Enterprise IT Governance and its Impact on Agile Software Development Project Success

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Abstract
Enterprise IT (EIT) governance has become the primary approach in leveraging the IT function to achieve business objectives. We found in previously published work that decision making is the core of EIT governance. We collected quantitative data from professionals on decision making in Agile Software Development (ASD) projects, which we analyzed using Spearman’s Ranked Correlation Coefficient. Decision-making clarity in implementation and decision-making distribution in the organization layers positively impact ASD project success. However, our finding that tailoring the decision-making process does not impact ASD project success was most surprising. We conclude that the impact of decision-making factors in an ASD project’s success needs to be explored more deeply.

Keywords: Decision Making, Decision-Making, EIT Governance, Agile Software Development, Agile Projects, ASD Projects, Governance Clarity, Distribution, and Tailoring

1. Introduction
In the past few decades, Information Technology (IT) has become a key contributor for business to gain high operational productivity, processing speed and further business growth. Businesses have become more complex, volatile and expanded in size, scope and components. To meet business demands and to address the changing landscape, IT has transformed itself over time. Software development (SD) is one area that has had major change by adopting various methodologies. Agile methodologies are specific approaches, designed in response to the specific challenges of the software industry [1] and replaced traditional SD methodologies. By Agile we mean all methods under the Agile umbrella, including SCRUM, DAD, SAFe etc. No specific method is targeted.

However, not all the components of business enterprises have changed accordingly. Organizations use projects to achieve strategic goals and business value. The projects are governed by project processes [2] to realize the value. Various factors such as processes, people, organization, technology and tools effect project success [3]. Project processes are not independent of each other and one of the key factors in project success or failure is governance [4]. The traditional governance processes of command and control are used to run the
organization. The governance processes are same for the traditional project as well as for the Agile projects in the organizations and have not changed. The change of methodology in software development is a response to the shortfalls of existing methods and expectations of better results. The expected results of Agile Software Development (ASD) projects as compared to traditional projects may not be realized if the governance remains unchanged. The aim of this research is to understand the impact of Enterprise IT (EIT) governance on ASD projects outcomes.

1.1. Paper Structure

The next section provides related work to the business alignment, changes in software development and governance. Section three is research design, which covers steps of research and data sampling. The fourth section is a literature review for hypothesis development. The fifth section provides details of research data model and the data collection process. The sixth section is discussion that includes more details on the data analysis and the results. The final section is conclusion that summarizes the implications for these findings as well as options to further this research.

2. Related Work

We consider the research problem from three perspectives: business goals alignment, software methodology adoption and governance. First is business changes and goal alignment with IT delivery. Second is the adoption of methodologies in software development over time. And third is governance inclusion and role in the enterprise and IT. This provides us with a logical structure and connection from business change, business goals alignment with IT deliverables, adoption of software methodologies and governance in IT.

2.1. Business Goal Alignment

Business required value is translated into goals and objectives, which are further decomposed into individual deliverables by the management function of an enterprise. These individual deliverables are accomplished by various initiatives in the organizations. To achieve the overall business value, individual deliverables must align with the business objectives. This alignment has two aspects. First is the gap between business goal and IT delivery, and second is the methodology used to minimize this gap. Such gaps are first reported in the mid-80s [5], and so are misaligned enterprise objectives [6]. Control-based measurements and technology, rather than a goal-based approach, brought short term gains rather than achieving the business objectives and long term goals [7]. Later, IT with more responsibilities and extended scope, is expanded at three levels - strategic, managerial and tactical. In most models, enterprise objectives and the direction for IT are set at the strategic layer, the IT department functions and processes sit at the managerial layer, while projects are tactical initiatives to deliver the objectives. The alignment of business goals and IT delivery still is the most important issue for Small and Medium Enterprises (SMEs) [8] [9]. Though causes may have changed over time, the gap still exists in some form. This is the case particularly when the business is changing and requirements are not certain, compared to predictable and pre-defined requirements and objectives. To align changing business demands and deliverables, IT has adopted various methods, particularly for the software development. We discuss next how software development has managed change through these various methods.

2.2. Software Development Methodologies Adoption

Changes in the software development by adopting various methodologies are response to the changing business demands in the delivery space where existing methodologies had shortfalls. Fundamentally, a software model or methodology is used to order the development stages and to define criteria for transition from one stage to the next stage [10]. Stable, mature and
predictable systems such as accounting, payroll and inventory, have low risk and to transfer an existing manual process to electronic process was simple. As businesses changed and required development of large, more complex systems, a simple analysis and coding method was not sufficient and successive stages were introduced. A stage-based Waterfall model with defined stage gates, feedback loop and provision to prototype was adopted for such development [11]. When more variables are added to large-scale Software Development, complexity exposes problems in the stage-gate model. These difficulties prompted the introduction of the spiral model, which is an extension to address the (then) existing methodology issues [11]. Risk, in the form of ambiguity and equivocality, further increased the chances of failure [12]. Software Development adopted new models such as Agile to increase flexibility and the ability to respond more effectively to changing requirements [13]. Newer business problems tend to be more complex, unpredictable and ambiguous than for traditional simple, predictable and stable systems. The software development community responded by adopting appropriate methodologies to align the business requirements and needs. Other organizational factors, including organization type, structure and governance may impact the adopted change. We now focus on the governance aspect on this change.

2.3. Governance in IT

Governance can be defined simply by ‘control’ or ‘direct’ and these concepts can be traced back to ancient times. Greek word 'kybernan' means 'pilot a ship' and Latin word 'gubernare' means 'direct' or 'guide' [14]. ‘Direct’ or ‘Guide’ is one of the common characteristic can be found in all forms and level of Governance. Though Governance is a subject of political science [15], its implications are widespread. The term 'director' is used for the first time in the corporate sector at the end of the seventeenth century, to monitor where large sums are consumed in the organizations [16]. This is perhaps the beginning of the formal implementation of Governance in corporates. ‘Corporate Governance’ or ‘Enterprise Governance’ is the terms used to denote governance in the organization at the enterprise level. Enterprise IT Governance (EIT Governance) is a general term used to encompass forms of governance related to IT in the enterprise. EIT Governance is a subset of ‘Enterprise Governance’ [17], originated from the necessity for financial controls and it inherited predefined guidelines. The same governance process and indicators apply to business and IT deliverables, including Software Development (SD) projects.

2.4. Governance Limitation

Pre-defined rules of EIT Governance work well for day-to-day work and simple problems. However, as discussed previously, business is changing and many variables are continually added to business functions. Pre-defined requirements and objectives are not the norm anymore, which adds variations to IT delivery. Agile is a response to manage the uncertainty by containing the risk of failure at the smallest level. ASD project progress, and measurement of project progress, are different [18]. These measurements are based on variable indicators, including story points for effort estimation, velocity for productivity, burndown and cumulative flow for planning and monitoring. Problems occur when pre-defined rules are applied to a dynamic ASD project in an uncertain environment. These problems may arise from the applied governance models, their implementation or other factors that may require a change. This research is to understand the EIT governance factors that impact ASD project outcomes.

3. Research Design

Our research was conducted in four consecutive steps: hypothesis development, research model development, sample selection, data collection and data analysis. In this section, we provide an overview of these steps, their deliverables and the activities that formed our results.
In the first step (hypothesis development), to develop the hypotheses, we first performed a literature review, described in section 4, to understand the current state of governance in an enterprise IT environment, governance implementation at enterprise layers and project governance for ASD projects. Our focus in this literature review is based on our previous research where we find decision making as a fundamental concept of EIT Governance [19]. Hence, our literature review and our previous experience and knowledge, helps us to develop hypotheses to find the impact of governance factors on ASD project success. Literature review and hypotheses are the deliverables of this step and are detailed in the next section.

In the second step (research model), we developed a research data model and questionnaire to collect data for hypothesis validation. The research data model is based on the hypothesis and has three parts: elements, relationships and data-items. Each element in the data model is considered from the hypothesis. Each data-item linked to the element is translated into a question (‘research data model’ in section 5.1, Fig 2 has more details). Deliverables from this step are a research data model and a questionnaire.

In the third step (data collection and compilation), No specific domain or industry group is our target, selection criteria is open for all the industries. However, we selected only those companies where Agile is considered as part of the enterprise strategy and ASD projects are the core software development delivery vehicle. We collected data from Agile experts who have five or more years’ experience in ASD projects. These experts represent three organizational layers (executive, managerial and technical) to cover the organizational dimensions as per our data model. From the above criteria, the sample characteristics are provided in the Table 1 below.

<table>
<thead>
<tr>
<th>Respondents</th>
<th>No of Companies</th>
<th>Industries</th>
<th>Executive</th>
<th>Management</th>
<th>Technical</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>30</td>
<td>11</td>
<td>Government</td>
<td>2</td>
<td>6</td>
<td>4</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Oil &amp; Gas</td>
<td>1</td>
<td>6</td>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Technology</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Supply Chain</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>6</td>
<td>15</td>
<td>9</td>
<td>30</td>
</tr>
</tbody>
</table>

A total of 30 participants from 11 different companies responded to the research questionnaire. These companies are from 4 industries including Government, Oil and Gas, Technology development or provider and Supply Chain Management. Participants represent three levels of the organization: executive (20%), management (50%) and technical (30%).

From the selected companies, the participants of this research were asked to select one project for data collection. The first author collected data through a questionnaire. Collected data is in quantitative form to validate the hypothesis. For this purpose, we used a Likert scale, which was set with optimum value (1 to 7) to ensure that resultant value will not be lost for a low selection and high number will not eliminate the clarity [20]. The deliverable of this step is the collected research data in a final form for analysis.

In the last step (analysis), we analyzed the collected data using Spearman’s Ranked Correlation Coefficient to validate the hypotheses.

4. Hypothesis Development based on Literature Review

We developed three hypotheses, one for each topic from the literature review discussed in this section. Our literature review is based on two findings, first “the key factors in project success or failure is governance” [4] and second is “decision making is the core concept of EIT governance” [19]. Hereafter, we use decision making as same meaning of governance. The
reason of hypotheses development is to validate research statement that EIT Governance factors impact the ASD projects outcome.

4.1. EIT Governance - Implementation Clarity

Governance is a relatively new concept in IT and a wide spread confusion is revealed about scope and alignment of Enterprise Governance and EIT Governance [21]. EIT Governance is a sub-set of Enterprise Governance [17], however, overlaps among Enterprise Governance, Strategic Information System Planning and EIT Governance are found with a conclusion that existing definitions are unable to represent the broad reach concept of EIT Governance adequately [17]. A lack of shared and common understanding exists for EIT governance, that develops complexities in the organizations [22]. Various factors, including culture, structure, size, industry, region, maturity, strategy, ethics and trust have an impact on the shape and selection of EIT Governance [23]; [24]. Without a common understanding and agreed definition, implementation of governance in IT may not be obvious, particularly in the ASD project space where more autonomy is required.

There is no single agreed definition for EIT Governance; however, a number of concepts are used in various definitions in many different ways. Decision making is one core concept used in most of the definitions and well aligned with the meaning of governance. Decision making is aimed to deliver business goals within an organization through people and management processes [19]. A clear implementation of decision making can help to achieve results.

Our first hypothesis from the above literature review and EIT Governance understanding is:

\[ H1: \text{Implementation clarity of decision making positively relates with ASD project success.} \]

4.2. EIT Governance - Implementation Distribution

To implement governance processes, various frameworks were developed. The organizational form of IT in an enterprise is a vital element to establish decision rights in the organization levels [25]. This decision making implementation is categorized into six types/forms. These forms are; 1) ‘business monarchy’ (strategic decision making for IT), 2) ‘IT monarchy’ (IT decisions making by CIO), 3) ‘feudal’ (decision making by business unit managers), 4) ‘federal’ (shared decision making by business & IT), 5) ‘IT duopoly’ (decision making by IT professionals) and 6) ‘anarchy’ (blurred decision making between IT and Business). Each of these forms results in a different decision making structure and set of business processes and may be addressed by one or more frameworks. Next we will discuss common frameworks and their distribution in the organization.

COBIT developed by ISACA is framework for governance processes implementation based on processes, performance and monitoring and have flexibility to implement IT decision making structure and considered as an influential decision making framework [26]; [27]. ITIL is another commonly used governance framework. This framework distributes governance process in the IT operations. It is used for best practices in the IT services field with other standards (ISO/IEC38500, AS8015:2008 etc.) but unable to provide strategy or alignment of IT and business [28]. These frameworks are employed at various organizational layers to implement decision making within EIT Governance structure.

At project and software development level, standard frameworks or methodologies are used for day-to-day tasks. This includes frameworks like Project Management Institute’s PMBoK, Microsoft Solution Framework (MSF), Application Implementation Methodology (AIM Oracle), PRINCE 2 from APMG, Scrum, Agile Methodology and many more. These frameworks, for different layers in the organization, are developed as standard reference models based on best practices, to tailor them and implement as per organization’s requirements.

We developed a representation of organizational layers and the implementation of the above frameworks and standards at the different layers - this representation appears in Figure 1.
Despite the availability of standards and frameworks for corporate and EIT Governance, deciding the amount, shape, size, function, strategic and technical role for governance at different levels is the choice of the organization [29]; [30]; [25]. This standardization allows organizations to create their own customized responsibilities, accountabilities and linkage between business objectives and IT objectives relative to their industry peers for implementation and benchmarking [31]. Due to the scale of economy and consolidation of benefits, management of technology is merged and use of technology is delegated [5]. Structural and strategic role of governance are used centrally while functional and tactical role are decentralized [32]. These changes introduced centralized, de-centralized and federated models of EIT Governance implementation. With some limitation and variations, still these models are only to deploy EIT Governance [33]. Centralized governance of IT resources is eliminating this risk by optimizing resource allocation to satisfy business objective and investment. However, this approach potentially limits the decision making at local level where managers have better understanding of the problem and solution [34]. Organizations use combination of frameworks to distribute the decision making among the organizational levels (strategic, managerial and tactical). For optimal benefits from the delivery function, especially for ASD projects, decision making distribution is important and can play a vital role in achieving results.

Our next hypothesis from the above literature review and EIT Governance understanding is:

\[H2: \text{Distribution of decision making positively relates with ASD project success.}\]

4.3. **EIT Governance - Processes for Projects**

Total investment of computing and communication technology of an enterprise is defined under ‘Information Technology Portfolio’ [30]. The definition of portfolio also reflects this notion as ‘the totality of an organization's investment in the changes required to achieve its strategic objectives’ [35]. IT assets or resources including, hardware, software, telecommunications, data, people, processes and functions are incorporating this portfolio. These resources are consumed through the projects to meet business objectives. A project is ‘a temporary endeavour undertaken to create a unique product services or result’ [2]. Program has been defined as ‘a group of related projects that together achieve a beneficial change of a strategic nature for an organization [36]. Portfolio, program and project can be considered, by definition, as mechanisms for implementing changes to meet the organizations strategic goals and to realize business value.
The governance of the project, program and portfolio is suggested to be the sub-set of corporate governance as basic function is to realize business value [4]. The primary objectives of portfolio are to identify, select, monitor, finance and maintain a suitable mix of programs and projects to achieve organizational objective [37]. Getting maximum benefit from the projects have two parts, ‘doing the project right’ and ‘doing the right project’ [38]. Table 2 links portfolio, program, traditional project and Agile project with their common measurement factors.

Table 2. Portfolio, Program and Project Measurement Factors

<table>
<thead>
<tr>
<th></th>
<th>Time</th>
<th>Cost/Resources</th>
<th>Scope</th>
<th>Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Portfolio</td>
<td>On going</td>
<td>High (in volume)</td>
<td>Business Objective (tangible &amp; intangible)</td>
<td>Overall Business Risks (High)</td>
</tr>
<tr>
<td>Program</td>
<td>On going</td>
<td>Medium (in volume)</td>
<td>Business Objective (for specific area)</td>
<td>Specific Business Risks (Medium)</td>
</tr>
<tr>
<td>Traditional Project</td>
<td>Bound (medium to large)</td>
<td>Limited (in volume)</td>
<td>Functionality (specific deliverable)</td>
<td>Specific Functionality Risks (Low)</td>
</tr>
<tr>
<td>Agile Project</td>
<td>Flexible</td>
<td>Variable (in iterations)</td>
<td>Functionality (very small &amp; very specific)</td>
<td>Specific Functionality Risks (High)</td>
</tr>
</tbody>
</table>

The Agile software development introduced inconsistencies to existing norms. Project governance has to make decision in this risky environment for project value and allocation of resources [39]. Effective governance is based on motivation and enablement, not command and control based [40]. Hence, ‘project governance’ which is internal to specific project, can build tailored structure, processes, authorities and resources as opposed to standard defined rules, for unique projects requirements [41]. Project governance does have flexibility to adopt new type of challenges as well as can play a role to bridge between governance layers.

Our last hypothesis is:

H3: Tailoring of the decision-making process positively relates with ASD project success.

5. Data Collection

In this section, we discuss our research model development, the questionnaire construction, data collection, collected data and how it is ensured that collected data is preserved for further analysis.

5.1. Research Data Model

We developed a research data model that covers the three hypotheses. A data model is a representation of data about things or events and the relationship between them [42]. The three parts of our research data model are elements, relationship and data-item. We derived the data model elements and relationships from the hypotheses. ASD project success is a common element across the hypotheses, linked with decision-making as implementation clarity in the first hypothesis, distribution in the second and process tailoring in the third hypothesis. Decision making has significant influence at each organizational layer (strategic, managerial and tactical). These decision-making concepts are implemented at enterprise (strategic), IT department (managerial) and project (tactical) levels. From these elements and relationships in the organizational levels, we drew the data-items in our research data model; Fig 2 provides a graphical representation of our model.

In the diagram, ‘elements’ are denoted with a rectangle, ‘relationships’ with a line and ‘data-items’ with a circular shape. The common element (ASD project success) is in the left hand side linked with the other three elements (clarity, distribution and tailoring), one from each hypothesis, on the right. The relationships between the elements show a positive or negative
outcome of the data analysis. Data items cover three levels of organizations (enterprise, IT department and project) for the elements decision-making implementation clarity, decision-making distribution and decision-making process tailoring. There could be many factors that can be used as project ‘success’. For this research, we considered the ‘achievement of project objectives’ as project success. Data-items for project success are the iteration objective, project objective and overall objective.

![Fig. 2. Research Data Model with Elements, Relationships and Data-items](image)

5.2. Questionnaire Development

From the research data model, we developed a questionnaire. This questionnaire is divided into question sets/groups. The first set of questions covered demography, organization and project background. In the second set, decision-making clarity and implementation in the organizational is covered. These questions comprised how well decision-making role and structure is defined, communicated and documented in the organization, how the decision-making function is implemented through various instruments and how well these instruments are used. In the third set of questions, decision-making distribution in covered with questions of distributed authority, accountability and responsibility among the organizational layers (strategic, managerial and tactical). In the fourth set, decision-making process tailoring is addressed with questions about change adoption and decision-making process modification by tailoring the accountabilities and authorities. In the last set, questions covered project success by asking the objectives achieved in the iteration and project, as well as overall business goal achievement.

5.3. Questionnaire and Data Collection

A multiple-choice questionnaire is used for data collection from the selected industry experts. After preliminary contact and sharing research project details, the first author scheduled the data collection sessions. The participants of this research were asked to select one project and consider/provide related artifacts to support their answers. Each data collection session lasted from 15 to 30 minutes. During the session, participants used the related artifacts to provide the data into the questionnaire. The responses were recorded using a seven-point Likert scale. Collected data from each participant, was sent back to reconfirm that their responses were correctly recorded. Final research data was stored in a file with an ID for each participant; no personal identifying information is recorded with the collected data.
6. Data Analysis and Results

The demographic data shows that we covered enterprise level organizations, with medium to large ASD projects, and the majority of the organizations have established governance processes. 80% of the selected companies have 1000 or more employees. More than 70% of companies have some sort of established governance processes or structures in place. 90% of the projects selected by the participants lasted for 6 months or longer. Also, data is collected from various companies and industries, hence, it is not specific to any particular industry.

Each hypothesis has two factors or variables linked to each other. In the first hypothesis, decision-making clarity and project success are linked, in the second, decision-making distribution and project success and in the last one, decision-making process tailoring and project success. We need a correlation coefficient test to establish the relationship strength between the two variables in each hypothesis. As our collected data is in ordinal form, and is not expected to exhibit a linear relationship, we used Spearman’s Correlation Coefficient instead of Pearson’s correlation to measure the strength of the relationship between these variables. Spearman’s test requires two conditions: firstly, data is to be in interval, ratio or ordinal form and, secondly, variables should be monotonically related (the relationship between the variables should always increase or decrease over the range of interest). Our collected data meets both of these conditions. We used the SPSS tool to apply Spearman’s Correlation Coefficient to the collected data for analysis and hypothesis validation. Figure 3 provides the relation between the variables.

![Figure 3](image.jpg)

Fig. 3. Correlation of Variables (Clarity, Distribution and Tailoring) with Project Success

Figure 3 presents the relationships between decision-making clarity and project success, decision-making distribution and project success, and decision-making process tailoring and project success. A straight line from the bottom left to upper right corner shows a trend of the variables and their relationship. The relationship between decision-making clarity and project success is a similar strength of that between decision-making distribution and project success. However, the last graph shows an irregular trend between decision-making process tailoring and project success.

6.1. Spearman Correlation Coefficient Test

Spearman’s Correlation Coefficient test provides a standard table for the indicative values for hypothesis validation. In this test, the resultant value indicates how strong or weak is the correlation / relationship between two variables. The range below from the Spearman’s correlation standard table provides the relationship strength if test result falls in any of these ranges: .00-.19 is “very weak”, .20-.39 is “weak”, .40-.59 is “moderate”, .60-.79 is “strong” and .80-1.0 is “very strong”.

Spearman’s Correlation 1-tailed test, the critical point for 30 records at correlation significant level 0.01 is 0.425. This means that if the resultant value is above the critical point (0.425), the hypothesis is accepted and if the value is below the critical point then the hypothesis is rejected. Table 3 provides the Spearman’s test results for each of the three variables’ (clarity, distribution and tailoring) correlation with project success.
Our three hypotheses and each of their Spearman correlation results are as follows:

H1: Implementation clarity of decision making positively relates with ASD project success
   Spearman’s Correlation Coefficient is 0.798
   Result: Strong evidence found to **accept the hypothesis**

H2: Distribution of decision making positively relates with ASD project success
   Spearman’s Correlation Coefficient is: 0.712
   Result: Strong evidence found to **accept the hypothesis**

H3: Tailoring of the decision-making process positively relates with ASD project success
   Spearman’s Correlation Coefficient is: 0.266
   Result: Sufficient evidence available to **reject the hypothesis**

As shown in the table above, the correlation coefficient between clarity and project success is 0.798, which falls into the ‘strong’ range of Spearman’s correlation coefficient standard table, and significantly above the critical value of 0.425. This means research data provided the evidence to accept the hypothesis and validated a strong relationship between decision-making implementation clarity and project success. Similarly, the correlation coefficient between distribution and project success is 0.712, which falls into the ‘strong’ range of Spearman’s correlation coefficient standard table and way above the critical value of 0.425. This means research data provided the evidence to accept two hypotheses and validated a strong relationship between decision-making distribution and project success.

However, the correlation coefficient between decision making process tailoring and project success is only 0.266, which falls into the ‘weak’ range of Spearman’s correlation coefficient standard table and is significantly below the critical value of 0.425. We conclude that this provides evidence to reject the hypothesis and therefore we have not proven a relationship or correlation between decision-making process tailoring and project success.

### 6.2. Limitations

The limitations that have influenced the interpretation and findings in this study are listed in this subsection. They include, firstly, a literature review that focuses on EIT governance, decision making and ASD projects. Such literature review is only on the governance aspects in the enterprise level organizations and its different layers. We considered ASD projects where the Agile methodology is used, no matter what method (e.g., Scrum, DAD, SAFe). Secondly, the research specifically focuses on ASD projects, and data was collected from 30 ASD projects without consideration of industry and business type (see Table 1 for a description of our data sample). Lastly, the data collected is quantitative, as responses to 25 closed questions using a 7-point Likert scale, and statistically analyzed using Spearman’s Correlation Coefficient test. Qualitative research may provide more insight into various aspects of impact and may expand knowledge and understanding about the decision-making impacts on the ASD projects.
7. Conclusion

This study provides evidence that both decision-making clarity and decision-making distribution positively impact ASD project success. A third, and unexpected, finding is that the tailoring of the decision-making process does not have a meaningful impact on ASD project success. This is contrary to our initial problem statement, in which we considered that the decision-making process and model does have an impact on ASD project success. We conclude that the findings of this research shift the focus to the significance of the clarity and distribution of decision making in EIT governance in ASD projects.

7.1. Future Work

The research results diverge from the original statement of governance processes impact on ASD projects. Although, we have shown that both decision-making clarity and distribution have positive impact on ASD projects, the same data has not provided us with details of these factors’ impact. Further study will include qualitative data, based on open-ended interview questions, and our focus will be to identify further factors from business and project management that result in decision-making having an impact on ASD project success. This study has steered us towards a more specific area for future research, to gain more insight and build knowledge about decision-making, and thus EIT governance, in ASD projects.

References


