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Strategic Orientation and Effects of E-Administration: Findings from the Miles and Snow Framework

Liliana Hawrysz

Department of Process Management, Faculty of Management Warsaw University of Technology, 00-661 Warszawa, Poland; liliana.hawrysz@pw.edu.pl

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Abstract: Much has been written about the strategic orientation of public administration organizations (prospecting, defending, reacting, and analyzing) and their consequences for organizational effects, but little is dedicated to e-administration. Is the provision of services using IT affecting the adoption of strategic orientation and its effects? The paper is dealing with e-administration issues, specifically in terms of the impact of the Miles and Snow strategic orientation on e-administration effects. To measure e-administration effects, the author's personal tool using the Common Assessment Framework (CAF) criterion has been proposed. The data collection was conducted using the Computer-Assisted Web Interview (CAWI) method, in the period from November 2017 to January 2018. Two hundred and twenty-six Polish organizations took part in the study. The objective of this study, i.e., assessing the impact of strategic orientation and e-administration effects, was achieved by using the Ordinary Least Squares (OLS) method. It is indicated that the Defender orientation is positively associated with the effects of e-administration.

Keywords: strategic orientation; effects; e-administration; Miles and Snow framework

1. Introduction

Strategic management has become more important in public administration because of the increased emphasis that was placed on attaining higher levels of performance (Poister et al. 2010; Walker 2013). A focus on goals, planning, and innovation underlies reforms related to New Public Management, while the citizens' expectations for public services are still rising, thereby requiring more strategic responses to meet these needs (Harrow 2000; Walker et al. 2013).

The correct strategy design requires familiarity with the sector's specificity, because an organization's strategy must be embedded in a particular context of its environment, thereby determining the key assumptions adopted for the strategy's design and for planned activities' implementation (Wronka-Pośpiech and Frączkiewicz-Wronka 2016). Designing the strategy for the effective functioning of e-administration requires the involvement of the general populace, creating and strengthening the role of public administration staff, procedural and organizational changes/improvements, as well as transforming and adapting the legal background to new circumstances. All organizations, especially those effectively using IT, require a strategic approach and necessitate the creation of short-, medium-, and long-term strategies. However, due to the unpredictability and continuous evolution of this field and the IT involved, these strategies must be flexible, adaptable, and always ready for renewal. As increasing numbers of public services become digital by default, the efficiency of public spending on IT solutions should be maximized by sharing and recycling known solutions (Nograšek and Vintar 2015). The research on strategy can be broadly divided into two categories: one that prioritizes the analysis of the external environment (as in the Porter's model) and the other, taking greater consideration of the internal environment (as in the Resource Based View model). The adaptive cycle process of Miles and Snow is in the middle of these issues (Miles et al. 1978).

Some researchers claim that the general framework offered by Miles and Snow is appropriate with some adaptations to public organizations (Boyne and Walker 2004). Miles and Snow argue that the organization's success depends on the external (environment) and internal (strategy, structure, processes, and ideology) process (Miles et al. 1978). They propose four strategic orientations—prospecting, defending, reacting and analyzing (Meier et al. 2010). This paper takes into consideration the framework offered by Miles and Snow to indicate the strategic orientation of e-administration. The indicated strategic orientations were paired with e-administration effects. To measure e-administration effects, the author's personal tool using the Common Assessment Framework (CAF) criterion has been proposed.

Based on the literature, it is frequently claimed that the availability of an assessment framework is a necessary condition for advancing e-administration proper implementation. Most e-administration appraisal models address the e-service dimension of e-administration that focuses on the services provided by the government to the citizens on the Internet. This gives a very narrow perspective to e-administration while ignoring a key dimension—the e-administration, that highlights the importance of modernizing the public administration, increasing administration productivity, and transforming its internal processes. The majority of these models do not take into consideration the opinion of the civil servants involved in such e-government programs, a key stakeholder that affects their success. That is why in our research we use the CAF model. The CAF model enables self-assessment by public administration units, and also serves as a tool to support international cooperation and exchange of experience. It is also a starting point for measuring and conducting comparisons between public administration organizations. The model primarily focuses on assessing management, performance, and identifying its organizational evidence. Therefore, it is to contribute to the flexible response to the changing needs of citizens (Vakalopoulou et al. 2013).

This paper was mainly focused on providing public services through e-administration practices, because it not only means a different type of administration but is mainly a different method of communicating with stakeholders (Scholl et al. 2007; Verma and Mishra 2009; Maj 2018a, 2018b). Secondly, it focuses on stakeholder's needs and expectations, with emphasis on their active role in the process of designing and providing the services (Bryson et al. 2007; Florentina 2013; Hawrysz and Maj 2017). Thirdly, thanks to e-administration practices, it becomes more open, whereas mechanisms and ideas from the administration's interorganizational relationships become more absorbed and used more effectively, while environment players act as partners for administrative entities (Bonsón et al. 2012). Fourth, thanks to e-administration practices, the quality, availability, and economic effectiveness of the service provision process improve (Pina et al. 2010). Fifth, the omnipresence of technologies prevents them from being ignored in any dimension of private and occupational life. It is not without significance that such a method of providing public services (through e-administration practices) is relatively new and unexplored (Del Sordo et al. 2017). In this paper, e-administration is understood as the use of Information and communication technologies (ICT) by public sector organizations in relation to organizational change, as well as new abilities to improve the services provided by these organizations.

This paper is organized in the following manner. The next sections include a review of the subject literature, especially of literature concerning the multi-dimensional model of measuring the effects of e-administration and strategic orientation. The review constitutes a basis for the formulation of the research hypothesis. The next section, Section 4, includes a description of the sample. The empirical results along with a discussion and conclusions are presented in the last sections of this paper.

2. Multidimensional Model of Measuring Effects of E-Administration

When analyzing the effects of applying IT systems in the public administration, it is possible to observe the lack of development in the measurement of specific dimensions (Petter et al. 2008). Researchers mainly focused on single dimensions, e.g., on the working environment (Petter et al. 2008; Prybutok et al. 2008), using the following indicators: productivity, efficiency, and task improvement (Adams et al. 1992; Segars and Grover 1993; Gable et al. 2008). Researchers also analyzed e-administration systems from a citizen's point of view (Wang and Liao 2008) and rated the availability and variety of

online e-administration information and services (Teo et al. 2009; Connolly et al. 2010). In some papers, researchers applied a single-dimension measure (Petter and McLean 2009) that does not take into account the complexity of the services' provision process (Marwa and Zairi 2009). Therefore, further studies focused on developing the measures of e-administration effects, especially with an approach that encompasses the multi-dimensional nature of these effects, are required. The e-administration effects' measurement is not well understood among practitioners or scientific communities (Heeks 2008) and the development of success measures (Korneta 2019) is an urgent task that would allow for technology investments justifying their public value (Yildiz 2007).

Taking into consideration the need to include many dimensions to measure e-administration effects, it is proposed to use the CAF model's part that is widely known (and accepted) in public administration. It takes into consideration three perspectives, i.e., the citizen, society, and employee perspectives.

Most of the changes occurring in e-administration result from the society's and citizens' expectations. However, as subsequent branches of e-services grow, their designers are aware that they often do not know what e-administration citizens want. IT tools providing new methods of delivering information and citizen consulting, but determining citizen and the society's preferences concerning the e-services' structure and contents, is a real challenge for Organisation for Economic Co-operation and Development (OECD) states. Nowadays, we are expecting open, flexible, and collaborative e-administration services, which are needed to empower citizens and the society (Salvati 2017). The call for holistic e-administration recognizes the problem of fragmentation that occurs when citizens and businesses need to negotiate with multiple agencies to receive public services. The level of public service effectiveness usually rises with the level of collaboration and integration (Chen et al. 2019).

This is the reason why increasing public participation, transforming administrative bureaucracies (Cumbie and Kar 2016; Ma and Zheng 2018; Lee-Geiller and Lee 2019), promoting transparency (Bearfield and Bowman 2017), and improving service provision (Zheng 2017) have become very important indicators of e-administration effects. Henceforth, the measurement of the "citizen" perspective features the use of four indicators: identification of ways to improve quality, flexible adaptation to the citizens' changing needs, engaging citizens in the process of designing/redesigning/providing the services, as well as care for the services' transparency.

The development of a society-focused approach requires co-operation. Due to the fact that services are becoming more complex, efficiency requires greater co-operation between agencies in the following fields: cross-boundary collaboration and integration for improving the services' quality, providing the highest quality of services at the lowest possible cost, eliminating unnecessary features, and avoiding duplication of the same initiatives (Lee et al. 2011; Kuk and Janssen 2013; Nograšek and Vintar 2014). Accordingly, the measurement of the "society" perspective featured the use of the following four indicators: coordination of the efforts of different units to improve the quality of services, providing the highest quality of services at the lowest possible cost, elimination of unnecessary formalities, and avoiding repetition of the same initiatives.

The consideration of the employees' role is a complement to the two aforementioned perspectives. Effective e-administration functioning requires broadening employee power to aid citizens in the quickest and most suitable manner by accelerating administrative processes and optimizing governmental solutions. State officials are to effectively collaborate with other departments, rely on the newest information, use the available resources in an optimal manner, and utilize the most adequate support (Rao 2011). These are not simple activities and employees are faced with completely different requirements than in the past. This means that the implementation of the e-administration concept requires the working environment's redesigning. The postulated manner of e-administration functioning requires providing an atmosphere based on openness, trust, friendly relations, and employee engagement in an organization (Dukić et al. 2017; Ejdys 2018; Sagarik et al. 2018).

Accordingly, the measurement of the "employee" perspective featured the use of the following four indicators: care for employee engagement, care for improving relations between employees, care for increased trust among employees, and flexible adaptation to the employees' changing needs.

The construct is mainly focused on the active inclusion of all interested parties in the organization's management process. The construct takes into consideration the perspective of the entire organization and its principal advantage is the ease of application and the principal disadvantage—subjectivity.

Having a defined construct for analyzing the effects of e-administration, we can deal with the consideration of strategic orientation and the impact of the aforementioned effects.

3. Strategic Orientation

Due to the fact that strategic management in public administration is becoming increasingly important in recent years (Poister et al. 2010; Walker 2013), we expected that a search of literature on this topic would provide a lot of papers. Indeed, a Web of Science search of paper titles and abstracts using "strategic" management undertaken in March 2020 identified around 2708 papers in the Public Administration section. However, relatively few examine Miles and Snow as well as performance (Meier et al. 2008, 2010; Andrews et al. 2009a, 2009b, 2011; Boyne and Walker 2010; Walker et al. 2013; Flink 2015; Staples and Dalrymple 2016; Cheon and An 2017; Pasha et al. 2018; Kim and Berry 2018; Lim et al. 2018). The strategic archetypes of prospector, defender, analyzer, and reactor are the best-known aspects of the Miles and Snow framework (Walker 2013). Each strategic orientation leads to a different response to, what the authors specify as, entrepreneurial, engineering, and administrative problems (Sebaa et al. 2009; Wolniak et al. 2019).

Prospectors are organizations that are continuously looking for market opportunities and regularly experiment with potential responses to emerging environmental trends (Miles et al. 1978). In the public sector, prospectors often try to increase budgets and pioneer the development of new products and services (Andrews et al. 2011). The prospectors' preferred strategy processes are based on hunches, intuition, and a reliance on the push and pull of organizational politics (Walker 2013). Prospectors are poised to expand or contract their activities, depending on the opportunities or threats that they face, so the planning cycle is seldom systematic or complete (Andrews et al. 2011). For prospectors, the goal is to be the first to market a new product, with innovation as the key to their success. They are focusing on their efforts on growth and innovation more consistently than other strategic types (Sebaa et al. 2009). The increased public administration effectiveness requires the adoption of criteria applied broadly in the economic (Rokita-Poskart and Mach 2019) network market, i.e., increasing the number of organizations that exchange information electronically using cross-organizational IT systems and connection with supplier, distribution, and customer systems, and the resulting effects of building relations with various stakeholders (Tan et al. 2007; Gatautis et al. 2009; Verma and Mishra 2009; Lips 2013; Maj 2015). The effectiveness of these activities requires thorough redesigning, starting with the workplace, throughout the organization and ending at the organizational level (Kassen 2014). The core of strategy orientation of prospectors is active market monitoring, i.e., in the case of e-administration of the changing needs of stakeholders, and then adapting to them. We therefore propose that:

Hypothesis 1 (H1). *A prospector orientation is positively related to the effects of e-administration.*

Defenders are organizations that look at the development of new products in a conservative manner. They usually compete on price and quality rather than new products or markets and are focusing on improving the efficiency of their existing operations. Public sector defenders are likely to focus on low-risk strategies designed to increase the efficiency of their existing services (Andrews et al. 2011). Defenders adopt a centralized structure to maintain control over efficient services that focus on core business or service goals. Defenders undertake a lot of formal planning, collect and analyze large amounts of data on service needs, evaluate options to meet those needs, and use advanced techniques to balance the costs and benefits of each option (Walker 2013). Defenders plan intensely and in detail and carefully evaluate any proposed changes in technology and procedures before taking action (Andrews et al. 2011). Defender organizations usually direct their products or services to a clearly

defined market and emphasize a stable set of products and customers. They constantly strive to update their current technology to maintain efficiency. Innovative change, growth, and diversification are achieved incrementally through market penetration (Sebaa et al. 2009). Due to the specifics of e-government functioning, settling on clearly defined internal structure and processes, as well as formal planning, collecting, analyzing, and evaluating large amounts of data on service needs, it seems to us that a defender orientation is positively related to the effects of e-administration:

Hypothesis 2 (H2). *A defender orientation is positively related to the effects of e-administration.*

Analyzers constitute a midway category between prospector and defender. Analyzers adopt intermediate structures and processes that depend on the emphasis on proactive or conservative strategy (Walker 2013). Due to the interest in e-administration, which has to deal with the complexity of the services' provision process (Marwa and Zairi 2009) and with the conflicting and competing goals (Pollitt and Bouckaert 2004; Kickert 2007), it is unlikely that this "composite mix" strategic type would be positively related to performance. Analyzers exhibit characteristics of both Defenders and Prospectors in that they are opportunistic in widening their spectrum and reach by quickly following in the footsteps of first movers while also relying on a strong position in a few essential product/service categories or among a firm core of customers. In a strictly ordered world of public money, opportunism is not a safe orientation, and therefore desirable and effective.

Hypothesis 3 (H3). *An analyzer orientation is not positively related to the effects of e-administration.*

Reactors are characterized by an absence of strategy, including inconsistent structures and processes. Reactors in the public sector do not have their own strategy but are waiting for an impulse or coercion of external forces, such as regulator interventions (Andrews et al. 2011). Reactor organizations do not take the lead, they rather react to market pressures and demands. They do not seek to innovate or to be the first-to-market and have little involvement in research and development (Sebaa et al. 2009). Reactors do not have a set of mechanisms that allow them to react consistently to the environment (Miles et al. 1978). However, if we consider the openness that e-administration should demonstrate in its interaction with stakeholders, the reactor orientation may be positively related to effects. We therefore propose that:

Hypothesis 4 (H4). *A reactor orientation is positively related to the effects of e-administration.*

4. Materials and Methods

The proper study was focused on public entities that provide electronic administrative services. The research sample was established based on the Act of 24 July 1998, which introduced the three-level territorial division of the state. According to the act, the units of the primary three-level territorial division in Poland include municipalities, powiats, and voivodeships. According to the data available as of 30 September 2017, Poland features 2803 entities that mostly employ less than 9 people. However, the study only featured organizations that hired more than 10 employees. This method of narrowing the population was aimed at identifying the capabilities that are intentionally embedded in the processes and have no effect of spontaneous multi-directional interaction taking place in micro-organizations. In such organizations, the problem of loss of conveyed information (especially along hierarchic levels) does not occur in principle, therefore the organizations do not have to develop the management notification mechanisms and procedures (Wolniak et al. 2019). After such narrowing, the study sample featured 634 entities. The request for taking part in the study was sent via a cover letter to persons holding the highest positions in each of these organizations. Two hundred and eighty-eight organizations out of a sample of 634 entities took part in the study. With a fraction of 0.5 and maximum error of 5%, the obtained study sample meets the minimum sample condition. Due to the lack of responses or their inconsistency, the sample ultimately featured 226 public administration organizations.

The data collection was conducted with the use of the Computer-Assisted Web Interview (CAWI), in the period from November 2017 to January 2018.

All scales for measuring particular constructs are seven-point Likert scales, from 1—"I strongly disagree" to 7—"I completely agree". The survey questionnaire consisted of twenty-four questions. Twelve questions concerned three dimensions—citizen, society, and employee (four questions for each dimension)—described in detail in the multi-dimensional model of measuring effects of e-administration. Twelve questions concerned strategic orientation—prospector, defender, analyzer, and reactor (three questions for each orientation).

The paper was mainly focused on providing public services through electronic administration practices in Poland, because due to its social and economic situation prior to 1990, Poland has for many years been behind other European states in terms of implementing the e-administration concept. Admittedly, the first talks about e-administration in Poland commenced after the presentation of the European Committee's report of 1994, but specific action towards building the bases of an information society in Poland were taken in 2000. However, the action featured a lack of coordination of the executed projects (Bebenek 2016) and the projects themselves were treated only as technological changes, which contributed to widening the gap between Poland and other EU states. The report on state management processes' computerization published by the UN in 2012 demonstrated that Poland was in the forty-seventh spot, whereas in 2010, it ranked forty-fifth, and in 2008—thirty-third, even despite the enormous EU resources contributed to the related investments. Poland was ranked behind Kazakhstan, Croatia, or Russia, the starting situations of which were difficult. Secondly, for many years Poland lacked a complex, multi-dimensional, and far-reaching approach. It was decided to implement numerous discipline-specific solutions applicable to particular fields of public administration activity, which functioned in isolation from systems that required co-operation. This solution responded to the need of particular public administration sectors; however, it did not ensure the sufficient interoperability of the systems. Providing services as part of e-administration requires establishing multi-directional co-operation of units regulated by separate legal acts and possessing systems that are incompatible and unable to establish mutual communication. The aforementioned factors and other, not mentioned in the paper, lead to rapid transformations in the Polish e-administration in recent years, which makes e-administration a very interesting and relatively unexplored research field.

5. Results

To achieve the objective of this study, which is assessing the influence of strategic orientation and effects of e-administration, therefore, the method of Ordinary Least Squares (OLS) was used, as it is the most popular method used in estimating the parameters of the multiple regression models and normally fit for explaining cross-sectional data as in this research. Gujarati asserted that the estimators of OLS are exclusively specified based on observable (X, Y) quantities which could be simply calculated (Gujarati 2004). Studies have used OLS regression (Lee et al. 2001). Therefore, the OLS model that depicts the association between the regress and the regressors is regarded as follows:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \ldots + \beta_k X_k + U$$

The model is linear in its parameters. Empirically, in this study, the model describes strategic orientation and effects of e-administration. Thus, to achieve this objective, the model is estimated as

$$\text{Citizen 1} = \beta_0 + \beta_1 \text{Prospector} + \beta_2 \text{Defender} + \beta_3 \text{Analyzer} + \beta_4 \text{Reactor} + \text{u}$$

$$\text{Citizen 2} = \beta_0 + \beta_1 \text{Prospector} + \beta_2 \text{Defender} + \beta_3 \text{Analyzer} + \beta_4 \text{Reactor} + \text{u}$$

$$\text{Citizen 3} = \beta_0 + \beta_1 \text{Prospector} + \beta_2 \text{Defender} + \beta_3 \text{Analyzer} + \beta_4 \text{Reactor} + \text{u}$$

$$\text{Citizen 4} = \beta_0 + \beta_1 \text{Prospector} + \beta_2 \text{Defender} + \beta_3 \text{Analyzer} + \beta_4 \text{Reactor} + \text{u}$$

where Citizen 1 represents the identification of ways to improve quality; Citizen 2 represents the flexible adaptation to the changing needs of citizens; Citizen 3 represents engaging citizens in the process of designing/redesigning/providing services; Citizen 4 represents care for the transparency of services provided. $ß_0, ß_1, ß_2, ß_3, ß_4$ are the parameters to be estimated while u is the error term, and u has a normal distribution with the expected value of 0 and variance of σ^2.

$$\text{Society 1} = \beta_0 + \beta_1 \text{Prospector} + \beta_2 \text{Defender} + \beta_3 \text{Analyzer} + \beta_4 \text{Reactor} + \text{u}$$

$$\text{Society 2} = \beta_0 + \beta_1 \text{Prospector} + \beta_2 \text{Defender} + \beta_3 \text{Analyzer} + \beta_4 \text{Reactor} + \text{u}$$

$$\text{Society 3} = \beta_0 + \beta_1 \text{Prospector} + \beta_2 \text{Defender} + \beta_3 \text{Analyzer} + \beta_4 \text{Reactor} + \text{u}$$

$$\text{Society 4} = \beta_0 + \beta_1 \text{Prospector} + \beta_2 \text{Defender} + \beta_3 \text{Analyzer} + \beta_4 \text{Reactor} + \text{u}$$

where Society 1 represents coordinating the efforts of different units to improve the quality of services; Society 2 represents providing the highest quality services at the lowest possible costs; Society 3 represents the elimination of unnecessary formalities; Society 4 represents avoiding repetition of the same initiatives. $ß_0, ß_1, ß_2, ß_3, ß_4$ are the parameters to be estimated while u is the error term, and u has a normal distribution with the expected value of 0 and variance of σ^2.

$$\text{Employee 1} = \beta_0 + \beta_1 \text{Prospector} + \beta_2 \text{Defender} + \beta_3 \text{Analyzer} + \beta_4 \text{Reactor} + \text{u}$$

$$\text{Employee 2} = \beta_0 + \beta_1 \text{Prospector} + \beta_2 \text{Defender} + \beta_3 \text{Analyzer} + \beta_4 \text{Reactor} + \text{u}$$

$$\text{Employee 3} = \beta_0 + \beta_1 \text{Prospector} + \beta_2 \text{Defender} + \beta_3 \text{ Analyzer} + \beta_4 \text{Reactor} + \text{u}$$

$$\text{Employee 4} = \beta_0 + \beta_1 \text{Prospector} + \beta_2 \text{Defender} + \beta_3 \text{Analyzer} + \beta_4 \text{Reactor} + \text{u}$$

where Employee 1 represents the care for employee engagement; Employee 2 represents the care for improving relations between employees; Employee 3 represents the care for increased trust among employees; Employee 4 represents the flexible adaptation to the changing needs of employees. $ß_0, ß_1, ß_2, ß_3, ß_4$ are the parameters to be estimated while u is the error term, and u has a normal distribution with the expected value of 0 and variance of σ^2.

The result of the regression in Table 1 depicts that the value of the R-squared for "Citizen 1" was 55.35%, which implied that approximately 55% of the changes in Citizen 1 were caused by the independent variable, while the remaining 45% of the changes were due to other variables not specified in Model 1. The result of the regression shows that Prospector on the effects of e-administration is (coefficient = 0.556150, $p < 0.0001$), and Defender on the effects of e-administration model show (coefficient = 0.351803, $p = 0.0005$). Variables Analyzer and Reactor have been removed from the model with the Student *t* test.

In the linear regression model, if the value of the explanatory variable (Citizen 1) changes by one unit, the expected value of the explained variable (Prospector) will change by the value of the coefficient (0.556150). If the value of the explanatory variable (Citizen 1) changes by one unit, the expected value of the explained variable (Defender) will change by the value of the coefficient (0.351803) ceteris paribus.

The result of the regression in Table 2 depicts that the value of the R-squared for "Citizen 2" was 62.36%, which implied that approximately 62% of the changes in Citizen 2 were caused by the independent variable, while the remaining 38% of the changes were due to other variables not specified in Model 2. The result of the regression shows that Defender on the effects of e-administration is (coefficient = 0.785115, $p < 0.0001$) and Reactor on the effects of e-administration model show (coefficient = 0.143048, $p = 0.0326$). The regression result of Analyzer depicts (coefficient = −0.152602, $p = 0.0103$) having a negative value. The variable Prospector has been removed from the model with the Student *t* test.

Table 1. Model 1: Ordinary Least Squares (OLS), using observations 1–228. Dependent variable: Citizen 1.

	Coefficient	**Std. Error**	***t*-Ratio**	***p*-Value**	
Constant	0.307856	0.313845	0.9809	0.3277	
Prospector	0.556150	0.0883406	6.296	<0.0001	***
Defender	0.351803	0.0992614	3.544	0.0005	***
Mean dependent variable	5.105263		S.D. dependent variable	1.261901	
Sum squared residual	161.4147		S.E. of regression	0.846994	
R-squared	0.553454		Adjusted R-squared	0.549484	
F(2, 225)	139.4336		*p*-value (F)	4.07×10^{-40}	
Log-likelihood	−284.1459		Akaike criterion	574.2919	
Schwarz criterion	584.5799		Hannan–Quinn	578.4428	

*** $p < 0.001$; $\widehat{\text{citizen 1}} = \underset{(0.313845)}{0.307856} + \underset{(0.0883406)}{0.556150} * \text{Prospector} + \underset{(0.0992614)}{0.351803} * \text{Defender}.$

In the linear regression model, if the value of the explanatory variable (Citizen 2) changes by one unit, the expected value of the explained variable (Defender) will change by the value of the coefficient (0.785115). If the value of the explanatory variable (Citizen 2) changes by one unit, the expected value of the explained variable (Reactor) will change by the value of the coefficient (0.143048). If the value of the explanatory variable (Citizen 2) changes by one unit, the expected value of the explained variable (Analyzer) will change by the value of the coefficient (−0.152602) ceteris paribus.

Table 2. Model 2: OLS, using observations 1–228. Dependent variable: Citizen 2.

	Coefficient	**Std. Error**	***t*-Ratio**	***p*-Value**	
Constant	1.23792	0.266207	4.650	<0.0001	***
Defender	0.785115	0.0463647	16.93	<0.0001	***
Reactor	0.143048	0.0665081	2.151	0.0326	**
Analyzer	−0.152602	0.0590068	−2.586	0.0103	**
Mean dependent variable	5.596491		S.D. dependent variable	1.051278	
Sum squared residual	94.41589		S.E. of regression	0.649230	
R-squared	0.623657		Adjusted R-squared	0.618617	
F(3, 224)	123.7339		*p*-value (F)	2.77×10^{-47}	
Log-likelihood	−223.0115		Akaike criterion	454.0229	
Schwarz criterion	467.7403		Hannan–Quinn	459.5575	

** $p < 0.01$; *** $p < 0.001$; $\widehat{\text{citizen 2}} = \underset{(0.266207)}{1.23792} + \underset{(0.0463647)}{0.785115} * \text{Defender} + \underset{(0.0665081)}{0.143048} * \text{Reactor} + \underset{(0.0590068)}{-0.152602} * \text{Analyzer}..$

The result of the regression in Table 3 depicts that the value of the R-squared for "Citizen 3" was 71.01%, which implied that approximately 71% of the changes in Citizen 3 were caused by the independent variable, while the remaining 29% of the changes were due to other variables not specified in Model 3. The result of the regression shows that Defender on the effects of e-administration is (coefficient = 0.658995, $p < 0.0001$), Reactor on the effects of e-administration model show (coefficient = 0.163939, $p = 0.0043$), and Prospector on the effects of e-administration is (coefficient = 0.148437, $p = 0.0111$). The regression result of Analyzer depicts (coefficient = −0.179726, $p = 0.0005$) having a negative value.

In the linear regression model, if the value of the explanatory variable (Citizen 3) changes by one unit, the expected value of the explained variable (Defender) will change by the value of the coefficient (0.658995). If the value of the explanatory variable (Citizen 3) changes by one unit, the expected value of the explained variable (Reactor) will change by the value of the coefficient (0.163939). If the value of the explanatory variable (Citizen 3) changes by one unit, the expected value of the explained variable (Analyzer) will change by the value of the coefficient (−0.179726). If the value of the explanatory

variable (Citizen 3) changes by one unit, the expected value of the explained variable (Prospector) will change by the value of the coefficient (0.148437) ceteris paribus.

Table 3. Model 3: OLS, using observations 1–228. Dependent variable: Citizen 3.

	Coefficient	**Std. Error**	***t*-Ratio**	***p*-Value**	
Constant	1.10777	0.225377	4.915	<0.0001	***
Defender	0.658995	0.0682294	9.659	<0.0001	***
Reactor	0.163939	0.0568785	2.882	0.0043	***
Analyzer	−0.179726	0.0505038	−3.559	0.0005	***
Prospector	0.148437	0.0579851	2.560	0.0111	**
Mean dependent variable	5.521930	S.D. dependent variable		1.011803	
Sum squared residual	67.36426	S.E. of regression		0.549620	
R-squared	0.710125	Adjusted R-squared		0.704925	
F(4, 223)	136.5740	*p*-value (F)		8.72×10^{-59}	
Log-likelihood	−184.5257	Akaike criterion		379.0513	
Schwarz criterion	396.1980	Hannan–Quinn		385.9695	

** $p < 0.01$; *** $p < 0.001$; $\widehat{\text{citizen 3}} = \underset{(0.225377)}{1.10777} + \underset{(0.0682294)}{0.658995} * \text{Defender} + \underset{(0.0568785)}{0.163939} * \text{Reactor} + \underset{(0.0505038)}{-0.179726} * \text{Analyzer} + \underset{(0.0579851)}{0.148437} * \text{Prospector}.$

The result of the regression in Table 4 depicts that the value of the R-squared for "Citizen 4" was 68.59%, which implied that approximately 68% of the changes in Citizen 4 were caused by the independent variable, while the remaining 32% of the changes were due to other variables not specified in Model 4. The result of the regression shows that Defender on the effects of e-administration is (coefficient = 0.598966, $p < 0.0001$), and Prospector on the effects of e-administration model show (coefficient = 0.177482, $p = 0.0014$). Variables Analyzer and Reactor have been removed from the model with the Student t test.

In the linear regression model, if the value of the explanatory variable (Citizen 4) changes by one unit, the expected value of the explained variable (Defender) will change by the value of the coefficient (0.598966). If the value of the explanatory variable (Citizen 4) changes by one unit, the expected value of the explained variable (Prospector) will change by the value of the coefficient (0.177482) ceteris paribus.

Table 4. Model 4: OLS, using observations 1–228. Dependent variable: Citizen 4.

	Coefficient	**Std. Error**	***t*-Ratio**	***p*-Value**	
Constant	1.10733	0.194827	5.684	<0.0001	***
Defender	0.598966	0.0616190	9.720	<0.0001	***
Prospector	0.177482	0.0548396	3.236	0.0014	***
Mean dependent variable	5.317982	S.D. dependent variable		0.934110	
Sum squared residual	62.20304	S.E. of regression		0.525793	
R-squared	0.685956	Adjusted R-squared		0.683165	
F(2, 225)	245.7304	*p*-value (F)		2.58×10^{-57}	
Log-likelihood	−175.4386	Akaike criterion		356.8772	
Schwarz criterion	367.1653	Hannan–Quinn		361.0281	

*** $p < 0.001$; $\widehat{\text{citizen 4}} = \underset{(0.194827)}{1.10733} + \underset{(0.0548396)}{0.177482} * \text{Prospector} + \underset{(0.0616190)}{0.598966} * \text{Defender}.$

The result of the regression in Table 5 depicts that the value of the R-squared for "Society 1" was 46.10%, which implied that approximately 46% of the changes in Society 1 were caused by the independent variable, while the remaining 54% of the changes were due to other variables not specified in Model 5. The result of the regression shows that Defender on the effects of e-administration is (coefficient = 0.885564, $p < 0.0001$). Variables Prospector, Analyzer, and Reactor have been removed from the model with the Student *t* test.

In the linear regression model, if the value of the explanatory variable (Society 1) changes by one unit, the expected value of the explained variable (Defender) will change by the value of the coefficient (0.885564) ceteris paribus.

Table 5. Model 5: OLS, using observations 1–228. Dependent variable: Society 1.

	Coefficient	Std. Error	*t*-Ratio	*p*-Value	
Constant	0.124221	0.356409	0.3485	0.7278	
Defender	0.885564	0.0636904	13.90	<0.0001	***

Mean dependent variable	5.000000	S.D. dependent variable	1.307383
Sum squared residual	209.1161	S.E. of regression	0.961921
R-squared	0.461041	Adjusted R-squared	0.458656
F(1, 226)	193.3268	*p*-value (F)	3.60×10^{-32}
Log-likelihood	−313.6620	Akaike criterion	631.3240
Schwarz criterion	638.1827	Hannan–Quinn	634.0913

*** $p < 0.001$; $\widehat{\text{society 1}} = \underset{(0.356409)}{0.124221} + \underset{(0.0636904)}{0.885564} * \text{Defender}.$

The result of the regression in Table 6 depicts that the value of the R-squared for "Society 2" was 42.21%, which implied that approximately 42% of the changes in Society 2 were caused by the independent variable, while the remaining 58% of the changes were due to other variables not specified in Model 6. The result of the regression shows that Defender on the effects of e-administration is (coefficient = 0.842053, $p < 0.0001$) and Analyzer on the effects of e-administration model show (coefficient = 0.0848740, $p = 0.0800$). Variables Prospector and Reactor have been removed from the model with the Student *t* test.

In the linear regression model, if the value of the explanatory variable (Society 2) changes by one unit, the expected value of the explained variable (Defender) will change by the value of the coefficient (0.842053). If the value of the explanatory variable (Society 2) changes by one unit, the expected value of the explained variable (Analyzer) will change by the value of the coefficient (0.0848740) ceteris paribus.

Table 6. Model 6: OLS, using observations 1–228. Dependent variable: Society 2.

	Coefficient	Std. Error	*t*-Ratio	*p*-Value	
Constant	−0.0695592	0.412185	−0.1688	0.8661	
Defender	0.842053	0.0665854	12.65	<0.0001	***
Analyzer	0.0848740	0.0482671	1.758	0.0800	*

Mean dependent variable	4.894737	S.D. dependent variable	1.316573
Sum squared residual	227.3766	S.E. of regression	1.005267
R-squared	0.422130	Adjusted R-squared	0.416994
F(2, 225)	82.18053	*p*-value (F)	1.61×10^{-27}
Log-likelihood	−323.2058	Akaike criterion	652.4117
Schwarz criterion	662.6997	Hannan–Quinn	656.5626

* $p < 0.05$; *** $p < 0.001$; $\widehat{\text{society 2}} = \underset{(0.412185)}{-0.0695592} + \underset{(0.0665854)}{0.842053} * \text{Defender} + \underset{(0.048267)}{0.0848740} * \text{Analyzer}.$

The result of the regression in Table 7 depicts that the value of the R-squared for "Society 3" was 47.04%, which implied that approximately 47% of the changes in Society 3 were caused by the independent variable, while the remaining 53% of the changes were due to other variables not specified in Model 7. The result of the regression shows that Defender on the effects of e-administration is (coefficient = 0.803616, $p < 0.0001$) and Reactor on the effects of e-administration model show (coefficient = 0.110531, $p = 0.0248$). Variables Prospector and Analyzer have been removed from the model with the Student *t* test.

In the linear regression model, if the value of the explanatory variable (Society 3) changes by one unit, the expected value of the explained variable (Defender) will change by the value of the coefficient

(0.803616). If the value of the explanatory variable (Society 3) changes by one unit, the expected value of the explained variable (Reactor) will change by the value of the coefficient (0.110531) ceteris paribus.

Table 7. Model 7: OLS, using observations 1–228. Dependent variable: Society 3.

	Coefficient	**Std. Error**	***t*-Ratio**	***p*-Value**	
Constant	0.144551	0.361619	0.3997	0.6897	
Defender	0.803616	0.0615148	13.06	<0.0001	***
Reactor	0.110531	0.0489315	2.259	0.0248	**

Mean dependent variable	5.052632	S.D. dependent variable	1.237036
Sum squared residual	183.9401	S.E. of regression	0.904163
R-squared	0.470476	Adjusted R-squared	0.465769
F(2, 225)	99.95477	*p*-value (F)	8.65×10^{-32}
Log-likelihood	−299.0381	Akaike criterion	604.0763
Schwarz criterion	614.3643	Hannan–Quinn	608.2272

** $p < 0.01$; *** $p < 0.001$; $\widehat{\text{society 3}} = \underset{(0.361619)}{0.144551} + \underset{(0.0615148)}{0.803616} * \text{Defender} + \underset{(0.0489315)}{0.110531} * \text{Reactor}.$

The result of the regression in Table 8 depicts that the value of the R-squared for "Society 4" was 41.52%, which implied that approximately 41% of the changes in Society 4 were caused by the independent variable, while the remaining 59% of the changes were due to other variables not specified in Model 8. The result of the regression shows that Defender on the effects of e-administration is (coefficient = 0.776268, $p < 0.0001$). Variables Prospector, Reactor, and Analyzer have been removed from the model with the Student *t* test.

In the linear regression model, if the value of the explanatory variable (Society 4) changes by one unit, the expected value of the explained variable (Defender) will change by the value of the coefficient (0.776268). If the value of the explanatory variable (Society 4) changes by one unit, the expected value of the explained variable (Analyzer) will change by the value of the coefficient (0.0543611) ceteris paribus.

Table 8. Model 8: OLS, using observations 1–228. Dependent variable: Society 4.

	Coefficient	**Std. Error**	***t*-Ratio**	***p*-Value**	
Constant	0.612347	0.383093	1.598	0.1114	
Defender	0.776268	0.0618859	12.54	<0.0001	***
Analyzer	0.0543611	0.0448605	1.212	0.2269	

Mean dependent variable	5.096491	S.D. dependent variable	1.216403
Sum squared residual	196.4135	S.E. of regression	0.934317
R-squared	0.415222	Adjusted R-squared	0.410024
F(2, 225)	79.88083	*p*-value (F)	6.12×10^{-27}
Log-likelihood	−306.5179	Akaike criterion	619.0358
Schwarz criterion	629.3238	Hannan–Quinn	623.1867

*** $p < 0.001$; $\widehat{\text{society 4}} = \underset{(0.383093)}{0.612347} + \underset{(0.0618859)}{0.776268} * \text{Defender}.$

The result of the regression in Table 9 depicts that the value of the R-squared for "Employee 1" was 69.42%, which implied that approximately 69% of the changes in Employee 1 were caused by the independent variable, while the remaining 31% of the changes were due to other variables not specified in Model 9. The result of the regression shows that Defender on the effects of e-administration is (coefficient = 0.575955, $p < 0.0001$), Reactor on the effects of e-administration model show (coefficient = 0.348458, $p < 0.0001$), and Prospector on the effects of e-administration is (coefficient = 0.182334, $p = 0.0034$). The regression result of Analyzer depicts (coefficient = −0.240453, $p < 0.0001$) having a negative value.

In the linear regression model, if the value of the explanatory variable (Employee 1) changes by one unit, the expected value of the explained variable (Defender) will change by the value of the coefficient (0.575955). If the value of the explanatory variable (Employee 1) changes by one unit,

the expected value of the explained variable (Prospector) will change by the value of the coefficient (0.182334). If the value of the explanatory variable (Employee 1) changes by one unit, the expected value of the explained variable (Reactor) will change by the value of the coefficient (0.348458). If the value of the explanatory variable (Employee 1) changes by one unit, the expected value of the explained variable (Analyzer) will change by the value of the coefficient (−0.240453) ceteris paribus.

Table 9. Model 9: OLS, using observations 1–228. Dependent variable: Employee 1.

	Coefficient	**Std. Error**	***t*-Ratio**	***p*-Value**	
Constant	0.664728	0.239624	2.774	0.0060	***
Defender	0.575955	0.0725423	7.940	<0.0001	***
Prospector	0.182334	0.0616505	2.958	0.0034	***
Reactor	0.348458	0.0604739	5.762	<0.0001	***
Analyzer	−0.240453	0.0536963	−4.478	<0.0001	***

Mean dependent variable	5.368421	S.D. dependent variable	1.047448
Sum squared residual	76.14996	S.E. of regression	0.584363
R-squared	0.694242	Adjusted R-squared	0.688757
F(4, 223)	126.5834	*p*-value (F)	3.27×10^{-56}
Log-likelihood	−198.5009	Akaike criterion	407.0018
Schwarz criterion	424.1485	Hannan–Quinn	413.9200

*** $p < 0.001$; $\widehat{\text{employee 1}} = \underset{(0.239624)}{0.664728} + \underset{(0.0725423)}{0.575955} * \text{Defender} + \underset{(0.0604739)}{0.348458} * \text{Reactor} + \underset{(0.0536963)}{-0.240453} * \text{Analyzer} + \underset{(0.0616505)}{0.182334} * \text{Prospector}.$

The result of the regression in Table 10 depicts that the value of the R-squared for "Employee 2" was 66.32%, which implied that approximately 66% of the changes in Employee 2 were caused by the independent variable, while the remaining 34% of the changes were due to other variables not specified in Model 10. The result of the regression shows that Defender on the effects of e-administration is (coefficient = 0.594410, $p < 0.0001$), Reactor on the effects of e-administration model show (coefficient = 0.240274, $p = 0.0002$), and Prospector on the effects of e-administration is (coefficient = 0.177097, $p = 0.0062$). The regression result of Analyzer depicts (coefficient = −0.156714, $p = 0.0054$) having a negative value.

In the linear regression model, if the value of the explanatory variable (Employee 2) changes by one unit, the expected value of the explained variable (Defender) will change by the value of the coefficient (0.594410). If the value of the explanatory variable (Employee 2) changes by one unit, the expected value of the explained variable (Prospector) will change by the value of the coefficient (0.177097). If the value of the explanatory variable (Employee 2) changes by one unit, the expected value of the explained variable (Reactor) will change by the value of the coefficient (0.240274). If the value of the explanatory variable (Employee 2) changes by one unit, the expected value of the explained variable (Analyzer) will change by the value of the coefficient (−0.156714) ceteris paribus.

The result of the regression in Table 11 depicts that the value of the R-squared for "Employee 3" was 67.38%, which implied that approximately 67% of the changes in Employee 3 were caused by the independent variable, while the remaining 33% of the changes were due to other variables not specified in Model 11. The result of the regression shows that Defender on the effects of e-administration is (coefficient = 0.618028, $p < 0.0001$), Reactor on the effects of e-administration model show (coefficient = 0.308120, $p < 0.0001$), and Prospector on the effects of e-administration is (coefficient = 0.157283, $p = 0.0156$). The regression result of Analyzer depicts (coefficient = −0.246773, $p < 0.0001$) having a negative value.

Table 10. Model 10: OLS, using observations 1–228. Dependent variable: Employee 2.

	Coefficient	Std. Error	*t*-Ratio	*p*-Value	
Constant	0.722037	0.248889	2.901	0.0041	***
Defender	0.594410	0.0753473	7.889	<0.0001	***
Prospector	0.177097	0.0640344	2.766	0.0062	***
Reactor	0.240274	0.0628122	3.825	0.0002	***
Analyzer	−0.156714	0.0557726	−2.810	0.0054	***

Mean dependent variable	5.350877	S.D. dependent variable	1.036620
Sum squared residual	82.15277	S.E. of regression	0.606958
R-squared	0.663211	Adjusted R-squared	0.657170
F(4, 223)	109.7841	*p*-value (F)	1.50×10^{-51}
Log-likelihood	−207.1508	Akaike criterion	424.3015
Schwarz criterion	441.4483	Hannan–Quinn	431.2197

*** $p < 0.001$; $\widehat{\text{employee 2}} = \underset{(0.248889)}{0.722037} + \underset{(0.0753473)}{0.594410} * \text{Defender} + \underset{(0.0628122)}{0.240274} * \text{Reactor} + \underset{(0.0557726)}{-0.156714} * \text{Analyzer} + \underset{(0.0640344)}{0.177097} * \text{Prospector}.$

In the linear regression model, if the value of the explanatory variable (Employee 3) changes by one unit, the expected value of the explained variable (Defender) will change by the value of the coefficient (0.618028). If the value of the explanatory variable (Employee 3) changes by one unit, the expected value of the explained variable (Prospector) will change by the value of the coefficient (0.157283). If the value of the explanatory variable (Employee 3) changes by one unit, the expected value of the explained variable (Reactor) will change by the value of the coefficient (0.308120). If the value of the explanatory variable (Employee 3) changes by one unit, the expected value of the explained variable (Analyzer) will change by the value of the coefficient (−0.246773) ceteris paribus.

Table 11. Model 11: OLS, using observations 1–228. Dependent variable: Employee 3.

	Coefficient	Std. Error	*t*-Ratio	*p*-Value	
Constant	0.824202	0.250868	3.285	0.0012	***
Defender	0.618028	0.0759463	8.138	<0.0001	***
Prospector	0.157283	0.0645434	2.437	0.0156	**
Reactor	0.308120	0.0633116	4.867	<0.0001	***
Analyzer	−0.246773	0.0562160	−4.390	<0.0001	***

Mean dependent variable	5.429825	S.D. dependent variable	1.061703
Sum squared residual	83.46419	S.E. of regression	0.611783
R-squared	0.673812	Adjusted R-squared	0.667961
F(4, 223)	115.1635	*p*-value (F)	4.30×10^{-53}
Log-likelihood	−208.9562	Akaike criterion	427.9124
Schwarz criterion	445.0591	Hannan–Quinn	434.8306

** $p < 0.01$; *** $p < 0.001$; $\widehat{\text{employee 3}} = \underset{(0.250868)}{0.824202} + \underset{(0.0759463)}{0.618028} * \text{Defender} + \underset{(0.0633116)}{0.308120} * \text{Reactor} + \underset{(0.0562160)}{-0.246773} * \text{Analyzer} + \underset{(0.0645434)}{0.157283} * \text{Prospector}.$

The result of the regression in Table 12 depicts that the value of the R-squared for "Employee 4" was 61.95%, which implied that approximately 62% of the changes in Employee 4 were caused by the independent variable, while the remaining 38% of the changes were due to other variables not specified in Model 12. The result of the regression shows that Defender on the effects of e-administration is (coefficient = 0.785628, $p < 0.0001$). Variables Prospector, Analyzer, and Reactor have been removed from the model with the Student t test.

In the linear regression model, if the value of the explanatory variable (Employee 4) changes by one unit, the expected value of the explained variable (Defender) will change by the value of the

coefficient (0.785628). If the value of the explanatory variable (Employee 4) changes by one unit, the expected value of the explained variable (Reactor) will change by the value of the coefficient (0.0202239) ceteris paribus.

Table 12. Model 12: OLS, using observations 1–228. Dependent variable: Employee 4.

	Coefficient	Std. Error	*t*-Ratio	*p*-Value	
Constant	1.18248	0.249905	4.732	<0.0001	***
Defender	0.785628	0.0425112	18.48	<0.0001	***
Reactor	0.0202239	0.0338152	0.5981	0.5504	
Mean dependent variable	5.596491	S.D. dependent variable		1.008504	
Sum squared residual	87.84626	S.E. of regression		0.624842	
R-squared	0.619511	Adjusted R-squared		0.616129	
F(2, 225)	183.1720	*p*-value (F)		6.14×10^{-48}	
Log-likelihood	−214.7896	Akaike criterion		435.5793	
Schwarz criterion	445.8673	Hannan–Quinn		439.7302	

*** $p < 0.001$; $\widehat{\text{employee 4}} = \underset{(0.24990)}{1.18248} + \underset{(0.0425112)}{0.785628} * \text{Defender}$.

The findings provide support for H2 on the link between Defender orientation and the effects of e-administration. The findings do not provide support for H1, H3, and H4.

6. Discussion and Conclusions

Tables 1–12 present the results of twelve models that are designed to examine the strategic orientation and effects of e-administration. Consistent with our expectations, the Defender stance showed positive effects on the effects of e-administration. The Prospector, Reactor, and Analyzer stances did not show clear supportive effects of e-administration. It is surprising and counterintuitive that the Prospector stance has no positive association with the effects of e-administration, especially with the society perspective. Researchers emphasize that Defender's and Prospector's orientations are closely linked to the environment. A prospecting strategy contributes more to organizational performance when the environment is turbulent, and the organizational structure is relatively decentralized. A defending strategy is especially important for results in more placid environments with organizations that have adopted more centralized structural forms (Walker 2013). This centralization may partly result from the heritage of the centrally planned economy in which Poland and other Central and Eastern European countries have operated for many years.

Prior studies have adopted the strategy typology of Miles and Snow and tested the effects of strategy orientation on public service performance. Researchers generally hypothesize that public organizations with Prospector and Defender stances are positively related to performance, and Reactors have a negative association with performance, though it is pointed out that a Reactor has an advantage under certain circumstances in which responsiveness to stakeholders (e.g., political elites) is required, for instance, in a centralized government system (Boyne and Walker 2010). Miles et al. (1978) argue that centralized organizations provide the most fruitful approach for a Defender, offering tight control over internal operations (Walker 2013). They also argue that Defenders are more rational (Miles et al. 1978). The Defenders' rational formulation and implementation processes are more likely to be successful in organizations that engage in centralized decision-making by providing the top management with a planned and coordinated approach to the development and implementation of strategies (Walker et al. 2010). These findings are consistent with the arguments of Miles and Snow (Miles et al. 1978) on the effectiveness of mechanistic organizations in which power and processes are tightly controlled in pursuit of a fixed strategy of stability and efficiency (Walker 2013). During the designing of the study, it was thought that the specificity of e-administration would make the Prospector stance to be positively associated with the effects of e-administration, but this could not be confirmed. However, there is a broad consensus among researchers about the Prospector stance's

positive association with organizational performance (Andrews et al. 2006; Andrews et al. 2009a, 2009b; Walker et al. 2010). Our evidence indicates that e-administration may have coherent strategies that fit into the strategy categories of Miles and Snow. However, some researchers criticize strategy research that places organizations in mutually exclusive boxes and assumes that each organization has only a single strategic stance that can be easily observed (Conant et al. 1990). Desarbo et al.'s empirical test of the Miles and Snow model found evidence of hybrid strategic stances within organizations, suggesting that the choice of strategy is messy and complex rather than neat and simple (Desarbo et al. 2005).

Research on the strategic management of public organizations has accelerated over the past two decades. However, it should be remembered that the findings and recommendations for the practice of strategic management come from limited data in only a few geographical locations (Great Britain and the United States) and largely local government settings (Walker 2013). In particular, there is a lack of research on Eastern European countries. The ability to compare our research results with other studies is also limited, because both scales for measurement of strategic types and organizational performance measures used around the world are different. Our research project on strategic types in e-administrations is among the few dealing with this topic that have been carried out in Eastern European countries. Therefore, it is worthwhile to conduct this type of research with larger samples. The findings offered here remain cautionary until more systematic research is undertaken. However, evidence from other sectors points to the veracity of Miles and Snow's arguments, and the growing quantity of e-administration evidence should be extended to provide better practical and theoretical proof.

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