Service innovation in the complex environment of tax administration: the Indonesian public sector perspective

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Abstract: Providing straightforward and inexpensive public services is a necessity in public administration including in the field of tax administration. To simplify the tax administration process, the Indonesian Directorate General of Taxes (DGT) has initiated an electronic tax service project, e-tax service. This e-tax service consists of e-registration, e-payment and e-filing. Using institutional theory, this paper aims to study the process and the challenges in implementing the e-tax service in Indonesia. The findings show that institutional power and pressures, institutional settings, and institutional politics have affected the Indonesian tax authority’s ability to deploy the e-tax system. Consequently, the e-tax initiative could not be fully implemented because of institutional setting and institutional politics.

Keywords: electronic services; innovation; institutional pressures; simplification; tax administration; Indonesia.


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1 Introduction

Tax administrators have authority to urge taxpayers to pay their taxes. Consequently, tax administrators face various pressures from their stakeholders, particularly from the taxpayers, who demand excellent services. According to Aberbach and Christensen (2007), the tax administration service is unique, because it must provide excellent services which make the taxpayer feel comfortable, but must also take coercive action (i.e., law enforcement).

Tax administration services include registering as a taxpayer, paying tax bills, reporting tax returns, filing objections against the tax billed, and claiming refunds for tax overpayments. Thus, the main function of the tax administration system is to reduce or eliminate asymmetric information between the taxpayers and tax officials.

The Indonesian tax system has embraced the self-assessment regime since 1983. In this context, a taxpayer is entitled to calculate, pay and report taxes owed by them. The tax authority has the role of overseeing the fulfillment of these obligations and re-examining what has been reported by taxpayers. Kristiaji (2013) and PwC (2013) report that asymmetric information has kept tax compliance costs in Indonesia high. Therefore, in the future the tax administration system needs to manage the process wisely and more effectively than the old system.

Tax administration systems are complex, particularly in developing countries such as Indonesia (Bird, 1992). The main problem is the flow of information, both from the taxpayer’s side (i.e., the notification and supporting data) and from the tax officials’ side (i.e., counter-transaction data from related parties).

The phrase ‘tax administration is tax policy’ (Bird, 1992) emphasises why administrative matters receive a lot of attention from tax authorities in developing countries. Limitations in tax administration constrain tax policy choices (Bird and Zolt, 2008). Therefore, many tax authorities spend much of their time solving ‘administrative-clerical’ problems. For example: how do tax officials make sure those taxpayers have paid their bills and submitted tax-returns correctly? As the tax authorities are forced to spend more of their resources dealing with trivial things, administrative costs are higher. Nevertheless, it cannot be denied that major problems might arise due to clerical and administrative problems. As argued by Vaillancourt et al. (2008), administrative problems are the frequently ignored part of overall taxation systems.

Until 2001, the Indonesian business processes was still fully manual, slow, costly, and vulnerable to ‘leakage’ (Brondolo et al., 2008). From the point-of-payment, tax payment receipts (paper-documents, so-called Surat Setoran Pajak/SSP) could be sent to DGT to be authorised and approved as state revenue (i.e., central-taxes), then this document was forwarded to the DGT for further administrative and clerical processing, such as tax receipt allocation, and then key into the computer system (DGT, 1994, 2002; Dwiputroanto, 2008). This was clearly inefficient, and to some extent caused asymmetric information.

The Indonesian tax administrators therefore need to establish innovative services which support the taxpayer in submitting the information needed by the tax officers. This needs to do more than just reduce the asymmetric information between taxpayers and tax officials, as explained by Kristiaji (2013). There needs to be a robust information management infrastructure in order to deal with huge, clerical, routine, and transactional tax information.
Since 2001, the Indonesian tax administrators have taken strategic measures to initiate innovation in ICT-based services (Poermomo, 2009; Brondolo et al., 2008). This included electronic services (e-services) online payment at a point-of-payment agency (e.g., appointed bank or post-office) that was connected to the state treasury authority and DGT. This was an online-real-time connection which deployed host-to-host technology and used the ISO-8583 standard as a data exchange protocol.

This paper has the following aims:

1. to gain an in-depth understanding of e-service implementation in Indonesia
2. to examine the process of implementing e-service in the tax system in Indonesia as an innovation in public sector service
3. to find out how the e-service maybe developed and operated.

Accordingly, the research questions for this paper are:

1. To what extent do institutional factors influence e-service in the tax system in Indonesia?
2. How was the e-service in the tax system initiated and developed?
3. What is the impact on the tax system in Indonesia?

This paper is structured as follows: it begins with a literature review on e-services in public services and institutional views in ICT research. The next section explains e-services in the tax system in Indonesia, followed by a discussion of the research findings using an institutional framework. The final section contains the conclusion followed by contributions and suggestions for further research.

2 Literature review

2.1 E-services and public service innovation

An innovation is a new idea that works. It differs from creativity, which is how to develop new ideas. Therefore, an innovation is a successful implementation of a new idea. An invention is a new idea or product which may or may not have economic value. Innovation is the process whereby inventions move into usable form (King et al., 1994).

In the public sector, innovation can be driven by various factors, including changes in government policies, stakeholder demands, technological developments, or individuals seeing opportunities to improve the way they work. The UK’s Improvement and Development Agency (IDeA) recognised public service innovation as covering a wide range of activity including: service improvement, systems and process improvements, organisational structures, partnerships, horizontal integration, fiscal management, public service revitalisation, devolution and decentralisation, regulatory change, use of IT and partnerships.

In addition, Amalia and Nugroho (2011) suggest a rather simpler categorisation. Innovation may be technological or organisational innovation. These two types of innovation are related. As Amalia and Nugroho (2011) say, “organisations use and innovate in and around new technology to achieve their missions and goals, improve their organisational management and develop new strategies”. In this context, ICT as it has
emerged in recent decades constitutes an ongoing process of innovation (Laudon in King et al., 1994). Avgerou (2003) also emphasises ICT-based innovation as the process leading to a new technology-mediated organisational practice and the results of such a process (i.e., technological innovation), that is, a novel form of technology-mediated practice (organisational innovation).

In the field of tax administration, ICTs also have been chosen as innovation tools. Many tax agencies have enhanced their tax administration using ICTs. ICTs also offer tax agencies the opportunity to rebuild their tax system. Bird and Zolt (2008) describe efforts by some tax agencies, such as using radio-frequency identification (RFID) or laser surface authentication (LSA) for international trade taxes in the EU, or internet-based resources such as satellite imagery (e.g., Google Earth) to assist in identifying and monitoring specific tax property objects’ locations and improvements. Similarly, Jenkins (1996) shows that tax agencies in the USA, Canada and New Zealand provide tax service innovation to increase voluntary tax compliance by implementing electronic filing and funds transfer (payment). Therefore, according to Mousa (2010), public sector (government) agencies should consider the implementation of electronic government (e-government) as a strategic innovation measure to enhance government services and make administrative tasks more efficient.

Disagreement among scholars indicates the numerous functions and possibilities which can be provided by e-government initiatives (Carrizales, 2008). For Gil-Garcia (2012), e-government is just a new label for old phenomenon about using ICT in the government environment. He also sums up e-government as being defined by:

1. referring to the stages that seem to exist in its development
2. the main characteristics of e-government
3. listing the different variants or applications of e-government.

Mousa (2010), in line with Gil-Garcia’s definition, finds that e-government can be viewed from three disciplinary perspectives: public administration, business and political. From the public administration perspective, e-government is using technology in the area of public administration to streamline public management procedures, reduce organisational layers and re-engineer business processes. From the business perspective, it means adoption and usage of ICTs, including internet-based technologies and network and communication infrastructure, by government agencies. From the political perspective, e-government is defined as a new policy opportunity for government where it can present new channels for the political participation of citizens. By performing this role, e-government is viewed as formalising the relationship between government agencies and citizens.

Additionally, Moon, as cited and used as research framework by Carrizales (2008), emphasised four distinct criteria of e-government, based on parties to whom it is related:

1. e-organisation: internal government efficiency and effectiveness
2. e-services: external efficiency and effectiveness in providing services
3. e-partnering: external efficiency and effectiveness in working with public and private organisations
4. e-democracy: citizen participation in government decision-making.
As the focal point of this research, in the next section we will highlight the second function: e-services in the context of e-government to provide public service. As with the e-government concept, there are various definitions of the term e-services. Rust and Kannan (2003) define e-service as “the provision of service over electronic networks”. In this view electronic networks include, but are not limited to the internet. This definition also includes other electronic environments such as mobile networks, ATMs, and self-service kiosks (Riedl et al., 2011). Compared to Carrizales’ (2008), this definition includes e-organisation, e-services (in more limited scope), and e-partnering. According to Sahai et al. (2001), e-services are services that are available through the internet as a whole unit or part of a transaction and can be accessed through a specified uniform resource locator (URL). Likewise, Hsu et al. (2004) state that the growth and success of the World Wide Web (web) makes it an attractive platform for implementing e-services. Further, Rust and Kannan (2002) state that e-services can be interpreted narrowly as a marketing theme by companies such as Hewlett-Packard, which moves from a product-centred focus to customer centred focus. For government agencies, e-service is interpreted as a way to communicate with the service-user, while for academics, e-services is a customer-centric concept with a very strong emphasis on the technology side.

Therefore, Rust and Kannan (2002) suggest that although e-service involves the provision of services through electronic networks, it should be seen as a broader service environment for any line of business, whether it relates to the manufacturer of goods or a pure-service-provider company. For businesses, the most fundamental aspect of e-services is its focus on meeting all the customers’ needs and increasing market share at the same time. Technology is only an enabler rather than a destination. This is important to avoid confusion, especially in the field of public service. It has been said that many terms (e-government, e-administration, e-service, public e-service, public information systems, public service, interactive service) are inconsistent, so it is crucial to make explicit distinctions. In the Indonesian context, Darono (2011) defines e-service as an electronic data exchange infrastructure in the form of data or a switching hub that will connect the customers with the service provider.

Rust and Kannan (2002) have proposed a model that describes the scope of e-services.

**Figure 1** Scope of e-services (see online version for colours)

*Source: Adapted from Rust and Kannan (2002) and Darono (2011)*
Figure 1 shows the scope of e-services that minimise human intervention to make information processing more efficient. This figure shows that e-services can include any services with external parties (suppliers, customers, or government entities) or internal e-services within the company. Internal parties in the company may include inter-divisional, intersection or even inter-system-applications.

Based on the explanation above, it can be concluded that:

1. e-services, as part of e-government, are becoming more important and pervasive; therefore, they need to receive adequate attention from any public sector organisation.

2. According to the nature of e-services, they are more suitable to be implemented in business processes that involve many parties, either inside or outside the organisation.

2.2 Institutional analysis and ICT research

Some previous research has discussed institutional factors related to this research problem in public policy, innovation and ICTs development and implementation. King et al. (1994) considered the role of institutions such as government entities and organisational agencies in the development of IT innovations. Parsons (2001) suggests the focal point of public policy formulation is arranging an institutional setting to shape people’s social behaviour. From the organisational innovation perspective, Hollingsworth (2000) emphasises that there has been increasing concern with how the institutional aspect could influence society, particularly their style of innovativeness. Once a number of firms in a particular industry are successful, they may be able to engage in collective action to modify their institutional environment in order to enhance their innovativeness and their technological competitiveness. In this context of the relationship between innovation and its institutionalisation process, Jennings and Greenwood (2003) define a sequential-connected activity: innovation, objectification, legitimation and diffusion, and deinstitutionalisation.

Currie (2009) has found that an investment firm whose application of an investment management system (IMS) drives governance practices. This application plays a significant role in shaping institutional-isomorphism, simply because the IMS application can demonstrate to the company’s customers that the company already has good ICT governance. Another case is presented by Svejvig (2010) who examined institutional factors in enterprise system implementation in a company, which involved 3,000 people over six years. This study found that the process of de-institutionalising the old system and institutionalising the new one was an important factor affecting the successful implementation of enterprise systems in the company. In accordance with this, research conducted by Dhillon et al. (2011), Henningsson and Henriksen (2011) and Avgerou (2000), among others, indicates that the development and implementation of information technology should not be alienated from various organisational contexts such as: leadership, social, culture, or even organisational politics in an organisation/society/country. There are many outside factors that can affect the success of technology implementation information systems (Orlikowski, 1991; Svejvig, 2010). Related to this, Mignerat and Rivard (2005), as cited in Orlikowski and Barley, suggest that institutional analysis has the potential to help IT researchers to understand "how
institutions influence the design, use, and consequences of technologies, either within or across organisations”.

The root of institutional analysis in organisational studies can be traced to the sociology of institution (Parsons, 2001; Scott, 2004). Institutions as social concepts are evolving, and no precise and comprehensive definition of the term is available (King et al., 1994). According to Scott, institutional theory is about “the processes by which structures, including schemas, rules, norms, and routines, become established as authoritative guidelines for social behaviour. It inquires into how these elements are created, diffused, adopted, and adapted over space and time; and how they fall into decline and disuse”. The World Bank (2007) builds definition of institutional analysis from a public policy reform point of view. It is defined as an analysis based on understanding how some rules – whether formally constructed or informally embedded in cultural practice – mediate and distort, sometimes fundamentally, the expected impacts of public policy.

In Hollingsworth’s (2000) view, although institutional analysis has become an emerging analysis tool in many fields of study, there is no consensus regarding the term institution. To that end, Hollingsworth has established a framework which he calls ‘multiple levels of institutional analysis’. This framework essentially re-arranges various meanings of institution.

The term institutions can be viewed from five different perspectives, as described in Table 1. The form of institution is sorted in descending order based on its permanence and stability. This means that, for example, norms/conventions are more enduring and persistent than corporate hierarchies, and so on. Knowledge about relations between the form of institution and the level of analysis should help the researcher to identify at which level an institution exists, to be determined by its endurance and persistence.

<table>
<thead>
<tr>
<th>Level of analysis</th>
<th>Form of institutions</th>
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<tbody>
<tr>
<td>Institutions</td>
<td>Norms, rules, conventions, habits and values</td>
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<tr>
<td>Institutional arrangements</td>
<td>Markets, states, corporate hierarchies, networks, associations, communities</td>
</tr>
<tr>
<td>Institutional sectors</td>
<td>Financial system, system of education, business system, system of research</td>
</tr>
<tr>
<td>Organisations</td>
<td>Organisation</td>
</tr>
<tr>
<td>Outputs and performance</td>
<td>Statutes; administrative decisions, the nature, quantity and the quality of industrial products, sectoral and societal performance</td>
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</table>

Source: Hollingsworth (2000)

An organisation should conform to societal norms of acceptable practice to achieve high levels of production efficiency and effectiveness. As a consequence, many aspects of an organisation should demonstrate formal structure, policies, and procedures to create conformity with the institutionalised rules and expectations expressed by the external constituents (Covaleski et al., 1993). This is what DiMaggio and Powell (1991) called isomorphism, which defined as a process by which an organisation makes some adjustments and is then in a more or less similar condition to other organisations in the organisational field. This isomorphism process operates in a normative, coercive, or mimetic way. These are sometimes called institutional pressures. Normative pressure
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happens when an organisation attempts to make organisational changes driven by its internal professional views or decisions. Coercive pressures occur when an organisation has to change operational procedures as result of other organisation’s pressures. This pressure could appear in the form of legal regulations or as another threat that forces the organisation to comply. Mimetic pressures occur when change is driven by another organisation’s success. In e-services implementation, pressures relate to the nature of e-services, which involve the need for some parties to be connected and exchange information as a standard procedure.

Perrow and also Clegg, as cited by Covaleski et al. (1993), criticise the institutional perspective as it does not give much attention to power, group interest, and the nature of rules and social relations of meaning. Institutionalised practices depend precisely on the power of the organisational actors’ translation and use of societal expectations. But the situation has changed. Lawrence (2008) states that many works on institutions have moved away from the focus on showing the effects of institutions to exploring the roles of conflict, politics and agency in the organisational field. From this viewpoint, institutional theory has aligned with the concept of institutional politics which recognises relationships between power and institutions in three dimensions, namely institutional control, institutional agency and institutional resistance. These dimensions describe aspects of how institutions and actors relate to each other in terms of power relations.

This paper uses some concepts from institutional theory, in terms of institutional pressure, isomorphism, institutional settings, as well as power and institutional politics, to analyse why and how e-services were implemented in DGT as part of its service innovation and organisational transformation. An institutional analysis is used to analyse the institutional issues surrounding e-services implementation, from the initiation stage to date.

The use of institutional analysis in this paper is influenced by the institutional facts, namely the role of an international financial institution, IMF, in the process of Indonesian tax reform (Brondolo et al., 2008; IMF, 2003a, 2003b). IMF’s role in the establishment of this e-service can be seen as coincidental. Since 1998, the Indonesian Government has requested financial assistance from the IMF to support the economic recovery programme. This required Indonesia to sign a letter of intent (LoI) which included measures to reform tax administration, as part of the whole fiscal adjustment programme. From the IMF’s perspective, it was crucial for tax administration matters to be emphasised in the LoI. Specifically, this covered the need to establish simpler and more efficient processes for taxpayer registration, tax payments, and tax return submissions (IMF, 2003b). In terms of IMF involvement, it is interesting to scrutinise this circumstance using an institutional analysis. Referring to Covaleski et al. (1993), use of this lens of analysis offers a way to reveal many elements of organisational structure, like e-services in this research topic, revealing as much a need to conform to societal expectations of acceptable practice as the technical imperative of fostering rationality.

3 Research methods

This study was conducted in interpretive research paradigm. Referring to Djamhuri (2011), an interpretive research paradigm is a worldview and philosophical assumption by which researchers examine the social reality as a research object. An interpretive
paradigm is one that looks at social realities as the result of the formation (i.e., construction) of human thought, not something that is ‘taken-for-granted’. Based on selected philosophical assumptions, researchers determine other research matters: research methods, data collection techniques, data analysis, as well as data interpretation measures to address the research problems. This paper has also used secondary data to complete the chronological time series of the e-tax system in Indonesia, including various government regulations, and other documents related to the research topic published by Directorate General of Taxation, Ministry of Finance as well as various mass media releases either online or in-print.

Additionally, qualitative-interpretive research is used for this paper. This means that while collecting data, researchers have also been processing and analysing the data, although it is still a preliminary and raw data analysis. This is a continuum process between collecting, processing, and analysing data. The relationships between the various things that described above are illustrated in Figure 2.

**Figure 2** Research methods (see online version for colours)

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<table>
<thead>
<tr>
<th>Philosophical Assumptions</th>
<th>Interpretive</th>
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<tr>
<td>Research Methods</td>
<td>Qualitative</td>
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<td>Data Collection Techniques</td>
<td>Documentation Study</td>
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<td>Data Analysis Techniques</td>
<td>Discourse Analysis (Interpretive Policy Analysis) using Institutional Theory</td>
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<tr>
<td>Findings &amp; Conclusions</td>
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*Source: Adapted from Djamhuri (2011)*

At a later stage, to analyse the interpretive policy involved in the tax system in Indonesia, this study has deployed discourse analysis, since it deals with policy making and the government. In Gee’s (2005) view, discourse analysis considers how language, both spoken and written, supports social activities and human affiliation within cultures, social groups, and institutions through construction of significance, activities, identities, relationships, politics, connection, and sign systems and knowledge.

Additionally, combined with discourse analysis, this paper has also used interpretive policy analysis. Glynos et al. (2009) describe one approach in discourse analysis called interpretive policy analysis. This approach’s notion is not to produce objective facts or causal explanations, but to articulate well-founded interpretations of policymaking that presume the judgements and values of the researcher involved. In interpretive policy analysis, discourse could be in the linguistics (text) or non-linguistic social context of texts. Consequently, based on those considerations, the researchers assumed that this approach is also appropriate due to the research topic and objectives.
In 2004, Indonesia had essentially recovered from the economic crisis that had plagued it since 1997. This was shown in:

1. Indonesia’s economic recovery programme no longer being supported by the IMF
2. Most macro-economic indicators showing continuous improvement.

Nevertheless, there was still a lot of work to be done, principally in maintaining the sustainable fiscal policy reforms and freeing them from political interests. The term fiscal reform included the tax administration reform that relied on information technology systems to automate the whole administration process (Boediono, 2009).

More details relating to these tax administration reform measures can be found in the IMF (2003b), Brondolo et al. (2008), Abimanyu (2009), Poernomo (2009) and also Dartanto (2012). There were two major parts to the tax reform: policy reform and tax administration (system).

Abimanyu (2009) outlines the steps towards tax administration reform that have been taken since 2003:

1. The expansion of the tax base and providing fiscal facilities
2. Improving taxpayers compliance by providing excellent services and consistent law enforcement measures
3. Establishing an efficient ICT-based tax administration system
4. Developing a good governance framework to enhance taxpayers’ and other stakeholders’ trust.

More specifically, DGT has established some of the required tax administration reform measures, particularly those supported by ICT. DGT’s (2007, 2009) Annual Report and Poernomo (2009) explain that in order to expand ICT-based tax services, since 2001 DGT has pursued some e-services-based service innovations. They are:

1. Taxpayer registration system online through the internet (e-registration)
2. Tax-return processing system (e-SPT)
3. Online tax-return submission system via the internet (e-filing).

Based on the 2007 DGT’s Annual Report (DGT, 2007), this initiative expanded to include various internal supporting information systems, such as a human resource information system, and asset management. The three public facing systems named above were selected because they should deliver all the major information required from taxpayers. The tax officers would then compare the taxpayers’ information with information in the tax office information system. Based on this verification process, tax officers would determine whether the taxpayers had complied with all tax regulation regarding with taxpayers’ submitted tax returns. As per Article 35A of Law No. 6/1983 concerning General Provisions and Taxation Procedure as latest amended by Law No. 28/2007 (hereafter KUP Law), tax officials have authority to gather information from various sources for later use as a tool to test the validity of the tax information (i.e., tax return) submitted by taxpayers.
According to the plan, information held by the tax officers would be compared to taxpayers’ master-file data to determine whether he/she was already registered as a taxpayer. If he/she has registered as a taxpayer, then the information would be matched to the amount of tax paid and reported (in the form of the tax return). If there were any discrepancies, the tax officers would then inform the taxpayer. If the taxpayer could not provide an adequate response, then the tax officers might propose further enforcement action, such as a tax audit or even tax investigation.

As a result, a seamless flow of information would assist both the taxpayers and the tax offices. The problem was how such a smooth flow of information could be delivered. Unfortunately, the proposed systems were still heavily reliant on paper-documents sent by taxpayers and keyed-in by tax officers Thus, the problem was in the information supply chain. Meanwhile, there was increased demand for excellent services as well as transparency and accountability.

To overcome this problem, it was an inevitable that information supply chains would be improved through an ICT-based innovation. The priorities were registration, payment and reporting services.

However, in practice, the implementation of such application-systems was not easy. The move to e-services was constrained not only by technological issues, but by legal issues. When this initiative began in 2002, the KUP Law (as latest amended by Law No. 16/2000) only allowed for electronic tax return (Article 6, paragraph 2), and did not include taxpayer registration and tax payment. The IMF put tremendous pressure on the Indonesian Government to implement the system application immediately.

A document, Memorandum of Economic and Financial Policies (MEFP), signed by the Coordinating Minister for Economic Affairs, Ministry of Finance, and the Governor of Bank Indonesia (IMF, 2003b) asserts that:

“... The new electronic payment system will be extended nationwide in 2003... June 2003, the electronic tax filing and payment system will be expanded to process 75 percent of DGT tax collections ...”

Technically, DGT had made some effort to establish the system, but it was far more challenging than expected.

Table 2

<table>
<thead>
<tr>
<th>Point of interest</th>
<th>Concerning</th>
<th>Important notes related to implementation of services</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decree of MoF 5/KMK.01/1993</td>
<td>The designation of banks as point of payment in state revenue management</td>
<td>Did not specifically indicate technological (ICT)</td>
</tr>
<tr>
<td>Decree of MoF 210/KMK.03/2002 455/KMK.04/2002</td>
<td>Amendment towards Decree of MoF 5/KMK.01/1993</td>
<td>To be assigned as perception bank (point of payments) the bank: 1. must have its own data communication network covering all of its offices 2. this network must be connected to DGT and DGTr 3. recommended by DGT.</td>
</tr>
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<td></td>
<td></td>
<td>This decree did not specifically regulate how the system would operate.</td>
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Table 2  Timeline of DGT’s e-services-based service innovations (continued)

<table>
<thead>
<tr>
<th>Point of interest</th>
<th>Concerning</th>
<th>Important notes related to implementation of services</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decree of MoF</td>
<td>Amendment towards Decree of MoF 5/KMK.01/1993</td>
<td>Perception banks who had not met requirements stated in Article 2 paragraph (3), could accept tax payments until 30 June 2003.</td>
</tr>
<tr>
<td>536/KMK.03/2002</td>
<td>Amendment towards Decree of MoF 5/KMK.01/1993</td>
<td>Perception Bank as Point of Payment, not to:</td>
</tr>
<tr>
<td>547/KMK.04/2002</td>
<td>Amendment towards Decree of MoF 5/KMK.01/1993</td>
<td>1 reject any payment in any amount of such payment</td>
</tr>
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<td></td>
<td>MEFP submitted to IMF</td>
<td>2 charge any provision fee related to tax/custom payments.</td>
</tr>
<tr>
<td>MEFP Government of Indonesia and Bank Indonesia</td>
<td>By June 2003, the electronic tax filing and payment system would be expanded to process 75% of DGT tax collections.</td>
<td></td>
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<tr>
<td>296/KMK.03/2003</td>
<td>Amendment towards Decree of MoF 5/KMK.01/1993</td>
<td></td>
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<tr>
<td>Decree of DGT</td>
<td>Implementation of tax payment monitoring system in DGT</td>
<td>Implementation rules as mandated in Decree of MoF 536/KMK.03/1993</td>
</tr>
<tr>
<td>KEP-162/PJ./2003</td>
<td>Submission of electronic tax return</td>
<td>• Implementation rules as mandated in Article 6 paragraph (2) Law 16/200.</td>
</tr>
<tr>
<td></td>
<td>Procedures of taxpayer and value-added tax (VAT)-withholder (Pengusaha Kena Pajak/PKP) registration through electronic registration</td>
<td>• Did not explicitly define ‘e-SPT’ (electronic tax return).</td>
</tr>
<tr>
<td>Decree of DGT</td>
<td>Submission of electronic tax return through application service provider</td>
<td>• Registered taxpayers get temporary-ID (Surat Keterangan Terdaftar Sementara/SKTS) for 30 days. During that time the taxpayer has to submit (by post) required document to the tax office where the taxpayer is registered. Tax office, after verifying supporting documents against electronic data, will send the permanent-ID</td>
</tr>
<tr>
<td>KEP-173/PJ./2004</td>
<td>Procedures of taxpayer and value-added tax (VAT)-withholder (Pengusaha Kena Pajak/PKP) registration through electronic registration</td>
<td>• If after 30 days the taxpayer does not submit the required documents, the temporary ID will be withdrawn.</td>
</tr>
<tr>
<td>Decree of DGT</td>
<td>Submission of electronic tax return through application service provider</td>
<td>• Update towards Decree of Director General of Taxes Number KEP-88/PJ/2004</td>
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<tr>
<td>KEP-05/PJ./2005</td>
<td>State revenue modules (Modul Keuangan Negara/MPN”)</td>
<td>• Files to be submitted through e-filing system have to be produced by e-SPT</td>
</tr>
<tr>
<td>Regulation of MoF</td>
<td>State revenue modules (Modul Keuangan Negara/MPN”)</td>
<td>To support Decree of MoF 5/KMK.01/1993 in order to regulate how the system operates, especially data communication between point of payment, DGT and DGTr. Enactment of this regulation makes Decree of Director General of Taxes Number KEP-162/PJ/2003 no longer valid</td>
</tr>
<tr>
<td>99/PMK.06/2006 as last amended by 37/PMK.05/2007</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 2  Timeline of DGT’s e-services-based service innovations (continued)

<table>
<thead>
<tr>
<th>Point of interest</th>
<th>Concerning</th>
<th>Important notes related to implementation of services</th>
</tr>
</thead>
<tbody>
<tr>
<td>Law No. 28/2007</td>
<td>Amendment towards Law No. 6/1983 concerning general provisions and tax procedures</td>
<td>Article 10:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 Taxpayer is obliged to pay or remit tax payable at state treasury through post office and or state-owned bank or local-owned bank or any other place of payment stipulated by the Minister of Finance</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2 Procedures of payment, remittance, and reporting of tax payable as well as its instalment and postponement are stipulated by a decree of the Minister of Finance.</td>
</tr>
<tr>
<td>Regulation of MoF 48/PMK.03/2007 as last amended by 80/PMK.03/2010</td>
<td>Detail procedures for tax payments</td>
<td>• This is an implementation rule, as mandated in Article 10 paragraph (2) KUP Law (Law Number 28/2007)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Gives detailed guidelines on how, where and when to pay tax and what taxpayers should have in order to make sure of the validity of tax payments.</td>
</tr>
<tr>
<td>Regulation of DGT 47/PJ/2008</td>
<td>Submission of electronic tax return through application service provider</td>
<td>• Update towards Decree of Director General of Taxes Number KEP-05/PJ./2005</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Explicitly defines the term ‘e-SPT’, and states that files to submitted through e-filing system have to be produced by e-SPT.</td>
</tr>
<tr>
<td>Decree of DGT 24/PJ/2009</td>
<td>Procedures of taxpayer and VAT-withholder registration through e-registration</td>
<td>• Revokes Decree of Director General of Taxes Number KEP-173/PJ./2004</td>
</tr>
<tr>
<td></td>
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<td>• Registered taxpayers may get temporary ID with duration no longer restricted to 30 days.</td>
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<td>• Tax office will verify taxpayer’s address through field inspection.</td>
</tr>
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<td></td>
<td></td>
<td>• Based on field inspection tax office shall withdraw ID already given if the taxpayer cannot prove truth of data submitted through e-registration system.</td>
</tr>
<tr>
<td>Decree of DGT PER-44/PJ/2010</td>
<td>Forms and submission procedures of monthly VAT-return</td>
<td>• VAT-withholders with more than 25 transactions per month have to submit their monthly-VAT-return in electronic format produced by e-SPT-application provided freely by DGT.</td>
</tr>
</tbody>
</table>
Table 2  Timeline of DGT’s e-services-based service innovations (continued)

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<th>Point of interest</th>
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</table>
| Decree of MoF 60/PMK.05/2011 | Trial of billing systems through state revenue modules (*Modul Penerimaan Negara/MPN*) | • Trying to enhance existing e-payment (MPN) with new feature which will enable taxpayers to get their payment serial number from DGT’s website, based on which the taxpayer would pay tax through a bank’s ATM, e-banking or m-banking.  
• Still in trial mode, covers only certain tax types, appointed tax offices and banks. |
• Integrates all taxpayer registration matters into a single regulation.  
• Terminate term of ‘temporary-ID’.  
• Required document for registration uploaded online, no need for paper-based document. |
| Decree of DGT PER-11/PJ/2013 | Amendment towards Decree of Director General of Taxes Number 44/PJ/2010 | All VAT-withholders have to submit their monthly VAT-return in electronic format produced by e-SPT application distributed by DGT (enacted since by June 2013). |

Table 2 gives a brief chronology (timeline) of the development and implementation process for the applications, alongside supporting regulations and related important events.

The timeline highlights institutional aspects (e.g., rules, specific institutional pressure).

Considering everything that has been done, what has the Indonesian tax administration achieved through e-service implementation as a public service innovation? From an outsider’s viewpoint, recent research by Arnold (2012) revealed that:

“... The use of electronic interactions between taxpayers and the authorities presents significant scope for improving tax procedures at the stages of registering, filing and paying taxes ... These are steps in the right direction and should be pursued further. Better use of information technology should also include ensuring a linkage between computer software used by the tax and customs administrations, as well as linking to databases used by other public agencies ...”
5 Discussions

5.1 Institutional pressures and isomorphism

The successful implementation of innovative ICT-based public services depends not only on technology but also on the institutional aspects surrounding an organisation and its organisation-fields. Therefore, based on the context of the case study described above, in the perspective of institutional pressures, this paper identifies some important points related to why DGT has decided to develop e-services-based innovation to enhance its public services.

Based on the data presented and the work of Miles (2012), in the author’s view, DGT can be considered an early adopter in implementing e-services as part of its public services, compared to other government organisation in Indonesia. In 2001, DGT already had a ready-to-develop concept (Brondolo et al., 2008). This concept was to promote an e-payment system based on e-services that connected banks as an agent point of payment, and the DGT as tax administrators. A pretty bold breakthrough when other government organisations are still initiating ‘online brochures’ through the internet. In this regard, DGT is also ‘lucky’, because internally the organisation has developed normative-isomorphism services that encouraged e-services-based innovation. Moreover, at the time the IMF’s LoI implementation team came to DGT they used this initiative as an indicator to measure the progress of the economic recovery programme. This was a real coercive institutional pressure.

In the context of e-payment establishment, DGT has the chance to create coercive pressures to taxpayers. This is because the e-payment system is the only way for taxpayers to pay their tax. As Avgerou (2000, 2003) said, institutionalisation of organisational practices will de-institutionalise other organisational practices. These coercive pressures from DGT extend to its own organisation-field, because the pressures affect the organisational-level rules of the game in terms of public financial management and more broadly involve important stakeholders and banking institutions.

To a certain degree, the e-payment initiative creates coercive pressure on banks that are not accustomed to using an e-services-based data exchange mechanism. This can be seen in the extension of the nationwide implementation period for this service (using the banks as an agent point of payment). Other banks, which are technologically ready, experience this new payment system initiative as mimetic pressure. These banks do not want to lag behind their competitors in implementing the right systems for the e-services-based tax payment systems.

The e-SPT implementation (as part of e-filing initiative) also has its coercive pressures. The most recent rule, DGT Regulation Number PER-11/PJ/2013 (enacted by June 2013) requires all VAT-withholders (Pengusaha Kena Pajak/PKP) to submit their Monthly VAT-Return in an electronic format produced by e-SPT application. This is a personal computer-based (desktop) application provided freely by DGT.

Nevertheless, this may turn out to be a risky measure due to legal aspects of the license for the e-SPT runtime software installed on the taxpayers’ computers. DGT does not provide any terms of use for this application, in accordance with the requirements of database management systems (DBMS) needed to run this application. This means that even though the application itself is free, the taxpayers still have to provide the legal software (i.e., operating system and DBMS) to use the e-SPT application properly. This situation will increase compliance costs. This situation, more or less fits with findings by
Löfstedt (2008), who concluded that in many cases, governments do not provide public e-services that are really needed and desired by their users.

From the institutional perspective, in the case of e-SPT DGT actually has a chance to institutionalise the e-SPT application at a deeper level through institutional arrangements. For instance, DGT may provide alternative methods for taxpayers who do not want to use e-SPT. It would be better for DGT to provide a standard data format based on recent general data exchange mechanism, like XML or XBRL. Whatever application is used by taxpayer then, as long as this application is able to provide data that fits the standard, DGT should receive such data as a tax return.

Meanwhile, the implementation of e-registration has almost no isomorphism impact on the taxpayers. If it does exist, it is merely mimetic pressure acting on the level of output and performance. That is, taxpayers look at these services solely as an extension of the registration service tax office. This situation, in a broader sense, actually became a test case for the provision of public administration in general.

5.2 Institutional arrangements

Referring to the framework proposed by Hollingsworth (2000), this paper considers how the DGT can establish its e-services for the tax system. It is believed that the key to this initiative is the institutional arrangements.

As shown in the timeline in Table 2, from the perspective of multi-level analysis of institutional changes there are gradual changes occurring in the development of the e-service-based service innovation.

First, institutionalising the e-services-based solution (although none of DGT’s official documents mentioned this term) at the level of norms/values. This can be seen in the emergence of this initiative, which existed even before the help from the IMF. Consequently, by the time the solution is realised, the process is much easier. In other words, the internal emergence of e-services is a final solution. Some internal to DGT have even assumed that this e-payment is a ‘killer application’ in the context of tax administration reform.

Second, DGT may institutionalise this initiative at the level of institutional sectors by bringing these solutions to its organisational field in the MoF, in order to gain the support of key stakeholders (MoF, DG Treasury and DG Custom and Excise). This can be inferred from various publications of regulations (as output and performance in the level of institutional analysis, see Table 1), in ministerial regulations and rules issued by the Director-General to support the implementation of e-payment.

Third, DGT institutionalised e-payment application in the banks because most of banks have already deployed e-services-based applications (i.e., host-to-host application). As they have deployed this e-service application, many of these banks are at the stage of institutional arrangement (see Table 1). DGT can easily make cooperative agreements with the banks in order to establish host-to-host tax payment applications (see for example: MoU between DGT and Bank Rakyat Indonesia Concerning Host-to-Host Tax Payment; DGT, 2002).

While there could be a few obstacles, in spite of several delays, in the implementation of the national service method (see e.g., Decree of Minister of Finance Number 536/KMK.03/2002), the situation is somewhat different for the implementation of e-filing and e-registration. It seems that to institutionalise these services at the institutional
arrangement level is challenging. For both of these application systems, DGT still reaches the level of output and performance (see Table 1) due to low response levels from the taxpayers. The use of the e-SPT application as a device to process economic transactions into taxation data can be enforced; unfortunately the further impact of this is mainly related to increasing compliance. Up to now, the cost (to deploy an e-SPT application on a taxpayer’s computer), has not been measured. Consequently, the institutionalisation process of this application is still at the lowest level and easily distorted.

Moreover from the institutional perspective, for e-registration in the early stages of the implementation, some taxpayers perceived this application as just a ceremony or rationalised-myth provided by tax administration. This is because the taxpayers may still view this initiative as merely an administrative tool instead of norms/values as guidance to achieve tax compliance. Therefore, DGT must think of other strategies to make the e-filing service more attractive to the taxpayer.

5.3 Power and institutional politics

This part of discussion begins from the power and institutional politics framework provided by Lawrence (2008). In this view, the relationship between power and institutions is bi-directional. This means that there are actors who affect the institutional contexts within them. This relationship is an interplay between the impact of institutions based on several factors such as the beliefs and behaviours of actors (institutional control); the work of actors to create, transform, maintain and disrupt institutions (institutional agency); and the works of actors to resist institutional controls and agency (institutional resistance).

Based on the institutional aspects, Figure 3 shows how each dimension of power and institutional politics affects the implementation of e-service in Indonesian tax administration.

\[ \text{Figure 3} \quad \text{Power and institutional politics dimensions in implementations on e-service in tax} \]

\[ \text{Source: Adapted from Lawrence (2008)} \]
From Figure 3, it can be seen that deploying e-service (as institution) has its power to affect some actors in terms of controls, agency and resistance. For example: IMF (actor) wanted to control its financial aid to overcome Indonesia’s economic crisis through implementation of LoI, for which one of the measures was to establish e-service-based tax administration. This action, caused the other powers and institutional politics as consequences.

As a result, the multilayered actors within the systems have caused inefficiency in implementing the e-system. Therefore, the impact on the taxpayers is not significant due to complications within the institutional power and pressures, institutional settings, and institutional politics. Moreover, there is a significant drawback to deploying this e-tax system.

6 Conclusions

This study has focussed on the Indonesian tax context. Nevertheless, the discussion in this paper contributes to developing and enriching the socio-technical traditions in the field of ICT-research in Indonesia.

The initiative to use e-systems in the Indonesian tax administration was heavily affected by the institutional setting and its politics. While the background created a strong necessity to innovate in the Indonesian tax system, applying and deploying this innovation in public service in practice is challenging.

From the chronological time series, it can be seen that the Indonesian government has tried to upgrade the tax system to an e-system, with pressure from the IMF during the economic crisis recovery. The institutional pressure and isomorphism has taken place at a later stage of this implementation. Unfortunately, in the Indonesian context, institutional arrangements and politics are not yet ready to fully implement this e-service.

Based on the findings and discussion from this paper, some critical thoughts can be provoked as follow:

First, public sector organisations need normative pressure in order to discover, implement and evaluate a service innovation. This study shows coercive pressures stemming from a particular institution (i.e., IMF) is just a coincidence, but it has been recognised that such pressures could accelerate the implementation of e-services. Regardless of several legal and organisational problems, the programme remains a novel agenda for the Indonesian authorities in the future.

Second, the normative pressure should always be maintained to enforce the organisation, rather than just to achieve the meet the obligations of government procedures. From the Indonesian context, it can be seen that the tax system is complex and politically sensitive. Therefore, this e-system initiative unfortunately did not achieve its initial expectations. To some extent, this could be a lesson for other developing/emerging economies, where the demands for ICT and law enforcement are still a challenge to deploying more efficient systems like their counterparts in developed nations.

Third, there are some public services that by their nature have developed to serve, although they have not been used optimally by their users. This is always the case for the tax system in any country. Regardless of the complications, the focus on the implementation of e-service in the tax system should receive more attention from
academics, policy makers, and the business community. In order to compare and contrast the different implementation of tax systems in developed and emerging nations, more studies in academic and business literature should be encouraged.

Additionally, further research on the e-system, from technical, economic, and sociological viewpoints, is needed to comprehend the narrative and the critical contribution of this system. The use of meta-data analysis and expanded participation in an actors’ network could be a future step to further study in terms of the depth and breadth of the analysis.

References


A. Darono and D. Irawati


