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# The Moderating Effect of Internal Audit in Strategic Planning Implementation Success

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#### Abstract

The objective of this study is to measure the moderating role of internal audits in the strategic planning implementation success. An internal audit is the primary function for all organizations to measure the effectiveness of the internal controls, risk management and governance processes. On the other hand, strategic planning is one of the most important resource allocation and strategic management instruments for an organization. The question is, how does the internal audit affect the strategic planning implementation success? How do these two strategic management instruments affect each other? In order to answer these questions, an empirical approach is being followed in this study. The conceptual framework of the study is being set up based on internal audits and strategic planning literature, previously validated measures to evaluate the effectiveness of the variables are used to test the hypothesis. Turkey's biggest 1000 firms are chosen as the target group, and a survey is conducted with 299 samples selected from this target group. The results indicate that the effectiveness of internal audits increases the strategic planning implementation success. Internal audits moderate the relationship between risk management and strategic planning implementation success. No empirical evidence is found on the moderating effect of internal audits on the relationship between internal controls and strategic planning implementation success. The primary contribution of this study to the internal audit literature is presenting the relationship between internal audits and strategic planning in a holistic approach with the help of empirical data.

#### Keywords

Internal Audit, Strategic Planning, Internal Control, Corporate Governance, Enterprise Risk Management

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#### Literature Review

Although being a rarely audited and evaluated function of an organization, strategic planning is actually a way of looking to the future. Every manager needs assurance about the planning and implementation processes. Strategic plans shape the future, and their success is very important for all the organizations. Internal audits are responsible for the assurance of the organizational processes. As a strategic control instrument, the internal audit function must give the necessary assurance to both planning and implementation of the strategic plans. There are two basic roles of internal audits during these processes; one is testing whether the necessary steps of the planning process are being taken or not, the second one is evaluating the reliability and suitability of the contents of the plan. According to the results of a survey conducted by McKinsey with 800 managers in 2009, 45% of them were not satisfied with the planning process (McKinsey, 2009). Auditing from beginning to end of this process can increase the satisfaction rate of the strategic planning process. The International Professional Practices Framework (IPPF) for Internal Auditors standard 2100 states that: "The internal audit activity must evaluate and contribute to the improvement of the organization's governance, risk management, and control processes using a systematic, disciplined, and risk-based approach. Internal audit credibility and value are enhanced when auditors are proactive and their evaluations offer new insights and consider future impact" (IIA, 2013: 29). Defining objectives and goals is the prerequisite of internal controls and they are the keys to the strategic planning process. According to the widely used internal control framework COSO, strategic goals and objectives should be defined with participatory methods by the management (COSO, 2013: 26).

The role of internal audits in strategic planning can be examined in three phases; formulating the strategies and strategic plans, implementation of strategic plans, and evaluating the results. During the formulation phase, there are two objectives of the process, the first one is evaluating the quality of the setting up process, and the second one is evaluating the content quality. The objective of the implementation phase is measuring the rate of transforming strategies to objectives and performance indicators, and evaluating the application of these strategies in entire organization. The objective of the evaluation and control phase is to measure the results and compare them with the preliminary objectives (IIA, KPMG, 2015: 14).

During the formulation process audit; the application of the planning process steps and their logical order, participation of the right people and the right organizations to the process and accurate communication with the stakeholders are being evaluated. Auditing the content means evaluating the basics of the strategies and their soundness, accurateness, objectivity and sufficiency. The weaknesses of the process, risk analysis results, internal and external factors that might affect the organization, the results of the SWOT and PESTLE analyses, competition among rivals, gap analysis between strategies, best case and worst case scenarios, sharing strategies with the other stakeholders, consistency between vision mission and objectives, and attainability of the objectives are the other issues that must be evaluated by the internal auditors during the formulating phase (Balkaran, 2016: 4). While evaluating the content of the strategy, the internal auditor should focus on the grounds of the strategy instead of its accuracy (IIA, KPMG, 2015: 15). Approved strategic plans give directions to the other plans of the organization, such as marketing, finance, production, human resource, governance, enterprise risk management, compliance and information technology. All of these plans and processes should be harmonized with each other. For example, if a 15% market share increase is projected in the strategic plan, the marketing plan should be coherent with this projection (Balkaran, 2016: 6). Likewise, according to IPPF 2110. A2: Internal audit function must evaluate the IT governance of the organization and its support to the organization's strategic objectives (IIA, 2013: 30). If the strategic functions are not coherent with each other, they may head in different directions. The internal auditors should be careful about the consistency of the strategic objectives of the organization. If the marketing department is moving forward in a direction other than the organization's strategy, the internal audit should see this difference and make the necessary recommendations.

Strategy implementation is converting the organizational strategy to: objectives, performance criteria, operational plans and the budget. In this phase, the projects' tactical levels are executed based on the management decision. The internal audit function should evaluate whether the operational activities are managed according to the determined strategy, and internal auditors should confirm that the organization has an appropriate governance structure, including decision responsibilities and reporting channels. Additionally, internal auditors should evaluate the strategic priorities, accountability criteria, performance indicators and resource allocation for the planned activities (Balkaran, 2016: 7). They should perform risk analysis, and examine the different projects and measure the risk indicators. Analyzing strategic risks during the implementation phase will increase the probability of hindering the obstacles that may affect positive outcomes of the strategy and add value to the system.

The internal audit function may evaluate the strategic plan implementation either as a part of a planned audit job or it may audit whole plan separately. In both jobs, they should go back and analyze the previous phases in order to compare the objectives and the results. They should evaluate the factors that are omitted during the planning phase. The objective of such an audit that is conducted at the end of the planning process is to put forth the learned lessons and determine the issues that may be an input for future planning processes (IIA, KPMG, 2015: 17).

In order to be an effective management instrument, the strategic plan and the planning process must be evaluated continuously considering the changing environment and market conditions. The internal auditors should evaluate the measurement criteria or the performance indicators for the success or failure of the plan and their grounds, and if these deviate from the objective, they should recommend performance indicators and measurement criteria to the management to reconsider (Balkaran, 2016: 7). Based on the factors mentioned above, we can say that the internal audit function will add value and make contributions to the planning process in every phase. We consider that an effective internal audit function moderates the strategic planning implementation success. The hypothesis based on this premise is presented in following parts of the study.

#### **Theory and Hypothesis**

#### **Enterprise Risk Management and Strategic Planning**

The modern economy is based on preferences, and every preference contains risks. From basic operational jobs to strategic decisions, every activity requires struggling with uncertainty. In today's World, management's expectations on management risks that may affect organization have increased dramatically (Standard & Poor's, 2008). Every organization should examine their strategies periodically in order to take the advantage of the opportunities and eliminate the risks. At this point, the organizations should benefit from the Enterprise Risk Management (ERM) process which can be defined as the culture, capability and applications integrated with the strategic management processes to manage the risks in order to create value for the organization. According to a study conducted by RIMMS in 14 different industries with 97 firms in 2017, 61% of the firms are shaping their strategies based on the results of the ERM process (RIMS, 2017: 3).

Selecting a strategy means evaluating the options and making the cost benefit analysis. Accurate decisions are the results of accurately applied analysis procedures. The ERM process sheds light on the risk dimension of decision processes. The decided strategy should support the organization's vision and mission. Although executed successfully, an improper strategy may cause a conflict between the vision, the mission and the organizational values. ERM diminishes this probability by its structured approach to risks, evaluates all risk aspects for all of the strategies, compares the risks with the organizational risk appetite, measures its contribution to the organizational objectives and considers the effectiveness of resource allocation. Every strategy is grounded to an assumption, and the changes on these assumptions may affect the selected strategy. The changes on the assumptions should be monitored continuously, and what can be done for those changes, should be considered all the time. ERM is a valuable process for

every organization, since it keeps the risk register that includes all the organizational risks, and helps defining, managing and reducing risk effects and supports decision processes (COSO, 2013: 1-5).

According to Kaplan and Mikes, organizations may face three kinds of risks. The first types of risks are operational risks as a result of user error, unauthorized access and control deficiencies. These types of risks can be reduced by operational controls. The second risk type is the external risks that happen without control of the organization. The organizations may foresee them, and develop ways to reduce the effect of these risks since they may not be able to control them. The third type of risk is the strategic risks, and they cannot be controlled by rule-based controls. A structured and well-rounded risk management process is needed for these type of risks (Kaplan and Mikes, 2012).

ERM is directly related with determining the strategy. ERM should be integrated with the organizational strategy in order to create value. Helping organization to achieve its goals is the defined mission of the ERM, and achieving this objective is only possible by being an integral part of the strategic planning process and its implementation (Beasley and Frigo, 2011: 33). According to a study carried out by Fungston (2004) regarding 100 firms with the biggest decrease in value between the years 1995 and 2004, operational and strategic risks are the primary reason for this decrease. 37 of these firms said that the reason for these decreases is operational risks, and 63 of them said that the primary reason for these decreases is strategic risks (Fungston, 2004: 11). According to another study carried out by Smithson and Simkins (2005) to analyze the effect of financial risk management on organizational value, contrary to the CAPM theory, even though industrial firms are sensitive to the exchange rates, the firms in financial sectors are sensitive to the interest rate. Managing these risks helps both to attain the appropriate investment opportunities and implement the planned strategies (Smithson and Simkins, 2005: 15). Andersen (2009) finds a positive relationship between risk management and corporate performance in a study analyzing the effect of risk management in exploiting the opportunities and eliminating the threats (Andersen, 2009: 360). Hoyt and Liebenberg (2011) find that ERM can increase the volatility of the stock prices and the earnings per share, and share issue costs can be diminished by the synergy between the risk management activities in the entire organization (Hoyt and Liebenberg, 2011: 780). In a study conducted in 645 different sized firms, Beasley at all (2015) find that, a strategic planning process supported by a mature ERM process can provide a competitive advantage to the firms (Beasley, 2015: 242). According to the factors mentioned above, the first hypothesis of the study is:

*H1:* There is a positive relationship between the risk management process and strategic planning implementation success.

#### **Corporate Governance and Strategic Planning**

Governance can be defined as the system of policies, procedures, rules and regulations, markets, contracts and stakeholders that direct and effect the decision-making process of the management (Brickley and Zimmerman, 2010). Many kinds of governance definitions can be found in various sources. The primary reason for the different definitions is looking at the governance from different aspects, one from the relationship focus, and the other one is the economic focus. The governance process is based on the balance between social and economic objectives, and between individual and corporate objectives. Lately, economic focused governance definitions are losing their value since they do not understand the dynamics of the motivation behind the governance process. Behavior oriented definitions are gaining importance. The objective of the governance principle is maximizing the shareholder value while maximizing the stakeholder satisfaction. Achieving this objective mostly depends on understanding the basic principles of governance such as transparency, reliability, accountability and responsibility (Aras and Crowther, 2008). In the governance literature, there are studies that indicate a strong correlation between governance and corporate value (Core, Guay and Rusticus 2006:655-687; Amman, Oesch and Schmid, 2010:36-55; Bebchuk, Cohen and Ferrel 2009:783-827; Rose 2003: 17), and there are studies that indicate that a weak governance structure may be harmful for the organizational sustainability and can cause discontent among the stakeholders (O'Reagen at all, 2004: 49). The leaders that feel responsibility to their organizations must benefit from the governance approach and best practices by focusing on the principles, values and institutionalization in order to manage more effectively. Strategic planning is a continual process where the objectives are determined by the upper level management with middle level management's and the workers' inputs. Likewise, an organization's governance process needs inputs from all layers of employees (Ferrell, Fraedrich and Ferrell, 2000). Most of the failures in the strategic planning process are attributed to the implementation of the plan. Although the issues such as economic conditions and competition may affect the implementation of the strategies, most of the failures are attributed to breakdowns during the implementation phase. A basic reason for this failure is the lack of information sharing at all layers of the organization (Siciliano, 2002: 34), or the employees being unreluctant to information sharing which may cause the upper level management to perform badly (Čater and Pučko, 2010: 207). A powerful organizational governance structure is the only way to struggle with the problems originating from the stakeholder participation during the strategic plan implementation (Lipton and Lorsch, 1992: 64). According to the study conducted by the National Association of Corporate Directors (NACD, 1997), governance mechanisms should participate in strategic issues of the organization. Every day, governance processes are evolving from regulations and their relationship to planning and performance. Corporate performance, strategic planning, CEO-Board relations and stakeholder management are the main issues for governance

(NACD, 1997). We think that, while making the decisions affecting the future of the organization, all of the stakeholders should be considered, since their contribution is very important for the strategic planning implementation success. Based on the factors mentioned above, the second hypothesis of the study is:

*H2:* There is a positive relationship between the governance process and strategic planning implementation success.

#### **Strategic Planning and Internal Control**

Internal control is maybe the most important factor that may affect the performance of the organization because it consists of all the processes and procedures of the organization. It plays a critical role while achieving the organizational objectives, and it is a prerequisite for organizational success. If we broadly define internal control; it consists of all the controls about strategic management, management processes, activities and performance processes. We can consider an internal control as effective only if it contributes to achieve the organizational objectives. The Lambert, Leuz, and Verrecchia (2007) model direct and indirect effects of the internal controls in the the organization, and find that low quality information flow increases the cost of capital and the information systems, as a part of the internal controls affect the decision processes (Lambert, Leuzand and Verrecchia, 2007: 390).

Internal control plays a vital role in achieving organizational objectives. An effective internal control system is the prerequisite for success of the organizational controls. In a broad sense, internal control consists of all the management processes that may affect corporate performance (Vijayakumar and Nagaraja, 2012: 2). The working conditions required for the organizational success are defined in the control environment standards. Internal control standards define a working environment in which organizational roles and reporting responsibilities, hierarchical relationships, policies and procedures are clearly defined, ethical values are known and adopted by everyone, planned educations are conducted to increase the competence of all employees. If we evaluate the control environment standards that can be called organizational culture, we can say that if everything is constant, an ideal control environment will affect the strategic planning implementation success. Palermo (2011) suggests that organizational culture is an important indicator for the internal control effectiveness, and an effective control environment can contribute to produce achievable and realistic objectives with the organizational resources (Palermo, 2011: 774).

The basic purpose of control activities is to evaluate the measures to achieve the organizational objectives. The risks of these activities are assessed in the risk management process, which is the third component of internal control, and the information flow of these risks is provided by the information and communication standard, which is the fourth component of the internal control. Information systems deal with operational, financial and compliance information which is needed for the decision-making processes (Stringer and Carey, 2002: 61). The quality of the internal control process is evaluated by the monitoring process, which is the fifth component of the internal control. The board is responsible for the evaluation of an internal audit's contribution to the achievement of the organizational objectives and their functionality. Even though it evaluates the effectiveness of the internal control, actually the internal audit is a part of internal control.

Although the goal of all internal control standards is to achieve the organizational objectives, especially the fifth standard, "planning and programming", defines the strategic planning. According to this standard, the organizations have to prepare strategic plans to form their vision and missions, to determine strategic goals and achievable objectives, to measure their performances and to monitor and evaluate the procedures and the processes. Strategic planning is a must for an ideal organization according to this standard. Examining the internal control standard of the risk management shows that the main aim of this process is to define, assess, control and manage the risk that may be a threat to the organizational objectives. At this point, we can say that the most valuable contribution of an appropriate internal control system is to achieve the organizational objectives. Based on the factors mentioned above, the third hypothesis of the study is:

*H3:* There is a positive relationship between the internal control process and strategic planning implementation success.

#### The Moderating Role of Internal Audits

Internal audits, as expressed with the definition, improve the internal control, governance and risk management processes by evaluating, analyzing and making appropriate recommendations (Grambling, Maletta, Schneider and Church, 2004: 195). They also support the management's decision-making processes with a systematic and disciplined approach (Marville, 2003: 210). Today, internal audits are evolving from the "preserving value" objective to the "adding value" objective by considering strategic risks and the shareholder value maximization approach. This approach steers internal audits to a future oriented point of view that evaluates the risks that may be an obstacle for achieving objectives instead of measuring past performance (IIA, KPMG, 2015: 7).

The results of the research on the gap between strategy formulation and implementation can be clustered into four groups: planning results (lack of harmony between strategy and objectives, disagreement between decision makers, failure to see impending problems, etc.), organizational problems (lack of coordination and information sharing, inadequate information systems, inappropriate structure and resource allocation, etc.), managerial issues (inadequate management and corporate support, erroneous personnel management, etc.) and individual problems (resistance to change, lack of understanding the vision and mission, etc.) (Jiang and Carpenter, 2011: 5). Effective risk management, control and governance processes are key to solving these issues and achieve the organizational objectives.

Organizations should consider the risks that they may confront while managing their strategic and operational objectives. An uncoordinated and department-based risk management approach is the main problem that management faces while managing risks. At this point, an internal audit plays a vital role as a facilitator supporting the integration of the uncorrelated risk management processes. In addition to this, the internal audit supports the management of organizational risks by providing a reasonable assurance to the management about the effectiveness of the key risks (Jeffrey, 2008: 1).

Supporting and encouraging an effective governance process, is very crucial for achieving the organizational objectives, high performance, organizational growth, competitiveness, compliance and long-run sustainability. The internal audit is in place to support the governance process. Additionally, the internal audit not only supports the board's oversight mission but it also is the most important instrument to measure its own performance (Ramamoorti and Siegfried, 2015: 31).

Sawyer and Vinten (1996) summarize the contribution of the internal audit to management in four topics: informing management about the control and performance issues by their judgment and expertise, recommending improvements to both management and the board, producing solutions to complex issues, and providing timely, accurate, reliable and useable information for all the management layers of the organization (Sawyer and Vinten, 1996). Considering the strategic planning implementation process, all the benefits counted above will have a positive impact to this process. In consideration of the above-mentioned arguments, we think that the internal audit plays a moderating role between the strategic planning and the internal control, governance and risk management processes. Moderating effect defines a relationship that increases or decreases the direction and the power of the relationship between a dependent and an independent variable. The moderator variable can regulate the direction and the power of the relationship between a dependent variable like a rheostat (Gürbüz and Şahin, 2016: 294). Based on the assumptions mentioned above, the followings are the other hypotheses of the research.

*H4:* Internal audit has a moderating effect between the strategic planning implementation success and the organization's risk management process.

*H5:* Internal audit has a moderating effect between the strategic planning implementation success and the organization's governance process.

*H6:* Internal audit has a moderating effect between the strategic planning implementation success and the organization's internal control process.

#### **Research Design and Methodology**

#### **Participants and Procedure**

Appointments from 974 firms having internal auditors were requested, and 214 of them refused our requests and 460 firms accepted. 23 firms did not answer all the survey questions. The study was completed with the managers of 299 firms by a face to face interview. With a 95 % confidence interval, 278 samples are considered enough for this study. The manager's intentions and ability to answer the questions objectively and sincerely are the limitation of this study. 18% of the participants were women, and 82% of them were men. Most of the participants are working in firms of the production sector (44,1%) and Finance (20.4%) sector.12% are general managers, 40% are department managers, 43.1% are board members and other high-level managers.

#### Measures

A five-point Likert scale is used for the sake of uniformity in measuring the variables. The scales range from very strongly disagree (1) to very strongly agree (5). The survey is initially constructed in English, and all items are translated into Turkish by conducting translation and back-translation procedures. The reliability and validity of all the measures are tested.

#### Strategic Planning Implementation Success

A six-item scale adapted from a previous research (Elbanna, Andrews and Pollanen, 2015) is used to measure the managers' perception about the success of the implemented strategic plan. The Cronbach  $\alpha$  for the scale is 0, 75. Kaiser-Meyer-Olkin (KMO) coefficient is 0.83, which means sample size is sufficient. Bartlett test results ( $\chi 2=335$ , 32; p<0,001) show that the sample is statistically significant. After the assumptions required for factor analysis were met, the analysis was carried out. As a result of factor analysis, it was observed that a single factor with a self-value above 1 was formed. In addition, a sharp decrease was found in the eigenvalue factor graph after the first factor, and it was observed that the factors after the first factor contributed very little to variance. These results indicated that the scale is one factor. After this stage, factor analysis was performed again with a single factor. As a result of the Exploratory Factor Analysis, it was observed that the factor loads of the items in the strategic planning scale ranged from 0.706 to 0.634. The eigenvalue for the single factor scale was calculated as 2.70. It was determined that the single-factor structure of the scale explained 45.04% of the total variance. It is sufficient that the variance explained in

single factor scales is 30% or more (Büyüköztürk, 2006). To determine the reliability of the strategic planning scale, Cronbach alpha internal consistency coefficient was calculated and examined. Cronbach Alpha internal consistency coefficient of the scale was calculated as 0.75. If the Cronbach Alpha internal consistency coefficient is less than 0.70, it is an indicator that the reliability of the scale is weak (Tavsancil, 2010: 29). The Cronbach Alpha coefficient calculated for the strategic planning scale showed that the scale's reliability based on internal consistency was sufficient. The single-factor structure of the strategic planning scale, which was discovered by exploratory factor analysis, was tested with CFA. As a result of CFA, some fit values were calculated and examined to find out how compatible the model was with the data available. As a result, it was understood that the single factor structure of the strategic planning scale is compatible with the available data.

#### **Internal Audit**

A 37-item scale adapted from a previous research (Cohen and Sayag, 2010: 298). is used to measure the effectiveness of an internal audit in an organization. The Cronbach α for the scale is 0, 94. Kaiser-Meyer-Olkin (KMO) coefficient is 0.95, which means the sample size is sufficient. Bartlett test results ( $\chi 2=3542, 62; p<0,001$ ) shows that the sample is statistically significant. According to this result, it was understood that the multivariate normal distribution assumption was also met in the universe parameter. After the assumptions required for factor analysis were met, the analysis was carried out. As a result of the factor analysis, it was observed that there were seven factors with a self-value above 1. On the other hand, it was determined that there was a sharp decrease in the eigenvalue factor graph after the first factor, and the contribution of the factors after the first factor to the variance was quite limited. It was observed that the eigenvalue of the first factor was approximately 11 times the eigenvalue of the second factor. These results indicate that the scale is one factor. After this stage, factor analysis was performed again with a single factor. As a result of the Exploratory Factor Analysis, it was observed that the factor loads of the items in the Internal Audit scale ranged from 0.611 to 0.48. The eigenvalue for the single factor scale was calculated as 11.31. It was determined that the single-factor structure of the scale explained 30.56% of the total variance. It is sufficient that the variance explained in single factor scales is 30% or more (Büyüköztürk, 2006). To determine the reliability of the internal audit scale, the Cronbach alpha internal consistency coefficient was calculated and examined. The Cronbach Alpha internal consistency coefficient of the scale was calculated as 0.94. In this study, the Cronbach alpha coefficient calculated for the internal audit scale showed that the scale's reliability based on internal consistency was sufficient. The single factor structure of the internal audit scale, which was discovered by exploratory factor analysis, was tested with CFA. As a result of CFA, some compliance values were calculated and examined to find out how compatible the model was with the

data available. As a result, it has been understood that the single factor structure of the internal audit scale is compatible with the available data.

#### **Enterprise Risk Management (ERM)**

A 21-item scale translated and adapted from two previous researches (Monda and Giorgino, 2013, and Risk Management Maturity Model of Risk Management Society, 2011) was used to measure the maturity of the ERM process in an organization. The Cronbach  $\alpha$  for the scale is 0, 90. Kaiser-Meyer-Olkin (KMO) coefficient is 0.92, which means the sample size is sufficient. The Bartlett test results ( $\chi 2= 2020, 21; p < 0,001$ ) show that the sample is statistically significant. After the assumptions required for factor analysis were met, the analysis was carried out. As a result of factor analysis, it was observed that there were three factors with a self-value above 1. On the other hand, it was determined that there was a sharp decrease in the eigenvalue factor graph after the first factor, and the contribution of the factors after the first factor to the variance was quite limited. It was observed that the eigenvalue of the first factor was approximately six times the eigenvalue of the second factor. These results indicated that the scale is one factor. After this stage, factor analysis was performed again with a single factor. As a result of the factor analysis, only one item (m71 - There is a risk log including potential risks and how to manage them) was eliminated from the scale by evaluating the factor load value and the overlapping status. As a result of the Exploratory Factor Analysis, it was observed that the factor loads of the items in the ERM scale ranged between 0.728 and 0.455. The eigenvalue for the single factor scale was calculated as 5.58. It was determined that the single-factor structure of the scale explained 34.89% of the total variance. It is sufficient that the variance explained in single factor scales is 30% or more (Büyüköztürk, 2006). To determine the reliability of the ERM scale, the Cronbach Alpha internal consistency coefficient was calculated and examined. The Cronbach Alpha internal consistency coefficient of the overall scale was calculated as 0.90. In this study, the Cronbach Alpha coefficient calculated for the ERM scale showed that the scale's reliability based on internal consistency was sufficient. The single-factor structure of the ERM scale, which was discovered by exploratory factor analysis, was tested by Confirmatory Factor Analysis. As a result of CFA, some compliance values were calculated and examined to find out how compatible the model was with the data available. As a result, it was understood that the single factor structure of the ERM scale is compatible with the available data.

#### **Internal Control**

An 18-item scale adapted from COSO internal control framework (COSO, 2004) is used to measure the effectiveness of the internal control process in an organization. The Cronbach  $\alpha$  for the scale is 0, 86. Kaiser-Meyer-Olkin (KMO) coefficient is

0.91, which means the sample size is sufficient. The Bartlett test results ( $\chi^{2}$ = 1162, 93; p<0,001) show that the sample is statistically significant. After the necessary assumptions were met for factor analysis, the analysis was carried out. As a result of factor analysis, it was observed that there were four factors with a self-value above 1. On the other hand, there was a sharp decrease in the eigenvalue factor graph after the first factor, and it was understood that the contribution of the factors after the first factor to the variance was very limited. The eigenvalue of the first factor was observed to be approximately five times the eigenvalue of the second factor. These results indicated that the scale is one factor. After this stage, factor analysis was performed again with a single factor. As a result of the factor analysis, a factor (m84-the potential of significant changes that can greatly affect the internal control system is constantly evaluated) was evaluated by evaluating the factor load value and the contradiction status. As a result of the Exploratory Factor Analysis, it was observed that the factor loads of the items in the internal control system scale ranged from 0.617 to 0.476. The eigenvalue of the single factor scale was calculated as 4.84. It was determined that the single-factor structure of the scale explained 30.41% of the total variance. It is sufficient that the variance explained in single factor scales is 30% or more. The Cronbach Alpha internal consistency coefficient for the overall scale was calculated as 0.86. The Cronbach Alpha internal consistency coefficient should be greater than 0.70. Coefficients less than this value indicate that the reliability of the scale is weak. In this study, the Cronbach alpha coefficient calculated for the internal control system scale showed that the scale's reliability based on internal consistency was sufficient. The single factor structure of the internal control system scale, which was discovered by exploratory factor analysis, was tested with CFA. As a result of CFA, some fit values were calculated and examined to find out how compatible the model was with the data available. The single factor structure of the internal control system scale, which was discovered by exploratory factor analysis, was tested with CFA. As a result of CFA, some fit values were calculated and examined to find out how compatible the model was with the data available. As a result, it has been understood that the single factor structure of the internal control system scale is compatible with the available data.

#### **Corporate Governance**

An 18-item scale adapted from a previous research (Wilkinson, 2014: 127) is used to measure the maturity level of the corporate governance process in an organization. The Cronbach  $\alpha$  for the scale is 0, 87. Kaiser-Meyer-Olkin (KMO) coefficient is 0.92 which means sample size is sufficient. The Bartlett test results ( $\chi 2= 1267, 33; p<0,001$ ) show that the sample is statistically significant. After the assumptions required for factor analysis were met, the analysis was carried out. As a result of factor analysis, it was observed that there were three factors with a self-value above 1. On the other hand, it was determined that there was a sharp decrease in the eigenvalue factor

graph after the first factor, and the contribution of the factors after the first factor to the variance was quite limited. The eigenvalue of the first factor was observed to be approximately 6 times the eigenvalue of the second factor. These results indicated that the scale is one factor. After this stage, factor analysis was performed again with a single factor. As a result of the Exploratory Factor Analysis, it was observed that the factor loads of the items in the corporate governance scale ranged from 0.632 to 0.477. The eigenvalue for the single factor scale was calculated as 5.66. It was determined that the single-factor structure of the scale explained 31.46% of the total variance. It is sufficient that the variance explained in the single factor scales should be 30% and more. The Cronbach Alpha internal consistency coefficient of the scale was calculated as 0.87. The Cronbach Alpha internal consistency coefficient should be greater than 0.70. Coefficients less than this value indicate that the reliability of the scale is weak. In this study, the Cronbach alpha coefficient calculated for the corporate governance scale showed that the scale's reliability based on internal consistency was sufficient. The single-factor structure of the corporate governance scale, which was discovered through exploratory factor analysis, was tested with CFA. As a result of CFA, some compliance values were calculated and examined to find out how compatible the model was with the data available. As a result, it has been understood that the single factor structure of the corporate governance scale is compatible with the available data.

#### **Control Variables**

Organization size, age and gender are taken as control variables as to see how they affect the outcome variables.

#### **Research Model**

The moderating effect of the internal audit between risk management-sp implementation success, governance-sp implementation success and internal controlsp implementation successes is depicted in Figure 1.



Figure 1. Research model

#### Results

#### **Descriptive Statistics**

Based on the objectives of the study, the Structural Equation Model (SEM) is used to test the relationship between the variables. Before the analysis, the assumptions for the multivariate analysis are tested. After analyzing the box plots to determine the outliers, we find that 13 outliers are hampering the normal distribution. These outliers are excluded from the dataset. In order to test the normal distribution, skewness and kurtosis values are calculated and find that skewness coefficients are between -1.21 and -0.47, kurtosis coefficients are between -0,25 and 1,67, meaning that the dataset is normally distributed (Finney and DiStefano, 2006: 269-314). Scatter diagram is analyzed for the dataset shows the linear relationship between the variables. Lastly, the Tolerance Values, Variance Increase Factors and Condition Indexes are analyzed, and find no multicollinearity between the variables. The calculated VIF values are between 1, 02-2, 70, TVs between 0, 37-0, 98 and CIs are between 1, 00-14, 82 (Çokluk,

Sekercioğlu and Büyüköztürk, 2012). The data from 286 participants were analyzed with the SEM software program AMOS 24.0

## **Correlation Analysis Results**

The correlation analysis result is depicted on the Table 1. According to these results, there are positive and statistically significant relationships between SP implementation success and other variables [internal audit (r=0.628; p<0, 01), ERM (r=0.587; p<0, 01), internal control (r=0.541; p<0, 01) and corporate governance (r=0.529; p<0, 01)].

Table 1

The Relationship	Between	the	Research	Variables
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	Variables	x	Ss	1	2	3	4	5
1	SP Implementation Success	4,13	0,48	1				
2	Internal Audit	4,14	0,31	,628**	1			
3	ERM	4,14	0,35	,587**	,769**	1		
4	Internal Control	4,15	0,30	,541**	,734**	,753**	1	
5	Corporate Governance	4,17	0,29	,529**	,682**	,676**	,764**	1
**,	2<0.01							

¢p<0,01

The positive and statistically significant relationship between internal audit and the other variables, [risk management (r=0,769; p<0,01), internal control (r=0,734; p<0, 01) and corporate governance (r=0,682; p<0, 01)], shows that if the effectiveness of the internal audit increases, the other variables will also increase.

## **Hypothesis** Testing

In order to achieve the research objectives, the hypotheses are tested with Structural Equation Modeling (SEM). Firstly, the positive effect of risk management on SP implementation success and the moderating role of internal audit on this relationship are tested. The model tested was depicted in Figure 2.



Figure 2. The SEM to Test the Moderating Role of Internal Audit on The Relationship Between Risk Management and SP Implementation Success

In this model, organization size, gender and age are control variables, ERM is an independent and SP implementation success is a dependent variable. Internal audit is a moderating variable, and internal audit X enterprise risk management is an interaction variable in the model. Fit indices for the tested model are listed below in Table 1.

unu bi imp	and SF Implementation Success					
Measure	Good Fit	Acceptable Fit	Observed Value	Status	References	
$(\chi^2/sd)$	$\leq 3$	≤ 4-5	2,59	Good Fit	Byrne, 1989	
RMSEA	$\le 0,05$	0,06-0,08	0,08	Acceptable Fit	Browne and Cudeck, 1993	
SRMR	$\le 0,05$	0,06-0,08	0,05	Good Fit	Browne and Cudeck, 1995	
CFI	≥ 0,96	0,90-0,95	0,99	Good Fit	McDonald and Marsh, 1990	
PClose	>0,05	0,01-0,05	0,17	Good Fit	MacCallum, Browne and Sugawara, 1996	
GFI	$\geq 0,90$	0,89-0,85	0,99	Good Fit	Tanaka and Huba, 1985;	
AGFI	$\geq 0,90$	0,89-0,80	0,93	Good Fit	Jöreskog and Sörbom, 1984	

Fit Indices for the Moderating Role of Internal Audit on The Relationship Between Risk Management and SP Implementation Success

Analyzing fit indices on Table 1 shows a good fit of the model to test the moderating effect of the internal audit on the relationship between risk management and the strategic planning implementation success. The relationship between the variables is depicted in Table 2.

Table 3

Table 2

The Relationship Between the Variables in SEM

Dependant Variable		Independent Variable	Beta	Standardize Beta (β)	Std. Er.	Т	Р
Strategic Plan.	<	Gender <sup>a</sup>	0,045	0,017	0,117	0,386	0,70
Strategic Plan.	<	Age	0,69	0,165	0,051	3,310	***
Strategic Plan.	<	Organization Size	-0,109	-0,065	0,077	-1,423	0,16
Strategic Plan.	<	Enterprise Risk Man.	0,273	0,270	0,072	3,815	***
Strategic Plan.	<	Internal Audit	0,415	0,409	0,072	5,759	***
Strategic Plan.	<	Internal Audit X Enterprise Risk Man.	0,071	0,112	0,034	2,111	0,035

\*\*\*p<0,001;<sup>a</sup>0 = Female; 1 = Male.

The findings show that gender does not have a significant effect on SP Implementation success ( $\beta$ =0,117; p>0,05). Age has a significant positive effect ( $\beta$ =0,165; p<0,001) but organization size does not have a significant effect on SP Implementation success ( $\beta$ = -0,065; p>0,05). The findings represent a positive and statistically significant relationship between enterprise risk management and SP implementation success

 $(\beta=0,270; p<0,001)$ . Based on these results,**H1 hypothesis is accepted**. Enterprise risk management affects the success of SP implementation. The findings represent a positive and statistically significant relationship between internal audit and SP implementation success ( $\beta=0,409; p<0,001$ ). Lastly, the results show a positive and statistically significant relationship between the interaction variable (internal audit x enterprise risk management) and SP implementation success ( $\beta=0,112; p<0,05$ ). Based on these results,**H4 hypothesis is accepted**. Internal audit moderates the relationship between enterprise risk management and SP implementation success. The variables affecting the SP implementation success explain 44 % of the variability.

To show the moderating effect visually, a graphic is created based on the regression lines in Figure 3. The graphic shows that the internal audit strengthens the relationship between SP implementation success and enterprise risk management.



Figure 3. The Moderating Role of Internal Audit Between SP Implementation Success and Enterprise Risk Management

In the following SEM model, the moderating role of the internal audit between governance and SP implementation success is tested. The model tested is depicted in Figure 4.



Figure 4. The SEM to Test the Moderating Role of Internal Audit Between Governance and SP Implementation Success

In this model, organization size, gender and age are control variables, governance is an independent and strategic planning implementation success is a dependent variable. Internal audit is a moderating variable, and internal audit x governance is an interacting variable in the model. Fit indices for the tested model are listed below in Table 3.

Table 4

Measure	Good Fit	Acceptable	Observed	Status	References
		Fit	Value	Status	Kelefences
$(\chi^2/sd)$	$\leq$ 3	≤ 4-5	2,28	Good Fit	Byrne, 1989
RMSEA	$\le 0,05$	0,06-0,08	0,07	Acceptable Fit	Browne and Cudeck, 1993
SRMR	$\le$ 0,05	0,06-0,08	0,05	Good Fit	browne and Cudeck, 1995
CFI	≥0,96	0,90-0,95	0,98	Good Fit	McDonald and Marsh, 1990
PClose	>0,05	0,01-0,05	0,23	Good Fit	MacCallum, Browne and Sugawara, 1996
GFI	$\geq 0,90$	0,89-0,85	0,99	Good Fit	Tanaka and Huba, 1985;
AGFI	$\geq 0,90$	0,89-0,80	0,94	Good Fit	Jöreskog and Sörbom, 1984

Fit Indices For the Moderating Role of Internal Audit Between Governance and SP Implementation Success

Analyzing fit indices in Table 3 shows a good fit of the model to test the moderating effect of the internal audit between governance and strategic planning implementation success. The relationship between the variables is depicted on Table 4.

Table 5

Dependent Variable		Independent Variable	Beta	Standardize Beta (β)	Std. Er.	Т	Р
Strategic Plan.	<	Gender <sup>a</sup>	0,092	0,035	0,117	0,781	0,435
Strategic Plan.	<	Age	0,168	0,163	0,052	3,243	0,001
Strategic Plan.	<	Organization Size	-0,119	-0,071	0,077	-1,536	0,125
Strategic Plan.	<	Governance.	0,160	0,159	0,061	2,607	0,009
Strategic Plan.	<	Internal Audit	0,505	0,498	0,068	7,478	***
Strategic Plan.	<	Internal Audit X Governance	0,076	0,101	0,038	2,012	0,044

The Relationship Between the Variables in SEM

\*\*\*p<0,001;<sup>a</sup>0 = Female; 1 = Male.

The findings show that gender does not have a significant effect on SP Implementation success ( $\beta$ =0,035; p>0,05). Age has a significant positive ( $\beta$ =0,163; p<0,01) but organization size has a non-significant effect on SP implementation success ( $\beta$ =-0,071; p>0,05). The findings represent a positive and statistically significant relationship between governance and SP implementation success ( $\beta$ =0,1959; p<0,001). Based on these results, **H2 hypothesis is accepted.** Governance affects the success of SP implementation. The findings represent a positive and statistically significant relationship between internal audit and SP implementation success ( $\beta$ =0,498; p<0,001). Lastly, the results show a positive and statistically significant relationship between the interaction variable (internal audit X governance) and SP implementation success ( $\beta$ =0,101; p<0,05). Based on these results, **H5 hypothesis is accepted**. Internal audit moderates the relationship between governance and SP implementation success. The variables affecting the SP implementation success explain 44 % of the variability.

To show the moderating effect visually, a graphic is created based on the regression lines in Figure 5. The graphic shows that the internal audit strengthens the relationship between SP implementation success and governance.



Figure 5. The Moderating Role of Internal Audit Between SP Implementation Success and Enterprise Risk Management

Thirdly, following the SEM model, the moderating role of the internal audit between governance and SP implementation success is tested. The model tested is depicted in Figure 6.



*Figure 6.* The SEM to Test the Moderating Role of Internal Audit Between Governance and SP Implementation Success

In this model, organization size, gender and age are control variables, Internal control is an independent and strategic planning implementation success is a dependent variable. Internal audit is a moderating variable, and internal audit x internal control is an interaction variable in the model. Fit indices for the tested model are listed below in Table 3.

Table 5

Success Acceptable Observed Measure Good Fit Status References Fit Value  $(\gamma^2/sd)$  $\leq 3$  $\leq$  4-5 2,99 Good Fit Byrne, 1989 RMSEA  $\leq 0.05$ 0,06-0,08 0,08 Acceptable Fit Browne and Cudeck, 1993 SRMR  $\leq 0.05$ 0,06-0,08 0,06 Acceptable Fit McDonald and Marsh, CFI 0.98 > 0.960,90-0,95 Good Fit 1990 MacCallum, Browne and PClose Good Fit >0.050,01-0,05 0.09 Sugawara, 1996 GFI > 0.900.89-0.85 0.98 Good Fit Tanaka and Huba, 1985; AGFI  $\geq 0.90$ 0,89-0,80 0,92 Good Fit Jöreskog and Sörbom, 1984

Fit Indices for the Moderating Role of Internal Audit Between Internal Control and SP Implementation

Analyzing fit indices in Table 5 shows a good fit of the model to test the moderating effect of internal audit between internal control and strategic planning implementation success. The relationship between the variables is depicted in Table 6.

Table 6 The Relationship Between the Variables in SEM

Dependent Variable		Independent Variable	Beta	Standardize Beta (β)	Std. Er.	Т	Р
Strategic Plan.	<	Gender <sup>a</sup>	0,076	0,029	0,118	0,641	0,522
Strategic Plan.	<	Age	0,166	0,162	0,053	3,155	0,002
Strategic Plan.	<	Organization Size	-0,098	-0,059	0,078	-1,262	0,207
Strategic Plan.	<	Enterprise Risk Man.	0,132	0,131	0,067	1,979	0,048
Strategic Plan.	<	Internal Audit	0,512	0,505	0,071	7,233	***
Strategic Plan.	<	Internal Audit X Governance	0,062	0,088	0,036	1,73	0,084

\*\*\*p<0,001;<sup>a</sup>0 = Female; 1 = Male.

The findings show that gender does have not a significant effect on SP Implementation success ( $\beta$ =0,029; p>0,05). Age has a significant positive ( $\beta$ =0,162; p<0,01) but organization size does not have a significant effect on SP implementation success ( $\beta$ =-0,059; p>0,05). The findings represent a positive and statistically significant relationship between internal control and SP implementation success ( $\beta$ =0,131; p<0,05). Based on these results, H3 hypothesis is accepted. Internal control affected the success of SP implementation. The findings represent a positive and statistically significant relationship between internal audit and SP implementation success ( $\beta$ =0,505; p<0,001). Lastly, the results do not show a statistically significant relationship between the interaction variable (internal audit X internal control) and SP implementation success ( $\beta$ =0,088;

p>0,05). Based on these results H6 hypothesis is rejected. Internal audit does not have a moderating role between internal control and SP implementation success. The variables affecting the SP explain 42 % of the variability. A summary of the results are shown below.

Hypothesis	Results
H1	Accepted
H2	Accepted
НЗ	Accepted
H4	Accepted
H5	Accepted
Нб	Rejected

Table 7Summary of The Results

#### Discussion

The main objective of this study is to measure the internal audit's role in the strategic planning implementation success. The study was conducted in 299 firms chosen from the biggest 1000 firms in Turkey. In this scope; the relationship between ERM-SP implementation success, governance-SP implementation success, and internal control-SP implementation success is tested, and after finding statistically significant relations, the moderating role of an internal audit on these relationships is tested. The findings support the moderating role of an internal audit in both the ERM-SP implementation success and the governance-SP implementation success, but the findings do not support the internal audit's moderating role on the relationship between internal control and SP implementation success. Another important finding of this study is the reverse relationship between organization size and SP implementation success. As the organization size gets bigger, the SP implementation success becomes smaller.

This study is the first study in the literature analyzing the relationship between the internal audit and the SP implementation success in a holistic approach. Studies on internal audits relate to the success of internal audits, their professional competence, their ability to find solutions to organizational problems and meet stakeholder expectations. In this study we see that effective internal auditing fulfilling the stakeholder expectations may affect positively the SP implementation success, which is the primary resource allocation system.

According to H1, there is a positive relationship between enterprise risk management and SP implementation success. The ultimate output of the strategic planning is the objectives and activities that it needs to achieve these objectives that will move the organization to the future. Distinct from the past planning approach, today's planners are focusing more on risk. This approach requires foreseeing the uncertainty that the organization will expose and taking the measures. Strategic risks are the risks that affect the organizational future directly. If the risks that can hinder the implementation of strategic decisions can be systematically linked to their impact on decisions and integrated with the organizational culture, the risk management process will become a decision support system. Enterprise risk management requires analyzing all the risks that may be faced during all the phases of the strategic plan. During the objective setting phase, internal and external risks, during implementation phase risks that may endanger or enable achieving organizational objectives, at the end of the implementation phase, the emerging risks are determined, evaluated, prioritized and precautions are developed to manage these risks. Coherent with the studies showing the positive relationship between risk management and business performance, the risk-based point of view to the strategic planning and the implementation processes positively affect the SP implementation success. As the fourth hypothesis, the internal audit's moderating effects between these two variables are confirmed by the research results. The internal audit not only evaluates the effectiveness of the risk management process, but it also assumes the facilitator role enabling the integrated management of risks all over the organization. The Internal audit strengthens the relationship between risk management and the SP implementation success.

According to the second research hypothesis, there is a positive and statistically significant relationship between an organization's governance process and the SP implementation success. A strong and positive governance structure of an organization positively affects the SP implementation success. This result is coherent with the previous studies showing a correlation between a strong governance structure and a firm value, and weak governance resulting in bad performance. Actually, the governance process is in search of a "liable decision", and the strategic plan prepared with participative methods is a kind of liable decision-making mechanism. In pursuit of liable decisions, all decision makers feel responsibility to all stakeholders who may be affected. This responsibility brings the decisions to maturity with the contribution of all the stakeholders, equity rights, ethics, organizational objectives and a shared wisdom. The governance process requires that all layers of stakeholders should contribute to the governance processes and all employees should absorb the strategic plan. A strong governance structure may prevent the problems that may be caused by stakeholder participation (Lipton ve Lorsch, 1992: 64). According to fifth hypothesis of the research, the internal audit plays a moderating role between governance and the strategic planning implementation success. The internal audit strengthens the relationship between these two variables by evaluating the effectiveness of the governance process.

According to third hypothesis of the research, there is a positive relationship between the internal control system and the SP implementation success. A strong and positive internal control structure of an organization positively affects the SP implementation success. Actually, internal control is an objective oriented system, having an important role in achieving operational objectives and shedding light on strategic objectives. The internal control system, including all the controls of the strategic management, management processes, activities and performance evaluation, can be considered effective only if it contributes to achieve organizational objectives (Pruvasi ve Ratrizia, 2015: 487). The internal control system that projects a high quality information flow, appraising the organizational culture as the most important factor achieving organizational objectives, evaluating the performance systematically puts forward a road map to achieve the organizational objectives and positively affecting the strategic planning implementation success. The last research hypothesis, that internal audit's moderating role between internal control and strategic planning implementation success is not supported by the research results. Although the internal audit, as a strategic control tool, evaluates the internal control effectiveness, it also is a part of the monitoring component of the internal control system, and that is why the hypothesis is not supported by the research results. The "monitoring standards" require continuous and independent evaluations in order to find out the internal control gaps, and to recommend corrective actions for these gaps. According to the research results, the internal control system, including the internal audit, affects the SP implementation success positively and the internal audit does not have a moderating role on this relationship.

Besides, a research result reveals another point, that there is a negative relationship between organization size and yhe SP implementation success. As the organization size gets bigger, the implementation success of the strategic plan decreases. Many factors affecting the implementation of the strategy negatively are counted in literature. Incompatible organizational structure with the implemented strategy and lack of communication-coordination mechanisms are the factors that we may link with the organization size. As the organization size is getting bigger, area of control and hierarchy layers are growing, complexity of management systems and uncertainty increase. In this case, putting into practice the organizational decisions or implementing strategic plans is much easier for smaller organizations than for bigger ones. As the size and the complexity of the organization get bigger, the problems encountered within the management processes hamper the strategic planning implementation.

Strategic planning, internal controls, enterprise risk management, internal control and governance are the management devices for sustaining their existence and achieving organizational objectives. The common trait of these management devices is to support the decision-making process and to lead towards the correct decisions that maximize the stakeholder benefits. If the rational interaction of these management devices that projects minimizing the uncertainty and risks, managing the operations effectively, efficiently and economically, wishing adding value to the organization is ensured, a corporate assurance synergy that will help accomplishing organizational objectives can be achieve .

The internal audit literature is very limited and the researchers mostly analyze the operational effects of internal audits, rather than strategic effects. But many things have changed since the first emergence of internal audits, and their role has been evolving day by day. Managers now are expecting the internal audit toshed light on strategic decisions. Today, the internal audit literature is far behind this expectation. In our opinion, future research should be focused on internal audits' strategic contributions to the organizations and their role in supporting strategic issues. The prerequisite for a sustainable competitive advantage in an open system is to adapt to change. The internal audit's role in managing organizational change may be another point that should be considered for future studies.

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