



Article

# Risk Management in Practice: A Multiple Case Study Analysis in Italian Municipalities

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**Abstract:** This paper aims to analyse the ways in which risk management has been embedded in management control systems in Italian municipalities. Through a qualitative method, this study presents multiple case studies from six municipalities with two levels of analysis: content analysis on the information published on the institutional website, and interviews through a questionnaire with open and closed questions addressed to the public managers of the Italian municipalities selected. Moreover, the municipality respondents were classified into medium (two municipalities with over 50,000 inhabitants), medium-high (two municipalities with between 100,000 and 500,000 inhabitants), and high (one municipality with over 500,000 inhabitants). The multiple case studies reported show how there is not a strong level of integration between risk management and the management control system in use. This research is useful to sustain the debate about risk management in the public sector. It should help practitioners and scholars to cover their municipalities' needs.

**Keywords:** risk management; municipality; practice



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## 1. Introduction

Many scholars and researchers have explained how risk management (RM) is embedded in public administration (Hinna et al. 2018; Rana et al. 2019; Soin and Collier 2013).

Various factors, including the economic crises that have taken place since 2008 and COVID-19, have increased the need to ensure the achievement of public objectives and to create resilient behaviors in public organizations (Hinna et al. 2018; Nilsen and Olsen 2005; Steen and Morsut 2020).

Moved by this need, public managers have researched (formalized) different ways and methods to determine what is useful to guarantee the objective achievements of these organizations (Deschamps 2019; Rana et al. 2019).

Scholars and practitioners claim that there is a need to create a linkage between risk management (RM) and performance management (PM), moving towards integrated risk management (Bracci et al. 2020; Palermo 2017).

RM represents a tool for public managers to use in public administration, as it is useful to increase the level of PM when integrated with the management control system (MCS) and the achievement of objectives.

Furthermore, highlighting the world of the municipality, which provides many services to various stakeholders, such as entrepreneurs, schools, local public service companies and, in general, citizens, is of particular importance when seeking to understand how to ensure its functionality (Bolívar 2018; Robey and Holmström 2001; Rodrigues et al. 2012).

In the literature, the roles of the city manager and the public manager have both been widely studied (Demir and Nyhan 2008; Mouritzen and Svava 2002; Nelson and Svava 2015; Newell and Ammons 1987). Many scholars have explained how the typical approach of private managers has been embedded in the public logic.

In the last 40 years, the influence of new public management (Hood 1995) has changed the approach to public administration and the municipality (Jansen 2008; Suzuki and Avelaneda 2018; Ter Bogt 2008). The birth of the management control system and performance

management in parallel with accountability and transparency policies highlights the need to increase the knowledge of both the public and city managers (McGuire 2006).

However, it also is evident that RM, the MCS and PM represent the tools necessary to enable public administration and municipality management. Their integration has been widely discussed (Palermo 2017), but there is no practical evidence of the ways in which RM, MCS and PM are integrated into public organizations (Hinna et al. 2018; Rana et al. 2019).

From the literature review it emerged that there are few works concentrated on practical aspects concerning the implementation of RM in municipalities.

Early reflections on the introduction of RM in public organizations include Power et al. (2009) who question the methods of introducing RM procedures into organizational systems as well as the emulations between the various organizations of the behaviors assumed.

This paper aims to fill this void with the purpose of discussing RM and MCS in municipalities and presenting evidence from a multiple case study in the Italian context.

The first section is the literature review on the role of the municipality and RM in the public sector. In the second section, the data and method of analysis are presented, including the multiple case study approach itself.

Finally, in the last sections, a discussion of the results and final conclusions are provided.

## 2. Literature Review

### 2.1. The Role of the Municipality in the Italian Context and Risk Management

In this paragraph, the analysis of the literature on the theme of RM in the public administration and in the municipalities has been developed through the analysis of the main papers that have dealt with the theme in a systematic way.

A municipality is a public organization that provides public services to its citizens (Grossi et al. 2016).

The Italian territory is characterized by the presence of many municipalities. In 2020, there were 7905 municipality organizations (ISTAT 2020), many of which are of medium-small size. There are 7905 municipalities (ISTAT 2020), but only 1.75%, or 136 municipalities, have more than 50,000 inhabitants. Approximately 0.55%, or 44 municipalities, have more than 100,000 inhabitants, and finally, only 0.11%, or 9 municipalities, have more than 300,000 inhabitants.

For the many services performed, there are various stakeholders that orbit around the municipality. For example, the municipality's policies affect the fiscal impact on entrepreneurs (Barbera et al. 2016) and provide local public services such as waste management (Chifari et al. 2017), water management (Mazzanti and Montini 2006), and the management of urban road safety (Demasi et al. 2018).

With the aim of ensuring the achievement of its objectives, the Italian legislature in the last 20 years has provided laws to introduce a "managerial approach" in Italian municipalities (Caccia and Steccolini 2006; Sancino and Turrini 2009) oriented to performance management (Bracci et al. 2017; Padovani et al. 2010).

Meanwhile, in the Italian municipalities, new public management approaches were introduced by private world practitioners and companies to ensure the achievement of their objectives, such as an enterprise risk management framework, the ISO 31000, and the COSO framework.

The reform process of the local authorities has neglected the relationship between risk management and the management control system (Reginato et al. 2012; Riso and Castellini 2019). As observed by Peta (2016, p. 24), the actions of Italian public managers do not appear informed as to the "risk logic".

The reform process introduces methods and instruments such as budgeting systems and financial programming, both of which are useful to translate to the managerial level. In more precise detail, the policies, programmes, financial resources, and objectives are defined at the political level (Grossi et al. 2016; Ziruolo 2013).

In 2012, the Italian legislature introduced a provision, Law n. 190. This introduced anti-corruption norms in the municipalities, first implementing an organic risk management process to manage the corruption risk (D’Onza et al. 2017).

There is no law that provides how municipalities put in place their enterprise risk management strategy, and the way to implement the choice to guarantee the achievement of the objectives is free and left up to the ability of the public manager (Peta 2016; Reginato et al. 2012; Riso and Castellini 2019).

The International Organization of Supreme Audit Institutions, i.e., INTOSAI (2004), provides specific guidelines for the implementation of risk management in the public sector. They explain that the aim of risk management is to enable management to effectively deal with uncertainty and to evaluate risks and opportunities. This enhances the capacity to build and create value and deliver services more efficiently (INTOSAI 2004, Gov 9130).

However, there is a lack of practical evidence about the implementation of RM in municipalities. In the literature, few studies are available, among which is Nilsen and Olsen’s (2005) comparative case study. It was in this study that it emerged that two municipalities that have different strategies in practice may engage in the same risk assessment procedures and behaviors, such as those associated with the assessed relationship between RM and the MCS (Nelson and Svava 2015).

Furthermore, Reginato et al. (2010) examined the behaviour of public managers in Italian municipalities and affirmed that there is isomorphic behaviour found in the way in which they developed in practice the managerial instruments provided by the Legislative Decree n. 267 in 2000.

The decision-making process in municipalities is a complex process. Risk-based decisions are influenced by various “interorganizational interactions among actors and how power, control and responsibility are distributed among them” (Boholm et al. 2012, p. 3).

Few studies in the literature, therefore, have focused on the practical implementation of risk management in municipalities. By practical implementation we mean learning procedures and techniques integrated with the management control system (Mormul 2021). Mormul (2021) investigated how RM integrated into the management control system of Local Government Units, concluding that “the understanding of the essence and principles of management control system and risk management by employees is incomplete”. For these reasons, a specific focus on the topic proposed is necessary.

## 2.2. A Holistic Approach to Risk Management in the Public Sector

Risk management in the public sector represents a technique used to ensure the achievement of institutional objectives (INTOSAI 2004).

When risk management practices are linked to strategic objectives and management control systems (Mikes 2009), scholars and practitioners have established enterprise risk management (Bromiley et al. 2015; Mikes and Kaplan 2014; Paape and Speklé 2012).

The financial and economic crises over the last thirty years highlight the need to break the boundaries of the “formal” and “bureaucratic” internal and external control in the public sector (Huber and Scheytt 2013; Peters et al. 2011). This is moving towards a “holistic” approach that contemplates the operational risks and strategic objectives together (Kline and Hutchins 2017; Mahama et al. 2020).

Bullock et al. (2019) offer a wide literature review about the theme of risk management in the public sector, showing the relatively limited treatment of risk thus far in the public management research literature.

Indeed, the uncertainty about RM practices and how these are developed generates various implications. Vinnari and Skærbæk (2014) explained how RM itself has given rise to a number of uncertainties. These uncertainties are generated by the legal aspects of the RM solution (i.e., which types of documents are considered legally valid) or the definition and operationalization of RM and the resources available for implementing and expanding an RM system.

This deficit was confirmed by Bracci et al. (2021) in their structured literature review about risk management in the public sector. They explained how there is “a lack of theorization, with a limited explanatory capacity of most studies, which remains descriptive” (Bracci et al. 2021, p. 219).

Moreover, the authors suggest a research agenda for this field, concentrating attention on RM and whether it is influenced by other managerial systems.

Furthermore, various scholars affirm how the linkage between risk and performance management is in development and how there is not currently a strong relationship practiced by public organizations (Arena et al. 2017; Hood and Smith 2013).

Many of these considerations start with the assumption of the “managerial” approach of public management, which plays a crucial role after new public management (Hood 1995) influences.

Bourn (2008), in his paper, suggests increasing the presence in the public organizations of more managerial and fewer “political” appointees at the senior civil service levels to improve financial management, cost control, and risk management.

Table 1 summarizes the main literature on RM in practice in the Public Sector of recent years that observe RM practices:

**Table 1.** Main literature on Risk Management in practice the Public Sector of recent years.

Year	Authors	Title	Journal	Topic
2005	Nilsen and Olsen	Different strategies—equal practice? Risk assessment and management in municipalities	Risk Management	Comparative case study that observe RM procedures in two municipalities
2009	Power et al.	Reputational risk as a logic of organizing in late modernity	Organization studies	Focus on RM practices and introduction in public sector
2009	Mikes	Risk management and calculative cultures	Management Accounting Research	The authors suggests implementing a risk calculation culture to integrate RM with MCS
2014	Vinnari and Skærbæk	The uncertainties of risk management	Accounting, Auditing & Accountability Journal	In the municipalities the absence of RM procedures has given rise to a number of uncertainties
2017	Hinna et al.	Implementing risk management in the Italian public sector: hybridization between old and new practices	International Journal of Public Administration	The authors proposed a case study of the implantation of ERM in ISTAT (an Italian public organization)
2019	Bullock et al.	Managing risks in public organizations: a conceptual foundation and research agenda	Perspectives on Public Management and Governance	The study shows the relatively limited treatment of risk thus far in the public management re-search literature.
2021	Mormul	Risk Management in the Management Control System in Polish Local Government Units—Assumptions and Practice	Risks	The author investigated how RM integrated into the management control system of Local Government Units
2021	Bracci et al.	Risk management in the public sector: a structured literature review	The International Journal of Public Sector Management	Structured literature review on RM in public sector

In light of the gap identified and the premises set out above, this paper discusses the relationship between RM and the MCS in the selected Italian municipalities and responds to the following research questions:

RQ1. Is there a relationship between RM and the MCS in the Italian municipalities, and how is it developed?

RQ2. How is this relationship managed?

A recent study theorized the need to provide a new type of professional approach in the municipality organization. This is the “municipal risk management” formalized in municipal organizations with accounting capabilities and backgrounds. This involves the varied ways of seeing risks also as opportunities (Mättö et al. 2021).

Todd (1969) called on the public administration to cover the need for an RM function in municipal governments. This includes exposing their increase in assets, examining the population served, presenting the diversity of services provided, and using the public liability of the municipalities to increase the loss exposure of the same (Todd 1969).

Finally, Mormul (2021) drew a first insight into how the RM is implemented and integrated with the MCS in the Polish public sector, highlighting how “the risk management and management control system in the Polish local government units is fragmented and insufficient, even if it is usually adequately documented, does not fit into the strategic management framework” (Mormul 2021, p. 12).

### 3. Materials and Methods

#### 3.1. Case Selection

Acknowledging the need to investigate the relationship between risk management and management control systems, the qualitative method is the most suitable (Noble and Smith 2015) and useful to conduct a multiple case study (Arena et al. 2006; Nyland and Pettersen 2015; Palermo 2017; Yin 2011).

Through the correct implementation of a multiple case study, we improve the reliability of this research (Palumbo et al. 2017) and use different resources (internal and external to the organizations) that allow the triangulation of information (Arena et al. 2006; Denzin 1978).

This involves comparing the data presented in the different documents of the case analysed using the information provided by the interview. This offers the possibility to evaluate the coherence between these documents.

The municipalities selected were all over 50,000 inhabitants, in coherence with a choice to select municipalities with similar sizes per category and coming from different geographical areas (north/south) (Barbera et al. 2020), which is a relevant condition according to Anessi-Pessina et al. (2008).

Moreover, the selection of large municipalities was because they have a more structured organization and are therefore more sensitive to innovation and problem solving, as well as creating best practices and models to follow, compared to the smallest municipalities (Barbera et al. 2020).

The six municipalities selected were divided into three-dimensional categories: medium (two municipalities with over 50,000 inhabitants), medium-high (three municipalities between 100,000 and 500,000 inhabitants), and high (one municipality with over 500,000 inhabitants).

Moreover, even if it did not allow for the generalization of the results, many authors agree that a case study is useful when studying and presenting new study contents that have not yet been defined. This includes being able to offer detailed descriptions and a wealth of details (Noor 2008; Stake 1978).

#### 3.2. Data Collection

All municipality names have been codified with an alphabet letter from “A” to “F.” Table 2 “Sample of Italian municipalities involved” reports the sample.



**Table 2.** Sample of the Italian municipalities involved.

N.	Municipality Code	Size	Inhabitant Range
1	A	Medium	50,000–100,000
2	B	Medium	50,000–100,000
3	C	Medium-High	100,000–500,000
4	D	Medium-High	100,000–500,000
5	E	Medium-High	100,000–500,000
6	F	High	500,000–maximum value

Different sources were used to improve the triangulation of information (Denzin 1978), and these were collected in different ways:

- An external point of view of the municipality selected was offered through a search of the municipality's official websites using a content analysis method; we analysed different documents, including strategic documents, contracts, public acts of the administrators or public managers (Feeney and Brown 2017; Karyotakis and Antonopoulos 2021).

The main document selected for the analysis is the municipal strategic document called "DUP" (Documento Unico di Programmazione). This document is where the administrator and officers collaborated to establish a multiyear strategy by considering the factors external and internal to the organization and the territory (Del Gesso 2020).

The DUP document is provided in Italy by Law n. 118/2011 and was introduced in 2016. It represents an important tool that is used to define the strategic and operational actions for the local authority. It establishes the basis from which to implement all other accounting tools, such as a budget or performance plan (Gori et al. 2018).

- An internal point of view of the municipality selected was offered through a semi-structured interview of the municipality's public managers. We use a questionnaire consisting of both open and closed questions to allow the researcher to intercept all answers in a binary way (yes or no), thus enabling a comparison of the results and leaving space for the interviewee's reflections by capturing their point of view.

All the data collected were reported in an electronic worksheet.

Finally, we specified that the analysis was conducted during the coronavirus/COVID-19 health emergency, and the interviews were conducted from August to December 2020.

### 3.3. Case Analysis

The data reported in the documents published on the institutional municipality's website were analysed using qualitative content analysis (Kohli et al. 2012; Mayring 2004).

Furthermore, the analysis of the documents collected from the municipality's website was first conducted separately by each author, who extrapolated the main information and commented on it; after this, the two sets of comments were compared to guarantee the coherence of the evaluation and to reduce subjectivity. This allowed us to obtain the information disclosed about the RM practices. The analysis pays great attention to the principal strategic document provided and published by the municipality called "Documento Unico di Programmazione" (in brief DUP).

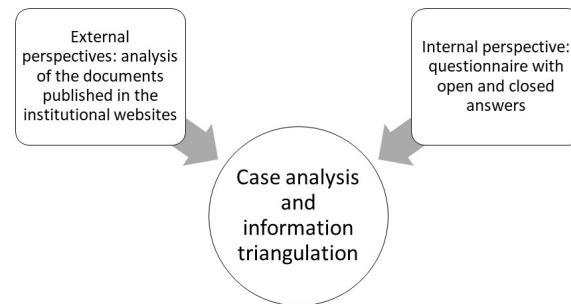
Finally, the main result of the content analysis is reported in the synthetic tables useful to present the data collected.

In Figure 1, we reported a flowchart of the analysis process.

Then, to collect the internal point of view of a municipality selected, we contacted it and asked who is the subject most competent in the risk management field in its organization; the respondents covered the role of general secretary, general affairs manager or a similar role.

To the respondents identified, we issued a questionnaire consisting of open and closed questions (Reginato et al. 2010) with the aim to collect comparable information, as well as to give them the possibility to express their personal judgements and comments.

Moreover, to understand the self-evaluation about risk management awareness of the respondent, we used a five-point Likert scale, where 1 indicated lack of knowledge and 5 indicated full knowledge for the question proposed (Palumbo et al. 2017).



**Figure 1.** Flowchart of the analysis process.

#### 4. Results

The results were presented by dividing the municipalities by category, presenting first the medium, then the medium-high, and last, the high municipalities.

Every category reported two principal points of view, specifically: external, using the information gathered through the qualitative content analysis of the DUP, and internal, using the analysis of the responses of the interviews and the point of view of the interviewees.

After every analysis, it was determined whether there was any coherence between the external and internal information.

Finally, in the last part of the analysis, a joint vision was reported, providing the results of all six municipalities.

##### 4.1. Medium Municipalities: Cases A and B

The medium municipalities, or those in the population range of 50,000–100,000, published their information in the institutional website DUP documents in compliance with the provision of the law.

In both documents, the word “risk” was recalled only a few times, and the risks considered were “social and natural” for Municipality A and “social, natural, and corruption” for Municipality B.

Table 3, “Analysis of DUP in Municipalities A and B”, reports the principal information on risk management.

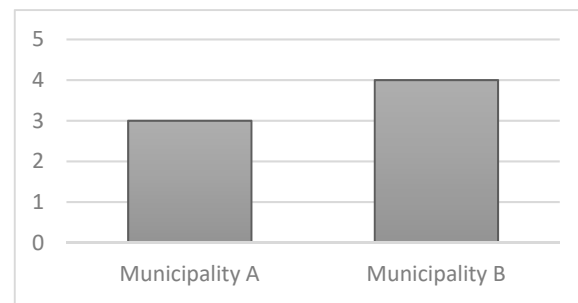
**Table 3.** Analysis of DUP in Municipalities A and B.

Municipality	DUP Published on the Institutional Website	Risk and RM in DUP		
		DUP Period Considered	Word Count of “Risk”	Risk Considered
A	Yes	2018–2020	3	Social and Natural
B	Yes	2018–2020	5	Social, Natural and Corruption

However, in the interviews, the respondents from both municipalities have similar backgrounds and experiences. Both have a master’s degree in economics and more than 20 years of working experience.

Both municipalities involve two officers in the risk management process.

Figure 2 presents the self-evaluation of the degree of knowledge about the risk management strategies for the municipalities that express a medium value for both municipalities.



**Figure 2.** Degree of knowledge about the risk management strategies in Municipalities A and B.

Table 4 reports the information from the closed questions for both municipalities investigating the relationship between RM and MCS. Seven responses show how there is no programmed time to discuss the RM strategies and that they do not define the RM objectives, monitoring procedure, and KPIs. Moreover, there is no budget for RM activities, and the RM objectives are not reported in the DUP. Finally, there is no comparison between the administrators and managers/officers regarding the RM strategies.

**Table 4.** Responses to the risk management and management control system relationship for Municipalities A and B.

Municipality	RM and the MCS Relationship						
	Presence of Programmed Time for the RM Strategies	Definition of the RM Objectives	RM Objectives Reported in the Strategy Document (i.e., DUP)	Presence of a Monitoring Procedure for the RM Objectives Achievements	Creation of KPIs for the RM Objectives	Implementation of a Budget for the RM Activities	Comparison between the Administrators and Managers/Officers
A	No	No	No	No	No	No	No
B	No	No	No	No	No	No	No

All closed questions have negative responses for both municipalities.

Moreover, the respondent for Municipality A explained that his organization does not engage with an external professional for assistance when executing the RM activities due to “lack of adequate internal professionalism”.

The respondent for Municipality B said that in his organization, the RM developed is “of embryonic level”:

*Our Management Control System does not consider the organizational risks that may affect the achievement of the programmed objectives and the correct and economic management of resources. (General Secretary, Municipality B)*

#### 4.2. Medium-High Municipalities: Cases C, D and E

The medium-high municipalities, or those in the population range of 100,000–500,000, published their information in the institutional website DUP documents in compliance with the law provision.

In the DUPs for Municipalities D and E, the word “risk” was mentioned a few times, while in Municipality C, it recurred 24 times.

Municipality D considers only “social” risk, and Municipality E considers the “social”, “financial” and “corruption” risks. Finally, Municipality C, in addition to Municipality E, considers the “natural” risk.

Table 5, “Analysis of DUP in Municipalities C, D and E”, reports the principal information about risk management.



**Table 5.** Analysis of DUP in Municipalities C, D and E.

Municipality	DUP Published in Institutional Website	Risk and RM in DUP		
		DUP Period Considered	Word Count of “Risk”	Risk Considered
C	Yes	2018–2021	24	Natural, Social, Financial, Corruption Social Social, Financial, Corruption
D	Yes	2017–2019	6	
E	Yes	2018–2020	6	

Figure 3 presents the self-evaluation of the degree of knowledge about the RM strategies for all three municipalities. Only Municipality C self-evaluated with a maximum value, as the latter two expressed values of 1 and 2 out of 5 points, respectively.

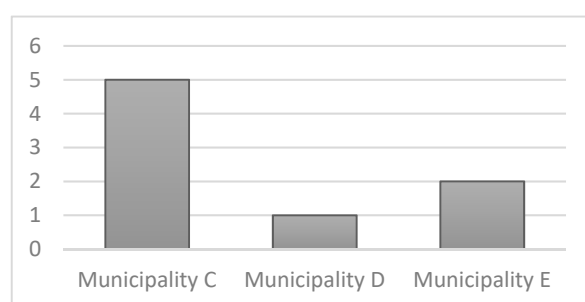
**Figure 3.** Degree of knowledge about the risk management strategies in Municipalities C, D and E.

Table 6 reports the information of the closed questions for both municipalities investigating the relationship between RM and MCS. For the medium category and for Municipalities D and E, all of the answers were negative.

**Table 6.** Responses about risk management and the management control system relationship for Municipalities C, D and E.

Municipality	RM and MCS Relationship						
	Presence of Programmed Time for the RM Strategies	Definition of the RM Objectives	RM Objectives Reported in the Strategy Document (i.e., DUP)	Presence of a Monitoring Procedure for the RM Objectives Achievements	Creation of KPIs for the RM Objectives	Implementation of a Budget for the RM Activities	Comparison between Administrators and Managers/Officers
C	Yes	Yes	No	Yes	Yes	No	No
D	No	No	No	No	No	No	No
E	No	No	No	No	No	No	No

In contrast, Municipality C has programmed time to define the RM strategies and to define the objectives. It also has a formal monitoring procedure and KPIs to monitor the achievement of its objectives.

However, there is not a budget for the RM activities, and the RM objectives are not reported in the DUP. There is no comparison between the administrators and managers/officers in regard to the RM strategies.

Furthermore, the respondent for Municipality C defined the risk management implemented as “very satisfying”:

*“Strategic risks that our organization assesses more carefully include all episodes of maladministration that make the organization perceived in negative terms: environmental*

*risks, the danger of mafia infiltration, operational risks, corruption phenomena in the field of tenders and construction". (General Secretary, Municipality C)*

#### 4.3. High Municipality: Case F

The high municipality, or the one with a population of more than 500,000 inhabitants, published its information through the institutional website DUP document in compliance with the law provision.

In the DUP document of Municipality F, the word "risk" was recalled 33 times. The risks considered were "environmental, operational, natural, social, financial, and corruption."

Table 7, "Analysis of DUP in Municipality F", reports the principal information about risk management.

**Table 7.** Analysis of DUP in Municipality F.

Municipality	DUP Published in Institutional Website	Risk and RM in DUP		
		DUP Period Considered	Word Count of "Risk"	Risk Considered
F	Yes	2018–2020	33	Environmental, Operational, Natural, Social, Financial, Corruption

Municipality F presents with a self-evaluation of the degree of knowledge about risk management with a maximum value, 5 points out of 5.

In Table 8, the information of the closed questions is reported. Municipality F does not have enough programmed time to define the RM strategies, but it defines the RM objectives and has a formal monitoring procedure (without KPI). This is to monitor the achievement of the objectives.

**Table 8.** Responses about risk management and the management control system relationship in Municipality F.

Municipality	RM and MCS Relationship						
	Presence of Programmed Time for the RM Strategies	Definition of the RM Objectives	RM Objectives Reported in the Strategy Document (i.e., DUP)	Presence of a Monitoring Procedure for the RM Objectives and Achievements	Creation of KPIs for the RM Objectives	Implementation of a Budget for RM Activities	Comparison between Administrators and Managers/Officers
F	No	Yes	No	Yes	No	No	No

However, there is no budget for RM activities, and the RM objectives are not reported in the DUP. There is no comparison between administrators and managers/officers about RM strategies.

Finally, the respondent for Municipality F describes how the RM activity was developed:

*"The risk management activity focuses on the assessment of the operational risk of the ISO 9001: 2015 certified processes and on the corruption risk of the operating models included in the Three-year Corruption and Transparency Prevention Plan on the basis of predefined methodology for each area". (Director Officer, Municipality F)*

However, in the same interview, the respondent explains that there is no synergy with the colleagues assigned to the management control office.

## 5. Discussion

The analysis conducted permits the observation of how the three categories of municipalities analysed, i.e., medium, medium-high, and high, have different approaches to RM and its relationship with the MCS. This confirms the presence of different definitions and ways to apply RM procedures (Bracci et al. 2021; Bullock et al. 2019; Vinnari and Skærbæk 2014).

Replying to a research question reported above, only in the high municipality, with over 500,000 inhabitants and therefore an articulated organization, did the relationship between risk management and the management control system appear to be more integrated compared to the others.

Furthermore, the medium municipalities presented negative responses for all issues, while the medium-high municipalities reported heterogeneous responses. Only Municipality C indicated a relationship between RM and the MCS.

However, in all municipalities analysed, it appears that there are no meetings or comparisons with the administrators about the risk management strategies that the municipality undertakes.

This fact shows that there is a low level of engagement with the other parts, especially the administrators' political part, in the risk management process, although the strategy undertaken is communicated to the whole organization.

This confirms what has already been observed by Mormul (2021), which describes a detachment between the RM practices implemented by public employees with respect to a strategic vision of the institution.

The absence of a budgeting process in all of the municipalities indicates a poor level of integration between risk management and the management control system.

Only the high municipality and one of the medium-high municipalities, Municipality C, defined its risk management objectives and created a procedure (Municipality C also has a set of KPIs) to monitor the associated achievements. The programming and controlling process implemented the development of objectives and KPIs to monitor the achievements (Kaplan 2009).

Another aspect is that there is almost always coherence between the information gathered in the DUP and the information reported in the interview. The lack of attention to RM is reflected in the DUP and in the responses provided. In Municipality F, attention is given to the RM activities where the DUP and the respondents' exposure provide the information.

Finally, the self-evaluation of the degree of knowledge of risk management strategies is generally in line with the responses provided in the interviews, with a small overestimation for the medium category.

Municipalities C and F have a good level of knowledge about RM practices and integration with MCS, so much that Municipality C is very satisfied with its RM system. Additionally, Municipality F, with an organization that is larger than that of Municipality C, would like to integrate more with MCS.

Municipality F has declared that its RM activities enhance the activities put in place for the ISO 9001 certification. This last certification regards the quality management of the services provided and the activities of the certified entity. The latest version (2015) considers the RM management activities in the quality management standard (Chiarini 2017).

Finally, regarding the risks treated, both Municipalities C and F in their affirmations mention the corruption risk as among the risks that are managed. The same evidence emerges in the content analysis in almost all DUPs of the municipalities. The corruption of risk management in Italy is derived from the legislative obligation (Law n. 190/2012) and all public administrations submitted from this provision (Riso and Castellini 2019).

The proposed multiple case study highlights how in the large municipalities (high and medium-high) there is a greater integration of the RM with the MCS compared to the smaller municipalities (medium).

## 6. Conclusions

The analysis conducted shows how the relationship between risk management and management control systems is a relationship in progress. Additionally, this relationship has not yet reached maturity (Bracci et al. 2021; Bullock et al. 2019; Reginato et al. 2012).

The results confirm how risk management is embedded in municipalities (Hinna et al. 2018).

Furthermore, the analysis shows that there is a lack of definition for RM activities and a lack of information on how every municipality independently knows what to put in place and how part of defining an RM strategy involves its relationship between MCS and PM. This confirms the deductions of Vinnari and Skærbæk (2014).

The results of the interviews show how medium-high and high municipalities have more advanced RM systems than smaller municipalities. The majority of Italian municipalities have a population of less than 50,000 (medium category). Out of the 7905 municipalities, only 1.75%, or 136 municipalities, have more than 50,000 inhabitants (ISTAT 2020).

According to Mättö et al. (2021), a new professional figure associated with municipal risk management could be brought in to improve the RM system and its integration with the MCS; this has not yet been implemented in the Italian municipalities.

The proposed study has limitations: the small number of municipalities involved in the analysis does not permit the generalization of the observations and results reported in this study. Moreover, it could be useful to understand the degree of integration of the RM with the MCS to propose a questionnaire on a larger sample of municipalities, as proposed by Mormul (2021). However, this paper does offer the opportunity to investigate the practical evidence about RM in the municipalities treated and to examine the relationship between RM and MCS. Future research will be able to better investigate the quality of integration between RM and MCS by analyzing a larger sample of municipalities, and also to understand the diffusion of RM practices.

## 7. Managerial Implications

This study offers the possibility of observing how in the municipalities analyzed there is no alignment and sharing of objectives between the strategic part and the operational part of the Authority. From a managerial point of view, this implies that both those who manage and administer the organization must work to improve the engagement of the actors involved in the decision-making process. Furthermore, from a procedural point of view, in the absence of a regulation that dictates guidelines on implementation, the management of the Entity will have to invest in training in order to equip its organizational structure with the skills and abilities to implement and integrate processes and MRI techniques.

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