

Contingent Governance Framework for Projects (CGFP)

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Research Summary

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International Project Management Association (IPMA)  
Award Winning Research

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Summary for the IPMA award winning research conducted by Dr. Muhammad Ehsan Khan for PhD in Strategy, Programme and Project Management from SKEMA Business School, France. This study is focused toward project governance domain, and concentrates on Contingency of Governance Frameworks.

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## About the Author

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With special inclination towards strategic planning and governance of projects and programs, Ehsan has provided management, consulting and mentoring services in the Middle East Region. He has been involved in establishment of PMO, implementation of governance frameworks, and related practices and tools, in order to create an environment of project management excellence. He has also been managing medium-large scale ICT programmes and projects for various customers, especially in the government sector.

As an academic, his research interests are in the field of Contingent Governance Frameworks for Temporary Organizations. He has written research papers in the project governance domain and has also featured as an author in various publications. He is currently authoring a book on Program Governance and has been part of major conferences where he has presented papers related to his area of interest.

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# Relationship between Project Attributes, Project Performance and Project Governance Dimensions

## A Project Governor Perspective

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### **Abstract**

The research summary proposes a new model for project governance termed as Contingent Governance Framework for Projects (CGFP). The framework is based on the idea that a successful model for project governance can be put into practice by considering the project context. Some of the factors remain stable during the project lifecycle whereas others change as the project progresses. Based on the changing project context the project governance framework should evolve.

This paper examines the impact of project attributes and project performance, using quantitative methods, on the manner in which project governance is carried out in organizations. This impact is analyzed by measuring the preference of project governors for different dimensions of project governance during the project life cycle. The results showed that certain project attributes, and project performance dimensions, influence the preference of project governors for governance dimensions. It was evident that the overall project performance also impacts the preference of project governors for project governance dimensions, as well as overall governance.

Along with that, through extensive literature review, various other factors have been identified that influence project governance framework. These factors include corporate governance, the experience of project team, organizational governance paradigm, social and other cultural influences.

The proposed model is the first step toward development of this novel framework which organizations can utilize to govern their projects and improve the probability of project success.

## Introduction

The basic nature of humans, to learn and do new things, has created a sense of competition and uncertainty. Because of this uncertain nature of our environment, organizations have to constantly change the way they are doing work, in order to keep them competitive, and perform different functions in a more productive manner. That might be the reason that Turner and Keegan state that our current environment is a “more project-based economy” (Turner and Keegan, 2001, p. 254).

Such organizational changes and resulting initiatives cannot be handled through the routine operations that organizations perform; thus organizations have to create projects within them, or amongst themselves, which can keep them more viable and competitive in the market. These projects are formed to meet the desired objectives, using the provided resources, within the defined constraints.

Although similar in terms of the certain attributes these projects may differ in complexity, size, organizational setup and other attributes. Because of these differences all project cannot be managed in a similar manner and will require different management models (Shenhar, 2001).

Along with management, these projects need surveillance, support and guidance from executives in order to achieve the desired objectives. This is part of the governance mechanism that needs to be put in place. However, the governance mechanism for projects cannot be applied in a similar manner for all types of projects (Miller and Hobbs, 2005). This paper focuses on the relationship between project attributes, project performance and project governance dimensions or roles.

The following section summarizes certain aspects of the literature review that was conducted as part of this research.

## Project and Project Attributes

### Defining a Project

Office of Government Commerce (OGC) defines project as "a temporary organization that is created for the purpose of delivering one or more business products according to an agreed Business Case" (OGC, 2009, p. 3.). Project Management Institute (PMI) states that “a project is a temporary endeavor undertaken to create unique product, service or result” (PMI, 2008, p. 5). Association for Project Management (APM) on the other hand defines project as "a unique, transient endeavor undertaken to achieve a desired outcome" (APM, 2009a, p. XV). These definitions focus on three project characteristics:

1. Temporary organization – which represents a beginning and an end
2. Endeavour or production function – which represents some actions
3. Objective or outcome – which represents something to achieve

## Project Attributes

Projects differ from each other based on different attributes. Some projects might have high complexity and uncertainty, whereas, for others these factors would be at a lower level (Shenhar, 2001). There might be projects which have a longer conceptualization phase as compared to others (Miller and Hobbs, 2005). Organizations tend to group project projects together based on these attributes in order to manage them more effectively.

Project attributes that were analyzed as part of this research were:

1. Project Complexity:

This factor determines the complexity of the project from the following perspectives:

- a. Project Duration
- b. Technical Complexity
- c. Scope Complexity
- d. Stakeholder Complexity
- e. Impact Complexity
- f. Project Ownership Structure Complexity

2. Project Uncertainty:

This factor determines the uncertainty of the project from the following perspectives:

- a. Requirement Certainty
- b. Requirement Stability
- c. Process Certainty

3. Project Strategic Value:

This factor determines the strategic value of the project under consideration. The strategic value of the project is being determined from the following perspectives:

- a. The strategic importance of the project
- b. The investment the organization is making in the project.

## Project Performance

There seems to be general agreement amongst researchers (Shenhar, Levy and Dvir, 1997; Atkinson 1999; Cookie-Davies 2002; Hartman and Ashrafi 2002), that project performance measures, in terms of project progress, and project success criteria, though interlinked, can be differentiated from a perspective of ex ante and ex post project closure metrics.

In terms of software projects Jiang et al. define project performance as "the extent to which the software development process has been undertaken as well as performance of the delivered system from the view point of the users" (Jiang et al., 2004, p. 282). They relate to the idea proposed by Nidumolu (1996), and mention that the project performance should be studied from the perspective of

product performance as well as process performance (Jiang et al., 2004). This is because, a project that delivers a high-quality product, while exceeding time and cost expectation, cannot be considered as a high-performing project. Jiang et al. relate to the idea of standardization and mention that the software development maturity level of the organization has an influence on project performance (Jiang et al., 2004).

This study focuses on the monitoring and measurement of project performance and progress, during its life cycle or right after closure and does not directly relate to measurement of project success in terms of business benefits or product success over its lifetime. This is in alignment with the Cookie-Davies proposal that "For the project management community, it is also important to make the distinction between project success (which cannot be measured until after the project is completed) and project performance (which can be measured during the life of the project)"(Cookie-Davies, 2002, p. 188).

Three performance dimensions, along with overall performance, were analyzed as part of this research. These are:

1. Meeting Constraints and Stakeholder Expectations:

This factor combines variables that determine the project performance as perceived by the stakeholder and certain aspects which seem to create that perception. This alignment seems to be logical as meeting project milestones generally creates a perception of improved project performance and increases the stakeholder satisfaction level. The following are the underlying variables:

- a. Meeting budget goals
- b. Meeting schedule goals
- c. Meeting milestones
- d. Client satisfaction project progress.
- e. Client satisfaction project results
- f. End-user satisfaction
- g. Project team's satisfaction
- h. Other stakeholder satisfaction

2. Meeting Design Goals and Expectations:

This factor determines whether the project is meeting the user requirements, and delivering a high quality solution that is aligned with the technical design specifications. The underlying variables for this factor are:

- a. Meeting user requirements
- b. Meeting technical specification
- c. High quality solution

3. Adherence to Process:



This factor determines whether the project is performing well in terms of the application of a defined process. The following variables determine this:

- a. Adherence to project process
- b. Successful audits

Adherence to project process is an internal perspective which ensures that the team is following the defined process. Successfully passing audits means that the audit results confirm that the project is compliant with the process, and the audit report depicts none-to-few non-compliance issues.

## Project Governance

### Defining Project Governance

Researchers have focused on project governance from different perspectives and scope. Some researchers focused on the governance using behavioral control (Müller, 2010b) through governance of project management, whereas, others have paid attention to governing the project environment through different mechanisms, roles and institutions (Turner and Keegan, 2001; Müller, 2011). Yet there are others who have paid attention to governance functions required for specific projects based on project attributes (Miller and Hobbs, 2005; Müller and Blomquist, 2006; Klakegg et al., 2008). All of these perspectives are important to design an effective project governance environment within an organization.

Klakegg et al. mention that alignment of the portfolio with organizational objectives and sustainability of results can be termed as governance through projects whereas efficient delivery of project is related to governance of projects (Klakegg, et al. 2008). Klakegg et al. defined project governance as "Governance of projects concerns those areas of governance (Public and Corporate) that are specifically related to project activities. Good project governance ensures relevant, sustainable alternatives are chosen and delivered efficiently." (Klakegg et al., 2008, p. 29).

Turner and Keegan focus on the objectives of governance mechanisms, for project-based organizations, and mention that these mechanisms are "adopted to support the operation control processes, and to manage the interface between project teams and their clients." (Turner and Keegan, 2001, p. 256). Turner states that "Project governance provides a structure through which objectives of the project are set and the means of attaining those objectives are determined and the means of monitoring the performance are determined" (Turner, 2006b, p. 93). Taking an internal perspective, in order to elaborate on the relational structure of project governance, he further explains that "Project governance involves a set of relationships between a project's management, its sponsor, its owner and other stakeholders." (Turner, 2006b, p. 93).

Müller takes an objective achievement and value addition perspective about project governance, when he states that "It comprises the value system, responsibilities, processes and policies that allow projects

to achieve organizational objectives and foster implementation that is in the best interests of all the stakeholders, internal and external, and the corporation itself"(Müller, 2010a, p. 3; Müller, 2011, p. 306). Müller identified three important aspects of project governance which are (Müller, 2010a; Müller, 2010b):

1. Defining the objectives of the project.
2. Providing the means and resources.
3. Monitoring and controlling the project progress and utilization of resources through governance oversight.

PMI defines project governance as a mechanism that "provides a comprehensive, consistent method of controlling the project and ensuring its success" (PMI, 2008, p. 20). The project governance framework must be aligned with the larger context of the organization, which owns, or sponsors, the project.

### **Project Governance Dimensions**

It is important to discuss the term dimension, which is considered as a synonym for attribute, or aspect. American Heritage Dictionary (2004) defines dimension as aspect or element. The concept of governance dimension is at a higher level, of abstraction, and is, in some terms, different from the functions of governance. Crawford et al. (2008), when they discuss the role of sponsor, and Müller (2009), when he discusses the role of steering group; refer to governance roles, which is in alignment with the concept of governance dimensions.

There are three main roles or dimensions of project governance identified in this research:

1. Project Surveillance, which relates to overseeing the project progress in order to ensure that the project is moving as per the committed plan and within the defined threshold (Müller, 2010a; Müller, 2010b).
2. Project Control, which relates to controlling the progress of the project and the action of the management team.
3. Project Support and Guidance, which relates to the need of support and guidance from the project governance team during project life cycle.

### **Methodology and Analysis**

This study can be considered as quantitative in nature, with data being gathered using online survey. The survey request was sent to 343 IT project governors, out of which 183 responded to the survey. This gives us a response rate of 53.35%, however, 168 were considered as complete and relevant responses. So the overall response rate of completed responses is 48.98%.

Some of the salient findings from the demographics data above show that:

1. The majority of the respondents of the survey are male.

2. All of the respondents are above 30 years in terms of age, with 25.6% being at or above the age of 45 years.
3. The majority of the respondents have more than 10 years of work experience.
4. From a qualification and experience perspective, the majority of the respondents mentioned that they have relevant qualifications to oversee and govern projects, and have up to 10 years of project governance experience.
5. Seventy-nine% of the survey respondents mentioned that hold senior positions in their respective organizations.
6. The respondents were from all over the world, however most of the survey respondent's organizations belonged to Gulf Cooperation Countries (GCC) or North America; the cumulative percentage being 68%.
7. From an organizational type perspective, the respondents were equally divided between private and non-private (public and state owned enterprise) organizations.
8. From an organizational domain perspective, the respondents belonged to all domains mentioned in the survey. However IT, consulting, banking and finance represent 56% of the respondents.

The above analysis of demographic information enhanced the confidence of the researcher about the data collection source, as it shows that appropriate respondents answered the survey.

The data was reviewed and cleansed for analysis, while treating the outliers and missing values. Factor analysis was conducted to identify the underlying factors within the variables, and Cronbach's alpha technique was applied to test the reliability of the constructs. Lastly regression analysis was used to test the hypotheses.

## Results of the Research

### Influence of Project Attributes

From a project attributes perspective, it is clear that certain project attributes have an influence on the project governors for preference of project governance dimensions and the overall governance. This is aligned with the earlier studies of researchers (Miller and Hobbs 2005; APM 2007b; Klakegg et al. 2008; Müller 2009). The following sections discuss this in further detail.

#### Project Complexity

If we further analyze the results in depth, project complexity did not have any impact on any of the project governance dimensions. This may be because the aspect of project complexity is generally handled at the level of project manager and the project team, without excessive intervention from the project governors. Project governors have an inclination of not getting too much involved in the technical details related to the project. Even though they may have a general impression about the complexity involved in the projects that they are governing, however their preference for governance dimensions typically is not influenced by this high-level understanding.

Project governors tend to trust their managers, and the project team, to handle and reduce project complexity and deliver the project within the defined constraints. Thus, while designing the governance framework, project complexity is not considered as a major influencer, whereas during project execution and delivery the complexity of the project does not influence the governors to alter their preference for governance dimensions. There are factors, other than project complexity, influencing this phenomenon.

### **Project Uncertainty**

Based on the results, project uncertainty has an influence on the project support and control dimensions as well as overall governance. This influence, however, is in the negative direction, which means that higher the uncertainty, the lesser will be the preference for support, control and overall governance.

Projects in our sample are IT projects, which generally have high level of uncertainty (Na et al. 2004), and this uncertainty gets resolved as the project progresses (Turner and Cochrane 1993). To resolve this uncertainty aspect highly evident in IT projects, special practices related to managing IT projects are developed by organizations. Researchers have also emphasized that specific project management techniques are being developed for standardization, in order to manage requirement uncertainty (Na et al. 2004). This means that project uncertainty is handled at the level of project management, and project governors allow the project team to handle the uncertainty aspect of the project. This may be because that project governors might consider themselves to be in a position where they are unable to take project related decisions because of a lack of clear information and a detailed roadmap. Project governors tend to withdraw themselves from the project at this stage, and the project team owns the project during this uncertainty period and tries to reduce this by clarifying the requirements and putting a clearer roadmap with minimal governance.

As the project progresses and more details are available, the project governors tend to get more involved in the project and provide the required support to the project team. Along with that, because of the clearer understanding of the project, project governors start controlling different aspects of the project when things tend to move in the wrong direction. Thus, project clarity allows project governors to take informed decisions and the level of support and control increases with increased level of certainty.

Based on this discussion, we can state that project uncertainty is an important attribute that needs to be considered when designing project governance frameworks. Also the level of uncertainty has to be reduced, as early as possible, by the project team in order to ensure that the project governors can understand different aspects of the project, which are relevant to them, so that they can play their true role of overseeing and steering the project.

### **Project Strategic Value**

The results show that project strategic value is the most influential attribute impacting all governance dimensions, as well as overall governance. This impact is in a positive direction, which means that higher

strategic value will result in increased support, control, and surveillance as well as an increased preference for overall governance.

The result is aligned with what we observe as practitioners as well as researchers. Strategic decisions are taken by senior managers, where projects act as strategy execution vehicles. Because of the investments made by the organization in highly strategic projects, the project governors focus on these projects in order to ensure that the projects meet their desired objectives. Unlike project uncertainty and complexity, the information flow in case of strategic value is from the senior managers to the project manager and the project team. Project governors have to ensure that the project stays aligned with the organizational goals, and the investment made in these projects delivers the required value to the organization.

As the strategic value of the project decreases, i.e. if the project is of low strategic importance or the cost of the project is low, the focus on different dimensions of governance also decreases. This may be because the investment required governing such projects may be much higher than the project's value to the organization. This is in alignment with the classical transaction cost economics perspective, which advocates economization of governance structure based on the transaction attributes (Williamson 1979). This means that it does not make economic sense to create governance frameworks with complex structure, multi-facet measurement parameters and tools for projects of low strategic value. Rather a simpler model can be created that can still ensure project delivery without creating cumbersome bureaucracy.

Based on the discussion, above, we can conclude that high strategic value projects require a higher level of governance from the project governors in order to ensure that the project can deliver its strategic value. Even though the project governors still allow the project manager to manage and execute the project activities, they work very closely with the project manager and the project team. They advocate for the project in front of other stakeholders and support the project team whenever needed. They also create monitoring mechanisms in such a way that any deviation, above the threshold, is observed, and decisions are made to bring the project back on track. All this is done to ensure that the project delivers its objectives, which are critical for organizational success.

## Conclusion

We can conclude from the discussion, that project attributes have an influence on project governance dimensions. These attributes should be considered while designing the governance frameworks. As the project attributes change during the course of the project, the project governance framework should be reevaluated and revised if it is not aligned with the project attributes. This will ensure that an economical, effective and efficient governance framework is in place during the course of the project, which will result in improved project results.

One thing that is worth discussing at this stage is the reflexivity of the circumstances. In our current study we are hypothesising that project attributes influence project governance dimension. However the causality may be the other way around, that is, because governors do not engage in the project it

remains uncertain for a prolonged period because of lack of support from the governors. This can be a good topic to research in future.

One should however be careful in deciding which attributes have a real impact on the governance framework. Based on this study, project complexity does not have an impact of governance dimensions, whereas project uncertainty and strategic value influenced the preference for governance dimensions. Thus governance frameworks that are considerate of these results may have a more positive impact on the project.

The following conceptual diagram (Figure 1) displays an initial version of Contingent Governance Framework for Projects (CGFP):

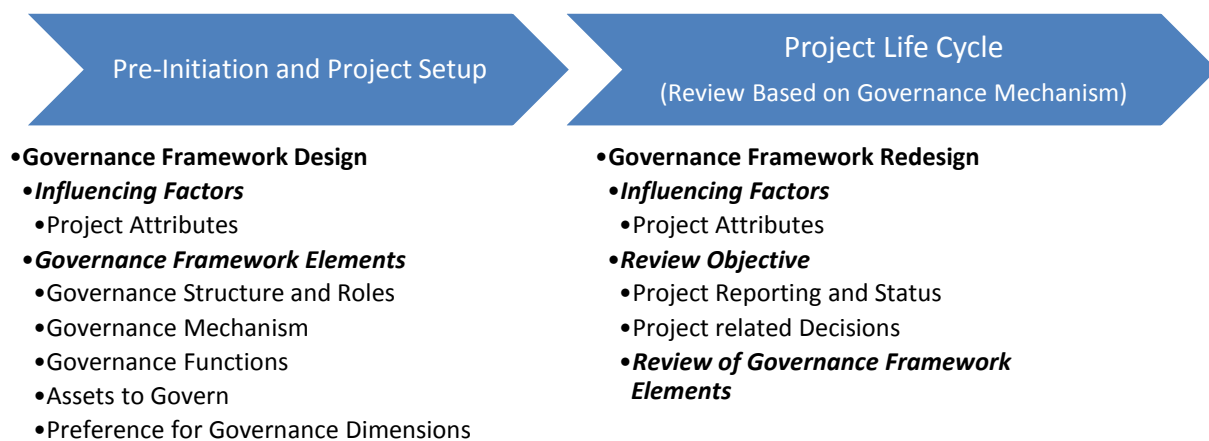


Figure 1: Contingent Governance Framework based on influence of Project Attributes

## Influence of Project Performance

From a project performance perspective, it is clear that certain project performance dimensions have an influence on the preference of project governors for support and control governance dimensions and the overall governance. However, there was no impact on project surveillance dimension, which means that the monitoring aspect of governance remains uninfluenced by the project performance dimensions. Along with that, overall project performance (as a combined concept) has an impact on preferences of all governance dimensions, as well as overall governance. This is aligned with the earlier studies of researchers, which mention that project performance has an influence on project governance dimensions (Cable et al. 2004; Crawford et al. 2008). The following sections discuss this in further detail.

### Meeting constraints and stakeholder expectations

The results show that meeting constraints and stakeholder expectations had an impact on the support and control dimension, whereas the surveillance aspect of governance remained uninfluenced by this performance dimension. Meeting constraints and stakeholder expectations also has an influence on the overall governance. All of these impacts are in a positive direction, which means that if the project is

performing well from this perspective, it will receive more support, however, the project governors will also be controlling the project, and the overall level of governance will also be high.

The focus of this dimension is on measuring the project performance by assessing the adherence to defined constraints of budget, schedule and milestones. It also looks at the perspective of different stakeholders in terms of project performance. This aspect ensures that the impact of project performance on different beneficiaries or impacted groups is taken into consideration. If a project is doing well from this perspective, the project governors tend to get more involved in the project by providing the required support and controlling the project so that the project keeps on performing well and stakeholders remain satisfied with the progress.

However, a project, which is a non-performer from this dimension, seems to progressively lose attention of the project governors, as it does not get the required support, and project governors do not take control of such projects. This is in contradiction with what was reviewed in the literature (Crawford et al. 2008), which mentions that non-performing projects are controlled by the project governors. However it does make sense from one perspective, because the project governors, instead of supporting or controlling the project, may want to terminate projects, which are consistently not meeting the defined deadlines and milestones, and the stakeholders are not happy with the performance for a prolonged period. Such decisions are made by projects governors during the status review sessions (Müller 2010a).

This phenomenon can also be explained by discussing the reflexivity of situation here as well. The performance of the project from this aspect can be low because the project governance might not be engaged in the project. This aspect has been discussed by Turner and Müller (2004) when discussing the communication model between principle and agent and its impact on project results.

Based on this discussion we can state that, during the project progress, performance from a perspective of meeting constraints and stakeholder expectations should be considered when re-defining the project governance framework at the time of the review. The monitoring mechanism may remain consistent, however, the project governors should consistently reevaluate their preference for support and control throughout the project life cycle based on the project performance from this aspect. However, when projects do not perform well for a prolonged period, they should be considered for termination or realignment.

### **Meeting design goals and expectations**

The results show that meeting design goals and expectations had an impact on the support dimension, whereas the control and surveillance aspect of governance remained uninfluenced by this performance dimension. Meeting design goals and expectations also has an influence on the overall governance. All of these impacts are in a positive direction, which means that if the project is performing well from this perspective, it will receive more support, and the overall level of governance will also be high. The concept of reflexivity, as discussed above, can also be applied for this observation.

The focus of this dimension is on measuring project performance by meeting the user requirements and ensuring that the end deliverable is a high-quality solution. If a project is doing well from this perspective, the project governors tend to get more involved in the project by providing the required support. This support is to ensure that the project keeps on meeting the user requirements and design goals expected from the end product or solution.

It should be clear that fulfilling the customer requirements in terms of solutions development is an internal looking perspective, and is the responsibility of the project manager and the team without much intervention from the project governors. Project governors are expected to provide an oversight function and support the project team when required. That might be the reason that the control and surveillance aspect of project governance are uninfluenced because of this performance aspect. This is in partial alignment with the literature (Crawford et al. 2008), which mentions that if a project is performing well it gets the required support; however, a non-performing project loses this support.

Based on this discussion we can state that, during the project progress, performance from a perspective of meeting design goals and expectations should be considered when re-defining the project governance framework at the time of a project review. The monitoring and controlling mechanism may remain consistent; however, the project governors should consistently reevaluate their preference for support throughout the project life cycle based on the project performance from this aspect.

### **Adherence to process**

The results show that adherence to process had an impact on the support dimension, whereas the control and surveillance aspect of governance remained uninfluenced by this dimension. Adherence to process also has an influence on the overall governance. All of these impacts are in a positive direction, which means that if the project is performing well from this perspective, it will receive more support, and the overall level of governance will also be high. The concept of reflexivity, as discussed above, can also be applied for this observation.

Process alignment is considered as a major aspect of project performance, especially in IT projects (Nidumolu 1996). The focus of this dimension is on ensuring that the project is following the defined process, and it is passing through the internal and external compliance audits with minimal issues. Similar to the above perspective of meeting design goal and expectations, if a project is doing well from a process adherence perspective, the project governors tend to get more involved in the project by providing the required support. They may provide additional resources in order to ensure that the project remains aligned with the process. This is important, as standardized process reduces dependency from individuals.

It should be clear that fulfilling following the process and adhering to standards is also an internal looking perspective, and is the responsibility of the project manager and the project team without much intervention from the project governors. Project governors are expected to provide an oversight function and support the project team when required. That might be the reason that control and surveillance aspect of project governance are uninfluenced because of this performance aspect. Similar



to the previous section this phenomenon is also in partial alignment with the literature (Crawford et al. 2008), which mentions if a project is performing well it gets the required support; however a non-performing project loses this support.

Based on this discussion we can state that, during the project's progress, project's adherence to process should be considered when re-defining the project governance framework at the time of the project review especially from a perspective of providing support to the project. The monitoring and controlling mechanism may remain consistent; however, the project governors should consistently reevaluate their preference for support throughout the project life cycle based on the project performance from this aspect.

### **Overall Performance**

Project performance from an overall perspective had an impact on all project governance dimensions as well as overall governance. All of these impacts are in a positive direction, which means that if the project is performing fine, it will receive more support, however the project governors will also be monitoring controlling the project, and the overall level of governance will also be high. Along with that the bi-directional relationship between project performance and governance can also be applied for this observation. This means that lack of governance might be acting as a cause of low performance of projects.

This perspective of performance is based on an overall perception of project performance in the organization. Organizations value high-performing projects and governors provide support to such projects by advocating the projects in front of different stakeholders and granting the required resources for successful execution and project delivery. Because of the high probability of success for such projects, project governors consider them as opportunities for successful delivery of business value, and tend to closely monitor and control such projects so that such project continue to perform well.

As discussed earlier, consistently non-performing project lose the support from the governors. The governors also tend to become less interested in such projects and may eventually suggest terminating such projects. Thus we see that the level of monitoring and control reducing as the performance of the project is no longer in alignment with strategic objectives.

Based on this discussion we can state that, during the project progress, the overall performance should be considered when re-defining the project governance framework at the time of the review. The project governors should consistently reevaluate their preference for support, monitoring and control throughout the project life cycle based on the project performance. However, when projects do not perform well for a prolonged period they should be considered for termination and the organization's project portfolio should be rebalanced.

## Conclusion

We can conclude from the discussion that overall project performance and its underlying dimensions have an influence on project governance dimensions. As the project performance changes during the course of the project, the project governance framework should be reevaluated and revised. This will ensure that an economical, effective and efficient governance framework is in place during the course of the project, which will result in improved project results.

There are some interesting findings in this area. One of them is the contradiction with the existing literature that low-performing projects will require more control from the project governors. This was not the case in this study. We have seen from the results that as the project performance misaligns with the performance expectations and strategic objectives, the level of control from the project governors also is lessened. We have justified this by mentioning that project governors tend to disassociate from consistent low-performing projects and such projects eventually qualify for termination. The project governors may lose interest in governing such projects and may escalate the project for cancellation.

This can also be explained from a perspective, that projects that are performing exceptionally well receive more support and control from project governors because the probability of eventual success of such projects is high. Thus project governors focus on such initiatives to ensure that they deliver the expected value to the organization.

However, there are two more interesting aspects related to this phenomenon which have been briefly discussed in the sections above:

1. Project performance is one of the factors that explain the variance in project governance dimensions. There would be other factors, such as project attributes, that may also explain this reduction in project monitoring and control, as well as overall governance when measured in conjunction. This can be researched in future studies.
2. It is also evident in the literature (Crawford and Cooke-Davies 2005; Simonsen 2007) that project governance and top management support has an influence on the project performance. This means that there may be a bidirectional relationship between the two concepts which can be explained by reflexivity of circumstances. There is a possibility that because governors do not engage in the project the project performance turns out to be below the expectation level. This has more support through existing literature (Turner and Müller, 2004) and can be an interesting topic for future research.

Having said this, it is important for the governance frameworks to be adaptive to the project performance context. It is also important to identify, in a particular context, the performance dimensions that are relevant and imperative for the organization to monitor. Based on the performance variance, from the perspective of identified performance dimensions, the organization may redefine its governance mechanism in order to improve the performance of the project resulting in eventual success.

The following conceptual diagram (Figure 2) shows the influence of project attributes and project performance on project governance framework, and displays a more refined version of CGFP:

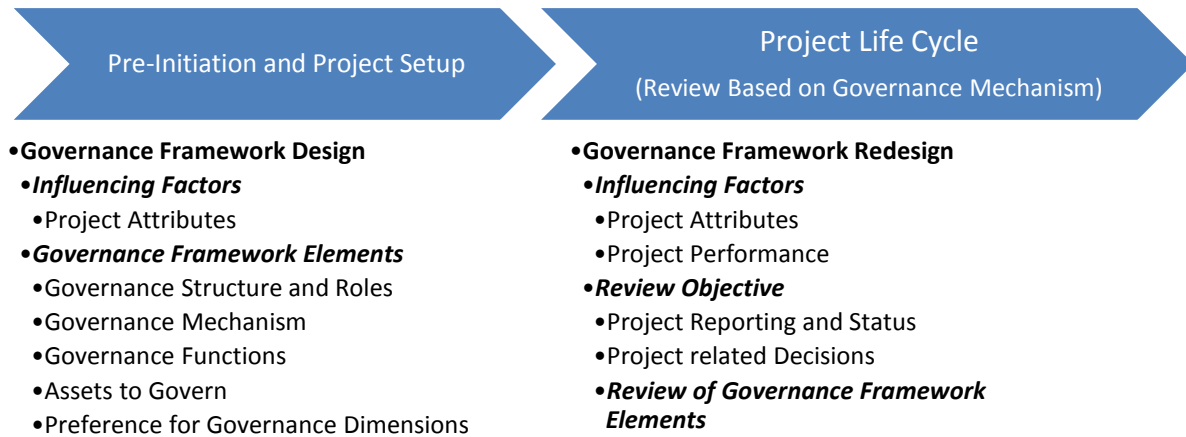


Figure 2: Contingent Governance Framework based on influence of Project Attributes and Project Performance

### Contingent Governance Framework for Projects (CGFP)

In the end, based on the literature review and the subsequent hypotheses testing, we have attempted to build an initial version for Contingent Governance Framework for Projects (CGFP). CGFP has Transaction Cost Economics as its underlying theory, as it is based on the concept that in order to economize on transaction costs, projects of different attributes should be governed through frameworks that are aligned with the project attributes and context.

The objective of creating such a framework is based on the understanding that the governance frameworks should adapt to the changing project contexts. This may result in provisioning of effective oversight organization that will assist the project in delivering its objectives, instead of creating additional layers of reporting and delayed decisions.

The following figure (Figure 3) provides the first draft for CGFP. This model will be further analyzed, refined and elaborated in future studies:

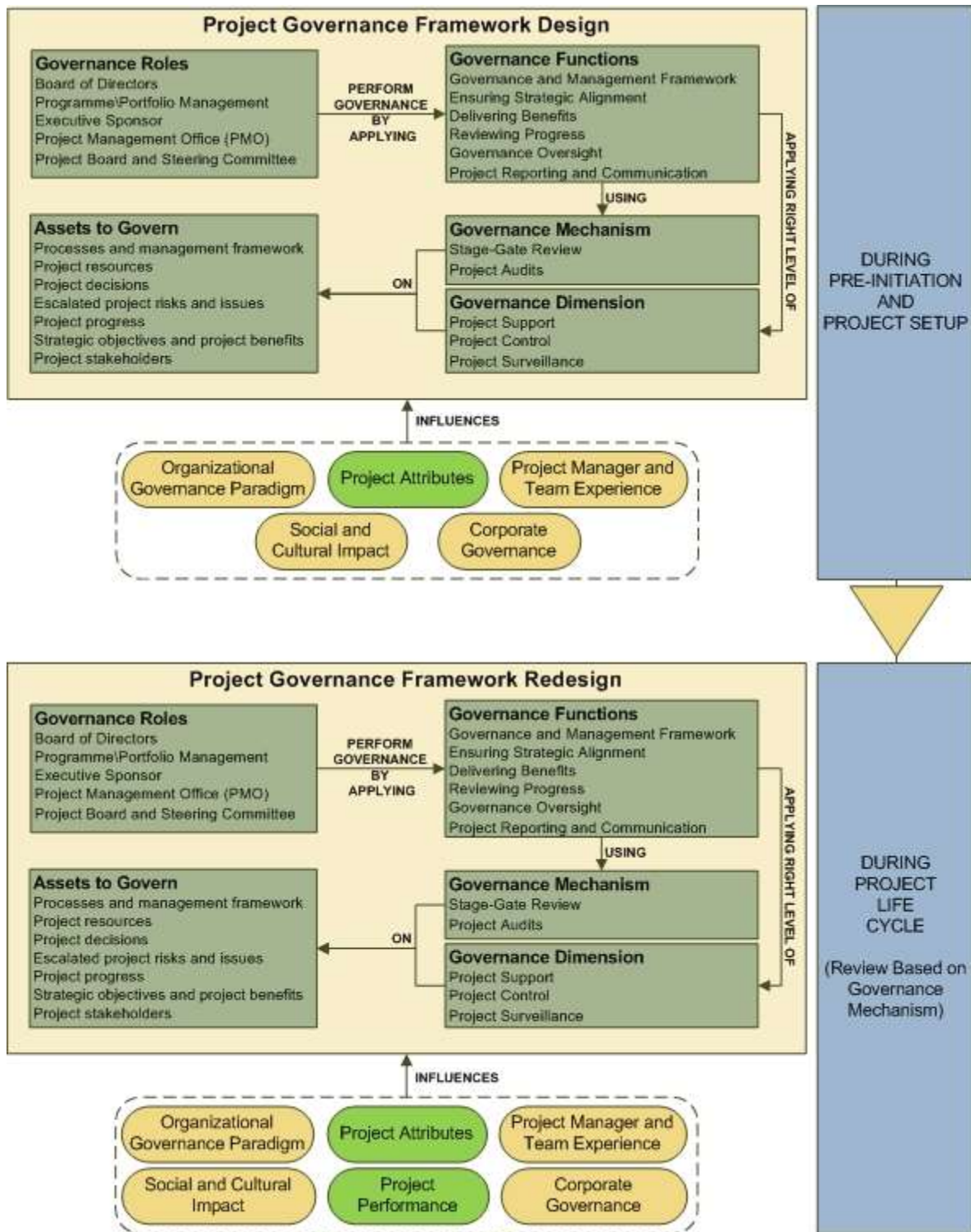


Figure 3: Contingent Governance Framework for Projects (CGFP)

Various factors influence the design of the project governance frameworks, and we call them Influential Factors (IFs). Some of the factors, such as project attributes and project performance, have been

quantitatively analyzed in this research, whereas others have been identified during the literature review, and it would be interesting to analyze them further in other studies.

The following table (Table 1) shows different IFs and their related references:

Table 1: Influential Factors and References - CGFP

Influential Factor	References
Project Attributes	Analyzed quantitatively in current study
Project Performance	Analyzed quantitatively in current study
Organizational Governance Paradigm	Weil 2004; Weil and Ross 2004; Müller 2010a; Müller 2010b; Müller 2011
Project Manage and Team Experience	Crawford et al. 2008
Social and Cultural Impact	Klakegg et al. 2008
Corporate Governance	APM 2007a; Klakegg et al. 2008; Müller 2010a

These IFs impact the different Governance Framework Elements (GFE) which are:

1. Governance Structure and Roles, which identifies the people and groups that should be involved in governance e.g. Sponsor, PMO, and Project Governance Board. The bodies and entities for governance may differ from organization to organization and type of projects that have to be governed.
2. Governance Mechanism, which defines how the governance will take place such as Stage Gates and Project Audits. Similar to the management model, the governance mechanism for projects cannot be applied in a similar manner for all projects (Miller and Hobbs, 2005). Thus, organizations adopt different mechanisms to govern their initiatives depending on the influential factors identified in this research.
3. Governance Functions, which define different functions performed by the governance entities. These functions include activities such as governing the benefits delivered by the project, strategic alignment of projects with organizational strategy, reviewing the project progress and providing governance oversight throughout project life cycle.
4. Assets to Govern, which identifies the different areas of projects that will be governed. Project governance functions are applied to provide an oversight function over assets that have to be overseen in order to meet the project objectives. These assets include but are not limited to project processes, project decisions and project resources.
5. Preference for Governance Dimensions, which will define the level of preference for each dimension of project governance. These dimensions include support, control and surveillance

dimensions as identified in this research. An effective governance framework will have a balanced level of support, control and surveillance applied by the governance entities.

These elements should be carefully designed based on the IFs so that an economically viable and efficient governance framework can be designed, which should influence improved project performance. Figure 3 shows that project governors provide governance oversight on project assets by implementing a right balance of support, control and surveillance dimension through governance functions. These functions are utilized based on the governance mechanism adopted by the organization.

It is however important to note that once the governance model is operational, it should not become something which cannot be redesigned or altered for improvement. Because of the project execution the overall project context will change, and additional IFs such as project performance will come into play. These IFs will play a role in redesigning the governance framework so that the objective of economic viability and efficient governance is consistently achieved. The redesigning of governance framework may take place at predefined milestones or at the time of a gate review or project audits. This review could also occur during an overall review for greater process effectiveness or during a maturity assessment.

Relating to the current research it is clear that project attributes and project performance (IFs) influence the preference of project governors (GFE) for different project governance dimensions (GFE). Thus these IFs should be considered when designing and redesigning the governance frameworks. The role of governance is to oversee the project and ensure that the project either delivers its objectives, or its existence is reassessed. The redesigning of governance framework based on IFs ensures that governance consistently plays its role effectively and efficiently.

## **Implications**

### **Theoretical Implications**

The following sections discuss the theoretical implications of this study in different areas of research.

#### **Identification of Constructs**

This research focuses on identifying different factors that have an influence on project governance and its dimensions. While the main focus of this research is project attributes and project performance, other factors, such as corporate governance, organizational governance paradigm and others, have also been identified during the literature review that can be verified in other studies.

This research helped in identification of some underlying dimensions of project governance through the literature review, which were later confirmed using data analysis. The project governance dimensions, i.e. support, control and surveillance, can be used in future studies related to project governance, e.g. to test the influence of different dimensions of governance on project manager motivation or project success.

Along with that the research also helped in identification of some underlying dimensions of project performance. The performance dimensions identified in this study, i.e. meeting constraints and stakeholder expectations, meeting design goals and expectations and adherence to process, are aligned with project performance and success measures of earlier studies. These performance measures can be used in future studies e.g. measure project performance from different aspects or influence of different factors on different performance dimensions.

### **Development of Framework**

This research is a step toward development of a contingent framework for governance of projects. The author would like to title it as Contingent Governance Framework for Projects (CGFP). This framework considers the importance of context when designing, implementing and redesigning project governance frameworks.

Even though the framework is in its initial stages, i.e. certain aspects of the framework will require significant research; it provides an initial direction for subsequent researches. Having said that, the existing framework is based on current literature and certain phenomenon were tested as part of this study.

### **Quantitative Research**

Most of the studies in the field of project governance have been qualitative in nature (Turner and Keegan 2001; Miller and Hobbs 2005; Crawford et al. 2008; Klakegg et al. 2008). Even though Müller and Blomquist did conduct mixed-methods research related to this concept (Müller and Blomquist 2006); however, such studies can be considered as limited at this moment.

This study, which provides insights about the level of influence that certain factors exert on project governors, can be considered as a significant addition to the area of quantitative studies in project governance.

### **Practical Implications**

#### **Efficient Governance of Projects**

This research will help practitioners to recognize different factors that influence the manner in which projects are governed. These insights will help them in adjusting their governance style based on the influencing factors.

Along with that the results of this study may help practitioners to deploy more effective governance frameworks for different types of projects, which can adjust based on changing project contexts, especially its performance.

Using the initial version of CGFP, practitioners can develop governance frameworks, which are not rigid and have a redesigning mechanism during the project life cycle. This will improve the likelihood of having a framework that is effective, efficient and aligned with the project attributes, project performance and other influencing factors.

## **Project Categorization**

The research identified certain project attributes that can be used by people in organizations in developing their project categorization systems. This categorization system can be used by the executives in organization to manage and govern projects by using appropriate methodologies and frameworks. Organizations tend to customize their project management methodology based on the type of project; for example project of high complexity and uncertainty might require a different management mechanism than a project which has relative low complexity.

Along with that certain project attributes such as the strategic value of the project might influence different portfolio level decisions. Organizations might create different portfolios for different types of project in order to manage and govern them more effectively.

## **Project Performance Metrics**

The research identified certain project performance dimensions that can be used by organizational leaders in measuring project performance from different aspects. Different organizational groups can focus on different aspects of performance, which will result in ensuring that the overall performance of the project stays aligned with the performance metrics.

In order to explain this further, an organizational entity such as enterprise process group, that focus on the process aspect of the project, might closely monitor the project from “adherence to process” aspects, whereas, the quality control and design authority teams might be more interested in monitoring the “meeting design goals and expectations” metric. This model will help organizations to measure different aspects of project progress by entities that are considered experts in the specific domain.

## **Understanding the Role of Governance**

This study can also help project managers, project teams and other stakeholders in understanding the role that governance should play during the project life cycle. It will also help them understand different factors that influence different aspects of governance, including the method in which the governance is carried out by the governing entities. This knowledge can help in better alignment between different project roles resulting in improved chances of project success.



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