Market Impact Analysis Service Based on Big Data in Gyeonggi-Do*

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Abstract

The Fourth Industrial Revolution is the driving force of change as the fundamental structure of the industry changes. Gyeonggi-do provides big data analysis services to improve citizens’ quality of life by providing various big data services. Local governments in Korea provide various services for citizens and small business owners. This paper discusses Gyeonggi-do’s ‘Market Impact Analysis Service,’ an information analysis infrastructure. This service helps start-ups, small business owners, and self-employed people who need help starting a business and management due to more information to make big data-based decisions. In this paper, we discuss the efforts of Gyeonggi-Do to provide information service based on big data analysis for local businesses using a Big data platform.

Keywords: big data, data analysis, e-government, small business, platform

I. Introduction

The Fourth Industrial Revolution is characterized by the advancement and integration of technology across various sectors of society. It involves the inter-connectivity of objects, systems, and people through communication infrastructure, enabling information and data exchange. With this connectivity, industries can optimize operations and enhance efficiency, leading to economic growth. By leveraging its strengths, each country can harness the potential of the Fourth Industrial Revolution to foster innovation, create new job op-
opportunities, and improve the quality of life for its citizens. The industrial structure is optimized, leading to the industrial revolution based on the country’s strength.

As a leading e-government country in the world, Korea has responsible for leading and disseminating e-government worldwide. Furthermore, Korea should establish and spread the development of future e-government in response to the 4th industrial revolution.

The focus on citizen-centric public services in Korea is a positive step towards enhancing the overall experience for individuals. The government can better address their unique needs by customizing services to suit citizens’ characteristics and life cycles. In particular, Gyeonggi-Do tries to provide customized services for individual citizens, support small businesses, share public information, and offer advanced services to help their local businesses.

E-government has achieved significant improvements through the deployment of many innovative applications (Gronlund & Horan, 2005; Lee et al., 2005). Governments of leading ICT countries have initiated big data application projects to enhance operational efficiency, transparency, citizens’ well-being and engagement in public affairs, economic growth, and national security (Kim et al., 2014). Also, governments expect big data to enhance their ability to serve their citizens and address significant national challenges involving the economy, healthcare, job creation, natural disasters, and terrorism.

In Korea, efforts to support small business owners and the self-employed are spreading from local governments, and business area analysis is at the center.

As a local government, Gyeonggi-Do provides a customized service for individual citizens and support small businesses by opening and sharing public information and offering advanced service to help people and small businesses. This service is to overcome the difficulties of small business owners’ operations and provide practical support for their businesses.

This service aims to strengthen the competitiveness of small business owners and maximize work efficiency by providing business district information by region-industry to prospective entrepreneurs and small business owners considering changing their industry by supporting successful startups and management improvement.

This paper discusses the ‘Market Impact Analysis Service,’ a local business analysis service using big data analysis and service-
oriented government with the Gyeonggi-Do case.

II. Background

1. Related Works

The role of ICTs has dramatically changed over the past decade. Governments are attempting to revitalize their public administration, making it more proactive, efficient, accountable, service-oriented, and closer to the people. To accomplish this transformation, governments are introducing innovations in their organizational structure, practices, capacities, and how they mobilize, deploy and utilize the human, material, information, technological, and financial resources for service delivery to remote, disadvantaged, and challenged people.

Integrating ICTs in public administration represents a promising opportunity for governments to transform their operations and better serve their constituents. By embracing innovation and leveraging these technologies, governments can work towards a more inclusive, efficient, and responsive public sector.

With the development of intelligent information technology, the e-government paradigm is shifting. As intelligent information technologies such as IoT, cloud, big data, and AI across society are accelerating, a new e-government strategy is required to support this.

Significantly, Big data can enhance decision-making and the organization’s efficiency and effectiveness, but only if organizations use a scientific method to understand the data. Big data can reduce costs such as new information technologies, improve the time required to make computing processes and deliver high-quality new services and products that meet the demands. It can also improve internal business decisions, such as traditional analysis. The concepts of the technologies behind big data allow organizations to achieve various goals and objectives (Davenport & Dyché, 2013).

Big data (Agnihotri & Sharma, 2015) refers to data sets that are so large and complex that traditional data processing tools and technologies cannot cope with them. The process of examining such data to uncover hidden patterns is called big data analytics. Data is growing rapidly, and its analysis with various mining techniques gives rise to valuable results regarding the best perception for the future
This paper focuses on the impact of big data analysis on E-governance.

(Agnihotri & Sharma, 2015) discussed asserting that the public sector gets less information from big data than other sectors as the public sector needs to keep track of the analytics of big data compared to others. Irrespective of the amount of data, the open government can provide better services with the analytics of the data to citizens; this is the thinking of everyone (Chen et al., 2012). discussed the following areas where web analysis has started, their causes for the future, and further references are discussed. These areas include campaign advertising, voter mobilization, policy discussion, and donations.

Big data offers immense opportunities for the government, particularly in e-Government. Governments can gain valuable insights into people’s behavior and preferences by analyzing the vast data on social networking platforms. This information can then be utilized to provide improved and personalized services to citizens. Big Data offers new opportunities for value creation, discovery, and prediction and empowers business intelligence for decision support in e-government (Kaka, 2015).

Since the public sector starts its online transactions and activities, the e-government initiatives have adopted big data strategies in their following implementation. Big data gives the government a better understanding of people’s habits and interests with mobile and social networking applications based on browsing, clicks, search engines, purchase histories, booking, etc. With these capabilities, the government can understand its people’s habits, tastes, personalities, and preferences, which can help predict what their people want and offer appropriate advertising and programs to satisfy their needs and concerns (Anshari & Syamimi, 2016). Big data helps the government structure smart government by providing its citizens with faster, more effective, and more reliable services (Noor et al., 2016).

Big data has the power to transform e-government practices in generating added value for public services and can motivate and support digital innovation for e-government (Anshari & Syamimi, 2016; Vincenzo, 2015).

With enhanced e-government services and increasing effectiveness and efficiency, big data’s added values are explored in business analysis. In identical administration structures, big data is also discussed in
integrating various information sources, security risks, and digital confidentiality. The viewpoint research directions are specified in big data issues for the public sector (Layne & Lee, 2001; Yusifov, 2016).

As the government, SEMAS (Small Enterprise and Market Service) started a Commercial district information system in 2006. As a local government, SMG (Seoul Metropolitan Government) introduced a local business analysis service to support citizens and job creation by opening and sharing public information and offering advanced services to help their local business with the ‘Golmok Sangkwon Analysis Service (Cho, 2019).’

In this paper, we also introduce the Market Impact Analysis Service (MIAS) based on big data in Gyeonggi-do, South Korea, which analyzes and provides local merchandise information based on Big Data for small and midsize businesses established in the overcrowded local markets.

2. Background

Gyeonggi-do is a province in the northwestern part of South Korea. Korea’s most populous metropolitan government is the center of industry. Gyeonggi-do promoted ten big data analysis tasks in 2015 as part of the Big-Fi (Bigdata Free Information) business. It also promoted the spread of two businesses, one business, and the convergence of three new projects in 2016.

Each local government is analyzing big data under the necessity of planning individually. However, some things could be improved. With a standardized model, they know how to use the analysis result works and projects planned individually according to their independent analysis frame. Therefore, local governments have no information-sharing system for big data analysis business.

In the survey from people in charge of the big data analysis project and business department at Gyeonggi-do local government, they know that big data analysis is needed for scientific policy support. However, there needs to be a more professional workforce and some difficulties in business excavation and analysis, such as how to promote Big data analytics business and what to analyze.

Despite the same project in each city, it has been run individually; therefore, it could be more efficient in terms of cost and easier to standardize the analysis. There has been a demand for an integrated analysis platform that can use big data business...
The big data analysis platform has to offer an integrated management function, a standardized model for analysis, a standard unit, an analytical technique, and a policy-supporting function. It must be built into the system to help big data, business planning, and analysis feedback through demonstration projects and internalize their work.

The use of big data platforms can provide several benefits, including:

- **Accurate insights**: Big data platforms can collect and analyze vast amounts of data, producing accurate insights into market trends and consumer behaviors.

- **Faster decision-making**: By providing real-time data analysis, businesses can make quicker decisions and respond more effectively to changing market conditions.

- **Improved efficiency**: MIAS can automate the data collection and analysis process, reducing the time and resources required for market research.

- **Cost-effective alternative**: Big data platforms in MIAS can be more cost-effective than traditional market research methods.

MIAS using big data platforms in Gyeonggi-Do can provide businesses with valuable insights into market trends and consumer preferences, ultimately leading to more informed decision-making and improved business performance.

It needs to make an integrated management system for big data analysis and provide a data mart for various analyses by collecting, classifying, refining, and standardizing open and private data. When they collect and classify the data, the important thing is making a standard unit(block). Also, they need to make a standard block from the subdivision, medium division to large division according to what they will analyze and offer the environment where establish each data in a standard block.

The classification role is also essential in big data analytics platform operations. It should be supported to perform various analysis tasks and manage data integration and standardization through a big data analytics platform. It must provide a big data analysis framework that can be internalized in work through continuous monitoring and feedback. Gyeonggi Big-Fi Promotion Team should run the platform for analysis and service. The local government provides data relating to the necessary analysis information and collaboration plans for
Gyeonggi-do big data analysis platform has to make up a virtuous circle system which applies these steps “collecting data - analysis - prediction - policy reflection - pending issue application.” They have to build a system that can be applied to an operational level, not for analysis. Each local government has to present opinions and requirements to Gyeonggi-do. Gyeonggi Province prepares a chapter that can communicate and share big data.

Table 1 shows the Comparison of the main provided data between SEMAS (Small Enterprise and Market Service), SMG (Seoul Metropolitan Government), and Gyeonggi-Do based on the classification of analytical services.

In 2006, the Small Enterprise and Market Service under the Ministry of SMEs and Startups was established to support small businesses.

While information systems are being developed and operated, Seoul Metropolitan Government and Gyeonggi-do, among local governments, are developing and operating commercial district analysis services independently to suit the purpose of each local government in 2015 and 2018.

In Table 1, the main provided data are similar. Regarding commercial districts, Gyeonggi-do, unlike other places, provides field-oriented commercial district information based on business sites, business establishments, and city and county information. It is evolving into the best platform for small business policy support for data-based administration.

The Gyeonggi-do system is different from the SEMAS and SMG. After development, the level of commercial district impact analysis service in Gyeonggi-do is considered far behind compared to SEMAS and SMG due to the considered system, such as data collection, processing, and refinement no advancement.

- SEMAS: The first service operation has strengths such as commercial area and budget input
- SMG: Strong in data and services (big data storage, chatbot, etc.) due to successful differentiation
- In the future, the Gyeonggi-do system will be differentiated from SEMAS and SMG.
- Establish an integrated support and management system based on big data for small business policy support.
- Provision of information through Korea’s first professional consulting system: the combination of qualitative (psychology) and quantitative
### Table 1: Comparison of the Main Provided Data

<table>
<thead>
<tr>
<th>Classification</th>
<th>SEMAS Commercial district information system</th>
<th>SMG My Village Shop</th>
<th>Gyeonggi-Do Trade Impact Analysis System</th>
</tr>
</thead>
<tbody>
<tr>
<td>Host organization</td>
<td>MSS (SEMAS)</td>
<td>SMG (SCGF)</td>
<td>Gyeonggi-Do (GMRA)</td>
</tr>
<tr>
<td>Service Start</td>
<td>2006.07</td>
<td>2015.11</td>
<td>2018.11</td>
</tr>
<tr>
<td>Geographical Scope</td>
<td>Nation-Wide</td>
<td>Seoul Metropolitan Area</td>
<td>Gyeonggi-Do</td>
</tr>
<tr>
<td>Service Target</td>
<td>Citizens</td>
<td>Citizens, Policy Utilization</td>
<td>Citizens, Policy Support</td>
</tr>
<tr>
<td>Commercial Business DB</td>
<td>Coordinate based Collaboration with 17 Institutions</td>
<td>Based on the Business Number Merchant Information</td>
<td>Coordinate based Collaboration with 17 Institutions</td>
</tr>
<tr>
<td>Revenue</td>
<td>NICE Genie Estimated Sales</td>
<td>BC, KB, SH Card Sales Consumption, Card Correction, Estimated Sales</td>
<td>BC Card Estimated Sales</td>
</tr>
<tr>
<td>Population</td>
<td>Open-mate Data</td>
<td>Calculation of resident registration standard</td>
<td>Open-mate Data</td>
</tr>
<tr>
<td>Residential Population</td>
<td>SKT communication data</td>
<td>Provides changes in distribution standards based on the concept of living and the permanent population</td>
<td>SKT communication data</td>
</tr>
<tr>
<td>Commercial Area</td>
<td>Major commercial districts, traditional market commercial districts</td>
<td>Development commercial district, alley commercial district, traditional market commercial district, tourist special district commercial district</td>
<td>National basic district unit commercial district, user district setting, alley commercial district, commercial development district, etc. Provision of site-centered commercial district information based on business sites and start-ups and provision of city and county information</td>
</tr>
<tr>
<td>Commercial Impact Assessment</td>
<td>None</td>
<td>Provision of commercial district information before and after the opening of a large retail store and the planned area</td>
<td>Provision of commercial district information before and after the opening of a large retail store and the planned area</td>
</tr>
<tr>
<td>Index Indicator</td>
<td>Overcrowded information, commercial district evaluation index, growth potential, stability, sales power, purchasing power, customer attraction</td>
<td>Start-up risk, commercial area change index, industry over-density, commercial area vitalization index, etc.</td>
<td>Startup risk index, growth potential, stability, marketability, purchasing power</td>
</tr>
</tbody>
</table>


Market Impact Analysis Service Using A Big Data Platform

Market Impact Analysis Service (MIAS) is a service that uses big data platforms in Gyeonggi-Do, South Korea, to provide insights into market trends and consumer needs. MIAS utilizes big data from various sources, such as social media, search engines, and purchase histories, to identify market trends and analyze consumer behavior patterns. By analyzing this data, MIAS can give businesses insights into market conditions and consumer preferences, allowing them to make informed decisions about business strategies and product development.

1. Big Data Service Platform

It is challenging to converge in the big data analysis business because of the format and format between the data held by institutions(Gyeonggi-do, local governments). Other public and private data differ, and combining individual information units has legal issues. It is essential to create a key that can do this.

When collecting and building data, it is important to build a standard unit (block) for analysis, considering the contents and results of the analysis. It is necessary to subdivide the region and prepare standard blocks of a sub-category, medium-class, and large-class units according to the type of analysis to be performed.

For example, we want to analyze the population status or trends by year. In that case, we can get the desired results even at the district level, which is about the administrative district.

Currently, there is no standard block that anyone can use. So, in the detailed spatial big data analysis at the regional level, private blocks and grid-type statistics are used, or public aggregate units and postal code areas (primary national areas) are used.

It is a common infrastructure for big data analysis platforms, and it is operated in connection with each department and local government and has the form of an integrated platform. Therefore, the analysis platform implementation direction is pre-
presented by checking the channel, service, process database, and infrastructure types discussed in terms of standards generally considered when constructing an analysis platform as an integrated system and synthesizing them.

First, the channel in the analysis platform should provide a part to support data collection and change history management for data providers and check the status of the provided data. The beneficiaries of big data services should be able to easily access the functions for checking the results of big data through the authentication process and applying them to work and related functions if necessary.

Second, services and processes should be implemented so that information on services provided by the analysis platform, progress, and information on applied analysis applications can be checked. In this study, for the big data service discovered at the stage of application of the analysis platform operation, the analysis is per-

![Big Data Service Platform](image)

[Figure 1] Big Data Service Platform
formed using an appropriate analysis API for services such as connection and sharing for data collection, a service to store the collected data, and data mining based on this. A visualization procedure that properly presents services and analysis results should be presented. In addition, it must have a simulation function that can check the history of changes, such as the life cycle of each service provided and the correlation with the database used.

Third, the database should be presented by an integrated management system, the current status and the history of each applied database, as well as a system that can be used by other organizations (departments) to prepare the basis for analyzing the provided information.

Fourth, the infrastructure presented for the analysis platform is designed to provide stable services. It should be built considering scalability. In addition, it should be established as a system that can be easily linked to multiple departments.

Expert opinions must be collected for the analysis platform for various big data services. The verification procedures for suitability are required to ensure that it can be efficiently built considering the channels, services and processes, databases, and infrastructures presented above.

2. Business (Market) Impact Analysis Service

Gyeonggi-do’s ‘Market Impact Analysis Service’ is an information analysis infrastructure that helps start-ups, small business owners, and self-employed people who have had difficulties starting and managing a business. Due to a need for more information to make big data-based decisions(Figure 2).

Market Impact Analysis Service consists of three parts.

This service enables prepared start-ups and advanced management strategies by providing 14 types of public data and four types of private data related to information on 31 cities, counties, and alleys in the province, such as commercial business DB, floating population, and card sales information(Figure 3). shows the sequence of market analysis of this service.

In detail, in the case of prospective founders, business district statistical information can be provided that compares the start-up risk index, purchasing power, and opening-closing rates of 73 industries, including wholesale and retail and food and lodging businesses, where the small business owners start. Through this service, self-employed people already operating
stores can check information necessary for management improvements and marketing, such as the main customer base, sales hours, and competitive industries.

The main functions of the Business Impact Analysis Service are as follows.

- Industry trend analysis: Compare and identify overall trends in the industry by comparing the number of stores, sales trends, store increase-decrease rates, and opening-closing rates of the 73 industries where small business owners start the most.
- ‘Baro’ business district analysis: Compare and identify overall trends in the industry by comparing the growth potential, stability, purchasing power, increase-decrease in the number of stores, opening-closing rates, and business history of the 73 industries in which small business owners start the most.
- My store marketing analysis: Analyze the sex/age and main time zone of the main sales customers in the industry in the commercial area and identify the induced population points and residential population densely visited by the main customer base.
- Industry change analysis: Compare various indicators such as the trend of the number of stores with other
industries in the commercial area, opening/closing rates, time zone, day of the week, gender, age-based sales, franchise ratio, etc., and continuously monitor changes.

In particular, this service is characterized by providing big data analysis information based on maps and commercial area evaluation indicators in simple reports so that small business owners can easily and conveniently understand them.

The Business area evaluation indicators that can be checked through the service are as follows.

‘Startup Risk Index,’ which judges the level of risk when starting a business by considering competition against demand in the commercial area and the selected industry’s growth potential and survival rate.

To calculate the risk index, this service uses Geographically Weight Regressions.

\[ Y_i = \beta_{ai} + \sum_{k=1}^{m} \beta_{ki} X_{ki} + \epsilon_i \]

where:

- \( Y_i \): Local Dependent Variables
- \( \epsilon_i \): independent normal distribution with mean 0 and variance \( \sigma^2 \)

The meaning of the GWR risk index model is that the relationship between the closing rate and the closing explanatory variable of the commercial company varies depending on the commercial sector. Also, the different relationships of each business area reflect the risk of each business area. The different coefficients for each model are used as a risk index by assigning weights according to the validity of the variables.

- ‘Growth potential’ compares the industry’s sales growth rate to the previous year.
- ‘Stability,’ which calculates the amount of change in the number of stores compared to the previous quarter to understand the sensitivity to changes in the number of stores
- ‘Marketability’ compares the sales per store in the commercial area with the average sales of cities and countries.
- ‘Purchasing power’ considering the size and proportion of the main customers in the commercial area.
- Density, which shows the density of shopping malls per commercial district area as a relative indicator compared to the overall average of the province.
Business Area Impact Information Service.

- Prevent damage to local small business owners and promote win-win growth when entering large stores like large marts.
- (Business Area Impact Assessment)

Expansion throughout Gyeonggi-do and advancement of the process.

- (Prediction of impact on store entry) Provides forecasting information through past store case data.
- (Continuous monitoring) After en-

[Figure 3] Market Analysis Sequence
tering the store, the impact monitoring status board is configured.

Business area information service.
- Advancement of service utilization to prevent start-up failure and improve management of small business owners, the information vulnerable class.
- Establishment of the alleyway and developmental commercial districts characteristic of Gyeonggi-do.
- Providing trend information to understand the commercial area/industry from the perspective of small business owners.
- Provides map-based indicators/indices and detailed information.
- (Specialized for prospective entrepreneurs) UI development that small business owners can easily use.

Policy support service.
- Provides analysis and policy impact monitoring system for policy-making to protect and revitalize the local economy.
- Calculation and visualization of policy support analysis reports.
- Target extraction analysis to support the activation of old shopping streets.

- Analysis of the current situation for coexistence between large marts and traditional markets.
- Relationship between large corporations and major industries.

3. Performance and Implications of Analysis Results

In this service, information-providing units for commercial and sector analysis were constructed from various viewpoints by establishing a local business area, including the existing administrative districts. The expected effects of building a big data analysis platform are as follows.

First, it reduces the burden on the workforce and budget for big data analysis in the field. There is much demand for using big data services in administrative work. However, infrastructure (hardware, software), big data, and application programs are required as in the existing method, so it has a structure that requires many costs and additional effort. Therefore, to improve these problems, it is necessary to create a system that can be shared with the analysis platform environment in an integrated aspect and an environment that can provide standardized services.

Experts and the Big-Fi Promotion Team
lead the big data analysis platform on the tasks discovered in each department. By supporting them to check and review the analyzed data in each department in consultation with the experts, it is necessary to provide human resources for big data analysis in the field. It can reduce the burden on the budget.

Second, it provides a basis for vitalizing the use of big data services to create new values. Efforts are needed to utilize big data information more effectively in township processing and civil response services through linking and sharing integrated services.

Third, it can support the efficiency and internalization of big data-based service operation management in the long term. For sustainable analysis for policy support in Gyeonggi-do, it is necessary to go beyond the consulting analysis stage and establish a joint utilization system environment to feed back the analyzed results through the project planning pilot project and to internalize it in work. Building it as a system makes it possible to secure management efficiency, such as internalization through integrated management of related tasks. In addition, analysis that requires diffusion and advancement through pilot projects effectively develops a standard model and applies an analysis platform to reflect improvements and provide advanced services through monitoring and feedback.

IV. Future Works

The future works for Market Impact Analysis Service (MIAS) using big data platforms in Gyeonggi-Do could involve several developments, including:

- Expansion of data sources: MIAS could expand its data sources to include a wider range of data, such as IoT devices, sensors, weather data, and government data. This could provide more comprehensive insights into market trends and consumer behaviors.

- AI and predictive analytics: MIAS could incorporate machine learning and predictive analytics algorithms to provide more accurate and actionable insights.

- Integration with other marketing tools: MIAS could be integrated with other marketing tools, such as CRM, marketing automation, and social listening tools, to provide a more holistic view of consumer
behaviors.
• Collaboration with more businesses: MIAS could collaborate with more businesses, especially small and medium-sized enterprises, to provide them with affordable and accessible market analysis to help them compete.
• Personalized recommendations: MIAS could potentially use the existing data and feedback of the users to generate personalized recommendations to meet the individual needs of businesses.

The future work for MIAS using big data platforms in Gyeonggi-Do would be to continue innovating and improving the service to provide more valuable insights into market trends and consumer behaviors.

V. Concluding Remarks

Governments are attempting to revitalize their public administration, making it more proactive, efficient, accountable, service-oriented, and closer to the people. To accomplish this transformation, governments are introducing innovations in their organizational structure, practices, capacities, and how they mobilize, deploy and utilize the human, material, information, technological, and financial resources for service delivery to remote, disadvantaged, and challenged people.

Gyeonggi-do has started a big data analysis service that analyzes and provides local merchandise information based on big data for small businesses established in the overcrowded local market.

Unlike other institutions or the private sector, the analysis service of street commerce in Gyeonggi-do provides risk information for small businesses and start-ups. As a result, the existing self-employed are expected to be provided opportunities to improve the business environment, increase sales, and induce reasonable investment decisions for prospective start-ups.

Gyeonggi-do expects to contribute to improving the competitiveness and self-sufficiency of self-employed people by supporting the macro policy perspective of self-employed people by analyzing the factors affecting the business environment of the local business through big data analysis.

Although this service needs more effort to increase satisfaction among citizens and local government, this service can be encouraged to participate and engage citizens, start-ups, business owners, and gov-
ernment agencies.

The commercial area analysis service developed for small business policy support is evolving. Gyeonggi-do provides a comprehensive support platform that connects all systems for efficient small business support. The scope of small business support through this hyper-connected platform is expected to expand and become active.

In the future, Gyeonggi-do plan to continuously secure additional data necessary for the start-up and self-employment operation of small business owners, improve indicators and service functions, and provide reliable information through the advancement

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경기도 빅데이터 기반의 시장영향 분석 서비스

조준서

초 록

4차 산업혁명은 산업의 근본적인 구조가 변화함에 따라 변화의 원동력이 된다. 경기도는 다양한 빅데이터 서비스를 제공하여 시민의 삶의 질 향상을 위한 빅데이터 분석 서비스를 제공하고 있다. 한국의 지방자치단체는 시민과 소상공인을 위해 다양한 서비스를 제공하고 있다. 본 논문에서는 경기도의 정보분석 인프라인 ‘시장영향 분석 서비스’에 대해 논의한다. 정보가 많아 창업과 경영에 도움이 필요한 스타트업, 소상공인, 자영업자들이 빅데이터를 기반으로 의사결정을 내릴 수 있도록 돕는 서비스이다. 본 논문에서는 빅데이터 플랫폼을 활용하여 지역 기업을 대상으로 빅데이터 분석 기반 정보 서비스를 제공하려는 경기도의 노력에 대해 논의한다.

주제어: 빅데이터, 데이터분석, 전자정부, 중소기업, 플랫폼