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Conceptual Design Of Sustainable Outsourcing With Balanced Scorecard Using Analytic Hierarchy Process: A Case Study For Tata Consultancy Services

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ABSTRACT

The purpose of this paper was to design a conceptual model of sustainable outsourcing with a balanced scorecard using the hierarchical analysis process. In this research, success factors of outsourcing were identified based on previous studies conducted inside and outside of the country. To ensure the validity of the factors, in addition to the content validity and the validity index, the reliability was guaranteed using the inconsistency ratio of the paired comparison questionnaire based on the Expert Choice report. An affinity diagram developed using the brainstorming approach was implemented for strategic objectives of the model. Our findings indicated that a sustainable outsourcing model was successfully designed using a balanced scorecard. Economic, social and environmental sustainability was considered in each of the balanced scorecard faces used in the model. In this work, sustainable domestic business, customer satisfaction, and sustainable learning and growth were the main objectives. Finally, a balanced scorecard with 26 strategic objectives was designed and implemented. To this end, paired comparisons were performed to compute the importance of each strategic goal in every phase and make prioritization accordingly.

Keywords: Analytic Hierarchy Process, Balanced Scorecard, Outsourcing, Sustainability.

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INTRODUCTION

Today, due to the complex nature of business and competition among manufacturers and suppliers, manufacturing organizations have moved toward optimal processes and decisions to ensure organization survival [1]. In the meantime, achievement of a sustainable competitive advantage has been pursued as a desired goal by a number of companies and organizations. In the world economy that has no consistent benchmark for supply chain success, it is essential for companies to carefully analyze their unique needs and determine which logistics solutions are suitable to meet their specific distribution demands [2]. Many companies have to carry out outsourcing to further develop their business objectives. The reason is that they can be held accountable for changes due to competitive and economic pressures of the market only through this approach. According to McDougall [3], outsourcing is one of the modern and successful models in the field of management that helps companies achieve higher benefits compared to their competitors. Outsourcing is a good compromise between cost optimization and high level of flexibility [4]. In fact, outsourcing can be considered as one of the tools, which makes possible free access to resources available in the market. Companies attempt to use all the required knowledge, techniques and innovative technologies so that they can provide a qualified and competitive product that satisfies the consumer and meets their demands [5]. Many companies prefer to outsource their non-core business to other companies in order to reduce costs and increase efficiency [2]. This may illustrate the importance of outsourcing. In fact, outsourcing has long been raised as a serious issue in Iran. This issue has been included in the country's development plans; in particular in paragraph B of Article 5 of the executive regulations, in the fourth and fifth development plans. In the past, outsourcing was used by organizations with unreliable sustainability, Nowadays, successful organizations are also using this tool to reform their structure. Considering macro-economic objectives, policies of the government and developments in the organization, privatization and public sector downsizing, civil services law, and Article 44 of the constitution and globalization, the status of outsourcing organizations' processes and changes in this direction is consistent with organizations' long-term policies, strategies and objectives.

Government agencies are moving toward agile organizations to achieve their objectives and milestones. According to reported protocols [6], the focus is on core missions, outsourcing technologies and activities using national research and developments; in addition, industrial capacities are emphasized to consider main policies and government agencies for agility. Most oil companies use outsourcing as a strategy for a sustainable business, which is effective on external influential parameters such as oil prices and production vulnerabilities [7]. The reason is that outsourcing is considered as one of the most effective strategies in today's business [5]. However, this strategy has not been so far used in subsidiaries of the Iran National Gas Company effectively. This is considered a serious challenge for the future of gas refinery companies, which are facing the constraints of hiring human resources. In the present study, the main issue was the non-use of the outsourcing strategy in subsidiaries of the Iran National Gas Company. The fear of change and failure of this outcome is considered as one of the most important problems related to the implementation of this strategy. Therefore, this challenge encouraged the researcher to conduct a related study using scientific approaches extensively and deeply in order to help senior managers in the organization to make appropriate and optimal decisions regarding business process outsourcing. Accordingly, the key question is how to incorporate sustainability-related issues, including environment, economy and society in refining company processes. Outsourcing aims to determine a sustainable strategy in this regard.

The main purpose of this paper was to develop a conceptual model of sustainable outsourcing. To this end, a balanced scorecard was implemented using the hierarchical analysis process to achieve the research objectives. Therefore, this article focused on sustainable outsourcing, which is a completely new topic. In most previous studies, sustainability was one of the perspectives of a balanced scorecard. In this study, sustainability was integrated into each of the perspectives in a balanced scorecard. This has so far not been observed in any studies nationally or internationally.

MATERIALS AND METHODS

THEORETICAL BACKGROUND

The definitions and theoretical foundations of keywords in this study including outsourcing,sustainability, balanced scorecard and hierarchical analysis with strategy, strategic goal, strategy implementation and company details are discussed in the theoretical background section. According to the literature [8], outsourcing is one of the best ideas, which allows many companies to focus on what they intend to perform. Moreover, outsourcing can be used for what others can do better, faster, cheaper and with higher efficacy. In fact, outsourcing as one of the concepts of successful business has become an organization management strategy [8]. In the present study, the operational definition was a contract between Tata Consultancy Services and one or more service providers, regarding the transfer of management responsivities of one or more activities of the company or work processes without transfer of ownership.

Many researchers have defined sustainability management as the regulation, implementation, and evaluation of environmental and socio-economic decisions and practices related to sustainability. Sustainable operations determine how a strategy is formulated and implemented. In fact, sustainability builds the bridge between strategies and operational worlds [9]. In the present study, sustainability referred to economic, social and environmental dimensions.

A BSC presents a performance measurement systemmore comprehensive than financial measurement systems. , In addition to financial indicators, BSC measures the status of an organization with some indicators on customer perspectives, processes, growth, learning, human resources and information systems. There is a significant relationship between objectives of these perspectives and causal relations. "Start from the end" refers to the

hypothesis that financial results will only be available when customer satisfaction is achieved. A presentable value to the customer describes how sales and loyalties of target customers are realized. Internal processes create and provide a presentable value to customers. Intangible assets support internal processes. Coordination between the objectives in these four perspectives is considered as a key for creating values and sustainable strategies [10]. Tata Consultancy Services has been exploited since 1968.

EXPERIMENTAL

The integration of balanced scorecards, the analytic hierarchy process and performance analysis is useful for a decision maker to achieve a more realistic and accurate representation of the problem, and also allows managers to analyze the company's performance [2]. The practical foundations of the research are divided into three sections. In the first section, studies were carried out inside the country for duration of ten years (2009-2018). In the second section, studies were conducted outside the country for duration of ten years (2009-2018). The studies focused on factors effective in outsourcing, entitled factors or criteria affecting outsourcing, decision making criteria in outsourcing, outsourcing determinants, outsourcing effects, outsourcing motivations, and key and critical factors of outsourcing success. Outsourcing benefits and indicators affecting outsourcing were collected, and their effects on outsourcing were measured through content validity questionnaires by experts. The criteria confirmed in terms of content validity were extracted as outsourcing success factors. In the third section, outsourcing failure factors extracted from the studies conducted inside or outside of the country over the past ten years was compared to equate with success factors when making a list of final factors affecting outsourcing. After the required data were collected and analyzed, the results were discussed. In the studies conducted inside and outside of the country on factors affecting the success and failure of outsourcing in companies, more than 200 factors were extracted. Afterwards, the list was made and duplicated and then similar factors were eliminated and equated. Subsequently, the number of final factors reduced to 152. Next, factors affecting the success and failure of outsourcing were identified, of which 32 factors belonged to studies carried out inside of the country and 36 factors belonged to studies performed outside of the country. Table 1 summarizes the

most important studies with regard to factors affecting outsourcing inside and outside of the country. Moreover, the primary criteria affecting outsourcing were mostly mentioned in studies as outsourcing success factors.

RESEARCH METHODOLOGY

This study was considered an applied research in terms of purpose and an exploratory research in terms of subject. Moreover, the present study was a descriptive-survey in terms of research design, but an analytical, exploratory research in terms of nature. The study was carried out using a combination of quantitative and qualitative models. In this study, the outsourcing success factors were first identified based on the studies conducted inside and outside the country. Then, the list was made and duplicate and similar factors were eliminated and equated.

The content validity ratio (CVR) and the content validity index (CVI) were used to measure the content validity.

In order to guarantee the reliability, the inconsistency ratio (IR) was used in the paired comparison questionnaires and also in the reliability analysis of the questionnaires according to the Expert Choice report. The statistical analysis of data was also performed in the Excel environment. The CVR index was designed by Lawshe. Experts' opinions were used on the content of the test to calculate this index. Lawshe (1975) developed a quantitative measure for assessing content validity called CVR. The CVR offers information about item-level validity. The procedure consisted in using a panel of experts to rate items according to the relevance to the domain of the scale. Each item of the scale was rated based on a 3-point rating system (1 – the item is irrelevant, 2 – the item is important, but not essential, 3 – the item is essential). For each item, a CVR was computed, that is basically the proportion of experts that considered items important or essential for the content of the scale. There was also the possibility of having an overall measure for the content validity of the scale. This is called an index and it is computed as a mean of items' CVR values [11]. Then, the CVR was calculated by the following formula.

$$CVR = \frac{n-I}{N}$$

n= Number of experts who considered items to be “essential” or “important, but not essential” I= Number of experts who considered items “irrelevant” N= Total number of experts Given that 13 experts evaluated the items in the content validity questionnaire, the items whose CVR was less than 0.54 were eliminated according to the minimum CVR acceptable score of the number of experts. The reason is that they did not have the acceptable content validity, and the rest of the items were confirmed. Another quantitative measure used in this study was CVI proposed by Waltz and Bausell (1983) [11]. The experts were then asked to rate each item based on relevance, clarity, simplicity and ambiguity on a four- point Likert scale. Therefore, the experts specified the features of "relevant", "clear", "simple" and "ambiguous" for each item abased on the four-point Likert scale, as shown in Table 2. Then, the value of each CVI was calculated by the following formula [21].

$$CVI = \frac{The\ number\ of\ expert\ who\ have\ given\ sources\ 3\ and\ 4\ to\ the\ item}{Total\ number\ of\ experts}$$

The minimum acceptable value for each CVI index was equal to 0.79; items with values less than 0.79 were eliminated. Overall, 114 items out of the total 152 items were confirmed according to the formula above.

In this study, the population included Iran’s gas refining companies, and Fajr Jam Refining Company was selected as a case study. Validity assessment, incompatibility rate calculation, and pair wise comparisons were conducted through distribution of a content validity questionnaire and a paired comparison questionnaire among 13 experts according to Table 2.

Two main questions were designed in the form of eight sub-questions in order to achieve the results of the research; the main questions included:

Question 1: What are the strategic objectives of each of the balanced scorecard perspectives to achieve a sustainable outsourcing model?

Question 2: What is the importance of each of the objectives determined for balanced scorecard perspectives of the sustainable outsourcing strategy in Tata Consultancy Service using the hierarchical analysis process?

The method used in this study was as follows: after extracting 152 initial success factors, a

content validity questionnaire was distributed among experts and CVR and CVI were calculated. In fact, 114 criteria were confirmed in terms of validity.

TABLE 1: CRITERIA FOR MEASURING CONTENT VALIDITY

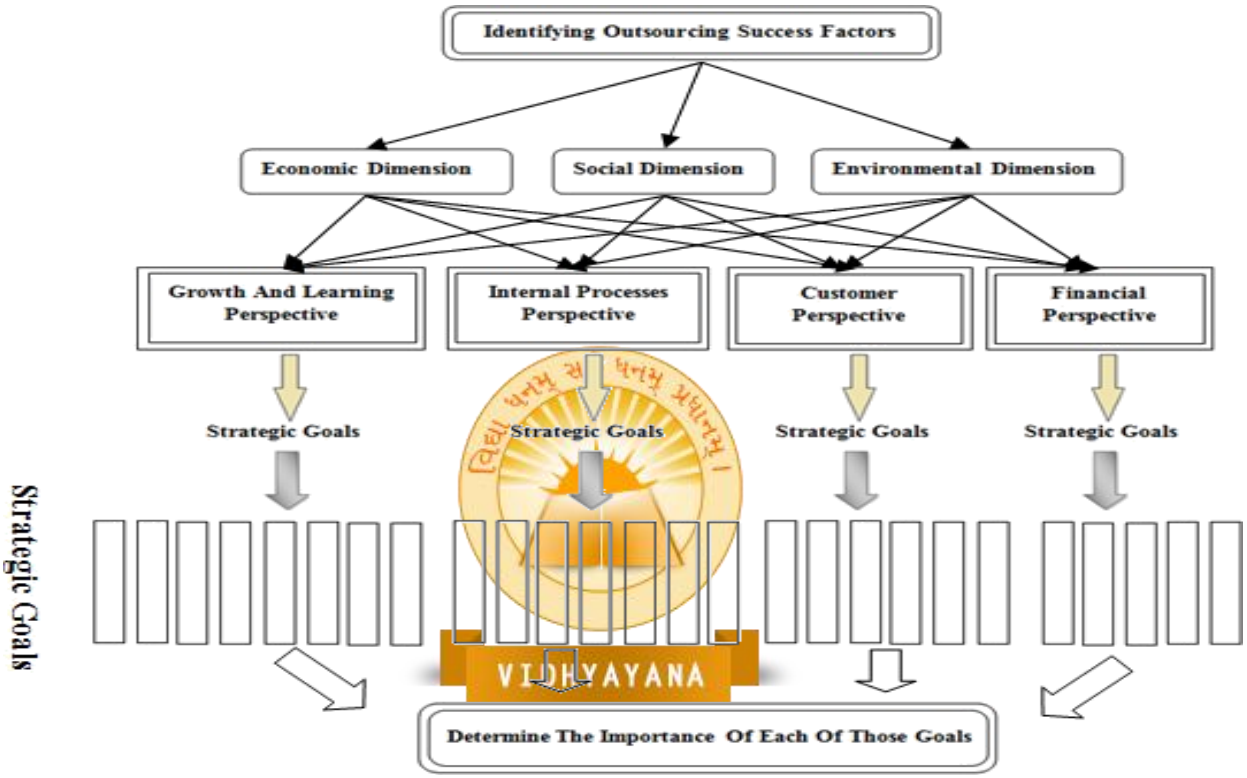
1. Relevance	2. Clarity	3. Simplicity	4. Ambiguity
1= Not Relevant 2= Needs some Revision 3= Relevant but needs Minor Revision 4= Very Relevant	1= Not Clear 2= Needs Some Revision 3= Clear but needs minor revision 4= Very clear	1= Not simple 2= Needs some revision 3= Simple but needs minor revision 4= Very simple	1= Doubtful 2= Needs some revision 3= No doubtful but needs minor revision 4= Meaning is clear

TABLE 2: EXPERTS' PROFILES IN THIS STUDY

No.	Criterion	Experts' Profile in Tata Consultancy Services	Number of Experts
1	Management Experience	Less Than 15 Years	6
		15 Years	7
		Above 15 Years	0
2	Organizational Rank	Lower than Organizational Rank 10	3
		Organizational Rank 10	4
		Above Organizational Rank 10	6
3	Education	Bachelor	1
		Master	10
		Above Master (Ph. D)	2
4	Age	Less Than 35 Years	2
		Between 35 and 45	9
		Above 50 Years	2

Theoretical foundations and experts' views, the confirmed factors were classified into three dimensions of sustainability including economic, social and environmental dimensions, and sustainability output criteria were classified based on the theoretical foundations of the

balanced scorecard in the perspectives of learning and growth, internal processes, customer and financial. Afterwards, strategic goals of each sector were determined based on the research questions through the affinity diagram. The goals were included on a balanced scorecard. Finally, the importance of each of the strategic goals of the balanced scorecard was determined by distributing a paired comparison questionnaire, incompatibility rate. The above steps were conducted based on the conceptual model of research according to Figure 1.



The measurable factors in these four perspectives were considered in a causal relationship, according to the theoretical foundations of the research. Financial performance depends on customer satisfaction or dissatisfaction. Customers' satisfaction and dissatisfaction are the result of the efficiency and quality of organizations' processes. How processes are performed depend on the quality of their workforce, their motivation and authority, as well as their information systems. In a balanced scorecard measurement system, managers measure and control their organization in a more comprehensive and complete manner [10]. Thus, it can be concluded that sustainability must be considered in all perspectives of BSC for the sustainability of the outsourcing strategy model, and if it is not sustainable in each of these aspects, it will lead to sustainability in the whole outsourcing process. Therefore, the

sustainability plan is not confirmed in one perspective scientifically. The results of this study were consistent with the results reported in the literature [10], reporting that the integration of a balanced scorecard, the analytic hierarchy process and performance analysis was useful for a decision maker to achieve a more realistic goal.

TABLE 3: The Balanced Scorecard Map of the Sustainable Outsourcing and Parameters

Balanced Scorecard Perspectives				
	Financial	Amendment of Cost Structure and Increasing Financial Power (**FEc1**)	Social Capital Development (**FSo1**)	Green Economy (**FEn1**)
		Outcome Income from Outsourcing (**FEc2**)	Economic Justice (**FSo2**)	
	Customer	Quality of Products and Services Provided (**CEc1**)	Social Responsibility (**CSo1**)	Clean and Healthy Environment (**CEn1**)
		Performance Satisfaction (**CEc2**)	Trust and Cooperation (**CSo2**)	Product or Service Safety (**CEn2**)
	Internal Processes	Outsourcing Process Management (**PEc1**)	Communication Management (**PSo1**)	Environmental Management (**PEn1**)
		Financial management of contract (**PEc2**)		
		Establishing a Performance Assessment System for Service Providers (**PEc3**)	Social Capital Management (**PSo2**)	Employee Health Management (**PEn2**)
	Growth and learning	Knowledge management (**LEc1**)		
		Using modern knowledge and technology (**LEc2**)	Making Culture (**LSo1**)	Obtaining Appropriate Certification with an Outsourced Activity (**LEn1**)

	Standardizing processes (**LEc3**) Focusing on core competencies (**LEc4**)	Service Providers' Commitment to fulfill Contractual Provisions (**LSo2**)	Observing the Principles of Environmental Health and Staff Health (**LEn2**)
SBSC	Economic	Social **Sustainability Dimensions**	Environmental

TABLE 4: The Compatibility Rate of Pair Wise Comparisons of the Questionnaires

Paired Comparison Test	Incompatibility Rate	Result
Paired comparison of Main BSC's Criteria	0.03	Acceptable
Paired comparison of Growth and Learning Perspective	0.02	Acceptable
Paired comparison of Internal Business Process Perspective	0.02	Acceptable
Paired comparison of Customer Satisfaction Perspective	0.02	Acceptable
Paired comparison of Financial Perspective	0.01	Acceptable

The pair wise comparisons of the main criteria of the balanced scorecard were first performed using the Expert Choice software. Output results were listed in the following, according to Matrix No. 1.

The weights of the criteria were obtained after the model was made in the Expert Choice and the pair wise comparisons matrices were entered. Four criteria have been prioritized using the Expert Choice software according to the views of the subjects. Based on comparisons made and weights obtained in the form of the sub-criteria of the balanced scorecard, the criterion "financial performance" was of the highest importance. The importance of prioritizing BSC main criteria is illustrated in Figure 2. The perspectives "Internal Business Processes" and "Customer Satisfaction" were ranked as the next priorities.

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Table 5: Compare the Relative Importance with Respect to Goal: Sustainable Outsourcing by BSC

Perspective	Financial	Customer	Internal Process	Learning
Financial		**4.89**	3.54	4.62
Customer			2.11	1.43
Internal Process				3.69
Learning	**Inconsistency : 0.03**			

Source: Processed Data

Matrix 1: The Paired Comparison of the Main Balanced Scorecard Criteria's

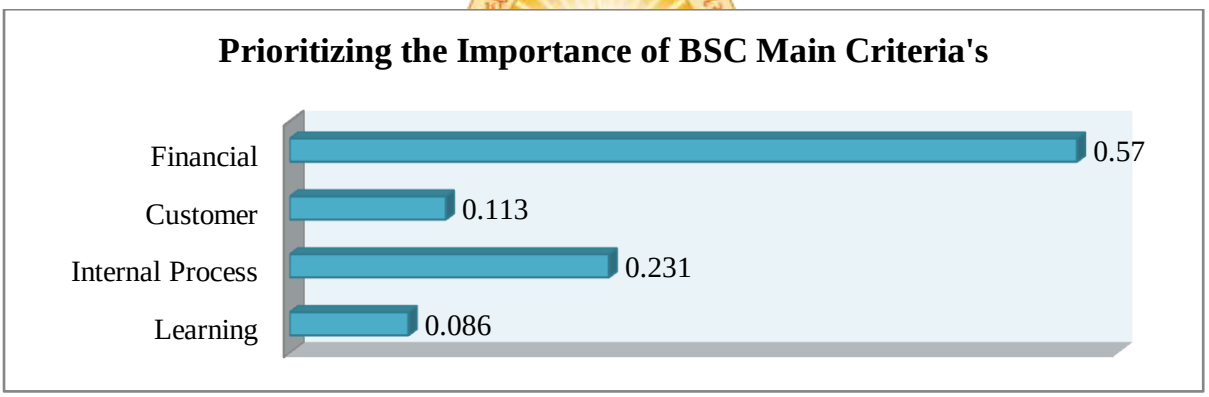

Figure 2: Prioritizing the Importance of BSC Main Criteria's

Then, the Expert Choice software was used to make paired comparisons between BSC of all perspectives sub criteria. Output results were listed in the following, according to Matrix No. 2. Therefore, according to comparisons made and weights obtained in the form of sub-criteria for the all perspective, the importance of prioritizing from all sub criteria is shown in Figure 3.

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Perspective & KPI's		Financial					Customer						Internal Process							Growth & Learning							
		FEc1	FEc2	FSo1	FSo2	FEn1	CEc1	CEc2	CSo1	CSo2	CEn1	CEn2	PEc1	PEc2	PEc3	PSo1	PSo2	PEn1	PEn2	LEc1	LEc2	LEc3	LEc4	LSo1	LSo2	LEn1	LEn2
Financial	FEc1		1.8	3.8	2.9	2.9																					
	FEc2			1.9	2.3	1.7																					
	FSo1				1.6	1.2																					
	FSo2					1.1																					
	FEn1	Inconsistency : 0.01																									
Customer	CEc1							1.8	4.1	4.2	1.8	1.2															
	CEc2								1.4	3.5	1.2	1.3															
	CSo1									1.7	1.2	1.9															
	CSo2										1.9	2.2															
	CEn1											1.1															
	CEn2						Inconsistency : 0.02																				
Internal Process	PEc1													1.4	1.7	4.0	2.4	1.1	1.2								
	PEc2														2.5	5.7	4.5	2.6	2.7								
	PEc3															4.2	2.9	1.0	1.2								
	PSo1																2.7	3.1	3.7								
	PSo2																	1.5	1.6								
	PEn1																		1.3								
	PEn2												Inconsistency : 0.02														
Growth & Learning	LEc1																				4.2	2.9	2.4	1.5	3.2	1.8	2.1
	LEc2																					1.1	1.5	1.1	1.1	1.6	1.1
	LEc3																						1.2	1.8	1.3	1.8	1.0
	LEc4																							1.1	1.4	2.1	1.5
	LSo1																								1.0	1.3	1.1
	LSo2																									2.3	1.3
	LEn1																										1.6
	LEn2																			Inconsistency : 0.02							

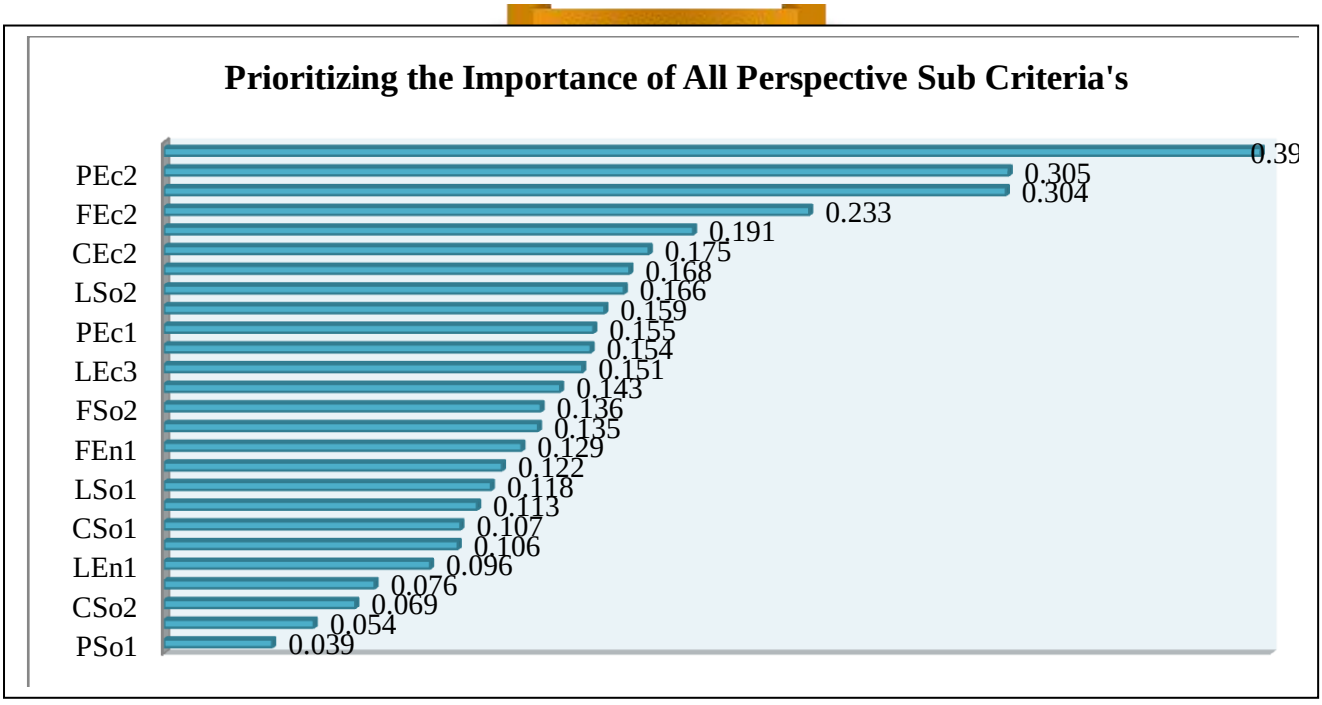

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Table 6 – The Importance and Priority of Balanced Scorecard Indicators

Perspective	Next Weight	Criteria	Importance	Rank	Overall Rank
Growth and Learning	**0.086**	**Service Providers' Commitment to fulfill Contractual Provisions (LSo2)**	**0.166**	**1**	**8**
		Focusing on core competencies (**LEc4)**	**0.159**	**2**	9
		Standardizing processes (**LEc3)**	**0.151**	**3**	12
		Using modern knowledge and technology (**LEc2)**	0.143	4	13
		Making Culture **(LSo1)**	0.118	5	18
		Observing the Principles of Environmental Health and Staff Health **(LEn2)**	0.113	6	19
		Obtaining Appropriate Certification with an Outsourced Activity **(LEn1)**	0.096	7	22
		Knowledge management (**LEc1)**	0.054	8	25
Internal Processes	**0.231**	**Financial Management of Contract (PEc2)**	**0.305**	**1**	**2**
		Establishing a Performance Assessment System for Service Providers (**PEc3)**	**0.168**	**2**	7
		Outsourcing Process Management (**PEc1)**	**0.155**	**3**	10
		Environmental Management **(PEn1)**	0.135	4	15
		Employee Health Management **(PEn2)**	0.122	5	17

		Social Capital Management **(PSo2)**	0.076	6	23
		Communication Management **(PSo1)**	0.039	7	26
Customer	**0.113**	**Quality of Products and Services Provided (CEc1)**	**0.304**	**1**	**3**
		Product or Service Safety **(CEn2)**	**0.191**	**2**	5
		Performance Satisfaction (**CEc2)**	**0.175**	**3**	6
		Clean and Healthy Environment **(CEn1)**	0.154	4	11
		Social Responsibility **(CSo1)**	0.107	5	20
		Trust and Cooperation **(CSo2)**	0.069	6	24
Financial	**0.57**	**Amendment of Cost Structure and Increasing Financial Power (FEc1)**	**0.396**	**1**	**1**
		Outcome Income from Outsourcing (**FEc2)**	**0.233**	**2**	4
		Economic Justice **(FSo2)**	**0.136**	**3**	14
		Green Economy **(FEn1)**	0.129	4	16
		Social Capital Development **(FSo1)**	0.106	5	21

CONCLUSION

This study aimed to design a sustainable outsourcing strategy model with a balanced scorecard using the hierarchical analysis process. According to the results, the social, economic, and environmental sustainability in each of the balanced scorecard perspectives must be considered in order to achieve sustainable learning and growth, internal business processes, customer satisfaction and financial performance.

Afterwards, the balanced scorecard was designed with 26 strategic goals. Then, the

importance of each strategic goal was calculated in each BSC perspective and the desired goals were coded using pair wise comparison.

The final results showed that in order to achieve sustainability for each of the balanced scorecard perspectives, strategic goals related to that perspective were determined. Moreover, it was indicated that a criterion was developed for the desired goal with measurable indicators. The indicators then measured sustainability in each criterion by measuring the performance of that criterion after the implementation of the outsourcing process. For each perspective, strategic goals were identified. In order to achieve sustainability in the growth and learning perspective, eight strategic goals were extracted. The goals included knowledge management, use of new knowledge and technology, standardization of processes; focus on core competencies, construction of culture, service providers' commitment to fulfill contractual provisions, achievement of valid credentials with outsourced activity and observation of environmental health and employee health principles. Further, to achieve sustainability in the internal business processes perspective, seven strategic goals were extracted. The goals consisted of outsourcing process management, contract financial management, and establishment of service provider performance assessment system, communication management, social capital management, environmental management and employee health management. Similarly, to obtain sustainability in the customer perspective, six strategic goals were extracted. The goals comprised quality of provided products and services, performance satisfaction, social responsibility, trust and collaboration, clean and healthy environment, and product or service safety. In addition, to achieve sustainability in the financial perspective, five strategic goals were derived. The goals were cost structure and financial sector reform, income from outsourcing, social capital development, economic justice and green economy using a scientific method. In order to evaluate the sustainability performance of outsourcing, indicators for measuring strategic objectives should be specified and the minimum amount of each indicator should be determined. After defining quantifiable and measurable indicators of each strategic goal, it is possible to determine sustainability or unsustainability in each of the balanced scorecard perspectives.

REFERENCES

1. Akbari, M. (2013). Factors affecting Outsourcing Decision in Iranian Industries. Victoria University.
2. Bertea, E., & Zait, P. A. (2013). Scale Validity in Exploratory Stages of Research. Management and Marketing Journal , 11 (1), 38 - 46.
3. Cram, W. A. (2009). Sucess Factors for Information System Outsourcing : A Meta Analysis. AMCIS 2009 Proceedings .
4. De Felice, F., Petrillo, A., & Autorino, C. (2015). Development of a framework for sustainable outsourcing: Analytic balanced scorecard method (A-BSC). Sustainbility , 7 (7), pp. 8399 - 8419.
5. Delen, G., Peters, R., Verhoef, C., & Vlijmen, S. (2016). Lessons from Dutch IT - Outsourcing Success and Failure. Science of Computer Programming , 130, pp. 37 - 68.
6. Gaspareniene, L., Remeikiene, R., & Startiene, G. (2014). Factors determining employment outsourcing in public and private sectors. Inzinerine ekomomika , 25 (2), pp. 203 - 220.
7. Gunasekaran, A., Irani, Z., Choy, K., Filippi, L., & Papadopoulos, T. (2015). Performance Measures and Metrics in Outsourcing Decisions : A Review for Research and Applications. International Journal of Production Economics , 161, 153 - 166.
8. Havler, D. (2015). Exploring Outsourcing as a Source of Competitive Advantage. Kingston University.
9. Kaplan, R., & Norton, D. (2004). Strategy Map : Converting Intangible Assets into Tangible Outcomes. Harvard Business School Press .
10. Karimi, G., Elyasi, M., Abedi, J. R., & Sadeghi, Y. (2013). A Model for Production Outsourcing Decision in Governmental Organization. 1 (2), pp. 83 - 106.
11. MacKerron, G., Kumar, M., Benedikt, A., & Kumar, V. (2015). Performance Management of Suppliers in Outsourcing Project : Case Analysis from the Financial Service Industry. Production Planning & Control , 26 (2), 150 - 165.
12. Opresnik, D., & Taisch, M. (2015). The conceptualization of sustainability in operations management. Procedia CIRP , 29, pp. 532 - 537.
13. Rezaian, A., & Naeiji, M. J. (2012). Strategic entrepreneurship and intellectual capital as determinants of organizational performance: Empirical evidence from iran steel industry. Journal of Global Entrepreneurship Research , 2 (1), 3 - 16.

14. Schniederjas, A. (2006). Outsourcing Management Information System. IGI Global.
15. Somjai, S. (2017). Advantages and Disadvantages of Outsourcing. The Business and Management Review , 9 (1), pp. 157 - 160.
16. Sridarran, P., & Fernando, N. G. (2016). Change management framework to enable sustainable outsourcing of facilities management services. Built Environment Project and Assets Management , 6 (3), pp. 317 - 331.
17. Tayauova, G. (2012). Advantages and disadvantages of outsourcing: Analysis of outsourcing practices of kazakhstan banks. Procedia - Social and Behavioral Sciences , 41, pp. 188 - 195.
18. Tjader, Y., May, J. H., Shang, J., Vargas, L. G., & Gao, N. (2014). Firm Level Outsourcing Decision Making : A Balanced Scorecard - Based on Analytic Network Process Model. International Journal of Production Economics , 147, 614 - 623.
19. Vestre, V. H. (2016). A Critical Assessment of Outsourcing in the Oil & Gas Industry. Norway: Unievrsity of Stavanger.
20. Yaghmaie, F. (2003). Content Validity and Its Estimation. Journal of Medical Education , 3 (1).
21. Yalaho, A., & Nahar, N. (2010). Key success factors for managing offshore outsourcing of software production using the ict- supported unified process model: A case experience from finland, india, nepal and russia. IEEE. PICMET 2010 Technology Management For Global Economic Growth.