Digital Transformation Drift

A Population Study of Swedish Municipalities

Fredrik Carlsson Swedish Center for Digital Innovation, University of Gothenburg and SKR fredrik.carlsson@ait.gu.se Marcus Matteby Swedish Center for Digital Innovation, University of Gothenburg and Sundsvall municipality marcus.matteby@ait.gu.se Johan Magnusson Swedish Center for Digital Innovation, University of Gothenburg and Kristiania University College johan.magnusson@ait.gu.se

ABSTRACT

Digital transformation is argued to entail fundamental change in existing operations and strategy alike. In the public sector, there have been ample evidence of both the profound effect of digital transformation and its substantial caveats. As organizations embark on digital transformation, they formulate and execute what is referred to as digital transformation strategies. In this study, we approach the digital transformation strategies of municipalities as the resource allocation and goal setting associated with digital transformation. Through a population level content analysis, we analyze the top steering documents of all 290 Swedish municipalities over two years (2021-2022). The findings display a shift to more and more emphasis on external (as opposed to internal) direct aspired value and innovation (as opposed to efficiency) activities in the sector. We interpret this through three extant theories of drift, with the goal of exploring how theories of drift may inform the future study of digital transformation strategies in the public sector.

CCS CONCEPTS

Applied computing; • Computers in other domains; • Computing in government; • E-government;

KEYWORDS

Digital transformation, digital government, digital transformation strategy

ACM Reference Format:

Fredrik Carlsson, Marcus Matteby, and Johan Magnusson. 2023. Digital Transformation Drift: A Population Study of Swedish Municipalities. In 24th Annual International Conference on Digital Government Research - Together in the unstable world: Digital government and solidarity (DGO 2023), July 11–14, 2023, Gdańsk, Poland. ACM, New York, NY, USA, 8 pages. https: //doi.org/10.1145/3598469.3598504

1 INTRODUCTION

Digital transformation, here understood as the organizational change brought about through the utilization of digital solutions [10], is more and more becoming a compulsory activity for organizations within the public and private sectors alike [9, 26, 39, 46]. In



This work is licensed under a Creative Commons Attribution International 4.0 License.

DGO 2023, July 11–14, 2023, Gdańsk, Poland © 2023 Copyright held by the owner/author(s). ACM ISBN 979-8-4007-0837-4/23/07. https://doi.org/10.1145/3598469.3598504 the public sector, digital transformation is seen as the next wave of digital government, turning traditional models of government obsolete and ushering in openness, transparency, and citizen-centrism [14, 30, 36, 37].

Previous studies of digital transformation in the public sector have identified both opportunities and challenges [16, 20, 21, 26, 38, 42, 44]. Core is the reported challenges of shifting over into increased utilization of the benefits of digital technologies not solely in the piece-meal, mechanistic manner associated with implementing certain solutions, but in the manner of adopting a new logic for value creation in the public sector as such [12]. This corresponds to the reported challenges within the private sector to not solely focus on continued enhancement of internal efficiency through automation, but the creation of new value paths and offerings [39].

Organizations that aspire for digital transformation adopt what Chanias et al [7] refer to as digital transformation strategies. These strategies are emergent in nature, continually evolving since digital transformation as such requires substantial adaptability to changing prerequisites. This is described in more detail by Magnusson et al [22] in the study of a large Swedish municipality as rhizomatic strategizing, i.e., the constant off-shoots through a process of trialand-error in the formation of strategy. In other words, digital transformation strategies are not fixed, but subject to continuous change and drift [8].

During recent years, we have seen three significant theoretical contributions to understanding said drift in relation to digital transformation. In a conceptual study of how individuals' practice deviations impact institutional order, Voronov et al [40] propose the theory of institutional drift. In a study of the implementation of a new system for check-in at a UK airport, Baptista et al [3] propose the theory of instantiation, i.e., how technological characteristics and attributes result in strategic drift. Finally, Nielsen et al [29] study how ideas (such as digital transformation) travel between organizations, proposing a theory of multidirectional translation to account for variations in said ideas as they are adopted, i.e., translational drift.

With the strategy being the answer to the question of how to achieve something, strategies are always directional. In terms of digital transformation strategies, we pose that direction can be conceptualized following two dimensions. First, the dimension of activity, where digital activities can be either focused on efficiency (i.e., continued operations with decreasing margin cost, economies of scale) or innovation (i.e., increased variation through new value paths, economies of scope). This dimension follows the ideas posed by March [23] and Benner and Tushman [4] within the field of organizational ambidexterity. Second, the dimension of direct value, where digital activities can be either focused on direct internal value (i.e., direct value to internal stakeholders such as co-workers and managers) or direct external value (i.e., direct value to external stakeholders such as citizens). This dimension follows the core ideas of digital as blurring the boundaries of the organization, as found in Menz et al [25]. Utilizing these two dimensions, the digital transformation strategies can be operationalized and studied.

The paper aims to contribute to research through answering the calls from the three fore-mentioned contributions to a theory of drift in digital transformation [3, 29, 40] and the calls from Morton et al [27] on additional empirical studies of digital strategizing. The research question that we address is:

How can theories of drift inform our understanding of shifts in direction of digital transformation strategies in the public sector?

The paper is organized accordingly. After this brief introduction, we review previous research of digital transformation in the public sector and the theories of drift. This is followed by a presentation of the method of the study. After this we present the results of the study which is followed by a discussion where the results are interpreted through the three theories of drift, looking into how said theorizing can inform research on digital transformation.

2 PREVIOUS RESEARCH AND THEORETICAL FRAMING

2.1 Digital transformation in the public sector

Following Hanelt et al [10], we regard digital transformation as organizational change, triggered and shaped by the widespread diffusion and adoption of digital technologies. Although the term as such suggests an ideal state upon completed transformation, this is not the case. Rather, as technological development is continuous, an end state of digital transformation is not achievable [7, 26, 39, 41].

Digital transformation has profound effect on all parts of society, including the public [24, 26, 44] and is perceived as key to coping with societal challenges, such an increasingly aging population and decreasing people active in the job market to deliver and finance its care [17]. Simultaneously, evolving general patterns of use of digital technology in everyday life is causing an increase of demands on improved digital services provided by state agencies, municipalities and regions [12].

Even though digital transformation is to be considered an ongoing process, triggered by a mix of external or internal pressures without end, it is assumed to increase both citizen satisfaction and have a positive effect on organizational culture [26]. However, as found by Norling et al [48] in a study of the political annual top level steering documents of 290 Swedish municipalities, the current focus of digital transformation among these is almost exclusively geared toward internal efficiency, with only a limited number of goals and resources allocated to improved citizen interaction and experience.

2.2 Digital transformation strategies and their directions

We regard the digital transformation strategy as the collection of practices intent on achieving digital transformation. This perception of strategy-as-practice has a strong tradition within both strategic management [13, 43] as well as information systems [5], and is also central to more recent publications on digital strategizing [7, 27, 35, 44, 46].

We operationalize the strategic direction of digital transformation strategies into two dimensions. First, we utilize the literature on organizational ambidexterity to assess the activity of the resource allocations and goal settings. Here, we lean on the suggestions from March [23] to identify an operationalizable variable for the distribution of activities from exploitation to exploration, revisited through Benner & Tushman [4] as efficiency and innovation. Utilizing said core readings, we see each allocation or goal as incommensurably either efficiency or innovation. With digital transformation both focused on automating existing operations (efficiency) as well as the creation of new value paths (innovation) [10, 39], organizational ambidexterity has been shown to be valuable in studies in both the public and private sectors [31, 47].

Second, we utilize the literature related to boundaries of value creation, where findings from Menz et al [25] and Yoo et al [45] highlight the blurring of boundaries brought about by digital transformation. From this perspective, allocations and goals may be directed toward either internal or external direct value. Internal direct value are intended goals where the primary recipient of said value is an internal stakeholder of the organization (co-workers, managers, politicians et cetera), and the external direct value is subsequently value intended toward external stakeholders (citizens, customers, society et cetera).

Together, these two dimensions offer a possibility of identifying directions and shifts in direction in digital transformation (Figure 1).

2.3 Theories of drift

We explore three different theories of drift to assess their utility for the study of public sector digital transformation.First, we lean on Voronov et al [40] and their process theory of institutional drift. The theory describes how practice deviations through mundane occurrences create institutional drift (rather than through sanctioned actions purposing change). Interactions (actions, interpretations and reactions) between actors within an institutional order inevitably leads to co-produced practice deviations. These are either noticed or not. In case they are noticed and either ignored or normalized (deemed as tolerable as it's considered compatible with the ethos), this causes institutional drift. When tolerance of deviations fails to normalize them, however, it triggers institutional change through institutional doubt, i.e., the questioning of the efficacy of current institutional arrangements.

Second, we use the theory of technology's role as a vehicle for strategic drift, as conceptualized by Baptista et al (2021) referring to the concept of strategy instantiation (the making of the real ground level strategy through local activity). Instantiation, the combination of reframing and recoupling, is preceded by decoupling from established logic, by introducing new technology and its embedded



Internal direct value

Figure 1: The two dimensions of direction in digital transformation strategies.

logic, causing clashes between old and new. Reframing refers to the application and acceptance of new micro practices given the affordances and constraints of new technology. Through recoupling, new practices are attributed strategic meaning, resulting in strategic drift.

Third, as the concept of (and attribution of meaning to) digital transformation varies across (and within) organizations and is a "travelling kind", defined and perceived differently by heterogenous actors and is translated (or morphed) among these as they interact, we utilize the work of Nielsen et al [29] on how ideas travel multi-directionally across organizational fields. Nielsen et al identify three forms of multi-directional idea travel. Reinforcing takes place as an idea gains strength upon the adding of new knowledge to it by other actors in a translation ecology. Complementing takes place as a variation of translations occurs among different actors in a translation ecology, allowing for an idea to spread organically and ease the idea adoption, depending on actor's varying ethos, culture, and ways of working. Polarizing manifests when translations cause tensions due to disagreement and controversy. This form of idea travelling de-legitimizes ideas at different levels but may also promote new ideas, resulting in what we refer to as translational drift.

3 METHOD

The research team has a long tradition of working with population level studies in the Swedish public sector [48]. The public sector in Sweden is comprised of agencies (national), and regions and municipalities (local). There are 290 municipalities in Sweden, ranging from small (500 employees) to large (30 000 employees). The municipality sector employs some 875 000 employees and has a total turnover of \in 80 Billion. The municipalities are tasked with delivering welfare services, with care and education on average constituting three quarters of the total municipal spending. The municipalities are under heavy duress through a decrease in human resources availability (a looming deficit of potential co-workers) and an increase in demand (demographic changes associated with an aging population), and digital transformation has been identified as a necessary and key part of the solution. In addition to this, the Swedish government has since 2015 had the vision to become the best nation in the world in terms of utilizing the benefits of digital transformation.

We collected data in the form of the municipal top steering documents referred to intermittently as "budget", "business plan" and "goal and resource plan". In Sweden, the municipality is regulated to issue these types of documents annually, and in them the municipality stipulates their yearly goals and resource allocations. The documents were collected in two sessions, one in May 2021 and one in May 2022. Out of the total 290 municipalities, we were unable to retrieve 7 vs 14 documents due to an inability of the municipality in question to release the documents. This results in a non-response rate of 3 vs 6 % which is deemed satisfactory. We complemented the collection of data with demographic data on all represented municipalities through open data available via the Swedish Association for Local Authorities and Regions. We included demographic factors in the form of political majority rule, size and geographic positioning as well as financial stature.

Our analysis followed the recommendations set forth by Krippendorf [15] on content analysis. As a first step in the coding, all accounts containing the mention of "digital*" were extracted. These accounts were then first coded into the categories "No goal/allocation", "Goal and allocation", "Goal" and "Allocation". The accounts were then coded in the two dimensions efficiencyinnovation and internal-external (see Table 1 for coding details) by two independent coders and a check for code concurrency was successfully (>95%) conducted. On the basis of the distribution of codes in the two dimensions, we calculated a position in percentage (0 - 100%). If two out of ten goals and allocations in a municipality

Dimension - Category	Keywords
Direct value - External	Citizens, society, suppliers, private actors, public actors, increased accessibility, regulatory requirements, customer experience
Direct value - Internal	Operations, processes, competence development, infrastructure, enterprise systems, organizational structure, IT-department, organizational culture, operating model
Activity - Efficiency	Exploitation, efficiency, automation, standardization, implementation, cost savings, prioritization, planning
Activity - Innovation	Exploration, experimentation, risk taking, innovation, flexibility, finding

Table 1: Overview of coding template

Table 2: Overview of frequencies of "digital*" per demographic category.

Category	2021	2022	Diff	Diff (%)
All municipalities	7,10	8,00	0,90	13%
Smaller cities and rural municipalities	4,66	7,34	2,68	58%
Larger cities and adjacent municipalities	7,69	6,95	-0,74	-10%
Large cities and adjacent municipalities	12,21	11,91	-0,3	-2%
Budget deficit	5,80	8,69	2,89	50%
Budget surplus	7,51	7,72	0,21	3%
Left-wing majority	3,34	4,03	0,69	21%
Right-wing majority	8,56	9,82	1,26	15%
Coalition	6,78	7,26	0,48	7%

were coded as "Efficiency" and eight goals as "Innovation", the position on the dimension efficiency-innovation was calculated as 80%. After this had been done for each municipality in the two years, we then analyzed the differences in the two dimensions utilizing the demographic data collected to identify potential patterns in drift. We did so fully aware that drift over a two-year period is indicative at best, for further reflection on this see Shortcomings under Discussion.

The analysis of the results following this initial calculation then shifted over into a conceptual mode. Utilizing the previously proposed three theories of drift, we exploratorily interpreted our results in order to create a first evaluation of the potential utility of each theory to understand the phenomenon at hand (i.e. drift/shits in the direction of digital transformation strategies).

4 RESULTS

4.1 Frequency of digital

Between 2021 and 2022 we see an overall increase in the average number of counts of "digital*" in the steering documents, from 7,10 to 8,00. Regarding size, only the smaller cities and rural municipalities display an increase in frequency (2,68) where both larger cities and adjacent municipalities and large cities and adjacent municipalities display a decrease in frequency (-0,74/-0,30). Regarding financial stature, municipalities with a budget deficit display a higher increase in frequency than municipalities with a budget surplus (2,89/0,21). Regarding political majority rule, right-wing governed municipalities display the highest increase in frequency (1,26), followed by left-wing (0,69) and coalitions (0,48). For additional details, see Table 2.

In these results, the highest relative impact on frequency of "digital*" in the steering documents is related size and financial stature of the municipality as well as Left-wing majority rule. The significant (58%) increase in frequency for smaller cities and rural municipalities, coupled with the significant increase in frequency for municipalities with budget deficits display clear covariation where smaller, rural municipalities in Sweden are more subject to financial constraints than the larger and large cities.

4.2 Drift in municipalities

On the population level, the municipalities display a drift of 2,8 percentage points into more emphasis on innovation and external value respectively (see Table 3). In other words, they are shifting their allocated capital related to digital transformation away from efficiency and internal value as primary objectives. Regarding size, this drift is most prevalent among the smaller cities and rural municipalities (9,5/4,3), whereas the large and larger cities and adjacent municipalities display a drift toward more emphasis on efficiency (0,3/1,8) but similar direction of drift in relation to an increased emphasis on external value (2,8/1,2).

Regarding financial stature, both municipalities with budget deficits and surplus display similar directions of drift with an increased emphasis on innovation and external value. However, the strength of the drift is significantly stronger in the case of municipalities with a budget deficit than in municipalities with surplus. Regarding political rule, all forms display a similar direction of

	Year	Efficiency- Innovation	Internal- External	Drift to Innovation (pp)	Drift to External value (pp)
All municipalities	2021	22,1%	35,7%	2,8	2,8
-	2022	24,9%	38,5%		
Smaller cities and rural municipalities	2021	18,1%	32,8%	9,5	4,3
	2022	27,6%	37,1%		
Larger cities and adjacent municipalities	2021	22,6%	34,8%	-0,3	2,8
	2022	22,3%	37,5%		
Large cities and adjacent municipalities	2021	26,3%	40,7%	-1,8	1,2
	2022	24,5%	41,9%		
Budget deficit	2021	23,6%	32,3%	5,2	7,3
	2022	28,8%	39,5%		
Budget surplus	2021	21,8%	36,5%	1,6	1,6
	2022	23,4%	38,1%		
Left-wing majority	2021	20,8%	35,9%	5,3	5,8
	2022	26,1%	41,7%		
Right-wing majority	2021	24,2%	37,9%	0,2	0,3
	2022	24,4%	38,1%		
Coalition	2021	19,9%	32,8%	4,9	5,7
	2022	24,7%	38,5%		

Table 3: Overview of drift per demographic category.

Table 4: Allocated capital drift with the assumption of 1 per mille of total cost on digital transformation.

	Drift to Innovation (allocation)	Drift to External value (allocation)
All municipalities	2 247 098	2 247 098
Smaller cities and rural municipalities	7 656 184	3 434 850
Larger cities and adjacent municipalities	- 208 659	2 206 971
Large cities and adjacent municipalities	- 1 404 436	938 966
Budget deficit	4 157 131	5 818 379
Budget supersurplus	1 316 157	1 316 157
Left-wing majority	4 229 360	4 654 703
Right-wing majority	168 532	200 634
Coalition	3 892 295	4 574 450

drift toward increased emphasis on innovation and external value. However, the strength of this drift is relatively insignificant in the case of municipalities governed by a right-wing majority (0,2/0,3)when compared to left-wing (5,3/5,8) and coalition (4,9/5,7).

Regarding the concrete implications of the identified drift, we have simulated the financial re-allocation implications stemming from the presented results (Table 4). Building on parallel, unpublished work we have selected the benchmark of 1 per mille of total cost (\in 80B) as a feasible current allocation to digital transformation in municipalities. This is significantly lower than the allocation to IT budgets displayed on the national average (around 1,2 per cent), and digital transformation is measured solely as the centralized allocation of program funding for digital transformation initiatives.

Following this simulation, we see an average drift equivalent to \notin 2,2 Million in both innovation and external value. The highest drift in monetary terms can be seen in smaller cities and rural municipalities with \notin 7,7 versus \notin 3,4 Million to innovation versus external value. Given that the average size of total cost for

these municipalities is significantly lower than the other two categories of municipalities, the drift as percentage of total cost is also higher, showing that the identified pattern signifies a significant re-allocation and drift.

Albeit small when considering solely the centralized allocation toward digital transformation, we see that a majority of initiatives posed in the general strategy is not funded by the centralized digital transformation budget. Instead, this is more commonly funded locally in the different administrations, whereby the monetary allocations need to be revised. The problem here is that there is presently no monitoring separated accounting of digital initiatives that are not centrally funded in the municipalities.

5 DISCUSSION

The discussion traces three layers of drift, utilizing previous theoretical contributions to identify potential explanations for the identified drift on the individual-institutional level [40], organizationalstrategic [3] and organizational fields [29]. With this being explorative work intended to study how theories of drift may inform investigations of shifts in directions of digital transformation strategies in the public sector, we will solely evaluate the potential utility of each theory and not drive concrete conclusions related to the data that we have at our disposal.

Following the notion of institutional drift from Voronov et al. [40], i.e., the idea that practice deviations by individual actors may cause a shift in the institutional order, misunderstandings drive a dual process of destabilization and re-stabilization of the institutional order. As an individual engages in practice deviations, these are either unnoticed, ignored or deemed threatening to the institutional order. In all but the first case (unnoticed), the institutional order changes through the interactants (other organizational actors) changing what is deemed acceptable within the organization. Through this process, the organization experiences institutional drift.

Interpreting the identified drift in the direction of digital transformation strategies from the perspective of institutional drift, we see that the public sector has had a long history of deeming innovationrelated activities as deviant and something that is not part of the institutional ethos [21]. As digital transformation increases in visibility (as seen in the increase in frequency of "digital*" in the top steering documents), we can expect to see an increase influx of core elements of digital technology into the practices in the organization. We will expect to see more individuals engaging in types of activities that are deemed legitimate within the digital logic but not the dominant industrial logic [45]. The increased allocation of capital to activities related to innovation and external value is hence deemed to be an indicator of an ongoing institutional drift, where the previous institutional order is continuously challenged by individual actors engaging in initiatives that shift the direction of digital transformation.

From this perspective, our results aid us in identifying drivers of institutional drift. We see that the small and rural municipalities along with municipalities with budget deficits display the highest level of drift, whereby the theory would indicate that these organizations are more susceptible to institutional drift. An explanation to this could be found in the governance literature, where smaller organizations display higher levels of agility on account of not having the same level of formalized governance routines and procedures in place [28]. At the same time, the budget deficit would (if not only temporary) be a sign of the municipality experiencing a crisis, which in turn has been identified as a decreasing factor for inertia [6].

Following the notion of strategic drift from Baptista et al. [3], i.e., the idea that technological design features may lead to strategic drift in organizations, we see that as new digital technologies with new affordances and constraints are introduced into the public sector, we can expect to see instances of what Baptista et al refer to as instantiation. Instantiation refers to the material aspects of a technology where this becomes the carrier of new possible actionrepertoires that may conflict with the prevailing strategy of the organization and/or intent of technology implementation.

Along these lines, new technologies in the sector such as artificial intelligence and robotic process automation will create new repertoires [33], where the previous strategy of the organization may be counteracted. Instead of aligning the implementation with the strategy, we see a misalignment leading to strategic drift. As the public sector organizations continue to implement new technologies (often after first changing the regulations, such as in the case of automated decision making), the inherent capabilities of these technologies will increasingly determine the direction of the digital transformation strategy. A parallel to this can be seen in Rahrovani's work on platform drifting, where he studied the strategic implications of the adoption of a social media platform [32].

Following the notion of translational drift from Nielsen et al. [29], i.e., how ideas travel across organizational fields, we see that digital transformation strategies will vary on account of definitions used and how these definitions are talked about within different organizations. If, e.g., an idea such as digital transformation is defined along the lines of "IT induced societal change", "business model change" or "IT implementation" (see Hanelt et al [10] for references), we will see varying differences in strategic direction. Along these lines, changes in definitions and new translations in organizations will be expected to result in drift.

As noted by Nielsen et al [29], the travel of ideas between organizations is multi-directional, where each organization simultaneously takes the role of sender and receiver in a translation ecology. Given this, Municipality X may adopt (i.e., translate into practice) a view of digital transformation that highlights efficiency rather than innovation, whereby they will impact not only their own strategic direction but also other municipalities that they are in contact with either formally or informally through inter-personal exchange. Municipality X may speak publicly about their strategy, they may share examples in terms of successful initiatives now considered best-practice, et cetera. At the same time, municipality Y may adopt a view of digital transformation downplaying efficiency and emphasizing innovation, whereby their strategic direction may shift and they will influence other municipalities in the same vein.

From this perspective, the identified drift can be seen as the consequence of an organizational field level translation process. In this regard, we would look for explanations to the drift in the manner in which digital transformation is discussed on policy- and practice levels, which definitions are in use et cetera. National initiatives, such as the scaling of a new model for digital maturity in Sweden during 2020-2022 (SKR.se, 2022) would hence be a relevant starting point for investigating the underlying reasons for the identified drift. In this initiative, covering 50% of all Swedish municipalities, they have been subject to a definition of digital transformation as a method for business development where digital solutions are used for either automation or innovation. This definition also highlights the need to balance between efficiency and innovation as well as the internal and external value perspectives. The definition has been diffused through both the introduction of a distributed selfassessment tool and through e-learning directed at a wide set of coworkers in the organizations, perhaps influencing the increased emphasis on innovation and external value.

Digital Transformation Drift

Drift	Level	Proposition	Proposed research design
Institutional	Individual-	Drift is the consequence of deviant	Longitudinal ethnographic studies of deviant
	Institution	workplace behavior and the	workplace behavior and responses coupled
		organizational response to said behaviors.	with content analysis of strategy (as practice).
Strategic	Organization-	Drift is the consequence of new	Technology audits and log-file analysis coupled
	Strategy	technological properties and attributes.	with content analysis of strategy (as practice).
Translational	Organizational field	Drift is the consequence of an	Discourse analysis of social media, reports,
		organizational field level multidirectional	white-papers, policy documents coupled with
		translation process.	content analysis of strategy (as practice).

Table 5: Three forms of drift and proposed research designs for future studies.

Following Nielsen et al [29] and their differentiation between different forms of travel of ideas, the definition is polarizing in the respect that it goes in direct conflict with previous existing definitions on the national level (e.g., the governments definition of digital transformation as a societal phenomenon), and reinforcing since it is diffused through a collaboration between the strongest and most active research environment and the association for municipalities and health care regions, where new findings continuously are diffused following the definition. For an alternative view of this, see Heidlund and Gidlund [11]. Table 5 contains an overview of the three types of drift along with propositions and proposed research designs.

This study offers two main contributions to research. Second, the study empirically identifies and nuances drift in digital transformation strategies among Swedish municipalities. This contribution is both empirical and methodological, where the proposed and utilized method may be seen as one way to operationalize the direction of digital transformation strategies in practice. Second, it shows the potential value of the three theories of drift as a basis for increased understanding of shifts in digital transformation strategies in the public sector. Previous research has highlighted the evolutionary and emergent perspective in digital transformation strategies [7], yet to date there have been only few empirical contributions [22, 27], and hence we believe this contribution to be of relevance to the scientific community's continued endeavors within digital transformation.

The study offers three main contributions to practice and policy. First, the study identifies the occurrence of drift in digital transformation strategies. This has previously been described within the private sector [7], but given our results drift needs to be considered in the strategic management of public sector digital transformation. Second, the method proposed in assessing the direction of digital transformation strategies can be directly applied in other institutional settings. Through our interactions with municipalities that we have assessed, we have learned that the plotting of their strategic direction offers an opportunity for discussion that is deemed valuable to the organization. Third, the work we have conducted in assessing all municipalities in Sweden also offers a contribution to policy. Through population level analysis, our findings support more data-driven policy making, where new policies may be designed in line with an understanding of the current direction of existing strategies in municipalities. This hence has the potential for increasing the efficacy of new policies for primarily digital transformation.

Through this study, we identify three prospective projects that would be valuable for future research. First, we propose a project intended to further investigate the micro-practices related to deviant workplace behavior [1, 34] that may form the basis for an increased understanding of institutional drift related to digital transformation in the public sector. Here, we suggest leaning on the theory of institutional work and more specifically on the method of "institutional biography" [18, 19], as well as the proposed theory of institutional drift [40]. Second, we propose a project directed at the theory of strategic drift as proposed by Baptista et al (2021). Here, we see the possibility of tracing the implementation of technological artifacts in public sector organizations, mapping the potential micro-shifts in strategic direction along the lines of Rahrovani [32]. Third, we suggest a project directed toward understanding the translational aspects of digital transformation following Nielsen et al [29] and the work of Heidlund & Gidlund [11]. All three projects are deemed as relevant for comparative studies across national and institutional borders and should be approached in a more longitudinal setup than our present study.

There are two main limitations of our study. First and foremost, our approach to utilize only two years of data to study something as longitudinal in nature as drift is off course a substantial limitation. With the research objective being to explore how theories of drift can inform the study of digital transformation strategies in the public sector we however argue that the low credibility of our empirical observation of drift is secondary for the objective. We consider the identification of drift to be indicative in nature, and in need of continued study over time. Second, the empirical identification of drift is based entirely on one select part of the Swedish public sector. We have not tested for statistical generalizability and transferability between sectors or across countries, whereby the identified drift could be a local phenomenon solely present within Swedish municipalities. Hence, as argued by Bannister [2], transferability of our findings may be at risk. At the same time, the evaluations of the three forms of drift as performed in the study are deemed generalizable. Third, the evaluation of the three theories of drift could be argued as relatively superficial in nature. We perceive our contribution here to be a first step towards more robust theory testing, hopefully inspiring additional research, and activities in practice.

6 CONCLUSION

We have, in this study explored how three theories of drift may inform the study of digital transformation strategies in the public sector. We have done so through first empirically identifying a drift in the direction of digital transformation strategies in Swedish municipalities, particularly strong in terms of a shift from efficiency to innovation and internal to external focus for small municipalities with budget-deficits. We interpret these findings through the three theories of drift, proposing additional research into better understanding the emergent nature of digital transformation strategies. The study finds that the three theories of drift offer a nuancing of the emergence of digital transformation strategies in the public sector, and that they may inspire future research into this important phenomenon.

REFERENCES

- Appelbaum, S.H. *et al.* 2007. Positive and negative deviant workplace behaviors: causes, impacts, and solutions. Corporate Governance: The international journal of business in society. 7, 5 (2007), 586–598. DOI:https://doi.org/10.1108/ 14720700710827176.
- [2] Bannister, F. 2007. The curse of the benchmark: an assessment of the validity and value of e-government comparisons. International Review of Administrative Sciences. 73, 2 (2007), 171–188. DOI:https://doi.org/10.1177/0020852307077959.
- [3] Baptista, J. et al. 2021. Instantiation: Reconceptualising the role of technology as a carrier of organisational strategising. Journal of Information Technology. 36, 2 (2021), 109–127. DOI:https://doi.org/10.1177/0268396220988550.
- [4] Benner, M.J. and Tushman, M.L. 2003. Exploitation, exploration, and process management: The productivity dilemma revisited. Academy of management review. 28, 2 (2003), 238–256.
- [5] Bharadwaj, A. et al. 2013. Digital Business Strategy: Toward a Next Generation of Insights. MIS Quarterly. 37, 2 (2013), 471–482. DOI:https://doi.org/10.25300/ misq/2013/37:2.3.
- [6] Bygstad, B. et al. 2022. From dual digitalization to digital learning space: Exploring the digital transformation of higher education. Computers & Education. 182, (2022), 104463. DOI:https://doi.org/10.1016/j.compedu.2022.104463.
- [7] Chanias, S. et al. 2019. Digital transformation strategy making in pre-digital organizations: The case of a financial services provider. The Journal of Strategic Information Systems. 28, 1 (2019), 17–33. DOI:https://doi.org/10.1016/j.jsis.2018. 11.003.
- [8] Ciborra, C. et al. 2000. From control to drift: the dynamics of corporate information infrastructures. Oxford University Press.
- [9] Escobar, F. et al. 2022. Digital transformation success in the public sector: A systematic literature review of cases, processes, and success factors. Information Polity. (2022), 1–21. DOI:https://doi.org/10.3233/ip-211518.
- [10] Hanelt, A. et al. 2021. A Systematic Review of the Literature on Digital Transformation: Insights and Implications for Strategy and Organizational Change. Journal of Management Studies. 58, 5 (2021), 1159–1197. DOI:https://doi.org/10. 1111/jons.12639.
- [11] Heidlund, M. and Gidlund, K.L. 2022. The making of digitalization: Like nailing jelly to a wall. Information Polity. (2022), 1–14. DOI:https://doi.org/10.3233/ip-220007.
- [12] Janowski, T. 2015. Digital government evolution: From transformation to contextualization. Government Information Quarterly. 32, 3 (2015), 221–236. DOI:https: //doi.org/10.1016/j.giq.2015.07.001.
- [13] Jarzabkowski, P. 2004. Strategy as Practice: Recursiveness, Adaptation, and Practices-in-Use. Organization Studies. 25, 4 (2004), 529–560. DOI:https://doi.org/ 10.1177/0170840604040675.
- [14] Kankanhalli, A. et al. 2017. Open innovation in the public sector: A research agenda. Government Information Quarterly. 34, 1 (2017), 84–89. DOI:https://doi. org/10.1016/j.giq.2016.12.002.
- [15] Krippendorff, K. 2019. Content analysis: an introduction to its methodology. Sage.
- [16] Lappi, T.M. et al. 2019. Project governance and portfolio management in government digitalization. Transforming Government: People, Process and Policy. 13, 2 (2019), 159–196. DOI:https://doi.org/10.1108/tg-11-2018-0068.
- [17] Larsson, A. and Teigland, R. 2019. Digital Transformation and Public Services. Taylor & Francis.
- [18] Lawrence, T. et al. 2011. Institutional Work: Refocusing Institutional Studies of Organization. Journal of Management Inquiry. 20, 1 (2011), 52–58. DOI:https: //doi.org/10.1177/1056492610387222.
- [19] Lawrence, T.B. et al. 2013. Institutional Work: Current Research, New Directions and Overlooked Issues. Organization Studies. 34, 8 (2013), 1023–1033. DOI:https: //doi.org/10.1177/0170840613495305.

- [20] Magnusson, J. et al. 2020. Digital ambidexterity in the public sector: empirical evidence of a bias in balancing practices. Transforming Government: People, Process and Policy. 15, 1 (2020), 59–79. DOI:https://doi.org/10.1108/tg-02-2020-0028.
- [21] Magnusson, J. et al. 2020. Efficiency creep and shadow innovation: enacting ambidextrous IT Governance in the public sector. European Journal of Information Systems. 29, 4 (2020), 1–21. DOI:https://doi.org/10.1080/0960085x.2020.1740617.
- [22] Magnusson, J. et al. 2022. Rhizomatic Strategizing in Digital Transformation: A Clinical Field Study. Proceedings of the 55th Hawaii International Conference on System Sciences. (2022). DOI:https://doi.org/10.24251/hicss.2022.777.
- [23] March, J.G. 1991. Exploration and Exploitation in Organizational Learning. Organization Science. 2, 1 (1991), 71–87. DOI:https://doi.org/10.1287/orsc.2.1.71.
- [24] Markus, M.L. and Rowe, F. 2021. Guest Editorial: Theories of Digital Transformation: A Progress Report. Journal of the Association for Information Systems, 22, 2 (2021). DOI:https://doi.org/DOI: 10.17705/1jais.00661.
- [25] Menz, M. et al. 2021. Corporate Strategy and the Theory of the Firm in the Digital Age. Journal of Management Studies. 58, 7 (2021), 1695–1720. DOI:https: //doi.org/10.1111/joms.12760.
- [26] Mergel, I. et al. 2019. Defining digital transformation: Results from expert interviews. Government Information Quarterly. 36, 4 (2019), 101385. DOI:https: //doi.org/10.1016/j.giq.2019.06.002.
- [27] Morton, J. et al. 2022. Digital strategizing: An assessing review, definition, and research agenda. The Journal of Strategic Information Systems. (2022), 101720. DOI:https://doi.org/10.1016/j.jsis.2022.101720.
- [28] Müller-Stewens, B. et al. 2020. The role of diagnostic and interactive control uses in innovation. Accounting, Organizations and Society. 80, (2020), 101078. DOI:https://doi.org/10.1016/j.aos.2019.101078.
- [29] Nielsen, J.A. et al. 2022. Multidirectional Idea Travelling Across an Organizational Field. Organization Studies. 43, 6 (2022), 931–952. DOI:https://doi.org/10.1177/ 0170840621998566.
- [30] Nyhlén, S. and Gidlund, K.L. 2021. In conversation with digitalization: Myths, fiction or professional imagining? Information Polity. (2021), 1–11. DOI:https: //doi.org/10.3233/ip-200287.
- [31] Peng, H. 2019. Organizational ambidexterity in public non-profit organizations: interest and limits. Management Decision. 57, 1 (2019), 248–261. DOI:https://doi. org/10.1108/md-01-2017-0086.
- [32] Rahrovani, Y. 2020. Platform drifting: When work digitalization hijacks its spirit. The Journal of Strategic Information Systems. 29, 2 (2020), 101615. DOI:https: //doi.org/10.1016/j.jsis.2020.101615.
- [33] Ranerup, A. and Henriksen, H.Z. 2019. Value positions viewed through the lens of automated decision-making: The case of social services. Government Information Quarterly. 36, 4 (2019), 101377. DOI:https://doi.org/10.1016/j.giq.2019.05.004.
- [34] Robinson, S.L. and Bennett, R.J. 1995. A Typology of Deviant Workplace Behaviors: A Multidimensional Scaling Study. Academy of Management Journal. 38, 2 (1995). DOI:https://doi.org/https://doi.org/10.5465/256693.
- [35] Rossi, M. et al. 2020. Balancing fluid and cemented routines in a digital workplace. The Journal of Strategic Information Systems. 29, 2 (2020), 101616. DOI:https: //doi.org/10.1016/j.jsis.2020.101616.
- [36] Scupola, A. and Mergel, I. 2022. Co-production in digital transformation of public administration and public value creation: The case of Denmark. Government Information Quarterly. 39, 1 (2022), 101650. DOI:https://doi.org/10.1016/j.giq.2021. 101650.
- [37] Soe, R.-M. and Drechsler, W. 2018. Agile local governments: Experimentation before implementation. Government Information Quarterly. 35, 2 (2018), 323–335. DOI:https://doi.org/10.1016/j.giq.2017.11.010.
- [38] Tassabehji, R. et al. 2016. Emergent digital era governance: Enacting the role of the 'institutional entrepreneur' in transformational change. Government Information Quarterly. 33, 2 (2016), 223–236. DOI:https://doi.org/10.1016/j.giq.2016.04.003.
- [39] Vial, G. 2019. Understanding digital transformation: A review and a research agenda. The Journal of Strategic Information Systems. 28, 2 (2019), 118-144. DOI:https://doi.org/10.1016/j.jsis.2019.01.003.
- [40] Voronov, M. et al. 2021. Under the Radar: Institutional Drift and Non-Strategic Institutional Change. Journal of Management Studies. (2021). DOI:https://doi. org/10.1111/joms.12765.
- [41] Warner, K.S.R. and Wäger, M. 2019. Building dynamic capabilities for digital transformation: An ongoing process of strategic renewal. Long Range Planning. 52, 3 (2019), 326–349. DOI:https://doi.org/10.1016/j.lrp.2018.12.001.
- [42] Weerakkody, V. et al. 2016. Digitally-enabled service transformation in the public sector: The lure of institutional pressure and strategic response towards change. Government Information Quarterly. 33, 4 (2016), 658–668. DOI:https://doi.org/10. 1016/j.giq.2016.06.006.
- [43] Whittington, R. 1996. Strategy as practice. Long Range Planning. 29, 5 (1996), 731–735. DOI:https://doi.org/10.1016/0024-6301(96)00068-4.
- [44] Wilson, C. and Mergel, I. 2022. Overcoming barriers to digital government mapping the strategies of digital champions. Government Information Quarterly. (2022), 101681. DOI:https://doi.org/10.1016/j.giq.2022.101681.
- [45] Yoo, Y. et al. 2010. Research Commentary The New Organizing Logic of Digital Innovation: An Agenda for Information Systems Research. Information Systems

- Research. 21, 4 (2010), 724–735. DOI:https://doi.org/10.1287/isre.1100.0322.
 [46] Zapadka, P. et al. 2022. Digital at the edge antecedents and performance effects of boundary resource deployment. The Journal of Strategic Information Systems. 31, 1 (2022), 101708. DOI:https://doi.org/10.1016/j.jsis.2022.101708.
 [47] Zimmermann, A. et al. 2018. Managing Persistent Tensions on the Frontline: A Configurational Perspective on Ambidexterity. Journal of Management Studies.

55, 5 (2018), 739–769. DOI:https://doi.org/10.1111/joms.12311.
[48] Norling K. *et al.* 2022. Digital Decoupling: A Population Study of Digital Transformation Strategies in Swedish Municipalities. Dg O 2022 23rd Annu Int Conf Digital Gov Res. Published online 2022:356-363. doi:10.1145/3543434.3543639