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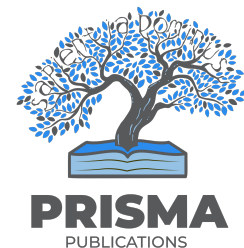
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# Towards a Data Governance Model for Enhanced Data Quality Management: A study of Public Sector Organizations in Guyana

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## ABSTRACT

Public sector organizations in Guyana recognize the need to handle and manage sensitive data properly. Proper data governance is the solution. Identifying the factors that would influence the design of data governance models helps to ensure the creation of a solid model and data quality management. This study accumulated factors from the literature and presented them to IT professionals in Guyana. The Contingency Model served as a base for the identified factors to work together to create a company-specific model for data quality management. Thematic analysis was employed to analyze nine (9) interview transcriptions from medium to high-level personnel across different public sector organizations in Guyana. The factors identified were refined to the Guyanese context. Culture emerged as an indigenous factor in this study. This research resulted in an emergent model that can now be used to design data governance models for public sector organizations in Guyana.

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## 1. INTRODUCTION

Data is everywhere and is generated daily. Data in the wrong hands can lead to severe repercussions; thus, it must be protected. Past research in the field of data and information governance in organizations shows that there is no simple definition for data protection [1], [2]. The literature explains data protection as a collection of legal rules that protect the rights and freedom of individuals whose personal data is being used [1]. However, looking at data protection only from a personal point of view is insufficient. We must look at data protection as a tool for safeguarding privacy. The threats and challenges to privacy and personal data protection are becoming increasingly prevalent. The information age has made the world a global community; everything is connected through the World Wide Web [3]. Data is readily available everywhere, and security has become a growing concern.

Data breaches are becoming fairly common. In 2023, there have been 767 data breaches recorded worldwide [4]. That does not account for the unreported data breaches. More than likely, the personal data of customers and employees were leaked into the public domain—no doubt putting their privacy and overall safety at risk. From the reported data breaches, almost all reports were from First World nations [4]. There is a significant need for developing countries to take data privacy and protection seriously.

Personal Identifiable Information (PII) such as a name, email, address, phone number, or social security number are directly linked to an individual. That person may be compromised if such information falls into the wrong hands [5]. The protection of PII is vital to everyone's safety online and offline. Organizations must implement safeguards against attackers to prevent leaks and data breaches. They may follow the General Data Protection Regulation (GDPR) or Legislation. The GDPR is a set of rules governing

the access and use of personal information [6]. The literature shows that implementing the GDPR would build trust between the organization and the public [7], [8]. Adopting the regulation would simultaneously protect an organization's resources and reduce the risk of customer harm [6]. The GDPR protects the consumer and the organization, making it an asset to any business willing to implement it.

Data protection and governance have become critical as Guyana marches into the information age and digitalization. The country's Data Protection Act 2023 was passed in the latter part of 2023, introducing a new requirement for organizations to upkeep. Despite recognizing these imperatives, there is an immediate need to explore and comprehend the factors obstructing data protection and governance development or adoption at the organizational level. Understanding how organizations in Guyana treat data governance and protection can provide valuable insights into the overall concept. Identifying factors influencing the development of data governance models or frameworks will be vital in identifying the problem. Once problems are identified, they can be fixed, and organizations can adapt so that a specific problem never occurs again. This research will also lead to a deeper understanding of how organizations approach data governance and protection. In terms of practical significance, as Guyana continues to develop, new standards will be introduced and must be met. Preparing at an organizational level will be of significant benefit in the long run. Identifying data governance issues and resolving them before Guyana advances further into the digital world will be an asset for organizations to stay on top. Because of the identified governance issue, policymakers can incorporate preventive measures into policies.

## 2. LITERATURE REVIEW

Given the number of countries that would have invested so much into developing their version of a data protection measure, the benefits must be worth it. The literature showcases the added value that the right to data protection can provide for an everyday person [9]. People may have personal data they would not want the public to see. If their data is well protected, the chances of that happening are much slimmer. Data protection can also reduce the state's risk of abusing its power. Data protection laws and regulations can keep governments in check, preventing them from abusing their powers without severe consequences. Data protection safeguards privacy by regulating unauthorized surveillance [10]. This enables people to freely express themselves and uphold the right to freedom of speech.

Whether or not people are interested in data protection, some measures exist to ensure data safety. Most countries have adopted rules or laws that embody data protection principles. The literature classified such measures based on the level at which they were instituted: international, regional, and national [11]. Most of the measures to protect data were legal including laws, regulations and guidelines. The literature highlighted the status of the different countries regarding data protection [12]. Some countries are developing data protection regulations much faster than others. At the head of the spear are developing nations in Europe, across the Atlantic, the United States, Canada, Argentina, and Mexico.

However, in the Middle Eastern African region, the concept of data governance was recognized as underdeveloped. For Latin America and the Caribbean, the literature shows that some countries would have developed a data protection framework including but not limited to Argentina, Brazil and Chile.

### 2.1. Data Protection Frameworks

Some frameworks can be followed or adopted to protect people's data. One of the most popular and widely recognized models of data protection in organizations today is the contingency approach to data governance [13]. The model proposed can be tailored to different organizations based on a set of factors that influence design parameters for a company's data governance model. These factors are called contingencies and can influence the organizational placement of decision-making authority and coordination of decision-making authority [13], [14].

Despite existing frameworks guiding data protection, challenges persist in implementing the same across various countries [15], [16]. The literature shows that in some countries, the general legislation around data protection was inadequate or inappropriate and lacked specificity due to rapid technological advancements [16]. Another challenge to data protection was undocumented or unreported data breaches [17]. Further, there is a major challenge around the enforcement of data protection and a lack of trained personnel to implement data protection [15], [18].

From a holistic view, the literature explores privacy and data protection as fundamental human rights where mass surveillance is a fundamental threat to privacy and data protection [19]. The literature expresses the need for national frameworks for data protection due to privacy breaches in mass surveillance which shatter human rights and break countless laws in countries such as Ukraine, Germany and Ethiopia [19], [20], [21]. The problem is not centred around development since such countries are not third-world countries. The

literature shows that the significant challenge that most countries faced was the lack of specific regulations or the enforcement of these legislations [19], [21].

Data protection safeguards people's privacy, encompassing the laws and regulations and the industry's best practices. The efforts for data protection can be found worldwide, with Europe leading in the field [19]. Globally, more countries are adopting measures to protect their citizens but face a variety of challenges at the national, legislative or regulatory levels. However, there remains a paucity of literature on the issues around the adoption of data protection measures at the level of organizations. Thus, this research explores the factors affecting effective data governance and the development of data governance models in organizations. The research was guided by the research question: "What factors influence the design of a data governance model for enhanced data quality management in the public sector Organisations in Guyana?"

### 3. METHOD

#### 3.1. Theoretical Framework and Research Model

The researcher identified theories and theoretical frameworks around data governance in organizations through a comprehensive literature review. Theoretical frameworks focusing on data quality management were examined and the Contingency Approach to Data Governance (see Figure 1) was subsequently identified as the theoretical framework to guide the study [13].

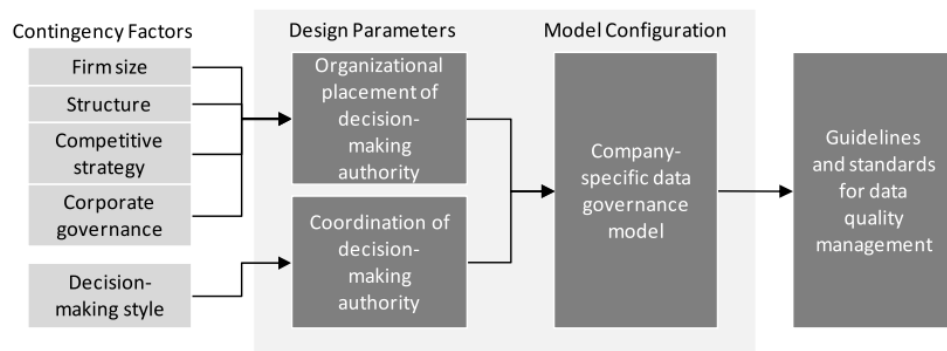


Figure 1. The Contingency approach to Data Governance

The contingency model for data governance was developed to assist organizations in creating company-specific data governance models. They used two design parameters, organizational placement and coordination of the decision-making authority, to understand how various factors influence a company-specific data governance model [13]. The contingency factors would inevitably shape a company's data governance model by affecting its corresponding parameters. The model's goal is to improve data quality. Each factor was derived from a different aspect of the organization. Organization size, structure, competitive strategy, and decision-making style are all organizational context variables taken from the approach [13]. Corporate governance encompasses IT governance and other organizational domains [13]. The contingency variables and corporate governance make up the contingency factors. They influence the configurations of the parameters [13].

The contingency model was selected to address the research question in this study because of its relevance in two areas: enhanced data quality management as an outcome and contingency factors. Furthermore, the contingency model allows for customization and adaptability since a one-size-fits-all approach to data governance may not always work [13]. This model allows organizations to tailor their data governance framework to their needs since data governance can be affected by various factors. The contingency model was modified based on additional contingency factors identified from a relevant literature review in the field. Figure 2 shows the extended conceptual model of the study. Two additional factors, namely Organizational Processes and Policies, and Regulatory factors, serve as modifications to the model and contain sub-factors which are explained below. Organizational Processes and Policies include the following sub-factors:

**Awareness:** the lack of awareness of proper data governance can result in undocumented data breaches [16]. This lack of awareness can further result in failure to follow procedures in the event of data breaches in an organization's everyday activities. To combat these issues, awareness is a separate factor to consider when developing a company-specific data governance model.

**Enforcement:** the lack of enforcement of best practices around data governance could lead to a decline in effective data governance in organizations [15], [16], [19]. Enforcement refers to the implementation of the developed data governance principles. Past research shows that there are

enforcement issues that are prevalent in protecting data [19] [22]. Therefore, it is clear that enforcement must be considered when developing the model to prevent future problems.

**Employee Training:** The level of expertise an employee has will determine how well they carry out their jobs. The literature highlights the lack of trained personnel as one of the challenges to data protection [16]. The lack of trained personnel to execute data protection will result in abstract thinking and poor execution of data governance. Therefore, employee training must be factored in when creating a company-specific data governance model.

**Specificity:** This factor is more concerned with the data governance model for the organization itself rather than the everyday processes. The literature shows that specific responses to different data governance issues will ensure the best practice is always followed [15], [19]. A vague and ambiguous data governance model will lead to loopholes in data protection [19]. Specificity must be considered in two ways: in terms of the wording or statements and their coverage of different parts of the business [15]. As a factor, specificity will determine whether a comprehensive model is created.

In terms of regulatory factors, the following were used to extend the contingency model:

**National Legislation:** The legislation occurs on a national level and is country-specific. This factor focuses on the regulations external to the company or organization. The absence or presence of legislation can significantly influence the organization's data governance model [23]. If there are regulations, failure to follow them would lead to severe repercussions for the organization. On the other hand, a lack of regulations can lead to challenges to data protection [19], [21]. This factor, while external, can significantly impact the organization's effective governance.

**Corporate governance:** this sets the institutional and policy framework that guides an organization's operations. Effective governance protects confidential data and fosters stakeholder trust by helping firms set clear regulations, manage risks, encourage moral behaviour, and promote openness. [24]. The literature shows that corporate governance can change how data governance models are laid out [25]. Hence, the absence or presence of the same can significantly affect the development of the data governance model.

Table 1. Key Factors Impacting Effective Data Governance

Category	Factor	Source
Organizational processes and policies	Enforcement	[14], [16], [18]
	Specificity	[15], [19]
	Awareness	[16]
	Employee Training	[16]
Regulatory factor	The absence or presence of legislation	[19], [21], [23]

### 3.2 Data Collection

The researcher used semi-structured interviews as the data collection instrument. This type of interview provides a middle ground, offering an insider's perspective, depth, and detail while allowing for hypothesis testing [26]. Semi-structured interviews contain both structured and open-ended questions. The researcher used a purposive sampling technique. This technique falls under the category of non-probability, which is most often used in qualitative and exploratory studies. The purposive technique focuses on a relatively small, selected sample to gain an in-depth understanding of the issue being investigated [27]. Given its successes in the studies, purposive sampling was utilized in this study. Further, as guided by past studies, the researcher used a sample size of approximately ten (10) participants [28]. For the nature of the sample, the researcher focused on personnel from the cybersecurity and information technology departments of five public sector organizations.

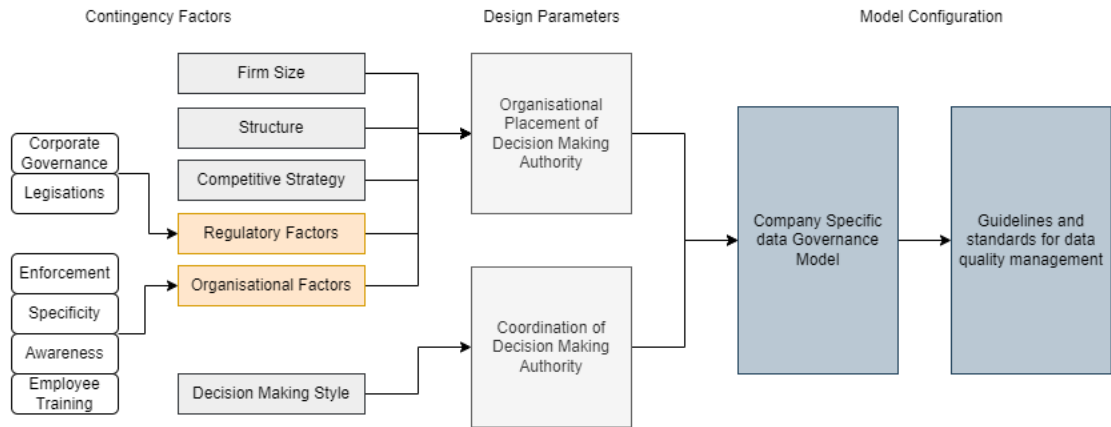


Figure 2, Modified Contingency Model

**3.3 Data Analysis**

Deductive analysis is a qualitative approach that takes a theoretical pre-position from the literature review [29]. Given that this research took theoretical pre-position, deductive thematic analysis was used to analyze the results from the semi-structured interviews. Thematic analysis constitutes pattern recognition within data, and the emerging themes become categories for analysis [30]. Thematic analysis offers numerous advantages including but not limited to the testing of existing theories, assisting with theory refinement and streamlining theme development based on existing theory [31]. For these reasons, thematic analysis was deemed suitable for the analysis in this research.

**4. RESULTS AND DISCUSSION**

The data collected on factors that influence the development of data governance models were subject to thematic analysis. Three (3) primary themes were extracted. Some sub-themes were predefined and some evolved from the data within the major themes. The major themes and their sub-themes are shown in Figure 3.

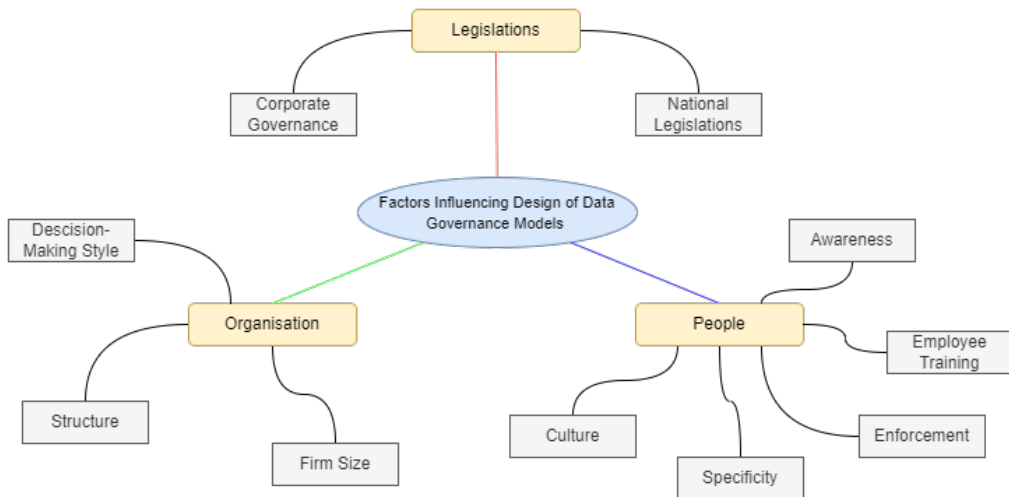


Figure 3. Themes from the Data collected in the study

**4.1. Theme 1: Legislation**

This theme concerns the internal and external effects of rules and regulations on the development of data governance models. It contains two (2) sub-themes.

**4.1.1. National Legislation**

This sub-theme speaks to how the absence or presence of legislation or local laws would influence the development of data governance models. It primarily concerns whether organizations should create their models with legislation in mind. Based on the data, compliance with local laws must occur before anything else. Participant 06 said, *“Definitely. You firstly have to be compliant. So when I mean that, I imagine an*

organization that's developing a data governance model. The first priority there will be compliance with local laws and regulations. And then you probably move into industry standards, and so on." Participant 05 also reported, "So legislation is a factor to consider, as it's above what the company is doing; as such, they must be compliant."

#### **4.1.2. Corporate Governance**

Focused on an organization's internal intricacies, this theme encompasses the policies and procedures set by corporate or upper management. It is mainly concerned with whether data governance models are moulded to incorporate what corporate governance dictates or supersede it. Interestingly, the professionals agree that data governance models are guided by corporate governance. Participant 01 said, "The Law is above the company's data governance, and corporate would follow next." Participant 08 also agreed that "all policies should be in one place, which would guide how the data governance models are developed."

### **4.2. Theme 2: People**

This theme involves person-related challenges in developing a data governance model. It contains five (5) sub-themes.

#### **4.2.1. Awareness**

This sub-theme considers user awareness as a factor that influences how data governance models are made. It originates from people's lack of awareness of what must be done. Based on the data, this issue has been found to only take effect after a model has been developed and not influence how models are made. Participant 02 said, "...I would say that lack of awareness won't impact how the data governance model is created. That sounds like an enforcement issue, not from a policy perspective."

#### **4.2.2. Employee Training**

This theme speaks to the training employees must receive to properly execute and implement a data governance model. Specifically, it asks whether the model should consider the employee's training. It was found that training is continuous and, therefore, a necessary factor to consider. Participant 03 said, "Very important because training is necessary because you can't send somebody out to comply with something that they're unaware of or have never heard about before. They may have done high school IT or." Participant 02 also agreed, "If Proper training isn't provided, then they're kind of, for lack of a better word, lackadaisical in their approach. So I think it's very important that employees receive proper training in these aspects."

Participant 06 also reported, "It is definitely considered. whenever you design a policy or so to total effect, you normally do training of the policy so that it uses them can be familiarized with the processes."

#### **4.2.3. Enforcement**

This theme concerns the implementation of data governance models. In particular, it is concerned with whether enforcement would influence how the models are designed and if it would change the approach or process of the data governance model. The data said no; enforcement is a post-development issue. As Participant 05 said, "Enforcement is necessary to ensure that the data governance model is followed to the T."

#### **4.2.4. Specificity**

This sub-theme encompasses the issues of ambiguity and conciseness. It speaks to how specific and clear the data governance model must be. The data has shown that specificity is needed in the design stage of data governance models, so gaps or ambiguities do not exist in implementation. Participant 02 said, "It's very important that you be specific, like at its core. Data governance means that you're setting some kind of internal standards, right? I guess it's important that these standards, these frameworks, as you say, are very specific to whatever means the company would find appropriate. The more specific, the better, so it doesn't leave gray areas, so to speak, where you could sort of play around, find loopholes, and, you know, avoid enforcing the governance model."

#### **4.2.5. Culture**

This theme, purely evolved from the data, concerns society's culture. It speaks to people's behaviour, norms, and expectations. Based on the data, it is apparent that a society's culture must be considered when developing data governance models. Participant 05 said, "Culture is very important. That should be a factor to consider because If you were to implement a data governance model whereby you were to protect your

*data. It might obstruct the flow of how people might operate. So I think culture is a big factor that should be considered by the organization. And every organization is different. Every organization's culture is different."*

#### **4.3. Theme 3: Organisation**

This theme is based on the factors specific to the organization only. It was found to contain three (3) sub-themes.

##### **4.3.1. Firm Size**

This theme captures whether the size of an organization would affect the development of data governance models. The data shows that data governance models would have to be different for larger organizations vs smaller ones. Participant 03 said, "Size affects how the model is created, from a network point of view, considerations change based on how large or small the organization is." Participant 06 also stated, "*The organization's size in terms of the number of people there and the geographical landscape would be a factor here. So, your policies and standards can be a challenge to implement across multiple bases of operation, compared to a medium-sized, one-location organization. So, the larger the organization, the more difficult it becomes to govern the processes.*" Participant 04 reported, "*It depends on the organization; larger organizations will govern their data differently from smaller organizations.*"

##### **4.3.2. Structure**

The main focus of this theme is the organization's layout. It covers how the organization is structured regarding who has specific privileges and rights to sensitive information. Structure plays a role in the design of data governance models based on the data. Participant 01 said, "*It affects how the data governance model is designed to cover the entire organization; it'll be different for a three-department company than for a well-structured organization.*"

Participant 06 also reported that "*...the organization structure does play a role. So the organization structure always will influence your strategy, but I don't think they can put it at their influence in a bad way or a good way. The process might be different.*"

##### **4.3.3. Decision Making Style**

This theme concerns the way upper management of an organization makes its decisions. The idea behind this is whether different decision-making styles influence how data governance models are designed. The data shows that decision-making styles change based on the organization and the people within the organization; thereby, they would be different for every organization. Participant 04 said, "*Company structure is related to the organization's decision-making style. This style would affect the data governance model because often, multiple people need to sign off on one decision.*" Participant 01 noted, "*It would depend on your company and company size, of course. A more straightforward structure would lead to a simpler model.*"

Participant 07 reported that "*...the management style and the leadership style do affect data governance. From the objective perspective, the management style has to tie in with the organizational policies.*"

## **5. DISCUSSION**

Following the thematic analysis results, the findings per theme are discussed in the subsections below.

### **5.1 Legislation**

#### **5.1.1 National Legislation**

The data showed that national legislation plays a significant role in developing data governance models. This aligns with past research on how the absence or presence of regulations would determine effective governance [19]. Firstly, organizations must ensure they comply with the laws and regulations of the country where they reside. This factor gathered positive responses from most participants in this study. Guyana is a developing country, and laws and regulations around data governance are still being developed and improved upon. That begs the argument that the relevance of this factor would depend on the country and whether such laws exist. Whilst being compliant with national laws is of utmost importance, the factor must also consider the lack of legislation. This factor would be ideal in designing new governance models by incorporating both ends of the spectrum.

#### **5.1.2 Corporate governance**



While national legislation is external to the organization, corporate governance oversees internal affairs. Only two participants disagreed that this would not affect how governance models are designed. The high level of acceptance of this factor among participants in this study aligns with the past literature field and directly relates to the contingency model [13]. However, the data shows that corporate governance or similar internal governance mechanisms are still being developed in a local context. The results show that after national laws are developed and enacted, organizations must consider the corporate structure and environment in which it is operating to ensure that their data governance model is tailored to that specific context.

## **5.2 People**

### **5.2.1 Enforcement**

Enforcement is not a factor to consider when designing data governance models. All participants in the study agreed that enforcement is good and necessary for proper data governance to prevail in organizations and must occur after a data governance model has been designed and developed [15], [16]. Enforcement is concerned with implementing the model and following it to the letter. Lack of enforcement can lead to significant consequences for the organization. The baseline is that there needs to be a model to enforce; hence, this factor would not be considered when designing new data governance models.

### **5.2.2 Awareness**

The results dictate that awareness is not a factor to consider in the design phase of a data governance framework but rather, in the deployment phase of same. Awareness is crucial to ensuring the organization's people know what policies and procedures must be carried out. The result in this case aligns with the literature which considers awareness as a challenge in the deployment phase of operationalization of new information policies [16]. Like enforcement, this factor becomes more relevant after a data governance model is created and established in an organizational context. It is to that effect awareness has been rejected as a factor to consider when designing data governance models.

### **5.2.3 Employee Training**

The factor of employee training garnered positive responses from almost all the participants. They agree that employee training must be considered to ensure the model is designed effectively. The one participant who disagreed argued that employee training is only irrelevant to creating the mode and would instead be put into place after it has already been created. The data would argue that employee training is continuous and must be considered before and after the governance model is designed. The results show that a lot of emphasis was placed on the importance of this factor regarding the successful creation and implementation of a data governance model. The results agree with past literature in the field which states that employee training is a significant factor when designing data governance models [16] [32], [33].

### **5.2.4. Specificity**

The results showed support for specificity as a factor to consider when creating a data governance model. The only participant response that was against this factor saw the factor as a phenomenon that should have already been in practice. The data showed that all were in agreement that specificity is crucial. According to the literature, there must not be any gaps or grey areas when creating data models for organizations [15], [19]. Therefore, the results agree with the existing literature in the field. Based on the data, specificity is linked to both awareness and enforcement. Since specificity is integral to successfully implementing data governance models, it must be considered in the design phase of the models' development.

### **5.2.5 Culture**

This factor was extrapolated from the open-ended conversations throughout the interviews. It concerns the people's daily lives in the public sector, how they operate and their norms. This factor was found to be indigenous to this study and was not identified in past studies in the field. The data revealed that the local culture of employees in the public sector of the developing nation of Guyana influences how data governance models are created. Based on the data, to ensure a model is tailored to an organization, the best practices of first-world nations, like the United Kingdom or the United States, cannot be forced upon the organizations in Guyana. Past literature in the field of data governance states that one size does not fit all when it comes to the application and deployment of data governance models and frameworks to organizations [13], [34], [35], [36]. In this case, the culture of the people must be considered when designing data governance models.

## **5.3 Organisation**

### 5.3.1 Firm Size

According to the narrative presented by the data, firm size is an essential factor to consider, having gathered positive feedback from all the participants in the study. This directly correlates with the contingency factors from previous data governance models in the literature [13]. The manner in which the model is designed is affected by firm size. This means that the manner in which a smaller organization would operate would not be the same as that of a larger multi-facility one. Furthermore, models should be appropriate to cater to growth within the organization. Based on the results, larger organizations are more challenging to manage, but because of their size, there is a need to focus more on what is being done.

### 5.3.2 Structure

From the conceptual model, the organizational structure seems to be the least accepted factor in designing data governance models. Although least favoured, the data agrees with the literature. Past studies show that structure is a contingency factor that would influence how data governance models are designed [13]. All participants in the study agreed that structure is viewed as how the organization is laid out, not as a hierarchy. Participants who were against structure suggested that it has nothing to do with hierarchy but with how the organization communicates or who has access to particular data. It is more along the lines of how the data is governed. It leads to a particular flow, whether by structure, communication or access. The majority of participants agreed this flow is the organization structure. Hence, the structure would be distinct to every organization, making it a strong factor to consider in developing company-specific governance models.

### 5.3.3 Decision-making style

The results favour decision-making style as a factor to consider when developing data governance models. Literature in the field suggests that decision-making style within organizations affects how the models are developed [13], [36]. The data revealed that the decision-making style would depend on the organization, the nature of what it is doing, and the persons in upper management. It is also apparent that this factor is linked to company structure. The decision-making style of the organization can either streamline how processes are carried out or can be a hindrance to progress. Nevertheless, organizations developing data governance models must consider this factor.

### 5.3.4 Competitive Strategy

Unlike the other factors in the study, competitive strategy was not coded as a theme. Although justified in the literature, this factor did not appear in the study [13]. Throughout all the interviews, competitive strategy was not identified as a factor to consider when crafting data governance models for organizations. This phenomenon may be because the interviewees were all from public sector organizations which have a monopoly in their respective fields of industry. This development may only apply to Guyana; thus, a competitive strategy must be eliminated as a factor to consider when developing data governance models based on the lack of data.

## 5.4 Emergent Data Governance Model

Guided by real-world data and the various cases presented by the literature, an emergent data governance model for public sector organizations in Guyana was created. Figure 4 depicts the emergent model. The new model categorizes factors based on what they are most concerned with legislation, people, or organizations.

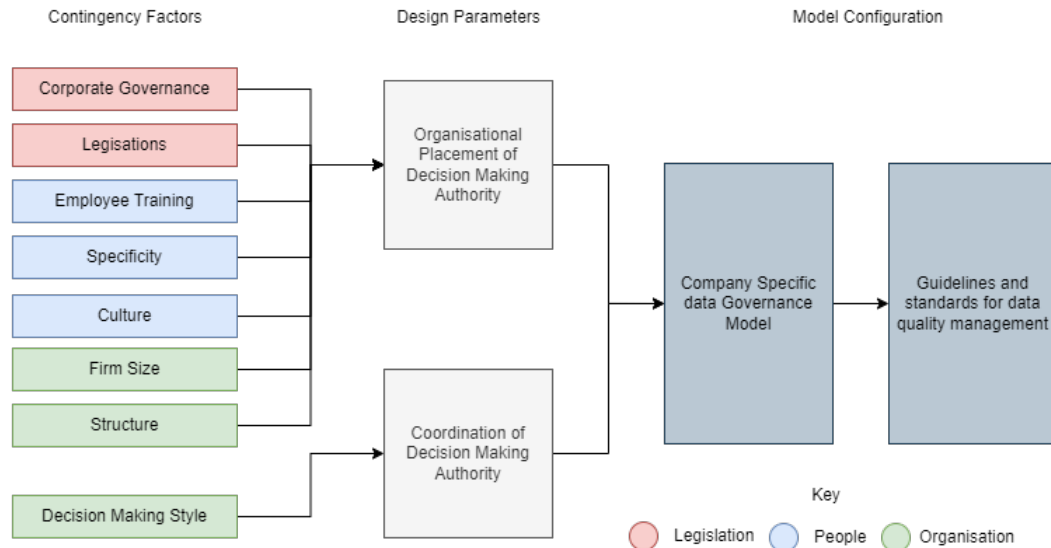


Figure 4. Emergent Data Governance Model for Public Sector Organisations in Guyana

Seven (7) of the ten (10) factors proposed were confirmed while three were rejected. The confirmed factors include Legislation, corporate governance, employee training, Specificity, firm size, structure, and decision-making style. Among the rejects are enforcement, awareness, and competitive strategy. Additionally, culture emerged as a factor indigenous to the Guyanese context. The confirmed factors and the newly discovered ones make up the contingency factors in Figure 4.

## 6. CONCLUSION

This study attempted to answer the question, "What factors influence the design of a data governance model for enhanced data quality management in public sector Organisations in Guyana?" A conceptual model was created using the contingency approach by Wende and Otto as a base model [13]. The qualitative technique, thematic analysis, was used to analyze nine (9) interview conversations. This resulted in eight (8) factors influencing the design of data governance models for quality data management. One new factor was discovered, and the others were refined to the Guyana context. These factors are legislation, corporate governance, employee training, specificity, culture, firm size, structure, and decision-making style. These factors were found to be the most influential in determining how a data governance model is designed and developed. Using the refined factors, an emergent model for data governance was developed in the context of the developing nation of Guyana.

### 6.1 Implications and Future Work

The discourse on data governance in the developing nation of Guyana is now taking root. Public sector organizations are now trying to implement governance models. This study produced an emergent data governance model tailored to Guyana that organizations can use as a guide to develop their models. The model was constructed by extending a theoretical model of data governance and analyzed using thematic analysis of data collected from prominent public sector organizations in Guyana.

The emergent model can greatly serve managers, policymakers, and IT practitioners in the context of Guyana and similar developing countries. From a policy-making perspective, this research can aid in creating data governance policies that would govern the public sector. Managers could use the emergent model and tailor it to their specific organizations. Presently, Guyana is advancing further into the technological age, heading towards implementing effective data protection and governance mechanisms for its public. The novelty of this research lays the foundation for future work in this area. Further research can be done by proposing the emergent model to IT professionals and utilizing their experiences and knowledge to refine the model for the various organizational settings in the context of Guyana and other similar developing nations.





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