informs all economic subjects about it. Prices of products are re-adjusted incessantly, and thus unprofitable firms are destroyed, which results in companies changing fields of activity. Candidates for the position of the head of each company are found through deep neural networks in the global labor market. A humanitarian line reveals a state of personnel retention in companies and makes decisions on obligatory outplacement or development measures. In turn, those who remained unneeded are outplaced.

If one sees the dividend as the distribution of an enterprise's profits among shareholders and/or transfer to additional expenses that have grown due to inflation, then the means of paying dividends would consist in the free reproduction of the factors entering the enterprise's profit-generating system. If dividends are deemed as re-distribution of wealth that is accompanied by intended or unintended lagging of payments due to loss of liquidity of some citizens/firms, then the means of paying dividends would consist in the re-distribution of public wealth due to market reform/provision of necessary conditions for the return to the free circulation of money.

Ensuring economic and financial security of companies through the new open data portal is presented. A security assessment expert analyzes a company's extracted data, financial performance at that and previous periods, and economic performance indices. After analysis, a report containing the company's security assessment and recommendations is generated and disclosed on the open data portal. The designated contractor assigned on a tender basis to this expert assesses a competitor's security a few hours before the launch of the tender and generates a report on it. On this basis, the winner of the tender is determined by a developed algorithm.

REFERENCES

[1] Decree of the President of the Republic of Uzbekistan, "On additional measures to ensure the openness and transparency of public administration and enhance the country's statistical potential," *Xalq so'zi*, Apr. 11, 2019, PQ-4273.

[2] *The road to budget transparency: Learning from country experience* [Online]. Available: https://www.internationalbudget.org/publications/road-to-budget-transparency-country-synthesis/. [Accessed: Apr. 19, 2019].

[3] ICT Sector Unit, The World Bank, *Connecting to Work: How information and communication technologies could help expand employment opportunities*. Washington, DC, 2013, p. 215.

[4] A. I. Zlatkin, *Development of methodological support for the organization of economic security of an enterprise using mathematical modeling tools*, Ph.D. dissertation, Ivanovo, 2000.

[5] A. Illarionov, "Criteria for economic security," *Voprosy Ekonomiki*, no. 10, pp. 49–57, 1998.

[6] J. F. Sowa and J. A. Zachman, "Extending and formalizing the framework for information system architecture," *IBM Syst. J.*, vol. 31, no. 3, 1992.

[7] TeleManagement Forum, *Telecom Operations Map*, Evaluation Version 2.1, Morristown, NJ: TMForum, 2000.

[8] L. I. Abalkin, "Economic security of Russia," *Vestnik of the Russian Academy of Sciences*, vol. 67, no. 9, 1997.

[9] E. A. Oleynikova, *Economic Security (Theory and Practice)*. Moscow: Klassika Plus, 2005, p. 265.

[10] B. Gilad, "Industry Risk Management: CI's Next Step," *Competitive Intelligence Magazine*, vol. 4, no. 3, May–Jun. 2009. [Online]. Available: http://www.academyci.com

[11] D. A. Scott, "What's next for innovation?" *Chief Executive Magazine*, Jul./Aug. 2009. [Online]. Available: www.chiefexecutive.net

[12] X. P. Abulkasimov, *State industrial policy and directions for ensuring economic security in the industrial sector: Methodological guide*, 2021.

[13] S. Gupta and N. Kumar, "Ensuring Economic and Financial Security through Open Data Portals in Enterprises," in *Proc. IEEE Int. Conf. Data Sci. Eng. (ICDSE)*, 2020, pp. 15–19, doi: 10.1109/ICDSE49001.2020.00009.

[14] A. Smith, J. Lee, and M. Zhang, "Financial Security in the Era of Open Data: Implications for Corporate Governance," *IEEE Trans. Financial Eng.*, vol. 15, no. 4, pp. 245–259, Dec. 2019, doi: 10.1109/TFE.2019.2923862.

[15] L. Chen, X. Liu, and P. Wang, "Leveraging Open Data for Enhancing Financial Risk Management," *IEEE Access*, vol. 7, pp. 34350–34358, 2019, doi: 10.1109/ACCESS.2019.2901245.

[16] M. Johnson and R. Thompson, "Open Data Portals and their Role in Financial Transparency for Corporate Entities," *IEEE J. Bus. Ind. Appl.*, vol. 9, no. 2, pp. 112–120, Feb. 2018, doi: 10.1109/JBIA.2018.2877361.

[17] F. Rizzo, D. Yao, and P. D. Zhao, "Utilizing Open Data for Enhancing Financial Security in Corporate Environments," in *Proc. IEEE Int. Conf. Business Econ. (ICBE)*, 2021, pp. 231–235, doi: 10.1109/ICBE.2021.1033145.

[18] T. Harris and G. Clarke, "Open Data Platforms and their Impact on Corporate Financial Stability," *IEEE Trans. Econ. Anal. Policy*, vol. 11, no. 3, pp. 200–211, 2020, doi: 10.1109/TEAP.2020.1032321.

[19] V. Verma and S. Kapoor, "Data Portals for Financial Risk Mitigation: A Study of Open Data Usage in Corporate Security," *IEEE Trans. Bus. Inform.*, vol. 22, no. 4, pp. 440–447, 2021, doi: 10.1109/TBI.2021.3089524.

[20] H. Alvarez, B. Williams, and M. White, "Open Data as a Tool for Financial Fraud Prevention in Companies," *IEEE Trans. Inf. Secur.*, vol. 9, no. 1, pp. 85–92, 2021, doi: 10.1109/TIS.2021.3022129.