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# Strategic Alignment and Performance for Service-oriented Smart Government in Taiwan: A Comparison between Government Officials and Private Sector Managers

*(Full Paper)*

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**ABSTRACT**

Transformation to service-oriented smart government is one of the most important issues for governments across the world, and has been promoted by academia and practitioners in the recent years. This study conducted quantitative research to evaluate the effect of the two different types of stakeholders – government officials and private sector managers – on the relationship between the strategic alignment and performance of service-oriented smart government in Taiwan. The findings of the study indicated that the government officials and the private sector managers focused on using different strategic alignments to enhance the government performance. These findings are able to serve as a guide to developing and transforming a government into a service-oriented smart government.

*Keywords*: Service-oriented smart government, strategic alignment, government performance and stakeholder.

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## INTRODUCTION

Service-oriented smart government in this study refers to that the role of the government is transformed from a decision maker to a service provider, emphasizing citizens placed at the center of the governance system with the concept of new public service theory (Denhardt & Denhardt, 2011). Meanwhile, the application of information technology and intelligent computing to the process, which enables e-Government to transform into Smart e-Government/Smart government, is regarded as digital government transformation (Gartner, 2017). In recent years, the e-Governments of developed countries have been striving to transform into the service-oriented smart government. Therefore, these countries have published new digital policies, such as the Australian Government Digital Transformation Agenda, the UK Government Digital Strategy, the American Digital Government Strategy, Singapore's Smart Nation 2025, and Taiwan's Service-oriented Smart Government Promotion Project - the 5th phase e-Government Program of Taiwan 2017-2020. As a result, the relatively new topic of service-oriented smart government has drawn great attention from other countries' governments as well as industries and academia (Peever *et al*., 2015; Alghazi *et al*., 2017; Ghildyal & Chang, 2017).

As service-oriented smart government relies on the assistance of information technology, such as cloud computing, open data and data analysis, mobile and social network (Gartner, 2017), the information technology plays an important role in helping service-oriented smart government to put new public service into practice so as to develop digital business strategies of the government as well as a key factor influencing the government performance. The concept of strategic alignment is necessary for the service-oriented smart government in creating the value of information technology to improve the performance. The strategic alignment is defined as the interrelationships between the information technology and business (Papp, 2001). This means that the implementation of the information technology is able to fully support organizations to achieve their goals, and the internal organizational management and information system stakeholders are willing and committed to support it (Winkler, 2013). The government has paid attention to the issue of the strategic alignment (Gerow *et al.*, 2014; Wu *et al.*, 2015; Alghazi *et al.*, 2017). The reason for this is that, compared with the private sector, the government is more concerned with the return of investment in information technology projects, and the government performance widely impacts every citizen of the country than that of enterprises.

Past studies have explored the relationship between organizational strategic alignment and performance (Sabherwal & Chan, 2001; Chan *et al.*, 2006; Leonard & Seddon, 2012; Reynolds & Yetton, 2015; Kappelman *et al.*, 2016). These studies showed the positive impact of strategic alignment on organizational performance, and pointed out that organizations that achieved strategic alignment performed better than those that failed. Most of these studies focused on exploring the relationship between the strategic alignment and performance in the context of the private sector rather than that of the government sector. Although only few studies explored the impact of strategic alignment on government performance, the findings of these studies have greatly contributed to government sectors (Winkler, 2013; Vander Elst & De Rynck, 2014; Walser *et al.*, 2016; Rusu & Jonathan, 2017; Hung & Lin, 2018). According to the published literature of Hung & Lin (2018), the authors adopted the Strategic Alignment Model (SAM) to examine the relationship between the strategic alignment and performance of Taiwan's service-oriented smart government from the perspective of the government transformation strategy, governance and public

service delivery. This study has revealed that there is a significant positive relationship between the strategic alignment and Taiwan's service-oriented smart government performance.

Obviously, compared with private sectors, it is more necessary for serviced-oriented smart government to enhance its performance through the use of strategic alignment. The reason for this is that service-oriented smart government stakeholders are complex and various stakeholders with different interests that need to be taken into account (Greger *et al.*, 2014). Empirical studies have shown that the satisfaction of government employee and citizens is associated with strategic alignment and government performance as well (Walser et *al.*, 2016). Therefore, in order to improve the performance, service-oriented smart government must understand stakeholders' concerns, interests and requirements. In addition, the government needs to keep its strategy formulation aligned with the information technology strategy and the business strategy as well. However, transforming into a service-oriented government is a new topic. There are still less studies exploring on the relationship among the strategic alignment, performance and stakeholders in the context of service-oriented smart government.

In order to bridge the gap among the academy, the industry and the government, this study aimed to examine the effect of different types of stakeholders on the relationship between the strategic aliment and performance of service-oriented smart government. The stakeholders in the study are divided into two types, i.e. government officials and private sector mangers. The former represents the service provider and the latter represents. The contribution of this study is the discovery of the effect of different types of stakeholders on the relationship between the strategic aliment and performance of service-oriented smart government. The findings of the study based on the analysis of the differences between the service provider and the service recipient are able to serve as a guide to developing and transforming a government into a service-oriented smart government.

Since the study focuses on analyzing the effect of the two types of stakeholders on the relationship between the strategic aliment and performance of service-oriented smart government, it develops the conceptual model to define constructs, and statistically evaluates operational measures of different types of strategic alignment and the performance of service-oriented smart government.

## THEORETICAL BACKGROUND

### Strategic Alignment and the Strategic Alignment Model

The strategic alignment is defined as the interrelationships between the information technology and business (Papp, 2001). This means that the implementation of the information technology is able to fully support organizations to achieve their goals, and the internal organizational management and information system stakeholders are willing to commit and support it (Winkler, 2013).

The models, used to measure strategic alignment, are diverse and slightly different from their concepts and frameworks. The reason for this is that the development of strategic alignment is almost four decades old (Papp & Coleman, 2006). However, the concept of strategic alignment remains valuable to organizations to looking to achieve alignment of their business and information technology strategies (Papp & Coleman, 2006). In spite of the various development of models measuring strategic alignment, it is agreed that the strategic alignment can boost performance. The perspectives on the model mainly discussed the extent of interrelationships between organizational business strategy and the information technology, e.g. the Strategic Alignment Model (SAM), or the critical success factors for influencing strategic alignment, e.g. the Critical Success Factors Model (CSF).

Among various models to measure strategic alignment, the Strategic Alignment Model (SAM) was adopted in the study to explore the interrelationships between the alignment of business and the information technology. SAM proposed by Henderson and Venkatraman in 1993 conceptualizes and directs two distinct areas, business and information technology, each of which has two quadrants defining that part of the business (Henderson & Venkatraman, 1993; Henderson *et al.*, 1996). SAM consists of four quadrants or domains, including business strategy, information technology strategy, organizational infrastructure, and information technology infrastructure. The four domains can be used to determine the extent and type of alignment with organizations. The domains of business strategy and information technology strategy considered to be external factors, while the other two domains, organizational infrastructure, and information technology infrastructure, are considered to be internal factors. The interrelationships between the four domains reflect the linkages between the four domains, forming eight different types of alignment, i.e. "business strategy → organizational infrastructure", "organizational infrastructure → business strategy", "information technology strategy → information technology infrastructure", "information technology infrastructure → information technology strategy", "business strategy → information technology strategy", "information technology strategy → business strategy", "organizational infrastructure → information technology infrastructure", "information technology infrastructure → organizational infrastructure". The arrow represents the direction-driven, for example, the "business strategy → organizational infrastructure" means that the business strategy drives the organization infrastructure. These eight types of alignment are divided into two types of linkages, namely strategic fit and functional integration. The four former strategic alignments are classified into strategic fit that is the vertical linkage in the model and refers to the interrelationships between the strategy and the infrastructure. The four latter strategic alignments are classified into functional integration that is the vertical linkage in the model and directly relates to information technology and the alignment of business.

This study focused on the application of the SAM to measure and evaluate how different types of alignment affect government performance. The three primary reasons for this are given as follows. Firstly, the four domains of the SAM are still widely adopted by corporations in order to build their strength to win competition. Meanwhile, the SAM has been empirically studied in many different industries (Luftman *et al.*, 1993; Papp, 2001). Secondly, the eight types of alignment, composed of the four domains in the model, are almost applicable to a business/information system in the context of organizations and have a positive impact on the performance (Papp, 2001). Thirdly, the SAM is the basis for many recent models today (Al-Hatmi & Hales, 2010). In addition, the SAM is one of the top business and information technology tools that is commonly adopted by experts and scholar to apply to the process of alignment (Renaud *et al.*, 2016).

**Government Performance and the Balanced Scorecard**

Currently, governments across the world are striving to transform into service-oriented smart government. Therefore, a set of performance measures for evaluating government service quality have been proposed, and related studies on e-Government performance indicators have been emerged as well. According to publishers, the existing performance evaluation frameworks are derived from the two entities, i.e. government organizations and third-party institutions. The former includes the Government of Canada (Treasury Board of Canada Secretariat, 2002), the U.S. government (FEAPMO, 2003) and the United Nations (2003), etc. The latter fall into universities and research institutions, such as Brown University (2004) and private consultancies, such as Gartner (2003) and Accenture (2004), etc. These evaluation studies and reports have different frameworks from different perspectives. However, they showed that the performance evaluation of service-oriented smart government is one of the primary issues that governments must take into account. The use of the performance evaluation enables service-oriented smart government to improve government efficiency and management process, enhance the public service quality and promote better execution of government departments.

There are many mechanisms to measure organizational performance. This study adopted the balanced scorecard to measure the performance of service-oriented smart government. The balanced scorecard proposed by Kaplan and Norton in 1992 has four balanced perspectives: the financial perspective, the customer perspective, the internal business processes, and learning and growth (Kaplan & Norton, 1992). The two primary reasons for the study to choose the Balanced Scorecard as the measurement tool are given as follows. Firstly, the balanced scorecard is applicable to the government entity. The Balanced Scorecard Institute indicates that the balanced scorecard has been widely used in business and industry, government and non-profit organizations as well as a strategic planning and management system to align the organizational infrastructures to the vision and strategy of organizations, in order to enhance the internal and external communications and monitor organizational performance (BSI, 2011). Secondly, the concept of the Balanced Scorecard is similar to that of the Strategic Alignment Model (SAM), as their measurement framework are established on the basis of internal and external environmental factors that affecting organizations (Al-Hatmi & Hales, 2010).

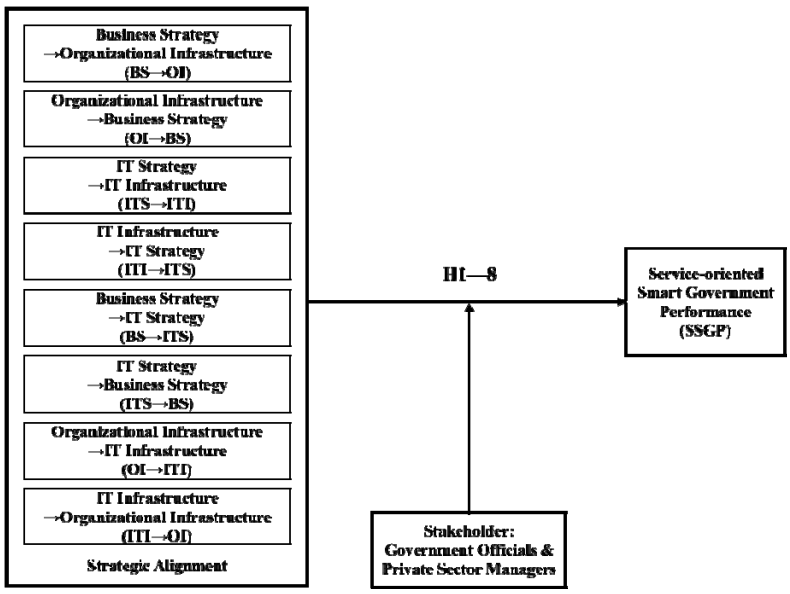
**The Stakeholder Model**

The definition of a stakeholder can be seen as any group or individual in an organization who is able to affect or is affected by the achievement of the organization's objective (Freeman, 1984). There is general agreement that service-oriented smart government is complex and involves a variety of stakeholders (Chircu, 2008). The alignment of service-oriented smart government objectives with stakeholder interests is central to effective e-governance.

There are various types of stakeholder model used in the context of e-Government. According to Greger *et al*. (2014), the stakeholder models can be divided into eight types on the basis of three attributes, i.e. categorization, interaction and scope (Greger *et al.*, 2014). The attribute *categorization* refers to the composition of entities in the model. The interrelationships between stakeholders are defined as the attribute *interaction*. The attribute *scope* refers to a type of project, such as a particular project or a generic project. This study adopts the De's model that identifies two categories based the direction of their interactions, i.e. a demand side and a supply side (De', 2005). The demand side, defined as the service receipt, refers to the private sector managers. The supply side, regarded as the service provider, refers to the government officials in the service-oriented smart government in this study.

## RESEARCH MODEL AND HYPOTHESES

Figure 1 presents the research model of the SAM and the performance of service-oriented smart government tested in the study. According to the model, eight measures of strategic alignment, "BS → OI", "OI → BS", "ITS → ITI", "ITI → ITS "BS→ ITS", "ITS → BS", "OI → ITI" and "ITI → OI", are related to the performance of service-oriented smart government. One variable, the stakeholder, is drawn from the literature and used to examine its effects on the relationship between the strategic aliment and performance of service-oriented smart government.




*Source*: This study.
Figure 1: Research model.

The use of strategic alignment enables service-oriented smart government to boost its performance. Therefore, the study examined the differences between the Taiwanese government officials (service provider) and the Taiwanese private sector managers (service recipient) on the relationship between the strategic alignment and performance of service-oriented smart government, which are able to serve as a guide to developing and transforming a government into a service-oriented smart government. The performance of service-oriented smart government is improved through the application of information technology, which collects the wisdom of crowds and creates IoT ecosystem (Denhardt & Denhardt, 2011; Gartner, 2017). This ITC-enabled reform leads to more efficient and cost-effective government, more government accountability to citizens, and convenient government service. In order to ensure the return of investment in information technology projects, the strategic alignment is necessary (Al-Hatmi & Hales, 2010; Walser *et al.*, 2016; Alghazi *et al.*, 2017; Rusu & Jonathan, 2017). This enables service-oriented smart government to create value for its stakeholders, e.g. the service provider and recipient. The above discussion leads to the following hypotheses:

*H1: The variable, stakeholder, influences the relationship between the alignment of business strategy → organizational infrastructure and the performance of service-oriented smart government.*

*H2: The variable, stakeholder, influences the relationship between the alignment of organizational infrastructure → business strategy and the performance of service-oriented smart government.*

*H3: The variable, stakeholder, influences the relationship between the alignment of information technology strategy → information technology infrastructure and the performance of service-oriented smart government.*

*H4: The variable, stakeholder, influences the relationship between the alignment of information technology infrastructure → information technology strategy and the performance of service-oriented smart government.*

*H5: The variable, stakeholder, influences the relationship between the alignment of business strategy → information technology strategy and the performance of service-oriented smart government.*

*H6: The variable, stakeholder, influences the relationship between the alignment of information technology strategy → business strategy and the performance of service-oriented smart government.*

*H7: The variable, stakeholder, influences the relationship between the alignment of "organizational infrastructure → information technology infrastructure" and the performance of service-oriented smart government.*

*H8: The variable, stakeholder, influences the relationship between the alignment of information technology infrastructure → organizational infrastructure and the performance of service-oriented smart government.*

## METHODOLOGY

The study divided the stakeholders into two sample groups, i.e. the Taiwanese government officials (service provider) and the Taiwanese private sector managers (service recipient). The issues of strategic alignment and government performance are too professional to be understood by general public. Therefore, the two selected types of stakeholders for the samples are

government officials and private sector managers, who have ever attended information technology development conferences and business strategy development conferences. Then, the study conducted multiple regression analysis to test the effect of the two types of stakeholders on the relationship between the strategic aliment and performance of Service-oriented smart government. The research model and hypotheses were tested using SPSS Statistics.

**Questionnaire Design**

The issues in relation with the strategic alignment and performance of service-oriented smart government are so professional; therefore, it is difficult to collect the data. In order to tackle this problem, A questionnaire was designed for testing the proposed research model and hypotheses, and a Likert seven-point scale was employed for the responses. The study collected data through E-mail and communication software in order to ensure the data reliable and valid. In addition, seven experienced senior supervisors and experts in the field of industry, government and academia helped revisions of the questionnaire through the focus group interview methodology, specifically for correcting semantic errors and checking completeness of the questions, to ensure the overall design was valid and clear and the questions were appropriate and representative.

On the basis of the research model in this study, the questionnaire design included three parts, i.e. strategic alignment, Smart-oriented smart government performance and personal information. The questions in the part one was a set of prototype that Papp adapted from the Strategic Alignment Model (SAM) to assess the eight different strategic alignments (Papp, 2001). The Likert seven-point scale was employed for the responses (1 = "strongly disagree" to 7 = "strongly agree"). In the second part, the questions, based on the Kaplan and Norton's concept of the balanced scorecard, were designed to measure the performance of Taiwan's service-oriented smart government. The two criteria in relation to the concept of new public service and the application of information technology were used to determine the level of government performance. The definition of high performance in the study is that the government provides the public service through the application of information technology, and constantly adjusts its business and information technology strategy to changing public demands with development. The Likert seven-point scale was employed for the responses (1 = "strongly disagree" to 7 = "strongly agree"). In the third part, subjects are required to fill in their personal information, such as company and job title, etc.

**Data Collection**

The study divided the stakeholders into two sample groups, i.e. the Taiwanese government officials (service provider) and the Taiwanese private sector managers (service recipient). The questionnaires in relation with the strategic alignment and performance of service-oriented smart government are too professional and challenging to general public to answer. The study set the three criteria to build a representative sample. Firstly, subjects are either the officials of government entities or private sector manager. Secondly, subjects must have the experience of business supervisors or information technology supervisor. In addition, they must have ever attended information technology development conferences and business strategy development conferences. Ideally, the CEO (or highest ranking business management) and CIO (or highest ranking information technology management) are the most suitable to use the SAM to evaluate the organization strategic alignment (Papp, 2001). Thirdly, subjects have received higher education that is helpful in understanding the survey questions. Therefore, subjects in our studies were required to graduate from college and universities, including bachelor's degrees, master's degrees and doctor's degree.

**Analyses**

This study conducted comparative analysis and quantitative research to evaluate the effect of the two different types of stakeholder – the government officials (service provider) and the private sector mangers (service recipient) - on the relationship between the strategic alignment and performance of service-oriented smart government. Due to the only two sample groups, the study conducted multiple regression analysis to test the effect of the two types of stakeholders on the relationship between the strategic aliment and performance of service-oriented smart government. Standardized regression coefficients (β values) and P-values were used to determine the stakeholder's effect. The research model and hypotheses were tested using SPSS Statistics to perform descriptive analysis, factor analysis, reliability and validity test, and model verification.

## RESULTS AND DISCUSSIONS

**Participants**

The final-version of the completed questionnaire was distributed though E-mails. A sample of 2136 selected the Taiwanese government official and private sector managers. The distribution period was six weeks. A reminder messages from E-mail and communication software was sent two weeks after the initial distribution.

A total of 326 surveys were returned (a 15.3 percent response rate). After eliminating invalid questionnaires based on the three criteria for selecting subjects, the final sample consisted of 236 respondents, including government officials (42%) and private sector managers (52%). The demographic breakdown of the respondents was as follows: 35 percent were high-level management position, such as chairman, general manager and deputy general manager; and 65 percent were mid-level/senior management position. 61 percent were supervisors of the information technology department and 45 percent were supervisors of the business strategy department. 96 percent and 94 percent have attended the information technology development conferences and business strategy development conferences, respectively. 68 percent had a master's degree as their highest degree attained, 28 percent had a bachelor's degree, and 5 percent had a Ph.D. Compared with the general public, the respondents in this study had better understanding of the questions in relation to the strategic alignment and performance of Service-oriented smart government. As a result, their data were reliable and valid.

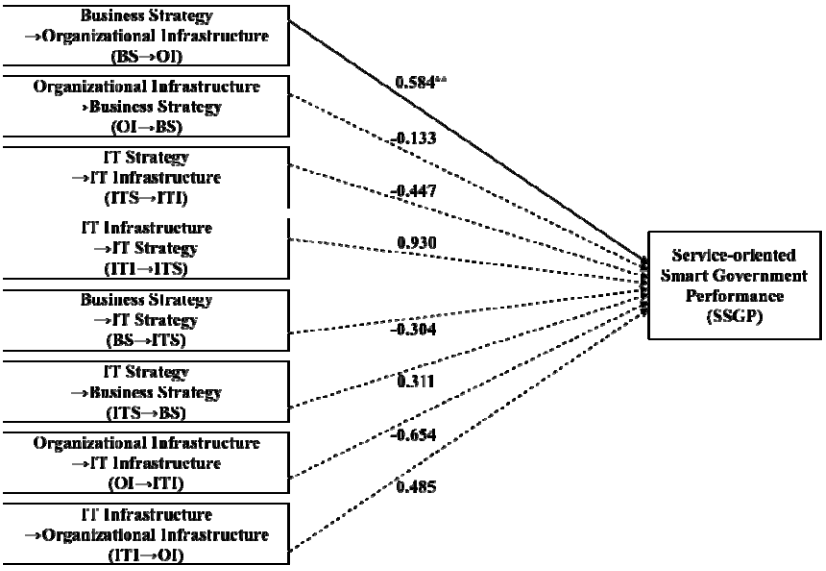
**Reliability and Validity Testing**

In order to ensure the reliability and validity of the data, pretest was conducted through different methods. Firstly, seven experienced senior supervisors and experts in the field of industry, government and academia helped revisions of the questionnaire through the focus group interview methodology. The reason for the study to adopt this methodology is that since this study focused on dealing with the issue of government performance, the focus group interview proposed by Grbich in 1999 is widely used in collecting feedback related to policy and performance issues (Grbich, 1999). Finally, the study conducted a pretest and distributed to 105 supervisors of business or information technology department from the government and the private sector. A total of 105 completed questionnaires were collected through E-mails. In order to ensure the internal consistency, the Cronbach α was calculated. The Cronbach α of the strategic alignment construct and the performance of service-oriented smart government was 0.92 and 0.96 respectively, which were both over 0.7 (Nunnally, 1978). This indicated that each variable in the model reached an acceptable level of reliability.

Exploratory factor analysis was performed and factorability was assessed with both the Kaiser-Meyer-Olkin Index (KMO) test and Bartlett's test of sphericity. The KMO of sampling adequacy value was 0.932, and Bartlett's test of sphericity was significant (p<.001). The factor analysis result showed that all items converged in the corresponding constructs, and that each construct was significantly different from the others. Therefore, the study adopted Principal Component Analysis to test construct validity, and measured the factor loadings to determine if the questionnaire achieved both discriminant and convergent validities. According to Hair *et al*. (2010), when the number of samples surpasses 150, a factor loading over 0.45 achieves construct validity. This study used the Varimax and Equamaz of the orthogonal rotation method to perform adjustments in the factor analysis. The factor loadings values obtained were all greater than 0.5, which cumulatively explained 75.32% of the variance. The Cronbach α of each construct was greater than 0. 7 (between 0. 93 to 0. 98), which indicates that the reliability of the questionnaire in the study was satisfactory and was sufficient for reliability to be assumed.

**Path Analysis Results**

Figure 2 presents the path analysis results of the participants who are government officials. For these participants, this study found that one (BS→IO) out of eight independent variables have significant and predictive power on SSGP. This one and the dependent variable (i.e., SSGP) share 0.631 for the multiple correlation coefficient, 0.488 for the determination coefficient, and 4.448 (p = 0.000; <0.05) for the F value of the model's overall testing.

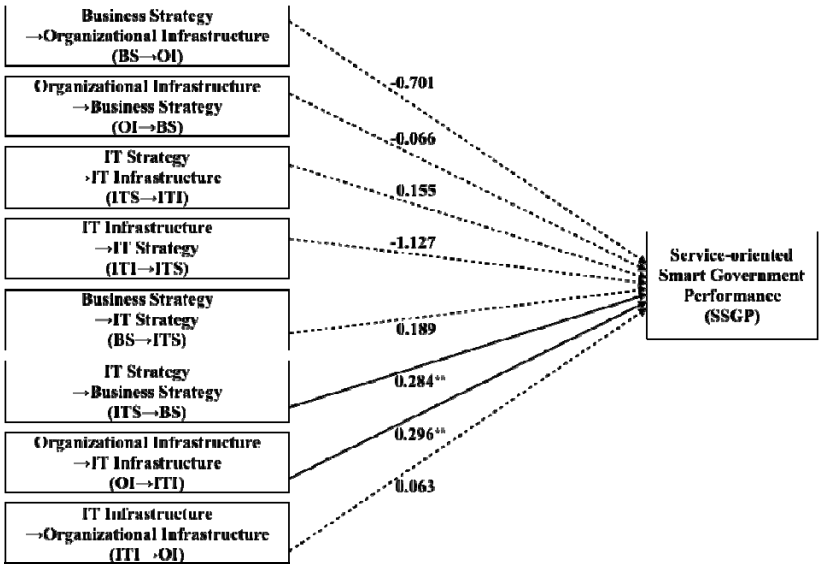



*P<0.05 **P<0.01 ***P<0.001.

*Source*: This study.

Figure 2: Path analysis of government officials.

Figure 3 offers the path analysis results of the participants who are private sector managers. For this type of participants, this study found that two (ITS→BS, OI→ITI) out of eight independent variables have significant predictive power on SSGP. These two predictors and the dependent variable (i.e., SSGP) share 0.731 for the multiple correlation coefficient, 0.451 for the determination coefficient, and 20.302 (p = 0.000; <0.05) for the F value of the model's overall testing.




*P<0.05 **P<0.01 ***P<0.001.
*Source*: This study.
Figure 3: Path analysis of private sector managers.

In a summary, the results for testing the direct effects as hypothesized are given in Table 1. If the result of the path is significant, it is denoted with bolded "Yes". In the model of the government officials, stakeholder has an effect on the relationship between the alignment of "business strategy → organizational infrastructure" and performance of service-oriented smart government. However, in the model of the private sector model, stakeholder has effects on the relationship between the alignment of "information technology strategy → business strategy", "organizational infrastructure → information technology infrastructure" and performance of service-oriented smart government.

Table 1: Results of hypotheses testing.

| Hypotheses | Path | Government Officials (Service Provider) Significant? | Private Sector Managers (Service Recipient) Significant? |
|---|---|---|---|
| H1 | "BS→OI" → SSGP | Yes | No |
| H2 | "OI→BS" → SSGP | No | No |
| H3 | "ITS→ITI" → SSGP | No | No |
| H4 | "ITI→ITS" → SSGP | No | No |
| H5 | "BS→ITS" → SSGP | No | No |
| H6 | "ITS→BS" → SSGP | No | Yes |
| H7 | "OI→ITI" → SSGP | No | Yes |
| H8 | "ITI→OI" → SSGP | No | No |

## CONCLUSIONS

The Taiwanese government is now moving forward to the fifth phase of e-Government – service-oriented smart government. Comparing with the first four phases of e-Government, transforming into a service-oriented smart government is more challenging. It is due to the fact that a service-oriented smart government must implement strategic alignment in order to achieve higher performance, and a good strategic alignment shall integrate the four key domains: business strategy, organizational infrastructure, information technology strategy, and information technology infrastructure. This study examined the differences between the Taiwanese government officials (service provider) and the private sector managers (service recipient) on the relationship between the strategic alignment and performance of service-oriented smart government. The findings of the study based on the analysis of the differences between the service provider and the service recipient are able to serve as a guide to developing and transforming a government into a service-oriented smart government.

Comparing the impacts of strategic alignment on performance of service-oriented smart government between the Taiwanese government officials and the private sector managers, the great differences lie in whether "business strategy → organizational infrastructure", "information technology strategy → business strategy", and "organizational infrastructure → information technology infrastructure" contribute significant influence on performance of service-oriented smart government. In terms of "business strategy → organizational infrastructure", this linkage is classified into strategic fit (Papp, 2001). The government officials think that the use of "business strategy → organizational infrastructure" enhances performance of service-oriented smart government. However, the private sector managers think that the use of "information technology strategy → business strategy" and "organizational infrastructure → information technology infrastructure", classified into functional integration (Papp, 2001), enhance performance of service-oriented smart government rather than the use of "business strategy → organizational infrastructure". Both of them think that the rest of the linkages have no significant impacts on performance of

service-oriented smart government, i.e. "organizational infrastructure → business strategy", "information technology strategy → information technology infrastructure", "information technology infrastructure → information technology strategy", "business strategy → information technology strategy" and "information technology infrastructure → organizational infrastructure". In other words, the relationships between these five strategic alignments and performance of service-oriented smart government do not vary according to different stakeholders, i.e. the government officials and the private sector managers.

**Management Implications**

The results of the study showed that perspectives between the Taiwanese government officials and the private sector mangers on the effect of strategic alignments on performance of service-oriented smart government are not exactly the same. In other words, the different types of a strategic alignment, which the service provider and the service recipients focused on, will directly impact the performance. The primary reason for this is that the government officials tend to use strategic fit to develop and transform a government into a service-oriented smart government. According to the strategic alignment model (Henderson & Venkatraman, 1990; Papp, 2001), this is regarded as the strategy execution perspective. Business strategy has been widely used to drive and improve organizational infrastructure; however, the application and the integration of information technology to development of a service-oriented smart government has been ignored. In this case, it is unlikely to satisfy service recipients' demand and achieve high performance (Winkler, 2013; Walser *et al*., 2016).

In contrast, the private sector managers, who are service recipients as well, think functional integration is more important. According to the strategic alignment model (Henderson & Venkatraman, 1990; Papp, 2001), the private sector managers think that both the competitive potential perspective and the organizational information technology infrastructure perspective must be taken into account in order to achieve high performance of a service-oriented smart government. In this case, in order to enhance performance, information technology strategy is used to drive business strategy; meanwhile, a business process of a service-oriented smart government must be analyzed, and then results in the improvement of information technology infrastructure. Obviously, these three different strategic alignment perspectives from both the government officials and the private sector managers must be taken into account for the government transformation into the service-based smart government, especially the alignments of "information technology strategy → business strategy" and "organizational infrastructure → information technology infrastructure", which the service recipient concerns for. In addition, the government must begin to take the rest of the alignments into account, although both the government officials and the private sector managers think those alignments have no significant effects on performance of a service-oriented smart government. Otherwise, when a service-oriented smart government has a poor performance, the government or society will blame for strategic misalignments.

**Limitations and Directions for Future Research**

This study has several limitations and foresees future directions for research. The study mainly focused on the study upon managers of government as well as private enterprises towards strategic alignment and service-oriented smart government, but not populace yet. Thus, in the future study, we can collect more ideas from the populace, and further understand the demand gap between the government (service provider) and the populace (service recipients).

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