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**DETERMINING OF KEY PERFORMANCE
INDICATORS IN BUSINESS**

Master Thesis

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Hazırlamış olduğum tez özgün bir çalışma olup YÖK ve İTİCÜ Lisansüstü Yönetmeliklerine uygun olarak hazırlanmıştır. Ayrıca, bu çalışmayı yaparken bilimsel etik kurallarına tamamiyle uyduğumu; yararlandığım tüm kaynakları gösterdiğimi ve hiçbir kaynaktan yaptığım ayrıntılı alıntı olmadığını beyan ederim. Bu tezin ihtiva ettiği tüm hususlar şahsi görüşüm olup İstanbul Ticaret Üniversitesinin resmi görüşünü yansıtmamaktadır.

ABSTRACT

As a result of technological developments, the impact of globalization on the social and economic environment is rapidly and constantly changing. Since increasing competition is not only within the borders of the country, all businesses have up-to-date strategies and have to put them into practice. Many state and private sector businesses, which are aware of this change, have sought to find a strategy that is diverse, feasible and capable of achieving their goals. In addition, performance management plays an important role to sustain companies' assets and competitiveness.

In this sense, key performance indicators (KPIs) that are the cornerstone of performance management are defined and explained in this study. KPIs are financial or non-financial metrics used to quantify objectives to reflect the strategic performance of the organization. Characteristics, principles of KPIs are mentioned respectively. The aim of this study is to show how businesses can determine which KPI is the best for their companies in order to reach their goals. Choosing the right KPIs have been mentioned in Chapter 1 in detail. Some examples of the KPIs are also given at the end of this section.

In Chapter 2, the concepts of performance and performance management have been emphasized in detail. Then, "Balanced Scorecard Method" (BSM) which is one of the multi-dimensional performance measurement methods is discussed. Balanced scorecard measurements are a management system that allows organizations to clarify their visions and strategies and transform them into action.

Keywords: Performance, Performance Measurement, Key Performance Indicator, Balanced Scorecard

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ABBREVIATIONS

BSM: Balanced Scorecard Method

KPI: Key Performance Indicator

INTRODUCTION

Organizations need effective performance management system in order to manage their processes more effectively and accomplish their vision and goals by spreading them throughout the company. Performance management system will bring noteworthy benefits not only to their competitiveness in controlling their costs but also using their resources properly and efficiently.

In this study; what key performance indicators are and what they are used for are mentioned and put emphasis on how they are determined for an organization and how they are contribute to performance management.

On second chapter, one of the multidimensional performance appraisal models, balanced scorecard method (BSM)is given in detail.Firstly, the emergence and development of BSMis examined and the conceptual framework about balanced scorecard is introduced.Dimensions, performance criteria, application stages, benefits, and finally obstacles of BSMare given in order.

The purpose of this study is; to give information about key performance indicators based on companies' performance management tools and their indicator tables and balanced measurement card and to mention about their usage, to define their purpose, and to show their contribution to performance of the company. For this purpose, the following questionswere investigated:

What are the KPIs and the purposes of it? What are KPIs characteristics and principles? Then, usage areas of KPIs also researched.Finding an answer to those questions are very crucial. Within this framework, managers try to generate KPI system for their companies.

1. DEFINITION AND CONCEPTUAL FRAMEWORK

Different types of key performance indicators and their characteristics are defined clearly and discussed below. Characteristics of key performance indicator and dashboards are explained in detail.

1.1. Key Performance Indicators

A key performance indicator (KPI) is a measurement of activity that brings out how a company or team is performing against its strategic goals. KPIs are the most critical metrics that measure the success of specific activities used to define success and track progress in meeting organizational goals. KPIs in business environment are mostly measurable information; it shows structures and processes of a company. First and foremost, the KPIs must relate directly to the organization's stated goals. These are the metrics against which the organization will be driven to perform in order to measure its success over time. Regardless of which definition companies adopt, the following elements should always be considered by companies; the KPIs must reflect the organization's goals, it should be measurable and be linked directly to the measurement of the organization's success. Now KPIs are very significant for planning and controlling through supporting information, creating transparency and supporting decision makers of the management (Meier, et al., 2013).

Lord Kelvin (1824-1907) defined KPIs as "When you can measure what are speaking about and measure it in numbers, you know something about it, when you cannot express it in numbers, your knowledge is insufficient and unsatisfactory kind; it may be the beginning of knowledge but you have scarcely, in your thoughts advanced to the stage of science"(Arora and Sukhbir, 2015).

Many companies are working with the wrong measures, many of which are incorrectly named key performance indicators (KPIs). Very few organizations really monitor their true KPIs. That is because only few organizations, business leaders, writers, accountants, and consultants have explored and knew what a KPI actually is.

There are four types of performance measures: Key result indicator (KRI) tells you how you have achieved in a perspective or critical success factor. Result indicator (RI) tells you what you must do. Performance indicator tells you must do and KPI tells you what to do to highly increase performance. Onion analogy helps us to describe the relationship between these four performance measures."The outside skin describes the overall condition of the onion, the amount of sun, water, and nutrients it has received; and how it has been handled from harvest to the supermarket shelf. The outside skin is a key result indicator. However, as we peel the layers off the onion, we find more information. The layers represent the various performance and result indicators, and the core represents the key performance indicator"(Parmenter, 2010)

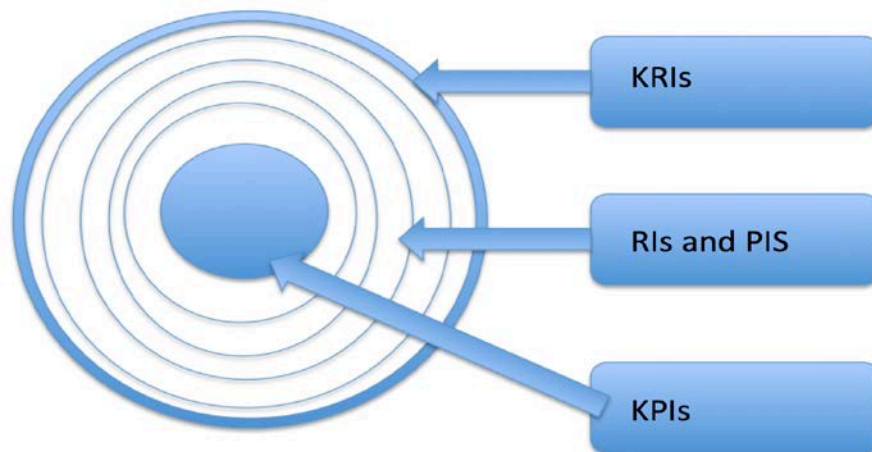


Figure 1: Four Types of Performance Measures

According to above-mentioned analogy, KPI gives much more information than RI and PI. Main and the most significant data can be taken from KPI and it acts as a set of

measures focusing on those sides of organizational performance that are critical for the success of the organization.

According to (Peng, et al. 2007,33) KPI can divide into three group; Leading indicator A KPI that measures activities that have a significant effect on future performance," which are causal roots of the outcome (i.e. lagging indicator) they influence, and actionable for the future performance against one or more lagging indicators. Lagging indicator also defined as a KPI that measures the output of past activities. It is very easy to measure whereas it is very difficult to influence. Unemployment rate, consumer price index (CPI) and book value of business inventories can be also included to the lagging indicator. On the other hand, diagnostic measurement can be defined as a KPI that is neither leading nor lagging, but signals the health of processes or activities. For example: Number of clients that sales people meet with each week may be a leading indicator of Sales Revenue. (A weak indicator or outcome); "Complex repairs completed successfully during the first time or visit" be a leading indicator of "Customer relief. Leading indicators are very powerful metrics in that they own the predictive and insightful causal relationship(s) within the business process(s), and authorize the actionable course to continue the process improvement. Therefore, creating effective leading KPIs is important to the success of any business organization so that it is smart to changes quickly, and also is prepared for the coming changes. However, identifying leading indicators is often hard requires months to collect needs, measure definitions and rules, prefer metrics, and encourage feedback. (Peng, et al. 2007) Diagnosis plays a crucial role to resolve the issues whereas lagging indicator help to understand the background and leading indicator exhibit the future issues.

1.2. Purpose of the Key Performance Indicators

One of the increasingly important units in business today is human resources. Performance indicator systems are one of the issues that these units stand for. There are many discussions related to performance indicator systems in the literature and in practice. However, it is not related to the existence of the underlying reasoning performance indicator system, but is related to the forms of practice. The concept of

performance appraisal must be a criterion that can set out the situation of organizations (Palmer, 1993). This is because one of the problems that organization face is to define whether their employees are fully responsible for their responsibilities. Employees are separated from each other since they have distinctive features, demands, and expectations. This causes each employee to have his or her own strengths and weaknesses. Due to the reasons mentioned above, companies are trying to determine the best employee for themselves with performance indicators. In performance indicator systems, administrators always keep an eye on their employees.

Studies related to performance indicators have various relevant explanations for this topic. Especially, “performance evaluation”, “job evaluation”, “productivity evaluation” can be topics for performance indicator systems (Sabuncuoğlu, 2008).

At the core of performance evaluation is the monitoring of the behavior of employees in the operating conditions and the interpretation of these behaviors (Akın, 2002). The performance indicator aims to determine the benefits of the employees to the organization and it is important for determining the degree to which it can carry out the purposes of its employees (Bilgin and Dig, 2008). In this respect, performance indicators can be expressed as the process of determining how well the organizational standards set forth by the enterprise comply with the performance of the employees (Palmer, 1993).

Performance indicator system is a system in which the efficiency of employees is assessed and the benefits of achieving their goals in achieving organizational goals are met. Regardless of which department the employee is in the organization, the process of determining whether the employee contributes to the organization’s effectiveness, benefits or damages is a performance indicator system process (Fındıkçı, 2000). Rewarding the contributions of performance indicator system is very useful in determining personal targets and making positive feedback.

A number of studies have been carried out with the aim of determining the relevance of a topic with the performance indicator system work of the enterprises' human resources

department. However, it should be noted that it is very difficult to scale the activity with success. Especially the presence of many different qualities of human beings makes this job stronger.

Performance evaluation for businesses is also an important concept in terms of work. If the employees are doing their jobs properly, they will be in the desire to receive their compensation. In this respect, a worker engaged in business may become unhappy if he or she strives to keep it in the same category as a worker who does not perform the job properly, and this will adversely affect the performance of this worker. In this respect, performance indicator systems are also important in terms of determining employees who are trying to do their job properly.

Institutions perform performance indicators for specific purposes. In fact, performance is based on two main reasons. First, one is being aware of work performance and we can easily define that administrators of an organization prefer to be aware of business performance in order to make some decisions and put them into practice. Reimbursement, premiums and other items for employees are made on the basis of performance evaluation. Moreover, feedback is also very important reasons because employees are made use of performance indicators to provide feedback on working conditions and compliance with workflow.

Other performance evaluations for these main purposes are also conducted to provide a number of different purposes (Uyargil, 2008):

- Determining the needs of the training within the institution and determining how to provide the requirements,
- To ensure that good employees are rewarded in the direction of these systems by determining the awarding and salary system,
- To identify low performing employees, to perform a performance measurement again to ensure that the performance of the detecting employees is improved,

- To ensure that employees are able to continuously perform their good performances and to improve their performance even further,
- To improve the communication between the management and the stakeholders,
- To evaluate the relations and interactions among the employees and to allow the increase of team work within the organization,
- To increase the job satisfaction levels of the employees within the institution and to increase the working efficiency,
- Taking into consideration the potential performance of the employees and determining the missing and inadequate items within the units,
- To support employees in terms of their carrier,
- To increase the desire for employees to work by giving feedback to employees.

The establishment of performance measurement and measurement systems has received high interest in the literature. Neely et al., (1996) the measurement was often discussed, but was defined at a much lower rate. A performance measurement, also referred to as a performance indicator, has been defined to quantify the effectiveness and results of an action intended in the organizational and strategic literature (Matthews, 2011; Neely et al. 1996; Waggoner et al., 1999). This understanding implies that performance is the efficiency and effectiveness of an action where efficiency is related to the company's economic use of its resources and effectiveness to the degree to which customers' needs are met (Neely et al., 1996). "What gets measured gets managed," describes the organizational significance of performance indicators more simply (Dillenburger et al., 2003). The impact of performance indicators on corporate behavior is quite strong. Performance indicators in organizations are perceived as tools supporting the strategic goals of an organization (Dillenburger et al., 2003; Waggoner et al., 1999). KPIs help organizations identify and assess how successful they are, in terms of progress toward their long-term corporate goals. KPIs is the integral part of strategic controlling, making it possible to assess whether management has achieved their objectives. Therefore, the purpose of performance indicators in their potential is to influence behavior and induce action (Neely et al., 1996).

1.3. Characteristics of the Key Performance Indicators

Not only science but also art helps generating productive KPIs; however, there are many standards to assist the uninitiated achieve success. Organizations that make KPIs with the following twelve features are presumably to create high-impact KPIs (Parmenter, 2010; Eckerson, 2009).

1.3.1. Scarse

Less KPIs means better KPIs. That is what most performance professionals say when the topic is about the number of KPIs to apply. The number of KPIs should be limited to an utmost of five to seven units at the same time because the standard view is that human being may just concentrate on that range.

Most administrators in organizations let each department to generate their own KPI to stick on the dashboard. Apparently, there is a lot of debate and time to figure out and generate a KPI that represents the work of the entire department. It is possible that the first proposed KPI will change over time or show that another KPI can be better for departmental usage. Focusing on a few KPIs allows users to understand what kind of behavior the KPI is deeper and adjusts the KPI to get better outcomes (Eckerson, 2009a).

1.3.2. Drillable

The issue of having just a few of KPIs is that organizations represent a dynamic balance between method and development. While the process is seeking stability, strategy is in search of change. Even though you can show your strategy with a few KPIs, you may wish to have more than that in order to track processes that cross department boundaries. For this reason, the best performance indicator tables breakdown KPIs and data based on role, level and task. The top level or first view of a dashboard includes a

handful of strategic KPIs with hundreds and thousands of KPIs in more detail in the performance dashboard. This internal cascade applies to all types of indicator tables: strategic, tactical and operational (Eckerson, 2009a).

1.3.3. Simple

KPIs need to be understandable. Workers must be aware of what is being measured and how they are calculated. Complex KPIs composed of indices, ratios, or multiple calculations are uneasy to figure out and more importantly, hard to act on. Shortly, if users don't figure out what KPI means, they cannot really control its result. Then, KPI can be a waste of time for the organizations that are eager to track and explain progress toward corporate or organizational goals. So, training workers and administrators in an organization in terms of KPI goals is significant. For example, what is the meaning of high score or bad score? If the benchmark is about customer obedience, high scores are desired, but if the benchmark is customer churn, then high score means awful. Occasionally, a benchmark of KPI may exhibit bipolarity; that means a high score is only good in some circumstances. For example, a telemarketer with 20 calls per hour may work extremely well, but 30 callers per hour may not be able to connect well to potential customers. An influential scoring and coding system has critical prescription to make KPIs easy to understand (Eckerson, 2009a).

1.3.4. Practical

All performance management practitioners emphasize the importance of creating applicable criteria. Alex Crabtree, senior manager of BI solutions at Net Jetssays, "Building KPIs which are nice to have is not what we want, but building KPIs that help us to reach our goals is what we are looking for." As KPIs should be so simple to understand, clients should influence positively the results of a KPI. Unfortunately, many organizations publish KPIs without knowing what the means of the outcomes or what to do when a KPI trends downward. This is particularly correct for new administrators, who may show an exaggerated response to a red stoplight when they see at first. Administrators should manage with respect to general tendencies instead of the present status of a KPI (e.g. percentage change in variance rates rather than red lights).

This avoids the whipsaw effect, in which a manager overreacts to a dip in performance that represents a normal statistical variation rather than a manifestation of a deep-rooted problem that needs to be fixed. Actually, overreacting the performance of the red line may sometimes make the issue worse. Performance indicator tables are used to liberate and strengthen workers; do not take them into the microscope of an over-controlling boss who accidentally uses the scores to morale and sabotage the personal initiative (Eckerson, 2009a).

1.3.5. Owned

Every KPI requires a responsible owner. Many people believe that each KPI should be only one owner, so there is no potential for finger-pointing, and that the individual owner senses extremely focused on and accountable for controlling the KPI. Others think it's the opposite: hold two people in charge of KPI and create teamwork. This coordination can be particularly worthy among distinctive groups in a company that demands to clear out departmental silos and cross-pollinate ideas.

In a characteristic manner, a KPI should have two owners; one is business and the other data. Business owner should account for KPI's explanation and worthy If the questions related to the origin of the KPI, how it is measured, what actions to take for the performance drop come on the scene, then the business owner should be called to get answer all these questions. Besides, the data owner is in charge of stuffing the KPI with data and keeping to standard system-level agreements (SLAs) that governs the validity and timed loading of the data, among other things. Not only business but also technical proprietors must be given in the KPI's data with their contact information when the needs arises (Eckerson, 2009a).

1.3.6. Referenced

Most performance management owners have learned that if workers don't rely on the information of KPI, then they will not want to use it. The information must be clean,

accurate and most importantly perceived as accurate. Only being right is not enough; clients should trust that they are as right as existing reports or spreadsheets.

The reference data about KPIs should be stated in order to make people trust in KPIs and their results. Clients should be able to provide a dialog box describing the operation and technical owners of the KPI by clicking on a KPI as well as information about the origins, calculation method, last update date and other relevant details of the KPI (Eckerson, 2009a).

1.3.7. Related

Ultimately, the KPIs should influence performance in the right direction. Unfortunately, many organizations form the KPI, but they never evaluate it to see if there is statistical correlation with the desired results. This correlation clearly sets the link between driver KPIs and result KPIs and gives greater confidence in deciding executives. They know that if they “pull a certain lever” it can generate a particular outcome. A strategy map associates strategic goals and KPIs, giving administrative a high-level view of how administrative goals relate to each other.

It’s significant to associate KPIs with a continuous basis as their effect changes over time as the internal, economic, and competitive landscape shifts. Most KPIs have a limited lifespan; in the first year, you get most of the value from them. You then need to re-organize goals or KPIs in order to stay ahead or move to updated KPIs that better reflect the present strategy. However, if you are constantly watching the effect of KPIs, you will not be capable of evaluating any slippage that may occur in their activities.

Many organizations spend a great deal of time and energy evaluating the efficiency of their KPIs, particularly when the monetary incentives depend on the outcome. They use statisticians to carry out regressions that map KPIs to intended outcomes and take notice of debates with peers and administrators to hold a talk about the KPIs and goals (Eckerson, 2009a).

1.3.8. Balanced

It's also important that you offer a balanced set of KPIs. This is the philosophical underpinning of the balanced scorecard methodology. Creators Robert Kaplan and David Norton believe organizations must measure performance across multiple dimensions of a single enterprise from a financial perspective. They advocate a "balanced" approach to measurement, which helps managers pay attention and invest in the key drivers of long-term growth and sustainability.

Kaplan and Norton offer four perspectives or categories of metrics: financial, customer, operations, and learning and growth. They also advocate that organizations create a strategy map that defines strategic objectives in each perspective and shows how they interrelate; giving executives, a pictorial view of what drives goals. Moreover, since each objective is associated with a KPI, the map shows cause-effect linkages between KPIs. Therefore, a strategy map is another way to identify leading indicators.

At the micro level, it is significant to have a balanced view of the individuals whose performance of KPIs is monitored. For instance, a single KPI leads behavior in an unwanted direction, which compels managers to make a second KPI that balances the first. The classic example is a call center KPI that motivates telemarketers to rise the number of calls per hour. On its own, this KPI will make as many phone calls as possible to telemarketers, no matter what their qualities are. Without a counterbalancing KPI such as customer satisfaction or call resolution ratio, the call center will experience a surprising decrease in effectiveness that weakens long-term targets (Eckerson, 2009a).

1.3.9. Ordered

It is significant that KPIs are aligned and do not inadvertently weaken each other; this is a case where some people say "KPI sub-optimization". For example, a logistics group that desires to accelerate stock expenses can make a decision to decrease stock levels.

However, it gets harder for the retail store to stop the stockpile of fast-moving goods-it is a KPI for the workers. An administrator of a company says, "Our employees take unanticipated actions in order to raise a measure to uncover other measures."

It's often causing difficulty to find out KPI sub-optimization till you put KPIs into play and observe the outcomes. You rapidly explore the instability and may then make arrangements. For this reason, many performance management users are paying attention to work hard for KPI excellence. They advise taking KPIs to a point where you are 80% sure they are workable and then starting to practice to observe what occurs (Eckerson, 2009a).

1.3.10. Confirmed

KPIs should be not only harmonious and balanced, but they also have to be tested to ensure workers cannot "play" the system—or keep KPIs away from laziness or greediness. Companies should test their KPIs to make sure that workers cannot influence their results without taking the necessary precautions to develop the business.

One of the solutions for this issue is to involve workers in identifying the KPIs and goals in the beginning. They are aware of better than anyone the nuances included in the processes and potential loopholes that can stimulate clients to play the system.

The inclination to play KPIs rises significantly after organizations insert monetary stimulus to KPIs. For this reason, it is necessary to test and verify KPIs in the workplace before applying them as part of a worker incentive method (Eckerson, 2009a).

1.3.11. Regulated

KPIs should be monitored 24 hours a day, 7 days a week, daily, or perhaps weekly for some. A monthly, quarterly, or annual measure cannot be a KPI, as it cannot be *key* to your business if you are monitoring it well after the "horse has bolted." KPIs are therefore "current-" or future-oriented measures as opposed to past measures (e.g.

number of key customer visits planned in next month or a list by key customer of the date of the next planned visit). When you look at most organizational measures, they are very old indicators that measure last month or quarter events. These indicators cannot be and never were KPIs (Parmenter, 2010).

1.3.12. Distributed

A KPI is deep enough in the company that it can be tied to an individual. In other words, the CEO can ask someone “why.” Return on capital employed has never been a KPI, as it cannot be tied to a manager—it is a result of many activities under different managers (Parmenter, 2010). Respondents were asked about their support to these KPI characteristics in a survey. Most of the participants (53%) said their KPIs get along with strategic objectives to a certain degree, but less than a third of participants were as confident about other characteristics. Most surprisingly, only 18% said the explanation, “Employees know what actions to take to affect KPIs,” responded to their KPIs to a certain degree (Eckerson, 2009a).

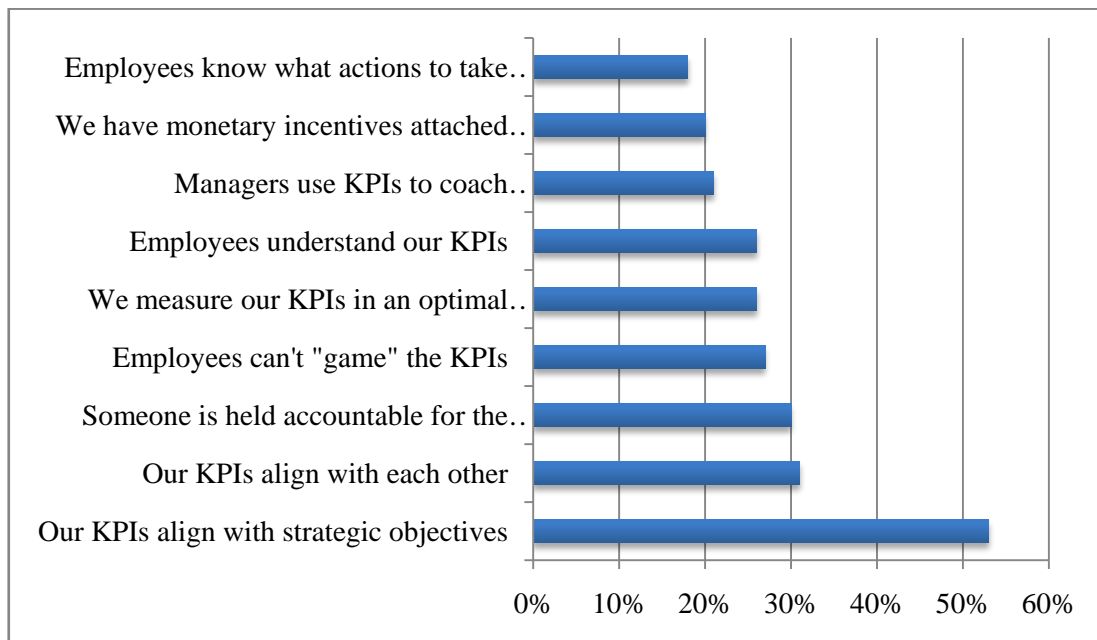


Figure 2: Multi-dimensional analysis of KPI

In addition to the characteristics mentioned above, KPIs preferably meet the criteria below. There are some qualifications of KPI. First, it should be explained directly, non-subjective and be sufficient. Moreover, it has to be practical, quantitative and reliable.

KPIs should be specific for each task and if it is possible, it should only be explained for that task. Words such as “business quality”, “business information”, “customer service standard”, “accuracy” are very ambiguous in terms of usage so KPIs should go beyond their definitions.

1.4. Principles of Key Performance Indicators

The principles of KPIs are defined by the word “S-M-A-R-T”. It is an abbreviation for the five conditions of an effective KPI:

Specific: What the KPI measures should be clear and focused. There should be only one definition of the KPI to ensure that users get the same meaning and, so, come to the final decisions that they can act on.

Measurable: The KPI has to be measurable to explain a standard, budget or norm, to make it possible to measure the actual value and KPI has to be comparable with the other data.

Achievable: Every KPI should be measurable to define a standard value for it. It is really important for the acceptance of KPI’s within the organization that this norm is achievable. It is discouraging to think about a goal that cannot be obtained at any time.

Relevant: The KPI should give more information about its performance to the organization’s strategy. If a KPI does not measure a part of the strategy, it does not affect the performance of the organizations. So an irrelevant KPI will not work properly.

Time Phased: It is important to specify the KPI value in time. Every KPI has only one meaning if one knows the time dimension in which it is realized. For this reason, the realization and standardization of the KPI should be time-phased (Neeney, 2009).

Due to the view that KPIs should be aligned, in these days, “S-M-A-R-T-A” is also used as an abbreviation of the principles of KPIs. This is particularly important adding for the place where KPIs are used as criteria throughout the organization (Toten, 2009).

“S-M-A-R-T” is a fine way to spell KPIs, as this is a solid framework for making decisions about KPI selection. Anderson (2011) cited Weller in his paper who presents the significance of KPIs in a unique manner: “If you don’t measure and benchmark, you won’t know how you are doing now, which areas of your process need the most attention, and how well your changes are working down the road.”

A good corporate strategic plan includes a robust set of KPIs that translates strategic operational activities into manageable action for employees. Usually, if you have too much or unaligned KPI, a business strategy will fail to achieve that goal. This can weaken the focus on the targets, making it difficult to communicate a consistent implementation plan for staff. KPIs should provide concrete links to individuals and their institutional goals. What's more, a large list of CPIs that are not explicitly linked to an entity's overall goals can be a sign of a bigger problem: lack of a strategic focus. Selected KPIs in any strategy should have clear and solid links to overall performance. Understanding the importance of different KPIs in driving these goals is essential to provide good and actionable information at the operational level to which the corporate strategy is applied (Baroudi, 2014).

1.5. Usage Areas of the Key Performance Indicators

KPIs are an application that organizations, administrators and employees put emphasis on. In fact, the parties within the organization have different expectations regarding the performance evaluation. Particularly, it is very important for the organization to share its personnel with the employees before putting the performance evaluation systems into

practice and to take the initiative of the employees before applying this system. Particularly, it is very important that to share performance indicator systems by administrators with their employees before putting the KPIs into practice and to take the initiative of the employees before applying this system.

Establishment of Wage Evaluation Policies: It is very important for the organization to be able to make proper payment within the organization. Paying the employees what they deserve and fairness of wage policy is very important in terms of employee loyalty. In this sense, the wage policy based on the performance indicator system ensures that good relations can be established between the employees and the organization (Kestane, 2003). Especially, it will be a good policy to pay average wages to employees who have average performance and to pay high wages that are well-performing workers.

Strategic Planning: Organizations use strategic planning to reach their goals. Determining the objectives of the organizations is important to determine how the strategic planning process will be carried out. Once the plans are formed, the application areas are shaped according to the plan. It is important to shape the application area within the scope of the organization's field of activity. The activity units distribute the tasks they are supposed to undertake to the employees. Being aware of the responsibilities of the employees makes it possible to increase the effectiveness of the strategic plan, making it easier for the organization to reach its goals. Performance indicator systems contribute to the strategic planning by setting the application level (Yılmaz and Ünsar, 2007).

Determining the Educational Needs of the Organization: Organizations are required to plan their training in line with their needs in order to achieve success within the scope of their training. Organizations determine the training needs of employees with performance indicator systems. As a result of these determinations, the content of the trainings that should be given is also determined as the employees who need to be trained are determined. Under these circumstances, employees are trained well so their weaknesses are disappeared (Baltacı, 2009).

Career Management: the management of the career is very important in terms of the development of the employees and the effective utilization of the employees. Performance evaluation reveals the shortcomings and redundancies of the employees. The phenomenon such as training or improving employees may be possible by means of work carried out within the scope of career management. Within the scope of career development programs, the units that employees are required to work within the organization are also identified (Baltacı, 2009).

Business Expansion, Rotation and Business Enrichment Applications: Employees who work within the facility but do not have the qualifications appropriate to the department they are in, but who have appropriate qualifications in a different department within the facility are being rotated. In addition, tasks under the working capacity are being upgraded through work expansion and work enrichment. In order to be able to fulfill the events mentioned here, the qualifications of the employees must be known. Performance indicator systems cover all the items required here (Yılmaz and Ünsar, 2007).

Determining the Demands and Requirements of the Employer: Organizations always need to be prepared. Because of this, organizations always want to know the number of jobs they need. Performance indicator systems help administrators of an organization determine the need of employees. In addition, performance indicators provides for the identification of features that must be possessed by the organizations (Baltacı, 2009).

1.6. Determining KPIs

In order to be able to start the performance evaluation process, some preparations must first be made. In particular, it is necessary to find out what criteria the evaluation process will carry out. It is also important to inform employees and administrators related to assessment process. Evaluating the success of a business depends on defining and prioritizing the criteria that are really important. The use of incorrect criteria gives incomplete or disconnected parts about the business. Even worse, the direction of the

company can be misunderstood because of the improper key performance indicators (Bayles, 2006).

According to (Wu, 2009) while KPIs provide significant information to decision-making processes for individuals, there are several factors to consider:

Identification of Performance Indicators:It is difficult to define KPIs; because the KPI definition requires knowing what performance is to be measured and how to measure it. In addition, it is critical to have the approval of the individuals to be assessed on the basis of KPIs. Without a generally accepted KPI definition, no one will use or support it.

Obtaining The Necessary Information:The required data must be collected after the KPI is determined. Depending on the complexity and number of operating systems in the organization, this can be quite complicated. Ideally, the information needed is the data being held in the data storage.

Calculation of Values According To KPI Definition: The person who is in charge of the performing business calculations or calculating a data set must clearly understand the definition of the KPI in order to create right KPI. Miscalculations often occur due to insufficient understanding.

Making Temporal Updates:Updating KPIs at specific periods or as needed can be very time consuming if it is done manually. In addition, various software programs can be used in defining KPIs and various metrics, data extractions, calculations, and updates.

The moment of a creating the KPI itemsmeeting that is performed at the beginning of a project is the best time to determine KPIs. It includes the following steps:

- Taking carefully into account the desired results,
- Avoiding extreme results definition,

- Determining as many indicators as possible with a brief brain storm,
- Evaluating each indicator according to the above criteria,
- Choosing the best indicators.

If the indicators obtained at the end are not satisfactory, a new brainstorming is needed (De, 2009).

Each job has different priorities in terms of the specific actions the management focuses on. The management should know which area is key importance. Otherwise there is a risk of collecting a lot of unnecessary information that really camouflages what is important.

It is very important to have a clear picture of what the goals are during the first 4 - 6 months of the implementation when using KPIs. The next step when the action is successfully implemented is "full-on" KPIs. The persons who are responsible for the transaction in line with their development goals regularly audit these. These are within the fixed hierarchy of well-managed action bench meetings and they can be qualified in terms of financial year-end effects (unit price, percentage of output, amount of waste, etc.). (Bernardy, 2009)

Steps to configure performance indicators:

- Describe links between company objectives and operational views,
- Map these strategic links to the length of time required in each field of view,
- Describe a set of short-term and mid-term metrics that will manage new outputs for each view,
- Define the gaps and dependencies within the organization to achieve success for the company,
- Implement metrics as individual or group cards and track to ensure strategic results (Tidd, 2009).

But if your company does not have KPIs developed or if you are unsure of the correctness of the KPIs set up, the ideal way to describe KPIs is; a senior and interdisciplinary team covering all the core departments should be established. Every member of the team must have a very good understanding of the organization's short and long-lasting high-level strategies and goals. Meetings should be held in non-political and open environments. Members can thus easily discuss what is to be measured and what should not be measured. Once you have decided what to measure, it is needed to determine how to measure it. What makes your organization successful? In today's highly competitive environment, this question should be answered with your business objectives and current industry benchmarks. In other words, if your target is, 90% and you have reached 95%, but if the industry in general reaches 98%, is this a success or not?

Vertical industry solutions and benchmarks are becoming more and more visible every day. Studies have shown that KPIs of similar companies in the industry show similarity the ration of 70-80%. It would then be sufficient to concentrate the remaining 20-30% of your industry's criteria to determine only your work-specific KPIs by taking a pre-loaded vertical solution indicator table. This will reduce the time the top management will spend to build the KPI (Andrews, 2009).

Unsatisfactory metrics tend to be generally blurry. Good KPIs need to consider all the extremes, which may affect a number.

For example, it is not specific enough to define KPIs as "measuring the increase in sales. Do you measure sales as monetary value (dollar, euro, etc.) or as a unit sold? How do you evaluate return products? Do you want to define the target increase in dollars, volumes, or percentages? Besides, what time zone would you like to evaluate sales?

Inadequate example:

- **The Title of the KPI:** Sales Increase

- **Description:** Change in monthly sales volume
- **Measurement:** Total regional sales for all regions
- **Goal:** Increase every month.

What is missing? Will sales here measure as units sold or in dollars? If it is in dollars, will it be measured from the list price or the sales price? Will the returnings be taken into consideration? If so, will the month of sale be taken as a correction for KPI or will it reflect the month in which the correction comes in? How much do you aim to increase (in dollars or units) every month?

Adequate example:

- **The Title of KPI:** Employee Period
- **Definition:** The total number of employees deducted for any reason and the portion of the total number of employees deducted from the work due to performance, divided by the number of employees at the beginning of the year. Removal from the workplace to reduce the number of employees will not be included in this calculation.
- **Measurement:** Human resources have all employees' registration info. The departure department lists the departure date and reason for each employee. Monthly or when requested, it queries the human resources data bank and reports transfer reports to department managers. Human resources publish the graphics of each report on the intranet.
- **Goal:** Reduce employee turnover by 5% on an annual basis (Reh, 2009).

Goals and measurement should be defined specifically. Otherwise, defined performance indicator criterias are not giving the precise result.

1.7. Visualization of KPIs

An image of the analyzed information is defined as visualization in which it can be presented in a meaningful sense to the person who views it. The data may be tiresome and difficult to analyze on its own. Graphical representation of the data with visualization may emphasize important aspects within the data and makes it easier for the person who looks at the data to focus on the important points within the analyzed data set. In most cases, visualization of information helps the person who looks at the data to be more productive in his analysis.

There is a graphical representation of a data set below. In this example, total sales, which are performed by sales representatives on an annual basis, are viewed.

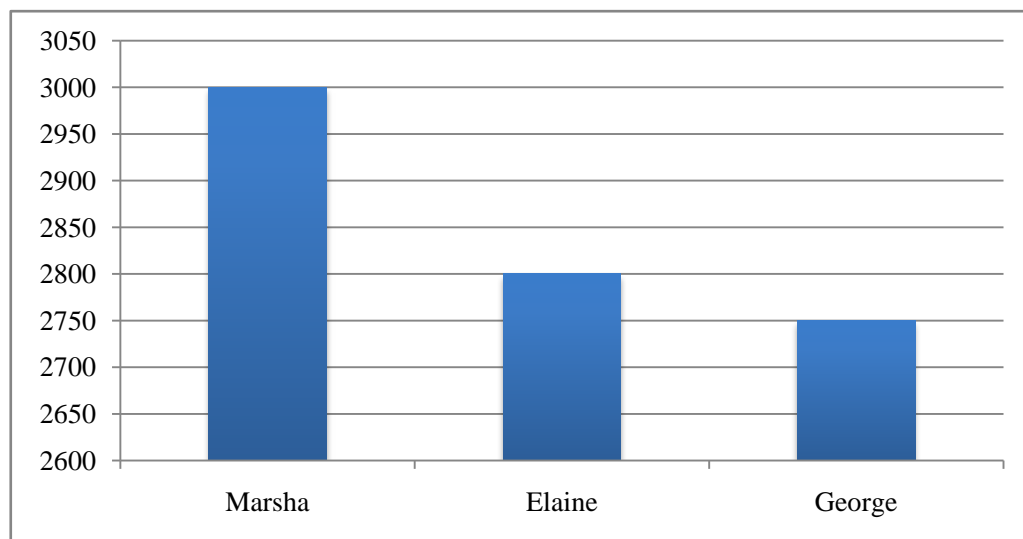


Figure 3: Salesman Performance

The graphical representation of this data allows the viewers to easily see the sales quantities and sales representatives with the best performance and compare them to the performance of others. As Napoleon said, "A picture is worth thousands of words" (Wu, 2009)

Primarily, there is a principle of "content". This means you have to provide visual control over all areas of the business so that the entire management team can see what is happening on all sides. In other words, all the basic functions of the business (marketing, sales, production, transportation, and finance) must be shown with the whole results in the indicator table, which is prepared for the top managers and covers a

certain period of time (monthly, weekly). This list should cover the most important processes of the business.

It should be possible to see the big picture from this dashboard and be able to verify the performance of the following subjects and we can divide the subjects into 3 main groups. These are customer, employees and operation.

Table 1: Dimensions of KPI

Customer	Employee	Operation
Number of active customers (or number of projects won)	Conversion rate to new jobs guaranteed from expectations and inquiries	The impact and cost of marketing, incoming business inquiries or initiated initiatives and their cost
Whether some type of market trend analysis open to fluctuations in the domestic market or not	Percentage of employee turnover	Success rate in delivering or completing the business and complete delivery percentage on time
Customer satisfaction rate, complaints, refunds		Breakdown of sales based on added value and gross profit on market sector basis
		Key efficiencies of operating processes
		Per capita expenditure compared to the budget
		Key financial management figures such as borrower days, creditor days, stock level and cash liquidity
		Deposited capital return ratio

Visualization of KPIs provides a powerful tool for managing the activities of people in their organizations. With the visualization of KPIs, people can quickly and easily notice

the events or trends within them and direct their resources and energy to areas which are waiting for their attention.

Table 2: Data Set for KPI Input

Data Set	Advantages	Disadvantages
Account chart software	<ul style="list-style-type: none"> • Software is the cheapest in these categories • Easy to use • Rich functionality 	<ul style="list-style-type: none"> • Prone to manual intensive faults and inconsistencies • KPI and criteria must be defined • Updates are time consuming
Intelligence software	<ul style="list-style-type: none"> • Easy to use • Rich functionality • Can be examined and analyzed with special query capabilities 	<ul style="list-style-type: none"> • There is a need to install the software • KPI and criteria must be defined • The presentation of information may be very detailed and may not be appropriate to top management
Analytical applications	<ul style="list-style-type: none"> • Easy to use • Standard templates for KPIs and criteria for the topic are usually provided by the supplier • Data extraction and automatic updating of criteria with KPI 	<ul style="list-style-type: none"> • The most expensive software in this group • Installation of the application and approval of criteria with KPIs is required • If the source for the topic templates is not available no value is provided

1.8. Display KPI on The Tables And Dashboard

The purpose of the dashboard is to provide the user with an intuitive and instinctive format of actionable business knowledge. Indicative tables highlight operational data consisting of criteria and KPIs (Gonzalez, 2005). Indicator sheets can take many shapes, from stunning reports to high-level strategically balanced measurement cards. They can directly support high-level strategic objectives, and they may depend on very specific business functions. The purpose of the display tables is to provide business users with to provide associated and actionable information that they can make more effective decisions than they can. Here, "associated" means directly related to the role and level of the organization in the organization. With "operational" information, data is expressed that warns the user when and how to act to achieve operational or strategic goals.

Steps of the Dashboard Design: First, identification of key performance indicators are very crucial. The first step in designing the dashboard is to understand what KPIs the users are responsible and they want to manage in the dashboards analysis. The user-specific identification of the right KPIs is the most important step in the design steps because it is the basis for what information is displayed on the table later. In addition to identify the KPIs, it is useful to specify the information that the user can identify the status of the KPI given. We will say "support logical analysis" which is environmental and diagnostic information that helps the last user to understand why this KPI is in that condition. Frequently, this supports logical analysis take shapes such as tables, charts, and so on which are more traditional data visualization presentations. Lastly, choosing the right KPI visualization components are important. Visualization components of visualization tables are assembled in two main categories: KPIs and support logical analysis. In each case, it is important that you choose the best visual you need, depending on the information that the last user is watching or analyzing.

1.9. Visuals Used in Dashboards for KPIs

According to (Gonzales, 2015) for KPIs, there are five types of visuals commonly used on dashboards. These are explained below:

Warning icons: The simplest visuality is perhaps the warning icons, which can be either color-coded, shaded in various ways, or can be a geometric shape. Generally, the most commonly known warning icons are circles with the colors of green, yellow and red, each of which gives information about the status of the KPI.

When to Use: Such visualizations are best used when they are placed as a component of other information, or when a dense amount of clearly classified visualization is required. Business balanced measurement chart display tables prepared in the traditional table format can benefit from this visualization in situations where the information in the other columns can be analyzed depending on the status of the warning icon. Such icons are also useful for reporting the status of the system, which indicates whether a machine or application is running. To illustrate the situation, it is necessary to avoid only color-based visualization, as 10% of men and 1% of women are color blind, so it is useful to use shapes with color to indicate the situation.

Traffic Light Icons: It is a simple extension of warning icons; traffic light icons have very few advantages over warning icons in data visualization. For example, the warning icon only needs one-dimensional information, but the screen requires 300% of the area of use. Another advantage of the traffic light icon is that it is a widely understood symbol for transmitting "good", "warning" and "bad" status.

When to use: In most cases, the simple warning icon is a much more effective visual, but it will help more quickly to assimilate the alert information with the familiarity of the traffic light symbol in everyday situations when a large audience uses the display panel less frequently.

Trend Icons: The trend icon represents how the key performance indicator or criterion performs over a period of time. There are three cases: Moves towards a target, moves away from a target, or is static. Various symbols can be used to illustrate these situations, such as numbers or arrow marks. Trend icons can be combined with warning icons and also used to display two-dimensional information in the same visual field. Placing the trend icon inside the color provides this or shape coded warning icon.

When to use: Either the trend icons can be used in situations where you use warning icons, or you can use the more complex KPI visualization that you want to show the KPI change over time.

Development Bars: With a development bar scale, color and limits, it conveys multiple dimensional information about KPI. At its most basic level, the development bar provides a visual representation of the evolution of the one-dimensional axis. With the addition of color and alert levels, it can show when the specific target threshold is passed or how close the specific limit is.

When to Use: The development bars are used to represent the relative development towards a positive real number. They do not work well in situations where the scale you want to represent may also have negative values. Growth bars also benefit when you share a common measure of KPI or metrics in an axis direction (similar to a bar graph) and when you want to see the relative performance of this KPI / metric.

Counters: Counters are a great way to use positive and negative values for quick evaluation at a relative scale. Counters are suitable for time-varying dynamic data, depending on the particular variables. In addition, the use of placed alert levels helps you to see quickly how close or far you are from the specific threshold.

When to use: Because of their tendency to focus on visual densities and user attention, the counters must be stored for the highest level and most critical criteria or KPIs on display tables. Most critical operation hand criteria / KPI consist of constantly changing dynamic values during the day. When you use counters, the most important issues are their dimensions. If it is too small, depending on the quality of the ink used, it is difficult for the user to distinguish the relative values, and if it is too large, there is a risk of wasting valuable visual space. With more sophisticated data visualization packages, the counters can also serve as special guides to the topic because of their visual dominance over the display tables (Gonzalez, 2005).

Demonstration is becoming increasingly popular on indicator labels of KPIs for measuring business performance. They simply have to give a quick, clear and perceptible look at how they go for KPIs. It can show poor performance quickly, usually shown in red. Moreover, it quickly shows how the work is done, and what should be done to achieve success in real world. In addition to this, it also quickly shows who is color-blind in the workplace and who is difficult to understand the display.

The use of colors that display KPIs on indicator labels makes it easier to emphasize good and bad performance. The proper definition of colors also adds professionalism to the presentation of the indicator table.

Color codes are interesting, usually red colors show problems while green shows that everything is all right, with yellow between them. In addition to this, display tables in which everything is in color of gray or mother-of-pearl can be seen occasionally. The following statement from Albert Schweitzer may help explain this:

“The optimist is the person who sees green light everywhere, besides the pessimistic person only sees the red stop lamp. The real wise person is colorblind.” Based on how users ultimately use the indicator tables at work, these wise people are not just color-blind, but they completely blind the colored realities (Fuchs, 2007).

Key performance indicator helps the organization to solve the problems and also increase the efficiency of whole team. Using areas prove the significance of key performance indicators for the organization. Next chapter, performance management and measurement will be discussed. The importance of balanced scorecard method is stated.

2. PERFORMANCE MANAGEMENT & MEASUREMENTS METHOD WITH BALANCED SCORECARD

First of all, performance management will be described in this chapter. Then performance measurement types will be defined by using the balanced scorecard. Perspectives are explained in detailed in second chapter. At the end of this chapter, benefits of balanced scorecard method is mentioned.

2.1. The Concept of the Performance Management

Dess and Robinson (1984) stated that the use of performance in the same sense of success has little to say to the manager and should be described in more detail. Meyer and Gupta (1994) debate that there is a significant conflict regarding to what performance is and that the polarity of the performance indicators leads to a performance paradox so that organizational control continues without knowing exactly what the performance is. On the other hand, some performance authorities seem to have obvious definitions about performance. In these definitions, performance is measured by the outputs that are determinative in reaching the targets and the resources used in the production of the outputs; A determined level of achievement; Is defined as the efficiency and effectiveness of a purposeful activity. They also define efficiency as a reciprocal relationship between performance indicators such as efficiency, quality, quality of working life, innovation, profitability (Akal, 1998).

Performance is complex and difficult to analyze. Performance in general terms; is a quantitative and qualitative description of where an individual, a group, a unit, or a company reaches with that job that it is aiming at, or what is provided with that job. According to contemporary management approach, it is the position reached in accordance with the plans made for a specific purpose and is a multidimensional concept that defines the success of an organization and its degree of achieving their goals (Yıldırım, 2006).

Nowadays, the concept of performance management is viewed as a management tool with great proposals for the transformation of corporate strategies into results. The concept of performance management is a management process in which the organization is tasked with collecting, comparing and presenting new and necessary activities that will provide continuous improvement in performance and relevance to the current and future associations to address the desired objectives. Organizational performance is a combination of economic and human dimension. In order to capture and sustain desired performance, these dimensions must be considered equivalently (Yıldırım, 2006).

The performance management process is a process in which the organizational and functional strategies of the business are managed in harmony with the performance of their objectives. Not only the organizational strategies are important but also functional strategies also play a crucial role on the performance management processes. It is stated that the goal of this process is to provide a proactive control system to ensure that the organizational and functional strategies in operation are spread to all processes, activities, work and employees in operation and then to obtain feedback. It is recommended that this feedback be used to make the most appropriate managerial decisions. In fact, the performance management process in the enterprise also describes how an organization can use different systems to manage its performance. These systems include, but are not limited to, the dissemination and retraining of established strategies, management accounting, management understanding of objectives, formal and informal non-financial performance measures, reward systems, personnel appraisal and retraining. At the heart of the performance management process is an information

system that provides good diffusion and feedback. This information system is actually a performance measurement system. This system integrates appropriate information from all the systems mentioned above. In this context, integration provides a regular framework that will let the performance measurement system to collect feedback in order to facilitate decision-making and control processes, as well as the correct extension of the strategic and tactical objectives of the business (Elitaş and Ağca, 2006).

The performance measurement system in enterprises takes into account organizational structure, organizational processes, functions and related relationships, as well as strategic and environmental factors related to the delivery, in order to be effective in reaching the targets. Similarly, the effectiveness of the performance management process in the enterprise is based on the use of performance measurement systems. In this context, how the performance measurement system is used to manage the performance of the organization is characteristic of the effectiveness of the performance management process. In the performance management process, rigid factors such as reporting culture, responsibilities and the use of information technology are considered, as well as soft factors such as culture of delivery, behavioral issues and attitudes. In this context, the structure of the performance measurement system and the organization of its elements play a critical role in performance management efficiency and effectiveness (Bititci vd., 1997).

In the performance management literature, the topic of performance measurement has been dealt with in different ways by researchers from many disciplines. As the performance measurement of a business has diverse dimensions related to the management of the business, it is seen that this topic is analyzed by the different disciplines in terms of their own perspective and approach. Although the issue of measurement of the performance of in a business is examined by different disciplines in different approaches, it seems that all disciplines basically explore the answer of the two problems. One of them is the determination of an organizational performance; the other is related to how performance can be measured (Elitaş and Ağca, 2006).

2.2. Performance Measurements

Performance measurement is an approach that is the basis for the necessary measures to be taken such as determining the performance level of the company, measuring the extent to which principles can be reached, and identifying problems. The performance in the companies needs to be systematically measured and evaluated. First of all, it is necessary to determine the objectives and appropriate performance indicators and standards so as to enable an objective evaluation based on the comparison, to collect the data related to these and to perform the measurements. Performance measurements are methods used to measure the performance of the company itself according to predetermined performance indicators or indicators to achieve performance improvement goals.

The number of companies, which are, used performance measurement as a management tool, increasing aggressively all over the world; on the other hand it is one of the significant instruments of accountability to the company's stakeholders. In this context, the identification of performance indicators plays an important role in the efficient management of firm performance. Indicators are derived from the relationship between direct measures that measure different aspects of company's activity and are expressed in the form of an index, a ratio, a measure of unit pressure, or another comparison (Elitaş and Ağca, 2006).

There are two main purposes of performance appraisal. The first of this purpose is to learn about business performance. This information will be necessary when making managerial decisions. The other purpose is to provide feedback on how closely the employees are approaching the standards set in the job descriptions and business analyzes.

Table 3: The reasons why we need to evaluate performance

Employee	Organization	Performance
Having an idea about the competencies of the employees,	To be able to make decisions based on real events,	To be able to see the level of understanding of what you want to perform in the facility,
To examine by comparison the benefit which do workers create in business.	To be able to look at the business as a whole,	To be able to reveal the effectiveness of the use of resources analytically,
To motivate obvious behaviors,	To be able to see the level of vision and mission sharing in the enterprise,	Questioning the processes of reaching the targets,
	To determine the individual and organizational training needs,	To identify positive results and celebrate.
	To be able to keep the tendency of development of the enterprise constantly,	
	To identify individual or organizational perceptions within	

	the same structure,	
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2.3. Contribution of the Performance Management System

It is possible to find out what advanced countries have taken for granted in the following words that Taylor expressed years ago.

Today, mind of the humanity is in competition. One of the most significant mind tools that will bring out the results of this competition is creativity. It is not right to look for the originative behaviors only in progress of science that affect an entire society at a great extent. Nations, who know best how to choose, improve and support creative potential among their own people may have a much more advantageous position among others (Yıldırım, 2006).

We can summarize the benefits of performance appraisal systems, employees, managers and business, which are aimed at improving the employees and therefore the business, in the following manner.

2.3.1. Benefits to the Employees

Performance appraisal is a very important requirement in terms of human resource management within the business as much as an individual psychological need at the individual level. Because, being able to see the achievements and failures of the employees in a business is important for the motivation of the employees as well as to organize their subsequent work (HalisandTekinkuş, 2003).

Much can be done to support people, performance support is one of them. Performance support is one of them. Therefore, although a complete description of performance support cannot be given, it is the support managers need to provide in order for their employees to achieve high performance.

We can list the benefits of the performance appraisal system to employees (Yıldırım, 2006):

- It allows the worker to know what kind of plans their superiors have about the performance they show and to meet the need for "realization" and "recognition",
- It encourages employees taking responsibility about their performance,
- It allows employees to receive feedback on their performances and establish two-way communication with their superiors,
- It aids the workers to direct their forces in the right direction and enable them to know the expectation from them,
- It helps the career improvement of the employees.

2.3.2. Benefits to the Manager

The benefits of performance measurement for managers are listed below (HalisandTekinkuş, 2003):

Table 4: Benefits to the Manager

Employee	Performance
It strengthens relations and communications with subordinates of managers,	It also helps managers to assess their own performance.
It allows managers to pinpoint high performance employees to be rewarded,	It improves the individual productivity of the managers,
It allows the managers to direct their employees to work more effectively,	It strengthens team work,
	It also helps managers to assess their own performance.

2.3.3. Benefits to the Business

The benefits of the performance appraisal are also shown below (HalisandTekinkuş, 2003):

Table 5: Benefits to the Business

Employee	Management	Organization
It ensures that institutional goals are clearly announced to employees,	It forms a resource to management reporting and information system,	It creates an infrastructure for promotions, transfers, wage increases and other decisions in the field of human resources,
It helps establish strong and healthy relationships at work,	It ensures that the level of reach of the enterprise's targets can be monitored on different units,	It provides input to the training and development needs of the overall procurement,
	It also helps policy makers and decision makers in the evaluation of policies.	It helps to control human resources systems,

2.4. Inadequacy of Traditional Performance Appraisal Methods

In today's business world, traditional performance appraisal methods are said to be inadequate. Conventional performance appraisal methods have positively contributed to industrial enterprises in the industrial age, but it has been seen vital that innovations in financial criteria and financial criteria are growing successfully in these establishments. Measuring the profitability of investments in the achievement of businesses such as DuPont and General Motors, which made great achievements at the beginning of the twentieth century, has been a very important part of innovations such as investment and cash budgets. Significant growth in the service industry and increasing global competition has caused enterprises to seek alternative control and performance appraisal method. From the beginning of the 1980s, management accounting researchers have begun to express that traditional control and performance appraisal methods are inadequate. Traditional performance appraisal methods based on financial measures are criticized from various angles (Tunçer, 2006). The issues related to the inadequacy of traditional performance appraisal methods are discussed in detail below.

2.4.1. Mainly Consisting of Financial Measures

Traditional performance appraisal methods are based primarily on financial criteria. However, developments in the field of performance appraisal show that financial measures cannot provide the correct information to reflect the performance of the transmission. Professional associations also recommend that non-financial criteria be used more in performance reports. For example, the Canadian Institute of Accountants recommends that traditional performance appraisal criteria are predominantly financial criteria and that they are now inadequate and should include non-financial criteria as well as financial criteria in performance reports (Güner, 2006).

2.4.2 To Be Focused Short-term

As the financial measures show the previous period, it is too late to determine the values that are revealed or lost because of the managers' behavior in the last period. In addition, financial criteria describe only a part of the issues related to past behavior; they do not have the capacity to provide sufficient guidance about the behavior that must be achieved today or in the future in order to create future financial values (Kaba, 2009). In fact, placing too much emphasis on short-term financial results leads firms to allocate resources to short-term investments on a cyclical basis and not allocate sufficient resources to invest in long-term value creation (Güner, 2006).

2.4.3. To Be Past-Oriented

Financial reports assess past performance, but give little information about the future value of the enterprise. Because, financial reports are generally organized at regular intervals and reflect the results of past decisions. For example, sales reports simply show what happened last week, last month, or last year. However, most managers want to have measures that show what happens next week, next month and next year. Financial metrics describe only a part of the tale of past behavior, not a whole part, and do not provide sufficient guidance on behaviors that must be achieved today or in the future in order to create future financial values (Kaba, 2009).

2.4.4. Not Supporting Strategic Applications

One of the reasons for failure in strategic implementations is the use of financial measures in a weighted manner in performance appraisal. When only financial benchmarks are used in evaluating the performance of the outsourcers, managers and employees are working to obtain financial results that can be seen in the short run, and they are away from strategic activities that will contribute to the business in the long run and provide long term success of the business. In this sense, it is not possible to say that traditional performance appraisal methods are qualitative measures supporting the strategic implementation capabilities of the enterprises (Güner, 2006).

2.4.5. Not Matching the Reality of Business World

In industrial society, enterprises can obtain significant competitive advantages with their physical facilities, production facilities, machinery, and equipments. In the information society, it is seen that intangible assets are more effective than property assets for the success of the business. Intangible resources for the achievement of knowledge-based enterprises are much more important than traditional physical and material resources. By incorporating these resources into cost accounting, organizations will be able to succeed to show improvements they have achieved in these resources to their employees, shareholders, investors and collectors. When it does not happen, that is, when the enterprises reduce their intangible assets or consume them, the negative effects will immediately be reflected to the business operator. Past direct labor costs were one of the most important cost carriers. However, nowadays direct labor costs rarely exceed 12% of product cost, while general production costs are around 50-55%. As a result of this change, it has been revealed that the developed performance appraisal criteria for the past production environments cannot meet the expectations of today's business world (Güner, 2006).

2.4.6. Being Irrelevant to Many Parts of the Business Departments

Financial reports are structured in the form of summary reports due to its structure. The reports prepared in this context have significantly lost their transitional characteristics from one process to the next. Financial reports are undergoing such a change when they arrive at the top level from the lower level, often move away from the characteristics of managerial and staff supportive the process of the decision-making. From this point of view, traditional performance appraisal methods based on financial criteria cannot provide the information, which cover the whole of the business and cannot help employees to manage their day-to-day work (Güner, 2006).

2.5. As a New Model for Performance Management System: Balance Scorecard

To reach the performance goals expected from individuals in the management process of the organizations is of great importance. In addition to this, organizational employees who are behind the desired performance can also come to the forefront. This poses a necessity for the organizational managers to rationally determine the performance problems that may arise in the performance measurement process (Barutçugil, 2002).

Key elements that indicate performance problems among organizational staff are at the forefront with these titles shown below.

- Decrease in productivity in organization,
- Decrease in job quality in organization,
- Not obeying the working hours of the organization,
- Increase in complaints within the organization,
- Decrease in communication within the organization,
- Decrease in cooperation within the organization,
- Increasing tendency to accuse others for failures within the organization,
- Repeating behaviors such as being late or not coming the work in the organization (Barutçugil, 2002).

Performance management is at the forefront as a process that requires the use of modern approaches to solving performance problems that may arise. Performance measurement as part of this process, when structured correctly in line with the objectives set by the organization, allows for organizational development as well as the development of the employees. The effectiveness of the performance measurement system improves the organization's employees' personal abilities in the direction of realization of the organizational goals (Öztürk, 2009).

With the spread of entrepreneurial cultures in the 1980s and the market economy being at the forefront, the concepts of being able to gain competitive advantage, rationality in resource use and creating value have gained popularity. With the development of the human resources management approach, the concept of performance management has also become widespread (Öztürk, 2009).

Human Resources Management;

- Strategic approach,
- The integration of human resources strategies and organizational strategies,
- In organizations, investing in feeder capital by extracting the value and importance of human capital and human resources to the forefront,
- Ensuring that the employees of the organization participate in the organizational decisions and management processes,
- To create a culture of organization that is consistent with the values and mission that the organization has determined,
- The organization intends to increase its progress and earning opportunities in the process of reaching organizational goals. The adoption of the stated objectives by organizations and their implementation has contributed to the development of the performance management process (Öztürk, 2009).

Organizations that strive to realize the goals they set in advance and spend their input in the production processes and present the outputs within the scope of the products that are put out again need to measure performance in order to receive feedback in the process of reaching the determined organizational goals. Performance measurement is one of the important processes for organizations to continuously improve their performance by clearly and rationally determining their successes and failures (Keskin, 2009).

The downsizing of organizations, organizational unions and other change strategies are the transformational processes created by the rapid change process in organizational

structures. The adaptation of organizations to the process of transformation is becoming increasingly dependent on the mobility of organizational staff and the rapid development of their existing competencies. This situation gives priority to the effectiveness of the performance measurement processes on the productivity of the organization's employees (Elitok, 2005).

Senior organizational leaders who identify the limitations of reporting processes based on financial objectives are conceptualized as the vital importance of the impact of organizational development on a performance measurement system that is well designed in the process of achieving organizational goals. This has led to the development of balanced measurement card technology in the preparation of reports on organizations' current performance. Balanced measurement card technology also allows traditional financial measurement systems, while at the same time it enables organizational strategies to be expressed as numerical targets and performance measures (Çelik, 2006).

The inadequacies of traditional performance-based systems can cause organizations to get rid of the performances of their organizations and achieve a lower level of performance than they can achieve. The use of modern approaches in the performance measurement process has become a necessity to avoid the stated limitations. One of these modern approaches is the balanced scorecard model (Kaba, 2009).

At the most strategic level of the business decision-making spectrum, there is a balanced scorecard at the top. A balanced measurement card is mainly used to assist the alignment of the operational executive with the business strategy. The aim of a balanced scorecard is to focus the work on a common strategic plan, by monitoring the actual execution and mapping the results of this executive to a specific strategy. The key criterion used in a balanced measurement card is the key performance indicator. Key performance indicators are a combination of other key performance indicators that often measure the ability of several measures or institutions to perform a strategic goal (Gonzalez, 2005).

Balanced measurement cards are used worldwide in business and industrial, government and non-profit organizations; Is a widely used strategic planning and management system to direct business activities in line with the vision and strategy of the organization, to increase internal and external communication, and to monitor the performance of the organization towards its strategic objectives (Balanced Scorecard Institute, 2009).

A balanced scorecard is not just a measurement system, but a management system that allows organizations to clarify their vision and strategies and turn them into action. It also provides feedback from both the internal business process and external outputs to continuously improve strategic performance and results. When used in a fully effective way, a balanced measurement card transforms strategic planning from an academic exercise to a nervous center of operation (Lawrie and Cobbold, 2004).

A balanced scorecard is an easy to understand format for describing the organization's goals and achievements. It has proved useful in the following points:

- Communication of strategic intentions (firms need to include managers and employees every day);
- Discussing actions that are driven by strategic objectives rather than current requirements;
- Monitoring and rewarding such activities (Olve and Sjostrand, 2006).

The balanced measurement card is designed as a strategy planning and execution tool that can more accurately and clearly convey the definition of the components of the strategy, which can be used to manage resource mobilization and align operational activity. Challenges are not the proper definition of the organization's strategy, but the implementation of this strategy in all business areas of the organization. Therefore, the success of a balanced scorecard requires organizational change. Unfortunately, the change in an organization is not determined by what is best for the subsequent organization. Moreover, a complex cocktail of organizational effectiveness determines

whether and how fast it is changing to support strategy implementation. In the course of managing the exchange, the following aspects must be a fundamental part of a balanced scorecard application:

- Managing political prejudices,
- Routing in employee behaviors and work practices,
- Motivate constructive behavior (McCann, 2009).

2.6. Emergence and Development of the Balance Scorecard Method

Balanced scorecard performance measurement method is developed by Robert S. Kaplan, a professor at Harvard University's Department of Rehabilitation and David P. Norton from the Renaissance Consulting Company in the United States for the need of a performance measurement method that includes the other functions of the enterprise, as traditional financial measurement methods are not sufficient for performance measurement alone. In 1990, the two initiated a research called "Performance Measurement in Future Organizations" and implemented innovative performance applications with 12 selected company executives and with the development of the works, balanced scorecard method was emerged (Baynal and Karasakal, 2008). The balanced scorecard is then the most commonly used method of multidimensional performance measurement. Kaplan and Norton have applied this new system to more than 300 companies in nine articles and five books between 1992 and 2008; there are 27,100 in Google Scholar, and 3,622 articles in Science Direct about balanced scorecard. This result shows that the development and application of the BSM is prevalent. Some traits can be obtained from previous publications of Kaplan and Norton before 1997. The balanced scorecard should have at least the following characteristics:

- Mix of financial and non-financial measures,
- Limited quantities,
- The original names "Financial", "Customer", "Internal Process" and "Innovation and Learning", which are divided into 4 groups under the

name of Perspectives, But the last two have been renamed "Internal Business Process" and "Learning and Development",

- Selected metrics to relate specific strategic objectives - one or more metrics, often documented in tables, each associated with an objective,
- Measurements should be chosen in a manner that provides active support for the senior management of the organization, reflecting both strategic access privileges and the importance of approval and support for strategic communications that will emerge from the balanced measurement card after being designed.
- Some should show causal relation. It is unclear what Kaplan and Norton mean by their work: The 1992 and 1993 articles explain the linkages between the four perspectives but do not discuss these links in the article. One article discusses and explains the need to demonstrate the causal link between the criteria in the Balanced measurement card perspectives in a manner that envisions the construction of a second generation balanced measurement cards. But in the 1996 books it also suggests causality to be between "performance (leader)" measurements and "output (latency)" measurements (Lawrie and Cobbold, 2004).

2.7. Balanced Scorecard Execution Processes

In the balanced scorecard performance measurement, after the company's mission, vision and strategies are determined, whether there is a different perspective to be measured in addition to the four perspectives of the method is evaluated. Following the assessment made, determining measurement criteria for four or more perspectives makes a chart. Each measurement criterion after the chart is divided into the subjects to be measured and evaluated in a new table. The new two columns to be opened on the right side of the chart are added to the target measure (objective) and the actual measure (criteria) from the past data. If desired, it is possible to make comparisons in a single chart by inserting as much data as needed with new columns added to the right or left. After all these creating a chart processes, the top management can interpret the points that need to be focused more clearly because the company's missing aspects and the

distance to its targets are determined. The performance measurement results are in the form of support from top management in terms of strategy development, decisions to be taken, implementation of these decisions and follow-up of processes.

2.8.Relation and Role of Key Performance Indicators with Balanced Measurement Scorecards

Key Performance Indicators (KPIs) help organizations identify and measure their progress toward organizational goals. Once you have defined the organization's mission, its partners, and its goals, these goals need a way to measure their progress. Key performance indicators are these measurements. Whichever key performance indicators you choose, they should reflect the goals of the organization, be a key to the success of the organization, and be measurable. KPIs are associated with organizational strategies through practices and methods such as the "Balanced Scorecard". These indicators help an enterprise measure the level of progress in reaching organizational goals. For example, the sales per customer are increased from a certain percentage to a different percentage (Tek, 2009). The goal of the balanced measurement card is to keep track of the real world executions and to focus the work on the common strategic plan by translating the results of these executions into the original strategy.

2.9.The Perspectives of the Balanced Scorecard

A balanced measurement card suggests that we should think of the organization from four perspectives and we need to develop and collect data and analyze it according to this perspective. The idea is that the first category, learning, development and innovation, starts with people (employees and partners). At the same time as these people achieve strategic objectives, they will achieve the defined strategic objectives to develop and create second-category business processes. This business acceleration accumulation and priorities will continue to contribute the customer loyalty and satisfaction of the third category. Thus, the energies and choices of employees, such as the driving force of the magnetic field in physics, will collectively contribute to

achieving the strategic goals of the final and fourth category of financial targets. A sample measurement criteria table is given in Table 6 (Baynal and Karasakal, 2008).

Table 6: Balanced Scorecard Dimensions

PERSPECTIVES			CRITERION		
FINANCIAL PERSPECTIVE	Increasing profits	Growing	Increasing efficiency	Reducing costs	Taking cash return period down to current level
CUSTOMER PERSPECTIVE	Customer loyalty	Customer satisfaction rate	Completing product range		
INTERNAL BUSINESS PERSPECTIVE	Inventory usage ratio	Efforts to develop new products and services	Minimization of operational problems	Energy costs/ sales ratio	

LEARNING AND GROWTH PERSPECTIVE	Training of Employees	Satisfaction of employees	Persistence of employees	Self-improvement of employees and career opportunities	
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2.9.1 Financial Perspective

Kaplan and Norton do not overlook traditional needs for financial data. Timely and accurate financing data will always be a priority and managers will do whatever it takes to ensure them. Generally, financial data are handled and processed more than necessary. With the application of the company database, most transactions are expected to be centralized and automated. However, it is important to note that the current emphasis on financial means leads to an unbalanced situation in terms of other perspectives. This category is likely to include additional financial data such as risk appraisal and cost-benefit data (Balanced Score Card Institute, 2009).

Examples of financial measures: Profitability, return on investment, income growth, cost control, productivity, asset management, investment strategy. The objectives and measures in this perspective are shown in Table 7 (Toten, 2009).

Table 7: Financial Perspective of Balanced Scorecard Management

OBJECTIVES	MEASUREMENTS	RESOURCES
Sales	Annual rise of the sales and the profits	Karakılıç N. (2009,209)
Increasing profits	Increasing the overall profitability of the business	Ağça and Tunçer (2006,188)
Financial Success	Increasing in sales and unit operating revenue in each quarter	Kaplan and Norton (1992,76)
Taking cash return period down to current level	Reducing stock waiting time	Ağça and Tunçer (2006,188)
Reduction of unit product	Cost of the unit product	Kaygusuz. S. Y. (2005,91)

cost		Ağça and Tunçer (2006,188)
Reduction of unit customer cost	Cost of the unit customer	Kaygusuz. S. Y. (2005,91) Ağça and Tunçer (2006,188)
Development of entity usage	Asset capital turnover, Economic added value	Kaygusuz. S. Y. (2005,91)

2.9.2 Internal-Business-Process Perspective

This perspective is related to the operation of the internal business. Criteria based on this perspective allow managers to know how well their business works and also allow managers to know whether products and services meet customer needs. These criteria should be carefully designed by those who are familiar with these processes, along with the unique mission of the business. It is not something that can be developed by outside consultants because it has its own mission (Balanced Score Card Institute, 2009). If the organization knows their clients financial perspectives clearly, they can offer the true price easily. The perspectives of the internal business include the following critical organizational activities divided into four top-level processes: First of all, to build new grocery stores and customer segments and to support agencies to develop new products and services to support innovation is important. Secondly, increasing the customer importance by expanding and deepening relationships with existing customers are crucial. Then, it is important to achieve operational excellence by developing supply chain management, internal processes, use of goods, resource capacity management and other processes. Lastly, being a good corporate citizen by developing effective relationships with external shareholders are play a crucial role. Most companies that adopt value-added customer relationships or adopt a strategy that requires innovation accidentally choose to measure the perspectives of their internal processes by focusing only on the cost and quality of their operations. These companies have complete indifference between strategies and how they measure them. As expected, organizations face great challenges in implementing growth strategies when their underlying genetic measures emphasize process development rather than innovation or improved customer relationships. The financial benefits provided by the developments in the different business processes often occur in stages. Cost savings from increased operational

efficiencies and process improvements bring short-term advantages. Revenue growth without improving customer relationships occurs in the mid-term. Increased innovation usually generates long-term revenue and margin increases. A complete strategy is to bring back all three high-level internal processes (Kaplan and Norton, 2001).

Examples of in-process perspective: customer service, innovations, operational efficiency, quality, resource utilization, cycles. The objectives and measures in this perspective are shown in Table 8 (Toten, 2009).

Table 8: Business Process of Balanced Scorecard Management

OBJECTIVES	MEASUREMENTS	RESOURCES
Increase in number of new products	Number of new products / planned new product	Kaygusuz, S. Y. (2005,96); Kaplan and Norton(1992,76) Ağça andTunçer (2006,190)
Increase process quality	Quality costs, percentage of defective products	Kaygusuz, S. Y. (2005,96)
After sales service	Percentage of customer satisfaction after service	Karakılıç, N. (2009,20)
Technological adequacy	Production geometry / competition	Kaplan and Norton (1992,76)
Process improvement	Decrease in error rate, added value analysis	Kaygusuz, S. Y. (2005,96)
Start a new product	New product sales, new product demand	Kaygusuz, S. Y. (2005,96); Ağça and Tunçer

		(2006,190); Kaplan and Norton (1992,76)
Job satisfaction	Business survey	Kaygusuz, S. Y. (2005,96)
Energy costs	Energy costs / sales ratio	Ağça and Tunçer (2006,190),

2.9.3 Customer Perspective

Current management philosophy shows that awareness of customer satisfaction and customer satisfaction increases in every business. These are the most important indicators; if the customers are not satisfied, they will naturally find other suppliers to meet their needs. Showing poor performance in this perspective is the most basic indication of the things, which will get worse in the future even though today's financial values are good. When determining the criteria for satisfaction, customers should be analyzed according to customer types and product and service processes provided to those customers (Balanced Score Card Institute, 2009). At the heart of every business strategy is a customer-value presentation that defines a mix of product, price, service, relationship and company image. It defines how this organization differentiates itself from its competitors in attracting, retaining and deepening relationships with target customers. The value offered is very important because it helps organizing its processes in conjunction with its clients in the improved output relationship. Choosing between operational excellence, customer privacy, and product leadership differentiates the offered values of the firms. Sustainable strategies can be achieved by satisfying at least one of these three, while fulfilling the basic standards of the other two. However, once you have defined your own value, the firm knows which customer type and class should be targeted. Companies that follow the operational excellence strategy in particular should be excelled on competitive price, product quality, product selection, and delivery

time and on-time delivery. Companies that follow customer privacy should emphasize the quality of its relationship with its customers, including its exceptional service, and the suitability and integrity of the solutions offered to each customer. Strategies for companies that follow product leadership should focus on the functionality, features and performance of its products and services.

The customer perspective also identifies the expected outputs from the differentiated value presentation. These include market share in the target customer segment, share of deposits of target customers, acquisition and retention of customers in the targeted segment, and customer profitability (Kaplan and Norton, 2001). Examples of Customer Perspectives: Market share, earned customer, held customer, customer satisfaction. The objectives and measures in this perspective are shown in Table 9 (Toten, 2009).

Table 9: Customer Perspective of Balanced Scorecard Management

OBJECTIVES	MEASUREMENTS	RESOURCES
Customer complaints	Reduce number of annual customer complaints	Karakılıç, N. (2009) p.209
Continuous, timely delivery	Responding to orders	Kaygusuz, S. Y. (2005) p.94
Development of mutual relations	The number of customers who are traded with	Kaygusuz, S. Y. (2005) p.94
Customer loyalty	Providing customer continuity	Karakılıç, N. (2009) p.209; Ağça and Tunçer (2006) p.189
Customer satisfaction	Zero mistake, just in time delivery, high quality, low price	Kaygusuz, S. Y. (2005) p.94; Kaplan and Norton (1992) p.76
Collaboration with customers	The number of customers who are involved in product development or marketing cooperation	Kaplan and Norton (1992) p.76
Increase product quality	Percent of refund	Kaygusuz, S. Y. (2005) p.94

2.9.4. "Learning and Growth" (Innovation and Learning) Perspective

The performance measures in the previous three perspectives are short-lived. They are regularly reported and show improvement and success over a relatively short period of time. But in order to remain competitive in the changing environment, companies must adapt and continue to offer products and services they would like to buy. Criteria in the innovation and learning perspective highlight the long-running trend compared to other short aspects (Berry et. al, 2005). This perspective includes employee education and common cultural attitudes regarding personal and corporate development. In the organization of an information worker, people (the sole information store) are the main source. In today's fast technological change conditions; it has become necessary for knowledge workers to be in continuous learning mode. Criteria can be positioned to guide managers to focus on where they can most benefit from educational funds. Learning and growth are already the cornerstone for the success of any information worker organization.

Kaplan and Norton emphasize that "learning" is more than "education". Learning not only includes the need for communication between employees to be able to easily obtain help when they need help with a problem, but also includes things like consultants and trainers within the organization. It also includes technological tools that the Baldrige criteria call "high performance operating systems" (Balanced Score Card Institute, 2009). The last region of a strategy map is the perspective of learning and growth that is fundamental to each strategy. In the learning and growth perspective, managers define the skills and competencies that are needed to work, the technology and the institutional environment required to support the strategy. These goals allow a company to align its human resources and information technology with the strategic requirements from critical internal business processes, differentiated value proposition and customer relationships. Once you have defined the learning and growth perspective, companies acquire a complete strategy map with the four relevant main perspectives (Kaplan and Norton, 2001). Examples of learning and growth perspectives: employee skills, retention, productivity, information systems competence, knowledge

management, employee empowerment, motivation, and alignment of values (Toten, 2009). A balanced scorecard measurement is best formed by transforming the strategy of the organization into goals, measures, targets and actions in each of the four perspectives and by a common agreement. Transmission of vision and strategy make the executive team specifically explain what it wants to say with some indefinite definitions such as "worldwide", "best service", "target customer" in the strategy. Without a clear and precise strategy, balanced measurement card-like systems can be developed and many organizations do it. However, it is more accurate that these types of financial and non-financial measures are called key performance indicators or key shareholder ratings because the balanced measurement card and strategy go hand in hand. Kaplan and Norton sum it up very nicely: The formulation of a strategy is art. However, the definition of a strategy should not be art, and if we can define the strategy in a more disciplined way, we increase the likelihood of successful implementation. Now with a balanced measurement card that tells the story of the strategy, we now have a reliable foundation. The objectives and measures in this perspective are shown in Table 10 (Kaplan and Norton, 2001).

Table 10: Learning and Growth Perspective of Balanced Scorecard Management

OBJECTIVES	MEASUREMENTS	RESOURCES
New product leadership	Sales from new products, R&D expenditures, share of design costs in total cost	Kaplan and Norton (1992,76); Kaygusuz, S. Y. (2005,97)
Improving the skills of the employees	Working satisfaction, trainings, working speed	Kaygusuz, S. Y. (2005,97); Ağça and Tunçer (2006,190); Karakılıç, N. (2009,210)
Ensure that employees improve themselves and career opportunities	Transition from part-time to full-time	Ağça and Tunçer (2006,190)
Satisfying customers	Increase the level of satisfaction of work	Karakılıç, N. (2009,210)

Technology leadership	New product development time	Kaygusuz, S. Y. (2005,97)
Product Focus	Number of products that correspond to 80% of sales	Kaplan and Norton (1992,76)

In the BSM, each perspective is connected to the cause - effect relationship between each other, and the activity carried out in each perspective frame affects one another. For example, the right activities within the company's learning and growth perspective can improve the financial situation of the company, while the well-financed firm may also be able to differentiate itself from the activities carried out within the framework of learning and growth perspectives. The causal relations between the perspectives are shown in Figure 4 (Cebeci, 2012).

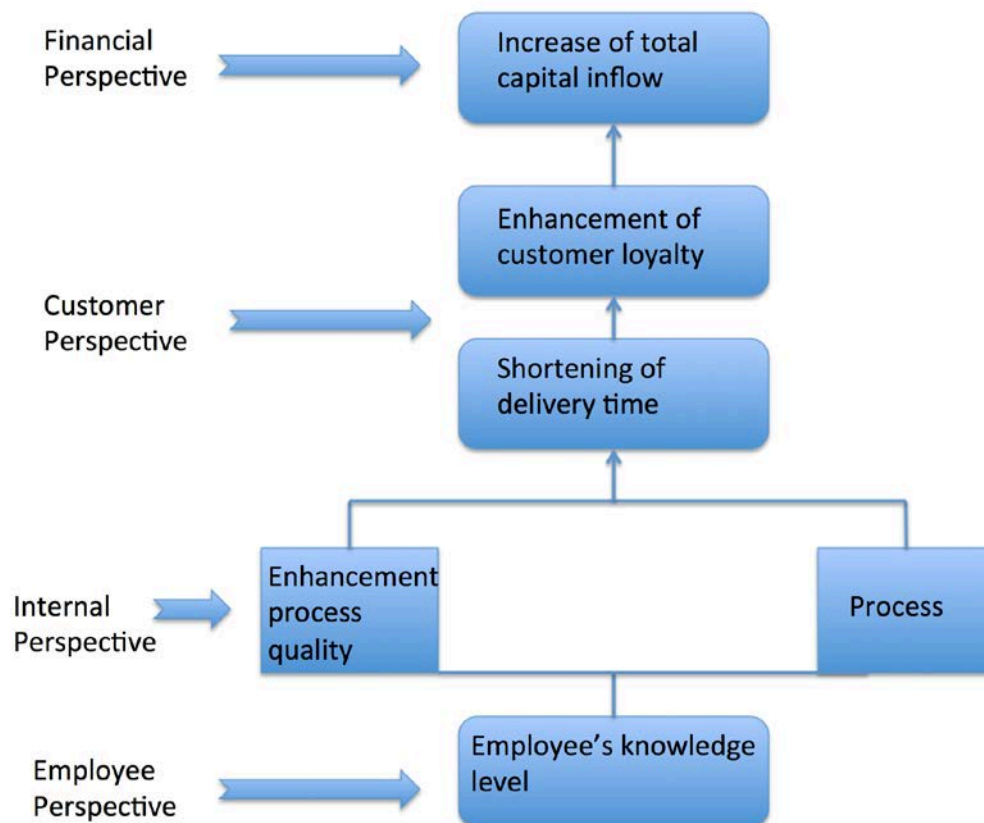


Figure 4: Cause and Effect Relation of Balanced Scorecard Perspectives

2.10. Implementation of Balanced Scorecard

There are various reasons why companies use balanced scorecard. None of the causes that seem to be the reason for the transition to practice are intended solely for the purpose of improving the measurement system. Each reason for starting balanced scorecard is part of a broader purpose. There are no examples of failure in balanced scorecard implementations. At the same time, in any application balanced scorecard is not limited to the purpose of the beginning. It draws the attention as a development that has begun to change processes (Kaplan and Norton, 2003).

2.11. Deficiencies of Balanced Scorecard Method

One of the most important criticisms of the balanced scorecard performance measurement method is that it does not contain environmental factors, as edited by Kaplan and Norton. Although initially adapted by Kaplan and Norton (1996b), as well as by other researchers to incorporate environmental factors, they were not initially designed as a supply chain environmental measurement tool.

Other criticisms of the method are listed as not including people's individual performance, not including environment and competitor's measurement perspectives and not including the environmental and social characteristics of the industry (Shaw and Grant, 2010).

When desiring to involve of the expectations of the other stakeholders to the application of the balanced scorecard, the effect of company-generated products and services, such as the impact of regional groups, and the diversity of multinational companies' working environments in different regions can render the four-perspective system ineffective (Zingales et. al., 2002).

Epstein and Wisner (2001) try to add more social criteria in this regard, such as the measurement criteria, staff entry / departure ratios, training budgets, and the effect of increased awareness of the company on sales. Because the operation to be carried out in

the study, it is not a multinational operation, specified deficiencies are not taken into account by Zingales et al. (2002).

2.12. Benefits of Balanced Scorecard Method

Balanced scorecard is a simpler method compared to other performance measures and is a comparable method in which the company's historical data can be evaluated. For this reason, it is the most applied performance measurement method in the literature. Indeed, the United States Environmental Protection Agency has set the BSM as the main method of strategic method identification, anticipation, and process measurement of the identified objectives (Hervaniet. al., 2005).

Balanced scorecard indicators play a key role in decisions to be taken as companies show both past and future activities. Decreasing operational and management costs, increasing revenue and company awareness guides managers regarding potential decisions (Eptesinand Wisner, 2001).

The benefits of the BSM, according to the Strengthened Scorecard Report published by Epstein and Wisner in 2001, are:

1. Benefits in terms of financial,

- Reduction of process costs
- Reduce management costs
- Increase in share premium with improvement in financial structure.

2. Benefits in terms of customers,

- Product development and innovation
- Market share increase
- Awareness increase

- Opportunity to enter new markets

3. Benefits in terms of transactions,

- Process innovation
- Productivity increase
- Lower product lifecycle
- Earnings increase from fewer resources
- Waste minimization

4. Benefits in terms of organizational,

- Employee satisfaction
- Better relationships with shareholders
- Reduced risks
- Increased learning rate

Performance measurements of companies with balanced scorecards also increase the accountability of companies. It also provides a strategic management system with managers that offer better communication and measurement to all employees, external stakeholders, supply chain members, and shareholders (Epstein & Wisner, 2001). Because it is a model that shows all the strategic issues together, it also allows top managers to make integrated decisions in all matters throughout the perspectives (Kaplan and Norton, 1992).

2.13. Elements to Consider When Implementing a Balanced Scorecard

No matter how successful a method is, if it cannot be implemented well, it is very difficult to give positive results for the delivery. Therefore, there are some factors to be

considered when applying this technique in order for the BSM to be successful. These aspects can be listed as follows (Kaygusuz, 2005):

Table 11: Crucial Factors for Successful Balance Scorecard

Business	Management	Operation
All businesses are different and there is no standard solution that can fit into all businesses. For this reason, balanced scorecard model implementation should focus on its own strategies and vision.	The support and management of top management in the performance measurement system is very important.	Meetings should be held with the employees when balanced scorecard is formed and the support of the employees should be taken while the performance measures for the installation workers and units are being determined.
Balanced scorecard needs to be perceived as an application that will move the strategic decisions of the enterprise.	The relationship between performance measures and critical success factors must be established.	Less performance measures are more effective measures. For this reason, the measures and objectives should be limited and in a balanced manner with each other, only those that are considered important should be included in balanced scorecard.

In order to encourage employees, the relationship between the balanced scorecard results and the reward system should be established.	The balanced scorecards for different levels within the facility should be compatible, and the balanced scorecards for the top management should be involved in the lower levels.	It is necessary to connect the performance measures with the causal relationship and consequently to connect the desired output.
Businesses that decide to implement balanced scorecard need to be careful at every stage of the above policy process.	Regular use of the balanced scorecard technique by the management and regularly scheduled reports are required to form a meeting agenda.	The system may not sit right in full compliance, and instead of removing it from the application; it is necessary to go through remediation.

2.14. Barriers in Balanced Scorecard Execution

BSM as a performance measurement system should be planned, implemented and updated as necessary. As is the case with other performance appraisal practices, businesses can also be interfered with in balanced scorecard applications.

It emerges as an obstacle in situations where the installation strategy cannot be turned into the objectives of departments, teams and individuals. The teams and individuals who create the departments will not consider the development of the capabilities and competencies that will ensure long-term strategic goals are achieved, as their objectives will be determined by the department's short-term tactical weighted goals. As long as there is such a disconnection between the strategies of the undertakings, well-designed and planned strategies will be difficult to adapt to the workforce. In order to overcome this obstacle, it is necessary for managers, teams and individuals to align their objectives with those of the enterprise in parallel and harmoniously.

The lack of feedback on how balanced scorecard is being implemented and whether it is being processed is also an obstacle. Today, most businesses provide feedback that evaluates operational performance against budget targets as a result of monthly and quarterly developments within the framework of financial metrics. In this case, it is necessary to leave time for the system to be applied and for the examination of the success indicators. As long as there is no feedback, it becomes impossible to check the system and obtain information about the system (Kaplan and Norton, 2003).

Putting strategic priorities in order as in BSM, and doing performance measurement accordingly, can be counterproductive to the dynamic nature of the business. Because the inside / outside environment is not static. The "time-to-live" of information that the business owner has may not be long, it may quickly go away. Strategies must therefore keep pace with this change. It should be noted whether balanced scorecard give this establishment its dynamic viewpoint. In most reports, managers want to see information based on traditional financial data, which tradition can be an obstacle (Yıldırım, 2006).

In order to compete, businesses have to identify and evaluate their intellectual assets, which are not very physical from their tangible assets. If businesses do not take into account non-physical assets such as quality product / service, customer satisfaction, organizational learning, motivation, employee skills, quick response internal processes, new product development, customer loyalty, they cannot measure their true value. The participation of these non-physical entities in the account is very important for the long term. BSM evaluates the non-physical assets of the enterprises. Therefore balanced scorecard serves to manage the strategy. However, if the strategy is based on a classical strategy that recognizes that the strategy can only be determined by top management, and if the opinions and views of other employees are not taken, then the strategy is not fully understood. Other obstacles can be specified as the problems that occur in the process of putting the measurements into effect, the distracting in the final decisions of the top management in the implementation phase.

Robert Kaplan and David Norton develop balanced scorecard method. It is used to measure and provide feedback to the organizations. Data collection is very crucial to

provide quantitative results. Mainly financial benchmark is the most important part for balanced scorecard method. But not only financial perspective is significant but three other perspectives (learning and growth, internal business and customer) are also important. A comparative analysis will be given on the third chapter that is about the sectorial trends that guide key performance indicators.

There are several researchs about key performance indicators. Some thesis are written on that case. First of all, The key performance indicators and a model improved to measure manpower performance is written by Tekiner Kaya (2008). Then, Yusuf Kaynar wrote about the usage of key performance indicators generated by accounting information system in decision-making processes in 2010. EnginGaytanli used Nestle Turkey for his research to define the key performance indicator. Lastly, KPI applications on ballast water treatment systems selection is researched by GülçinVural.

3. CONCEPTUAL MODEL OF SECTORIAL TRENDS THAT GUIDE KPIS; A COMPARATIVE ANALYSIS

KPI is used world widely in many different areas such as energy, agriculture and communication. Due to the reason of KPI affects the companies' many aspects, global firms and local companies mainly use KPI in their departments.

3.1.Factors Directing Companies KPI at Global Level

The answer to the question of which factors will affect the economy in the future is not easy when we examine the economy of world and the economy of Turkey. Modeling will be carried out on scenarios, basic expectations and trends in some sectors and basic framework will emerge. In this way, we will try to find out what trends are in the context of Turkey and world economy.

However, the basic behavior of the consumer has been changing and the future process must be established on a framework which technological innovation and development are much more intense. Basic predictions regarding to sectors in Turkey and global level have been revealed by the experts's assessments and interviews. In this context, it is much easier to solve the problems when the expectations at the sector level are revealed in a healthy way.

The world economy has abundant opportunities in terms of different segments in all respects (Court and Narasimhan, 2010). Especially the development of the middle class has important opportunities in terms of the business world. We can see how this process has changed in different cultures and markets (Desvaux and Regout, 2010).

The fact of globalization that is rapidly spread in the world has gained even more momentum in the sense that developing computer technology, new production

technologies, rapid improvement in communication and development of human resource quality. These developments bring synergy by becoming more active with the interactions between them. Especially consolidating of the gigantic markets and the growth rate of some dynamic markets are emerged as one of the most important processes of the global economy (Galvin, Hexter and Hirt, 2010).

The changes that increasing by globalization is big. The dimensions of material and intellectual development reached by the business world have never reached such dramatic levels in human history at all.

These dizzying developments have moved the existing competition order to different dimensions and formats through the development of means of communication and transportation in countries, which have free trade agreement. Competition has been globalizing as a result of new developments. We can define that today's most important concept is the competition. Under these circumstances, the customer is more important for every business than it is in the past. Especially, developments in financial markets have made the level of competition even more devastating in global markets (Bryan, 2010).

Businesses and organizations have had to revise their products and services as customer-focused. Many organizations will resist this change. However, they will eventually have to accept this situation. Businesses and organizations, which cannot keep up with the competition, will be liquidated on the labor market.

Competition has been growing rapidly among businesses competing in the same and different sectors. The competition race continues intensively in the industrial and service sectors as every other area. In the new economy climate, the share of service in national income has been constantly increasing and the share of industry has been constantly decreasing. And also, one of the most affected areas of the globalizing world is human resource that plays a more valuable and strategic role for businesses than ever before. Therefore, the duties and responsibilities of human resource management have increased.

There are lots of information in the new economic environment; however, qualified human power to manage knowledge is very less. Knowledge accumulation and linking of information constitute the intangible capital assets and separate the winners and losers.

To create a novel management form is vital to continue businesses's existence according to changes in the changing and globalizing world. For this purpose, the following points should be taken into consideration:

- To balance in global and local making decision
- To continue the income growth and to focus on the market
- To improve the product and service processes continually
- To use the knowledge in order to achieve the successful result in labor
- To find capable people, to employ, to provide development, to reward and to keep in the labor them

Achieving the change; one of the most important skills of a business. In this context, there are serious tasks of management. The most important of these are:

- To carry out organizational change according to economic market conditions
- To prepare the environment necessary to create a continuous change process that will provide advantages in the competitive environment,
- To adapt the innovations and to solve the difficulties with rapid and right approaches
- To make and implement strategic plans
- To lead and direct the change

3.1.1. Factors Directing the KPI in the Manufacturing Industry

Manufacturing is expected to undergo a major structural change over the next decade. There are anticipations that there will be major transformations in work models and

business systems because of the fundamental constraints created by the natural resources in the industry. Developments in global markets also directly affect this process (Bisson, Stephenson and Viguerie, 2010).

Production activities and operational systems of manufacturing sector will be affected by the constraints (especially air pollution, water resources problems) and developments that natural resources will create. Consolidations will increase in the manufacturing industry, particularly business life will clearly transformed into an oligopoly market. In the near future, we will see that several important companies will play an active role within this structure. The importance of strategic analyses, scenario studies, predictions and creating strategies will increase in the sector.

It is expected that there will be decline in the inflow of the new capital and business group which are declining and steady in the sector because of the growth of the scale in the field and limitations caused by natural constraints.

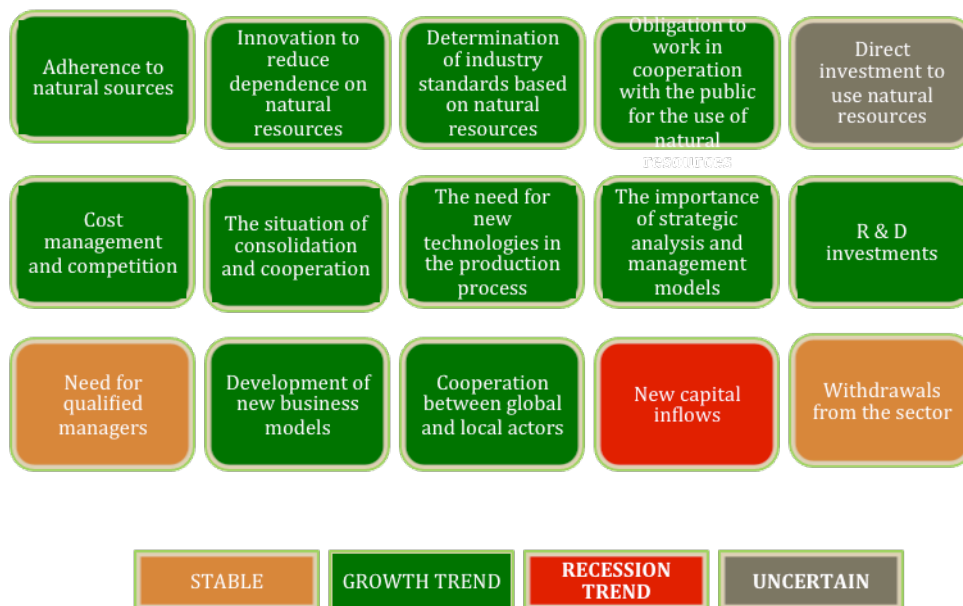


Figure 5: Scenario analysis chart for manufacture

3.1.2. Trends in the Energy Sector

The energy sector is one of the strategic areas in terms of the global economic trend and is tend to improve consistently. Especially, it is estimated that technologies, which are compatible with environmental and natural resources, will be basic dimensions to shape to the basic paradigm of this sector.

In the future, it is for seen that the PPP models will be labor systems in in the energy sector. It is also stated that investments that are environment-friendly and minimizing the destruction of natural resources will lead to basic ways of labor in this area. For this reason, it is very important to make vision studies of this factor.



Figure 6: Scenario analysis chart for energy

3.1.3. Trends in Advanced Technology and Communication Sector

In the world, investments in advanced technology and telecommunications have always been costly and on a large scale. This sector, which also constitutes the source of many innovations in the field of economy, is one of the business areas that will be least affected by environment and natural resources in the future. The sector has a totally

global character and qualification. It is estimated that the withdrawals from the sector will not be too much and the companies will maintain their basic positions.

Consequently, advanced technology and tele communication that affects and directs many sectors, is appeared as one of the most important indicators in estimating economic developments. Specially, Nano-technology-based investments and strategies are thought to be factors that will guide to the basic trends in the upcoming period.

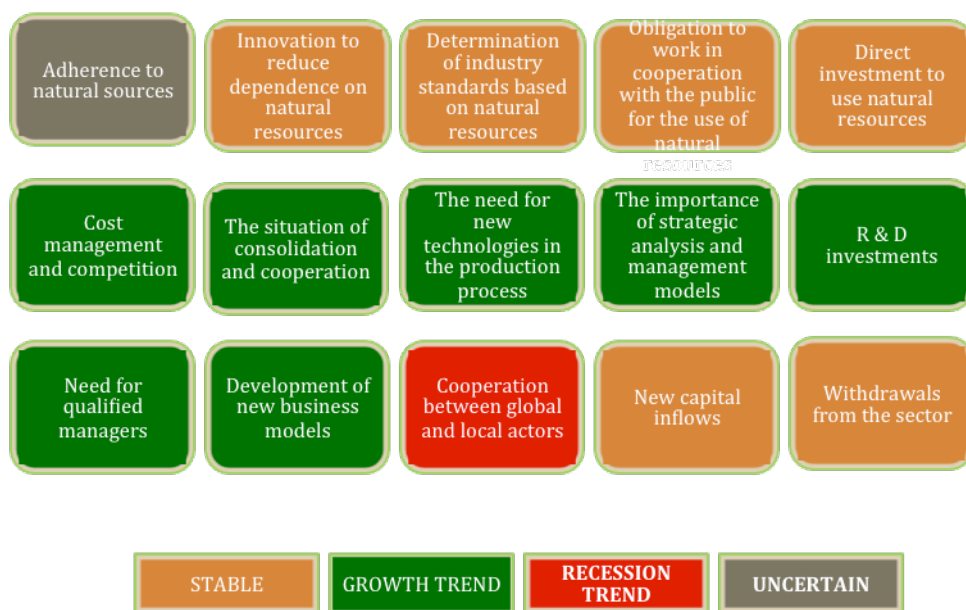


Figure 7: Scenario analysis chart for advanced technology

3.1.4. Trends in Agriculture Sector

Agriculture appears as one of the fastest structural transformation areas in terms of the world economy and Turkey's economy. Processing approach and models have been changing in this field. Developments intended from the small-scale agricultural activities to corporate, medium and large-scale business models are taking place.

It is considered that cooperation models based on cooperation between the state and the private sector will become widespread in the construction of this sector in the future because of significant problems in the usage of existing land and natural resources. In

addition, there is an expectation that productivity and competitiveness will increase in the agriculture field.



Figure 8: Scenario analysis chart for agriculture

3.1.5. Trends in Service Sector

Service sectors, which are the basic input of many industries, will be one of the labor areas that show the greatest growth and development tendency in the coming period. The structure and characteristics of labor models in the service sector will be greatly influenced due to the growing importance of urban life.

One of the most important trends that will guide the service sector in the forthcoming period is the approach that developed the environment and natural conditions in the labor model system. Especially new capital inflows will continue in this area at an increasing rate. The attitudes and behaviors of the individual will be important because of more based on services. In this context, models that emphasize the importance of individual service will continue to gain importance in service sector.

Especially, making correct estimations for the sectors that constitute the main backbone of economic life and basing predictions on these estimations is a great prospect in terms of regional planning.

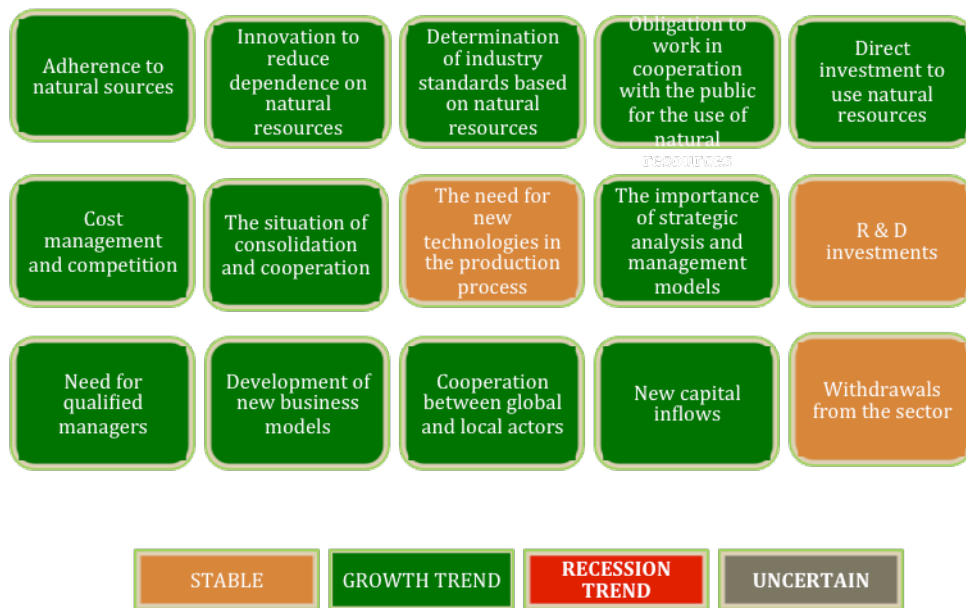


Figure 9: Scenario analysis chart for service sector

Although manufacture, energy, advanced technology, agriculture and service sectors are five different sectors, we can see that trends of changes may be show a same trends like growth trend or recession trend. To give an example; all sectors have the same scenario for cost management and competition (growth trend).

Table 12: Benchmarking Of Five Sectors from Multidimensional Perspective

	Manufacture Sector	Energy Sector	Advanced Technology Sector	Agriculture Sector	Service Sector
Adherence to natural sources	Growth trend	Growth trend	Uncertain	Growth trend	Growth trend
Innovation to reduce dependence on natural resources	Growth trend	Growth trend	Stable	Growth trend	Growth trend
Determination of industry standards based	Growth trend	Growth trend	Stable	Growth trend	Growth trend
Obligation to work in cooperation with the public for the use of natural resources	Growth trend	Growth trend	Stable	Growth trend	Growth trend
Direct investment to use natural resources	Uncertain	Growth trend	Stable	Growth trend	Growth trend
The need for new technologies in the production process	Growth trend	Growth trend	Growth trend	Growth trend	Stable
R&D investments	Growth trend	Growth trend	Growth trend	Growth trend	Stable
Need for qualified managers	Stable	Growth trend	Growth trend	Growth trend	Growth trend
Cooperation between global and local actors	Growth trend	Growth trend	Recession trend	Growth trend	Growth trend
New capital inflows	Recession trend	Growth trend	Stable	Growth trend	Growth trend
Withdrawals from the sector	Stable	Recession trend	Stable	Stable	Stable

Growth trend is seen almost for all sectors regarding to the natural sources except the advanced technology and communication sector. This sector stays stable concerning the natural sources according to scenario analysis. Need of qualified manager is stable for manufacturing sector whereas research and development investment will be stable for service sector. On the other hand, new capital inflows from manufacturing sector and withdrawals from energy sector will be decrease for manufacturing sectors,

CONCLUSION

Assessment on competitive management of business in global business world and 3D management mentality and KPIs should be analyzed in detail. It appears that the factors that affect the success of businesses in the global environment are multifaceted. In which areas they should develop themselves and form the system to be successful. These factors need to be explained.

Profit: One of the most effective indicators of a business's commercial value in local and global markets. It can be said that a business that has the ability to make a continuous and uninterrupted profit is generally successful. If this tendency is constantly upwards, then it can be said that the business has a healthy commercial operation model. It is very important that businesses have a performance that meets their investors' expectations. This is related to how much profit the business make. Therefore, the basic success criteria come from its profit.

Expansion of Markets: One of the most important criteria of a business's success is performance that shows in its own market. The business can be considered as very important success if the market rate of the business is constantly growing in the existing markets or if the business can find new market. Businesses that can make effective operation, tend to expand and develop their market rate

Continuously Growth of Business: One of the success criteria is the growth figures in the last five years. That very important indicator increases in the number of employee, individual earnings, and production in terms of both market rate and other factors for business. Especially, it is known that growing and developing business in a competitive model, have around 10% average annual growth performance. Therefore, business should grow at least over 5% every year in order to survive and remain on the market.

The Strong of the Competitive Strategy: Strategy is another criterion of success level evaluation. The strategy is the essential element of the business on realization of the

factors such as cost leadership, product diversification, and focus. Here we are confronted with the strength of the structure and quality of the basic strategy for the operation.

Trading of Companies in the Stock Market: It is possible to evaluate opening to the stock market of a company as an important success criterion. A business has reached a significant level when it has attained the level of trading in the stock market as a structure, system, and balance sheet. It is very important for enterprises to improve their structures after reaching a certain growth rate. Also, it is very important what kind of methods will finance their growth. In this context, solving business growth by finding partners or risks and impacts opening to the stock market directly on the basis of operations of the business have been evaluated below based on the decision tree model by developing different scenarios.

Foreign partnership is another funding technique in terms of model and content. This should be addressed in particular by the qualification of the partner and its approaches to integration into the management process.

The most important issue in opening a business to the market is due diligence. In this process, it is of utmost importance that the price of the enterprise's value and resources is calculated correctly. Opening up to a stock exchange with a strong corporate governance model which businesses have metric models for each area with a good management system contributes to the future processes and shareholders of the business as a serious resource. It may be useful for business that has management-system infrastructure problems and developing structural models to prepare this process correctly with a ½-year preparatory cycle.

As a result, opening of a business to the stock market and starting trading can be seen as a very important success factor. On the other hand, it is an important performance criterion for a structure to cooperate with domestic and / or foreign partners. Effectively management of these factors for businesses is the most important values that will affect growth and other key indicators positively.

As a conclusion, majority of companies are using KPIs to achieve their goals and compete with their rivals. KPI helps the company to survive in today's competitive world. Especially developed countries follow the rules and find the best way to take the advantage of KPI. Almost all departments on the major companies, we can see the KPI and it is controlled very strictly. Unless it creates a pressure on managers, directors and other employees, companies' growth rate may increase sharply due to that reason. Not only performance management is important but measurement of this performance also plays a crucial role in every aspects of performance of company.

Balanced Scorecard method is used by organizations to measure and monitor progress, control the company's targets and goals. There are four perspectives for balance scorecard; financial, customer, internal process and organizational capacity.

In Turkey, we can see the KPIs in some companies. Especially the organizations that is world widely multinational. Manufacture, energy, advanced technology, agriculture and service sectors are the most common ones. Detailed graphs are given above concerning these sectors. To be a successful on competitive markets five factors are very important. These are profit, expansion of markets continuously growth of business, the strong of the competitive strategy, trading of companies in the stock market.

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