

**PERFORMANCE EVALUATION OF MIANDOAB MUNICIPALITY BASED ON
BALANCED SCORECARD (BSC) MODEL**

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ABSTRACT

In order to evaluate and assess the performance and efficiency of municipality in the delivery of municipal services to its citizens, an evaluation system is necessary. Hence, this study tried to evaluate municipal performance using the balanced scorecard BSC, based on four aspects including financial, citizenship, internal processes and innovation and learning aspects. Methodology of the present study was a practical survey using questionnaires and interviews. The results indicate that citizenship has the highest negative effect and innovation and learning has the highest positive effect on the municipal function. The total measure of municipality shows that the optimal performance is only 48%.

KEYWORDS: evaluation, municipal performance, Miandoab, the balanced scorecard approach.

INTRODUCTION

In Iran, Municipalities operate as NGOs to provide primary services for residents, increased efficiency, profitability and economic growth. Due to growth and development of cities and increased population and thus extended urban service area, an organizational performance measure is required. Organizational performance management allows an organization such as municipality to modify its direction according to changing conditions and to give its dynamics (Ehsanifard and Ehsanifard, 2013). Balanced Scorecard (BSC) can be used as a tool to monitor the performance of municipalities. With the help of this tool, municipalities can assess their long-term success. The method is used to enhance the quality and efficiency of public services and enhance the quality of life of citizens. Municipalities may have an important influence on performance feedback. In fact, BSC looks broadly on organizational performance and allows the organization eliminates the weaknesses and shortcomings by integrating it in the considered evaluation model through monitoring, control, awareness and quality assets. Based on four financial, customer, internal processes and learning and growth perspectives, BSC model evaluates organizational performance (Shahaei and Rostami, 2012).

The main question in this research is whether the municipality of Miandoab has an optimal performance in providing services to the citizens.

- Is there any relationship between municipal revenues and success rate in the municipality?
- Can a research centre play a role in taking advantage of new managerial technologies and urban planning in the municipality in order to develop and improve administrative performance of municipalities?

Hypotheses

It seems that the municipality did not have a good performance in delivering services to citizens.

It seems a good income and stable financial resources of municipalities improve its performance in delivering services to citizens.

It seems a research department in the administrative organization of the municipality is effective on sustainable optimum performance of the organization.

Using BSC, the present study evaluates the performance of municipality in delivering services to citizens.

MATERIALS AND METHODS

Methodology

The purpose of the present study is to evaluate the organizational performance of Miandoab municipality based on BSC model; the methodology used in this study is a practical survey using questionnaire and interview.

Theoretical Background

One of the most important planning tools in any organization is to evaluate its performance based on which the functional status can be measured in a specified time. In the past decades, a variety of evaluation methods for public organizations has been created which can be examined in two approaches. The first approach which is traditional evaluates the financial aspects of the organization, agency problems, performance of the organization, relying on retrospective indices, decreased morale and creativity and emphasizing control. The second approach based on performance evaluation by modern systems focuses on the assessment processes, emphasizing different aspects of the organization, retrospective and prospective measures, improved organizational performance, trust and cooperation, spirit of creativity, causal relations, an emphasis on understanding the strategies and goals before performance evaluation and continuous assessment (Ehsanifard and Ehsanifard, 2013).

Table 1: various performance evaluation models

Time and cost based models	Organizational superior and self-assessment models	Alignment models (integrated)
The half-life chart	Deming model	SMART system
Score model	ISO model	Performance chart model
	BALDRIGE quality model	Benchmarking model
	EFQM model	MBO model
		HOSHIN model
		BSC model
Focusing on financial evaluation and production process based on control of the consumed time and cost	Focusing on managerial evaluation and production process based on result and improvement of process quality	Focusing on all evaluation aspects in management, production process and operation, finance, human resource based on implementation and improvement of strategy

In the late 1980s, numerous articles in various publications were published about ineffectiveness of performance evaluations in public organizations; many of the scientists criticized wide and exclusive usage of financial measures in assessing the performance (Daneshfard *et al.*, 2010). Before that, Hopwood (1972) noted insufficiency of traditional financial measures of performance evaluation. Hypotheses and findings that later formed on the basis of the Hopwood studies indicate that Relying solely on financial performance measures is followed by deleterious consequences and may lead to job stresses and distrust to supervisors (Daneshfard *et al.*, 2010). In 1992, Robert Kaplan, a professor of accounting at Harvard Business School and David Norton, founder and managing director of sustainable strategy consulting firm in Massachusetts (Kaplan and Norton, 2004), developed the theory of the balanced score card as an approach for evaluating the performance of public and private organizations. The methods are considered as a conventional technique developed in America to measure organizational productivity (Jafari *et al.*, 2009). In fact, BSC is a strategic management system including a vision, strategic goals, measures of performance, and involves four financial, internal business processes, customer, and learning and growth perspectives (Sadeghi, 2009). Four aspects of the balanced scorecard are as follows:

1. Financial perspective: Financial performance measures indicate that the strategy of the organization balances the income and expenditure. Measures of financial perspective are in the two groups.

- The first group is the strategy to increase productivity involving improvement of the organizational structure and increase in capital.
- The second group is the strategy to increase revenue divided to subgroups including increased cost of services and expanded opportunities for income.

2. Customer perspective

To select Targets and measures related to customer perspective, organizations must respond to three questions: First, who are our target customers? Second, what are our proposed values? Third, should managers be aware that the organization has satisfied its customers in meeting their needs? For this, all values delivered to customers should be identified and measured. In that case, managers can answer these questions (Sadeghi, 2009). Many organizations believe that they know their customers and know what products and services they have to offer; in fact, they supply

everything for their customers. Michael Porter believes that Lack of focus on a particular segment of customers and their desired values leads organizations to be unable to gain competitive advantage (Tabari and Arasteh, 2008). To evaluate organizational performance by BSC approach, eight measures of customer perspective (citizens) can be considered:

- Cost of Service
- Quality of Service
- Customer retention
- Customer acquisition
- Systematic Services
- Service
- Participation
- Customer type

When an organization identifies its target customers, it can act better in delivering service; hence, some priorities are presented for better management of customers.

Customer Relationship Management (CRM)

This type of management involves three business parts including customer service, marketing information systems, and sales management system. Many call centres use CRM software to store customer information. When customers call, systems are employed to assess and store customer information (Sadeghi, 2009).

Customer Service Improvement

CRM can facilitate service providing for the customer using the following methods:

- Providing service information, product instruction and technical support via websites
- Assisting in identifying problems before they occur
- Creating an intelligent system for recording customer complaints
- Identifying how to define quality from the customer's perspective
- Using Internet Cookie for tracking customer preferences
- Using the internet for customization
- Integrating CRM by other systems (Ibid)

Customer Relationship Improvement

CRMs can improve customer relationships. In addition, the CRM can identify citizens' needs and services can be based on the needs of citizens.

Technical Performance of CRM

Multiple communication channels, the ability to communicate with users via telephone, WAP, Internet and wireless, centralized database storage (ibid).

3. Internal processes perspective

Many organizations try to develop their performance, technology and culture. However, many of them do not coordinate these intangible assets with their strategies. The key for coordination is to consider the context that is the focus on capabilities and characteristics required for internal processes affecting on implementation of the organizational strategy map (Sadeghi, 2009). Internal processes generally are grouped into four categories.

- Operational management processes: The main processes of organizations for current services and delivering them to customers (citizens).
- Customer management process: involves customer relationship improvement, customer service improvement and customer relationship management.
- Innovation process: Kaplan calls the platform to learn, grow and innovate as organizational infrastructure. Without learning and innovation, organizations would not last long. Innovation processes lead to new services and new management processes, including the following four criteria:
 - Identifying opportunities to create new services
 - Managing development projects
 - Designing and developing new services

- Providing New services to citizens
- Legal and social processes: This process helps right of organizations in the city or the country where services are offered. This process consists of the following two criteria:
 - Employment opportunities
 - Social Investment

Excellent reputation in the legal and social aspects helps organizations in attracting skilled workers and thus effective and efficient processes (ibid).

4. Innovation and learning perspective

An organization can continue to sustain when it grew and innovate in the field of manufacturing, service, technology and management. Kaplan and Norton divided innovation and learning into three groups:

- The first group consists of human capital including three sub-criteria, skills, training and knowledge.
- The second group is information value including corporate information, information bank and information networks.
- The third group is assets, including culture, leadership, alignment and teamwork.

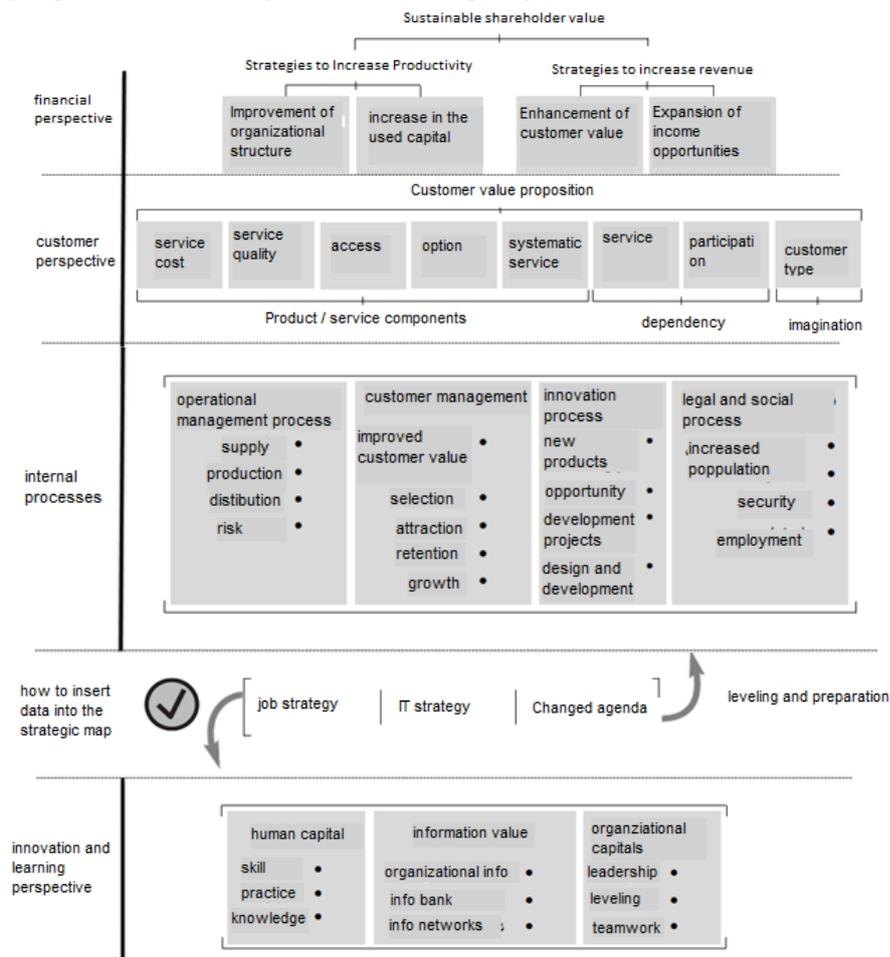


Figure 1: strategy map

According to Petr Rehor and Darja Holatova (2013) for the Municipality of Borovany, Czech Republic, BSC represents strategic planning and systematic management to improve internal and external relationships with strategic goals. To achieve strategic goals of Borovany municipality, they defined 21 sub-criteria including infrastructures (quality of

environmental jobs, passages, transportation lines, percentage of citizens who use water and sewage system and rate of crime), environmental factors (constant factor of the environment, water quality, the percentage of waste, soil and renewable energy), social factors (hospitals and training centers), culture and leisure, housing development, tourism development, environment development, improvement of social security, financial resource development, quality of local government, review of the municipal objectives and development of skills.

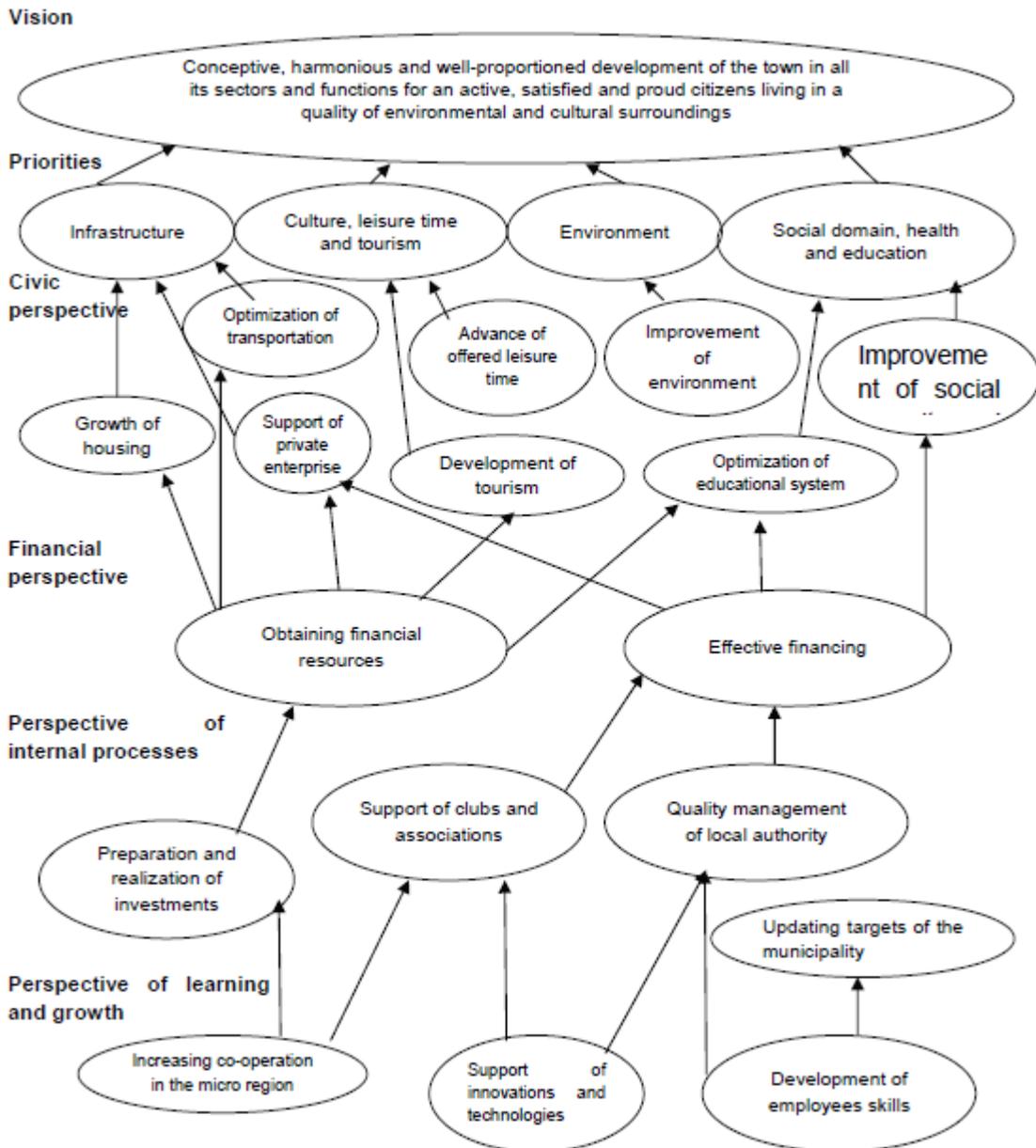


Figure 2: strategic map of Borovany municipality

The result of this study shows that balancing the criteria and sub-criteria of BSC progress and achieve the strategic objectives of the Municipality (Rehor and Holatova, 2013). Elin Linberg and Sara N Schonfeldt (2008) evaluated the performance of Skellefteå, north of Sweden based on BSC. The purpose of their study was to determine whether BSC is effective in evaluating the performance of Skellefteå. Therefore, they developed their sub-criteria based on strategic

map. The results of their study show that BSC increases performance of the municipality. This method seems to be effective in improving the performance of other organizations, if applied (Linberg and Schonfeldt, 2008).

Theoretical Framework

The model used in this study to assess the performance of municipality is balanced scorecard (BSC). In this evaluation, the overall structure has been maintained in four perspectives, financial, customer, internal process and customer (citizen). For each of these criteria, some sub-criteria have been considered as follows.

1. Financial perspective

Financial perspective of this research is divided into increased productivity and budget growth. The former is divided into improved organizational structure, savings in expenses and investment attraction. The latter is divided into increased constant revenue resources and sustainable budget growth rate.

2. Customer perspective (citizen)

Customer perspective is divided into customer management and citizen satisfaction. The former includes fair life conditions, attractive conditions for children to continue life in the city and desirable environment. The latter includes citizen satisfaction with urban expenses (for example, construction licencing, urban service delivery, participation in urban projects and performance of the organization in attempts to attract citizen satisfaction.

3. Internal processes

Internal process of municipality is divided into administration, citizen management, innovation process and employees. Administration involves two criteria including servicing and fair distribution of services to citizens. Citizen management involves four sub-criteria including improved citizen value, attracting people to live in the city, sustainable immigration and sustainable growth of population. Innovation includes new services, research centres, development projects and new opportunities for innovation. Criterion of employees includes skills required for employees, healthy working environment, improved employee performance, employees must have a plan of how they work and efficiency measurement. Increased job opportunities for individuals with expertise in the field of municipal organization and reduced staff time off to less than 1% per year.

4. Learning and growth perspective

Growth and learning perspective is divided into human capital, information value and organizational capital. Human capital is divided into skills, training and knowledge. Information value is divided into organizational information, information bank and information networks. Organizational capital is divided into leadership, alignment and teamwork.

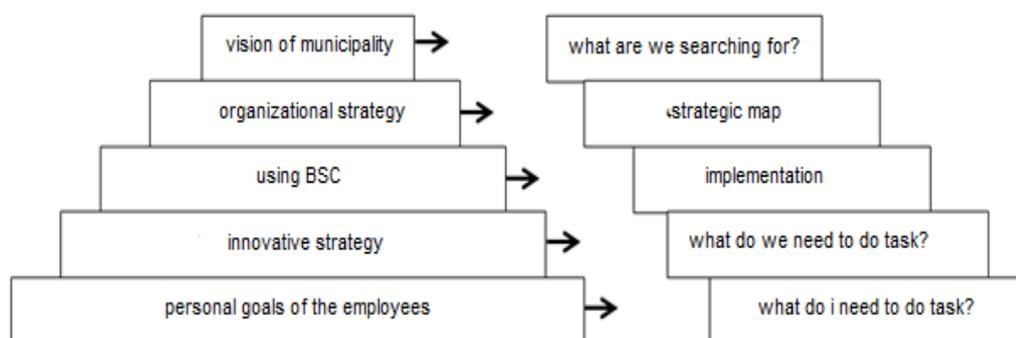


Figure 3: a hierarchy of vision, strategy and objectives

To evaluate by BSC, the first step is to assess the prospects of municipalities and then to prepare a strategic plan in order to interpret urban plans. Strategy of the initiatives of the organization or operational goals and objectives of the employees is the next step to develop a hierarchy of strategic planning.

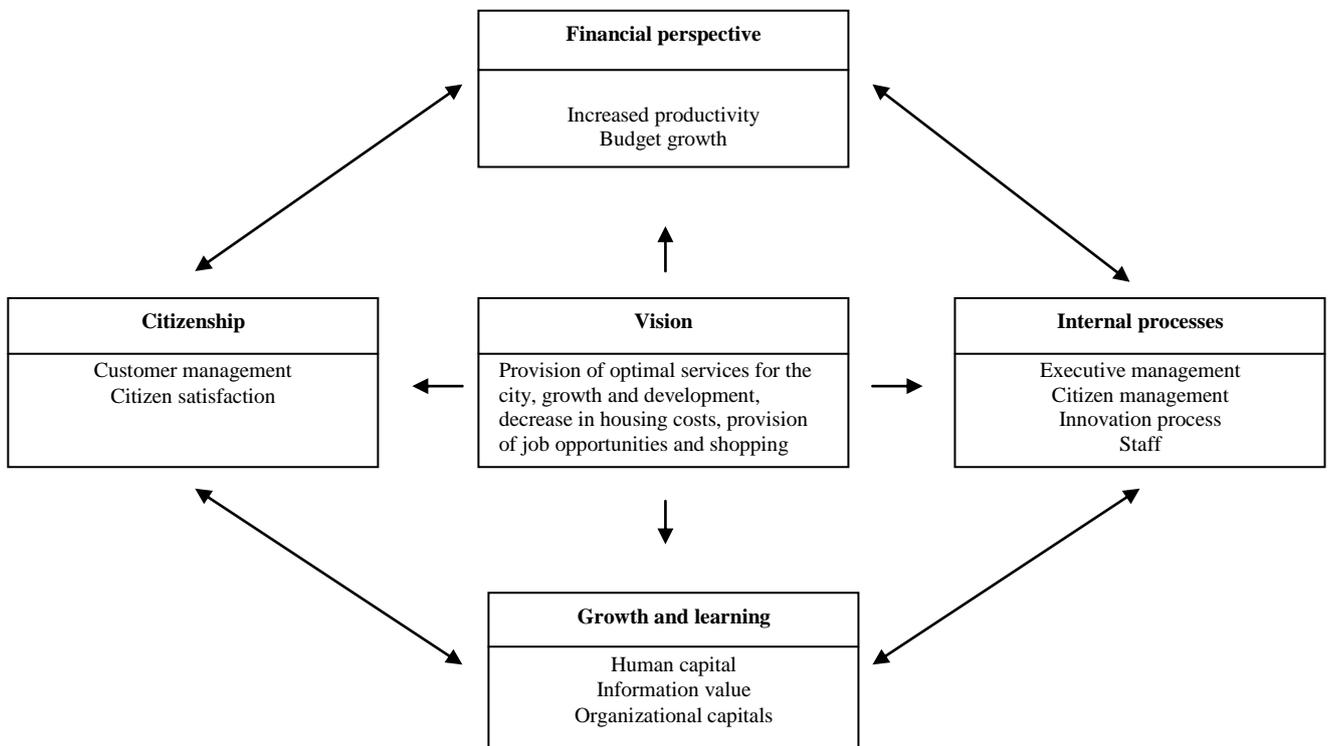


Figure 4: aspects and criteria of BSC model to evaluate the performance of municipality

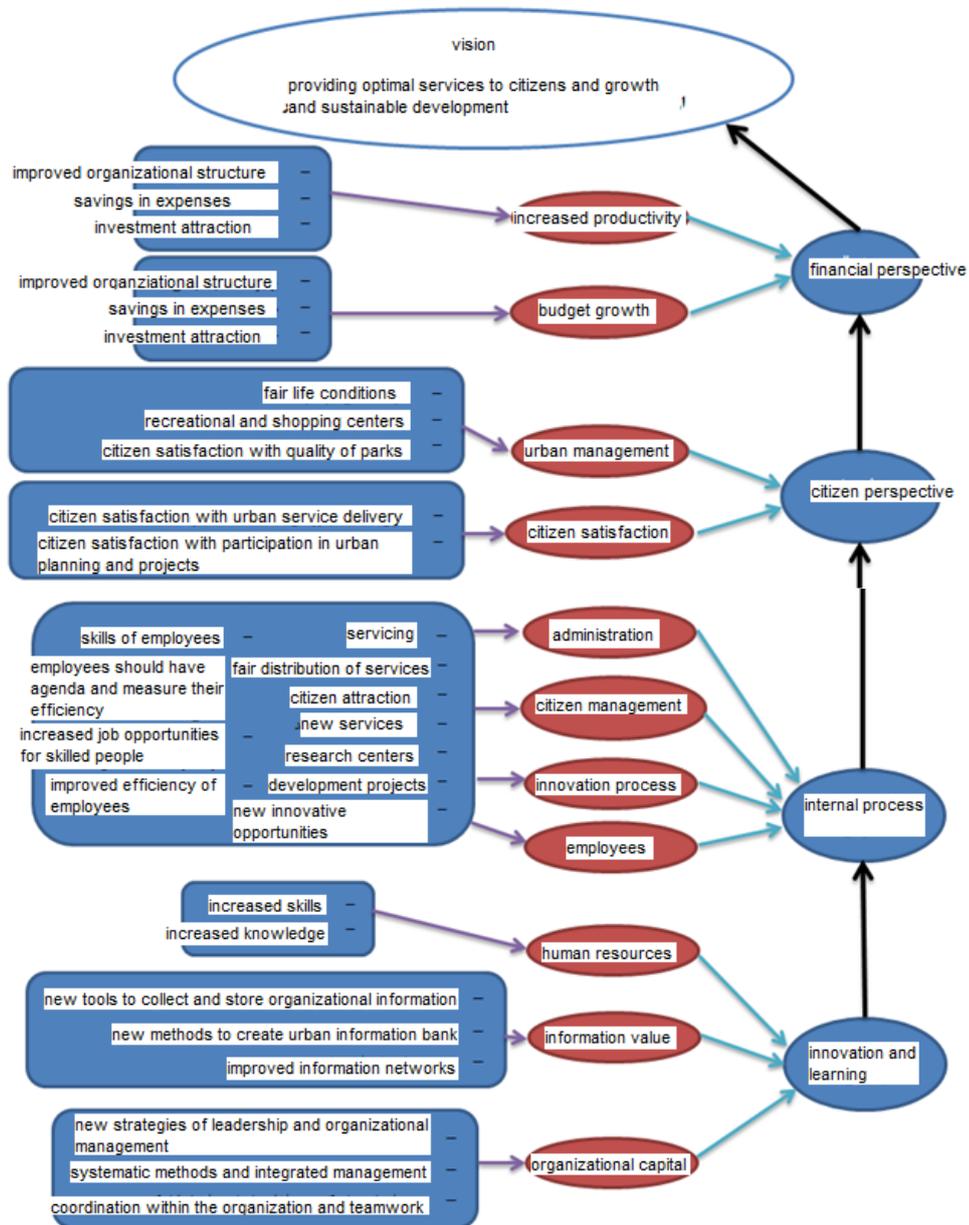


Figure 5: criteria and sub-criteria of BSC model to measure performance of the municipality

Administrative Organization of Miandoab Municipality

Miandoab municipality generally have 423 employees, of this number, about 90 people work at the administrative office.

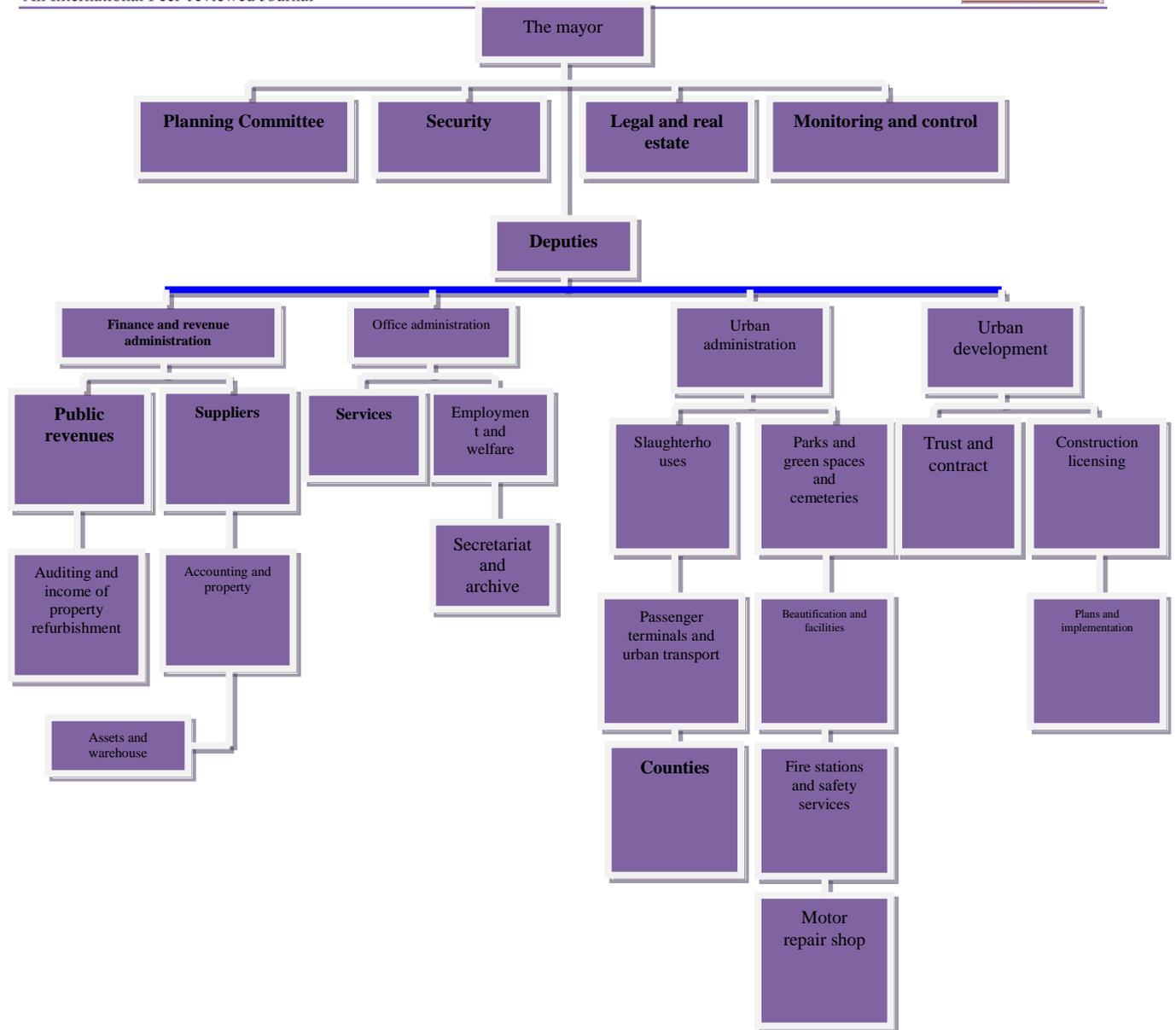


Figure 6: organizational chart of the Miandoab municipality

At the head of the organization is mayor followed five departments including planning committee, security, legal and real estate, monitoring and control, deputies. Department of deputies is divided into four sub-departments including finance and revenue administration, office administration, urban administration and urban development. Finance and revenue administration is divided into five groups, suppliers, public revenues, accounting and property, auditing and income of property refurbishment and warehouse. Office administration is divided into three groups, services, employment and welfare, and secretariat and archive. Urban administration is divided into slaughterhouses, passenger terminals and urban transport, counties, parks and green spaces and cemeteries, beautification and facilities, fire stations and safety services, and motor repair shop. Urban development is divided into three groups of construction licensing, trust and contract, and plans and implementation.

RESULTS

According to the regional BSC model to evaluate the performance of Miandoab municipality, 315 questionnaires were randomly distributed among citizens in order to evaluate the customer perspective and customer satisfaction. Then, 13 questionnaires were distributed among senior employees. Accordingly, the financial, internal process, learning and growth and innovation perspectives were evaluated. Items of both questionnaires were developed based on the Likert scale. In the SPSS software based on t-student test, the hypothesis H_0 was neither accepted nor rejected by a critical ratio of 2.5 and 95 percent significance level. In the following, each of the four perspectives of BSC model has been measured.

Financial Perspective

- Hypothesis H_0 : Municipality has not changed its organizational structure to enhance organizational productivity.
- Hypothesis H_1 : Municipality has changed its organizational structure to enhance organizational productivity.

Based on the t-student test with 12 degrees of freedom, organizational structure is $1.782 > 0.349$, thus hypothesis H_0 is accepted and H_1 is rejected.

- Hypothesis H_0 : Municipality does not save on its expenses.
- Hypothesis H_1 : Municipality saves on its expenses.

Based on t-student test with 12 degrees of freedom, saving is $1.782 < 2.114$, thus H_0 is rejected and H_1 is accepted.

- Hypothesis H_0 : the municipality has not been successful in attracting investors.
- Hypothesis H_1 : The municipality has been successful in attracting investors.

Based on t-student test with 12 degrees of freedom, this measure is $1.782 > -0.928$, thus H_0 is accepted and H_1 is rejected.

Based on the average used to evaluate the performance of productivity, it can be concluded that efficiency of this measure is only 33.3%.

- Hypothesis H_0 : The municipality does not have a stable income source.
- Hypothesis H_1 : The municipality has a stable income source.

Based on t-student test with 12 degrees of freedom, this measure is $1.782 > -1.028$, thus H_0 is accepted and H_1 is rejected.

- Hypothesis H_0 : there is no budget growth in the municipality.
- Hypothesis H_1 : there is budget growth in the municipality.

Based on t-student test with 12 degrees of freedom, this measure is $1.782 < 2.025$, thus H_0 is rejected and H_1 is accepted.

Budget has only grew by 50%. Thus, financial perspective only accounts for only 41.65% of its total capacity.

Customer Perspective

- Hypothesis H_0 : Living conditions in Miandoab does not seem fair.
- Hypothesis H_1 : Living conditions in Miandoab seems fair.

Based on t-student test with 12 degrees of freedom, the measure is $1.960 > -2.019$, thus the hypothesis H_0 is accepted and H_1 is rejected.

- Hypothesis H_0 : Citizens are not satisfied with entertainment centres and shopping malls.
- Hypothesis H_1 : Citizens are satisfied with entertainment centres and shopping malls.

Based on the t-student test with 12 degrees of freedom, this criterion is $1.960 > -3.720$; thus, the hypothesis H_0 is accepted and H_1 is rejected.

- Hypothesis H_0 : Citizens are dissatisfied with the quality of parks.
- Hypothesis H_1 : Citizens are satisfied with the quality of parks.

Based on the t-student test with 12 degrees of freedom, this criterion is $1.960 > -11.152$; thus, the hypothesis H_0 is accepted and H_1 is rejected.

Therefore, the performance of urban management is 0%.

Based on the questionnaire distributed among citizens, the results show that only 34% of the citizens are satisfied with municipal activity. By averaging these two measures, the performance of the citizen respective is 17%.

Internal Processes Perspective

- Hypothesis Ho: Administration has not performed well in providing services to citizens.
- Hypothesis H1: Administration has perform well in providing services to citizens.

Based on t-student test with 12 degrees of freedom, the result obtained is $1.782 < 2.413$, thus the hypothesis Ho is rejected and H1 is accepted.

- Hypothesis Ho: services are not evenly distributed among citizens.
- Hypothesis H1: services are evenly distributed among citizens.

Based on the t-student test with 12 degrees of freedom, this criterion is $1.782 > -0.587$; thus, the hypothesis Ho is accepted and H1 is rejected.

Thus, the performance of administrative management is 50%.

- Hypothesis Ho: There is no hope to improve municipal performance.
- Hypothesis H1: There is hope to improve municipal performance.

Based on the t-student test with 12 degrees of freedom, this criterion is $1.782 > -7.768$; thus, the hypothesis Ho is accepted and H1 is rejected.

Thus, urban management failed to attract citizens and its performance was 0%.

To collect data, informatics staff of the municipality was interviewed. The results were as follows:

- There is no research centre in the municipality;
- There are development projects in the municipality;
- Employees have duties and plans to do them.
- Hypothesis Ho: Employees do not have the skills necessary to do tasks.
- Hypothesis H1: Employees have the skills necessary to do tasks.

In order to assess this measure, employees were asked for training. Based on the t-student test with 12 degrees of freedom, this criterion is $1.782 < 1.851$; thus, the hypothesis Ho is rejected and H1 is accepted.

Based on findings, performances were 50% for administration, 0% for citizen management, 50% for innovative process and 50% for employees. Thus, performance of internal processes was 37%.

Innovation and Learning Perspective

- Hypothesis Ho: Employees do not have the skills to do tasks.
- Hypothesis H1: Employees have the necessary skills to do tasks.

In order to assess this measure, employees were asked for training. Based on t-student test with 12 degrees of freedom, the result obtained is $1.782 < 1.851$, thus the hypothesis Ho is rejected and H1 is accepted.

- Hypothesis Ho: employee awareness of strategic management is not desirable.
- Hypothesis H1: staff awareness of strategic management is desirable.

Based on the t-student test with 12 degrees of freedom, this criterion is $1.782 < 3.870$; thus, the hypothesis Ho is rejected and H1 is accepted.

Thus, Human capital is 100 percent.

Information value was calculated by interview in which new tools were used to collect and store information, new methods were applied for an urban information bank and information networks. Thus, the performance of information value is 100%.

- Hypothesis Ho: performance of the management is not desirable.
- Hypothesis H1: performance of the management is desirable.

Based on the t-student test with 12 degrees of freedom, this criterion is $1.782 < 2.062$; thus, the hypothesis Ho is rejected and H1 is accepted.

- Hypothesis Ho: Administrative management of the municipality is not integrated.
- Hypothesis H1: Administrative management of the municipality is integrated.

Based on the t-student test with 12 degrees of freedom, this criterion is $1.782 < 2.062$; thus, the hypothesis Ho is rejected and H1 is accepted.

- Hypothesis Ho: there is no coordination and cooperation within the organization.
- Hypothesis H1: there is coordination and cooperation within the organization.

Based on the t-student test with 12 degrees of freedom, this criterion is $1.782 < 2.208$; thus, the hypothesis Ho is rejected and H1 is accepted.

As a result, the performance of organizational capital shows about 100%. The performance of innovation and learning is 100% of the performance.

Table 2: performance of municipality

Parts	Measures	Levels of performance for each indicator	Level of performance in each unit	Organizational performance to achieve the vision
Financial perspective	Increased productivity	33.30%	41%	48%
	Budget growth	50%		
Citizen perspective	Urban management	0%	17%	
	Citizen satisfaction	34%		
Internal processes	Administrative management	50%	37%	
	Citizen management	0%		
	Innovation process	50%		
	Employees	50%		
Innovation and learning	Human resource	100%	100%	
	Information value	100%		
	Organizational capital	100%		



Figure 7: performance of organizational aspects

CONCLUSION

According to findings, it can be concluded that Miandoab municipality does not well perform, and only 48% of the organization is efficient. In this regard, lack of funds and stable incomes has the greatest negative effect on the financial aspects of the balanced scorecard model. In relation to customer perspective, municipal agencies failed to attract citizen satisfaction. Unfortunately, this key has the greatest negative impact on the municipality. Internal process is also not

satisfactory and cooperation and interaction between parts of the organization is not in a good condition. It is proposed to raise the internal processes of the organization by new administrations, including strategic management of public organizations or integrated Management. The last aspect of municipal performance evaluation model based on a BSC is learning and innovation perspective. Based on the findings, this perspective is absolutely in good condition. To maintain this, it is recommended to establish a Research Centre for developing strategies.

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