

Size tackles quality: Insights from a simple e-government evaluation index

Ronit Purian ^a

^aTel Aviv University

Abstract

Large organizations are traditionally associated with better IS design. In this study we want to examine the more subtle differences between websites. Having established trends among early and late e-government evaluation criteria in a previous study (Purian, 2014), we developed a new e-government index and carried out a web survey of municipal Internet websites, in 2007 and in 2010. Factor analyses demonstrated the priorities and concrete choices of the local authorities' managers, supporting the new typology. In order to develop this theme, the empirical part is followed by a review of philosophical ideas, explaining the extent and nature of social action with technology. The new typology of e-government websites posits that the concealed goals of IS design and evaluation range between maintaining the social status quo and taking action towards change.

Keywords: E-Government, IS Evaluation, IS Design, Social Action

1 Introduction

A simple tool for the evaluation of municipal Internet websites, developed by the author and administered in 2007 and in 2010 (88 and 106 websites, respectively), reveals the "compelling story" of the digital age (Henfridsson, 2014: 357). Although the story is told in terms of evaluation criteria, it is not about evaluation criteria, and not about the systems that emerge through these criteria, but about the making of these systems; how and by whom. The new tool was devised to be rudimentary, in order to increase flexibility in the evaluation according to the goals of the designer or instigating institute. It covers basic elements in Internet websites, e.g., communication channels and online forms, assigning each measure with an objective quantitative score. The results of the two website surveys were factor analyzed to show four foci of interest in e-government design (e.g., websites that provide online services in certain technological levels; websites that supply simple content such as downloadable forms; websites focused on contact channels and communication with officials). It is the contention of this paper that these foci of interest serve as a new typology of Internet websites (Table 1). The proposed typology implies that the influence of the individual in charge of information system (IS) design individual – a local official, decision maker, information technology (IT) manager, etc. – might be crucial, compared to other factors that affect the design and implementation of governmental systems.

Large organizations are traditionally associated with better IS design. It is reasonable to assume that large municipalities would also enjoy the advantage of an economy of scale, namely, substantial resources and IT budget. The prevailing view is that due to "a direct relationship between Web site quality and population size [...] larger cities are expected to exhibit the best quality Web sites" (Scott, 2005: 156). This question, however, goes beyond the resource perspective (Amit & Schoemaker, 1993; Andreua & Ciborrab, 1996) and its resultant direction of impact, i.e., top-down (assumed to depend on organizational resources) or bottom-up processes (assumed to depend on psychological resources, intrinsic to the individual). There is more to this question than the availability of economic resources (e.g., Chatterjee & Sarker, 2013; Ciborra, 2004), and even the human infrastructure such as organizational capabilities of trained workers and professional managers (Weill, Subramani, & Broadbent, 2002). This paper suggests a framework and typology for the evaluation of e-government IS as a driver of social change and social responsibility, based on the philosophical discourse (Habermas, 1984; Mingers & Walsham, 2010), Popper (1986) as well as the approach offered by Levinas (1992).

In what follows, we show how the choices made by managers (in different hierarchical levels) due to their individual preferences and competencies affect the design of different applications in local e-government.

The second part of the paper presents the creative forces of innovators. Changing reality to create a better world is the main intention manifested in the empirical part of this paper, and it is further discussed in the theoretical sections.

1.1 Philosophical Reasoning

The materialization of information and communication technology (ICT) for a better world requires the will and the reason to act in the world of actual and possible states of affairs. One cannot be objective while institutional barriers collapse, transparency and accountability are enforced, and organizations are flattening. "In this perspective, e-government goes beyond simple task automation" (Chadwick 2006, p. 194). In this world, man-made entities such as social relations bear actual material significance. This is the subjective and material world delineated by Habermas's (1984), in which the "other" is not a mental representation, and being human is not some static philosophy (Levinas, 1991). The other is a person, available to communicate, whose actual characteristics (e.g., gender, age, economic status, or fertility) affect the relationship. By defining the relationship as a dialog, Levinas' intention is to create a symmetrical relationship, in which the other should be accepted as an equal, and should not be attached to the otherness. In Levinas' view, the social aspect of communication is responsible communication. The individual's boundaries span, through the responsible communication, towards the other ("autrui"; Lévinas, 1991: 17). Moreover, responsibility for others is a concept developed by Levinas (1992), according to which self-definition, i.e. announcing that "I am", is a statement of ethical responsibility for the other. This is not merely an interactive statement, but rather a means of the person to actualize their existence through the other. The relationship that arises in the presence of the other is the individual's ultimate purpose. In Levinas' philosophy – to rephrase René Descartes – "Cogito ergo sum" turns into a dyadic definition: I encounter with the other therefore I am; otherwise I would not be communicating. The essence of being human, then, is the relationship with the other, but not only for the

sake of interaction with the other; the awakening of the relationship with the other gives life to one's dynamic, transcendent freedom.

This view is entirely different from the pragmatic approach toward social responsibility as proposed, for example, by Porter & Kramer (2006). Porter & Kramer (2006) act on behalf of the organization's self-interests. While they introduce social responsibility as a "source of opportunity" and "competitive advantage" to the firm, social responsibility is a mode of being through which the individual engages for Levinas (1992). The egalitarian model that characterizes and dominates Levinas' view holds the others responsible for their actions. Rather than the economic value of IS, ethically-motivated people who seek for emancipatory system design, and pose limitations on current constraints, would actualize the social value of IS. A good decision process should "force" (Henig & Buchanan, 1996: 4) the decision makers to collaborate and share. It is not about optimizing solutions or achieving the most efficient bargain. Rather, it requires openness for listening and understanding other interests and concerns, as suggested by the discourse ethics.

Philosophical thought concerning modes of interaction with other individuals and regarding the concept of others as well as the self has undergone many transformations. Communication has received much attention in various fields, among them organizational theory, e.g., Weick's enactment, and Habermas' discourse ethics. E-government IS design is a tool in the discourse between institutions and citizens, which should be used in favor of the common good, as a new aspect of the value of information in the network.

Under these premises, ICT are powerful tools by which to connect people and resolve limitations, depending on the choice of the human designer, as any manipulation of these systems and channels changes their concealed values and goals. Different IT architectures may provide different levels of access to information, flexibility, and collaboration, and the introduction of new technologies is usually expected to foster even more rapid communication, for example, by initiating open discussions and encouraging public debate, in addition to two-way contact channels. Indeed, governments are affected by the new rules that the network imposes, such as openness and transparency, as opposed to well-formed system boundaries. Notwithstanding, the system's owner – the governor or regulator – could also achieve the opposite by holding direct and exclusive control over the system. Seemingly objective and professional decisions regarding information delivery, which shape the public sphere, now depend on the body who sets the agenda. Thus, a major challenge is to resolve the dichotomy of values versus opportunities.

The proposed theory posits that the concealed goals of IS design and evaluation range between maintaining the social status quo and taking action towards change. For example, system design can result in a closed system that maintains routines and common features, protecting the economic structure, or it may lead to an open system that encourages transparency and collaboration and hence changes power relations (Avgerou & Mcgrath, 2007). Which trajectory is followed and to what extent is contingent on the choice of the human designer (e.g., Ciborra, 1997; Husserl, 1970).

1.2 Research Structure

Having established trends among early and late e-government evaluation criteria in a previous study (Purian, 2014), the first section presents the findings that assess the communicative value of information ("E-government evaluation"). In this study we

want to examine the more subtle differences between websites (“The locality of content decisions”), assuming two elements that constitute the value of a system: its design from a pragmatic view (how to) and its social value (“Social action and IS design”). Factor analyses demonstrated the priorities and concrete choices of the local authorities' managers (“The new typology”). The theoretical rationale presented earlier posits that these observations reveal the extent and nature of social action with IT. In order to develop this theme, the empirical section is based on a review of philosophical ideas (“Philosophical Reasoning”), explaining the proposed model.

2 E-Government Evaluation

The evaluation of e-government is a critical research issue that bears significance on communication preferences, social responsibility, ethical issues concerning employment and design, and questions pertaining to democracy and form of governance at large (Paivarinta & Saebo, 2006; Purian, 2014). Facing large amounts of data, a variety of criteria, needs, and desires as well as the complexity of procedures involved, the evaluation of e-government has proved to be an intriguing challenge for researchers and policy-makers alike (Gronlund & Horan, 2004; Irani, Al-Sebie, & Elliman, 2006). Compared to e-commerce, e-government is expected to address the requirements of the entire population, involving a mandatory relationship (Warkentin, Gefen, Pavlou, & Rose, 2002). It must operate in a decentralized organization and maintain accountability. Additionally, e-government must also ensure accessibility even where disabilities, socioeconomic status, age, and other obstacles make it difficult (Jorgensen & Cable, 2002).

Early evaluation models delineated mostly rudimentary stages, concerning mainly on the delivery of online information (e.g., Gartner, 2000; Irani et al., 2006). A critical analysis of evaluation criteria (Kunstelj & Vintar, 2004) identified the evolution towards integrated measurements of back- and front-office with measurements of the environment, maturity of the government agency as well as the customers (citizens and businesses), and the impact of e-government on service delivery. Over time, stages have evolved, involving the monitoring, evaluation, and benchmarking of e-government development (e.g., Capgemini, 2006; Wimmer, Codagnone, & Janssen, 2008; UN, 2005; 2008; 2010). This evolution reflects a shift from the mere delivery of online information – and the focus on “efficiency”, saving time and money – towards new areas of IT-driven policy and business making – that is, “effectiveness” in the public sector – involving greater complexity both technically and conceptually (Irani, Love, & Jones, 2008). Following their trajectory of development, a previous study (Purian, 2014) presented the evaluation criteria used between the years 2000 and 2010 to evaluate e-government systems. Reviewing a large set of reports and papers published in recent years, the study showed the evolution of such evaluation criteria over a decade, and pointed at changing trends with respect to e-government and its evaluation. The observed changes capture the growing importance of discourse in e-government systems and the strengthening role of “participation” and democratic decision-making.

Emphasis seems to have shifted to the impact of e-government on the public and society at large, such as social inclusion, transparency, and collaboration. In addition to the pragmatic purpose of IS such as service quality, user satisfaction, usability, productivity and policy making, to name a few, newer evaluation criteria represent

the richness of the new actions enabled by the mediating technologies. Indeed, newer evaluation criteria consider the impact of e-government on the public and society at large – such as social inclusion, transparency, and collaboration. The evaluation criteria are the empirical material, reflecting human relationships or relationships between mediating technologies and the new actions they enable. The elaboration of the criteria – the observed artifact of concern – to a mode of “participative communication” (Purian, 2014) introduced the ethical dimensions in the design of systems and tasks. A new “social” value of IS has emerged.

The new criteria manifest in the relationship between people and organizations, emphasizing these elements and shifting the focus from *user-IT interaction* to *human-institution trust-building*. Accordingly, we have developed a new e-government evaluation tool for municipalities' websites. Our review of e-government evaluation criteria (Purian, 2014) made us recognize the need for an index (web survey) that considers the basic components that establish an Internet website while allowing for flexibility by not specifying pre-defined functions. In contrast to prevailing indices, the current index does not specify required content or services. We thus expect to detect variance between the websites in a more precise manner and in greater detail compared to existing indices. To exemplify, most evaluation tools determine specific content and services such as the availability of 20 online services (Action Plan objectives of Capgemini, 2009: 172, item 16.4). Such pre-determined requirements may prove to be too rigid (Mosse & Whitley, 2009).

2.1 The Locality of Content Decisions

Evaluation criteria, such as “best practice”, often define a roadmap for the development of new e-government systems (e.g., changes in UNPAN's index through the years 2005, 2008 and 2010 or in the objectives of Capgemini 2009). The criteria and measurements can be used, by local managers, as guidelines that facilitate the creation of new systems and encourage the creation of more effective systems. By enabling the reproduction of new systems rather than their reinvention, the indices provide professional support and, perhaps more important, play a social role. They shape social action by use of IT.

To properly evaluate an e-government system, one would have to consider objectives, such as return on investment, user satisfaction, variety and quality of services, or democratic ideals (Purian, Ahituv, & Ein-Dor, 2010). Benchmarks and best practices cannot fit all. As Mosse & Whitley (2009: 155) put it, any evaluation according to universal criteria carries “a danger of implying an ‘ideal form.’” Moreover, local constraints, needs, and desires are not addressed by such criteria, robbing the organization from prioritization of local needs and investments. The proposed index, therefore, distinguishes the evaluation of goals (e.g., communication or interactivity) from prescriptive formats such as the most appropriate (or ‘ideal’) mixture of services and attitudes. Its purpose is to empirically consider e-government IS design as a form of social action. The purpose of the index is to allow flexibility so that each website is evaluated according to its own goals; it measures the amount of contact channels that imply interactivity and access to databases and other information sources – but it does not set a list of specific services. Therefore, the index proposed here does not impose a list of “universal” criteria and requirements, but maps the available features in the website, allowing for subsequent deeper probing into the role of the producers and

constructors of the systems; to identify the instigators and designers who are framing and placing e-government in new and alternative settings.

3 Social Action and IS Design

Weber (1997: 88) defined social action as a subjectively meaningful behavior, "either overt or purely inward or subjective," potentially consisting of "positive intervention in a situation, or of deliberately refraining from such intervention or passively acquiescing in the situation." The tension between the "constrictive and the creative aspects of institutions" (Eisenstadt, 1968: xvii) gives meaning to the social action, aiming to either change or maintain the social status quo. This tension, as proposed by Weber (1997), often defines the extent and nature of social action. Accordingly, we propose a *design action* that can be either "innovative" or "reproductive". The "reproductive" design would represent efficiency as it conforms to existing knowledge, such as the reproduction of systems based on prescriptive evaluation criteria, explicitly elaborated in e-government indexes, or just following some standards and common practice. The innovative design, in contrast, will initiate new ways of making systems on the organizational and professional levels.

Although both the reproductive and innovative approaches facilitate communication, the innovators would do so as a way by which to improve processes and enhance managerial effectiveness for different purposes. The reproductive design, in contrast, is focused on the mere execution of routine processes.

The reproductive design is easily valued from an institutional/economic perspective as an organizational resource that is extrinsic to the designer, whereas the innovative design is more likely to be valued in terms of creative intrinsic psychological resources of the designer.

In addition to the *design action* (reproduction vs. innovation) there is the *social action* (maintaining vs. changing the social status quo). While the reproductive design is likely to maintain the status quo by playing an instrumental role within the organizational boundaries, the innovators aim to deliberately expand boundaries and routines (e.g., introduce openness to IS design, enhance transparency and knowledge sharing, and initiate collaboration). The reproductive design is functionalist in the sense that it conforms to extant norms, whereas the innovative design is assumed to involve the authentic actions of individuals who care.

These concepts are not dichotomous, as there are "grays" in between, and different "blends" of types are possible over the two axes (Table 1). The difference lies in their main purpose, and the exercise of the system's broader potential. More broadly, each approach bears characteristics of the other, enabling larger social and managerial changes. The distinction can be illustrated in the case of a social actor who decides to reproduce the design of a system, and still revoke restrictive and alienating conditions of the status quo. The tension between the constrictive and the creative aspects of institutions defines the tension between an instrumental design action and a design action that considers its social role. This framework of IS design drivers is summarized in Table 1.

Table 1. Framework of IS design drivers*

		Social Action	
		The purpose of IS design depends on the tension between the "constrictive and the creative aspects of institutions" (Eisenstadt, 1968: xvii).	
		Maintain the status quo	Change the status quo
<p>Design Action The nature of IS design as a "subjectively meaningful behavior" (Weber, 1997: 88).</p>	<p>High: Innovation The psychological value of innovation in IS design</p>	<p>Factor 2 – Effectiveness: Sophistication breadth/latitude; bidirectional service delivery Normative rules for IS design can be fulfilled by indices as an effective tool of reproduction</p>	<p>Factor 3 Openness: Participative communication Social actor, authentic action. The creative aspects of institutions, aiming towards change and manifested in "the processes of institution buildings, social transformation, and cultural creativity" (Eisenstadt, 1968, p. xvii)</p>
	<p>Low: Reproduction The economic value of reproduction in IS design</p>	<p>Factor 1 – Basic efficiency: Elementary practicality; unidirectional The constrictive aspects of institutions, aiming to maintain the social status quo; manifested as the tension between institutions and innovators</p>	<p>Factor 4 – Efficiency: User satisfaction</p>

* Draws on aspects of institutions (Eisenstadt, 1968) and the nature of social action (Weber, 1997)

Internet websites that present a rather standard mixture of content and services are assumed to follow some common practice in a reproductive design that lacks innovation. Such design that relies on a reproductive action suggests top-down processes and extrinsic sources. The adoption of existing benchmarks is considered herein as a reproduction of e-government system.

Longitudinal variance between website measurements at the same municipality reflects the extent to which the indices value reproduction (or best practices) compared to the extent to which they value innovative local actions, and the goal of maintaining or changing the status quo.

3.1 Axis 1. Social Action: Change versus maintain the status quo (communication and reciprocity; event, subject)

New mechanisms of participation are often designed by people who consciously act to change their social and economic environment. The designers who are framing and placing e-government in new and alternative settings, consciously act to change their social and economic environment, are considered here social actors. The hidden goals of IS design, implementation, evaluation, and usage could be to maintain the social status quo or to recognize the responsibility of the manager in the institution towards the other, that is, to use IT to revoke restrictive and alienating conditions of the status quo.

IS design and evaluation criteria seem to be intuitively understood by those individuals striving to fulfil a deeper, meaningful goal. Due to the nature of communication in the subjective world of social relations (Habermas, 1984), the design of systems that enable communication, namely, IS and specifically e-government, can be interpreted as an authentic action that depends on subjects (the creative innovative individuals) rather than on the objective abstract world of institutions. In order to determine a design strategy, the goals of the IS should be stated in light of the core values. Results of the present study provide empirical premises by which to conceptualize the role of the individual designer in e-government-driven social action; stressing the value of contact as a human activity, carried out by people and depends on them.

3.2 Axis 2. Design Action: Innovation versus reproduction (local active dimension)

The system can be utilized for good in a social action that emerges spontaneously and intuitively through the materialization of the individual's beliefs about responsibility for others. At the same time, the new design of features and systems can be reproduced, e.g., by governmental officials, and consequently lead to change. Accordingly, we propose a design action that can be either "innovative" or "reproductive". The "reproductive" design would represent efficiency as it conforms to existing knowledge, such as the reproduction of systems based on prescriptive evaluation criteria, standards and common practice. The innovative design, in contrast, will initiate new ways of making systems on the organizational and professional levels. This is the value of reproduction.

While the reproductive action is congruent with a more pragmatic notion of self-interested organization, and the authentic action holds others responsible for their actions, this is not a dichotomy. Quite the contrary. The social action, a subjectively meaningful behaviour is not necessarily an active intervention. The tension between the "constrictive and the creative aspects of institutions" (Eisenstadt, 1968: xvii) often defines the extent and nature of social action. Similarly, innovate design and technologies do not guarantee social change. Social goals can be achieved also with the reproduction of familiar and reliable systems. Indeed, the creation of benchmarks and evaluation criteria bears the significance of social action (Purian, 2014). The philosophy of aesthetics may bear light on the value of originality of works of art compared to reproduction. While in the Western culture it is originality that gains economic value, in Chinese aesthetics, works of art are valued for their physical qualities, even when copied, as preservation is a fundamental goal. The Chinese tradition presents an

economic mechanism that stands in contrast to the psychological mechanism of the Western creative milieu, which attributes the sign much signified meaning (Barthes, 1964). Translated to benchmarks (reproduction) versus innovation (authentic action), we propose that in the same manner that physical properties can be reproduced and traditions can transfer in works of art, so the accomplishment of social values through the design and implementation of IS is not exclusive to the original products. Given “existing resource constraints, agents rationally choose the innovation that will allow them to most efficiently produce the outputs that are useful for obtaining their goals.” (Abrahamson, 1991 as cited by Fichman, 2004: 592).

We considered evaluation criteria of information systems as IT artifacts that pursue social agenda. They not only guide public policy or serve as standards of production in industrial terms (such as the standards of the International Organization for Standardization). Rather, evaluation criteria are intended to serve as standards of production also in ethical terms.

The Internet flattens hierarchies among people, organizations, and IT (Fountain, 2001; Howlett, 2011), multiplying connections between actors in a process that involves extensive participation. Similarly, the transformation of e-government systems from static Internet web pages used unilaterally, to bidirectionally relay information, to fully interactive services (Irani et al. 2006; Janssen & van Veenstra, 2005; Purian, 2014), amounts to social action. This reinforces the view presented herein that we should evaluate information systems not only based on business-oriented measures but also based on social and ethical ones.

In a networked world, where information and communication technologies provide, by definition, access to information and flexible communication, such technologies can build a joint perspective and coordinate actions among different users. The communication between agents in the network can play additional roles, for example, it might be used to reduce information-asymmetry. Reciprocating, the actual initiation of new system goals facilitates the development of the network (e.g., open-data initiatives that lead to further collaboration) and, consequently, the network structure becomes an underlying mechanism that adds new system goals.

3.3 Research Propositions

To better understand the reproductive and innovative nature of local authorities' e-government systems, we examined content delivery (access to information, online services) and contact channels (facilitating communication). To this end, we developed a new e-government index, which we used to evaluate municipal websites in both 2007 and 2010. We postulated that despite their superiority in resources, larger municipalities do not necessarily produce better e-government systems (manifested as rank in this study). It is expected that extrinsic factors contributing to higher ranking of websites – including financial status of a local government (often related to size), peripheral geographic distance from the central zone, or type of the local authority (city, kibbutz, development town) – reflect reproduction and best practices while intrinsic or local drivers reflect the significance of individual traits of local actors.

After using the index to map the local websites, we will try to divide the websites according to the four types of action-design interfaces. We expect the findings to provide some indication regarding the type of actors in each municipality. A possible explanation of the findings should be the identified types, with respect to the proposed framework (Table 1).

4 Instrument Development

E-government evaluation tools seek to assess three types of deliverables: unidirectional information delivery; bidirectional service delivery (interactive and integrative); and a participative mode of communication (Purian, 2014). Respectively, the index in this study was designed to measure the quantity of information items on the Internet website of the local authority (including databases); the presence of online services such as forms and payments; and the quantity of contact channels that allow citizens to interact with their local municipality.

The index was derived from a national list of evaluation criteria annually published online (in Hebrew) by Ministry of Finance since 2005 (MOF, 2013). The criteria and the results are discussed with the ministries to verify the relevance, accuracy, and importance of different measurements (since these discussions are internal, there are no references to cite). For the purpose of this study, the list was revised through discussions with a team of experts and policy-makers serving in the e-government department of the Accountant General at the Israeli Ministry of Finance (mainly making the necessary adjustments to the municipal-local level; adjusting also the weights). The new index items, achieved at the end of this stage, were examined by a focus group comprising three researchers and three senior IT managers in the field of local e-government after which the revised survey was approved by an additional team of four colleagues for review. The final e-government evaluation index used herein and the weight each item was assigned are presented in Table 2.

Table 2. E-government evaluation criteria used to rank websites of Israeli local authorities

Evaluation*	Measures	Scale	Weight
Unidirectional information delivery	Number of online databases	Numeric value (highest score after comparison formula** is 6)	6.5%
	Published public tenders (amount)	Numeric value (highest score after comparison formula** is 30)	5%
	Licensing information for small and medium business enterprise (SMEs)	2-point scale (yes=1 or none=0)	3.5%
	Sector accessibility (languages)	13-point scale (only Hebrew=12; additional 3.75 points for English; 6.25 for Arabic; 2.5 points for any other language; up to 25) (highest score computed to 1)	1%
Bidirectional service delivery & underlying mechanisms	Citizen records allowing for personalization or one-stop-shop	2-point scale (yes=1 or none=0)	10%
	Downloadable forms printed and sent by fax or postal mail	Numeric value (highest score after comparison formula** is 75)	5%

	Online forms, filled and sent via the website	Numeric value (highest score after comparison formula** is 8)	15%
	Application form, filled and sent online	2-point scale (yes=20 or none=0) (highest score computed to 1)	2%
	Online payments	Numeric value (highest score after comparison formula** is 10)	20%
	Online processes	Numeric value (highest score after comparison formula** is 3)	15%
	Browser compatibility	Explorer, Firefox, and Chrome***	10%
Communication and participation	Contact information: number of officials listed on the Internet website	26-point scale (0 to 25) (highest score is computed to 1)	2.5%
	E-mail: number of e-mail addresses in relation to number of officials	21-point scale (0 to 20) (highest score computed to 1)	2%
	Dissemination: newsletter subscription	2-point scale (yes=10 or none=0) (highest score computed to 1)	1%
	Forum for open discussions (content and quality are taken into consideration)	6-point scale (0 to 5) (highest is computed to 1)	0.5%
	RSS and social networks****	2-point scale (yes=10 or none=0) (highest score computed to 1)	1%

Table Notes:

* Offered here for the purpose of organization only bearing no significance in compiling this evaluation tool.

** Item graded post-factum in comparison to the highest quantity among all evaluated websites, as customary in annual evaluations of Israeli government agencies and ministries' websites.

*** As explained below, the index was used to evaluate websites at two points in time: 2007 and 2010. Chrome compatibility was only measured in 2010.

**** Social networks and blogs were surveyed in 2010 but were not included in the index due to low presence.

Items were graded according to the formula (n/n_{max}) , where "n" is the number of online forms (or payments, etc.) on a certain municipal Internet website and "n_{max}" is the highest number of online forms (or payments, etc.) found among the municipal Internet websites, after surveying all of them (the scores are relative to the "market leader", the "n_{max}" in each evaluation criteria).

5 Methodology

The study was carried out in Israel, a country with a developed economy, a member of the OECD, characterized by pioneering high-tech industries and a stock exchange that is listed as a developed market by international financial indices. These qualities suggest that our results are generalizable to other developed countries. An analysis by the OECD (McKinsey, 2011; OECD, 2012, 2015), based on UN and International Telecommunications Union data, shows that in terms of electronic infrastructures in relation to the accessibility to citizens and businesses, Israel falls in the middle of the sample. The level of broadband penetration in Israel is similar to the average among OECD countries (including five accession countries; more than 20 subscribers per 100,000 inhabitants), as is the level of its interactive services.

In the absence of any legislation and regulation of e-government prior to 2007 (Barak-Erez, 2007), local government in Israel was attractive for the study of IS development. Moreover, for many years the Israeli market of e-government was dominated by a single company. The uniformity of a single supplier, with a single basket of IT products and services offered to all, provided an ideal environment that eliminates irrelevant differences between local authorities' purchases.

Local authorities websites were identified based on published documents of the Ministry of Interior combined with a Google search. The resultant list was verified against data from the Central Bureau of Statistics (CBS). Two researchers surveyed the total of 88 available e-government websites during June-August 2007 and 160 e-government websites during June-July 2010. Website evaluation survey is a bias-free methodology of structured and unobtrusive observation, based on the pre-defined set of features (Table 2), in which surveyors systematically seek features and count their instances in each website. After ranking each website, factor analysis was carried out applying Principal Component Analysis as the extraction method, Varimax with Kaiser Normalization as the rotation method, and seven iterations for rotation convergence (Hair et al., 2005).

Subsequently, correlations and regression analyses examined the impact of external factors on website ranking. To assess the impact of external factors on resultant website ranking, official indicators of the municipalities' socioeconomic level, expenses and deficits per capita, population size, and demographics were extracted from the CBS (2006).

6 Data Analysis and Results

The index demonstrates the government's modes of interaction with other actors, specifically, the scope of communication over the Internet (between the government, the citizens, and other agents) and over time (2007 and 2010).

6.1 Factor Analysis – Recognizing the Categories

Results of the factor analysis carried out on the two surveys (2007 and 2010) are shown in Table 3. Results of both surveys indicate that the surveyed websites could be grouped into four categories. For the sake of convenience and sense-making, criteria were sorted according to 2007 factor groupings while showing equivalence among the two surveys. The factors were designed to reflect construct validity (Zeller & Carmines, 1979) from previous research (2007 and 2010). The reliability of each

factor was assessed statistically using Cronbach's alpha (see Cronbach, 1951). The categories of the two surveys are not entirely identical, but suggest potentially meaningful areas of interest in e-government evaluation. In itself, this is important information potentially bearing on extant models of e-government evaluation.

Table 3. E-government evaluation criteria according to factor analysis*

2007 factors				2010 factors				2007 grouping	2010 grouping
1	2	3	4	1	2	3	4	(88 websites)	(160 websites)
Factor 1 – Basic efficiency: Elementary practicality; unidirectional									
	X			X				Online payments (amount)	Browser compatibility:
	X					X		Static, downloadable forms (amount)	Explorer (2007), Chrome (2010), Firefox (both)
	X			-	-	-	-	Sector accessibility (languages)	
Factor 2 – Effectiveness: Sophistication breadth/latitude; bidirectional service delivery									
X				X				Citizen records	Citizen records
X				X				Interactive online forms, filled and sent in real time	Interactive online forms, filled and sent in real time
X				X				Browser compatibility: Explorer (2007), Chrome (2010)	Online processes (amount)
X					X			Online processes (amount)	Online payments (amount)
X				-	-	-	-	Online databases (amount)	Published public tenders (amount)
X				-	-	-	-	Passive dissemination: newsletter subscription	
Factor 3 – Openness: Participative communication									
	X			X				Published public tenders (amount)	Transparency: number of officials listed on the Internet website
	X				X			Browser compatibility: Firefox (both)	Invitation to contact: number of e-mail addresses in relation to number of officials
	X					X		Transparency: number of officials listed on the Internet website	Static, downloadable forms (amount)
	X					X		Invitation to contact: number of e-mail addresses in relation to number of officials	
	X						X	Forum for open discussions (content and quality are taken into consideration)	
Factor 4 – Efficiency: User satisfaction									
			X				X	Interactive application form, filled and sent online	Interactive application form, filled and sent online
			X				X	RSS and social networks	RSS and social networks
			X		-	-	-	Licensing information for small and medium business enterprise (SMEs)	Forum for open discussions (content and quality are taken into consideration)

* Factors on the left sorted by 2007 grouping; bold denotes same grouping; criteria unavailable for 2010 were excluded from the factors due to statistical reasons.

6.2 Eliminating Competing Explanations

Correlations of analyzed websites grouped by factor with the four economic keys (socioeconomic level, expenses and deficits per capita, population size, and demographics), showed no correlation with socioeconomic level or expenses (and deficits) per capita. Authorities from almost all socioeconomic levels were found in each of the four categories, and nearly all socioeconomic levels exhibited a broad range of scores. No significant difference was found in expense per capita between large, medium-sized, and small authorities, probably because of the high expenses typical of small authorities. The new e-government index is, however, correlated with the number of residents. It is also partially correlated (but with low significance) with demographics, namely, with respect to age groups. A sample of local authorities and their characteristics is presented in Table 4.

Table 4. E-government evaluation criteria groupings according to factor analysis of Israeli local authority websites (factors on the right sorted by 2010 grouping; bold denotes same grouping)

Local Authority	Socio-economic level (10 high, 1 low)	Total revenue (thousand nis)	Total expenses (thousand nis)	# of inhabitants (thousands)	Expenses per capita	Evaluation Index Rank*				
						Over all	Factor 1	Factor 2	Factor 3	Factor 4
Tel Aviv	8	4,307,450	4,384,645	390.1	11,240	17 th	1 st			
Jerusalem	4	4,025,820	3,994,265	747.6	5,343	25 th	2 nd			
Haifa	7	2,424,434	2,447,712	264.9	9,240	2 nd	3 rd			
Rishon Lezion	7	1,184,861	1,135,295	224.3	5,062	1 st		1 st		
Carmiel	6	242,039	242,200	44.4	5,455	18 th		2 nd		
Ariel	6	109,091	108,812	16.6	6,555	3 rd		3 rd		
Kohav Yair	8	53,683	54,154	11.7	4,629	23 rd			1 st	
Givat-ayim	8	305,692	312,957	49.6	6,310	6 th			2 st	1 st

Table Notes:

* Factor 1 - Elementary practicality; Factor 2 - Sophistication breadth/latitude; Factor 3 - Openness; Factor 4 - User engagement

6.2.1 Economies of Scale

Economies of scale probably play an important role in IT management. First, the fixed costs of technological infrastructure and salaries create a considerable burden on small authorities, whereas in larger municipalities IT takes up a smaller percentage of the budget. Second, the number of users in larger municipalities increases the ROI. Notwithstanding, the findings lead to the conclusion that the economic ability to allocate budget for planning and implementing IS and an Internet website is not a sufficient condition for facilitating social action in local e-government.

The distribution of the municipalities along rank order shows that socioeconomic strength does not equate effective e-government. Thus, the differences are not merely a reflection of organizational resources and budget.

6.2.2 Management Quality

The important role of qualified management in the municipality is demonstrated by the absence of correlation between the socioeconomic level and expense per capita (or deficit or surplus). Economic studies examining performance of Israeli local authorities have reached similar conclusions (e.g., Ben-Bassat & Dahan, 2008; Razin, 2002). No significant difference was found between wealthy, poor or middle-ranged authorities in their expense per capita. They all head heavily into deficit or surplus regardless of their income level whereas a balanced budget is weakly correlated with socioeconomic level (Ben-Bassat & Dahan, 2008). We therefore deduce that the distinction between municipalities lies also in their management quality.

These differences represent a shift in focus to the relationship with the machine rather than on the machine itself, suggesting perceptions of the IT artifact as a social actor. The richness of the new actions – that are made possible by mediating technologies – is evidence that the proof is in the eating rather than in the pudding, to paraphrase Cervantes in *The History of Don Quixote*. For example, Savyon, situated among authorities of the highest socioeconomic level, is ranked 37th on the overall scale. Among middle-ranging authorities, Ariel is outstanding, ranking 3rd on the overall scale, despite its relatively small population of less than 50,000 inhabitants. Other middle-ranged authorities, similar in size and economic strength to Ariel, are ranked at the low end of the overall scale. Among the three largest cities, only one is ranked high on the overall scale (Haifa, 2nd), while the richer and larger authorities lagged behind (Tel Aviv, 17th and Jerusalem, 25th).

The second website survey, carried out three years after the first (2010), makes it possible to follow the trends of change according to the theoretical framework and website classification. The comparison between 2007 and 2010 reveals consistency (relying on routines and available resources) or shift in focus (often the result of local actor's initiative). Reproductive websites were expected to follow prevailing trends among international indexes (e.g., changes in UNPAN's index through the years 2005, 2008 and 2010 as well as in the objectives of Capgemini 2009).

7 The New Typology

The factor analysis we conducted suggests that e-government websites would be better described according to the proposed framework (see Table 1): Basic efficiency (elementary practicality; unidirectional information delivery); Effectiveness (sophistication breadth/latitude; bidirectional service delivery, interactive and integrative); Efficiency (user satisfaction); and Openness (participative communication) (Purian, 2014). Classifying the analyzed websites according to these new website types yields some interesting insights. Comments below alluding to specific individuals are based on personal interviews conducted with IT managers at these municipalities after survey results were already known:

- **Basic efficiency** (elementary practicality; unidirectional information delivery): Comprising the smallest number of authorities, website in this class offer many services that can be accessed but not completed online, such as forms that the user may download, print, fill out, and fax, as well as a higher number of languages. The largest cities achieved the highest grades in this sub-index, Tel Aviv is in the lead (headed at the time by IT managers who emphasized the investment in project management methodologies), followed by Jerusalem and Haifa. This is probably due to the higher return on investment (ROI, i.e., better ability to allocate resources and increase savings).
- **Effectiveness** (sophistication breadth/latitude; bidirectional service delivery, interactive and integrative): Websites in this category offer more online processes, greater accessibility to online databases, newsletters, online forms, and other services. Rishon Lezion leads this group (as well as the general index), followed by Karmiel and Ariel, which are small municipalities headed at the time by knowledgeable mayors who were aware of technological innovations. The IS manager of the leading municipality expressed clear targets. She emphasized accessibility as a top priority and promoted projects of digital inclusion and wider service delivery. After her retirement, the municipality scored lower grades (2010 compared to 2007).
- **Efficiency** (user satisfaction): These websites offer more application forms, information on SME licensing, and social network activity, manifesting effective management. The prominent municipalities in this category vary substantially in their socioeconomic levels, such as Givatayim, Ashkelon, and Ramat Hasharon. Notwithstanding, their competent IT managers at the time shared strong professional identity and commitment to the greater good of society. They showed high levels of community-awareness and strove for effective management of their authorities.
- **Openness** (participative communication): These websites offer more communication channels and contact information of specific officials. These items are inexpensive and relatively easy to provide yet have a profound impact on the availability of authorities to their constituency. Indeed, many small municipalities (in a wide range of socioeconomic levels) scored highly in this class. Leading this category is the local council Kokhav Yair, which at the time was headed by an enthusiastic mayor who believed in the benefits of transparency and public debate. For example, valuable economic information was presented on the website,

including building plans, pictures, and interactive mapping systems (GIS) meant to encourage public participation in planning.

7.1 Social Action is Not Budget-Contingent

This study, first and foremost, shows that larger and richer municipalities do not necessarily produce better e-government systems. While their superiority in size and resources allows them to rise above common routines and applications, they typically do not. The largest cities fall in the class of "basic efficiency", often providing services only on a very basic level (e.g., printable forms rather than full online processes). In fact, this class comprises the smallest group of municipalities and represents the largest municipalities. Contact with the public, manifested by the number of communication channels, which also characterized smaller and poorer municipalities, appears to be contingent more on managerial approaches than on budget size. Hence, it is proposed that contact with the public depends on the individual designer rather than on budget constraints.

8 Summary

The theoretical rationale posits that the observations reveal the extent and nature of social action with IT. Factor analyses aimed to demonstrate the priorities and concrete choices of the local authorities' managers. Our analysis of municipal websites shows that the focus of e-government evaluation should center on factors such as basic efficiency (unidirectional); effectiveness (bidirectional); efficiency (user satisfaction); and openness (participative communication), not necessarily as evolutionary processes but rather as a simultaneous expression of purpose and outlook. The findings show that a large population size, inferring high supply and demand, poses no guarantee for effective management or a large extent of participative communication channels. In line with the proposed typology, the results can be represented in four quadrants, along two axis (Table 1).

We show, through factor analysis of e-government websites and their ranking, that the "reproductive" design would represent efficiency as it conforms to existing knowledge, such as the reproduction of systems based on prescriptive evaluation criteria, standards and common practice (factors 1 and 4). The "innovative" design, in contrast, will initiate new ways of making systems (factors 2-3). Although both the reproductive and innovative approaches facilitate communication, the innovators would do so as a way by which to improve processes and enhance managerial effectiveness for different purposes. The reproductive design, in contrast, is focused on the mere execution of routine processes.

In addition to the *design action* (reproduction vs. innovation) there is the *social action* (maintaining vs. changing the social status quo). While the reproductive design is likely to maintain the status quo by playing an instrumental role within the organizational boundaries (factor 1), the innovators aim to deliberately expand boundaries and routines (factor 3, e.g., introduce openness to IS design, enhance transparency; and factor 2, e.g., knowledge sharing, initiating collaborations). In factor 3 the number of communication channels is driven not only by economic factors but rather by innovative and inspirational local actors. Hence it is proposed that contact with the public may depend on the individual designer rather than on budget size. In this case, the design action may be intuitive and spontaneous, driven by psychological and ethi-

cal preferences, as well as a sense of purpose (social action) and social value (Purian, 2014).

Despite growing propensity towards the evaluation of participative communication channels in extant e-government evaluation indices (Purian, 2014), results of the current study seem to indicate that participative communication channels are not a sufficient measurement for evaluating e-government. Information is important, for example, if it increases transparency thereby encouraging participation, as in the case of Kochav Yair's urban planning information. By the same token, participation relies on information, rendering importance to the evaluation of the quality or purpose of provided information, even when passive and unidirectional. The distinction is illustrated in the case of small and poor municipalities that afford the development of such websites (factor 4), compared to the larger cities (factor 1). Their superiority in resources enables them to provide basic services efficiently, but they miss a social actor who decides to reproduce the design of a system, and still revoke the restrictive and alienating conditions of the status quo. The design of e-government systems can thus be seen as an authentic action that depends on the designer's intrinsic resources, and bear greater weight in e-government website design, compared to extrinsic factors that are traditionally associated with resources that allow for better IS design.

9 Discussion

Our findings support the proposition that e-government should be evaluated as a function of social action and according to the suggested framework and typology. To better understand these processes, a philosophical reasoning is needed, explaining the emerging actions.

As stated by Badiou (2005: 11-13), "nothing normative can be drawn from the simple realist examination of the becoming of things". The philosophical reasoning is consistent with Badiou's (2005) affirmations. "The structure of situations does not, in itself, deliver any truths. [...] A truth is solely constituted by rupturing with the order which supports it, never as an effect of that order" (Badiou, 2005: 11-13) and so is the distinction between the design and evaluation of municipal websites (the structure of situations), and the "order which supports it", constituted by the breach of social action that manifests social values. My claim is that when IS design is carried out as a social action (Badiou's "event"), the designer is a social actor (Badiou's "subject"), and the principles that guided the design action, either spontaneously or methodologically in different local municipalities (Badiou's "local active dimension") are the revelation of universal truths about IS design (Badiou's "generic procedure").

9.1 Research Contribution

This paper makes several important contributions:

- It offers an evaluation index based on descriptive (the quantity of information items, online services, and interactive contact channels) rather than prescriptive criteria thereby allowing for greater flexibility in assessing the effectiveness of IS design as per the goals of the designer or instigating institute;
- Using factor analysis, it shows four foci of interest in e-government design, which characterize it in relation to extrinsic and intrinsic factors;

- It suggests that the four foci of e-government evaluation represent a simultaneous expression of purpose and outlook rather than an evolutionary process;
- Based on two waves of website evaluation of Israeli local authorities, it shows that extrinsic factors are not directly manifested in the design of IS, suggesting the crucial role of the individual designer or instigator of the website.

This paper shows the importance of evaluating an e-government system based on the system's objectives. A system may seek to maximize ROI, user satisfaction, variety or quality of service, or it may strive to achieve democratic ideals (Purian, Ahituv and Ein-Dor, 2010a; Purian, 2010). System usage can therefore symbolize resistance to change versus disruption of the social order.

Bonding with the IT artifacts probably impacts the nature of further use, experience, design and evaluation.

Capturing important relationships between citizens and governments, IS evaluation would primarily serve as a way of generating a more "coherent and consistent" (Henfridsson, 2014: 357) narration of the worldwide practice of communication between users and organizations.

As proposed by Henfridsson (2014), our intellectual endeavor cannot start in measures and weights by which to assess, in our case, information systems (IS). The evaluation of these systems would be seen as an "input in the process of generating new and powerful accounts of the digital age, rather than as a summative evaluation [of the system resulting from the criteria]" as proposed by Henfridsson (2014: 357).

The current results contribute to extant literature by offering a new outlook, beyond the traditional tendency to "explain innovation using economic-rationalistic models" (Fichman, 2004: 315). We show that driving forces other than budget affect the readiness and willingness of local authorities to plan and implement IS in a collaborative and open manner.

These results suggest that evaluation criteria in IS should not focus merely on technology and prescriptive criteria but should rather be associated with social values, social actions, and ethically committed individuals. The evaluation of websites in terms of productivity, pragmatically exploiting the economic value of the IS, is thus misleading.

Beyond the pragmatic preferences, this paper indicates the extent to which individuals use IS to change their reality and create a different one altogether.

9.2 Future Study

The proposed framework implies that a normative, universal pattern does, indeed, exist for IS design, and can be fulfilled spontaneously and intuitively as an authentic expression of individuals (B's generic procedure). Factor analysis revealed a new underlying typology of e-government websites, suggesting to view e-government IS design as a tool in the discourse of social action. A theoretical framework encompassing this notion, such as the one we propose herein, would allow IS scholars and practitioners to increase their collective understandings of (1) how IT artifacts are conceived, constructed, and implemented, (2) how IT artifacts are used, supported, and evolved, and (3) how IT artifacts impact (and are impacted by) the contexts in which they are embedded.

System usage can symbolize resistance to change versus disruption of the social order. In relation to ideas expressed by both Habermas (1984) and Popper (1986), in

the subjectively-existing-but-material world of man-made entities, system usage is seen as a social action. Different emotions of different actors are expected to emerge in this interaction (Schwarz & Chin, 2007). Therefore there is a need to understand our "psychological counterparts" (Schwarz & Chin, 2007: 230) when using the system. If communication is dependent on the user's mental representation of the IT artifact (Burton-Jones & Straub, 2006; Cenfetelli et al., 2008), it would be useful to understand our psychological state when using the system. Our ability to bond with IT artifacts probably impacts the nature of further use, experience, design and evaluation (Al-Natour & Benbasat, 2009; Benbasat, 2010).

The value of information and the meaning of communicating in a networked world are among the most tempting challenges for researchers today and the framework proposed here can be taken on. Deeper analysis of organizational processes is required in order to identify those actors or agents who lead to change. Further research clearly is also needed to assess the validity and reliability (Zeller & Carmines, 1979; Cronbach, 1951) of the e-government evaluation index proposed in this study.

The proposed framework recognizes the need for responsibility for the other in e-government. However, further research is needed to understand the extent and manner by which a nation appears to exercise social responsibility. Taking into account the social impact of e-government, understanding the underlying causes or drivers of this change would be crucial. We call upon further research to do so. Deeper analysis of organizational processes is required in order to identify those actors or agents who lead change.

References

- Al-Natour, S., & Benbasat, I. (2009). The adoption and use of IT artifacts: A new interaction-centric model for the study of user- artifact relationships. *Journal of the Association for Information Systems*, 10(9), 661–685.
- Amit, R., & Schoemaker, P. J. . (1993). Strategic assets and organizational rent. *Strategic Management Journal*, 14, 33–46.
- Andreua, R., & Ciborrab, C. (1996). Organisational learning and core capabilities development: the role of IT. *Journal of Strate*, 5(2), 111–127.
- Avgerou, C., & Mcgrath, K. (2007). Power, Rationality, and the Art of Living Through Socio-Technical Change. *MIS Quarterly*, 31(2), 295–315.
- Badiou, A. (2005). *Being and Event*. London.
- Barak-Erez, D. (2007). Administrative Law in the Age of the Electronic State. *Hamishpat*, 24, 57–65 (in Hebrew). Retrieved from www.tau.ac.il/law/barakerez/articals/BE2.pdf
- Barthes, R. (1964). *Elements de semiologie* (Editions d.).
- Benbasat, I. (2010). HCI research: Future challenges and directions. *AIS Transactions on Human-Computer Interaction*, 2(2), 16–21.
- Ben-Bassat, A., & Dahan, M. (2008). *Municipal Crisis* (No. 16). Jerusalem.
- Burton-Jones, A., & Straub, D. (2006). Reconceptualizing system usage: An approach and empirical test. *Information Systems Research*, 17(3), 228–246.
- Capgemini. (2004). *Online Availability of Public Services: How is Europe Progressing? Web Based Survey on Electronic Public Services. Report of the 5th Measurement, October 2004. Screening*. Retrieved from http://ec.europa.eu/information_society/eeurope/i2010/docs/benchmarking/online_availability_2006.pdf
- CBS. (2006). Local Authorities in Israel 2006. Publication #1315, financial data updated to 2006. Jerusalem: Research Department, the Senior Devision of Municipal Management, Ministry of the Interior. Retrieved from www.cbs.gov.il/publications/local_authorities2006/excel/p_libud.xls
- Cenfetelli, R. T., Benbasat, I., & Al-Natour, S. (2008). Addressing the What and How of Online Services: Positioning Supporting-Services Functionality and Service Quality for Business-to-Consumer Success. *Information Systems Research*, 19(2), 161–181. doi:10.1287/isre.1070.0163
- Chatterjee, S., & Sarker, S. (2013). Infusing Ethical Considerations in Knowledge Management Scholarship: Toward a Research Agenda. *Journal of the Association for Information Systems*, 14(8), 452–481.
- Ciborra, C. U. (1997). De Profundis? Deconstructing the concept of strategic alignment. *Scandinavian Journal of Information Systems*, 9(1), 67–82.
- Ciborra, C. U. (2004). Encountering information systems as a phenomenon. In C. Avgerou, C. Ciborra, & F. Land (Eds.), *The social study of information and communication technology: Innovation, actors, and contexts* (pp. 17–37). Oxford University Press.
- Cronbach, L. . (1951). Coefficient alpha and the internal structure of tests. *Psychometrika*, 16, 297–334.

- Fountain, J. E. (2001). *Building the Virtual State: Information Technology and Institutional Change*. Brookings Institution Press.
- Gartner. (2000). *Key issues in e-government strategy and management*.
- Gronlund, A., & Horan, T. . (2004). Introducing E-Gov: History, Definitions, and Issues. *Communications of the Association for Information Systems, 15*, 713–729.
- Habermas, J. (1984). *Theory of Communicative Action: Reason and the Rationalization of Society* (p. Vol. 1). London: Heinemann.
- Hair, J. ., Black, B., Babin, B., Anderson, R. ., & Tatham, R. . (2006). *Multivariate Data Analysis* (6 edition.). Upper Saddle River, NJ.: Prentice-Hall.
- Henfridsson, O. (2014). The power of an intellectual account: developing stories of the digital age. *Journal of Information Technology, 29*(4), 356–357. doi:10.1057/jit.2014.18
- Henig, M. I., & Buchanan, J. T. (1996). Solving MCDM problems: Process concepts. *Journal of Multi-Criteria Decision Analysis, 5*(1), 3–21. doi:10.1002/(SICI)1099-1360(199603)5:1<3::AID-MCDA85>3.3.CO;2-Y
- Howlett, M. (2011). Public Managers as the Missing Variable in Policy Studies: An Empirical Investigation Using Canadian Data. *Review of Policy Research, 28*(3), 247–263.
- Husserl, E. (1970). *The Crises of European Sciences and Transcendental Phenomenology: An Introduction to Phenomenological Philosophy*. (D. Carr, Ed.) (p. 405). Northwestern University Press.
- Irani, Z., Al-Sebie, M., & Elliman, T. (2006). Transaction Stage of e-Government Systems: Identification of its Location & Importance. In *Proceedings of the 39th Hawaii International Conference on System Sciences* (pp. 1–9). Retrieved from <http://bura.brunel.ac.uk/bitstream/2438/4486/1/250740082c.pdf>
- Irani, Z., Love, P., & Jones, S. (2008). Learning lessons from evaluating eGovernment: Reflective case experiences that support transformational government. *Journal of Strategic Information Systems, 17*(2), 155–164. doi:10.1016/j.jsis.2007.12.005
- Jorgensen, D. J., & Cable, S. (2002). Facing the Challenges of E-government: A Case Study of the City of Corpus Christi, Texas. *SAM Advanced Management Journal, 67*, 15–21.
- Kunstelj, M., & Vintar, M. (2004). Evaluating the progress of e-government development : A critical analysis. *Information Polity, 9*, 131–148.
- Lévinas, E. (n.d.). *Dieu et la Philosophie in De Dieu qui vient a l'idee. 1992* (Librairie.). Paris.
- Lévinas, E. (1991). L'Ontologie est elle fondamentale? In *Entre nous*. Paris: Grasset.
- McKinsey. (2011). *The Impact of the Internet on the Israeli Economy. Technology* (pp. 1–57). Tel Aviv. Retrieved from <http://e-conomy.co.il/report/e-conomyEnglish.pdf>
- Mingers, J., & Walsham, G. (2010). Toward Ethical Information Systems: The Contribution of Discourse Ethics. *MIS Quarterly, 34*(4), 833–854.
- MOF. (2013). E-government Report. *Israel Government Portal*. Retrieved from <http://www.gov.il/FirstGov/BottomNav/MemshalZamin/Report>
- Mosse, B., & Whitley, E. a. (2009). Critically classifying: UK e-government website benchmarking and the recasting of the citizen as customer. *Information Systems Journal, 19*(2), 149–173. doi:10.1111/j.1365-2575.2008.00299.x
- OECD. (2012). *Internet Economy Outlook* (p. 296). doi:10.1787/9789264086463-en

- OECD. (2015). Country data: Israel. *OECD Data*. Retrieved from <https://data.oecd.org/israel.htm#profile-innovationandtechnology>
- Paivarinta, T., & Saebo, O. (2006). Models of E-Democracy. *Communications of the ACM*, 17, 818–840.
- Popper, K. (1986). *Unended Quest an Intellectual Autobiography*. Glasgow: Fontana.
- Porter, M. E., & Kramer, M. R. (2006). The Link Between Competitive Advantage and Corporate Social Responsibility. *Harvard Business Review*, 84(12), 78–92.
- Purian, R. (2014). A decade of e-government indexes: The emerging mode of participative communication. *Systems, Signs & Actions: An International Journal on Information Technology, Action, Communication and Workpractices*, 8(1), 43–75. Retrieved from www.sysiac.org
- Purian, R., Ahituv, N., & Ein-Dor, P. (2010). Indexing and Theorizing Local E-Government. In *UK Academy for Information Systems Conference Proceedings* (p. Paper 35). Oxford. Retrieved from <http://aisel.aisnet.org/ukais2010/35>
- Razin, E. (2002). *Fiscal Disparities Among Local Authorities in Israel in the Year 2000*. Jerusalem.
- Schwarz, A., & Chin, W. (2007). Looking Forward: Toward an Understanding of the Nature and Definition of IT Acceptance. *Journal of the Association for Information Systems*, 8(4), 230–243.
- Scott, J. K. (2005). Assessing the Quality of Municipal Government Web Sites, 37(2).
- UN. (2005). *UN Global E-government Readiness Report 2005 From E-government to E-inclusion*. *Governance An International Journal Of Policy And Administration* (pp. 1–495). Retrieved from <http://unpan1.un.org/intradoc/groups/public/documents/un/unpan021888.pdf>
- UN. (2008). *UN E-Government Survey 2008: From e-Government to Connected Governance*. New York. United Nations. Retrieved from <http://unpan1.un.org/intradoc/groups/public/documents/un/unpan028607.pdf>
- UN. (2010). *E-Government Survey 2010*. New York (pp. 1–140). New York: UN Publishing Section. Retrieved from http://www2.unpan.org/egovkb/global_reports/10report.htm
- Warkentin, M., Gefen, D., Pavlou, P. ., & Rose, G. . (2002). Encouraging citizen adoption of e-government by building trust. *Electronic Markets*, 12(3), 157–162.
- Weber, M. (1997). The Theory of Social and Economic Organization. In *Volume 93493 of Free Press Paperback* (reprint., p. 448). Simon and Schuster.
- Weill, P., Subramani, M., & Broadbent, M. (2002). Building IT infrastructure for strategic agility. *MIT Sloan Management Review*, 44(1), 57.
- Wimmer, M., Codagnone, C., & Janssen, M. (2008). Future e-government research : 13 research themes identified in the eGovRTD2020 project. In *Proceedings of the 41th Hawaii International Conference on System Sciences* (pp. 1–11).
- Zeller, R., & Carmines, E. (1979). *Reliability and Validity Assessment* (illustrate., p. 72). Issue 17 Quantitative Applications in the Social Sciences: SAGE.