

Digital Governance and Public Administration: Interdisciplinary Insights from research

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Citizens' Trust and Emotions Towards Governance: Empirical Findings

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Sharing economy along with advantages has several challenges. The present study attempts to determine the most preferable way for users to regulate digital platforms using temporary employment platforms as an example. Existing emotions are subjective and most research overlook their role in the satisfaction-trust link within digital governance. The research objects were to examine impact of emotions on trust to digital government and explore how they moderate satisfaction and performance evaluation in this field. Survey was conducted to check several hypothesis. Positive emotions led to more trust to digital government and negative emotions decrease it. Satisfaction boost trust and perceived performance correlates with trust in digital governance too. What is interesting, positive emotions also has moderation effect; while negative do not have one. The same is with satisfaction. That means that with low satisfaction positive emotions can make compensation in terms of trust. At the same time, negative emotions can low trust even with satisfaction of citizens with digital government services.

Regulation of Digital Freelance Platforms:

The View of Customers and Performers

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The widespread adoption of digital technology in social interactions has created a need for better government regulation. Digital platforms, which have evolved beyond their original purpose of transmitting messages, are now used for important activities such as accessing government services and employment opportunities. With the development of new technologies like artificial intelligence and big data, these platforms are processing and accumulating more data, increasing the risks of negative interactions between users. While digital platforms offer convenience and economies of scale, they can also be used for discrimination, fraud, and dishonest behavior. Governments should balance the need to protect users' rights with the need to avoid excessive regulation that could hinder innovation and negatively affect the economy. This is particularly important for multi-sided markets based on digital platforms, which can dominate sectors of the economy and disadvantage other market participants.

One of the key issues is the classification of workers. Many gig economy workers are classified as independent contractors rather than employees, which means they are not entitled to benefits such as minimum wage, overtime pay, and health insurance. This has led to concerns about worker exploitation and the need for clearer guidelines on how to classify workers in the gig economy [1, 2, 3]. Another challenge is ensuring that digital platforms are held accountable for the actions of their users. This includes issues such as discrimination, harassment, and safety concerns. Platforms may also need to be held responsible for ensuring that workers are properly trained and equipped to perform their jobs safely [4, 5, 6]. The scientific community is also exploring ways to promote fair competition among digital platforms. This includes developing standards for data privacy and

security, as well as ensuring that platforms are transparent about their algorithms and business practices [7].

All of these problems can be solved on the one hand by the establishment of regulation by the government [8], on the other hand by mechanisms of self-regulation [9] or partnership among government platforms and its users [10]. The aim of this study is to find out which method of regulation is the most preferable for users of the digital freelance platforms.

To understand which regulation is acceptable for users, a classification tree was built using the CHAID method based on the sample of 3,244 respondents who use digital freelance platforms. The classification tree made it clear that, regardless of the role on the platform, the most preferred way to regulate digital platforms is coregulation. It is based on minimum governmental standards and platform rules of interaction according to governmental regulations.

Governmental bodies should base on the best practice in the process of rules creation. For example, Hilfe.dk platform for the provision of cleaning services for private homes, which signed a collective agreement with the 3 A trade union in April 2018. According to the collective agreement, the employees of the platform can get sick leave, vacation and pension contributions. Thus, similar conditions can be used for other freelance platforms with the support of law.

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An Empirical Investigation of Enterprises' Switching Intention to G2B Service Robots: From the Perspective of Push-Pull-Mooring Framework»
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The research project aims to address the growing adoption of artificial intelligence technology in the public sector, specifically focusing on service robots. While previous studies have primarily examined users' acceptance of service robots in commercial settings, there is a significant gap in understanding the usage of service robots in the public sector. Through the application of the push-pull-mooring (PPM) framework, which originated from human migration theory, this study explores why enterprise users would switch from traditional electronic services to government-provided G2B service robots. By conducting a comprehensive survey among enterprise users and employing structural equation modeling (SEM), the study identifies key determinants of enterprise users' switching intention to G2B service robots, considering the push, pull, and mooring effects. The findings will provide valuable insights for practitioners and managers in promoting positive responses and informed decision-making regarding G2B service robots.

Introducing Sentiment Analysis in the Governance of Smart Sustainable Cities: An Initial Project getting tested in Urban Transportation Services
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Although there is no consensus about what a Smart Sustainable City (SSC) is, it is widely agreed among urban scholars and experts that SSCs are those that massively use Information and Communication Technologies (ICTs), Big Data, Data Science techniques, and Machine Learning tools for improving urban services

and governance [4]. These “smart” features help to provide optimized real-time or georeferenced data to all urban stakeholders (citizens, industry, governments, academia, etc.). For instance, citizens can know the real-time location of the bus they need to take as well as know detailed information about traffic jam and accidents in the city. Governments can use these “smart” features to improve urban policies, e.g., urban services (e.g., urban mobility), urban governance, and urban systems.

In the context of SSCs and Democratic Institutions, stakeholder participation and collaboration [1]. An urban stakeholder is “who/which has the salience attributes of power, urgency, legitimacy, and proximity and simultaneously is affected or affects ... the goals of municipalities, [and] even the whole body of urban governance” [2]. Thus, the bottom line is that an effective and SSC’s governance considers the opinions and sentiments of stakeholders toward urban issues, urban policies, urban systems, and urban services. It is critical for building a so-called Sustainable Urban Strategy [1], and thus, meeting the needs of stakeholders and creating value for them [2].

Sentiment Analysis (SA) is one of the Machine Learning techniques that can be employed in SSC governance, and thus, improve the relationship among local governments and urban stakeholders. SA is recommended for any study aiming to analyze people's opinions, sentiments, attitudes or emotions because the written opinions express valuable sentiments for organizations to assess their products and/or services [5]. Thus, SA analyzes and classifies the opinions according to positive or negative sentiments on a text, in the case of Bing Liu algorithm [5]. Grounded in Natural Language Processing, this technique automatically scans texts and classifies key words from Big Data. Thus, SA can be an optimal tool in urban governance for fostering democratic and sustainable urban strategies.

In short, I and my colleagues believe that SA can be an optimal tool for urban stakeholders and urban managers identifying and solving urban issues. For this reason, we are testing SA as a tool in transportation services (as a unit of analysis, and it should also be expanded and tested in other urban themes) in two

cities worldwide: São Paulo, Brazil and Lisbon, Portugal [2, 3]. In these two studies, we collected georeferenced data from Google Maps, which is an open and widely recognized tool as well as used in many published literature as data source.

We aim to replicate the SA's use in other cities worldwide with new partners. And at the end of this project, we aim to compare the results of these cities and discuss them with the literature of Smart Governance, Stakeholder Theory, and Public Administration.

As for now, our two studies of this project have found that: first, SA could provide solid and straightforward information for Stakeholder Value Creation, stakeholder satisfaction, Sustainable Urban Strategy formulation, and stakeholder-oriented governance; second, SA provides detailed information about citizen satisfaction on service speed and accuracy, and thus, provides valuable orientations for public managers improve public service quality; third, SSCs provide multiple and massive quantities of data that all kinds of urban stakeholders can use in decision-making processes, which help perform SA; and fourth, SA is useful for Bus Terminuses and Subway managers improve the transportation services based on the user feelings.

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Challenges for Data Governance on Emergency Data in the Post-Pandemic Era

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Monitoring the COVID-19 pandemic in many countries has created data concerns. For instance, the lack of systems that efficiently process raw data delivers limits governments in generating trends and forecasts that can be useful for decision-making or public policy generation [2]. Moreover, in some cases, government officials publish data in unreadable and unstructured formats for citizens, exposing another weakness in government reporting [1]. These weaknesses point to different phenomena of data sharing, data governance, open government, and transparency, which must be analyzed and identified before implementing new data proposals.

This paper aims to explore these weaknesses and identify some of the causes and issues that generate them based on some principles of open data: completeness, source, availability, accessibility, and machine-processable. It presents a series of strategies and recommendations to resolve and discuss this problem. In particular, we will explore the challenges of open data and government data portals in this context of opacity and seek to propose ideas to solve the ambiguity problem. In particular, we will explore the challenges of open data and government data portals in this context of opacity and seek to propose ideas to resolve this difficulty.

Key Points:

- Describing the context and issues of dealing with post-Pandemic data governance.
- Describes a literature review on open data, open government, transparency, and accountability, in this post-pandemic context.

List some different phenomena of data sharing, data governance, open government, and transparency

- Context and issues in post-Pandemic data governance.

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Efficiency of E-Participation Tools: Evaluation by Officials of St. Petersburg

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The study was conducted in order to assess the effectiveness of e-participation tools, as well as the needs for IT skills among employees of the executive authorities of St. Petersburg. E-participation in the study is understood as a set of methods and tools that provide electronic interaction between citizens and authorities in order to take into account the citizens' opinions when making political and managerial decisions.

The study involved 417 employees from 43 executive authorities (sample is representative of the size and positions within each authority). The study was conducted by the method of online questionnaires in November-December 2022 using a representative sample (95.4% reliability level, sampling error does not exceed 5%). Among the respondents, 26.9% were managers of various levels, and 73.1% were employees in non-management positions. Among them, 43% are men and 56% are women. The age structure of the respondents was as follows: 18-25 years old - 7%, 26-35 years old - 29%, 36-45 years old - 37%, 46-55 years old - 21%, 56-64 years old - 5%, 65 and older years - 1%.

The survey questionnaire included questions on evaluating the use of various e-participation tools, opinions on the readiness and desire of citizens to use such mechanisms, as well as the preference for various e-participation channels. A separate block of questions was related to IT-competences assessment within the studied group. The survey questionnaire was compiled using the Likert scale. Respondents assessed the degree of their agreement (or disagreement) with a number of statements. According to the survey, the vast majority of civil servants

assess the effectiveness of using e-participation tools as a possibility to quickly inform citizens about the actions of the authorities (72.1%). Also, officials are in solidarity with high assessments of the possibilities of e-participation mechanisms for obtaining a prompt data on citizens' opinions (81.4%). At the same time, the respondents gave more restrained estimates in assessing the costs associated with the possible complication of the interdepartmental interaction (15.5%), as well as the possibility of temporary delays in decision-making (19.4%).

In the study, the respondents were asked to prioritize the most preferred channels of interaction between citizens and authorities. The civil servants named city portals for reporting problems and the ecosystem of urban digital services as the most preferred ones. The least preferred channels were specialized online forms, portals of initiative budgeting and pages of authorities in social networks.

A separate block of questions was devoted to the respondents' evaluation the ways citizens use e-participation tools. It is noteworthy that when the respondents were asked what they think about the citizens and their activities, the assessments were rather restrained. Only a third of the respondents believed that the population had knowledge about the structure of government bodies and their activities. In addition, more than half of the respondents believed that citizens were more interested in solving their personal problems through electronic platforms than issues of urban importance.

According to the survey, 78% of respondents rated their IT-skills highly and said that they were enough to perform their duties. Also, 77% easily learned new programs and applications necessary for work. Approximately 60% felt the need for advanced training in IT. At the same time, the need for advanced training was felt equally among employees in both managerial (64%) and non-managerial positions (58%).

To compare the significance of the parameters, a factor analysis was carried out in order to find relationships between the estimates according to the criteria for different channels. The method of principal components was used as a factor analysis technique.

The eigenvalue indicator according to the Kaiser criterion was used as a component selection criterion. The rotation technique used is the orthogonal Varimax method. To assess the adequacy of the available data for factor analysis, the Kaiser-Meyer-Olkin (KMO) sampling measure and the Bartlett sphericity test were used. To build the model, the entire set of criteria was tested, then the most optimal parameters of the models were compared with the exclusion of individual criteria from them. Only rank variables were used to calculate the factorial model.

For factor analysis, 21 variables were selected and the following data suitability results were obtained: the value of the KMO measure is 0.822, the Bartlett test shows a significance of 0.000 (Chi-square 4322, degrees of freedom - 210). As a result of factor analysis, 6 factors with an eigenvalue above 1 were selected. Together they cover 72% of the sample, which is a fairly high indicator. Although the interpretation of the results obtained may be different and needs additional verification, the matrix shows several groups of variables with a high correlation between themselves and the load on certain components.

Based on the analysis, we found the following patterns specific to groups of civil servants:

- 1) Civil servants who assessed the benefits of using e-participation tools.
- 2) Civil servants who positively assessed the opportunities for citizens to participate in city management through e-participation tools.
- 3) Civil servants who confidently used IT technologies in their work and easily learned new programs.
- 4) Civil servants who were skeptical about the possibilities of a constructive dialogue with citizens through e-participation tools.
- 5) Civil servants who felt the need to improve their IT skills.

The study noted some barriers associated with the citizens' point of view such as lack of readiness for a constructive dialogue, and desire to solve individual problems, etc. It is important to focus further research on collecting ratings from residents - users of the ecosystem of digital city services.

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Algorithmic Management: Sociological View

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ILO and the EU Commission posted their first framework on algorithmic management only last year. This kind of tech was boosted by COVID crisis. Algorithmic management as it is in the name challenges balance between human and digital at work. But it is also a part of another big shift. These technologies has good chances to become the final nail in the coffin of public and private dichotomy which deteriorates because of digital technologies.

Several theories from Science and technology studies were used for the research. According to Feenberg (2002, 2005) the task of good sociotechnological theory is double: to describe the ways in which technology is chosen and also what was the goal behind this choice. Instrumentalization theory implies critical emphasis on the actors or stakeholders that adopt and use technologies. Feenberg (2017) claimed that technology is always biased – and the bias “originates not in the technical elements but in their specific configuration in a real world of times, places, historical inheritances... prejudicial choice of the time, place, and manner of the introduction of a system composed of relatively neutral elements”.

I suggest three types of algorithmic management technologies. Many researchers only consider the third one. Why it is so? It is more innovative than the others from one hand are, and already cause some inequality troubles at the same time. As from technological prospective, first type have not gone this far from

general control from human. You just use a program than to stay behind the worker so to say. Second tech some would not recognize as management at all, because it is self-control. However, there are managers and culture of modern capitalism that create this illusion. In fact, self-controlling via tech worker still runs for employers goals thinking it is for his or hers best interest. Platform algorithms are not so direct, they may be promotes as the best service oriented, so workers are checked and directed for better buyer experience, but ultimately its platform owners, who get the most value. Since striving for it, most of them tend to name gig-workers subcontractors, the last will not get labor rights, which leads to broad variety of problems. COVID-19 just made it more obvious due to openness such workers to the disease without sick leaves and e.t.c.

According to Feenberg “The entire development of modern societies is thus marked by the paradigm of unqualified control over the labor process on which capitalist industrialism rests. It is this control which orients technical development toward disempowering workers and the massification of the public”. So, we can say, when worker use self-tracking, it is only an illusion of empowering – it is control over him on ideology level. Stark and Pais showed how Algorithmic management based on the idea of “suppliers and users control each other”, making sub-reporting an obsolete thing in platform economy, which is big change in management due technological advancement.

Computerisation as implementation of various programs is only a first step of digital transformation of an organization. The next step is connectivity, when different business-apps are connected in synchronized work. This is the basis for visibility, when all staff has an open access to the information of the organization. This is an important ideological shift, because in many (if not in most) groups power is based on control over information. Industry 4.0 implies that employees on different levels would be ready to participate and management becomes more agile. We may see parallels with the use of algorithmic management on platforms, but it is much harder because of the need to change hierarchy to more flexible

networks, while platforms, starting from zero point, have no problem with changing what previously worked well.

At the first glance it may seem that the problem, pointed out by Feenberg may find its solution in algorithmic management: «The operational autonomy of management and administration positions them in a technical relation to the world, safe from the consequences of their own actions» (Feenberg, 2005: 53). If Industry 4.0 will be as connected as it supposed to be in the mind of its ideologists, administrative defense would not be as effective as it used to be – all managers become actants in a huge digital shadow of organization networks. However, it is neither the case for owners, nor for a business that has achieved Industry 4.0 and platform-owners. What looks like huge inequality and hierarchy reduction from one side might be a huge rise of control from another. Before AM and Industry 4.0, capital and/or firm owners controlled their assets through their managers. Now, the whole organization becomes one human-objects entity, which might be ruled by decision-making based on systems of algorithms.

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Artificial Intelligence in the Public Sector:

The Evolution of the Scientific Literature

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The technological and digital evolution of the public sector reinforces the idea of implementing new technologies to improve public management and the government decision-making process. However, it is necessary to recognize the scientific and academic advances that analyze the development of AI in the public

sector. The objective is to describe and analyze the development of AI in the public sector from the academic literature. Research question: What is the development of artificial intelligence in the public sector from the academic literature? To answer the question and meet the objective, an analytical strategy is used based on the systematic review of the literature and the establishment of dimensions, categories, variables, and indicators that allow classifying and analyzing the information of articles in the academic journals that most publish works related to AI in the public sector. The results show an interest by the academic community to analyzing the development of AI in the public sector worldwide.

Key Ideas:

- In recent years, there has been a steady and gradual growth in knowledge generation regarding studying AI in the public sector.
- Research in AI in the public sector is currently in an exploratory phase.
- Documentary analysis is the primary technique researchers employ to gather and analyze data. Three other techniques commonly used for diagnosing AI in the public sector include case studies, surveys, and interviews.
- Qualitative analysis is the predominant approach in studying AI in the public sector.