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Development of a Model for Identification of Reasons for Deviation in Forecasts

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Abstract

Most organizations use forecasting techniques in order to achieve their goals and to reduce risk in uncertain conditions and varying situations. Forecasting by senior managers plays a very important role in the success or failure of organization and company projects as well as their affairs. However, the scope of forecasting has not yet structured or regulated and there is no approved or special conceptual framework for it, especially in relation to the reasons decisions of mangers deviate while forecasting, which can have a crucial influence on the whole organization. The aim of this study is to develop a conceptual model of the reasons for deviation from forecasting by senior managers. To understand the subject, a systematic review and meta-analysis of the research and literature was carried out. A conceptual model was developed according to the results of this research and the data from a focus group. The results of meta-analysis show that trends in optimistic and pessimistic forecasting and senior managers are the main reasons for deviations from forecasting by management. Moreover, it did not confirm that voluntary forecasts are responsible for increased accuracy in forecasting by management, and that there are still contradictions in this field. The results of our meta-analysis also indicated that some studies considered voluntary disclosure of forecasting as a factor in the reliability of the forecasting. Some researchers consider it as a factor of an optimistic trend of forecasting and others consider it as a factor effecting deviation from forecasting by management directly due to the individual motivation of managers and inaccuracy of information on which the decisions are made. According to the findings, it was not confirmed that voluntary forecasting on its own is a factor in the accuracy of forecasting.

Keywords: Combining Forecasts; Decision Making; Error Measures; Rule-Based Forecasting; Optimistic and Pessimistic Forecasting.

1. Introduction

Based on the system approach, an organization is an open system which constantly exchanges energy and information with its surroundings. Duties of a manager, especially senior management in the organization, are consistent with the conditions of the organization including environmental possibilities and limitations. But the environment of an organization does not constitute a set of constant factors (Sarrafizadeh, 1994). Managers use different types of forecasting and estimating for precision in the organizational status. Forecasts are both essential and powerful in the short term and under constant conditions. Managers are needed certainly and reduce the risk of decision-making and this is what provides forecasts (Lindgren & Bandhold, 2007). Although forecasts are one of the important resources of successful decision making, it should not be assumed that forecasts are valid by them. Forecasts are valid only if used in parallel with specific methods for separating pure from impure information (Gordon, 2013).

Planning and forecasting is important in most organizations. Senior managers are trained based on accurate data and scientific methods. Making decisions without enough accurate, relevant and timely information is risky and in many cases create numerous consequences (Haghparast, 2004). Optimal decisions often involve forecasting the tastes and trends of the future, and future trends may differ from current trends with regard to factors such as the formation of habits, daily mood, swings, social impact, maturity, and environmental impact (Loewenstein, O'Donoghue, and Rabin,

2003). Forecasting is a key element in decision making because the final effectiveness of any decision depends on the outcome and events occurring after the decision. The ability to predict uncontrollable aspects of these events before decision making can lead to a better choice. For this reason, management systems have forecasting models for planning and management of operations (Jamali, 2010). The human need to forecast is evident in the numerous occupations of tellers, forecasters, futurists, economists, sociologists, journalists, financial consultants, market researchers, planner's security and defense, technology teachers and advisers and analysts. Sometimes the work of this industry is called "anticipates" or "future studies". But these forecasts also fall into conservative topics such as economic analysis, market research, technology assessment or competitive insight (Gordon, 2013).

Senior managers of companies and organizations are in a type of force field and determining which tasks to undertake influenced by interacting forces in this field (Sarrafizadeh, 1994). The success of managers in achieving the objectives of the organization has always been considered as the first and one of the key issues of management science. Managers are vital members of the organizations and it can be said that the success of managers is the success of the organizations and their failure is the failure of organizations. As the success and failure of managers is so important, understanding the factors affecting success and failure is an absolute necessity (Jafari, 1998). Organizational behavior and performance of a manager is to some extent affected by his perception, attitude and personality, and every job is limited to some degree by the employee's ability. If the employee in a particular case has a wide range of ability or information, the duties and responsibilities of his/her job will develop in that direction. Conversely, lack of ability and insufficient information in a particular field causes limitation on the job (Sarrafizadeh, 1994). In addition, the forecast for influences on business decisions, such as budget, compensation, and financial reporting is important. Incorrect forecasting can reduce the effectiveness of the planning process and have a negative impact on production efficiency, cost management, and ultimately, the company's performance (Xiaoling et al., 2015). Beaver says: "Forecasting can be done without making a decision, but the smallest decisions cannot be made without a forecasting." (Jamali, 2010). Forecasting of the future is sterile unless it is accompanied by systematic, well-grounded, comprehensive actionable plans (Godet, 1994). However, the area of forecasting is not yet regulated. There are no accepted conceptual frameworks, accepted methods, professional standards agreements, or guidelines that can be applied in business policy or decision making (Gordon, 2013). The purpose of this study is to evaluate the reasons for deviation and bias in forecasting by senior managers of organizations.

Main Question of Study

Can a senior manager be a deviation factor in management forecasting?

Sub-Questions of Study

Are optimistic or pessimistic biases the main causes of deviation in management forecasting?

Can voluntary disclosure of forecasting be an accuracy factor in forecasting?

2. Theoretical Research

2.1. Forecasting and the Reasons for its Importance

2.1.1. Forecasting

In the dictionary, there is forecasting and prediction which means to anticipate and predict. The term can be used to mean the same thing or have two different meanings. In the Webster dictionary, forecast has been defined as estimating or calculating something ago and predict has been defined as knowing something ago (Jamali, 1389). Forecasting attempts to identify the various impacts of our activities and decisions in future (Boshehri and Malekifar, 2003). When a forecast is made, it is in the best effort to connect with what happens in the future. In practice, forecasting is used to influence, set expectations and support the planning process extensively (Bliss, 2007).

A forecast is a guess of future events (Jafari, 2013). Forecasts are associated with risk and uncertainties, but are formed by a logical-scientific method or philosophical foundations (Taghva and Alizadeh, 2006). For those people who are seemingly able to predict the rewards are high. Some benefits include supporting the decision-making process and informed planning and resource allocation decisions, and high-quality data can influence its accuracy (Bliss, 2007).

2.1.2. Environmental Uncertainty and Forecasting

According to Donald Rumsfeld (2002), "**there are known knowns; there are things we know we know. We also know there are known unknowns; that is to say we know there are some things we do not know. But there are also unknown unknowns – the ones we don't know we don't know**". In other words, the data can be incorrect or incomplete, the past is not always a guide to the future, qualitative data is often influenced by past experiences and peer pressure; it is difficult to combine external factors such as government policies and media that will create controversy"(Bliss, 2007). Many aspects of everyday life that people need forecasted are about the results for which uncertainty is known and are not random (Kahneman and Tversky, 1982).

2.1.3. Forecasting Methods

Forecasting uses both qualitative and quantitative methods (David, 2013).

2.1.3.1. Qualitative Methods

Qualitative methods include subjective appraisal by expert comments. In qualitative methods, the forecast is based on a subjective judgment and the predictor predicts future data using their experience and taking into account the current situation and predictable changes (Jamali, 2010). Qualitative forecasting methods are based on the intuition and common sense of decision-makers, knowledge and experience of experts and managers, the experience of practitioners, and research about the market (Khodayari and Rahimi, 2005). A cautious forecast probably involves more of a point of view that is followed by discussion to achieve a consensus. Under conditions that includes choice, experts can be replaced by a consumer or focused group. In such cases, the organization should match views and data to formulate their vision of the future (Bliss, 2007). In the forecasting process, the absence or lack of access to historical information or inadequate volume necessitates the use of judgment methods (Jamali, 2010).

2.1.3.2. Quantitative Methods

Most of quantitative methods are based on fitting mathematical models than on historical data. By default, this forecasting is a perception kind of continuity and its stability lies in the past data and finding the law of this integration can create a model that is extendable into the future (Khodayari and Rahimi, 2005). Quantitative methods are mainly based on data. Often statistical data are used to identify relationships and extrapolate trends. The data can be affected in different ways by experts who are ready to forecast (Bliss, 2007). In a quantitative method, the operation is done on the basis of mathematical calculations. In this way, by examining historical data and reviewing past trends, it is assumed that the process is sustainable and extendable into the future. Forecasts done using time-series models are one of the quantitative methods. In statistic methods, forecasting is done based on regular analysis of historical data. This gives objectivity to the system and leads to effective management of data content. Statistical forecasts act as input in the subjective evaluation of an aware decision-maker who moderates forecasting by using other relevant information and their expectations of the future (Jamali, 2010).

2.1.4. The Importance of Forecasting

Forecasting is an attempt to avoid many problems that can occur in the future (O'Brien and Robertson, 2009). If an event is previously predicted and what might happen is understood, it can be prepared for (Reynolds, 2013). Forecasting is a key factor in economic decisions. Investors, creditors, managers and other entities make economic decisions based on forecasting and expectations (Motamedi, 2012). Forecasting (predicts, estimates or calculates something in the future) is an integral component in the cycle of management control (Bliss, 2007). Forecasting is a link in the chain between the organization and its environment. Even if forecasting is not always in the form of a direct and formal activity, it has a very important rolein decision-making and planning. Due to this, forecasting is very useful for senior management and all functions within the organization, especially marketing, finance and production. Exact forecasting is an art (Jafarnejad and Faryabi Basmenj, 2007). Forecasting the environment of an organization begins by identifying vital factors in the external environment. The impact of these factors on the organization is shown in terms of opportunities or threats determined by the strategist (Ahmadi and Esfahanian, 1999). The most important foundation for decision-making is forecasting and forward-looking at events and activities of the organizations. Organizations for creation long-term life and drawing horizon plans, activities and resources is needed that forecasting is done in terms of policies and long-term strategies (Hamidizadeh, 1998) Forecasting is important from this aspect because it is a fundamental and key element in the decisions of internal and external users of the organization. Accordingly, the efficiency and final effectiveness of each decision depends on the results of the events that occur following any decision. Thus, effective and efficient decisions are made by forecasts based on the correct foundation (Haghighat, 2011). In fact, forecasts are management's expectations of the company's future performance, so the accuracy of these forecasts is a key factor for investors, managers and creditors (Abzari et al., 2012). Financially and business outlook, forecasting will allow to data recipients to verify that the programs and perspectives can be accomplished or are available, if proven otherwise and is as a strong forecasting of satisfaction individuals and organizations, is needed to corrective measures (Bliss, 2007).

Forecasting is a technical method to estimate the future of a business or function. Forecasting is important for short-term and long-term decisions. In various areas of business, such as technology, economics demand and etc. may be used for forecasting (Gahirwal and Vijayalakshmi, 2013). Forecasting helps investors to improve their decision-making process and to reduce the risks of their decisions. They are interested in estimated future benefits of their investment so that they can judge the receipt of the next dividend and the share value. Investors judge a company by forecasted profit rather than the current situation because the forecasts determine the allocation of funds to departments and business units and this is important for potential investors. They proceed to invest and allocate their capital resources by forecasting future cash flows and profits (Motamedi, 2012). However, organizations skill accept what is emitted, any organization that is not able to accurately forecast domestic consumption will soon be faced with problems (Bliss, 2007).

2.1.5. Important Reasons of Forecasting for Investors and Managers Forecasts

Forecasting is important in economic decisions. Investors, creditors, managers and other institutional shareholders potentially profit from economic decisions based on their expectations. Investors investing in companies and buying shares require information, such as forecasted earnings per share, and use this information for share pricing, especially in new companies with little history. Based on these forecasts, investors may sell their shares or keep them (Abzari et al., 2012). The literature confirms that management forecasts are important and have useful information for investors (Amini Motlagh, 2010). Since the investors require information about future prospects of the company to make decisions, companies are required to provide forecasted earnings per share along with other information in order to provide expectations of the company's future. If management does not provide adequate information to investors forced to pay for it or get help from financial analysts (Jamali, 2010). Also, according to Chang et al. (2008) information related to manager's forecasts plays an important role in reducing information asymmetry between managers and investors. Lanks and Part (2006) argue that reducing information asymmetry between managers and investors reduces the opportunity for some investors to use private information to achieve higher profits, thus reducing information asymmetry reduces investment cost. Diamond and Verchia (1991) also believe that reducing information asymmetry reduces the cost of capital and increases liquidity of the stocks (Jafari, 2013).

Investors rely on information, such as forecasted earnings per share, and use it in pricing their stock. Correct forecasting of profit can help investors and creditors to achieve objectives such as: 1. Helping to assess the power of profitability of business units; 2. Forecasting future profits; 3. Estimating the risk of investing in the business unit; and 4. Estimating the risk of lending to the Business Unit (Motamedi, 2012). Houghton and Astaken (2007) studied the impact of fame on the reaction of investors to the forecasts of the management of profit. They found that the reputation of management in forecasting was a key factor of forecasting validity among the effective factors on the validity of forecasts of profit (Amini Motlagh, 2010).

2.2. The Duties of Managers in the Organization and its Relationship with Management Forecasts

Managers have the responsibility of a formal organization or a sub-unit of it. A manager who has formal authority is faced with two main goals: 1. The manager shall ensure that the organization will effectively produce a product or service. 2. The manager must ensure that the organization fulfill the objectives of those who control or influence its survival (Sarrafizadeh, 1994). One of the duties of managers is monitoring and assessment of the organization's environment in the changing environment of today's business market. A manager must constantly assess the environment, and consider and deal with the impact of variables affecting the forecast for the survival and development of their organization. A manager must always look to the future to prepare their organization to coordinate quickly with environmental changes. To do this, a manager must be fully aware of all the factors within the organization in addition to variables outside the organization, and as a leader be able to influence employees and executives to join together to achieve the objectives of the organization.

According to the theory of field of forces, it is not enough to provide appropriate job descriptions and communicate with managers to obtain the desired results from their performance. To achieve this purpose, it is necessary to identify the effective forces on the manager's work; neutralize the disruptive forces and strengthen the good forces (Sarrafizadeh, 1994). Figure 1 shows the most important effective factors on the combination of duties of senior managers.

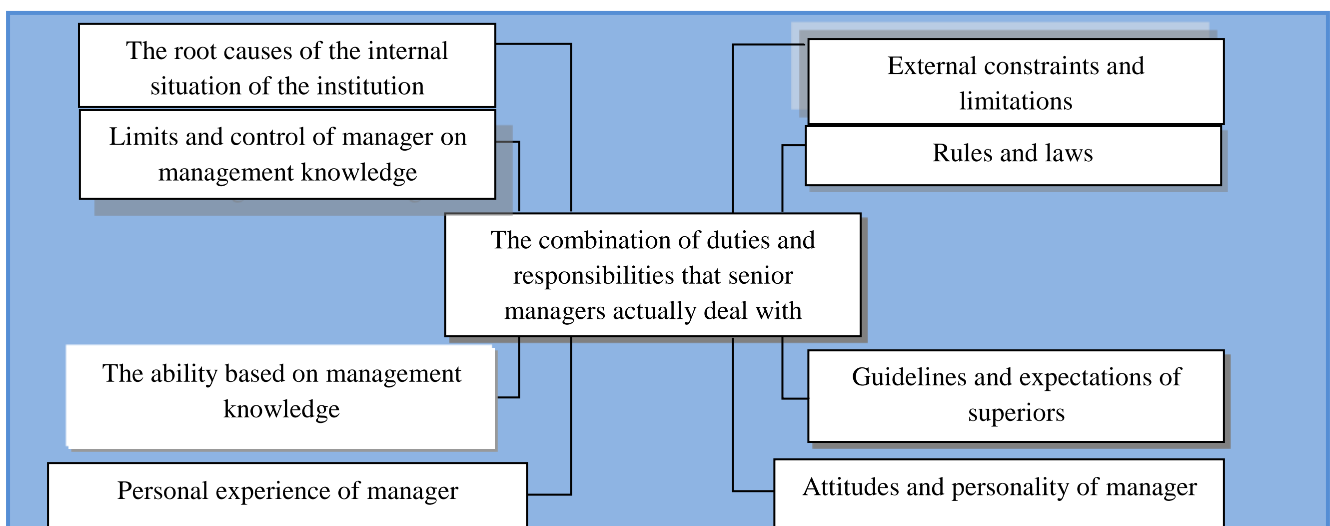


Fig 1: The Most Important Effective Factors on the Combination of Duties of Senior Managers (Sarrafizadeh, 1994)

The factors mentioned in Figure 1 are factors that potentially could affect the duties of the manager, as well as the management forecasts. Some of these factors have been tested in internal and external investigations, and others have been based on other research. The results of some studies show that the quality of managers forecasts may be damaged under the influence of imposed conditions "in the environment (uncertainty of the future)", "the expertise of the manager" and "personal motives of suppliers of information" (Parsley , 2013). Analysis and reforms of the management process deals with the detection and analysis of deviations from the program and the decision in support of the responses of what the organization should do. The following table describes inputs, optimal methods, and outputs to the analysis of the reform of process management (Buytendijk et al., 2009).

Table 1: Analyze to Adjust Inputs, Process Steps and Output (Buytendijk et al., 2009)

Input	Best Practice Steps	Output
• Short-term targets • Drivers • Constraint • Assumption • Actual and historical performance	1. Continuously monitor variances 2. Perform root-cause analysis across business domains 3. Benchmark performance against external and internal peer groups 4. Identify opportunities for improvement 5. Adjust forecast and resource alignment	• New forecast • Improvement Activities

2.2.1. Forecasting Presented by Managers and its Relationship with the Effective Factors on the Composition of Senior Manager's Duties

Managers forecast the profit for four reasons, 1. Managers in accordance with the hypothesis of dampen of expectations are tried to the investors' expectations associated with them. 2 Managers and their forecasts try to reduce asymmetric of information in the market. 3. The managers try to show their ability in their supervision of environment changes. 4. The plan is to reduce the expected cost of justice (Jamali, 2010). Many researchers have studied the factors effecting managerial decisions to issue earning forecast. These factors include reducing information asymmetry and the risk of litigation while creating fame and a reputation for transparent reporting and driving down market expectations (Brown and Zhou, 2015).

2.2.1.1. Forecasts by Management and Supervisory Regulations

Gounopoulos, Kraft, and Skinner, (2013), in their study of " volunteer forecasts of profit management in IPOs against the mandatory forecasts" is said that changing the rules is a potential channel through which to improve forecasting revenue (i.e. reducing the level of forecast error of brief biographies to the annual report) should increase the credibility of management . Regulatory change increases the financial flexibility of management thanks to the independent decisions. So it is expected that there is a positive relationship between improved communication and management and investors to accurately forecast revenue (Gounopoulos, et al., 2013).

2.2.12. The Impact of Past Experiences of Management in a Forecasting

The neglect of past experience is the dramatic aspect of planning error. In other words, people have optimistic forecasts for the future are to maintain a pessimistic view about their overall abilities, and timely completion of tasks. Why do people ignore easily valuable feedback from experience? A convincing argument by Bilvor et al. (1994) showed that one of the factors may tend to avoid self-blame for past failures (Pezzo, Pezzo, and Stone, 2006). Also, Bilvor et al. (1994) have pointed out they tend to ignore the failures of the past as "past neglect" and show that this is a key factor in planning error (Buehler, Griyn, and Ross, 1994). To reduce the negative impact of self-image with past failures, planners are compared the failure to certain temporary factors, and controlled from the outside. Although this strategy is supported by self-image, but, caused to be considered the past experiences as irrelevant to future conditions (Pezzo, Pezzo, and Stone, 2006).

2.2.1.3. Management Forecasts and Managers Personality Traits

A person's character is a stable set of characteristics and attitudes that shows the similarities and differences of cognitive behavior including thoughts, feelings and actions of a person during a continuation time, and while not simple to understand may become known due to social pressures and immediate situations (Jafari, 1998). Researchers of personality traits have long been interested in how many personality traits are required to differentiate between individuals. Hierarchical model of personality traits offer a variety of levels of explanations. Examples of five of these factors include: extraversion, neuroticism, conscientiousness, agreement and freedom. Each consists of six aspects of personality and represents a more detailed level of character. Despite the popularity of these five features, there is

remarkable discussion about the relative merits of factors and evaluation of the aspects of personality (Anglim and Grant, 2014).

Comparing the predictive value of a model with 30 individual predictors with the five main predictors mentioned above shows the challenge for researchers (Sieglerand Brummett, 2000). Researchers of character are often seeking to forecast results such as welfare, job performance, and personality disorders along with other factors. Subsequently, researchers will decide whether these cases need to include other aspects of personality, or only use the five basic factors as predictors (Anglim and Grant, 2014). Past research has not always shown a significant relationship between the character and forecasts with regards to timely affairs; probably because these studies examined variables more dependent on the beginning of the study rather than the timely completion of a work, or the degree of positive outlook rather than a desire to focus on the work. When a significant relationship was found between personality and forecasting tendencies, the result concepts are uncertain, perhaps because the assigned tasks are to be done immediately and therefore required advanced planning (Pezzo, Litman, and Pezzo, 2006).

Managers have individual differences. There are many measures of individual differences mentioned in the studies. As it has been shown, none of them are particularly useful to determine who shows an optimistic versus pessimistic trend (Windschitl, Smith, Rose, and Krizan, 2010). Bilvor and Griffin (2003) also examined whether forecasting bias are linked to the individual differences in the level of optimism and delay or dodge. In two separate studies, a significant relationship was not found between forecasting prejudices and personality traits, probably because optimism and delay are related more to a general positive outlook; the work begins by the accuracy of the forecasting or completeness of work (Buehler and Griffin, 2003).

2.2.1.3.1. Personality Trait of Confidence

More confidence is a psychological characteristic that may be defined as intention to have unrealistic beliefs (positive) about any unclear results. Several studies show that the "more confidence of Managers" are likely to lead to the release of a more optimistic forecast and less accuracy in forecasting the company’s future. Other factors can affect the managers optimistic forecasting can be one of the "opportunistic" characteristics of managers and the "pressure and low legal risk" level on the managers for the quality and accuracy of the presented forecast. Also, Haribar and Yung (2011) expressed that more confidence may be from a lot of optimism about the future performance or an underestimation of changes in the future performance of the company. They also stated that these managers, more than managers who are less confident in achieving their forecast, are more likely to manage the earnings (Parsley, 2013).

2.2.1.3.2. Character Traits, Risk Managers

According to the future and the desire to live in the present, knowledge of past events are necessary to take risks in life. If the manager is not willing to take risks, he/she will not realize the potential for growth and development. Risk managers should decide on the conditions of uncertainty and check the possibility of success against loss (Jafari, 1998). But in changing circumstances of today, there are uncertainties about many issues, some risks are irreparable and may put at risk the fate of an organization. These risks can be reducing by analyzing the environment and accurate and appropriate forecasts of senior manager.

The aim of forecasting is to reduce the risk in decision making. Although forecasts are not necessarily correct, the error rate of forecasting can be dependent on the systems used for forecasting along with some other factors. Allocating more resources to forecast can increase its accuracy and eliminate or reduce some of the uncertainty losses in the decision-making process. Since, forecasting cannot fully eliminate the risk, it is essential to explicitly consider the forecasting uncertainty in the decision process (Jamali, 2010).

2.3. Management Forecasts and the Role of Information Management

A manager should act as the main interface of information between his organization and the environment. Because of manager's official power, he is only able to create a vital link between specific resources of information and the organization (Sarrafizadeh, 1994).

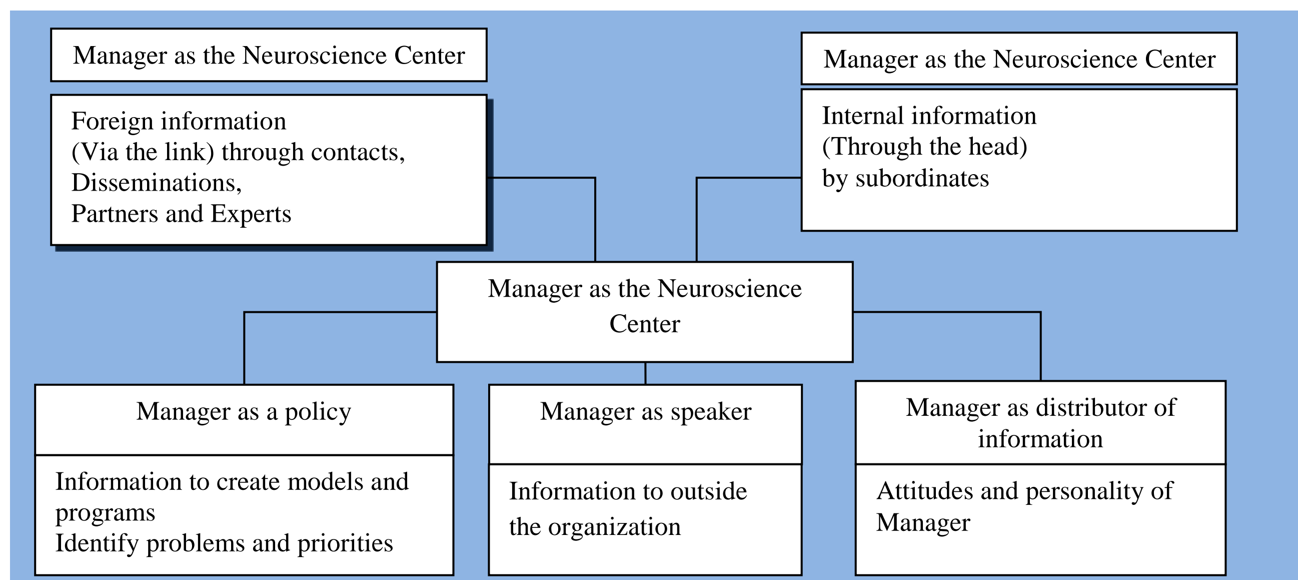
The manager with detailed information about his organization can produce good forecasts about it. According to the Speaker role, the manager has also the ability to present the information about the organization as reports, forecasts, etc. to others outside the organization for specific objectives.

Mitenzberg (1973) stated the information role of managers including the role of the central nervous system (receiver), the information distributor and the speaker (Sarrafizadeh, 1994). Management with more and timely information can better draw the future prospect of companies for foreign users. However, to attract the trust of users, managers must try to reduce the deviation between real and forecasted returns (Motamedi, 2012).

It seems that management forecasts and presentation to stakeholders, such as shareholders or a general presentation in society as dividends are more insisted to the information role of managers.

A manager in the role of Neuroscience Center is constantly seeking information and a host of information is sent to him that enables him to be aware of organization and environment events. He is looking for information that identified changes, issues, problems and opportunities so that he can take advantage of this knowledge in decision-making or publishing them (Sarrafizadeh, 1994). Figure 2 shows the role of a manager in information processing and the position of manager in relation to management issues through this role.

Fig 2: The Manager as the Information Processing System (Mitenzberg, 1973) (Sarrafizadeh, 1994)



2.4. Perspective View of Opportunistic Behavior and Information Management

The opportunistic behavior view of managers, as opposed to the information view, has a cynical approach to managers and believes that managers abuse the opportunities and flexibility that accounting and financial reporting offers them. According to the authorities, they try to hide the facts from the shareholders and investors. According to this view, the purpose of corporate managers is to maximize their prosperity. On the other hand, according to the information perspective, managers make good use of voluntary opportunities which they get in accounting and financial reporting and try to use this opportunity to convey private information that sometimes managers only have access to it (Jafari, 2013).

2.5. The Reasons of Managers for Unrealistic Forecasts

Managers with incentives such as the prevention of eviction have a successful career or achieve rewards in cases where compensation is depended on performance; proceeds to increase management of profit (Jafari, 2013).

2.5.1. Fear of Loss of Reputation and Litigation

Managers who forecast profit higher than the reality have adopted the accounting procedures of increasing profit and when forecast profit is less than the reality have adopted the accounting procedures of reducing profits. In either case, managers will be reaching to the forecasts. The reason is that they fear losing their reputations or want to be safe from financial effects of the investors proceeding (Amini Motlagh, 2010). Skinner (1994) concluded that managers may forecast the bad news to investors and in this way protect themselves against risk of litigation and loss of reputation (Jafari, 2013). Of course, managers are concerned with their forecasts and want to fulfill them, because, not reaching a forecast or forecast error (especially if it is negative) will be charged to the managers. Empirical evidence suggests that the costs of forecast error are often in the form of litigation and lead to lose the reputation of accuracy of management (Amini Motlagh, 2010).

2.5.2. Fear of Job Loss

Senior managers and financial managers who suddenly emit bad financial forecasts may lose their jobs. Naturally, they might delay bad news as long as possible and neglect the worsening situation in the hope for a miracle to maintain their job for a few more months (Bliss, 2007). Trying to keep a job and to upgrade it, setting a favorable target for future performance, and efforts and pressure from the corporate governance structure of the axis bank are among the reasons and motives leading managers to avoid loss of forecasting (Jafari, 2013). Who will forecast a budget deficit, if they are at risk of dismissal, or risk elimination and a bankrupt organization is forecasted surplus economic goods? (Bliss, 2007).

2.5.3. Bias and Personal Motives

Managers sometimes have a personal incentive to refrain from disclosing private information and potentially have motivation to falsify the financial statements; at this time, disclosure requirements ensure that the capital market operates efficiently (Amini Motlagh, 2010). Rugerz (2008) found that managers were strategically altering the quality of disclosure in response to personal motives; he reported that the quality of the disclosure before the sale is on average higher between the persons of a group, while it is lower before an internal purchase. In an environment where managers felt little risk for possible legal consequences as a result of providing misleading information, they may also provide profit forecasts based on personal motives (Jafari, 2013).

Although managers may not have such an incentive, investors can still find bias in other sources such as oversight analysts, auditors, or the next earnings reports (Jamalifar, 2010).

However, the sobering reality is that even the most impartial forecasts in the best institutions are often quite wrong. Even when future analysts are worked meritly and hard, the complexity of many natural and human systems is very random and it can be risky looking at both the medium and distant future (Gordon, 2013).

2.6. Forecasting Accuracy and Issues Related to the Accuracy of Management Forecast

The value of forecasting is dependent on its accuracy and credibility (Brown, Clarke, How, and Lim, 2000). Good forecasting is needed to be honest on the part of all those interested (Bliss, 2007). Profitability of forecasting is related to its difference from reality. If forecast accuracy is higher, its deviation will be lower (Abzari et al., 2012). If the prediction is made with accuracy, some of the losses caused by uncertainty in the decision making process will be reduced or removed (Jafari, 2013). Accurate forecast of product demand is important for the companies because it has application in decisions about inventory control, production planning, purchasing, logistics, planning of cash flow and other aspects of business (Petropoulos, Fildes, and Goodwin, 2014). Despite the risks, forecasting accuracy is essential (Bliss, 2007).

The researchers suggest that forecasting manner should include accuracy of the confidence of managers about the future, and more accurate forecasts (e.g. point) are generally thought to reflect the management's confidence in forecasting with less accuracy (i.e. widespread) (Jafari, 2013). Forecasts accuracy is increased by implementing a voluntary policy in mature companies that have multiple stakeholders and high demand (Gounopoulos, Kraft, and Skinner, 2013). Forecast accuracy of stock dividend increases with the ratio of retaining ownership in public offerings of the company stock and forecast ability of its future earnings. In addition, it seems to create a company's law is started the period that management forecasts be more accurate (Brown, Clarke, How, and Lim, 2000). Also, strong corporate governance and the presence of analysts in the capital market are among the factors that can have a direct relationship with the accuracy of forecast. Research also shows that the accuracy of seasonal or cyclical forecasting by managers is better than annual forecasting (Jafari, 2013). Economic conditions will affect the manner and accuracy of the managers forecast (Jamali, 2010). Also, if the organizations only intend that the forecast shows the breakeven point (without profit and loss) this removes any incentive for an accurate forecast. A Breakeven Forecast by the end of the year is easier; however, it is not a good practice (Bliss, 2007). Some other factors that are inversely related to the accuracy of profit forecast include fluctuation of efficiency, cost of ownership, exposure to legal liability, duration, and time horizon of forecasting (Jafari, 2013).

2.7. Prediction Error and the Factors Affecting the Forecast

There is uncertainty in the predictions. This fact is due to an unusual component in the time series. The presence of this element indicates the presence of undefined or unpredictable fluctuations in the data leading to forecast error. If this unusual component creates a significant error and has considerable effect on the ability to accurately forecast, the result becomes insignificant, but if it is limited to a higher accuracy, it can be achieved in forecasting by determining annual and seasonal patterns (Jamali, 2010).

Forecasts are usually associated with errors, but enlargement of forecast errors depends on various factors (Jafari, 2013). Many factors are involved in the deviation of actual earnings from forecasted earnings. These factors reduce the accuracy of forecasts and increase the forecast error. Forecast error can be reduced by identifying these factors and considering them in the calculation of forecast earnings (Abzari et al., 2012).

According to the Haygins's studies (2008), forecast error is higher in companies with declining sales. He also analyzed seasonal errors during 1992-1999 in American companies. In this study, he found an inverse relationship between company size and forecast error (Motamedi, 2012). A sample of 82 initial public offerings of securities (IPO) on the Euronext Paris Market (2000-2002) has shown that only two variables are dependent on the disclosure of very accurate predictions: forecast horizon and company age (Cazavan- Jeny & Jeanjean, 2006). Motamedi (2012) in research addressing "Analysis Impact of Effective Factors on the Deviation from Forecasting of Listed Companies Dividends in the Tehran Stock Exchange during 2005-2007" evaluated five hypotheses: the impact of the volume of transactions, Shareholders, the life of the company, size and time horizon of the forecast on the deviation of the profit forecast in the

60 companies. The result of this study shows that the size of the company and the forecast time horizon has an effect on the deviation of the profit forecast and there is a positive relationship between them.

Fluctuations in economic conditions are difficult to forecast and therefore increase the error rate (Jamali, 2010). Also, when the amount of details increases in the disclosure of the forecast, the forecast error is reduced. This strong finding is in terms of reverse causality tests and suggests that the amount of details in the disclosure of the forecast increases the reliability of the earnings forecast (Cazavan-Jeny and Jeanjean, 2006). Many studies have shown that institutions having poor performance observe wider profit forecast errors and are likely to encounter problems meeting profit forecasts (Motamedi, 2012). There are two opposite interpretations for a negative relationship between disclosure of accurate forecast and forecast error. First, this negative relationship may mean that the disclosure of an accurate forecast lead to smaller forecast error, because the forecasts are more reliable; or it may indicate that only companies with reliable forecasts are emitting accurate forecasts (self-selection bias) (Cazavan- Jeny and Jeanjean, 2006). According to Ijiri (1966), a number of factors may be affecting the accuracy of forecasts such as the period of time that forecasts should be performed, industrial nature of companies, the external environment, and the degree of skill and experience in forecasting (Motamedi, 2012).

Research has found some factors affecting profit forecast error; they are as following: company size, the forecast period, the life of the company, financial leverage, economic conditions, industry type and annual adjustments (Jamali, 2010). Another study found some factors affecting revenue forecast as follows: the amount of disclosed information, company size, financial leverage, age, diversity of earning changes, the performance of the previous year, operating profit, earnings per share (EPS), audit quality, economic value added (EVA), integration, employee rewards for the purchase of shares, environmental factors, information asymmetry, accruals, information environment, etc. (Abzari et al., 2012).

In the extrapolation of the trend, a false assumption is faced to fail all the set of accurate data and very accurate extrapolation and forecast got away from the truth. By changing the basic conditions, the conclusion of the process becomes nonsense and ridiculous (Gordon, 2013). In a forecast, for example, these three errors can be detected in a statistic test (Godet, 1994):

- Using an assumption that is not eventually provable.
- Ignoring a hypothesis or an event that is proved in fact.
- Not asking the right questions, for example, ignored prospective thinking about the assumptions or events that will have a prominent role in the future.

Ijiri (1966) has classified the main issues that should be considered in financial forecasts to minimize forecast error as follows: (Motamedi, 2012)

- Reliability that is concerned with the relative accuracy of forecasts.
- Responsibility that is related to the expression of possible legal obligations in the forecasts.
- Reticence which must be considered in the disclosure of forecasting due to competitive conditions.

2.7.1. Factors Affecting Management Forecast Error

In economics with the assumption of rational behavior of individuals, it is assumed that all persons are looking to maximize their wealth and personal motives, so managers are not the exception. However, managers with their freedom in accounting practices must know how these factors have impact on their wealth so that they can use them in their own interests to increase their wealth as much as possible. But increasing managers' wealth can be associated with reducing the wealth of other groups, including shareholders (Jafari, 2013). Managers as decision-makers and suppliers of finance information likely have confidential information about their company business outlook and production processes of accruals. Therefore forecast of management revenues can lack reliable errors on the basis of historically reported accruals. However, in a changing operating environment, a manager’s knowledge of his/her company business prospect is incomplete which can lead to unintentional errors in assessing the future of the company's performance. When managers have the flexibility to transfer their incomplete assessment of the business through both accrual and forecasts of their earnings, both the information disclosures are likely to include common errors (Gong, Li, and Xie, 2009). The separation of ownership from management in companies, has created the potential for managers to transfer part of the wealth of the group within organization to themselves because: firstly, they have access to information that other people don’t; and secondly, due to the preparation and submission of information, such as finance information by managers, there is a possibility for them to modify this information in their interest. Of course, managers who are less experienced, and have less flexibility in accounting and those who are exposed to external shocks, are less likely to emit a correct forecast (Jafari, 2013).

2.8. Optimistic Management Forecast

When people who speculate about the possible outcomes have an optimistic forecast, this is an important conclusion, because many aspects of a company's daily life are tied to the forecast of results which are fully or partially random (Windschitl, Smith, Rose, and Krizan, 2010). A manager's forecast of profits is usually different from the real profits due to the nature of forecasts and the uncertainty of future events. If a manager's estimated forecasted profits are more than real profits, the forecast was optimistic, and if the profits are less than real profits, the forecast was pessimistic. Some researches show that profit forecasts are all optimistic (Jafari, 2013). However, the optimistic and the pessimistic forecasts are done for many reasons, and these biases in the forecast cause the manager's forecast to deviate from the actual results.

2.8.1. Reasons and Motivations of Managers for Optimistic and Pessimistic Management Forecast

One of the reasons for optimistic trends in forecasts is that in order to avoid self-blame managers may reduce problems experienced in similar cases (Pezzo, Litman, and& Pezzo, 2006). Another reason is a false opinion (false thinking) they put above all other ideas, especially when this results in the desired forecast (Buehler, Griffin, and MacDonald, 1997). Managers have various incentives for optimistic forecasts to obtain the desired value of the market. These reasons may include job security, compensation and reward incentives based on performance or the need for financing, etc. (Jafari, 2013). People may present optimistic forecasts in order to appear more productive and more successful. A study by Pezzo, Pezzo and Stone (2006) found that participants who presented unknown forecasts had not shown an optimistic trend (Pezzo, Litman, and Pezzo, 2006). Quito et al. (2009) and Jafari (2013) both stated that more manager confidence and behavioral prejudices were considered as possible motivations for an optimistic forecast, and concluded that the opportunism of management is considered the most likely reason for an optimistic forecast by management. Kato and Skinner (2009) said that in the Japan, it is not important that litigation is related to the managers forecast error. Many initial forecasts are too optimistic especially for companies that are not profitable, and many managers forecast too optimistically every year (Amini Motlagh, 2010).

Managers intentionally emit pessimistic forecast which in turn causes market participants to revise their expectations downward and subsequently cause an easier standard to reach or get closer to the real benefit. Chen (2004) in a studied sample observed that when the forecasts of management were pessimistic, the real benefit exceeded above the forecasted profit. Often a pessimistic forecast is used by managers to justify their profit forecasts as a means to reduce market expectations of company profit (Jafari, 2013).

2.9. Forecast Prejudices (Trends) - No Prejudice is More Important than Accuracy

Predictors are added to time series forecasts in most unstructured emotional reforms. This can be a source of bias and prejudice. For example, managers can change the sale forecast by pride style to motivate employees. Retailers may change the forecast so that it can be more easily surpassed. So it is not surprising that some early studies have shown unstructured reforms often damage forecasts (Armstrong, 2006). A problem more important than the forecast accuracy is whether the bias in the forecast is a major factor of avoidance. This is a big concern during judgment. Hoggart and Makridakis (1981) carried out an extensive survey about the prejudices that developed in human judgment; the investigation revealed how these prejudices could lead to serious errors in forecasting and planning (Erickson, 1987).

How much does a desired result affect possible judgments or establish optimism? The number of published studies on this question is not convincing (Krizan and Windschitl, 2007). Desirable attitudes (prejudice) are generally too weak or do not exist in cases where there is uncertainty and forecasting is not a coincidence, unless a person is unsure that he only guesses about results, or allows only his views and understanding of evidence to guide his forecasts (Windschitl, Smith, Rose, and Krizan, 2010). Tests that directly checked prejudices have had mixed results (Vosgerau, 2009). This can also be seen in the research of Barhillel and Bodesko (1995) and in their chapter titled "Wishful Thinking in Forecasting of the World Cup Results: the Deceptive" (Bar-Hillel, Budescu, and Amar, 2008). Windsaytel, Smith, Rose, and Krizan, (2010), in the study "The Favorable Trend in the Forecasting: Optimism without Being Realistic", shows that the impact of favorable results must be comprehensible in the following two ways: First, people may express optimistic or pessimistic tendencies in no large scale, and how they assess the probability of a desired outcome and the estimation of these probabilities must be shown to have been done in a common practice. Second, people may have an optimistic image about the potential consequences, but this optimism becomes apparent only when using some certain measures (for example, a forecast of the outcome, the special possible measures are used to encourage and facilitate the expression of opinion).

People normally presume an optimistic attitude because it seems that optimism is essential for achieving targets or that an optimistic attitude is more consistent with maintaining a positive situation and quite well understood by others (Segerstrom, Taylor, Kemeny, and Fahey, 1998). In fact, a widespread human tendency is to rely on being optimistic and maintaining positive thoughts and balanced and stable conditions (Lench and Ditto, 2008). When the judgment is dependent on elements that can increase pessimism or decrease optimism, most have the tendency to inhibit the bad news (Windschitl et al., 2010). Although attitudes (prejudice) of optimistic forecast are common, these errors are not created

by anyone in particular. In some studies, participants offered forecasting that either is completely accurate (e.g. has no significant tendency) or is relatively pessimistic (e.g. is finished earlier than expected). Totally these findings suggest that there are differential trends for creating the prejudices in forecasts. However, exactly what features are connected to which people is not clear (Pezzo, Litman, and Pezzo, 2006).

2.10.Managers Biased Forecasts and Planning Error

In the first theoretical analysis of planning error, Kahenman and Turesky (1979) adopted a predominantly cognitive approach of an individual's tendency to judgment error rather than informed statistical judgments. Kahenman and Toresky argued that people presented biased forecasts because they focused on specific information, (For example, the specific features of a given task) regardless of the distributed information (e.g. description of the individual work and the completion of a typical task for the general population (Pezzo, Pezzo, and Stone, 2006). Also, the manager's upward forecast of dividend is biased as a forecast of company earnings. However, the dividend forecasts are substantially more accurate and less biased than their colleagues incomes (Brown, Clarke, How, and Lim, 2000).

Some studies suggest that participants are encouraged to focus on the specific programs with the aim of completing a task or increasing your optimistic attitude, (Buehler R., 2003). Studies have found that participants who have done forecasts as compared to other people (and people who may have no incentive to past failures) have shown less planning biases (Buehler, et al., 1994; Pezzo, Pezzo, and Stone, 2006). It has been shown that as the systems which are trying to forecast their behavior become more complex, planning is becoming irrelevant (Lindgern and Bandhold, 2007).

2.11.Voluntary and Mandatory Disclosure Management Forecasts

Mandatory and voluntary disclosures are two important channels through which managers send information to shareholders. While a significant amount of literature shows that both types of disclosure contain valuable information and significantly affect the price of securities (government bonds and stocks) (Kothari, 2001). Also, previous research has shown that voluntary disclosure by managers helps users to process information more effectively (Brown and Zhou, 2015). The optional amount of disclosure to reduce the false allocation of resources in the capital market will depend on the accuracy of the published information about the economic situation of the business unit. Since the optional disclosure is dependent on the manager's decision, the accuracy of the information contained therein is not clear (Jafari, 2013). The literature of voluntary disclosure of management forecasts of profit is based on the tendency of knowing the motivation of managers to disclose or their tendency to disclose personal information when it is not necessary. This is a fundamental concept for accounting and security provisions. In this respect, what set of disclosure requirements should be developed and implemented? As long as managers have a personal motivation for optional disclosure of personal information, it seems that disclosure provisions are not necessary (Amini Motlagh, 2010).

Managers can try to achieve the correct forecast or forecast with their desired results. Credit of optional disclosure means the accuracy of the published information by the management; on the other hand, the release of the voluntary disclosure has an effect on the stock price of the company (Jafari, 2013). Ganopolo's and colleagues (2013), findings in a study on the "Voluntary Forecasts of Management Profit in IPOs, against Mandatory Forecasts ", indicates that a pessimistic revenue forecast at a time when companies are required to publicly offer next year profit changes to an optimistic forecast when shifted to a voluntary period. Comparing two time periods in the study showed that forecasting of compulsory income could force companies to anticipate what they had neither the motivation nor the ability to do (Gounopoulos, Kraft, and Skinner, 2013).

Roland et al. (1990) showed that revenue forecast publication could reduce the adverse selection and moral hazard, so it was easier to attract new capital. They showed companies that have increased their capital by holding down the shares of former shareholders, by publishing more forecasts. The motivation to do such a work in France where there is less risk of litigation should be higher (Djankov, La Porta, F, and Shleifer, 2003). Lou and Penman (1990) showed that generally companies with good news voluntarily disclosed their forecasts to distinguish themselves from the companies with bad news (Cazavan-Jeny and Jeanjean, 2006). The refuting hypothesis argues that when managers are owner of all the confidential and unclassified information, even if declaration of all information is not possible for them, the lack of disclosure or a slight disclosure is more favorable to them (Jamali, 2010). Hiley and Palio (2001) believe that there are two potential mechanisms to enhance the credibility of voluntary disclosure: (Jafari, 2013):

i) The third parties that play the role of middleman can provide the essential confidence about the quality of management disclosure.

ii) Confirmation at the time of publication of the financial statement of period end, for example credit of managers forecast of revenues and net income, can be approved or rejected by publication of the real financial statements at the period end. These mechanisms, while useful in increasing the credit degree of the manager's forecast, are adequate punishment for those managers who knowingly published false forecast.

In Hirest's et al. (1999), Houghton et al. (2003), and Neg et al. (2006), there was a significant relationship between the reaction of investors and successive changes on management forecasts. These studies have shown that when executives

are changed after the forecast was offered to the market, they will lose their credibility in forecast accuracy in the following years; so when they offer their first forecast of profits to the market, the shareholders are less responsive to this forecast and their stock prices are less affected by information relating to the benefit forecast (Amini Motlagh, 2010).

3. History Research

3.1. International Research

Chu et al. (2011) examined the optimistic forecast and avoiding behavior from the losses forecast of the management in Japanese companies. . Their final sample was 1771 companies selected among the 2,079 Japanese companies between the years of 1988-2005. They showed that companies avoiding behavior from the loss forecast were made up of a small fraction of the companies (about 25.5% of companies) but they explained a large percentage (61.6%) of optimistic bias in management. They also said that the market recognized this opportunistic behavior and discounted the information of the profit forecast (Jafari, 2013).

Gong et al. (2009) examined the relationship between the management forecast error of revenues in the year after and accrual in the current year. They assumed that management earnings forecast showed more optimism (pessimism) when accruals were relatively high (low). Consistent with this hypothesis, they found that there was a positive relationship between forecast error of management earning and accrual. This positive relationship for companies operating in a business environment is more uncertain, and companies in industries that offer a larger synchronize changes between accruals and activities related to growth is stronger. In addition, when this positive relation is significant, that most likely reflected the true beliefs of management about perspectives of the company's business, but it disappears when accruals are manipulated to increase the profits of the managers business (Gong, Li, and Xie, 2009).

Irani (2003) examined the relationship between the bias in the published profit forecast by executives at companies that had a financial crisis and the results of internal trade. This study was conducted during the period 1990-1995 at US companies. In his research in 2001, he found optimism in such forecasts and he tried to evaluate whether the observed optimism is related to the opportunistic behavior of management or their true belief that the company is better. Unusual Internal Transaction in Management forecasts in the past period showed that their optimistic forecast was associated with opportunistic behavior (Jafari, 2013).

3.2. Internal Research

Jafari (1392) examined the relationship between optimistic management forecast and avoiding behavior from the loss forecast. The results showed that a lot of optimistic bias were explained by avoiding behavior from the loss forecast and the market showed a positive reaction to the benefit forecast of companies that had avoiding behavior from the loss forecast. Therefore, this behavior is not recognized and new data does not discount the profit forecast.

Mashayekh and Shahrokhi (2007) addressed assessing the accuracy and effective factors of profit forecast by the managers. They compared the forecast accuracy of managers from the earnings per future share with forecast based on information from the Random Walk Model. To this end, the forecasting of 279 companies during 1381-1384, including 639 observations were evaluated by the Mean Differences Method. Findings showed that there was a significant difference between the inaccuracy of the managers forecast and the inaccuracy of forecast based on Random Walk. In addition, comparing the mean differences of the two models showed that the accuracy of the manager’s forecast was higher than the forecast based on the Random Walk. Also, results of other assumptions showed that the manager’s forecasts had optimistic deviation (Mashayekh and Shahrokhi, 2007).

Mehdi and Hossein Abadi (2011) examined the relationship between forecasted profit error and accruals of listed companies in Tehran Stock Exchange. The main objective of their study was to investigate the relationship between forecasted profit error by the management and the total accruals. To this end, they collected the information of 112 companies that had the presented characteristics during the period 1387-1382. The results showed that there was a significant relationship between the forecasted benefit error by management and the total accrual. Also, the relationship between the forecasted benefit error by management and the total accrual was not accepted in a commercial environment with high uncertainty (Mahdavi and Zare Hossein Abadi, 2011).

4. Research Method

Research done by the qualitative method is descriptive, and the data collection method is documents.

This study is a systematic review based on local data bases, including Civilica, Ganj and Sid, valid international databases including Scopus and Science Direct, and valid international journals. The search was done using the keywords forecast, prediction and foresight. The field management investigation was done with a top Manager. Then, all the studies and reviewed thesis were adapted to the research questions, evaluated, and data extracted and classified based on the purpose of research meta-analysis.

In this study, the basic framework was presented based on a meta-analysis of reviewed research, focus groups, and professional meetings. Then experts' opinions were added to the above frame and amendments were made to the initial frame. Finally, the model presented in the study was finalized during regular focus groups meetings. Figure 3 shows the theoretical framework of this research.

The duration of research was studies with a similar title, from 1985 to 2015, and over a period of 30 years.

Fig 3: The Theoretical Framework of the Study

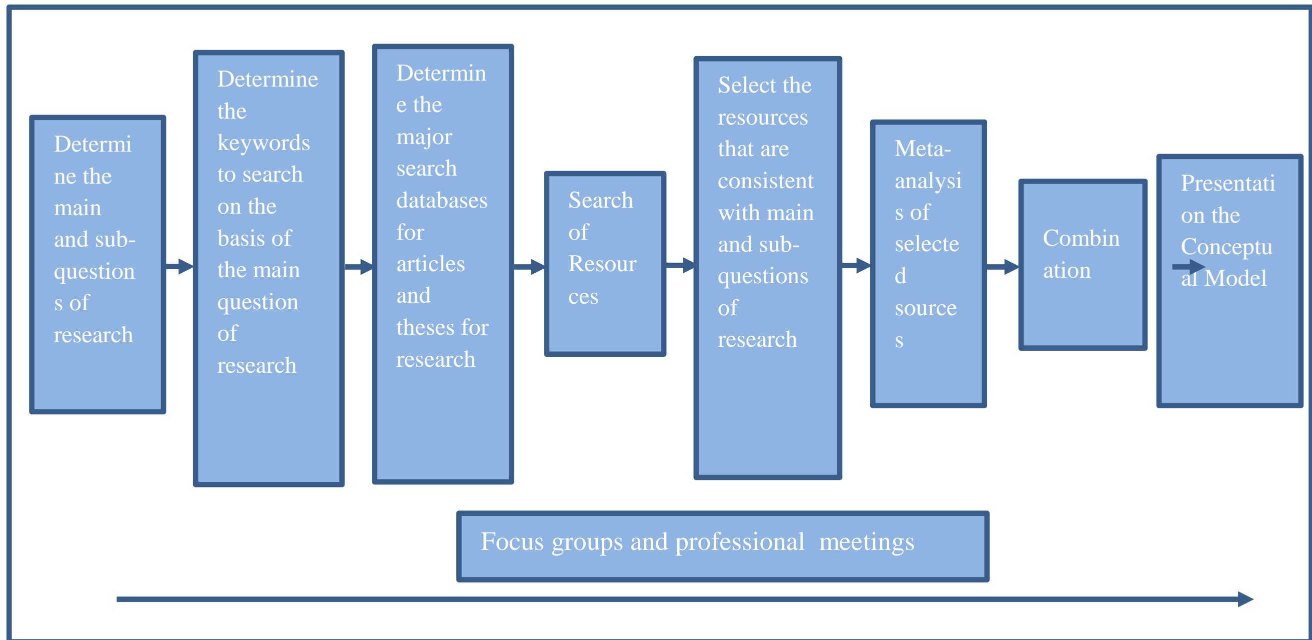


Table 2: The Frequency Table of the Results of Previous Studies, The Period 1985-2015 (Source: Researcher)		
References of Index	**Category**	**Index of Title**
more manager confidence	Optimistic forecast bias	Kato and Skinner (2009) Source (Jafari, 2013).
Behavioral biases	Optimistic forecast bias	Kato and Skinner (2009) Source (Jafari, 2013).
Management opportunism	Optimistic forecast bias	Kato and Skinner (2009) Source (Jafari, 2013). Irani (2003) Source (Jafari, 2013).
Avoiding losses forecast	Optimistic forecast bias	Research Chu et al. (2011). Research (Jafari, 2013).
The opinion is false	Optimistic forecast bias	(Buehler, Griffin, & MacDonald, 1997).
litigation of error of managers forecast is not important	Optimistic forecast bias	Kato and Skinner (2009) Source (Amini Motlagh, 2010).
Necessity of optimism for achieving the targets	Optimistic forecast bias	(Segerstrom, Taylor, Kemeny, & Fahey, 1998)
Compatibility of optimistic attitude with maintaining positive situation	Optimistic forecast bias	(Segerstrom, Taylor, Kemeny, & Fahey, 1998)
better understanding of optimism by others	Optimistic forecast bias	Segerstrom, Taylor, Kemeny, & Fahey, 1998).
Widespread human tendency to optimism, positive thinking and harmony and stability condition	Optimistic forecast bias	(Lench & Ditto, 2008). Research (Windschitl, Smith, Rose, & Krizan, 2010).

Avoiding blaming yourself for the experienced problems	Optimistic forecast bias	(Pezzo, Litman, & Pezzo, 2006).
To obtain the desired value of the market (with motivation of job security, services compensation, obtaining reward based on performance, financing etc.)	Optimistic forecast bias	(Jafari, 2013).
Appearing more productive and successful for others	Optimistic forecast bias	(Pezzo, Litman, & Pezzo, 2006).
Voluntary forecast disclosure	Optimistic forecast bias	Research (Gounopoulos, Kraft, & Skinner, 2013)
Credit of optional disclosure means the accuracy of the published information	credit of optional forecast	(Jafari, 2013).
Voluntary forecast disclosure (Good news)	-	(CAZAVAN-JENY & JEANJEAN, 2006)
Accruals (High accrual- optimism)	Optimistic forecast bias	Research (Gong, Li, & Xie, 2009)
Mandatory forecast disclosure have neither motivation nor the ability to do it	Pessimistic forecast bias	Research (Gounopoulos, Kraft, & Skinner, 2013)
Reducing market expectations	Pessimistic forecast bias	Chen (2004) Source: (Jafari, 2013).
Bad news - increasing pessimism	Pessimistic forecast bias	Research (Windschitl, Smith, Rose, & Krizan, 2010)
accruals (Accrual low – pessimism)	Pessimistic forecast bias	Research (Gong, Li, & Xie, 2009)
Avoiding losses forecast (trying to keep the job and promotion, setting a desire target for performance; future efforts, pressure from corporate governance structure)	The forecast deviation of senior managers	(Jafari, 2013).
Bias and personal motivations	The forecast deviation of senior managers	Rugerz (2008) Source: (Jafari, 2013). (Amini Motlagh, 2010).
Fear of loss of reputation	The forecast deviation of senior managers	(Amini Motlagh, 2010).
Avoid of decreasing reputation	The forecast deviation of senior managers	(Jafari, 2013).
Fear of job loss	The forecast deviation of senior managers	(Bliss, 2007).
Protection against the risk of litigation	The forecast deviation of senior managers	(Jafari, 2013).
Less flexibility in accounting	The forecast deviation of senior managers	(Jafari, 2013).
External shocks	The forecast deviation of senior managers	(Jafari, 2013).
variable Operational environment	The forecast deviation of senior managers	(Gong, Li, & Xie, 2009)

The separation of ownership	The forecast deviation of senior managers	(Jafari, 2013).
Biased forecasts	The forecast deviation of senior managers	Kahenman and Turesky (1979) Source: (Pezzo, Pezzo, & Stone, 2006)
unstructured Reform	The forecast deviation of senior managers	(Armstrong, 2006).
Bias (the main cause of avoidable)	The forecast deviation of senior managers	(Erockson, 1987)
Favorable results or favorable trends	The forecast deviation of senior managers	(Windschitl, Smith, Rose, & Krizan, 2010)
Chimera	The forecast deviation of senior managers	(Bar-Hillel & Budescu, 1995) Source: (Bar-Hillel, Budescu, & Amar, 2008)
The degree of management skills	The forecast deviation of senior managers	(Motamedi, 2012).
Management experiences	The forecast deviation of senior managers	(Jafari, 2013). (Motamedi, 2012).
Personal motivation of management (optional disclosure of forecasts)	The forecast deviation of senior managers	(Amini Motlagh, 2010).
Wrong information (optional disclosure of forecasts)	The forecast deviation of senior managers	(Jafari, 2013).

4.1. Research Questions

Main Question of Study

Can a senior manager be a deviation factor in management forecasting?

Sub-Questions of study

Are optimistic biases the main cause of deviation in management forecasting?

Are pessimistic biases the main causes of deviation in management forecasting?

Can voluntary disclosure of forecasting be an accuracy factor in forecasting?

5. The Meta-Analysis Results of the Research Questions

5.1. Main question: Can a Senior Manager be a Deviation Factor in Management Forecasting?

A meta-analysis of reviewed studies has identified that 19 cases of factors that caused the deviation of management forecasts are issues related to the Executive Director, so the answer is yes, and the senior manager of organization can be one of the main reasons for deviation from the forecasts of the management (Table 3).

Table 3: The Factors Affecting the Deviation in Management Forecasting - By Senior Manager			
Row	**The factors affecting the deviation in management forecasting - by senior manager**	**Row**	**The factors affecting the deviation in management forecasting - by senior manager**
1	Avoiding losses forecast (trying to keep the job and promotion, setting a desire target for performance; future efforts, pressure from corporate governance structure)	11	Biased forecasts
2	Bias and personal motivations	12	unstructured Reform
3	Fear of loss of reputation	13	Bias (the main cause of avoidable)
4	Avoid of decreasing reputation	14	Favorable results or favorable trends
5	Fear of job loss	15	Chimera
6	Protection against the risk of litigation	16	The degree of management skills
7	Less flexibility in accounting	17	Management experiences
8	External shocks	18	Personal motivation of management (optional disclosure of forecasts)
9	variable Operational environment	19	Wrong information (optional disclosure of forecasts)
10	The separation of ownership		

5.2. First Sub-question: Are optimistic biases the main causes of deviation in management forecasting?

Considering that 14 of the cases in the documented researches considered the reasons of the deviation from management forecast directly affected the optimistic forecast bias of management and only 1 case of error depended on the conditions, it can be concluded that the answer is yes, and optimistic bias is the main factor of deviation from management forecast(Table 4).

Table 4: The Factors Affecting the Optimistic Bias in the Management Forecast			
Row	**The factors affecting the optimistic bias in the management forecast**	**Row**	**The factors affecting the optimistic bias in the management forecast**
1	More manager confidence	9	Better understanding of optimism by others
2	Behavioral biases	10	Widespread human tendency to optimism, positive thinking and harmony and stability condition
3	Management opportunism	11	Avoiding blaming yourself for the experienced problems
4	Avoiding losses forecast	12	To obtain the desired value of the market (with motivation of job security, services compensation, obtaining reward based on performance, financing etc.)
5	The opinion is false	13	Appearing more productive and successful for others
6	litigation of error of managers forecast is not important	14	Accruals (High accrual- optimism)
7	Necessity of optimism for achieving the targets	15	Voluntary forecast disclosure
8	Compatibility of optimistic attitude with maintaining positive situation		

5.3. Second sub-question: Are pessimistic biases the main causes of deviation in management forecasting?

Four cases of the factors that may cause deviations in the forecast are factors of pessimistic bias of management forecast, so pessimistic bias can be one of the factors of deviation from management forecasts (Table 5).

Table 5 : The Factors Affecting the Pessimistic Bias in the Management Forecast

Row	The factors affecting the pessimistic bias in the management forecast
1	Mandatory forecast disclosure (have neither motivation nor the ability to do it)
2	Reducing market expectations
3	Bad news - increasing pessimism
4	accruals (Accrual low – pessimism)

5.4. Third sub-question: Can voluntary disclosure of forecasting be an accuracy factor in forecasting?

According to meta-analysis in this study, there is a paradox in optional disclosure of manager's forecasts. Some researchers validated the optional disclosure to mean accuracy of the published information by management, while others questioned the accuracy of the information due to the dependence of the voluntary disclosure of forecast to the manager's decision, and they knew that it depended on the motivation of the managers to disclose it. Results of another study showed that the forecasts were pessimistic at the time of mandatory disclosure, but the forecasts shifted to optimistic when companies voluntarily disclosed forecasts. These results are inconsistent with each other and one implicitly gives credibility to the voluntary disclosure, while others know that information accuracy depends on the motivation of the manager and considers it as a factor for deviation from forecast concluding that a shift from pessimistic to optimistic forecasts occurs at the time of voluntary disclosure. A meta-analysis results of previous studies show that voluntary forecast directly caused the deviation of forecast if the manager published it with personal motivation or the forecast data is not correct. If the manager of the disclosure doesn't have personal motivation and the information is correct, the optimistic forecast is good news. Therefore, answer of this question is no, and the optional disclosure cannot be an absolute cause of the accuracy of forecast.

6. Findings and Conception Model of Research

This study is the first systematic comprehensive review in the field of the management forecast of the organization, especially inspection of personality traits of senior managers and their thoughts and motivations. This research used an innovative meta-analysis method. The study has also provided a comprehensive set of effective factors for the organization forecasts in addition to offering a model to identify the effective factors on the deviation of senior manager's forecasts according to the results of previous research and literature (note Table 6). In addition, this study has tried to look at the theories of management that used senior managers roles in the world of management science to forecast future events in today's uncertain condition; the providence of managers of organization and their possessions that have effective factors on the combination of senior managers' duties (see Figure 1 Note). According to the meta-analysis of past research, the effective factors of the task of senior executives forecast are introduced where the environment of variable business market is critical for today's organizations.

From the application aspect, this research can provide a wide range of information to the senior managers of organizations, stakeholder organizations and researchers in the field of management and forecasting. Also, in terms of compliance, the presented results are completely consistent with past research results and are entirely based on meta-analysis of past research.

Outputs of the study offer a table of the various factors influencing the forecasts of the organization (Table 6). This provides a conceptual model of the factors affecting the deviation from forecasts of the senior executives (Figure 4), as well as factors affecting the task of forecasting the senior executive (Figure 5) and have been presented based on a systematic review and meta-analysis of previous research and management theories.

6.1. Table of effective factors on the organizations forecast

According to a systematic review, deep literature search, and results of past research, it was found that some of the factors are effective in the forecasts of organizations. These factors can cause accuracy or forecast deviation depending on the quality and their direction.

Table 6 shows the factors generally affecting the forecasts of organizations. Some of these factors are completely relevant to organizations such as the size and age of the organization; and some of these factors are relevant to the external environment of organizations such as economic conditions. Some factors such as the forecast style and time duration of forecast are at the discretion of the managers or analysts. A number of factors such as the level of detail in the forecast disclosure and the amount of disclosed information are fully available to the senior managers as the nerve center of the organization in accordance to the role of spokesperson for the organization according to the strategy of the organization, stakeholders opinion, legal, market share, market control, personal motivations, etc. determined by senior managers.

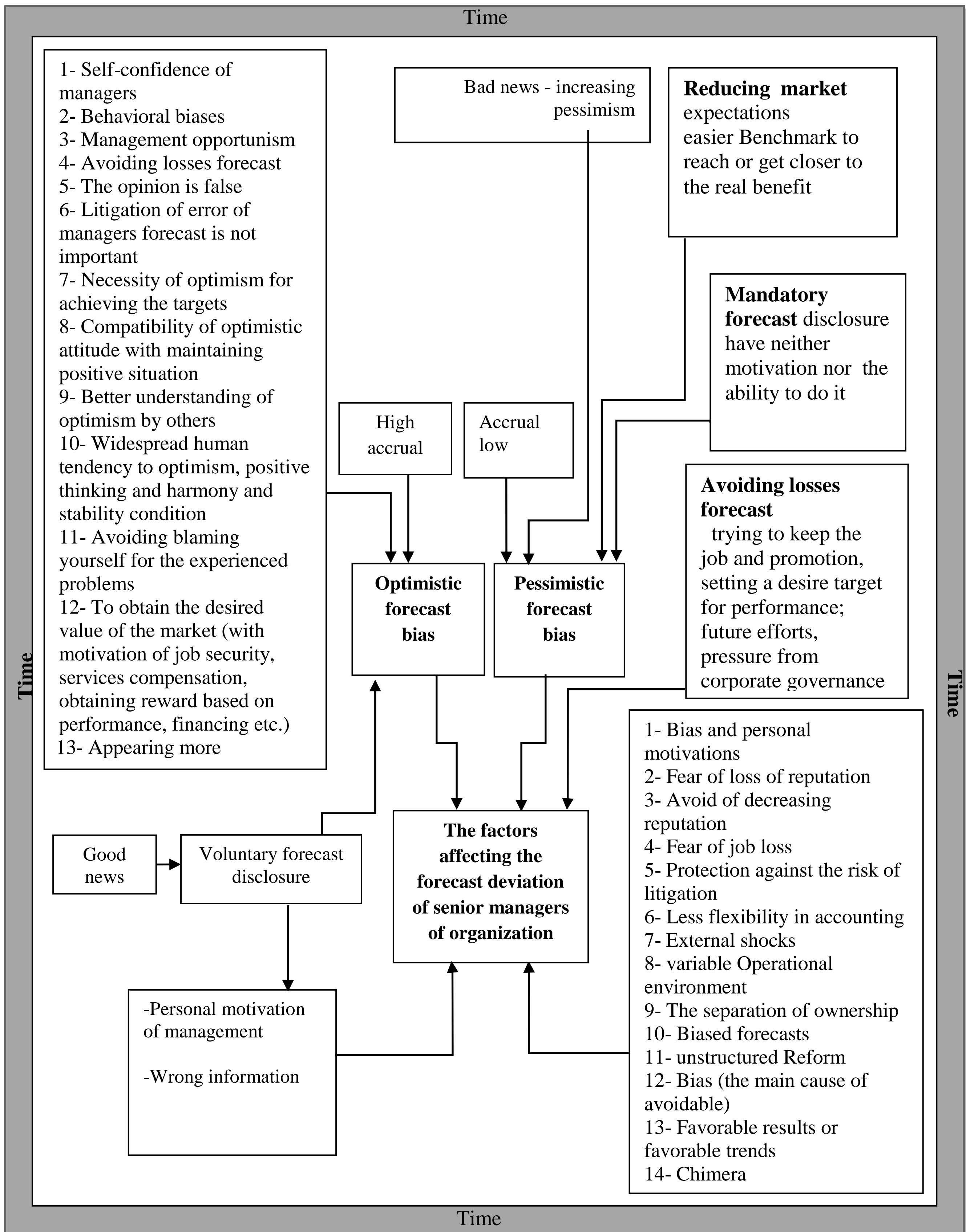
Table 6: Factors Affecting the Company's Forecasts *(Source: Researcher)*

Factors Affecting the Forecasts of Corporate Income and Profit		
Amount of Sales Environmental factors Information asymmetry Accruals Informational environment A false assumption Change the basic conditions Volatility of efficiency Exposure to legal liabilities The degree of skill and experiences Forecasting style	Voluntary and mandatory policy of forecasts presentation Annual adjustments Amount of disclosed information A variety of changes in income The previous years performance The predictability of future earnings The presence of analysts in the capital market Operating profit Earnings per share Audit Quality Economic Value Added (EVA)	Organization Size Forecast horizon Age of Organization Economic conditions The amount of detail in the disclosure of forecast Duration time of forecast The nature of the industry Forecast period Financial Leverage Maintain ownership Corporate governance

6.2. Conceptual Model

As revealed by the research questions, review of meta-analysis of literature and researches of topic and its classification highlight the reasons of managers forecasting deviation according to the methodology of the study. Figure 4 shows the proposed conceptual model for influencing. factors on the deviations of forecast of senior managers of organizations and companies.

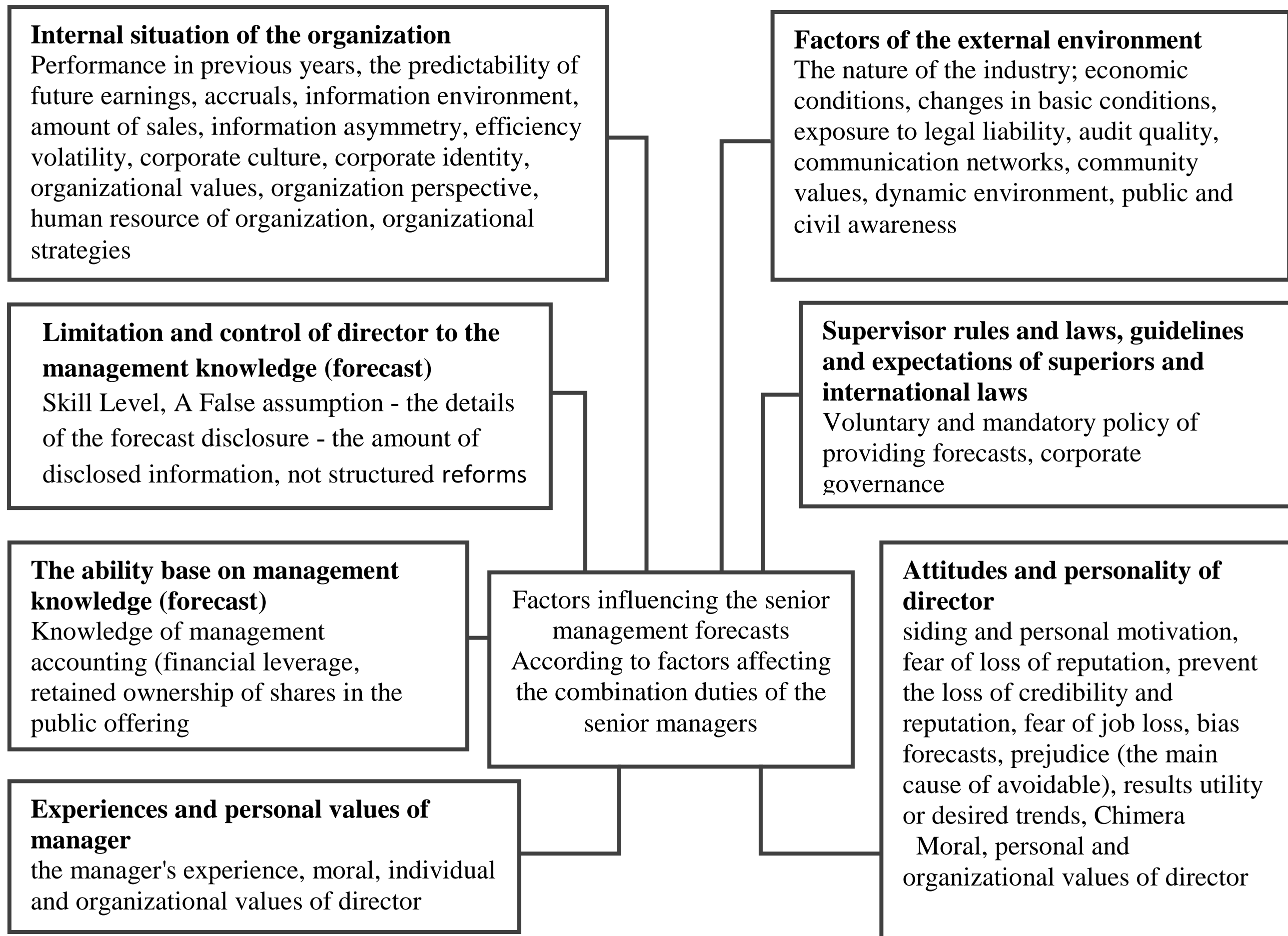
Fig 4: The Conceptual Model of the Factors Affecting the Deviation in Forecasting by Senior Managers (Source: Researcher)



6.3. Effective Factors on the Duty of Senior Managers Forecast

According to Figure 1, the most important factors affecting the composition of senior managers duties, and according to the variable of today business market and many environmental uncertainties, forecasting is one of the main tasks of the senior managers of many organizations. we merged factors affecting the forecasts of directors with the factors affecting the duties combination of the senior managers so that the factors affecting the forecasting task of organization managers is determined (Figure 5).

Fig 5: The Factors Affecting the Forecasting Task by Senior Managers (Source: Researcher)



7. Conclusion

This study has tried to study all the factors affecting organization forecasts and has focused on the factors affecting the forecast deviations of manager's, particularly the personal factors of the director. Forecasts of senior managers, as the largest source of information and as the nerve center of the organization, distributor of information, spokesperson and policy-maker, are one of the most important factors affecting the orientation of the organization, decision-making by stakeholders and investors, and participants in the stock exchange, and ultimately the successes and failures of the organization. Organizations and especially those that are active in stock and ownership separated from management should be aware of the reasons and motivations of manager's forecasts. Inexperience, lack of awareness of environmental factors, lack of managerial skills to forecasting, personal motivations, bias in the forecast, utility result, false fantasies of managers and many other factors should be well regarded by stakeholders of the organization, and managers should be also aware of the factors and their consequences that may unconsciously and unintentionally cause deviation in their forecasts.

According to meta-analysis of past research, the answer to the main question of this research "Can the senior manager be a deviation from the forecasts of the management?" is yes. Referring to the answer to the Main question of research, it becomes clear that senior managers alone can be a major cause of the deviation from forecasts of the management of an organization. The answers to the sub-questions were identified. The first and second sub-questions, "Are optimistic or pessimistic biases the main causes of deviation in management forecasting?" The answer is yes. A meta-analysis of past

research showed that several factors that cause deviations can be caused by optimistic and pessimistic bias of management forecasts (referred to first and second Sub-questions). The answer of the third sub-question, "Can voluntary disclosure of forecasting be an accuracy factor in forecasting?" is no. This subject is not proven; meta-analysis of previous research shows contradictions on this subject (referred to third sub-question).

Finally, we propose that the beneficiaries and directors of the organizations should consider each of the factors in this study and their effect on the forecasts of the organization; they should also consider the factors influencing the deviations of managers' forecasts for the survival, growth and success of the organization in the unpredictable business environment of today.

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