Scientific Research Publishing

Open Journal of Business and Management, 2023, 11, 1359-1385
https://www.scirp.org/journal/ojbm
ISSN Online: 2329-3292
ISSN Print: 2329-3284

Using the Balanced Scorecard and the Analytic Hierarchy Process to Rank the Key Performance Factors in the Iranian Banking Industry

Hadi Keshavarznia, Mario Wallace

School of Business and Management, Walden University, Minneapolis, USA
Email: hadikeshavarz77@yahoo.com, wallacemariod@gmail.com

How to cite this paper: Keshavarznia, H., & Wallace, M. (2023). Using the Balanced Scorecard and the Analytic Hierarchy Process to Rank the Key Performance Factors in the Iranian Banking Industry. *Open Journal of Business and Management, 11,* 1359-1385.
https://doi.org/10.4236/ojbm.2023.113075

Received: April 17, 2023
Accepted: May 28, 2023
Published: May 31, 2023

Abstract

Ranking the appropriate Key Performance Factors (KPFs) for banks in Iran is vital for determining the focus of the bank's economic growth and development. Although identifying the appropriate KPFs is important for the outgrowth of the Iranian banks, one of the most critical performance drivers is establishing the appropriate strategy management framework and infrastructure to drive strategic performance in Iranian banks. The Balanced Scorecard (BSC) methodology is a multidimensional strategy management performance system that provides leaders with tools to identify industry forces, to develop a strategic plan with causal linkages, to align an organization, to drive performance, and to evaluate organizational growth and development. The BSC was the conceptual framework used in this study along with the Analytic Hierarchy Process (AHP) method. The population of this study consists of 25 professionals of the Iranian Banking Network (IBN). A purposive judgmental sample was used to arrive at the sample size. The aim of this study was to identify, rank, and prioritize the appropriate KPFs to determine the best path forward to advance the bank's economic goals and to strengthen the nation's economy. The AHP method guided the decision of the banking professional in determining the KPFs for the Iranian banking industry. The KPFs were grouped together according to the BSC's four perspectives: financial, customer, inner process, and learning & growth. The study provided implications for decision makers in the Iranian banking industry that the highest KPFs for the financial perspective is economic value-added, for the customer perspective is future years profit, for the internal process perspective is given facilities, and for the learning and growth perspective is the average work life of an employee.

Keywords

Strategy, Balanced Scorecard, Key Performance Factors, Banking Industry, Iran, Analytic Hierarchy Process Method, Multi-Criteria Decision Making

1. Structure of the Article

The article is organized in the following structure: the introduction of the study including the role of the Iranian bank; the problem statement, the literature review, the methodology including the explanation of the BSC and the AHP method used to collect and evaluation the participant's responses to the study, the data analysis, the limitations of the study, the discussion, and the conclusion.

2. Introduction

The global banking institution is vital to the financial performance, growth, and development of the modern world economies (Ahmed, 2010). Banking, as a subsector of the financial service industry, has important responsibilities to provide financial services to individuals, businesses, and governments (Ahmed, 2010; Rabaa & Younes, 2016). These services include short-term and long-term loans, and to facilitate international trade to expand a country's businesses operations, access new markets, and wealth management (Kamel, 2005). By establishing a focus and facilitating the flow of money and credit and the intermediaries between savers and borrowers, the banking industry indirectly and directly stimulates and grows the modern world economies.

The banking industry offers financial stability and financial stewardship of the assets for the country and its citizens (Kamel, 2005). Financial stability and financial stewardship in banks are created by providing access to banking services, facilitating the flow of money and credit, offering diversification of assets, mitigating risk management, consistently meeting the regulatory and compliance standards, and advancing information technology (IT)-driven innovation (World Bank, 2003). Although many factors can reinforce the financial stability and stewardship in banks, IT-driven innovation, in particular, can strengthen the financial resolve in the banking industry. Research has shown that IT-driven innovation increases access, efficiencies in transactions, and reduced the operational transactions of employees (Jakšič & Marinč, 2019). IT-driven solutions are one of many factors that can provide significant competitive advantage and help increase the financial sustainability in banks. Nonetheless, the banking industry has other valuable benefits that enhances financial solidarity and grow the local, national, and regional economy (Decker, 2014).

The banking industry is a financial catapult for stimulating the local, national, and international economy. Banks offer personal and bank loans and business lines of credit to individuals, large companies, and small businesses (Kamel,

2005). The business loans and business lines of credithelps business owners reinvest back into their business, create jobs, and stimulate innovation that create economic growth and contribute to a country's gross domestic product (GPD) (Decker, 2014). In China, small businesses account for six million registered private businesses and 65% of the GDP (Ahlstrom & Ding, 2014). In the United States, 50% of the GDP is generated by the small business sector (Dal Bianco, Amini, & Signorelli, 2017). In Japan, the small business sector accounts for 64% of the GDP (Fouad, 2013). The large and small business sector contributes to local markets, and it influences the national and international markets. In developing countries, however, borrowers lack access to personal and bank loans and business lines of credit as developed countries.

The banking industry in developing countries lacks financial resources, the appropriate technological infrastructure, and options to identify the most strategic KPFs to grow the bank's profits and the local, regional, and national economy (Kamel, 2005). Banks in developing countries have less developed assets and financial markets to provide the competitive services to their customers (Kamel, 2005). They do not have the financial infrastructure to offer competitive personal and business loans, payment facilitation, credit assignments, and maintaining financial stability (World Bank, 2003). They lack the technological infrastructure to enable access to rural communities to improve their socioeconomic standing (Kamel, 2005). According to a Grameen Bank in rural Bangladesh, poor farmers struggled to grow and sustain their farms and improve their socioeconomic conditions because they lacked access to banking institutions (Haqqani, 2003). Leaders in the Grameen Bank solved the problem by reversing the policies that focused on the need for collateral loans and instead built a system based on mutual trust (Haqqani, 2003). In recent years, the World Bank created the Growth Success model to bring a better financial infrastructure and technological infrastructure to developing counties (Haqqani, 2003). The growth and success model helped more than 50% of the borrowers in developing countries attain a level of success and financial freedom (Haqqani, 2003; World Bank, 2003). When the banking industry has the right financial and technological infrastructure, leaders in banks can focus more on identifying the appropriate KFPs to grow and develop their banking operations and the local, regional, and national economy.

Leaders in the banking industry are best effective when they can identify the appropriate KPFs to compete internationally, regionally, and locally to drive advance the bank's goals. Bank leaders can identify the appropriate KPFs by conducting regular stress test, evaluating existing policies, mitigating risk in the risk management portfolio, auditing the investment portfolio, and reimaging the role of information technology (World Bank, 2003). Focusing on portfolio diversification and information technology can potentially help banks compete internationally, regionally, and locally. IT development has also provoked competition in banking affecting the strategic choice in KPFs. IT development has transformed the banking sector and made banking faster, more efficient (Jakšič &

Marinč, 2019; Kamel, 2005). IT development makes banking more accessible by providing online banking, mobile banking, artificial intelligence, and even blockchain technology (Jakšič & Marinč, 2019). Leveraging information technology, diversifying assets, and mitigating risk, banks can reduce costs and increase profitability for banks, which are key factors for growing the banking industry in Iran. The Iranian banking industry (IBI) seeks to compete nationally, regionally, and internationally, and to do this it must collectively identify the KPFs to determine the best path forward.

The Role of Iranian Banking Industry

Iranhas gone through stages and political upheavals over the past 30 years, which accounts for some of contemporary economic challenges in the Iranian banking industry (IBI). Some of the economic challenges are limited innovation, lack of transparency, and a range of international sanctions. The Iranian government has taken steps to reform the banking sector and improve its stability and efficiency. The reforming includes measures such as the creation of a new central bank and the implementation of new regulations. The modern IBI, however, plays a key role in the country's renewal and economic development.

The primary role of the modern IBI is to serve as the system for providing various financial services to businesses and individuals. The goal of the modern IBI is to offer the traditional services such as short-term and long-term loans, and to facilitate international trade to expand Iranian businesses operations, and access new markets. The goal of the modern IBI is to also offer innovative banking solutions such as online banking that includes including deposit accounts, credit cards, online banking, mobile banking, and other digital services. Overall, the modern IBI plays a crucial role in promoting and developing economic growth in Iran.

3. Problem Statement

The IBI faces multiple problems such as technological innovation, risk management, economic sanctions, and international competition. Economic sanctions have caused some justifiable economic concerns but the country's vigilant approach to sustaining its main trading partners has mitigated some of the challenges with the sanctions. The IBI's general problem is international competition which is associated with market size, regulations, brand reputation, and capital and financial strength. Although the general problem is international competition, the main problem for the IBI is its inability to pin down the appropriate KPFs to properly resource the banking system to compete internationally.

The IBI's failures are due to the lack of setting long-term goals and transparency and the lack of a strategy management evaluation system where knowledge is retained and codified, and decisions are valued at all levels of the organization. Leaders in the IBI seek to identify, rank, and prioritize the appropriate KPFs to determine the best path forward to advance their goals and to strengthen their economy.

4. Review of the Literature

The aim of this study is to identify, rank, and prioritize the appropriate KPFs to advance the bank's economic goals and to strengthen Iran's economy. To review the literature for this research, it is important to review seminal and current research related to knowledge management and strategy management evaluation systems. It is also important that the context of the research discuss methods and frameworks in relations to the banking industry.

4.1. Knowledge Management

The repository of knowledge and knowledge management in organizations begin with a company's ability to recruit, hire, develop, and retain the best leaders. Leaders are a source of competitive advantage in an organization when they are rare, difficult to imitate, and non-substitutable resources (Barney, 2001; Grant, 1996; Teece, 2000). A company's competitive advantage stems from its ability to acquire and development its intangible assets such as people capabilities, problem solving, routines, and access to information (Grant, 1996; Sarder, 2016). To sustain a competitive advantage, organizations must retain rare leaders and prevent them from becoming mobile (Barney, 1991; Jabar, Sidi, & Selamat, 2010). Leaders must be immobile and possess the skills to sort through large amounts of market data, internal documents, emails, to identify value creating opportunities for an organization (Abusweilem & Abualoush, 2019). Leaders become rare and difficult to imitate through the process of capturing, storing, sharing, and reusing knowledge. Leaders possess skills and competencies to make strategic decisions based on their tacit and codified knowledge (Jabar, Sidi, & Selamat, 2010; Teece, 2000). Tacit knowledge has no mechanisms or processes to impart to the larger organization; codified knowledge is captured, structured, reusable for the larger organization (Jabar, Sidi, & Selamat, 2010). Tacit knowledge is extremely valuable when it is codified. To offer a competitive advantage, leaders across all tiers in organizations must be considered rare, immobile, difficult to imitate, and carriers of both tacit and codified knowledge. To compete and offer value in an organization, these leaders must be empowered to make decisions at their local level to help increase performance in an organization.

Inclusive decision making is a source of knowledge management in an organization that empowers leaders across all tiers in organizations to collectively use their knowledge to advance the company's goals. Leaders, managers, and people are vessels of knowledge in an organization but if they are not allowed to contribute to the decisions in the organization, their knowledge serves no purpose (Clark, 2020; Jabar, Sidi, & Selamat, 2010). The best leaders foster and thrive in psychologically safe environments (Jabar, Sidi, & Selamat, 2010). Clark (2020) expressed that a psychologically safe environment is one that adhere to the inclusion safety, learner safety, contributor safety, and challenger safety. Inclusion safety addresses belonging of all people in an organization. People feel that they are

seen heard and included. Learner safety offers the comfort of making a mistake without negative consequences (Nagler, 2022). People can participate in development and knowledge sharing and grow with the company. Contributor safety empowers people in an organization to contribute to team's goals without criticism (Clark, 2020; Nagler, 2022). Challenger safety is the last stage of psychological safety. In this stage, people are allowed to feel encouraged to challenge the status quo. If they feel that they can offer a better solution, they are encouraged to share their ideas without the fear of retaliation (Clark, 2020; Nagler, 2022). When leaders feel that they work in a psychologically safety environment, they feel obligated to offer their knowledge to help advance their company. Inclusive decision making is predicated on psychological safety. Leaders at all levels of the organization must be included in the decision making to collectively manage the mission, vision, and goals of an organization. Leaders at all levels must be actively engaged.

Knowledge of one of the intangible assets that builds competitive advantage. Intangible assets are those that are not visible. Some intangible assets are intellectual capital, reputation, organization culture, relationships, and technology systems (Barney, 2001). Human capital readiness (HCR) is a type of intangible assets related to developing the knowledge of strategic job families (SJFs) in an organization to help drive strategic performances (Kaplan & Norton, 2008). SJFs are key positions in an organization that is responsible for advancing a company's strategic priorities. HCR is a strategic concept of aligning SJFs to a strategic plan, identifying the appropriate knowledge, skills, and attributes (KSAs) to drive the strategy, using the KSAs to assess the competencies of the SJFs, and developing the accordingly (Kaplan & Norton, 2004; Sarder, 2016). The more prepared the employees are in an organization, the most competitive the organization is. Risinger (2018) wrote that HCR planning is one of the most valuable activities in an organization. The goal of HCR is to build the KSAs of people in an organization to help advance the company goals. Leaders in organizations must identify the performance gaps of their team members and provide the appropriate intervention to prepare them to execute the strategic plan. They are directly responsible for ensuring that employees have the right KSAs to execute the strategic plan. Their role is to ensure that their team is fully prepared and skilled and offers the organization a competitive advantage.

The proper execution of knowledge management has a positive impact on the organization's performance. Grant (1996) wrote that information can be used for business intelligence (BI). BI is created by capturing, storing, sharing, and reusing knowledge (Jabar, Sidi, & Selamat, 2010). BI is also created through using information systems to organize large sums of data, and mine data (Kamel, 2005). Yang et al. stated that knowledge management is the biggest challenge for management in twenty first century who lacks the competency to use it. Leaders must be skilled enough to use BI to increase performance and productivity in an organization. Leaders in an organization must be skilled in organizing, interpret-

ing, and evaluating data and using it to make optimal business decision. One of the main sources of knowledge management resides in the strategic planning review meeting (SPRMs).

SPRMs are designed for leaders across tiers in an organization to report out the progress of their strategic priorities and to strategically capitalize off the strategy. There are three types of SPRMs: initiative review, strategy review, and strategy refresh. In the initiative review meeting, strategic initiative owners report out on the progress of strategic initiatives (Kaplan & Norton, 2008). The initiative review meeting is managed by business unit leaders and the cadence for the meeting is mostly monthly. Strategic initiatives are considered budgeted projects or programs that align to goals in a strategic plan and have start and end dates (Kim & Mauborgne, 2014; Porter, 1997). The strategic initiatives are assigned to people in an organization who are responsible for implementing them. The strategy review meeting is designed for fine tuning the strategic plan and making midcourse adjustments (Kaplan & Norton, 2006). The strategy review meeting is held quarterly and led by executive leaders who have a line of sight into strategic plan. The purpose of the strategy review meeting is to identify, analyze, and make decisions to move the strategy forward (Kaplan & Norton, 2008). The strategy refresh meeting is designed for pressure testing the strategic plan (Kaplan & Norton, 2008). The strategy refresh is scheduled annually and attended by executive leaders. In the strategy refresh meeting, executives test and adapt the strategic plan using casual analytics, scenario planning and war gaming concepts (Kaplan & Norton, 2008). The commonality of each meeting is iterative learning and the execution of information to positively impact the organization's performance. Leaders learn from unexpected results, discuss solutions, and adapt accordingly to ensure that the organization capitalize off the information. To capitalize off the strategy review meetings, leaders must have a prudent knowledge base of various strategic frameworks to select the appropriate activities for their organization.

4.2. Strategy Management

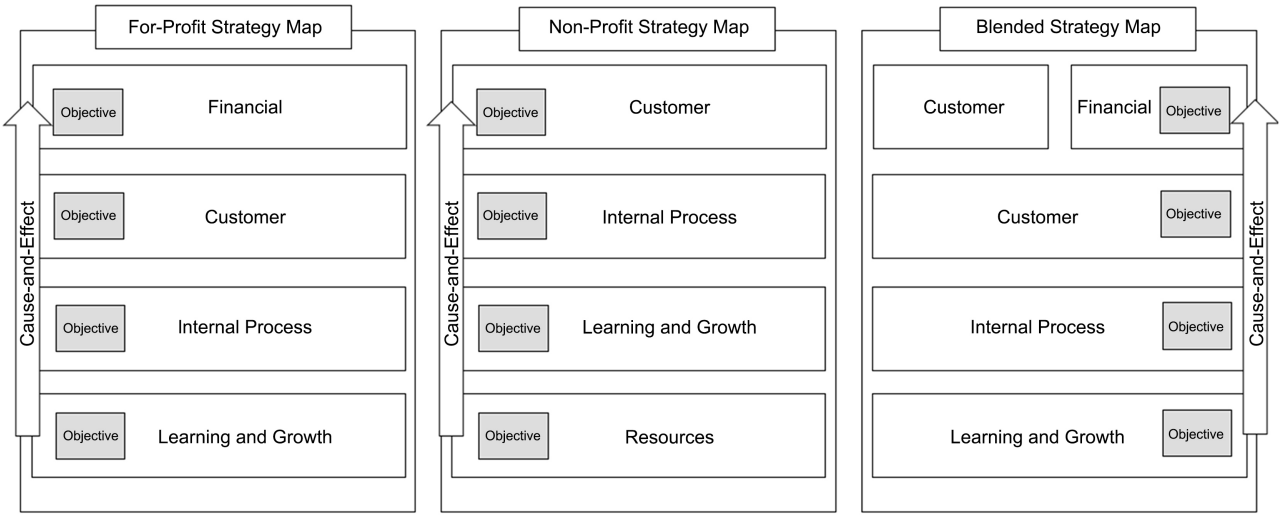
Strategy management frameworks are designed to structure and align strategic activities and information to encourage strategic performance. The lack of a strategy management framework has been known to create performance challenges. There are multiple strategic frameworks that leaders can use to help align employees to a company's strategy and to create a cadence for strategy review to further their strategic goals. Some of the best frameworks are blue ocean strategies (BOS), red ocean strategies (ROS), platform strategies (PS), the resource-based theory (RBT), and the balanced scorecard (BSC). BOS is a future casting strategy management framework that helps leaders create an uncontested marketplace (Kim & Mauborgne, 2014). BOS consists of a multitude of strategy management associative tools such as the strategy canvas, visual exploring, the four action frameworks, the buyer experiences, and others (Kim & Mauborgne, 2014). The tools

are highly effective in carving out a BOS, but they are not designed to align the resources to a strategy, cascade strategy to business units, or evaluate the performance of a strategy. ROS, on the other hand, are strategies that are attributed to Michael Porter's doctrine of strategy management. Red ocean is a term that was attributed to Porter's work to show a comparison of approaches between BOS and ROS. Porter's strategic frameworks have stood the test of time and globally benefited many organizations. Porter's strategy management tools are the five forces, value chain analysis, and generic strategies (Porter, 1997). Porter's strategy framework is not a strategy management and evaluation system. They are mainly external focused frameworks although his value chain analysis model is internal focused. Platform strategies (PS) revolve around the idea of allowing independent contractors or participants to benefit from the presence of others (Parker et al., 2016). Platform companies such as Uber, Facebook, Air BnB, Netflix, and Amazon Prime all operates using a technology that controls all transactions. The PA framework is innovative in design and practice, but the framework is not specifically designed as a strategy management and evaluation system. Resource-based theory (RBT) considers internal resources as the source of competitive advantage (Barney, 1991). Barney (1991) internal resources such as people, technology, that is rare, difficult to imitate gives companies a sustained competitive advantage (Barney, 1991). The RBT framework is only designed to evaluate the competitiveness of intangible resources. The BSC is a strategy management and evaluation system that entered the managerial strategy execution stratosphere in 1992 (Kaplan & Norton, 2001). Kaplan and Norton presented that the BSC framework is designed to formulate and design the strategy and to evaluate its effectiveness. The goal of BSC is obtaining the key factors of a business success for managers across all tiers and creates a synchronicity between the performance and the general strategy of the organization. The BSC is the only strategy management framework that is designed to develop, execute, and manage the lifecycle of an organization's strategic plan.

The BSC is a strategy management system and evaluation framework that evaluates linked hypotheses. Kaplan and Norton (2008) wrote that BSC is an evaluation tool that considered the decision of leaders across all tiers. The BSC has linked hypothesis related to the four perspectives of the strategy map and their associative objectives. The BSC operates using four perspectives that organize in a cause-and-effect alignment. The four perspectives are elements of the strategy map. The four perspectives of the strategy map are financial, customer, internal process, and learning and growth (Kaplan & Norton, 2004). The financial perspective identifies short- and long-term financial objectives; the customer perspective identifies objectives related to a promised of value delivered to a customer; the internal process perspective identities processes that can be improved to create valued opportunities for customer; and the learning and growth perspective identifies objectives related to intangible assets, which

leaders find difficult to measure (Kaplan & Norton, 2004). The specific objectives related to human capital, technological capital, and organization capital (Kaplan & Norton, 2008; Risinger, 2018). Risinger (2018) the learning and growth perspective of the BSC focuses on the readiness of human capital, organization capital, and technological capital. The strategy map links intangible assets to tangible customer and/or financial assets in an intentional manner and test the linkages. This concept allows leaders to evaluate an organization performance in a multi-dimensional way which helps leaders make key decisions. For example, objectives related to intangible assets in the learning and growth perspective only increase in value when there is a direct or indirect link to a financial outcome. If the objective is *growing the bench strength of leaders by* 65%, it increases in values when it is aligned to the financial objective *ensure are turn on invested human capital by* 65%. The linked hypothesis of objectives is evaluated during strategy review meetings. If leaders do not see growth in the target of the financial objective, *by* 65%, they can evaluate the strategy to determine the problem. The linkages are tested repeatedly throughout the lifecycle of the strategic plan. The BSC is not only a tool for evaluating strategies, but a leading evaluation system of the company (Kaplan & Norton, 1996; Kaplan & Norton, 2008).

Figure 1 shows the varying types of strategy map structures and their cause-and-effect logic. The strategy map is constructed from the top down, and the cause-and-effect logic is sequenced from the bottom up. For example, in the learning and growth perspective, the appropriate people, the desired culture, and the competitive information systems must be in place to effectively perform the valued work in the internal process. The internal process perspective is where the value is created regarding innovation and/or process improvements to meet the customer's value proposition. When the customers' desires are met, the financial outcomes of an organization can be achieved. However, the for-profit strategy map consists of the perspective in the order of operations: learning and growth, internal process, customer, and financial. In a for-profit organization, the financial outcome is the focus of the organization. Examples of for-profit financial goals are to increase profit margins, return on investments, and return on invested human capital. The non-profit strategy map consists of perspectives in the order of operations: resources, learning & growth, internal process, and customers. In a non-profit organization, the mission is the focus of the organization. Examples of non-profit mission are to increase awareness of social determinants of health and to provide a cure for myeloma cancer. The blended strategy map consists of perspectives in the order of operations: learning and growth, internal process, and the customer and financial perspectives are on the same plane. In a blended organization such as an academic medical center, the financial outcomes, and the mission of the organization are simultaneously the organization's focus. The blended strategy map better describes the outcomes expected in a blended organization. Refer to **Figure 1**.



Note: **Figure 1** was designed by the authors of this research study.

Figure 1. Multiple versions of a strategy map.

The BSC is a proven strategy management system for evaluating performances in banks. Keshavarznia and Valipour (2017) conducted research aimed at implementing the BSC as the strategy management system at MehrEghtesad bank. In their search study, researchers examined the bank's services, investment portfolio, financial infrastructure, and technological infrastructure. They also evaluated the bank's existing strategic plan including its framework and KPFs. The finding showed that the bank lacked a competitive information technology, resources, and the necessary financial infrastructure to compete and to advance the bank's goals. The bank's strategic plan lacked rigor and did not have the appropriate KFPs to compete in modern banking (Keshavarznia & Valipour, 2017). The strategy was ambiguous, difficult for people conceptualize, and challenging for people to adopt. The adoption was extremely low which lacked the appropriate level of engagement to manage the strategy (Keshavarznia & Valipour, 2017). Ozturk and Coskun (2014) conduct research aimed at examining the strategic performance of banks using the BSC as a performance evaluation system. Instead of focusing on the traditional financial performances, the researchers wanted to understand the relevance of assessing banks performance using the four perspectives of the BSC. The majority of the research studies identified in the literature showed a consistency in successful. The research concluded that the BSC provided quality a multidimensional approach to evaluating a bank's performance. Al-mawali, Zainuddin, & Ali (2010) conducted research aimed at examining the usage of multiple performance measures in banks using the BSC. Research randomly identified 120 branch banks in Jordon for the study. A survey was sent to branch managers which led to an 80% response rate. Researchers concluded that multiple performance measures, in particular, the non-financial ones, enhanced a bank's performance. Zhang and Li (2009) conducting research aimed at examining the performance of the BSC in the commercial banking in-

dustry. Researchers concluded that using the BSC results in the evaluation of a bank's all-around performance. Researchers concluded that commercial banks could have a greater success if they not only focus on the financial profitability but also non-financial measures such as service level agreements. Keshavarznia and Wallace (2023) conducted a quantitative research study to determine the most competitive KPFs in banks in Iran using the BSC and the Delphi method. Researchers concluded that success of the banks in Iran four specific financial KPFs, five stakeholder KPFs; six internal process KPFs; and three learning and growth KPFs (Keshavarznia & Wallace, 2023). According to relevant research, the BSC is an effective tool in evaluating a bank's performance. Yet, to solve the challenges faced by leaders of the IBI, the leaders must develop and implement the appropriate KPFs to advance the bank's goals and grow and develop the local economy.

4.3. Summary of the Literature

The current literature does not offer a solution that identifies the critical and appropriate KPFs for the banking industry in Iran. But it offers key factors that point to the reason behind the economic growth of banks throughout the globe. It also offers scientifically proven methods to enhance decision making in banks across all tiers, varying KPFs, and the best strategy management evaluation frameworks to achieve the desired outcomes for banks. However, although the BSC is designed to evaluate the progress and results of the KPFs in an organization, it cannot provide value to banks in Iran if the leaders in Iranian banks have not identified the necessary KPFs to compete in the global market.

The current study examines the KPFs in the IBI. Researchers seek to discover and introduce the basic performance factors that can improve the current state of the banking industry. Researchers deployed the Analytic Hierarchy Process (AHP) method for the study. The AHP method is a decision-making technique that uses a logical approach to derive at a complex solution. The AHP method uses ranking and prioritization to organize decision-making in groups. The goal of the AHP method is to guide the decisions of the banking professional in determining the KPFs for the Iranian banking industry.

5. Methodology

The research study evaluated responses of 25 professionals of the Iranian Banking Network (IBN) to help identify and prioritize the appropriate strategic KPFs for banks in Iran. IBN is an organization of banking executives with more than 10 years of banking service. A purposive judgmental sample was used to arrive at the sample size. The sample size was determined based research conducted by Melillo and Pecchia (2016). Their findings concluded that the appropriate sample size for AHP can vary between 19 - 400. The researchers in this study met the qualification for the sample size using the AHP method.

The professionals were considered the decision makers in the IBN. To qualify

for the research study, participants had to meet the following criteria:

1) Professional in the IBN with at least five years of senior management in banking and fifteen years of work experience in banking.

2) Professional in the IBN must have a master's degrees.

3) Full or partial familiarity with the balanced scorecard.

The duration of the research study lasted six months and consisted of conducting a literature review to identify and developing a list of KPFs in the IBI, grouping the KPFs according to the four perspectives of the BSC to design a hierarchical tree, applying the grouped KPFs to the AHP method, and interpreting the data.

The researchers contacted professional in the IBN by telephone requesting their participation in the research study. The researchers hand delivered a definition sheet including, the hierarchy tree, and AHP activity sheet with instructions that included four paired comparison tables. The research verbally explained the instructions to each selected IBN professional and waited in a separate location until each participant completed the AHP activity sheet. Of the 25 copies of AHP activity sheets delivered, all 25 were filled out and analyzed and ranked according to the AHP method. The analysis tool used in this research was an Excel spreadsheet workbook.

6. AHP Method

The AHP method is a decision-making method that helps people and organizations prioritize alternatives based on a set of criteria (Fernando & Siagian, 2021). In the research study, the AHP method is used to rank KPFs of the banking industry which organizes the parts of a system in a hierarchal order (Fernando & Siagian, 2021). The method is used by expert participants to pair and rank the comparison of KPFs identified in the hierarchy tree. Refer to **Figure 2**.

The following consists of the three steps for the AHP method used in the research study to instruct the participants.

1) Use the scores in the weighting of paired comparison table to complete the activity.

2) Pair each comparative criteria to each alternative and assign a score to each based on the scores in the weighting paired comparison table.

3) Repeated the process four times until you have compared scores for all possible paired comparisons.

In the research study, the AHP method has three phases: creating a decision tree, weighting of paired comparison, and ranking KPFs using the four perspectives of the BSC as the framework for the research study.

6.1. Creating the Hierarchy

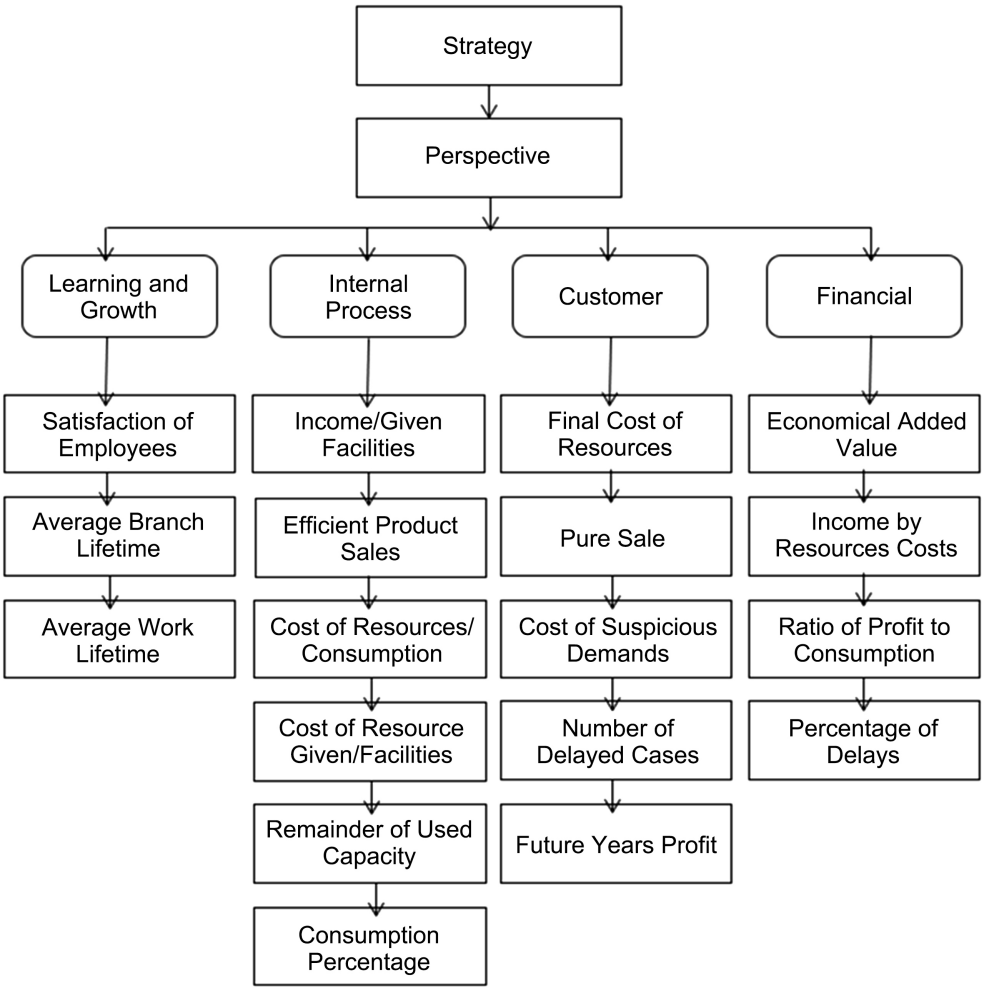
In the first step of the AHP method, the researchers created and organized the hierarchy tree based on the four perspectives of the BSC. The researchers grouped together the KPFs in affinities according to the four perspectives and created a

decision criterion for ranking the KPFs. The researchers designed the hierarchy three to display a visual graphic to make ease categories for ranking. Refer to Figure 2.

The hierarchy tree visually articulates the strategy map's four perspectives and the identified 18 KPFs. The set of terms and definitions anchored each participant on a single definition for each KPF. Refer to Table 1.

6.2. Weighting of Pair Comparisons

The researchers used the four perspectives of the BSC as the criteria to evaluate the KPFs and/or alternatives associated with the perspectives and determine the scores for the pair comparison. The researchers used the Likert scale equally important, slightly more important, moderately more important, significantly more important, and extremely more important as a ranking for the criteria and alternatives. The researchers assigned the scores between 1 to 9 as a ranking to score the comparisons. Refer to Table 2.



Note: Figure 2 was designed by the authors of this research study.

Figure 2. Hierarchy tree.

Table 1. The definitions of KPFs.

Perspective	KPF	Definition
Financial	Economical added value	Economical added value is a firm's economic profit, and the **book value of the company** created for the shareholders. Economical added value is the net profit less the capital charge for raising the firm's capital.
	Income by resource costs	Income by resource costs is the cost of funds that a financial institution pays to acquire the money that it lends out to borrowers. The cost of funds is the interest rate that a financial institution such as a bank or a credit union pays to acquire the money that it lends out to borrowers.
	Ratio of profit to consumption	Ratio of profit to consumption is a **measure of profitability**, which is the capacity to make a profit from income earned after deducting all costs and expenses.
	Percentage of delays	**Percentage of delays refers to payments that are not processed or received on the agreed-upon date. The percentage of delays can occur for a variety of reasons, such as insufficient funds in the payer's account, technical issues, or errors in the payment processing system.**
Customer	Pure sale	Pure sale is the total amount of loans extended by a bank over a year is known as the total loan disbursements. This refers to the total amount of money that the bank has lent out to borrowers during a specific period, typically a year.
	The final cost of resources	The final cost of resources refers to the cost of capital. This refers to the cost that a bank incurs to obtain the funds it needs to lend out to borrowers.
	The cost of suspicious demands	The cost of suspicious demands refers to a non-performing loan (NPL) in banking terminology. A non-performing loan is a loan that a borrower has failed to make payments on the loan for an extended period.
	The number of delayed cases	The number of delayed cases refers to delinquency in which a borrower has not made their required loan payments on time based on a specific period.
	Future years profit	Future years profit for banks refers to the anticipated earnings. Banks use this metric to evaluate the bank's growth potential and profitability.

Continued

Internal Process	Income/given facilities	Income/given facilities refer to the volume of loans that a bank has extended to borrowers. Income/given facilities is measured by the total amount of new loans originated over a given period.
	Efficient product sales	Efficient product sales refer to product sales with higher margins. Banks and other businesses may focus on selling high-margin products to increase their profitability and maximize their return on investment.
	Cost of resource consumption	Cost of resource consumption refers to the interest rate or other costs that a bank must pay to borrow money from sources such as depositors, other banks, or the capital markets.
	Cost of resources/given facilities	Cost of resources/given facilities refers to the cost of funds ratio that is calculated by dividing a bank's total interest expenses by its average interest-bearing liabilities.
	Remainder of used capacity	Remainder of used capacity are net charge-offs. This refers to all payments minus the total installment of the unpaid customers. Net charge-offs are an important measure of a bank's credit quality and risk exposure.
	Consumption percentage	Consumption percentage refers to the percentage of a customer's available credit or funds that they have used or spent. It is also known as the credit utilization ratio and is often used as a measure of a borrower's creditworthiness.
Learning and Growth	Satisfaction of employees	Satisfaction of employees refers to a measure of employee satisfaction in their current roles.
	Average of branch lifetime	Average of branch lifetime refers to average existence of a bank's branch which is measured by the average time of each employee who worked in a bank's branch.
	Average of work lifetime	Average of work lifetime refers to the average length of time a person works at a job over the course of his or her career is job tenure.

Note: Table 1 consists of the terms and definition developed by the authors of this research study.

Table 2. Weighting paired comparisons.

Likert Scale for comparing importance factors i and j	Weighting Descriptions for i and j	Score
Equally important	Whenever i is equally important than j, use the associative score.	1
Slightly more important	Whenever i is slightly more important than j, use the associative score.	3
Moderately more important	Whenever i is moderately more important than j, use the associative score.	5
Significantly more important	Whenever i is significantly more important than j, use the associative score.	7
Extremely more important	Whenever i is extremely more important than j, use the associative score.	9
Medium values	Use the medium values whenever needed	2, 4, 6, or 8

6.3. Incompatibility Rate Calculation

The incompatibility rate shows whether the comparisons are stable or not. In the Excel AHP workbook, the incompatibility rate is automatically calculated. If the rate is less than 0.1 then the matrix is incompatible; if the rate is more than 0.1 then the pair comparisons must be reconsidered.

The incompatibility rate is calculated as followed:

1) In the first step, multiply the pair comparisons matrix in the relative weights vector.

2) In the second step, divide the result by the vector of factors' relative weights to get the compatibility vector.

3) In the third step, calculate the average of the elements of this vector which is called λ.

4) In the fourth step, calculate the incompatibility factor based on the formula below:

$$\prod = \frac{\lambda - n}{n -} \tag{1}$$

5) In the fifth step, the IRI factor is obtained from the random matrix incompatibility factor table based on n (the number of factors) and incompatibility rate (IR) is calculated based on the formula below:

$$\mathrm{IR} = \frac{\prod}{\mathrm{IRI}} \tag{2}$$

6.4. Data Analysis

Data analysis for the research study consists of evaluating and assigning a score to the set of KPFs associated with the four perspectives of the BSC: financial, customer, internal process, and learning and growth. Each participant was given

an AHP activity sheet and asked to compare the importance of the row criteria/alternative to the column criteria/alternative using the scale from 1 to 9. The participants repeated this process in all four tables until they had a compared score for all possible paired comparisons.

The researchers collected the AHP active sheets, added the assigned scores into an Excel spreadsheet workbook, and calculated the sum of all the inputs. The paired comparison weights are called relative weights. The sum of all the paired comparison weights is called the absolute weight. The results of the calculations were populated in the following tables.

The researchers also calculated the normalized sum and the total weighted sum. The process was repeated for each perspective table. The results of the calculation are populated in tables entitled normalize matrix and weight and rank.

6.5. Ranking the Aspects of Financial Perspective

The financial perspective consisted of four KPFs. All the paired comparison has assigned scores and all the scores are consistent. Refer to Table 3. The KPF associated with economical added value has the highest scores (2.19, 2.14. 1.78. and 1.00) in the table.

In Table 4, the normalize matrix and the weights of the KPFs are presented. To calculate the normalize weights, the calculated scores for each column was added together and the column's sum was divided by each score in the same column. This process is repeated for each column.

Table 3. Pair comparisons matrix of the financial perspective.

Factor	The percentage of delays	Ratio of profit to consumption	Income with the costs of resources	Economical added value
Percentage of delays	1.00	1.78	1.50	0.46
Ratio of profit to consumption	0.56	1.00	1.61	0.47
Income with the costs of resources	0.67	0.62	1.00	0.56
Economical added value	2.19	2.14	1.78	1.00

Table 4. Normalize matrix of the financial perspective.

Factor	The percentage of delays	Ratio of profit to consumption	Income with the costs of resources	Economical added value	Normalize	Weight
Percentage of delays	0.23	0.32	0.25	0.18	0.1946	0.247067
Ratio of profit to consumption	0.13	0.18	0.27	0.19	0.1495	0.189841
Income with the costs of resources	0.15	0.11	0.17	0.23	0.1171	0.163607
Economical added value	0.50	0.39	0.30	0.40	0.2922	0.399485

In Table 4, the KPF economical added value has the highest calculated score with a (0.2922) followed by percentage of delays with a (0.1966). In addition, Table 5 identifies the KPF economical added value (0.399485) as the highest and most important KPF for the financial perspectives.

Table 5 includes the KPFs, the weights, and the ranking from 1 to 4 of the KPFs in the financial perspective. Economical added value is highest ranking and weighted KPF.

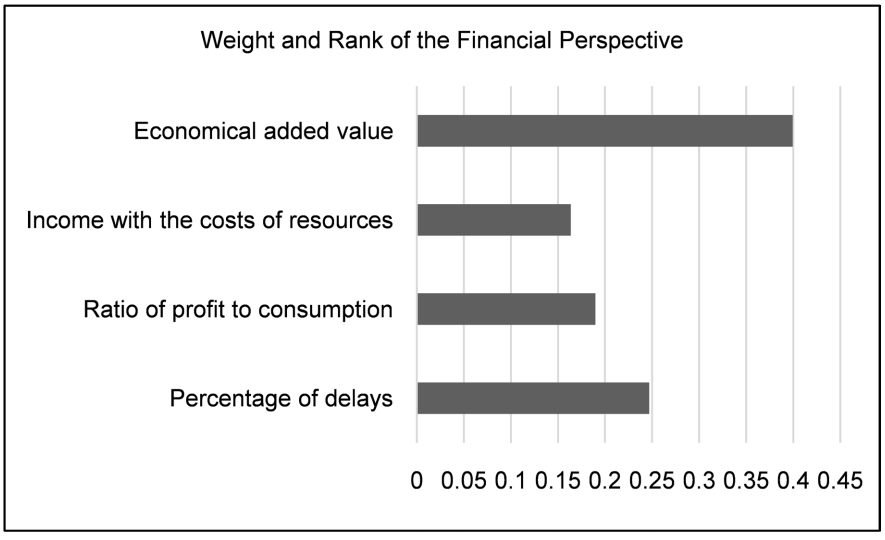
In Graph 1, shows a positive separation economical added value and the rest of the KPFs in the financial perspective. The graph communicates the result of the collective scores assigned to the KFPs in the financial perspective.

6.6. Ranking the Aspects of Customer Perspective

The customer perspective consisted of five KPFs. All the paired comparison has assigned scores and all the scores are consistent. Refer to Table 6. The KPF associated with future years profit has the highest combined scores (1.00, 1.78, 1.50, and 0.87) in the table.

Table 5. The weight and rank of the financial perspective.

Factor	Weight	Rank
Percentage of delays	0.247067	2
Ratio of profit to consumption	0.189841	3
Income with the costs of resources	0.163607	4
Economical added value	0.399485	1
Incompatibility Coefficient		0.037



Graph 1. The weight and rank of the financial perspective.

In Table 7, the normalize matrix and the weights of the KPFs are presented. The KPF future years profit has the highest calculated score with a (0.2174) followed by the final cost of resources with a (0.1902). In addition, Table 8 identifies the KPF future years profit (0.25527) as the highest and most important KPF for the customer perspectives.

Table 8 includes the KPFs, the weights, and the ranking from 1 to 5 of the KPFs in the customer perspective. Future years profit is highest ranking and weighted KPF.

In Graph 2, shows a positive separation future years profit and the rest of the KPFs in the customer perspective. The graph communicates the result of the collective scores assigned to the KFPs in the customer perspective.

Table 6. Customer perspective comparison matrix.

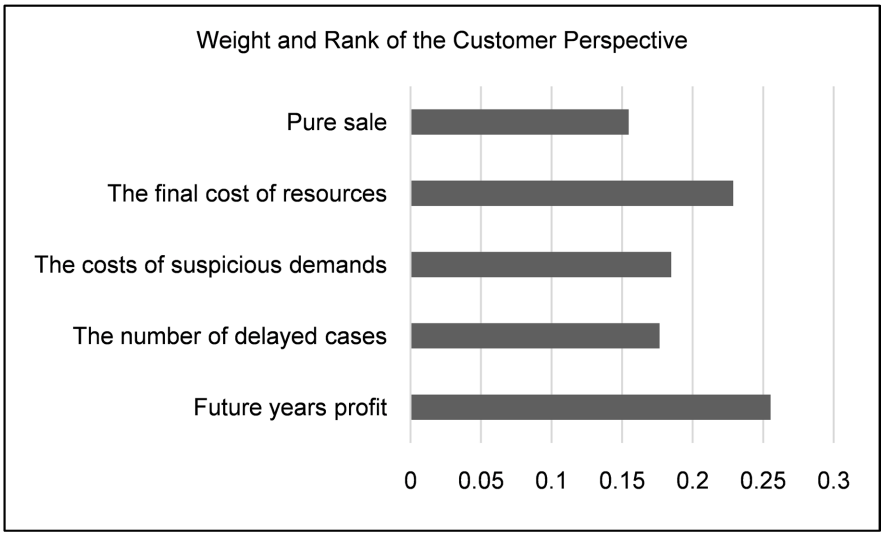
Factor	Future years profit	The number of delayed cases	The costs of suspicious demands	The final cost of resources	Pure sale
Future years profit	1.00	1.78	1.50	0.87	1.72
The number of delayed cases	0.56	1.00	1.61	0.72	0.80
The costs of suspicious demands	0.67	0.62	1.00	1.15	1.43
The final cost of resources	1.15	1.38	0.87	1.00	1.61
Pure sale	0.58	1.25	0.70	0.62	1.00

Table 7. Customer perspective comparison matrix.

Factor	Future years profit	The number of delayed cases	The costs of suspicious demands	The final cost of resources	Pure sale	Normalize	Weight
Future years profit	0.25	0.30	0.26	0.20	0.26	0.2174	0.25527
The number of delayed cases	0.14	0.17	0.28	0.17	0.12	0.1487	0.176565
The costs of suspicious demands	0.17	0.10	0.18	0.26	0.22	0.1541	0.184754
The final cost of resources	0.29	0.23	0.15	0.23	0.25	0.1902	0.228785
Pure sale	0.15	0.21	0.12	0.14	0.15	0.1313	0.154626

Table 8. The weight and rank of the customer perspective.

Factor	Weight	Rank
Future years profit	0.25527	1
The number of delayed cases	0.176565	4
The costs of suspicious demands	0.184754	3
The final cost of resources	0.228785	2
Pure sale	0.154626	5
Incompatibility Coefficient		0.031



Graph 2. The weight and rank of the customer perspective.

6.7. Ranking the Aspects of Internal Process Perspective

The internal process perspective consisted of six KPFs. All the paired comparison has assigned scores and all the scores are consistent. Refer to Table 9. The KPF associated with Income/given facilities has the highest combined scores (1.00, 1.78, 1.50, and 0.87) in the table.

In Table 10, the normalize matrix and the weights of the KPFs are presented. The KPF Income/given facilities has the highest calculated score with a (0.2174) followed by the cost of resources/given facilities with a (0.1783). In addition, Table 10 identifies the KPF Income/given facilities (0.212711) as the highest and most important KPF for the internal process perspectives. Refer to Table 10.

Table 11 includes the KPFs, the weights, and the ranking from 1 to 6 of the KPFs in the internal process perspective. Income/given facilities is highest ranking and weighted KPF.

In Graph 3, shows a positive separation income/given facilities and the rest of the KPFs in the internal process perspective. The graph communicates the result of the collective scores assigned to the KFPs in the internal process perspective.

Table 9. Pair comparisons matrix of the internal process perspective.

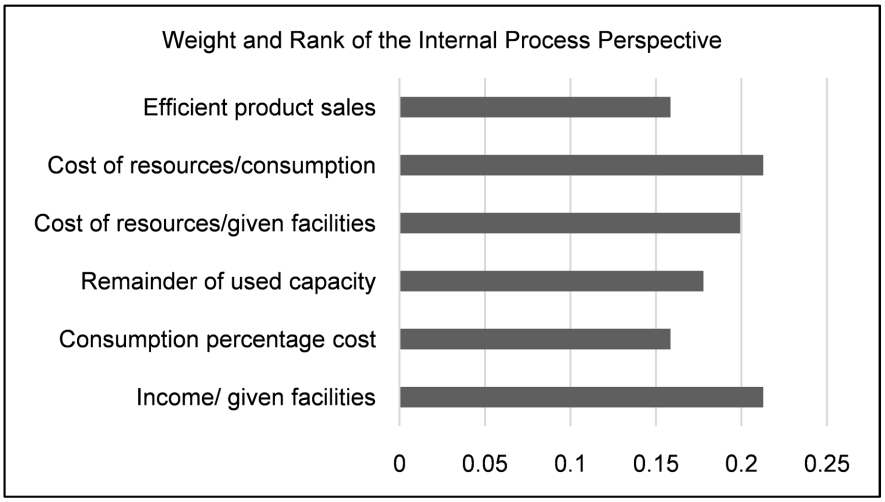
Factor	Income/ given facilities	Consumption percentage cost	Remainder of used capacity	Cost of resources/ given facilities	Cost of resources/ consumption	Efficient product sales
Income/given facilities	1.00	1.78	1.50	0.87	1.72	1.28
Consumption percentage cost	0.56	1.00	1.61	0.72	0.80	1.55
Remainder of used capacity	0.67	0.62	1.00	1.15	1.43	2.41
Cost of resources/ given facilities	1.15	1.38	0.87	1.00	1.61	1.78
Cost of resources/ consumption	0.58	1.25	0.70	0.62	1.00	2.22
Efficient product sales	0.78	0.64	0.42	0.56	0.45	1.00

Table 10. Internal process perspective comparison matrix.

Factor	Income/ given facilities	Consumption percentage cost	Remainder of used capacity	Cost of resources/ given facilities	Cost of resources/ consumption	Efficient product sales	Normalize	Weight
Income/ given facilities	0.21	0.27	0.25	0.18	0.25	0.12	0.1864	0.212711
Consumption percentage cost	0.12	0.15	0.26	0.15	0.11	0.15	0.1431	0.15844
Remainder of used capacity	0.14	0.09	0.16	0.23	0.20	0.24	0.1666	0.17774
Cost of resources/ given facilities	0.24	0.21	0.14	0.20	0.23	0.17	0.1783	0.199302
Cost of resources/ consumption	0.12	0.19	0.11	0.13	0.14	0.22	0.1458	0.151653
Efficient product sales	0.17	0.10	0.07	0.11	0.06	0.10	0.0882	0.100155

Table 11. The weight and rank of the internal process perspective.

Factor	Weight	Rank
Income/given facilities	0.212711	1
Consumption percentage cost	0.15844	4
Remainder of used capacity	0.17774	3
Cost of resources/given facilities	0.199302	2
Cost of resources/consumption	0.212711	5
Efficient product sales	0.15844	6
Incompatibility Coefficient		0.035



Graph 3. The weight and rank of the internal process perspective.

6.8. Ranking the Aspects of Learning and Growth Perspective

The learning and growth perspective consisted of three KPFs. All the paired comparison has assigned scores and all the scores are consistent. Refer to Table 12. The KPF associated with average of work lifetime has the highest combined scores (1.00, 1.78, and 1.50) in the table.

In Table 13, the normalize matrix and the weights of the KPFs are presented. The KPF the average of work lifetime has the highest calculated score with a (0.2556) followed by average of branch lifetime with a (0.1894). In addition, Table 13 identifies the average of work lifetime (0.44745) as the highest and most important KPF for the learning and growth perspectives.

Table 14 includes the KPFs, the weights, and the ranking from 1 to 3 of the KPFs in the learning and growth perspective. Average work lifetime is highest ranking and weighted KPF.

In Graph 4, shows a positive separation average work lifetime and the rest of the KPFs in the learning and growth perspective. The graph communicates the result of the collective scores assigned to the KFPs in the learning and growth perspective.

Table 12. Pair comparisons matrix of the learning and growth perspective.

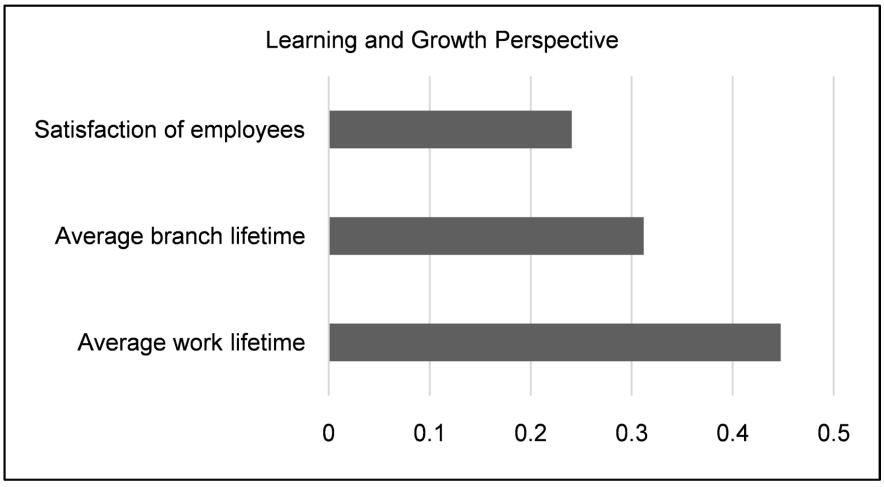
Factor	Average work lifetime	Average of branch lifetime	Satisfaction of employees
Average work lifetime	1.00	1.78	1.50
Average of branch lifetime	0.56	1.00	1.61
Satisfaction of employees	0.67	0.62	1.00

Table 13. Learning and growth perspective comparison matrix.

Factor	Average work lifetime	Average branch lifetime	Satisfaction of employees	Normalize	Weight
Average work lifetime	0.45	0.52	0.36	0.2556	0.44745
Average branch lifetime	0.25	0.29	0.39	0.1894	0.311841
Satisfaction of employees	0.30	0.18	0.24	0.1368	0.240708

Table 14. The weight and rank of the learning and growth perspective.

Factor	Weight	Rank
Average work lifetime	0.44745	1
Average branch lifetime	0.311841	2
Satisfaction of employees	0.240708	3
Incompatibility Coefficient		0.0304



Graph 4. The weight and rank of the learning and growth perspective.

7. Limitation

The research study had several limitations. First, the geographic scope of the research study was limited to Iran and the Iranian banking systems. If the scope was broader and included banking systems of other countries, it is possible that the results would have been different. Second, the research study used a qualitative descriptive statistic. If the researchers had used a qualitative research design, the results of the study would have had emerging themes with specific social meaning. Finally, the research was not designed to apply the identified KPFs in a banking setting. It is important to note that the research study is limited by its focus on the Iranian banking industry. Further research is needed to validate the findings in other contexts.

8. Results

The global banking industry is vital to the advancement of a bank's goals and the growth and development of the modern world economies. To advance, grow, and develop, the banking industry in country, the leaders must be able to identify the appropriate KPFs to focus its resources to compete. In the research study, the researchers identified four KPFs associated with each of the BSC perspectives. The KPF associated with economical added value in the financial perspective has the highest scores (2.19, 2.14, 1.78, and 1.00). The total weight and rank equals (0.399485). The KPF associated with future years profit in the customer perspective has the highest combined scores (1.00, 1.78, 1.50, and 0.87). The total weight and rank equals (0.25527). The KPF associated with Income/given facilities has the highest combined scores (1.00, 1.78, 1.50, and 0.87). The total weight and rank equals (0.212711).The KPF associated with average work lifetime in the internal process perspective has the highest combined scores (1.00, 1.78, and 1.50) in the table. The total weight and rank equals (0.44745).

9. Conclusion

Ranking KPFs for banks in Iran is critical first step in advancing the banking industry and growing the modern economy in Iran. The critical second step is to resource the KPFs to ensure that they are fully developed, implemented, and managed. The BSC was the conceptual framework used in this study along with the AHP method. The study concluded that the highest ranking KPFs consist of the economical value-added factor in the financial perspective, the future years profit in the customer perspective, the given facilities in the inner process perspective, and the work lifetime in the learning and growth perspective.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

References

Abusweilem, M. A., & Abualoush, S. (2019). The Impact of Knowledge Management Process and Business Intelligence on Organizational Performance. *Management Science Letters, 9,* 2143-2156. https://doi.org/10.5267/j.msl.2019.6.020

Ahlstrom, D., & Ding, Z. (2014) Entrepreneurship in China: An Overview. *International Small Business Journal, 32,* 610-618. https://doi.org/10.1177/0266242613517913

Ahmed, A. (2010). Global Financial Crisis: An Islamic Finance Perspective. *International Journal of Islamic and Middle Eastern Finance and Management, 3,* 306-320. https://doi.org/10.1108/17538391011093252

Al-mawali, H. H., Zainuddin, Y., & Ali, N. N. K. (2010). Balanced Scorecard (BSC) Usage and Financial Performance of Branches in Jordanian Banking Industry. *World Academy of Science, Engineering and Technology, 42,* 1174-1181.

Barney, J. (1991). Firm Resources and Sustained Competitive Advantage. *Journal of Management, 17,* 99-120. https://doi.org/10.1177/014920639101700108

Barney, J. B. (2001). Resource-Based Theories of Competitive Advantage: A Ten-Year Retrospective on the Resource-Based View. *Journal of Management, 27,* 643-650. https://doi.org/10.1177/014920630102700602

Clark, T. R. (2020). *The 4 Stages of Psychological Safety: Defining the Path to Inclusion and Innovation.* Berrett-Koehler Publishers.

Dal Bianco, S., Amini, C., & Signorelli, M. (2017). The Impact of the Global Financial Crisis and the Role of External and Internal Factors in Emerging Economies. *Emerging Markets Finance and Trade, 53,* 229-249. https://doi.org/10.1080/1540496X.2016.1216840

Decker, R., Haltiwanger, J., Jarmin, R., & Miranda, J. (2014). The Role of Entrepreneurship in US Job Creation and Economic Dynamism. *Journal of Economic Perspectives, 28,* 3-24. https://doi.org/10.1257/jep.28.3.3

Fernando, E., & Siagian, P. (2021). Proposal to Use the Analytic Hierarchy Process Method Evaluate Bank Credit Submissions. *Procedia Computer Science, 179,* 232-241. https://doi.org/10.1016/j.procs.2021.01.002

Fouad, M. A. A. (2013). Factors Affecting the Performance of Small and Medium Enterprises (SMEs) in the Manufacturing Sector of Cairo, Egypt. *International Journal of Business and Management Studies, 5,* 157-166. https://dergipark.org.tr/en/pub/ijbms/issue/26065/274584

Grant, R. M. (1996). Toward a Knowledge-Based Theory of the Firm. *Strategic Management Journal, 17,* 109-122. https://doi.org/10.1002/smj.4250171110

Haqqani, A. B. (2003). The Role of Information and Communication Technologies in Global Development. In United Nations Information and Communication Technologies Task Force (Eds.), *ICT Task Force Series 3.* United Nations.

Jabar, M. A., Sidi, F., & Selamat, M. H. (2010). Tacit Knowledge Codification. *Journal of Computer Science, 6,* 1170-1176. https://doi.org/10.3844/jcssp.2010.1170.1176

Jakšič, M., & Marinč, M. (2019). Relationship Banking and Information Technology: The Role of Artificial Intelligence and FinTech. *Risk Management, 21,* 1-18. https://doi.org/10.1057/s41283-018-0039-y

Kamel, S. (2005). The Use of Information Technology to Transform the Banking Sector in Developing Nations. *Information Technology for Development, 11,* 305-312. https://doi.org/10.1002/itdj.20023

Kaplan, R. S., & Norton, D. P. (1996). *The Balanced Scorecard: Translating Strategy into*

Action. Harvard Business Press.

Kaplan, R. S., & Norton, D. P. (2001). *The Strategy-Focused Organization.* Harvard Business Press.

Kaplan, R. S., & Norton, D. P. (2004). *Strategy Maps: Converting Intangible Assets into Tangible Outcomes.* Harvard Business Press.

Kaplan, R. S., & Norton, D. P. (2006). *Alignment: Using the Balanced Scorecard to Create Corporate Synergies.* Harvard Business Press.

Kaplan, R. S., & Norton, D. P. (2008). *The Execution Premium: Linking Strategy to Operations for Competitive Advantage.* Harvard Business Press.

Keshavarznia, H., & Valipour, H. (2017). Measuring the Customers' Loyalty to Mehr-Eghtesad Bank with Balanced Scorecard Approach. *HELIX, 8,* 960-966.

Keshavarznia, H., & Wallace, M. (2023). Applying the Balanced Scorecard and the Delphi Method to Determine the Key Performance Factors for the Banking Industry in Iran. *Open Journal of Business and Management, 11,* 821-838. https://doi.org/10.4236/ojbm.2023.113044

Kim, W. C., & Mauborgne, R. (2014). *Blue Ocean Strategy, Expanded Edition: How to Create Uncontested Market Space and Make the Competition Irrelevant.* Harvard Business Review Press.

Melillo, P., & Pecchia, L. (2016). What Is the Appropriate Sample Size to Run Analytic Hierarchy Process in a Survey-Based Research. In *Proceedings of the International Symposium on the Analytic Hierarchy Process* (pp. 4-8). ISAHP. http://www.isahp.org/uploads/isahp16_proceeding_1155987.pdf https://doi.org/10.13033/isahp.y2016.130

Nagler, C. (2022). *Psychological Safety in the Native American Workplace.* Ph.D. Thesis, The College of St. Scholastica.

Ozturk, E., & Coskun, A. (2014). A Strategic Approach to Performance Management in Banks: The Balanced Scorecard. *Accounting and Finance Research, 3,* 151-158. https://doi.org/10.5430/afr.v3n3p151

Parker, G. G., Van Alstyne, M. W., & Choudary, S. P. (2016). *Platform Revolution: How Networked Markets Are Transforming the Economy and How to Make Them Work for You.* WW Norton & Company.

Porter, M. E. (1997). Competitive Strategy. *Measuring Business Excellence, 1,* 12-17. https://doi.org/10.1108/eb025476

Rabaa, B., & Younes, B. (2016). The Impact of the Islamic Banks Performances on Economic Growth: Using Panel Data. *International Journal of Economics and Finance Studies, 8,* 101-111.

Risinger, J. A. (2018). *Toward a Model of Strategic Human Capital Management Using the Balanced Scorecard-An Exploratory Case Study.* Ph.D. Thesis, The University of Texas at Tyler. https://scholarworks.uttyler.edu/cgi/viewcontent.cgi?article=1035&context=hrd_grad

Sarder, R. (2016). *Building an Innovative Learning Organization: A Framework to Build a Smarter Workforce, Adapt to Change, and Drive Growth.* John Wiley & Sons. https://doi.org/10.1002/9781119235200

Teece, D. J. (2000). *Managing Intellectual Capital: Organizational, Strategic, and Policy Dimensions.* Oxford University Press.

World Bank (2003). *ICT and MDGs—A World Bank Group Perspective.* World Bank Group.

Zhang, Y., & Li, L. (2009). Study on Balanced Scorecard of Commercial Bank in Performance Management System. In *Proceedings of the 2009 International Symposium on Web Information Systems and Applications (WISA 2009)* (p. 206). Academy Publisher.