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Looking into the black box of non-systemic quality management in public administration

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Abstract

Purpose – Through the lens of neo-institutionalism, this study suggests an up-to-date check of non-systemic quality management (QM) practices, based on the example of Swiss cantonal public administrations. Related findings shall allow public managers to choose concrete tools for quality improvement, which are less resource intensive than quality management systems (QMS).

Design/methodology/approach – A framework of quality management tools (QMTs) is developed based on existing literature, tested and adapted through four case studies and applied to a broader variety of Swiss public administrations based on a survey. It is detected to what extent QMTs are used, since when and with what intensity by paying attention to the respective importance of new public management (NPM) and network governance (NG)-shaped QMTs.

Findings – All examined offices use an important number of QMTs. Classical isomorphism only takes place on a superficial level. Findings are in line with more recent neo-institutional views, involving reflective attitudes of public administrations, which lead to a selective choice of QMTs. Non-systemic QM consists of NPM- and NG-shaped tools, although the latter are used less often in practice.

Research limitations/implications – The obtained results need further confirmation based on a quantitively broader sample.

Practical implications – It is suggested to practitioners to choose individual QMTs with a focus on performance impact, opting to use a smaller number of QMTs in a systematic way rather than a bigger number with only half-hearted application.

Originality/value – This article sheds light on the often invisible non-systemic QM in public administration.

Keywords Quality management, Non-systemic, Tools, New public management, Network governance, Switzerland, Performance, Isomorphism

Paper type Research paper

1. Introduction

As in the case of other managerial reforms, quality management (QM) was first practiced in the private sector, before being introduced in the public sector. Studies dedicated to QM in the public sector mostly focus on total quality management (TQM) concepts (Swiss, 1992; Boyne and Walker, 2002), such as EFQM (European Foundation for Quality Management) (Massey, 1999), CAF (Common Assessment Framework) (Pimentel and Major, 2016) and ISO (International Organisation for Standardisation) (Abdullah *et al.*, 2013; Ćwiklicki *et al.*, 2019). According to Van der Wiele *et al.* (1997), TQM "involves the application of quality management principles (...) to all aspects of the business, including customers and suppliers. Individual systems, procedures and requirements (...) pervade every person,

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activity and function of the organization" (p. 241). Thus, TQM can be considered as a management system (Vinzant and Vinzant, 1996). To our knowledge, no international or national overview covering all institutional levels exist regarding the share of public administrations using such a quality management system (QMS). Yet, there is some evidence, supporting the hypothesis that this share corresponds to a minority, among others, due to the fact that the use of QMS is very resource intensive (see, e.g. Ćwiklicki *et al.* (2019) concerning ISO in Polish municipalities).

Based on the assumption that QMS is only the visible part of the iceberg of QM in public administration, it is argued that only because most public administrations do not use any QMS, this does not mean that they do not practice any QM at all. Thus, it is hypothesised that public administrations who renounce to use a QMS may nevertheless use single quality management tools (QMTs) – understood in a wide sense, thus, comprising elements which may be part of the "management system" (leadership, planning, human resources, etc.) and the "technical system" (TQM tools and techniques) (Evans and Lindsay, 2005) – or a combination of them, without referring to a QMS. This hypothesis is corroborated by an early study on TQM and single QMTs in British public administration (Redman *et al.*, 1995). However, compared to QMS, research on non-systemic QM in public administration is scarce. Since the use of QMTs is less resource intensive than QMS and given its potential for public administrations' performance improvement, more research is needed not only for scientific but also practical endeavours. Therefore, this study suggests an up-to-date check of non-systemic QM practices, based on the example of Swiss cantonal public administrations. Related findings shall allow public managers to choose concrete tools for quality improvement which are less resource intensive than QMS.

The underlying empirical analysis is embedded in neo-institutional organisation theory. The latter's central concept of isomorphism suggests that all organisations tend to adopt the same innovative management practices to gain legitimacy (DiMaggio and Powell, 1983). Given that the pressure for such isomorphic behaviour is particularly strong for the public sector (Frumkin and Galaskiewicz, 2004) and that QM's central ambition consists of improving institutional performance, one can hypothesise, first, that public administrations tend to adopt an important set of non-systemic QMTs (if no QMS), and, second, that they adopt the same kind of QMTs. Thus, the examined research questions related to these hypotheses are to what extent public administrations which do not use a QMS use non-systemic QMTs, whether they all use the same kind of non-systemic QMTs, with the same intensity and according to the same chronological logic. In the context of former public management reforms, Swiss public administration was characterised as an interesting experimental territory, because individual federal states and municipalities can test new management practices before applying them on a broader basis (or not) (Giauque and Emery, 2008). Thus, the Swiss federal context is a particularly "hard" and, therefore, relevant test for neo-institutional theory.

Besides examining these classical neo-institutional hypotheses, this article aims to go more into detail regarding the features of individual QMTs by paying attention to the place of the various public management paradigms. Thereby, it contributes to the debate on the framing of QM by public paradigms by focusing on QMTs. In fact, TQM and QM in the public sector are usually associated with New Public Management (NPM) (Vinni, 2007). Indeed, NPM also plays an important role in the Swiss context, but also Network Governance (NG) was noticed as an emerging paradigm visible in practice (Giauque and Emery, 2008). Hypothesising that NPM and NG paradigms may both play a role in the Swiss context of QM, a framework of QMTs is developed on the basis of existing literature on single QMTs in the public sector, including both NPM and NG tools. This framework will allow measuring in a more detailed way the use of QMTs.

Thanks to this approach consisting of a simultaneous focus on non-systemic QM and two major public management paradigms, conceptual, empirical, and theoretical debates about QM in public administration are nourished and further developed. Thus, what kind of alternative non-systemic QM concepts are observed empirically? Furthermore, these empirical observations shall show to public managers what kind of concrete tools public administrations can use to enhance performance without implementing a whole QMS. The theoretical debate will clarify to what extent an integration of a further public management paradigm makes sense regarding QM in the public sector.

The next sections are organised in the following way. Section two is dedicated to literature on QMS and individual QMTs, institutional theory, the development of a QMT framework and ends with the formulation of the research questions and hypotheses. In section three, the applied methodology and data collection is developed in detail, comprising the application and adaptation of the developed QMTs framework. Fourth, the results of the framework's application to a broader variety of public administrations in Switzerland are presented. Finally, the last two sections discuss the obtained results, the study's limits and develop avenues for further research.

2. Quality management in the public sector

2.1 Quality management systems and conditions of successful implementation

Nowadays, public managers have a large choice of quality management systems and tools at their disposal. In terms of QMS, the most well-known concepts are ISO, EFQM and CAF. ISO and EFQM were originally developed for the private sector, but, nowadays, are also applied to the public sector. CAF corresponds to a modified form of EFQM, specifically adapted for the public sector. Given their systemic approach, they ought to help organisations to improve their functioning in a comprehensive manner rather than to repair punctual problems.

However, the successful use of these systems in the public sector depends on a series of conditions. First of all, a sufficiently strong commitment of the management towards such QMS (Pimentel and Major, 2016; Jabnoun and Khalifah, 2015) as well as sufficient resources (Ćwiklicki *et al.*, 2019) are required. Second, existing organisational structure (Abdullah *et al.*, 2013) and culture (Wynen *et al.*, 2016) play a crucial role. Third, employees' attitude (Abdullah *et al.*, 2013) and skills (Ćwiklicki *et al.*, 2019) are of paramount importance as well. Fourth, the degree of experience with QM has an impact on the successful implementation (Wiśniewska and Szczepańska, 2014) as well as performance measurement (Jabnoun and Khalifah, 2015) and communication (Pimentel and Major, 2016).

Given these rather demanding conditions for successful implementation, it seems to be intelligible if a public manager renounces to use a QMS. Simultaneously, it is argued that renouncing to a QMS does not necessarily mean that no QM is applied in a given public administration. Indeed, QM does not only exist in a systemic form, but also as individual tools or a combination of them, which are less demanding regarding their implementation than a complete QMS. Non-systemic QM may be used as a permanent solution for QM or as an intermediate stage on the journey towards a QMS. Indeed, a study carried out by Tarí and Sabater (2004) on Spanish ISO certified firms shows that the wide application of tools and techniques – corresponding here to the "technical system" and excluding the "management system" – has a positive impact on the successful use of TQM. Thus, the use of QMTs might have a positive impact in either case.

2.2 Quality management in public administration and neo-institutionalism

When considering that QM in public administrations does not exclusively exist as a QMS, but also as non-systemic form, the question is raised whether empirical reality contains

variety or homogeneity in terms of non-systemic QM. Based on neo-institutional organisation theory and its central concept of isomorphism (DiMaggio and Powell, 1983), one should conclude that we would find rather homogeneous forms of non-systemic QM in public administration. This hypothesis can be reinforced in the case of the public sector because, as observed by Frumkin and Galaskiewicz (2004) and Dingwall and Strangleman (2005), public administrations are even more sensitive to institutional pressures towards isomorphism than for-profit organisations, among others, due to the incapacity to measure organisational performance and to be accountable in terms of sales and profits. Indeed, this incapacity exposes public sector organisations to more uncertainty. As a consequence, public administrations imitate private organisations in order to appear as responsible and legitimate organisations which use the most innovative management practices (Frumkin and Galaskiewicz, 2004; Dingwall and Strangleman, 2005).

Di Maggio and Powell insist on the weight of professions in the imitation process: members of the same profession tend to imitate each other. In the case of several professions present in one given organisation, they may differ from one another and be more similar to their counterparts in other organisations. Given that public administrations comprise various professions, it is interesting to observe whether the institutional or professional variable plays a more dominating role. Indeed, the imitation process does not need to be absolute. DiMaggio and Powell (1983, p. 154) consider that "there is variability in the extent to and rate at which organizations in a field change to become more like their peers". In addition, they formulated their isomorphism hypotheses based on the *ceteris paribus* assumption, in particular regarding organisational size.

A more recent vision of isomorphism considers that further variation can be explained by a new dimension of isomorphism, i.e. commitment, which involves a reflective dimension. Thus, based on some experience with an imitated management style, an organisation may customise the latter according to its needs (Li and Chung, 2020). This vision contrasts with DiMaggio and Powell's vision, according to which organisations imitate other organisations' behaviour even if it is does not improve their performance.

Finally, a further revision of institutional theory in public administration considers that the combination of institutional theory with other strands of organisation theory "has the potential not only to conclude ex-post that change is either failure or success, but to a large extent predict the patters of such changes" (Aksom and Vakulenko, 2023, p. 3). In the context of QM in public administration, the combination of neo-institutionalism with the NPM and NG paradigms represents interesting areas to explore because both paradigms contain promises related to performance improvements, especially regarding effectiveness and efficiency in the case of NPM (Hood, 1995) and effectiveness and policy outcomes' quality in the case of NG (Scott and Thomas, 2017). Scientific analyses of NPM reforms preceded those of NG reforms. The development of the NG narrative arose as a critical reaction to the NPM paradigm, but was also based on empirical observations in European democracies, arguing that a broader analytical framework is needed to understand public management (Kickert *et al.*, 1997). Also in the case of Switzerland, the analytical focus of public management analysis has been credited for a long time to NPM, but by underlining the emerging importance of the NG narrative (Giauque and Emery, 2008). Thus, a certain chronology between NPM and NG may be hypothesised.

2.3 Individual quality management tools used in public administration

Previous attempts to categorise TQM regarding existing public management paradigms usually associate TQM with NPM (Vinni, 2007; Palm *et al.*, 2016). Gomes *et al.*'s study (2019) sees TQM and NPM rather as complementary concepts, with TQM having a clear emphasis on customer focus, employee involvement, and continuous improvement. The present

section continues this debate at the level of individual QMTs. It argues that some QMTs are indeed in line with the NPM paradigm, whereas others are closer to the NG paradigm or have a hybrid character, tending to one or another of both paradigms according to its concrete application. In addition, it is explained how these tools can contribute to the improvement of a public administration performance.

First, NPM puts an important emphasis on performance measurement, expressed by the definition and description of a public administration's mission and strategic goals and the monitoring of the achievement of those goals and other activities of public administration. Thus, equating to a sort of self-evaluation. In this context, it was examined whether strategic planning really improves organisational performance in the public sector. Indeed, this link could be confirmed, particularly regarding organisational effectiveness, but not necessarily concerning efficiency (George *et al.*, 2019). Thus, it can be considered that a clear definition and follow-up of what a public administration is doing and trying to achieve are necessary components to improve the quality of its daily work.

Performance measurement is strongly related to the concept of accountability, since it is a new mean of accounting which has arrived with NPM (Hood, 1995). Accounting is considered as a crucial mechanism to improve the performance of public organisations (Schillemans, 2016). A classical tool for public sector accounting consists of yearly reports provided to the parliament and citizens by a public administration or its various administrative units.

Knowledge management and organisational intelligence also gained importance in the public sector to improve performance. According to De Angelis (2013), it can be implemented in a NPM mode, consisting of concentrating knowledge in the higher level of an organisation or in a NG mode, privileging knowledge sharing between various actors. He concludes that the second mode is more beneficial for the public sector.

A further typical NPM tool, benchmarking, is also an interesting source for potential quality improvement (Dan and Pollitt, 2015). However, given the generally weakly developed competition within the public sector, due to its mostly monopolistic activities (Rainey and Chun, 2007) and the possible necessity to obtain data from the benchmarking partner – thus, involving a collaborative component – it is argued that benchmarking in the public sector could also be attributed to the NG paradigm, according to the concrete application.

Benchlearning is a QMT which belongs rather to the NG paradigm if it is seen as best practice diffused through networks (Ferlie *et al.*, 2008). The basic idea consists in detecting information, collected among internal or external actors, which allows improvement in the provision of public services.

Client orientation, also has its roots in NPM (Schedler and Proeller, 2005). A concrete tool to evaluate to what extent clients, among which citizens, are satisfied by public administration's performance consists of satisfaction surveys. The latter can be seen as a means to improve public services through the collaboration with citizens, thus, rather than a NG practice.

Finally, the idea of continuous improvement also found its way into public administration. A literature review allowed the identification of some distinctive success factors for the public sector's use of continuous improvement, compared to the private sector. Employee empowerment is one of the main differences (Fryer *et al.*, 2007). It is argued that the empowerment and involvement of employees in the continuous improvement cycle corresponds to what Ferlie *et al.* (2008) describe as "distributed leadership and team based approaches rather than the highly individualised management typical of NPM" (p. 338) when defining NG characteristics of higher education institutions. Therefore, it is suggested to consider the continuous improvement tool as a NG tool.

2.4 Constitution of the quality management tools framework

The framework's architecture is essentially based on the QMTs, such as mentioned in the previous section. The QMTs' order expresses the growing degree of investment in terms of resources a public administration must make when using them. Thus, it is considered that the effort to use QMT 1 – "Internal or public description" – is the smallest one among the eight QMTs, whereas it is the biggest one for QMT 8 – "Continuous improvement cycle".

The internal and external dimension is integrated in this continuum because it is considered that the use of QMTs which also involve external actors constitute a higher hurdle than QMTs which only concern internal actors of a public administration. Thus, performance measurement is distinguished regarding the internal dimension (internal self-evaluation) and the external dimension (public reporting). Furthermore, based on the same logic, benchmarking is distinguished from benchlearning, and QMT 7 comprises internal and external satisfaction surveys. Finally, the cycles indicate a start with a clear NPM logic (QMT 1–3), coming into a mixed zone (QMTs 4–5) towards an increasingly NG logic (QMT 6–8).

2.5 Research questions and hypotheses

The following research questions shall allow filling the research gap on the use of non-systemic QMTs. All hypotheses are based on previously developed theoretical elements related to neo-institutionalism, NPM and NG.

RQ1. To what extent do public administrations which do not use a QMS use non-systemic QMTs?

H1. Public administrations which do not use a QMS use an important number of non-systemic QMTs.

RQ2. Do public administrations which do not use a QM use the same kind of non-systemic QMTs?

H2. Public administrations tend to use the same kind of non-systemic QMTs.

RQ3. To what extent can variation be observed among public administrations regarding the use intensity of all individual QMTs, considering also their NPM or NG character, and the rate of becoming similar?

H3. If some variation can be observed in terms of use intensity, especially with a more intensive use of NPM featured QMTs due to their longer tradition, and the rate of becoming similar, a timely linearity consisting of the introduction of NPM featured QMTs in a first step, followed by NG featured QMTs in a second step can be observed.

3. Methodology and data

The applied methodology consists of two steps: first, the created framework is applied to four case studies to answer the Research Questions 1 and 2 (hereafter: 1st dataset); second, a revised framework is used for the development of a survey, which is sent to a broader number of administrative units to answer the Research Questions 1 to 3 (hereafter: 2nd dataset).

3.1 Testing the analytical framework based on four case studies

Empirical fieldwork, based on case studies, was carried out in Swiss public administration. Indeed, because of its diverse features, the latter is a particularly interesting empirical field to test the hypotheses based on neo-institutionalism. First, Swiss public administration is shaped by a diversity in terms of varying administrative cultures. If the Federal (national)

administration is a hybrid of the Germanic, Napoleonic, Anglo-Saxon and Scandinavian traditions (Giauque, 2013), differences are more clear-cut when it comes to varying linguistic regions, i.e. between the German-speaking part on the one side and the Latin part (comprising the French and Italian-speaking regions) on the other (Koci, 2007). Ladner (2016) notices more openness to reforms, such as NPM, in the German-speaking municipalities than in the French-speaking ones and explains this finding with different administrative cultures. In addition, Maeder (2007) shows in his sociological study on the acceptance of NPM reform in various professions that professional cultures may have a deep impact. This cultural diversity allows testing whether the developed QMT framework proves to be solid in various cultural contexts. Simultaneously, other variables related to different national administrative systems can be controlled by staying within one single country.

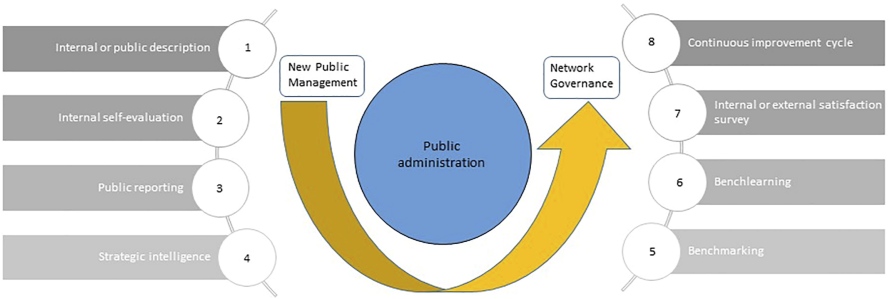
Thus, case studies were chosen to consider existing diversity in terms of linguistic regions. One large and one medium-sized cantonal public administration were chosen within both linguistic regions to cover existing diversity also regarding organisational size. The cantonal level constitutes the intermediate level between the national and local levels. Altogether, Switzerland has 26 cantons, out of which 17 are German-speaking, four are French-speaking, one is Italian-speaking, three are bilingual (French and German) and one is trilingual (German, Italian and Rhaeto-Romanic). Case studies are chosen among monolingual cantons to eliminate the potential diluting effect of the multi-cultural dimension on the cultural profile of the case studies.

Considering that the cantonal administrations' size is more or less proportionate to the number of inhabitants, they were chosen on this basis. Consequently, the largest canton of the Latin part – the canton of Vaud – is chosen together with the German-speaking canton, which has the most similar number of inhabitants – the canton of Aargau. A second pair of medium-sized cantons – Neuchâtel (as a Latin canton) and Basel "City" (as a German-speaking canton) – was chosen on the same principle.

Finally, four varying public sectors were chosen to cover potential diversity at the level of administrative units and professions. According to Bouckaert (2007), administrative units and specific professions may have their own culture. Thus, the objective consisted in choosing administrative units, which hypothetically make various use of QMTs, either because of their organisational or professional culture. Following Reichard and Schröter (2018) it is considered that the administrative units are influenced by the educational background of individual collaborators. Hence, the Finance Office was chosen because it is hypothesised that mainly economists work there, whereas the Public Transport Office is probably dominated by engineers. Both types of educational profiles are used to work with quantitative data, which may imply a rather technical approach. In contrast, the Social Welfare Office is probably dominated by social workers and the Human Resources Office by psychologists and other social scientists. In both cases, the human is at the centre of their activities.

Data collection happened in two stages. First, statements, strategic plans, annual reports were researched on the websites of the chosen case studies. In addition, legal frameworks, which specifically concern the analysed offices were scrutinised to identify any legal obligations for QM. Collected data gave a first, yet incomplete overview of used QMTs. Therefore, main data was collected in a second step, through 24 semi-directive interviews with two kinds of actors: on the one side, key players involved in QM for the whole cantonal administrations, on the other side, heads of the offices (or their deputy). Due to refusals, interviews with three heads of offices were replaced by interviews with managers at the department level (which is hierarchically situated over the offices).

Both types of interview partners received the QMTs framework (Figure 1) with written explanations before the interview to be given the opportunity to prepare for the interview. The interviews' main objective consisted of the identification of used QMTs per category and its illustration by concrete examples. If interviewees did not understand the meaning of one



Source(s): Authors' own work

Figure 1. Framework of quality management tools

or several of the QMTs, oral explanations were given during the interviews. Interviewees were also asked about the use of other QMTs, which would not be part of the framework's components. Furthermore, interviewees were also asked whether they use a QMS, and if yes, which one. Finally, interviews with key players involved in QM for a whole cantonal administration aimed at examining to what extent the QMTs were imposed to all administrative units and to what extent the latter were free to use (or not) certain QMTs. This way, data crossing between the two types of actors could be carried out.

3.2 Apply a revised analytical framework to a broader empirical base (2nd dataset)

Besides a few exceptions, almost all offices indicated using all of the eight identified QMTs (see Table 1).

In addition, and more importantly, 34 concrete sub-tools were identified for the defined QMTs, which enrich the framework considerably. No sub-tools, which would not fit into the framework were mentioned. Thus, at least in the case of the given empirical setting, no relevant QMTs were overlooked. The general framework proved to be relevant but must be nuanced within the QMT categories. Finally, the distinction between benchmarking and benchlearning could often not be made precisely by interviewees. Therefore, one only category is used in the adapted form of the framework, what reduces the number of QMT categories to 7.

An online survey was developed based on the revised framework aiming at providing the second dataset. Its first goal consisted of asking which of the 34 sub-tools were used in each administrative unit, since when (by suggesting five categories: before 2000, 2001–2009, 2010–2015, 2016–2021, unknown) and with what kind of intensity (regular vs punctual use). Through this procedure a much more detailed analysis could be carried out compared to the first dataset. The survey was sent to the directors of the same four kinds of offices (Finance, Public transport, Social welfare and Human resources) of the remaining 22 cantons. All directors who did not answer after the first invitation were sent a friendly reminder. 15 complete answers were received, what corresponds to a response rate of 17%. The answers are distributed on twelve different cantons, cover all suggested size categories (3 have between 1 and 10 full time equivalent positions [FTE], 5 have 11–30 FTE, 1 has 31–50 FTE, 3 have 51–100 FTE, 2 have 101–200 FTE and 1 has more than 200 FTE). With 13 answers from the German-speaking part, there is overrepresentation for this linguistic region. Finally, most answers came from Public transport offices (7), followed by Finance offices (4), Human resources offices (2), one Social welfare office and one other office. Thus, the balance between the four types of offices could not be maintained such as in the first dataset.

Table 1.
The use of quality management tools in the case studies (1st dataset)

Linguistic region	German-speaking part								Latin part							
Size	Large Aargau (670K inhabitants)				Small Basel "City" (193K inhabitants)				Large Vaud (793K inhabitants)				Small Neuchâtel (178K inhabitants)			
Office	Finance	HR	Transport	Social welfare	Finance	HR	Transport	Social welfare	Finance	HR	Transport	Social welfare	Finance	HR	Transport	Social welfare
Number of FTE	20*	22*	260*	146**	3*	51.5*	40*	280*	21*	63*	460*	280-300*	40*	23*	9*	42*
Improvement cycle	X	X	X	X	X	X	X	X	X	X	X	0	X	X	X	X
Satisfaction survey	X	X	X	X	X	X	X	X	X	X	X	X	X	0	0	X
Bench-learning	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Bench-marking	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Strategic intelligence	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Reporting	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Self-evaluation	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Description	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Note(s): * Numbers indicated by interviewees
** According to yearly government report 2020 (Aargau, 2021)
Source(s): Source of number of inhabitants: https://www.bfs.admin.ch/bfs/fr/home/statistiques/statistique-regions/portraits-regionaux-chiffres-cles/cantons.html; consulted in August 2019; Authors' own work

Table 2. Use, intensity, and temporal introduction of quality management tools by sub-tool (2nd dataset)

	1	1a	1b	1c	2	2a	2b	2c	2d	2e	2f	2g	2h	2i	2j
	Description	Charter, values, vision and/or mission	Strategy, performance contract and/or objectives	Services, actions, processes and/or norms and standards	Self-evaluation	Internal audit	Self-evaluation of strategy, performance contract and/or objectives	Controlling, monitoring and/or reporting	Cockpit and/or indicators	Internal control system	Risk analysis	Process and project management tool	Appraisal interview	Working hours controlling	4/6 eyes principle
Number of offices using	*14*	12	15	15	*14*	12	14	15	13	14	14	13	15	15	15
Regular use	*12*	9	13	15	*12*	12	10	13	10	11	10	9	15	15	15
Punctual use	*2*	3	2	0	*2*	0	1	2	3	3	4	4	0	0	1
Before 2000	*5*	1	5	8	*5*	4	4	5	1	3	1	0	9	11	11
2000–2009	*4*	5	5	3	*3*	4	3	7	4	1	3	5	2	1	1
2010–2015	*0*	0	0	0	*1*	1	1	0	3	2	3	3	0	1	0
2016–2021	*4*	4	4	3	*3*	1	4	2	4	6	6	2	3	1	2
Unknown	*1*	2	1	1	*2*	2	2	1	1	1	1	1	1	1	1

	3	3a	3b	3c	3d	4	5	5a	5b	5c
	Reporting	Annual report	Press communi-cation	Parliamentary commission report	Statistics on activities	Strategic intelligence	Bench-marking	With other cantons	With foreign public administrations	Audit through another canton
Number of offices using	*14*	15	14	13	15	*13*	*5*	14	2	0
Regular use	*12*	15	10	9	13	*7*	*2*	7	0	0
Punctual use	*2*	0	1	4	2	*6*	*3*	7	2	0
Before 2000	*11*	10	12	10	11	*6*	*2*	5	0	0
2000–2009	*1*	2	0	0	1	*4*	*0*	1	0	0
2010–2015	*0*	0	0	0	0	*0*	*1*	3	0	0
2016–2021	*1*	1	0	0	2	*1*	*1*	3	1	0
Unknown	*1*	2	2	3	1	*2*	*1*	2	1	0

(*continued*)

Table 2.

	6 Satisfaction surveys	6a Informal internal satisfaction survey	6b Formal internal satisfaction survey	6c Informal external satisfaction survey	6d Formal external satisfaction survey	6e Citizen conference
Number of offices using	*8*	11	15	4	6	3
Regular use	*3*	7	4	1	2	0
Punctual use	*5*	4	11	3	4	3
Before 2000	*1*	3	0	1	0	0
2000–2009	*2*	2	4	1	3	1
2010–2015	*2*	3	5	2	0	0
2016–2021	*2*	2	5	0	2	2
Unknown	*1*	1	1	0	1	0

	7 Continuous improvement cycle	7a PDCA and/or after-action-review	7b Internal control system with an improvement cycle	7c Risk Management	7d Document revision	7e Quality circle	7f Idea box for internal improvements	7g Citizen conference with improvement goal	7h Individual development meetings	7i Continuing education
Number of offices using	*11*	11	10	14	15	5	12	2	13	15
Regular use	*7*	6	7	9	10	1	6	0	9	12
Punctual use	*4*	5	3	5	5	4	6	2	4	3
Before 2000	*3*	2	3	1	2	1	1	0	6	10
2000–2009	*3*	3	1	3	5	1	6	1	3	2
2010–2015	*1*	1	0	1	2	0	1	0	1	0
2016–2021	*3*	4	6	6	4	2	2	1	2	2
Unknown	*1*	1	0	3	2	1	2	0	1	1

Source(s): Authors' own work

Effective use of each QMT was calculated by adding received values for each sub-tool (e.g. 1a+1b+1c) and dividing it by the number of sub-tools of a QMT. In the case of QMT 1, the applied formula was as follows: (12 + 12+15)/3 = 14. The same logic was applied to calculate the average period of introduction for each QMT (see Table 2 for all detailed results).

4. Results

First, only two offices indicated using ISO and one using EFQM. Those using ISO are both in the field of public transport and explicitly mention reasons related to their profession:

> The ISO certification brings us an image vis-à-vis our providers. In the case of public tendering, it is one of our criteria we are evaluating: are they certified, what is their quality system's performance level? Then, since we wish to be exemplary, we are also happy to be certified, which allows us to find a common vocabulary, similar working methods. If I think about an engineering enterprise, they work a bit as we do.

(Interviewee of a public transport office 1).

If this statement is very clearly in favour of QMS, a head of a human resources office positions himself very clearly against such QMS:

> The more we formalise, the less we are agile (. . .). Being in HR, we must listen to the people.

Indeed, most offices rely on non-systemic QM. However, as previously mentioned, all offices use most eight QMTs (see Table 1), despite diversity in terms of administrative cultures and professions as well as organisational size. Thus, hypotheses 1 and 2, according to which public administrations which do not use a QMS use an important number as well as the same kind of QMTs, are confirmed based on the four case studies (1st dataset). However, various interviewees underlined that they would not use each single QMT in a regular and systematic way, but rather pragmatically:

> We do not have somebody who does benchmarks in a regular way. It is rather according to the needs and improvement potential.

(Interviewee of a finance office).

The second dataset allows detailed analysing of the issue of use (Research Questions 1 and 2) and variation in terms of use intensity and rate of becoming similar as well as the degree of timely linearity regarding the introduction of individual QMTs, featured by NPM and NG (Research Question 3). Indeed, the second dataset provides a more nuanced image. The calculated average mean of use per QMT shows that if QMTs 1–3 (description, self-evaluation, and reporting) are used by most offices, the use decreases for QMTs 4 and 5 (strategic intelligence and benchmarking), yet it raises again to some extent for QMTs 6 and 7 (satisfaction surveys and continuous improvement cycle). A closer look at their use by sub-tools (see Table 2) shows that this partial raise of use is principally due to satisfaction surveys carried out within the given offices and less with citizens. In the case of QMT 7, rather traditional sub-tools, such as individual development meetings, continuing education and document revision raise the average. Thus, there is a preference for less complex and well-known sub-tools.

Regarding the intensity of QMTs use, the tendency is similar. While QMTs 1–3 are used regularly, this is much less the case for QMTs 4–6. Given the nature of QMT 7 "continuous improvement cycle", its use becomes again slightly more regularly (see Figure 2).

Thus, as admitted by DiMaggio and Powel, a certain variation takes place, whereas the general movement towards isomorphism can be observed at a superficial level. However, what about the respective importance of the NPM and NG featured QMTs' use? NG shaped sub-tools, such as citizen satisfaction surveys, quality circle and citizen

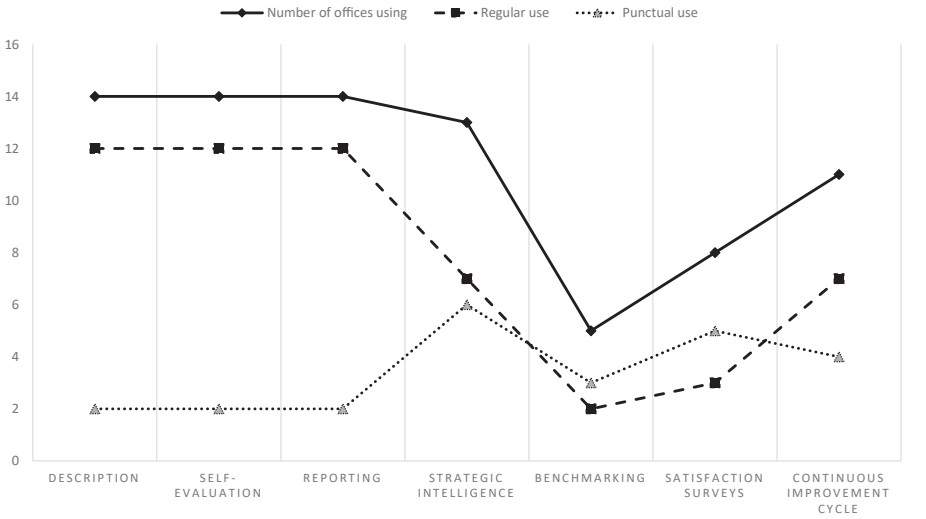


Figure 2.
Intensity of quality management tool use

Source(s): Authors' own work

conference with an improvement goal are rarely used (see Table 2). The QMTs 6 and 7's overall average is raised by NPM shaped sub-tools such as internal satisfaction surveys, after-action review, and individual development meetings, all led by the hierarchy. In other words, QMTs 6 and 7, such as used among the respondents, have rather a NPM than an NG shape.

Simultaneously, this nuanced result based on the 34 sub-tools also allows revising further the framework of QMTs, by underlining that QMTs do not necessarily evolve into the direction of the NG paradigm, the higher they are classified. According to the sub-tool used, a "NPM-track" can be added to the "NG-track" for QMTs 6 and 7 (see Figure 3).

Finally, institutional isomorphism also predicts timely linearity regarding the introduction of single QMTs. This partial aspect of Hypothesis 3 cannot be confirmed. In fact, no linear logic can be observed when making a distinction between NPM and NG shaped QMTs. Some NPM shaped QMTs, such as QMTs 1–3, were indeed mostly introduced during Switzerland's NPM reform of the 1990s and 2000s. However, such tools were also introduced later or even only very recently. The same applies to all other QMTs and sub-tools, whether

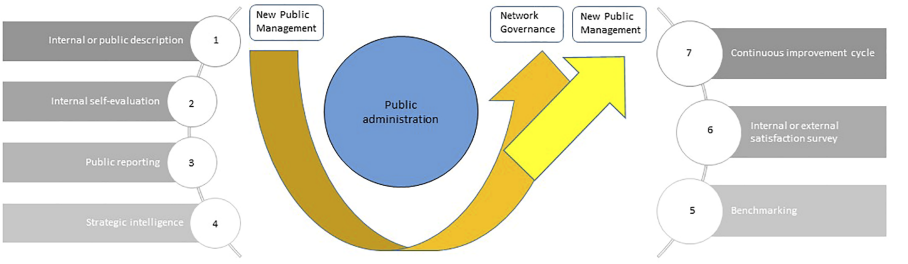
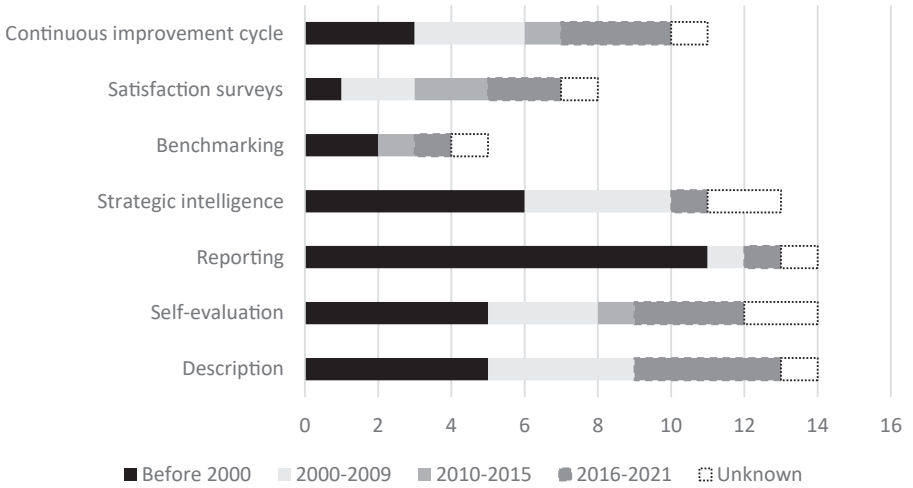


Figure 3.
Revised framework of quality management tools

Source(s): Authors' own work



Source(s): Authors' own work

Figure 4. Period of introduction by quality management tool

they are NPM or NG shaped. In other words, QM seems to be an issue, which has not only been handled during a given period but showed up at very different time periods according to the given cantonal office (see Figure 4).

5. Discussion

Based on the first dataset, it seems that institutional isomorphism also applies largely in the case of non-systemic QM. Indeed, interviewees of almost all four case studies gave examples of QMTs belonging to the seven basic categories built. Consequently, one can ask whether they simply use a QMS without naming it as such. However, the second dataset confirms what some interviewees already insinuate: many QMTs are not used on a regular, systematic basis, such as it would be the case in a QMS, such as ISO, EFQM or CAF, but often only punctually. In addition, both datasets show that there is a wide array of sub-tools used or not according to the office, which contradicts the QMS' logic of the use of a common set of norms or criteria (Tomaževič *et al.*, 2016). Thus, we can say that institutional isomorphism applies on a superficial level, but less clearly when we dig deeper. In addition, DiMaggio and Powell's theory definitely fails to explain the chronological introduction of QMTs featured by NPM and NG. These results are in line with more recent neo-institutionalists, such as Li and Chung (2020), according to which an organisation may customise management practices according to its needs, thus, involving a more reflective approach rather than the one of blind imitation, but also with the characterisation of Swiss public administration as a laboratory for the testing of new public management practices (Giauque and Emery, 2008). NPM shaped tools were often introduced during the hot phase of NPM reform in Switzerland, but also recently. Thus, managerialism understood as the borrowing of management tools from the private sector still impacts Swiss public management reform, at least regarding QM. Yet, the chronological appearance of NG shaped QMTs necessitates more long-term observation, especially to examine whether their increased use is only a matter of time and whether they will replace NPM shaped tools or simply complement them.

The distinction between NPM and NG featured QMTs allows enriching the theoretical debate on QM in public administration. Indeed, even though not every single sub-tool can clearly be attributed to one of these two paradigms, the initial and refined QMT frameworks

and their empirical application show that QM in public administration (at least in the Swiss cantonal context) is not exclusively determined by NPM, but also NG. NG featured QMTs, such as citizen satisfaction surveys, quality circles and citizen conferences with improvement goals generally have a more complex character than many NPM shaped QMTs. This difference may explain why they are less used in practice and have been overseen also in theoretical debates.

However, from a practical point of view, it is striking that rather less complex and traditional tools are preferred to more recent and time-consuming ones, a result which confirms findings made by Redman *et al.* (1995). Thus, effectively used QMTs are chosen on a pragmatic basis. Consequently, as in Tarí and Sabater's study (2004), the question must be raised about their effectiveness regarding QM of the given public administrations. Are these QMTs applied in the most effective combination and with the most efficient intensity? In addition, such "pick-and-choose"-practices complicate the measurement of the impact of QMTs on the performance of the various public administrations. Thus, analyses, such as the ones carried out by Tomaževič *et al.* (2016) for the impact of CAF on police units' performance, become more complex, due to the lack of common QMTs (or "enabling criteria").

Given this pragmatic choice of less time-consuming QMTs and its potential negative impact on effective performance improvement, recent public management literature pointing to the potential of artificial intelligence (AI) technologies in public administration (Madan and Ashok, 2023; Neumann *et al.*, 2024) raises the question whether AI might allow an easier access to QMT's use. Thus, can AI reduce the necessary time investment related to the use of QMTs and, thereby, increase the use of QMTs, such as strategic intelligence?

6. Conclusion

From an empirical and practical perspective, a first important observation concerns the existence of non-systemic QM in public administration. The present study corroborates the statement according to which public administrations who renounce to use a QMS, such as CAF, EFQM or ISO, do not necessarily renounce to QM in other, non-systemic forms. Indeed, the developed and adapted framework allowed identifying the use of an important number of QMTs and sub-tools. All these QM practices represent an interesting alternative to QMS, because they are generally less resource intensive than a whole QMS.

However, though on a lower level, also QMTs require various degrees of resource investment. The findings about the preference for simple rather than complex tools reinforce lessons made about the successful use of QMS in public administration: the use of heavy QMTs is challenging and needs a lot of investment – thus, apparently discouraging public administrations, their managers, and employees to use them. For instance, findings indicate that heavy tools such as strategic intelligence and benchmarking are mostly used punctually. Yet, the problem is that such tools need regular use to unfold and generate positive results. Studies about QMS also underline the importance of the participative dimension for the QMS' success (Hellein and Bowman, 2002). If considering that this also applies to the use of single QMTs, the use of more collaborative QMTs, such as "satisfaction surveys" and "continuous improvement cycles", may be more resource intensive, but potentially also more effective regarding performance improvement. Thus, there seems to be a dilemma between investment and results in terms of performance improvement. It is suggested to practitioners to choose individual QMTs with a focus on performance impact, which means, rather use a smaller number of QMTs in a systematic way than a bigger number with only half-hearted application.

If this study allowed lightening to some extent the black box of non-systemic QM in public administrations, it nevertheless has several limits. Given the low answer rate for the second dataset, obtained results need further confirmation by a quantitatively enlarged

basis. Moreover, observed results cannot be generalised to the Swiss public sector, because realities may vary considerably between the three institutional levels and also at the municipal level. It would be necessary to test, adapt and apply a similar kind of survey on the Federal and local levels to examine whether similar observations can be made to those developed above.

Several issues could be the object of further research. First, the use of a non-systemic QM may be part of the explanation for good performance of public administrations. Thus, further research should focus on the link between public administrations' performance and non-systemic QM. Second, another important question must be raised: what is the best ratio between the use of certain QMTs and the real impact in terms of public administration performance improvement? Finally, comparative research with other countries is needed to detect whether the dominance of NPM shaped QMTs is a general or specific Swiss phenomenon.

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