Questionnaire dataset: The Greek Smart Cities - Municipalities dataset

Georgios Siokas*, Aggelos Tsakanikas

Laboratory of Industrial and Energy Economics, School of Chemical Engineering, National Technical University of Athens¹, Zografou Campus, 9 Iroon Polytechniou str., Zografou 15780, Greece

**A R T I C L E   I N F O**

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**A B S T R A C T**

The dataset was formulated through field research in the Greek Municipalities. The survey was undertaken with an online questionnaire (available in Greek) and the contact person was the Chief Digital Officer or a person with similar responsibilities. The final sample is 252 out of a total of 325 Municipalities. Each respondent had to answer to 26 questions, including sub-questions, of different types (1) 5-point Likert scale, (2) rating scale, (3) closed type “Yes/no”, (4) open-ended and (5) dropdown, and, depending on them, there are 3 types of variables (1) ordinal, (2) nominal, and (3) scale variables. The concepts included in the questionnaire are a) the level of integration and use of digital technologies, b) the difficulties and the challenges municipality authorities face when trying to implement a smart strategy and c) the level of diverse collaborations and partnerships which are necessary in order to develop a strategy. The data can be used to analyse the strategic capabilities of the Greek Municipalities under the three concepts evaluated in the questionnaire. The data’s primary beneficiaries include researchers, public authorities, digital platforms entrepreneurs, smart city specialists and smart city entrepreneurs, as they can use the dataset to develop models against already known results, to identify factors important in an urban strategy and to further study the correlations between the different factors, design and draft an urban strategy on real data.

* Corresponding author.
E-mail address: geosiok@mail.ntua.gr (G. Siokas).
Social media: (G. Siokas)
¹ @LIEENTUA

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Specifications Table

| Subject | Management of Technology and Innovation |
|---------|-----------------------------------------|
| Specific subject area | Design and develop urban and smart city strategies |
| Type of data | Table |
| How the data were acquired | The data were collected using online questionnaire available in Greek via the Google platform. For cross-validation, the respondents were contacted, also, through e-mail, telephone, or face-to-face meetings. |
| Data format | The data is considered as mixed (raw and pre-processed). The dataset is in SPSS (.sav) and Excel file format (.xlsx), analysed and organised appropriately. It is available online (Mendeley Data repository). |
| Parameters for data collection | The questionnaire was addressed to the Mayor or Deputy Mayor, the Smart City Strategy Responsible, the Digital Strategy or Technology Affairs Officers or the Head of the ICT or Digital Department. |
| Description of data collection | The dataset was formed by collecting data from 252 out of a total of 325 Municipalities, using a digital questionnaire available in the Greek language. The concepts under study are: |
| | ■ the level of integration and use of digital technologies by the municipality and the local stakeholders in a city. |
| | ■ the difficulties and the challenges municipality authorities face when trying to implement a strategy |
| | ■ the level of diverse collaborations and partnerships which are necessary to develop a strategy |
| Data source location | Institution: Laboratory of Industrial and Energy Economics, National Technical University of Athens City/Town/Region: Athens, Zografou, Attiki Country: Greece |
| Data accessibility | Repository Name: Mendeley Data Title: Dataset on the questionnaire-based survey: DOI: 10.17632/mpwryygc4r.1 Direct URL to data: https://data.mendeley.com/datasets/mpwryygc4r/1 |
| Related research article | Siokas, G., Tsakanikas, A., & Siokas, E. (2021). Implementing smart city strategies in Greece: Appetite for success. Cities, 108(March 2020), 102938. https://doi.org/10.1016/j.cities.2020.102938 |

Value of the Data

• The data can be used to analyse the strategic capabilities of the Greek Municipalities, under three thematic areas: (1) the difficulties and challenges Greek municipalities face when trying to implement a smart strategy, (2) the level of diverse collaborations and partnerships which are necessary to develop a smart urban strategy and (3) the level of integration and use of digital technologies by the local authorities and stakeholders in an urban ecosystem.
• The data’s primary beneficiaries include researchers, public authorities, digital platforms entrepreneurs, smart city specialists and smart city entrepreneurs. Also, educators can use the datasets to obtain statistics training.
• The data in this article provides more details on the theoretical aspects of urban development in the digitalization era and creates a deeper understanding of the research issues that have been addressed in issues relating to smart city strategies.
• The interesting parties can use the dataset to develop models against already known results, to identify factors important in an urban strategy and to further study the correlations
between the different factors, design and draft of an urban strategy that includes smart city initiatives.

• The questionnaire that was developed can be used as an instrument for similar surveys in any other municipality in related research areas. The results can be used as a steppingstone for creating a more targeted questionnaire for a set of local municipalities in a country.

• The data in this article provide further understanding on the research methods that have been utilized and descriptive analytics can be employed to further understand rising trends, hidden patterns, and characteristics.

1. Data Description

This part of the article is divided in three sections. The first section provides the general specifications of the dataset and the questionnaire. The second section refers to the respondents’ characteristics and the third section refers to the Distribution characteristics.

1.1. Dataset specifications

This article is associated with a questionnaire in portable document format (.pdf) and a dataset file [1] given in both SPSS file (.sav) and Microsoft Excel format files, as a supplementary material. The files of the dataset were provided in two different file types to help the interesting party choose the best type for its calculations.

In more detail, the data files contain the respondents’ answers to the questionnaire. Each respondent had to answer to 26 questions with relevant sub-questions. The file dataset has 252 entries of encoded answers. The questionnaire had four types of questions: (1) 5-point Likert scale, where 1 for “Not at all” and 5 for “Maximum”, (2) rating scale questions, where 1 for “Not provided” and 4 for “The whole process is complete electronically”, (3) closed type questions “Yes/no”, where 1 for “Yes” and 2 for “No”, (4) open-ended questions and (5) dropdown questions. Data interpretation comments are available in the SPSS file. The dataset has ordinal, nominal, and scale variables, depending on the question. Regarding the variables, the questions are the variables and the answers provided by the participants are provided in the supplementary materials. More details regarding the variables are shown in the Table 1. In more detail, the 5-point Likert scale questions are in the table positions 6-19, 31-147 and 154-171, the rating scale questions are in the table positions 20-30, the closed type questions are in the table positions 148 and 150-153, the open-ended questions are in the table positions 149 and 175-177 and the dropdown questions are in the table positions 5 and 172-174. Additionally, the number 9999997.00 corresponds to a missing value.

Regarding the questionnaire, the original questionnaire was provided in Greek, which is the respondents’ native language. For the purposes of the article, the questionnaire was translated to English in the supplementary material [1]. Additionally, the questionnaire was not anonymous during the collection process. The main demographics of the representatives were collected at the end of the questionnaire. At this point, the degree of suitability or adequacy of each respondent-executive for the representative’s participation in the research and the degree of reliability of the collected data is ensured. Each respondent was informed via email that his/her answers would be used as a part of a Ph.D. research and agreed to that by filling in the questionnaire. All the participants could answer the questionnaire anonymously. But for privacy reasons the respondents’ names and the population of each entry were excluded from the file file to maintain privacy and not to allow any indirect link to the respondent.
Table 1
The description of the dataset.

| Position | Variable | Label | Measurement Level | Type | Values |
|----------|----------|-------|-------------------|------|--------|
| 1        | ID       | Municipality's Entry Code in the Database | Ordinal | Numeric | 1-Municipalities of metropolitan centres (Athens and Thessaloniki) | 2-Municipalities - Capitals of former prefectures | 3-Regional Continental & Island Municipalities | 4-Small Municipalities (mainland & island Municipalities) |
| 2        | nomos    | Former Prefecture (Kapodistrias Program) | Nominal | String | |
| 3        | Per      | Region | Nominal | String | |
| 4        | Per_En   | Regional unit | Nominal | String | |
| 5        | category | Categorization of Municipalities (Based on their characteristics and central role) | Nominal | Numeric | |
| 6        | A_1.1    | To what extent the Municipality uses a call centre to receive/exchange information from/with citizens/businesses? | Scale | Numeric | 1-Not at all | 2-Low | 3-Moderate | 4-High | 5-Maximum |
| 7        | A_1.2    | To what extent the Municipality uses e-mail to receive/exchanges information from/with citizens/businesses? | Scale | Numeric | |
| 8        | A_1.3    | To what extent the Municipality uses a digital form for filling in data and data via the internet to receive/exchange information from/with citizens/businesses? | Scale | Numeric | |
| 9        | A_1.4    | To what extent the Municipality uses social media (e.g., Facebook, Twitter, LinkedIn, etc.) to receive/exchange information from/with citizens/businesses? | Scale | Numeric | |
| 10       | A_1.5    | To what extent the Municipality uses a mobile application to receive/exchanges information from/with citizens/businesses? | Scale | Numeric | |
| 11       | A_1.6    | To what extent is the use of the bot system (automatic response system) utilized so that the Municipality receives/exchanges information from/with citizens/businesses? | Scale | Numeric | |
| 12       | A_2      | The Municipality has established a Wi-Fi network in public places for its citizens to use freely | Nominal | Numeric | |
| 13       | A_3.1    | To what extent the Municipality uses Cloud Data and Computing services in its (internal & external) operations? | Scale | Numeric | |
| 14       | A_3.2    | To what extent the Municipality uses Social Networks in its (internal & external) functions? | Scale | Numeric | |
| 15       | A_3.3    | To what extent the Municipality uses electronic resource management tools in its (internal & external) operations? | Scale | Numeric | |
| 16       | A_3.4    | To what extent the Municipality utilizes the use and maintenance of one and/or more database(s) in its (internal & external) operations? | Scale | Numeric | |
| 17       | A_3.5    | To what extent the Municipality uses the maintenance, use and access to open data to/for the citizens in its (internal & external) functions? | Scale | Numeric | |
| 18       | A_3.6    | To what extent the Municipality collects geographical data and makes it available to the citizens in digital form in its (internal & external) functions? | Scale | Numeric | |
| 19       | A_3.7    | To what extent the Municipality use the data collection systems in its (internal & external) operations? | Scale | Numeric | |

(continued on next page)
| Position | Variable | Label | Values |
|----------|----------|-------|--------|
| 20       | A_4_1    | Note the level of integration of digital services provided by the Municipality to citizens and businesses for the issuance of individual & family certificates. | Ordinal | Numeric | 1-Not provided | 2-Relevant information is provided | 3-A part of the process is done electronically | 4-The whole process is completed electronically |
| 21       | A_4_2    | Note the level of integration of digital services provided by the Municipality to citizens and businesses for the registration/deletion/change of data in the municipal registers. | Ordinal | Numeric |
| 22       | A_4_3    | Note the level of integration of digital services provided by the Municipality to citizens and businesses for the payment of bills | Ordinal | Numeric |
| 23       | A_4_4    | Note the level of integration of digital services provided by the Municipality to citizens and businesses for requests and permits for urban issues | Ordinal | Numeric |
| 24       | A_4_5    | Note the level of integration of digital services provided by the Municipality to citizens and businesses for business start-up and/or start-up licenses | Ordinal | Numeric |
| 25       | A_4_6    | Note the level of integration of digital services provided by the Municipality to citizens and businesses for requests to Health and Social Care agencies | Ordinal | Numeric |
| 26       | A_4_7    | Note the level of integration of digital services provided by the Municipality to citizens and businesses for requests for services for People with Disabilities (PWDs) | Ordinal | Numeric |
| 27       | A_4_8    | Note the level of integration of digital services provided by the Municipality to citizens and businesses for requests/platforms for participation in education/vocational training programs (e-learning) for citizens | Ordinal | Numeric |
| 28       | A_4_9    | Note the level of integration of digital services provided by the Municipality to citizens and businesses for the dissemination/information on advertisements and information programs for jobs, employment promotion, etc. | Ordinal | Numeric |
| 29       | A_4_10   | Note the level of integration of digital services provided by the Municipality to citizens and businesses for access to Electronic and Digital Libraries | Ordinal | Numeric |
| 30       | A_4_11   | Note the level of integration of digital services provided by the Municipality to citizens and businesses for requests for participation/information on actions related to Sports/Culture/Entertainment | Ordinal | Numeric |
| Position | Variable | Label | Measurement Level | Type | Values |
|----------|----------|-------|-------------------|------|--------|
| 31       | A_5_1   | To what extent does the Municipality provide information about the municipality through the website or through an application(s) for mobile devices | Scale | Numeric | 1-Not at all | 2-Low | 3-Moderate | 4-High | 5-Maximum |
| 32       | A_5_2   | To what extent does the Municipality publish news through the website or through an application(s) for mobile devices | Scale | Numeric | |
| 33       | A_5_3   | To what extent does the Municipality have the ability of submitting complaints through the website or through an application(s) for mobile devices | Scale | Numeric | |
| 34       | A_5_4   | To what extent does the Municipality have the ability of submitting an application for problem solving through the website or through an application(s) for mobile devices | Scale | Numeric | |
| 35       | A_5_5   | To what extent does the Municipality post the decisions of municipal collective bodies through the website or through an application(s) for mobile devices | Scale | Numeric | |
| 36       | A_5_6   | To what extent does the Municipality post the financial data of the Municipality through the website or through an application(s) for mobile devices | Scale | Numeric | |
| 37       | A_5_7   | To what extent does the Municipality carry out the operation of a citizen/business consultation platform through the website or through a mobile application(s) | Scale | Numeric | |
| 38       | A_5_8   | To what extent does the Municipality carry out the process of procuring equipment through the website or through an application(s) for mobile devices | Scale | Numeric | |
| 39       | A_6_1   | To what extent does the Municipality exchange information (bidirectional) with the National Municipal Register and the central information systems of the Public Administration? | Scale | Numeric | |
| 40       | A_6_2   | To what extent does the Municipality exchange information (bidirectional) with the Land Registry and the central information systems of the Public Administration? | Scale | Numeric | |
| 41       | A_6_3   | To what extent does the Municipality exchange information (bidirectional) with the TAXISnet Certifications/Approvals and Applications from and to the tax office and the central information systems of the Public Administration? | Scale | Numeric | |
| 42       | A_6_4   | To what extent does your Municipality exchange information (bidirectional) with the GIS Platform and the central information systems of the Public Administration? | Scale | Numeric | |
| 43       | A_6_5   | To what extent does the Municipality exchange information (bidirectional) with KIMDIS and the central information systems of the Public Administration? | Scale | Numeric | |
| 44       | A_6_6   | To what extent does the Municipality exchange information (bidirectional) with the e-KEP and the central information systems of the Public Administration? | Scale | Numeric | |
| 45       | A_6_7   | To what extent does the Municipality exchange information (bidirectional) with e-Town Planning and the central information systems of the Public Administration? | Scale | Numeric | |
| 46       | A_6_8   | To what extent does the Municipality exchange information (bidirectional) with EFKA and the central information systems of the Public Administration? | Scale | Numeric | |
| 47       | A_6_9   | To what extent does the Municipality exchange information (bidirectional) with HERMES and the central information systems of the Public Administration? | Scale | Numeric | |
| 48       | A_7_1   | To what extent the Municipality provides the possibility of electronic submission of bids by citizens/companies for job application in the Municipality or in Municipal services | Scale | Numeric | |
| 49       | A_7_2   | To what extent the Municipality provides the possibility of electronic submission of bids by citizens/companies for a request for equipment supply | Scale | Numeric | |
| 50       | A_7_3   | To what extent the Municipality provides the possibility of electronic submission of tenders by citizens/companies for a request for execution of projects, works, studies and services | Scale | Numeric | |

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Table 1 (continued)

| Position | Variable | Label | Measurement Level | Type | Values |
|----------|----------|-------|-------------------|------|--------|
| 51       | A_8      | Do municipal employees, during their trips for official purposes, use any kind of mobile electronic device and/or software in their work? | Nominal | Numeric |
| 52       | A_9      | The material required for the conduct of the Municipal Councils (or e.g., Dropbox) is posted or sent electronically so that a number of pages are not printed | Nominal | Numeric |
| 53       | B_1      | To what extent do you think you have understood the concept of Smart City? | Scale | Numeric |
| 54       | B_2_1    | Does your municipality have a comprehensive digital strategy for e-government? | Nominal | Numeric |
| 55       | B_2_2    | Does your Municipality have a comprehensive digital strategy for Smart Cities? | Nominal | Numeric |
| 56       | B_3_1    | To what extent does your Municipality take into account the functions related to its internal business needs for the formulation of the following digital strategy | Scale | Numeric |
| 57       | B_3_2    | To what extent does your Municipality take into account the functions related to the needs of the citizens for the formulation of the digital strategy that follows | Scale | Numeric |
| 58       | B_3_3    | To what extent does your Municipality take into account the functions related to the needs of the local economy for the formulation of the following digital strategy | Scale | Numeric |
| 59       | B_3_4    | To what extent does your Municipality take into account the functions related to the needs of local agencies and organizations for the formulation of the digital strategy that follows | Scale | Numeric |
| 60       | B_4_1    | To what extent do you consider that Effectiveness plays an important role in your Municipality in the direction of the “Smart City”? | Scale | Numeric |
| 61       | B_4_2    | To what extent do you consider that Efficiency plays an important role in your Municipality in the direction of the “Smart City”? | Scale | Numeric |
| 62       | B_4_3    | To what extent do you consider that Sustainability plays an important role in your Municipality in the direction of the “Smart City”? | Scale | Numeric |
| 63       | B_4_4    | To what extent do you consider that Equality and Equality play an important role in your Municipality in the direction of the “Smart City”? | Scale | Numeric |
| 64       | B_5_1    | To what extent do you consider that the Lack of suitable partners/external resources plays an important role in your Municipality in the direction of the “Smart City”? | Scale | Numeric |
| 65       | B_5_2    | To what extent do you consider that the Requirement for further education and understanding of modern tools plays an important role in your Municipality in the direction of the “Smart City”? | Scale | Numeric |
| 66       | B_5_3    | To what extent do you consider that the Lack of relevant experience plays an important role in your Municipality in the direction of the “Smart City”? | Scale | Numeric |
| 67       | B_5_4    | To what extent do you consider that the Technical Constraints - Lack of Infrastructure play an important role in your Municipality in the direction of the “Smart City”? | Scale | Numeric |
| 68       | B_5_5    | To what extent do you consider that the Movement from pilot projects to larger projects plays an important role in your Municipality in the direction of the “Smart City”? | Scale | Numeric |
| 69       | B_5_6    | To what extent do you consider that the Geographical Area - Extended networks plays an important role in your Municipality in the direction of the “Smart City”? | Scale | Numeric |
| 70       | B_5_7    | To what extent do you consider that the Wider Environment plays an important role in your Municipality in the direction of the “Smart City”? | Scale | Numeric |
| 71       | B_5_8    | To what extent do you consider that financial constraints and resource constraints play an important role in your Municipality in the direction of the “Smart City”? | Scale | Numeric |
| 72       | B_5_9    | To what extent do you consider that the Legal Environment plays an important role in your Municipality in the direction of the “Smart City”? | Scale | Numeric |

(continued on next page)
| Position | Variable | Label                                                                                                                                                                                                 | Measurement Level | Type   | Values |
|----------|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|--------|--------|
| 73       | B_5.10   | To what extent do you consider that Security - GDPR plays an important role in your Municipality in the direction of the "Smart City"?                                                                 | Scale             | Numeric|        |
| 74       | B_6.A_1.6_1 | Evaluate the importance of the Government and the e-services regarding the projects that are in the immediate plan or are being carried out in your Municipality                                                                 | Scale             | Numeric|        |
| 75       | B_6.A_1.6_1_1 | Evaluate the importance of the Information Systems Upgrade regarding the projects that are in the immediate plan or are being carried out in your Municipality                                                                 | Scale             | Numeric|        |
| 76       | B_6.A_1.6_1_2 | Evaluate the importance of Creating one-stop services in relation to projects that are in the immediate plan or are being carried out in your Municipality                                                                 | Scale             | Numeric|        |
| 77       | B_6.A_1.6_1_3 | Evaluate the importance of the Services to the citizens through the internet regarding the projects that are in the immediate plan or are being carried out in your Municipality                                                                 | Scale             | Numeric|        |
| 78       | B_6.A_1.6_1_4 | Evaluate the importance of the Tools for active participation of the citizens regarding the projects that are in the immediate plan or are being carried out in your Municipality                                                                 | Scale             | Numeric|        |
| 79       | B_6.A_1.6_1_5 | Evaluate the importance of the Social Inclusion Tools regarding the projects that are in the immediate plan or are being carried out in your Municipality                                                                 | Scale             | Numeric|        |
| 80       | B_6.A_1.6_1_6 | Evaluate the importance of Human Resources Management Systems and internal operation organization regarding the projects that are in the immediate planning or carried out in your Municipality                                                                 | Scale             | Numeric|        |
| 81       | B_6.A_1.6_2  | Evaluate the importance of Urban planning, transport, and quality of life regarding the projects that are in the immediate planning or carried out in your Municipality                                                                 | Scale             | Numeric|        |
| 82       | B_6.A_1.6_2_1 | Evaluate the importance of Air Quality Control Sensors in relation to projects that are under the immediate plan or are being carried out in your Municipality                                                                 | Scale             | Numeric|        |
| 83       | B_6.A_1.6_2_2 | Evaluate the importance of Vehicle Fleet Management Systems in relation to projects that are in the immediate plan or are being carried out in your Municipality                                                                 | Scale             | Numeric|        |
| 84       | B_6.A_1.6_2_3 | Evaluate the importance of Digital Mapping Systems in relation to projects that are in the immediate plan or are being carried out in your Municipality                                                                 | Scale             | Numeric|        |
| 85       | B_6.A_1.6_2_4 | Evaluate the importance of Geographic Information Systems (GIS) regarding projects that are in the immediate plan or are being carried out in your Municipality                                                                 | Scale             | Numeric|        |
| 86       | B_6.A_1.6_2_5 | Evaluate the importance of the Tools for access and management of social services regarding the projects that are in the immediate plan or are being carried out in your Municipality                                                                 | Scale             | Numeric|        |
| 87       | B_6.A_1.6_2_6 | Evaluate the importance of the Civil Protection and Immediate Evacuation Plans in relation to the projects that are in the immediate plan or are being implemented in your Municipality                                                                 | Scale             | Numeric|        |
| 88       | B_6.A_1.6_2_7 | Evaluate the importance of Noise Pollution Sensors (noise levels) in relation to projects that are in the immediate plan or are being carried out in your Municipality                                                                 | Scale             | Numeric|        |

(continued on next page)
| Position | Variable   | Label                                                                 | Measurement Level | Type  | Values |
|----------|------------|----------------------------------------------------------------------|-------------------|-------|--------|
| 89       | B_6_A_2_6_1 | Evaluate the degree of implementation of the Government and e-services regarding the projects that are in the immediate plan or are being carried out in your Municipality | Scale             | Numeric |        |
| 90       | B_6_A_2_6_1_1 | Evaluate the degree of implementation of the Information Systems Upgrade regarding the projects that are in the immediate plan or are being carried out in your Municipality | Scale             | Numeric |        |
| 91       | B_6_A_2_6_1_2 | Evaluate the degree of implementation of the Creation of one-stop services regarding the projects that are in the immediate plan or are being carried out in your Municipality | Scale             | Numeric |        |
| 92       | B_6_A_2_6_1_3 | Evaluate the degree of implementation of the Services to the citizens through the internet regarding the projects that are in the immediate plan or are being carried out in your Municipality | Scale             | Numeric |        |
| 93       | B_6_A_2_6_1_4 | Evaluate the degree of implementation of the Tools for active participation of the citizens regarding the projects that are in the immediate plan or are being carried out in your Municipality | Scale             | Numeric |        |
| 94       | B_6_A_2_6_1_5 | Evaluate the degree of implementation of the Social Inclusion Tools regarding the projects that are in the immediate plan or are being carried out in your Municipality | Scale             | Numeric |        |
| 95       | B_6_A_2_6_1_6 | Evaluate the degree of implementation of the Human Resources Management Systems and the organization of internal operation regarding the projects that are in the immediate plan or are being carried out in your Municipality | Scale             | Numeric |        |
| 96       | B_6_A_2_6_2   | Evaluate the degree of implementation of the Urban planning, transport, and quality of life regarding the projects that are in the immediate plan or are being carried out in your Municipality | Scale             | Numeric |        |
| 97       | B_6_A_2_6_2_1 | Evaluate the degree of implementation of the Air Quality Control Sensors regarding the projects that are in the immediate plan or are being carried out in your Municipality | Scale             | Numeric |        |
| 98       | B_6_A_2_6_2_2 | Evaluate the degree of implementation of the Vehicle Fleet Management Systems regarding the projects that are in the immediate plan or are being carried out in your Municipality | Scale             | Numeric |        |
| 99       | B_6_A_2_6_2_3 | Evaluate the degree of implementation of the Digital Mapping Systems regarding the projects that are in the immediate plan or are being carried out in your Municipality | Scale             | Numeric |        |
| 100      | B_6_A_2_6_2_4 | Evaluate the degree of implementation of the Geographic Information Systems (GIS) regarding the projects that are in the immediate plan or are being carried out in your Municipality | Scale             | Numeric |        |

(continued on next page)
| Position | Variable | Label                                                                 | Measurement Level | Type   | Values |
|----------|----------|----------------------------------------------------------------------|------------------|--------|--------|
| 101      | B_6_A_2_6_2_5 | Evaluate the degree of implementation of the Access Services and Social Services Management Tools regarding the projects that are in the immediate plan or are being carried out in your Municipality | Scale            | Numeric |        |
| 102      | B_6_A_2_6_2_6 | Evaluate the degree of implementation of the Plans for civil protection and immediate evacuation of areas regarding the projects that are in the immediate plan or are being carried out in your Municipality | Scale            | Numeric |        |
| 103      | B_6_A_2_6_2_7 | Evaluate the degree of implementation of the Noise Measurement Sensors (noise levels) regarding the projects that are in the immediate plan or are being carried out in your Municipality | Scale            | Numeric |        |
| 104      | B_6_B_1_6_3  | Evaluate the importance of Energy and resource management in relation to projects that are in the immediate plan or are being carried out in your Municipality | Scale            | Numeric |        |
| 105      | B_6_B_1_6_3_1 | Evaluate the importance of Energy Consumption and Energy Saving Measurement Systems regarding the projects that are in the immediate plan or are being carried out in your Municipality | Scale            | Numeric |        |
| 106      | B_6_B_1_6_3_2 | Evaluate the importance of Telemetry Systems for remote controls regarding projects that are in the immediate plan or are being carried out in your Municipality | Scale            | Numeric |        |
| 107      | B_6_B_1_6_3_3 | Evaluate the importance of the Utilization of RES systems regarding the projects that are in the immediate plan or are being carried out in your Municipality | Scale            | Numeric |        |
| 108      | B_6_B_1_6_3_4 | Evaluate the importance of the Installation of Smart lighting management in public buildings and public spaces regarding the projects that are in the immediate plan or are being carried out in your Municipality | Scale            | Numeric |        |
| 109      | B_6_B_1_6_4  | Evaluate the importance of the Environment regarding the projects that are in the immediate plan or are being carried out in your Municipality | Scale            | Numeric |        |
| 110      | B_6_B_1_6_4_1 | Evaluate the importance of the infrastructure and installations of solid waste treatment units regarding the projects that are in the immediate plan or are being carried out in your Municipality | Scale            | Numeric |        |
| 111      | B_6_B_1_6_4_2 | Evaluate the importance of the Internet system for managing waste bins with sensors that enables the Municipality to perceive the amount of waste per collection point regarding the projects that are in the immediate plan or are being carried out in your Municipality | Scale            | Numeric |        |
| 112      | B_6_B_1_6_4_3 | Evaluate the importance of the Citizens/Citizens Awareness Programs in the sense of recycling regarding the projects that are in the immediate plan or are being carried out in your Municipality | Scale            | Numeric |        |
| 113      | B_6_B_1_6_4_4 | Evaluate the importance of the Plans and policies for the issue of recycling regarding the projects that are in the immediate plan or are being carried out in your Municipality | Scale            | Numeric |        |
| 114      | B_6_B_1_6_4_5 | Evaluate the importance of the Mechanism for the collection and utilization of recyclable material regarding the projects that are in the immediate plan or are being carried out in your Municipality | Scale            | Numeric |        |
| 115      | B_6_B_1_6_5   | Evaluate the importance of the Economy, education & innovation regarding the projects that are in the immediate plan or are being carried out in your Municipality | Scale            | Numeric |        |
| 116      | B_6_B_1_6_5_1 | Evaluate the importance of the Attractive environment for the establishment of new businesses regarding the projects that are in the immediate plan or are being carried out in your Municipality | Scale            | Numeric |        |

(continued on next page)
| Position | Variable | Label | Measurement Level | Type   | Values |
|----------|----------|-------|-------------------|--------|--------|
| 117      | B_6_B_1_6_5_2 | Evaluate the importance of Collaborative formations regarding the projects that are in the immediate plan or are being carried out in your Municipality | Scale | Numeric |        |
| 118      | B_6_B_1_6_5_3 | Evaluate the importance of Creating a new business incubator in relation to the projects that are in the immediate plan or are being carried out in your Municipality | Scale | Numeric |        |
| 119      | B_6_B_1_6_5_4 | Evaluate the importance of Collaboration with university research teams regarding projects that are under direct plan or are being carried out in your Municipality | Scale | Numeric |        |
| 120      | B_6_B_1_6_5_5 | Evaluate the importance of the Citizens’ Education and Skills Development Programs regarding the projects that are in the immediate plan or are being carried out in your Municipality | Scale | Numeric |        |
| 121      | B_6_B_1_6_6 | Evaluate the importance of Infrastructures regarding the projects that are in the immediate plan or are being carried out in your Municipality | Scale | Numeric |        |
| 122      | B_6_B_1_6_6_1 | Evaluate the importance of Fiber Optic Networks in relation to projects that are in the immediate plan or are being carried out in your Municipality | Scale | Numeric |        |
| 123      | B_6_B_1_6_6_2 | Evaluate the importance of the 4th or 5th generation Networks regarding the projects that are in the immediate plan or are being carried out in your Municipality | Scale | Numeric |        |
| 124      | B_6_B_1_6_6_3 | Evaluate the importance of Infrastructure for wireless internet (Wi-Fi) regarding the projects that are in the immediate plan or are being carried out in your Municipality | Scale | Numeric |        |
| 125      | B_6_B_1_6_6_4 | Evaluate the importance of the electronic signs regarding the projects that are in the immediate plan or are being carried out in your Municipality | Scale | Numeric |        |
| 126      | B_6_B_2_6_3 | Evaluate the degree of implementation of the Energy and management of natural resources regarding the projects that are in the immediate plan or are being carried out in your Municipality | Scale | Numeric |        |
| 127      | B_6_B_2_6_3_1 | Evaluate the degree of implementation of the Energy Consumption and Energy Saving Measurement Systems regarding the projects that are in the immediate plan or are being carried out in your Municipality | Scale | Numeric |        |
| 128      | B_6_B_2_6_3_2 | Evaluate the degree of implementation of the Telemetry Systems for remote controls regarding the projects that are in the immediate plan or are being carried out in your Municipality | Scale | Numeric |        |
| 129      | B_6_B_2_6_3_3 | Evaluate the degree of implementation of the Utilization of RES systems regarding the projects that are in the immediate plan or are being carried out in your Municipality | Scale | Numeric |        |
| 130      | B_6_B_2_6_3_4 | Evaluate the degree of implementation of the Installation of Smart lighting management in public buildings and public spaces regarding the projects that are in the immediate plan or are being carried out in your Municipality | Scale | Numeric |        |
| 131      | B_6_B_2_6_4 | Evaluate the degree of implementation of the Environment regarding the projects that are in the immediate plan or are being carried out in your Municipality | Scale | Numeric |        |
| 132      | B_6_B_2_6_4_1 | Evaluate the degree of implementation of the infrastructures and installations of solid waste treatment units regarding the projects that are in the immediate plan or are being carried out in your Municipality | Scale | Numeric |        |
Table 1 (continued)

| Position | Variable | Label | Measurement Level | Type | Values |
|----------|----------|-------|-------------------|------|--------|
| 133      | B_6_B_2_6_4_2 | Evaluate the degree of implementation of the Internet system for waste management with sensors that enables the Municipality to perceive the amount of waste per collection point regarding the projects that are in the immediate plan or are being carried out in your Municipality | Scale | Numeric | |
| 134      | B_6_B_2_6_4_3 | Evaluate the degree of implementation of the Citizens/Citizens Awareness Programs in the sense of recycling regarding the projects that are in the immediate plan or are being carried out in your Municipality | Scale | Numeric | |
| 135      | B_6_B_2_6_4_4 | Evaluate the degree of implementation of the Recycling Plans and policies regarding the projects that are in the immediate plan or are being carried out in your Municipality | Scale | Numeric | |
| 136      | B_6_B_2_6_4_5 | Evaluate the degree of implementation of the Mechanisms for the collection and utilization of recyclable material regarding the projects that are in the immediate plan or are being carried out in your Municipality | Scale | Numeric | |
| 137      | B_6_B_2_6_5 | Evaluate the degree of implementation of the Economy, education & innovation regarding the projects that are in the immediate plan or are being carried out in your Municipality | Scale | Numeric | |
| 138      | B_6_B_2_6_5_1 | Evaluate the degree of implementation of the Attractive environment for the establishment of new businesses regarding the projects that are in the immediate plan or are being carried out in your Municipality | Scale | Numeric | |
| 139      | B_6_B_2_6_5_2 | Evaluate the degree of implementation of the Cooperative formations regarding the projects that are in the immediate plan or are being carried out in your Municipality | Scale | Numeric | |
| 140      | B_6_B_2_6_5_3 | Evaluate the degree of implementation of the Creation of the incubator of new businesses regarding the projects that are in the immediate plan or are being carried out in your Municipality | Scale | Numeric | |
| 141      | B_6_B_2_6_5_4 | Evaluate the degree of implementation of the Cooperation with research teams of universities regarding the projects that are in the immediate plan or are being carried out in your Municipality | Scale | Numeric | |
| 142      | B_6_B_2_6_5_5 | Evaluate the degree of implementation of the Citizens’ Education and Skills Development Programs regarding the projects that are in the immediate plan or are being carried out in your Municipality | Scale | Numeric | |
| 143      | B_6_B_2_6_6 | Evaluate the degree of implementation of the infrastructures regarding the projects that are in the immediate plan or are being carried out in your Municipality | Scale | Numeric | |
| 144      | B_6_B_2_6_6_1 | Evaluate the degree of implementation of the Fiber Optic Network regarding the projects that are in the immediate plan or are being carried out in your Municipality | Scale | Numeric | |
| 145      | B_6_B_2_6_6_2 | Evaluate the degree of implementation of the 4th or 5th generation Network regarding the projects that are in the immediate plan or are being carried out in your Municipality | Scale | Numeric | |
| 146      | B_6_B_2_6_6_3 | Evaluate the degree of implementation of the infrastructures for wireless internet (Wi-Fi) regarding the projects that are in the immediate plan or are being carried out in your Municipality | Scale | Numeric | |
| 147      | B_6_B_2_6_6_4 | Evaluate the degree of implementation of the electronic signs regarding the projects that are in the immediate plan or are being carried out in your Municipality | Scale | Numeric | |

(continued on next page)
Table 1 (continued)

| Position | Variable | Label                                                                 | Measurement Level | Type     | Values                  |
|----------|----------|----------------------------------------------------------------------|-------------------|----------|-------------------------|
| 148      | B_7_1   | In the last three years, the Municipality has participated in research regarding the projects that are in the immediate planning or are carried out in your Municipality | Nominal           | Numeric  | 1-Yes | 2-No | 3-No not know             |
| 149      | B_7_2   | If yes, how many of these are Smart Cities related projects?          | Scale             | Numeric  |                  |
| 150      | B_8_1   | In the last year, has your Municipality organized and/or participated in innovative events or actions as Co-/Organizer? | Nominal           | Numeric  | 1-Yes | 2-No                  |
| 151      | B_8_2   | In the last year, has your Municipality organized and/or participated as its Representative in innovative events or actions as a guest speaker? | Nominal           | Numeric  |                  |
| 152      | B_8_3   | In the last year, has your Municipality organized and/or participated in innovative events or actions as Simple Participation/Monitoring & information? | Nominal           | Numeric  |                  |
| 153      | B_8_4   | In the last year, has your Municipality organized and/or participated in innovative events or actions as a Participation with a specific role? | Nominal           | Numeric  |                  |
| 154      | B_9_1   | Regarding data collection and management policy, to what extent do you consider posting of digital data (e.g., data collection from sensor, digitalization of public documents) to play an important role in your Municipality in the direction of the "Smart City"? | Scale             | Numeric  | 1-Not at all | 2-Low | 3-Moderate | 4-High | 5-Maximum |
| 155      | B_9_2   | Regarding data collection and management policy, to what extent do you consider access of the Municipality and the residents to digitally readable datasets of high value data (or datasets) (e.g., cooperation with local organizations for systematic collection and distribution of data) to play an important role in your Municipality in the direction of the "Smart City"? | Scale             | Numeric  |                  |
| 156      | B_9_3   | Regarding data collection and management policy, to what extent do you consider provision of integrated services through the utilization of data (e.g., indexing, storage, search, and availability) to play an important role in your Municipality in the direction of the "Smart City"? | Scale             | Numeric  |                  |
| 157      | B_9_4   | Regarding data collection and management policy, to what extent do you consider informing citizens and stakeholders about protection policy (e.g., seminars for young entrepreneurs in terms of managing their customer data) to play an important role in your Municipality in the direction of the "Smart City"? | Scale             | Numeric  |                  |
| 158      | C_1_1   | To what extent does your Municipality cooperate with large companies (> 250 people) for investment projects related to "Smart Cities"? | Scale             | Numeric  |                  |
| 159      | C_1_2   | To what extent does your Municipality cooperate with Small and Medium Enterprises (SMEs) (<240 people) for investment projects related to "Smart Cities"? | Scale             | Numeric  |                  |
| 160      | C_1_3   | To what extent does your Municipality collaborate with academics and research bodies for investment projects related to "Smart Cities"? | Scale             | Numeric  |                  |
| 161      | C_1_4   | To what extent does your Municipality cooperate with local teams (e.g., NGOs) for investment projects related to "Smart Cities"? | Scale             | Numeric  |                  |
| 162      | C_1_5   | To what extent does your Municipality cooperate with other municipalities in Greece and/or abroad for investment projects related to "Smart Cities"? | Scale             | Numeric  |                  |
| 163      | C_1_6   | To what extent does your Municipality cooperate with public bodies for investment projects related to "Smart Cities"? | Scale             | Numeric  |                  |
| 164      | C_2_1   | To what extent is your Municipality involved in your collaborations with the different bodies in the collaborative projects? Does the Municipality offer to its associates: Available as a space for experimenting with prototypes and new technologies? | Scale             | Numeric  |                   |

(continued on next page)
Table 1 (continued)

| Position | Variable | Label | Measurement Level | Type | Values |
|----------|----------|-------|-------------------|------|--------|
| 165      | C_2_2    | To what extent is your Municipality involved in your collaborations with the different bodies in the collaborative projects? Does the Municipality offer to its associates: Disposal of human resources? | Scale | Numeric | 1-Compulsory education | 2-Secondary education | 3-Technical education | 4-University education | 5-Postgraduate education | 6-Doctoral degree |
| 166      | C_2_3    | To what extent is your Municipality involved in your collaborations with the different bodies in the collaborative projects? Does the Municipality offer to its associates: Provision of material resources? | Scale | Numeric | 1-Informatics | 2-Electrical Engineer - Computer Engineer | 3-Other type of engineering degree | 4-Physics/Mathematics/Chemistry | 5-Economy/Administration | 6-Political & Humanities | 7-Environmental & Agricultural Sciences | 8-Legal studies | 9-Technical professions | 10-Other |
| 167      | C_2_4    | To what extent is your Municipality involved in your collaborations with the different bodies in the collaborative projects? Does the Municipality offer to its associates: Possibility of Applying architectural design? | Scale | Numeric | 1-Chief Elected Official | 2-Head of Information and Communication Technologies Unit | 3-Executive of the Information and Communication Technologies Unit | 4-Chief Administrative Officer | 5-Manager/executive of another unit |
| 168      | C_2_5    | To what extent is your Municipality involved in your collaborations with the different bodies in the collaborative projects? Does the Municipality offer to its partners: Strengthening and development of innovative plans on old infrastructure? | Scale | Numeric | 1-Level of Education | 2-Secondary education | 3-Technical education | 4-University education | 5-Postgraduate education | 6-Doctoral degree |
| 169      | C_2_6    | To what extent is your Municipality involved in your collaborations with the different bodies in the collaborative projects? Does the Municipality offer to its associates: Development of innovative applications? | Scale | Numeric | 1-Specialization by education | 2-Informatics | 3-Electrical Engineer - Computer Engineer | 4-Physics/Mathematics/Chemistry | 5-Economy/Administration | 6-Political & Humanities | 7-Environmental & Agricultural Sciences | 8-Legal studies | 9-Technical professions | 10-Other |
| 170      | C_2_7    | To what extent is your Municipality involved in your collaborations with the different bodies in the collaborative projects? Does the Municipality offer to its associates: Connection with different bodies? | Scale | Numeric | 1-Current position in the Municipality | 2-Chief Elected Official | 3-Head of Information and Communication Technologies Unit | 4-Chief Administrative Officer | 5-Manager/executive of another unit |
| 171      | C_2_8    | To what extent is your Municipality involved in your collaborations with the different bodies in the collaborative projects? Does the Municipality offer to its partners: Development of a competitive environment? | Scale | Numeric | 1-Years of work experience in the Municipality | 2-Years with the specific responsibility | 3-Years in this service |
| 172      | D_2      | Level of Education | Ordinal | Numeric | 1-Compulsory education | 2-Secondary education | 3-Technical education | 4-University education | 5-Postgraduate education | 6-Doctoral degree |
| 173      | D_3      | Specialization by education | Ordinal | Numeric | 1-Informatics | 2-Electrical Engineer - Computer Engineer | 3-Other type of engineering degree | 4-Physics/Mathematics/Chemistry | 5-Economy/Administration | 6-Political & Humanities | 7-Environmental & Agricultural Sciences | 8-Legal studies | 9-Technical professions | 10-Other |
| 174      | D_4      | Current position in the Municipality | Ordinal | Numeric | 1-Chief Elected Official | 2-Head of Information and Communication Technologies Unit | 3-Executive of the Information and Communication Technologies Unit | 4-Chief Administrative Officer | 5-Manager/executive of another unit |
| 175      | D_5      | Years of work experience in the Municipality | Scale | Numeric | 1-Years of work experience in the Municipality | 2-Years with the specific responsibility | 3-Years in this service |
| 176      | D_5_1    | Years with the specific responsibility | Scale | Numeric | 1-Years of work experience in the Municipality | 2-Years with the specific responsibility | 3-Years in this service |
| 177      | D_5_2    | Years in this service | Scale | Numeric | 1-Years of work experience in the Municipality | 2-Years with the specific responsibility | 3-Years in this service |
1.2. Respondents’ characteristics

The analysis of the demographic characteristics of the executives begins with the presentation of (1) the level of education of the representative of the Municipality, (2) the representative’s specialty field of training, (3) the position the representative holds and (4) the representative’s years of work in the Municipality, both in the specific competence and in the respective service. More specifically, it seems that 80% of the executives have completed higher education (university education, postgraduate and doctoral studies) and 39.6% of them have obtained a postgraduate degree. In addition, 10.8% and 7.6% of executives are of technological and secondary education, respectively. Results on their expertise are also presented. In more detail, 46.2% of the respondents are related to technological fields (26.9% of the respondents have a degree in the field of ICT and 19.3% have and engineering background). Finally, the distribution of the executives who responded to the survey is constituted from 9.9% are the competent elected, 26.2% are the Head of the ICT Unit, 13.1% are executives of the ICT Unit and 6.7% are summoned by the mayor to deal with ICT and relevant issues.

1.3. Distribution characteristics

A total of 252 out of a total of 325 Municipalities participated in the survey (Table 2). This represents a population coverage of 79% (8,524,731 in total 10,813,386) for Greece (based on the census data of 2011).

The smallest Municipalities (5,001 to 20,000 inhabitants) and the very small Municipalities (up to 5,000 inhabitants) are represented by 80% and 78%, respectively. The medium (20,001 to 60,000 inhabitants) and large municipalities (from 60,001 and more inhabitants) of the country are each represented by 76%. More specifically, the very small Municipalities correspond to 15% of the sample (15% in the total of the Greek Municipalities), the small Municipalities to 36% (35% in the total of the Greek Municipalities), the medium Municipalities to 33% (34% in the total of the Greek Municipalities) and the large Municipalities at 15% (16% in the total of the Greek Municipalities). Table 3 presents four categories of the Municipalities that were created based on the related research article [2]. Each category may have 2 or more population classes since there is significant variance in the population coverage. Some very small Municipalities could however be capitals while other island municipalities may have a larger size, and not be a capital in their area.

| Name of Region in Greece       | Municipalities | Participating | Percentage |
|--------------------------------|----------------|---------------|------------|
| Eastern Macedonia and Thrace   | 22             | 16            | 73%        |
| Attica                         | 66             | 50            | 76%        |
| North Aegean                   | 9              | 7             | 78%        |
| Western Greece                 | 19             | 14            | 74%        |
| Western Macedonia              | 12             | 7             | 58%        |
| Epirus                         | 18             | 16            | 89%        |
| Thessaly                       | 25             | 21            | 84%        |
| Ionian Islands                 | 7              | 4             | 57%        |
| Central Macedonia              | 38             | 25            | 66%        |
| Crete                          | 24             | 17            | 71%        |
| South Aegean                   | 34             | 29            | 85%        |
| Peloponese                     | 26             | 23            | 88%        |
| Central Greece                 | 25             | 21            | 84%        |
| Total average                  | 325            | 250           | 77%        |
Table 3
Presentation of the population order by category of Municipality (N = 252).

| Category | Population Class | Distribution structure (Percentage) | Population |
|----------|------------------|--------------------------------------|-------------|
|          |                  | Category (Total) | Population Class (Distribution) |
|          |                  | Minimum       | Maximum         | Minimum | Maximum |
| Municipalities of metropolitan centres (Athens & Thessaloniki) | Large Municipalities (>60,001) | 41 (16%) | 23 (56.1%) | 25.389 | 664.046 |
|          | Medium to large Municipalities (25,001 - 60,000) | 18 (43.9%) | | | |
| Municipalities - Capitals of former prefectures | Large Municipalities (> 60,001) | 34 (14%) | 15 (44.1%) | 13.105 | 213.984 |
|          | Medium to large Municipalities (20,001 - 60,000) | 18 (52.9%) | | | |
|          | Small to Medium Municipalities (5,001-20,000) | 1 (3.0%) | | | |
| Regional Continental & Island Municipalities | Large Municipalities (> 60,001) | 113 (45%) | 1 (0.7%) | 10.063 | 94.181 |
|          | Medium Municipalities (20,001 - 60,000) | 81 (55.5%) | | | |
|          | Small Municipalities (5,001 - 20,000) | 64 (43.8%) | | | |
| Small Municipalities (mainland & island) | Very small Municipalities (< 5,000) | 64 (25%) | 38 (59.4%) | 185 | 9.693 |
|          | Small Municipalities (5,001 - 20,000) | 26 (40.6%) | | | |
2. Experimental Design, Materials and Methods

• The structure of the questionnaire:
  o Combination and exploitation of various theoretical approaches and different econometric- 
    cal tools.
  o The questionnaire was developed based on three main concepts: (Topic 1) the level of 
    integration and use of digital technologies by the municipality and the local stakeholders 
    in a city, (Topic 2) the difficulties and the challenges municipality authorities face when 
    trying to implement a strategy and (Topic 3) the level of diverse collaborations and part- 
    nerships which are necessary to develop a strategy.

  ■ Topic 1: The section records the specific characteristics of the electronic and digital ac- 
    tions of each municipality regarding projects and activities related to ICT. Through this 
    unit, the level of use of ICT by the employees and the residents of the Municipality 
    at various stages of their daily operation is evaluated. Regarding the technical charac- 
    teristics of this section, it consists of a set of nine (9) central questions, accompanied 
    by their sub-questions, and they are 5-point Likert scale, rating scale or closed type 
    questions "Yes/no".

  ■ Topic 2: This sector aims to understand the existence of a comprehensive digital stra- 
    tegy for "Smart Cities". The strategy is studied at two stages: (1) the level of impor- 
    tance during the planning phase and (2) the degree of implementation of the cor- 
    respond ing project. The section consists of eight (8) questions accompanied by cor- 
    responding sub-questions in 5-point Likert scale, closed type questions “Yes/no” 
    and open-ended questions.

  ■ Topic 3: The third section refers to the types and characteristics of collaborations that 
    the Municipality is involved for the implementation of projects related to its urban 
    development. This section consists of two (2) questions separated by sub-questions of 
    the Likert scale format.

  o Based on the structure of the questionnaire, one additional section was included. At the 
    end, a set of 7 screening questions were applied to filter and verify the respondents’ rate.

• Data collection:
  o A structured questionnaire was sent to all Municipalities (N = 325) across all regions of 
    Greece.
  o The survey lasted from November 2018 to April 2019.
  o The data were acquired using an online questionnaire based on the Google platform.
  o 252 municipalities answered the questionnaire successfully (77% of the total targeted pop- 
    ulation).

• Data method:
  o The data were collected using online questionnaire available in Greek via the Google 
    platform. For cross-validation, the respondents were contacted, also, through e-mail, tele- 
    phone, or face-to-face meetings.
  o The contact person was either the Mayor or Deputy Mayor, the Smart City Strategy Re- 
    sponsible, the Digital Strategy or Technology Affairs Officers or the Head of the ICT or 
    Digital Department.
  o The survey was conducted by the Laboratory of Industrial and Energy Economics at the 
    National Technical University of Athens, Greece (NTUA).

Ethics Statement

We agree upon standards of expected ethical behaviour for all parties involved in the act 
of publishing. Our paper presents an accurate account of the work performed and an objective 
discussion of its significance. Thus, the degree of suitability or adequacy of each respondent- 
executive for the representative's participation in the research and the degree of reliability of
the collected data is ensured. The underlying data is represented accurately in the article. Each respondent was informed via email that his/her answers would be used as a part of a Ph.D. research and agreed to that by filling in the questionnaire. All the participants could answer the questionnaire anonymously. No personal data or any other type of information that links the answers to a specific participant were provided for publication.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

CRediT Author Statement

Georgios Siokas: Conceptualization, Methodology, Validation, Formal analysis, Investigation, Data curation, Writing – original draft, Visualization, Project administration; Aggelos Tsakanikas: Resources, Supervision, Writing – review & editing.

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Supplementary Materials

Supplementary material associated with this article can be found in the online version at doi: 10.1016/j.dib.2021.107716.

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