Identification and Prioritizing Critical Success Factors for HR Shared Services Implementation in Multi-Business Firms Using DEMATEL Method

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Abstract
Rapid developments in information technology and software have led organizations to adopt a new structure model known as shared services. A Shared Services Center (SSC) is an organizational concept companies use to allocate distributed resources efficiently. However, research has shown that some SSCs fail to achieve the expected efficiency improvements. Therefore, focusing on critical success factors for implementing a Human Resources Shared Services Center (HRSSC) can help organizations identify the factors necessary for success and avoid costly failures. The primary objective of this study is to identify and prioritize Critical Success Factors (CSFs) for implementing HRSSC in multi-business firms. The CSFs for implementing HRSSC have been identified. Furthermore, the interrelationships and influences among these factors have been examined using the DEMATEL paired comparison questionnaire. Among the identified factors, Leadership and Staff management, Organizational culture, Commitment of management, and a Clear and appropriate strategy have been ranked as the most important CSFs for implementing HRSSC in multi-business firms. Thus, managers and decision-makers should consider to these CSFs which are crucial to successful implementation of the Human Resources Shared Services Center in multi-business firms.

Keywords: Critical Success Factors, DEMATEL Method, Human Resources, Multi-Business Firms, Shared Services Center.

I.   Introduction

One of the important challenges that managers of organizations have to deal with is cost efficiency while maintaining high quality levels. This is one of the reasons for creating shared service units. Shared services in HR, work by integrating services within a company. A general HRSS model centralizes resources in one or more places and shares services across different HR units. The transition from traditional HR to HRSS is achieved through the re-engineering of HR processes, including the classification and centralization of daily and routine HR services (Petković & Đorđević, 2014). The implementation of Shared Services Centers (SSCs) has gained increasing importance in recent years, especially in developed countries where more and more business units are adopting this organizational structure. Multinational businesses have reported successful experiences with common administrative units, resulting in a 20-50% reduction in costs (Simões, 2019). According to the latest biennial international reports, there is a clear prevalence of shared services offered by multi-business firms. These reports emphasize that financial services rank as the foremost category among shared services, closely followed by human resources in second place (Bozorgi Amiri et al, 2021).

When organizations launch SSCs, cost savings are usually considered the most important goal, followed by the improvement of quality and transparency (PWC2, 2016). Research has shown that 70% of cost savings in these units is due to the reduction of personnel costs, of which 30% is due to the use of information technology and infrastructure. However, some SSCs have not been able to

achieve the expected efficiency improvement and have even failed completely (Richter & Bruhl, 2021).

In today's world, the size and stability of an organization are not decisive for its success, rather, speed and flexibility have replaced the former factors of success. These developments have required a drastic change in the human resource management department of organization (Mölleney, 2019). However, getting attention to the implementation of HRSSCs is very beneficial, there is no guarantee of success or failure in implementing these services in the firms. So, the success and failure of SSCs, particularly Human Resources Shared Services Centers (HRSSCs), have become important topics in current research. Therefore, identifying and prioritizing Critical Success Factors (CSFs) for implementing HRSSCs in multi-business firms is essential to ensure their success and prevent inefficient resource utilization.

So, our discussion questions are:

What are the Critical Success Factors (CSFs) for the implementation of human resources shared services (HRSSs)?

What is the priority of CSFs for the implementation of HRSSCs?

II. Literature Review
History and Functions of Shared Services
Price Waterhouse Coopers

Organizing human resources in multi-business firms requires that specialized human resources departments be designed in business units and ensure well managed. Hence, a new method of organizing human resources called shared services has been introduced (Ulrich & Dulebohn, 2015). SSC prompts a low-risk approach to quality service delivery, ultimately optimizing human resources effectiveness while reducing costs (Simões, 2019). In the late 1980s, large companies integrated some of their support functions, such as accounting, from separate business units into one or more units, introducing the concept of shared services (Paagman et al., 2015). The concept of Shared Services Centers (SSCs) emerged as a solution for public spending pressures among organizations in the 1990s (Ulrich & Dulebohn, 2015). To consolidate support services such as human resource management, information technologies, or procurement, organizations increasingly establish a SSC, that would have anticipated benefits such as cost saving and quality improvement (Meijerink et al., 2013). Implementing shared services is a strategic response to organizational challenges, including repetitive tasks and a lack of focus on core competencies. Moreover, businesses continually seek continuous quality improvement, which can be attained through standardized processes, cultivating new competencies to enhance the business unit's value proposition, boosting productivity, and ultimately achieving the desired cost savings (Simões, 2019).

The adoption of Human Resources Shared Services (HRSS) within organizations was primarily motivated by the need to cut labor costs. However, other essential factors, such as improving HR function efficiency and overall performance, also contributed significantly to its implementation (Rai1 & Maheshwari, 2024).

Shared Services and centralization, however, are not the same. Many researchers have defined shared services as a unit for centralizing or integrating functions, activities, services, or resources into an independent unit. Centralization models provide economies of scale and scope by eliminating the duplication of activities and resources, but they result in long response times. In contrast, decentralization models provide quicker responses to change and greater support for business unit needs, but cost levels are high due to resource duplication. SSCs combine centralization and decentralization models, with organizations taking advantage of both while minimizing their disadvantages (Meijerink & Bondarouk, 2013). separating HR from the main department and integrating HR functions into business units suggested by Ram Charam emphasizes the crucial need for coordination and cooperation between HR and other units despite potential challenges (Tang & Zainal, 2022).

The HRSSCs business model categorizes HR activities into two types: transactional (administrative in nature) such as payroll processing, and transformational (strategic in nature) including job analysis. The main aim is to eliminate redundancy by centralizing routine HRM

functions to free up time and resources for strategic HR activities, helping organizations acquire and develop a competitive advantage (Sahoo & Goute, 2021; Bozorgi Amiri et al., 2021). Re-engineering business processes while implementing Shared Services helps eliminate redundancy by optimizing business processes and workflows. Optimal workflows for shared services include eliminating non-value-added business processes, negotiating for unique business processes, standardizing service processes, and sharing business process re-engineering knowledge. By eliminating redundancy, SSCs have the potential to streamline processes and drive down costs, allowing organizations to focus on strategic HR activities that can give them a competitive advantage in their industry.

SSCs create a complex network that has all the characteristics of inter-organizational and intra-organizational networks. SSC is a business partner that makes an inter-organizational network and is managed by a board of directors which is elected by partner organizations. Since the daily operations of SS are coordinated by SSCs and SSCs are managed by partner organizations, the center and its governance organizations form intra-organizational networks (Wang & Wang, 2015).

Recent reports from Deloitte show a more than five percent increase in productivity in 73% of organizations after adopting a shared service model (Simões, 2019). Shared services are an organizational concept employed by companies to optimize resource allocation across the organization. By collaborating and centrally sharing resources among various departments, businesses can achieve sustainable cost savings up to 40%. However, studies indicate that certain services may not enhance efficiency or performance, which is a significant factor in the failure or delay of shared services implementation, ultimately leading to increased costs (Richter & Bruhl, 2021).

Critical Success Factors (CSFs)

To improve decision-making performance, it is important to focus on critical success factors (CSFs). According to Borman and Janssen (2013a) decision-makers often have a limited capacity to process information, so focusing on CSFs can help simplify the decision-making process by highlighting the most important factors that need to be considered. At first, this consent was proposed by Daniel in 1961 and later by Rockart in 1979. This has retained its value over time due to the high failure rate of projects and the desire to increase the chances of success (Borman & Janssen, 2013b). By identifying and focusing on CSFs, organizations can improve their ability to successfully execute projects, including HR shared services centers.

CSFs for Implementing HRSSC

Critical success factors (CSFs) have been extensively investigated in various research to identify the factors affecting the implementation of HRSSCs. Leadership and Staff management have been identified as a significant CSFs by different researchers in implementing HRSS in multi-business firms. Competencies, Experience, and Skills of staff have also been identified as essential CSFs in many studies. Commitments of management, Training, and Organizational culture have also been identified as important CSFs for implementing HRSSCs.

Additionally, Clear and appropriate strategy in organizations, Task standardization, and Appropriate supporting technology have also been identified as significant CSFs for the implementation of HRSSCs. Table 1 lists the CSFs of the implementation of HRSSCs that were extracted from the relevant literature, which were used to design the questionnaires and analyze the data results of this study (Goudarzi et al, 2023).

Table 1. Critical Success Factors for implementing HRSSC extracted from literature review

No.	CSF	Researchers
1	Leadership and Staff management	(Richter & Bruhl, 2021); (Simões, 2019); (Ribeiro et al., 2018); (Pohl, 2016); (Wang & Wang, 2015); (Meijerink et al, 2013); (Meijerink & Bondarouk, 2013); (Dhange, 2013); (Borman & Janssen, 2013a); (Ramphal, 2013); (Ulrich & Grochowski, 2012); (Borman & Janssen,

		2012); (Borman, 2010)
2	Competencies, Experience, and Skills of staff	(Simões, 2019); (Ribeiro et al., 2018); (Pohl, 2016); (Ramphal, 2013); (Meijerink and Bondarouk, 2013); (Dhange, 2013); (Meijerink et al, 2013); (Borman & Janssen, 2012); (Borman, 2010)
3	Appropriate supporting technology	(Simões, 2019); (Pohl, 2016); (Wang & Wang, 2015); (Bondarouk & Friebe, 2014); (Borman & Janssen, 2013a);(Borman & Janssen, 2013b); (Borman & Janssen, 2012); (Miskon et al., 2011)
4	A clear and appropriate strategy	(Richter & Bruhl, 2021); (Simões, 2019); (Ribeiro et al., 2018); (Wang & Wang, 2015); (Bondarouk & Friebe, 2014); (Borman & Janssen, 2013a); (Ramphal, 2013); (Borman, 2010)
5	Training	(Simões, 2019); (Ribeiro et al., 2018); (Pohl, 2016); (Wang & Wang, 2015); (Borman & Janssen, 2013a); (Borman & Janssen, 2013b); (Ramphal, 2013); (Dhange, 2013); (Borman & Janssen, 2012)
6	Task standardization	(Richter & Bruhl, 2017); (Wang & Wang, 2015); (Bondarouk & Friebe, 2014); (Dhange, 2013); (Borman & Janssen, 2013b); (Borman & Janssen, 2013a); (Borman & Janssen, 2012); (Miskon et al., 2011)
7	Change management	(Miskon et al., 2011); (Borman & Janssen, 2013a); (Pohl, 2016); (Richter & Bruhl, 2017); (Simões, 2019); (Richter & Bruhl, 2021); (Richter & Bruhl, 2021)
8	Commitment of management	(Ribeiro et al., 2018); (Pohl, 2016); (Borman and Janssen, 2013a); (Borman and Janssen, 2013b); (Borman and Janssen, 2012); (Miskon et al., 2011)
9	Flexibility	(Ribeiro et al., 2018); (Richter & Bruhl, 2021); (Simões, 2019); (Borman & Janssen, 2013b); (Ramphal, 2013
	SLA, Policy, and	(Ribeiro et al., 2018); (Wang & Wang, 2015); (Ramphal,

No.	CSF	Researchers
10	Governance	2013); (Borman & Janssen, 2013a); (Borman & Janssen, 2012)
11	Organizational structure	(Wang & Wang, 2015); (Borman & Janssen, 2013a); (Borman & Janssen, 2013b); (Ulrich & Grochowski, 2012); (Borman, 2010)
12	Teamwork skills	(de Avelar Simões, 2019); (Ribeiro et al., 2018); (Pohl, 2016); (Borman & Janssen, 2013a)
No.	CSF	Researchers
13	Organizational culture	(Wang & Wang, 2015); (Bondarouk & Friebe, 2014); (Ramphal, 2013)
14	People involved, and People support	(Richter & Bruhl, 2021); (Ramphal, 2013); (Borman & Janssen, 2012)
15	New rewarding systems	(Wang & Wang, 2015); (Borman & Janssen, 2013b); (Ramphal, 2013)
16	Transaction-Based service offering	(Wang & Wang, 2015); (Borman & Janssen, 2013b); (Borman & Janssen, 2012)
17	Evolutionary approach	(Borman & Janssen, 2013a); (Borman & Janssen, 2013b); (Borman & Janssen, 2012)
18	Strong project management skills	(Ribeiro et al., 2018); (Miskon et al., 2011)
19	Correct focus on service scope, and service delivery	(Borman & Janssen, 2013b); (Borman & Janssen, 2013a)

III.   Research Methodology

The objective of this study is to identify and prioritize critical success factors (CSFs) for the successful implementation of HRSSC in multi-business firms. To achieve this, the researchers encountered challenges related to the complex interrelationships between various factors. The DEMATEL method was chosen as a suitable approach to overcome these challenges and achieve the research objectives.

DEMATEL is a multi-criteria decision-making method which is used for solve complex problem groups (Koca & Yıldırım, 2021). DEMATEL was developed in the 1970s to simplify the analysis of complex systems and to study and resolve complicated and intertwined problem groups

(Tzeng et al., 2007; Lin et al., 2011). The DEMATEL method can investigate the causal relationship between different factors in a system. This method also can show the interdependence between factors for solving complex decision-making problems (Yazdi et al., 2021). This method assumes indirect relationships between components and models the complexity of interactions using matrix multiplication.

To carry out this study, the researchers first conducted a comprehensive review of related literature to identify and investigate CSFs for the implementation of HRSSC. Based on the findings, eleven factors were selected and extracted. The importance of each of these factors was then evaluated using the DEMATEL method pairwise comparison questionnaire, which was completed by thirteen experts with extensive experience in multi-business firms. The questionnaire asked the experts to score each of the eleven factors on a scale of zero to four, where zero indicates no effect and four indicates the highest level of influence between two factors. The DEMATEL matrices used in this study are square matrices with the same number of rows and columns as the number of factors under investigation.

Overall, this study employed a rigorous and systematic research methodology to identify and prioritize the critical success factors for the implementation of HRSSC in multi-business firms.

Table 2. selected CSFs for implementation of HRSSC

No.	CSF
1	Leadership and Staff management
2	Competencies, Experience, and Skills of staff
3	Change management
4	Commitment of management
5	Appropriate supporting technology
6	Training
7	Clear and appropriate strategy
8	SLA, Policy, and Governance
9	Task standardization
10	Organizational structure
11	Organizational culture

The DEMATEL method produced results that are summarized in Table 2. In this method, the sum of rows is denoted as R, and the sum of columns is denoted as J. The highest row total (R) represents the factors that have an influence on other factors, while the highest column total (J) represents the factors that have the greatest influence among other factors. The column R-J shows the position of an element. If this number is positive, it indicates that the factors are influential, and if it is negative, it shows that those factors are influenced by other factors. Additionally, the R+J column represents the total sum of the influence of a factor, indicating the extent of its influence and the influence exerted on it. Hence, this research selects the most critical success factors for implementing SSCs in multi-business firms as the factors that greatly impact other factors and accept the greatest impact from other factors (Ghag et al., 2022; Song et al., 2022; Zhao et al., 2021; Majumdar et al., 2021; Mehregan et al., 2012).

In this part, the method of data analysis through 5 steps of DEMATEL's method is described.

Finding the Average Matrix

Table 3 shows the average matrix of CSFs for the implementation of HRSSC, which is the result of an interview with 13 experts in this field. In this matrix, H is the number of experts and is the values assigned by them, which in this research, H is equal to 13. Also, f1 to f11 in this table respectively represent eleven factors that were extracted from the literature of references.

$$A = a_{ij} = \frac{1}{H}\sum_{k=1}^{H} x_{ij}^{k} \qquad 1 \leq k \leq 13$$

Table 3. Average of the collected data from the questionnaire

A	f1	f2	f3	f4	f5	f6	f7	f8	f9	f10	f11	SUM
f1	0	3.23	3.61	2.92	1.84	3.15	3.30	3.61	2.46	2.46	3.30	29.92
f2	2.07	0	2.76	2.46	1.76	3.15	1.84	2.07	3.53	2.30	3.38	25.38
f3	2.61	1.84	0	2.92	1.69	2.38	2.38	2.38	1.69	1.76	2.69	22.38
f4	3.15	2.38	3.3	0	2.07	2.53	3.46	3.76	2.07	2.23	3.15	28.15
f5	1.92	2.38	2.15	1.53	0	2.3	1.53	1.30	3.53	2.15	2	20.84
f6	2.53	3.84	3.07	2.23	1.69	0	1.76	1.61	3.53	1.76	3.07	25.15
f7	3.30	2.38	3.53	3.53	2.3	2.53	0	3.69	2.15	2.61	2.84	28.92
f8	3.69	2.23	3.07	3.61	1.53	2.46	3.30	0	2.23	2.46	3.15	27.76
f9	2.15	3.38	2.38	1.92	3	2.76	2	1.69	0	3	2.76	25.07
f10	2.23	2.46	1.92	1.53	1.84	1.69	2	1.76	3.15	0	2.69	21.3
f11	3.07	2.92	3.38	2.76	1.76	3.15	2.38	2.30	2.69	2.76	0	27.23
SUM	26.76	27.07	29.23	25.46	19.53	26.15	24	24.23	27.07	23.53	29.07	

Calculating the Normalized Initial Direct-Relation Matrix

The rate of MAX $\sum_{j=1}^{n}|a_{ij}|$ indicates the total direct effects that a factor with maximum direct effect has on other factors. Also, since the sum of each i column in matrix A represents the total direct effects which factor i receives from other factors, the amount of $\sum_{j=1}^{n}|a_{ij}|$ indicates the total direct effects that the factor, which is most affected by other factors, receives. It is noteworthy that each element from matrix D is a value between zero and one.

$$D = M \times A$$

$$M = \min\left[\frac{1}{max\sum_{j=1}^{n}|a_{ij}|} \cdot \frac{1}{max\sum_{i=1}^{n}|a_{ij}|}\right] = \left[\frac{1}{29.9} \cdot \frac{1}{29.2}\right] = \frac{1}{29.9} \qquad (i,j = 1,2,\ldots,n)$$

Table 4. Normalized matrix of direct relationships (intensity of direct relationships)

D	f1	f2	f3	f4	f5	f6	f7	f8	f9	f10	f11
f1	0	0.11	0.12	0.1	0.06	0.11	0.11	0.12	0.08	0.08	0.11
f2	0.07	0	0.09	0.08	0.06	0.11	0.06	0.07	0.12	0.08	0.11
f3	0.09	0.06	0	0.1	0.06	0.08	0.08	0.08	0.06	0.06	0.09
f4	0.11	0.08	0.11	0	0.07	0.08	0.12	0.13	0.07	0.07	0.11
f5	0.06	0.08	0.07	0.05	0	0.08	0.05	0.04	0.12	0.07	0.07
f6	0.08	0.13	0.1	0.07	0.06	0	0.06	0.05	0.12	0.06	0.1
f7	0.11	0.08	0.12	0.12	0.08	0.08	0	0.12	0.07	0.09	0.1
f8	0.12	0.07	0.1	0.12	0.05	0.08	0.11	0	0.07	0.08	0.11
f9	0.07	0.11	0.08	0.06	0.1	0.09	0.07	0.06	0	0.1	0.09
f10	0.07	0.08	0.06	0.05	0.06	0.06	0.07	0.06	0.11	0	0.09
f11	0.1	0.1	0.11	0.09	0.06	0.11	0.08	0.08	0.09	0.09	0

Calculating the Indirect Influence Matrix
The indirect influence matrix is obtained as follows

$$ID = \sum_{l=2}^{\infty} D^i = D^2(I - D)^{-1}$$

Sequencing the Occurrence of Elements

In the fourth step, the possible hierarchy or structure of the elements is specified. The order of influence of presumed elements of one problem on others or their being influenced is definitely indicative of the possible structure of the hierarchy of those elements in improving or solving the problem. Therefore, in Table 5 designed at this stage according to the number of CSFs, the matrix $D(I-D)^{-1}$ is used to show the sequence of occurrence of elements (Mehregan et al., 2012; Karim-khani et al., 2018).

Table 5. The matrix of D(I-D)$^{-1}$

T	f1	f2	f3	f4	f5	f6	f7	f8	f9	f10	f11	SUM
f1	0.59	0.69	0.75	0.65	0.49	0.67	0.63	0.65	0.66	0.59	0.73	7.11
f2	0.56	0.51	0.63	0.55	0.43	0.59	0.51	0.52	0.61	0.51	0.64	6.05
f3	0.53	0.51	0.49	0.52	0.39	0.52	0.48	0.49	0.5	0.45	0.57	5.47
f4	0.65	0.63	0.71	0.54	0.48	0.63	0.61	0.63	0.62	0.56	0.7	6.75
f5	0.47	0.49	0.51	0.44	0.31	0.48	0.42	0.42	0.52	0.43	0.51	4.99
f6	0.57	0.62	0.63	0.54	0.42	0.49	0.5	0.5	0.6	0.49	0.63	6.01
f7	0.67	0.65	0.73	0.65	0.49	0.64	0.52	0.63	0.63	0.58	0.7	6.89
f8	0.66	0.63	0.7	0.64	0.46	0.62	0.6	0.51	0.62	0.56	0.69	6.69
f9	0.55	0.6	0.6	0.53	0.45	0.56	0.5	0.5	0.49	0.52	0.61	5.92
f10	0.49	0.51	0.52	0.46	0.37	0.47	0.45	0.44	0.52	0.38	0.54	5.15
f11	0.63	0.63	0.68	0.6	0.45	0.62	0.56	0.56	0.62	0.56	0.58	6.48
SUM	6.38	6.45	6.95	6.13	4.75	6.28	5.78	5.84	6.38	5.66	6.91	0

Calculating R and J

In calculating the amount of R and J, obtain by row and column sum from the fourth step. R represents the row total and J represents the column total. The result of this step as the last step of DEMATEL's step is given in Table 6 in the main text. In Table 6, the sequence of placement of the 11 factors of this study is prioritized from the highest to the lowest.

$$T = [a_{ij}] \qquad , \qquad i,j = 1,2,...,n$$

$$R = [\sum_{j=1}^{n} |a_{ij}|] \quad , \qquad J = [\sum_{i=1}^{n} |a_{ij}|]$$

Table 6. Final indicators based on priority for decision making

R-J		R+J		J		R	
f7	1.11	f1	13.5	f3	6.95	f1	7.11
f8	0.85	f11	13.39	f11	6.91	f4	6.75
f1	0.73	f4	12.88	f2	6.45	f5	4.99
f4	0.62	f7	12.68	f1	6.38	f7	6.89
f5	0.24	f8	12.54	f9	6.38	f3	5.47
f6	-0.27	f2	12.51	f6	6.28	f2	6.05
f2	-0.4	f3	12.42	f4	6.13	f8	6.69
f11	-0.43	f9	12.3	f8	5.84	f9	5.92
f9	-0.47	f6	12.29	f7	5.78	f6	6.01
f10	-0.51	f10	10.8	f10	5.66	f10	5.15

| f3 | -1.48 | f5 | 9.74 | f5 | 4.75 | f11 | 6.48 |

IV.   Results

After analyzing the data using the DEMATEL method and obtaining the scores in Table 6, Figure 1 was created to visually represent the most influential to least influential factors. The factors that are located along the horizontal axis of coordinates (R+J) towards infinity are the most important critical success factors for implementing HRSS, as they have the highest influence and effectiveness among other factors in this research. The three most critical factors identified in this study are Leadership and Staff management (f1), Change management (f3), and Commitment of management (f4).
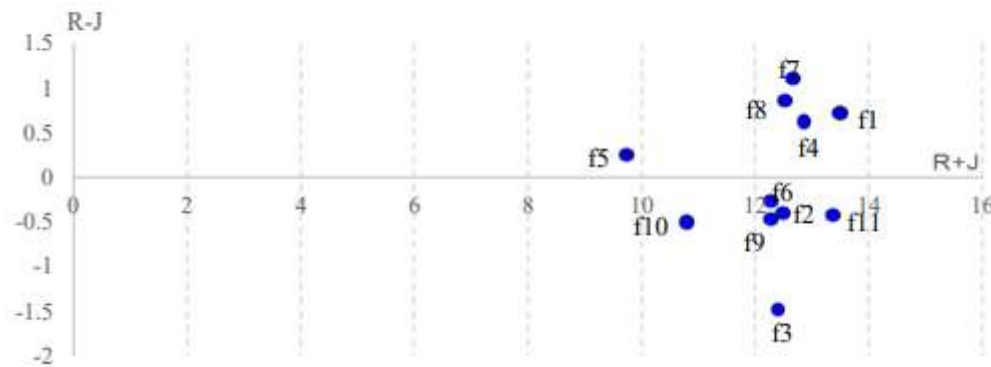
Figure 1. The causal effects

On the other hand, the transverse axis of the graph displays the factors that have the greatest influence and those that are most influenced by others. The factor with the highest level of influence on other factors is having a Clear and appropriate strategy in organizations (f7) with a value of +1.01. On the other hand, change management (f3) with a value of -1.48 accepts the highest level of influence from other factors. This graph helps to identify the most critical factors that require significant attention and resources for the successful implementation of HRSS in multi-business firms.
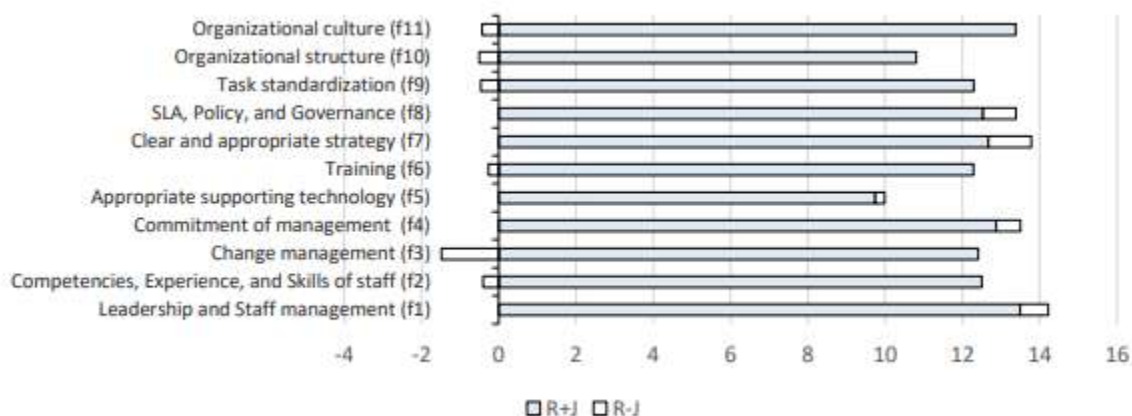

Figure 2. Degree of influence and effectiveness of the factors

Figure 2 illustrates the influence and effectiveness of the factors by representing the values of R+J and R-J. The longitudinal axis in Figure 1 indicates the positive or negative values of R-J. Factors on the right side of the horizontal axis indicate their influence, while those on the left side indicate their effectiveness. It is possible to identify the factors with high importance more clearly by observing Figure 2. The factors with high R+J values are Leadership and Staff management (f1), Organizational culture (f11), Commitment of management (f4), and Clear and appropriate strategy (f7). The location of R-J on the right side of the horizontal axis for the factors of Leadership and Staff management as well as the Commitment of management in Figure 2 indicates the dominance of their

influence on their effectiveness. Therefore, it is essential to consider the influence of these factors more attentively. On the other hand, the location of R-J on the left side of the horizontal axis for the Organizational culture factor indicates that the effectiveness of this factor prevails over its influence. Therefore, special attention must be paid to the effectiveness of this factor, and the conditions for its successful implementation must be provided.

V.   Discussions and Findings

The main objective of this study was to identify and prioritize CSFs for the implementation of HRSSCs in multi-business firms. Based on the results of the R+J analysis, which shows the total sum of the effects of a factor, the 11 influential factors in order of priority are: Leadership and Staff management (f1), Organizational culture (f11), Commitment of management (f4), Clear and appropriate strategy (f7), SLA, Policy, and Governance (f8), Competencies Experience and Skills of staff (f2), Change management (f3), Task standardization (f9), Training (f6), Organizational structure (f10), and Appropriate supporting technology (f5).

Leadership and Staff Management (f1) are the most important CSF for implementing HRSSC in multi-business firms as it has the highest level of influence and effectiveness according to the findings of this research as illustrated in Figures 1 and 2. Ready leaders who can cope with changes and challenges, along with a training program for staff, can have a significant impact on the success of HRSSC implementation (de Avelar Simões, 2019). However, managers alone cannot lead to success without staff involvement with problem-solving and active and creative skills (Ulrich & Delbohon, 2015). The influence of this factor is more than its effectiveness, as indicated by its placement on the right side of the horizontal axis.

Organizational structure (f10) is the least important factor in this research, with the lowest amount of R+J and at least amount of influence and effectiveness (Figures 1 and 2). On the other hand, Organizational culture (f11) and Commitment of management (f4) are ranked second and third, respectively, among all factors. Creating a strong Organizational culture requires creating the necessary background conditions in the organization, including capable staff that can accept this and then implement it in the right situation (Ramphal, 2013). The commitment of management of the team like financial support, supporting staff in career progress, and improving their job skills have a high impact on the success of HRSSC implementation (Ribeiro et al., 2018).

In conclusion, the results of this study provide insights into the critical success factors (CSFs) for implementing HRSSCs in multi-business firms. The findings highlight the importance of Leadership and Staff management, Organizational culture, and Commitment of management in the success of HRSSC implementation. These factors should be considered when planning and implementing HRSSCs in multi-business firms to achieve successful outcomes.

The fourth important factor is having a Clear and appropriate strategy, which includes re-engineering business processes that lead to reduced costs, establishing long-term strategic alliances, and focusing on core functions (Wang & Wang, 2015). Standardization in all aspects of the organization requires having a suitable and transparent strategy. SLA, Policy, and Governance are the fifth important factor, which includes setting a good service level of agreement, policy, and strong governance. Competencies, Experience, and Skills of staff are the sixth important factor. Change management is prioritized as the seventh, and it is important to manage changes in the relationship between the customer and the service provider. Task standardization is ranked eighth, and Training is ranked ninth. The Organizational structure and appropriate supporting technology are in the next ranked respectively. Actually, the success of the implementation of HRSSC is affected by appropriate supporting technology, Experience, and Skills of staff.

VI.   Conclusions, Recommendations

The implementation of HRSSC has become increasingly important in recent years, and this study aimed to identify the critical success factors for the implementation of HRSSC in multi-business firms. The results revealed that the Leadership and Staff management, the Commitment of management, and the Clear and appropriate strategy are the most influential factors in the successful implementation of HRSSC.

It is also important to note this point that SSC invests in technology to streamline processes, but the rise of artificial intelligence affects specialized activities. Adaptation, flexibility, and dynamic capabilities are necessary for SSCs to stay competitive and utilize technology-driven transformations based on dynamic capabilities theory. Dynamic capabilities are the firm's ability to integrate, construct, and reconfigure internal and external competencies to deal with rapidly changing environments and DC theory provides a framework and model for organizations to do that (Ferreira & Janssen, 2022).

Therefore, it is recommended that managers of multi-business firms pay close attention to these factors and make efforts to hire and retain competent staff in management positions, develop clear and capable strategies, and ensure the commitment of management.

This study highlights the importance of conducting research before implementing new structure models in multi-business firms. Organizations should invest in research to avoid wasting capital and energy and ensure the success of new structure implementations. Furthermore, this research can be extended to other fields such as finance, IT, supply chain, and more to identify critical success factors and to draw relationships between these factors to report more accurate results.

In conclusion, this study provides valuable insights for organizations that aim to implement HRSSC successfully. It is recommended that organizations prioritize the three most influential factors identified in this study to ensure the success of HRSSC implementation. Additionally, organizations should consider conducting further research to identify other key factors and to ensure a more accurate understanding of the critical success factors for SSC implementation.

One significant challenge in this study was accessing professionals experienced with implementing new technologies in real-world environments, as their insights on the challenges and opportunities could have provided valuable data. Another limitation was the limited availability of research experts, which constrained data collection to a single round of questionnaire distribution. Ideally, if access to these experts had been more readily available, a two-stage survey process could have been implemented, potentially yielding more in-depth and nuanced findings.

References

Bondarouk, T., & Friebe, C. (2014). Shared Services—standardization, formalization, and control: a structured literature review. Shared services as a new organizational form, 39-65.

Borman, M. (2010). Characteristics of a successful shared services center in the Australian public sector. Transforming Government: People, Process and Policy, 4(3), 220–231.

Borman, M., & Janssen, M. (2012). Critical success factors for shared services: Results from two case studies. Proceedings of the Annual Hawaii International Conference on System Sciences, 2511–2520.

Borman, & Janssen. (2013a). Similarities and Differences in Critical Success Factors across Context and Time: An Examination in the Setting of Shared Services. e-Service Journal, 9(1), 85-105.

Borman, M., & Janssen, M. (2013b). Reconciling two approaches to critical success factors: The case of shared services in the public sector. International Journal of Information Management, 33(2), 390–400.

Bozorgi Amiri, A., Raissifar, K., and Akhavan Anvari, M. R. (2021). Human Resource Shared Services as a Part of Parenting Services in Corporates. The 7th International Conference on Management Science and Accounting. (in Persian)

Koca, G., & Yıldırım, S. (2021). Bibliometric analysis of DEMATEL method. Decision Making: Applications in Management and Engineering, 4(1), 85-103.

Dhange, T. (2013). HR Shared Services- A Model for HR Efficacy. 65–72.

Ferreira, C., & Janssen, M. (2022). Shaping the Future of Shared Services Centers: Insights from a Delphi Study About SSC Transformation Towards 2030. Journal of the Knowledge Economy, 14(4), 4828-4847.

Ghag, N., Acharya, P., & Khanapuri, V. (2022). Prioritizing the Challenges Faced in Achieving International Competitiveness by Export-Oriented Indian SMEs: A DEMATEL Approach. International Journal of Global Business and Competitiveness, 17(Suppl 1), 12–24.

Goudarzi, F, Akhavan Anvari, M. R., & Raissifar, K. (2023). Identification Critical Success Factors for HR Shared Services Implementation in Multi-Business. 5th National Conference and 2nd International Conference on New Patterns of Business Management in Unstable Conditions, MBAC05_098. (in Persian)

Karim-Khani, M., Pakizeh, K., & Akhavan Anvari, M. R. (2018). Prioritizing Factors Affecting on innovation of Target Firms from VCs perspective. Journal of Entrepreneurship Development, 10(4), 655-674.

Lee, H. S., Tzang, G. H. Yeih, W., Wang, y. j., & Yang, S. C. (2013). Revised DEMATEL: Resolving the Infeasibility of DEMATEL. Applied Mathematical Modelling 37 (2013) 6746–6757.

Lin, Y. T., Yang, Y. H., Kang, J. S., & Yu, H. C. (2011). Using DEMATEL method to explore the core competences and causal effect of the IC design service company: An empirical case study. Expert Systems with Applications, 38(5), 6262-6268.

Majumdar, R., Choudhury, T., Tomar, R., & Jain, R. (2021). Prioritization of Disaster Recovery Aspects Implementing DEMATEL Technique. Proceedings of International Conference on Machine Intelligence and Data Science Applications: MIDAS 2020, (pp 13–25). Springer Singapore.

Mehregan, M. R., Razavi, S. M., Reza, M., & Akhavan Anvari, M. R. (2012). Identification and Evaluation of Strategic Decisions in Gas Industry Using DEMATEL Method Keywords : Iranian Journal of Management Studies (IJMS), 5(2), 49-65.

Meijerink, J., & Bondarouk, T. (2013). Exploring the central characteristics of HR shared services: Evidence from a critical case study in the Netherlands. International Journal of Human Resource Management, 24(3), 487–513.

Meijerink, J., Bondarouk, T., & Looise, J. K. (2013). Value creation through HR shared services: Towards a conceptual framework. Personnel Review, 42(2), 154–175.

Miskon, S., Bandara, W., Gable, G., & Fielt, E. (2011). Success and failure factors of shared services: An IS literature analysis. 2011 International Conference on Research and Innovation in Information Systems, (pp. 1–6). IEEE.

Mölleney, M. (2019). HR management needs a new business model.

Paagman, A., Tate, M., Furtmueller, E., & De Bloom, J. (2015). An integrative literature review and empirical validation of motives for introducing shared services in government organizations. International Journal of Information Management, 35(1), 110–123.

Petković, M., & Đorđević, B. (2014). HR shared services centers as part of a new business model of the organizations. 798.

Pohl, M. (2016). Reasons for the Success and Advantages of the HR Shared Services Model: a Case Study of Company X. Laurea University of Applied Sciences Leppävaara. Degree Programme in Business Management Bachelor's Thesis.

Rai, A., & Maheshwari, S. (2024). Transforming HR Functions Through Shared Service: Insights from Indian Public Sector Power Major. Asian Journal of Management Cases 1–10.

Ramphal, R. (2013). A literature review on shared services. African Journal of Business Management, 7(1), 1.

Ribeiro, J., Fernandes, G., & Tereso, A. (2018). Risks, Issues and Critical Success Factors in Shared Service Center Projects. 4th International Conference on Production Economics and Project Evaluation, 255–260.

Richter, Philipp Clemens, & Brühl, R. (2017). Shared service center research: A review of the past, present, and future. European Management Journal, 35(1), 26–38.

Richter, Philipp C, & Brühl, R. (2021). Shared service implementation in multidivisional organizations: A meta-synthesis study. Journal of General Management, 46(2), 73–90.

Sahoo, M. B., & Goute, A. K. (2021). Outsourcing HR Shared Services In The Times of Covid: Role of Technology and Customer Nees Fulfillment. International Journal of Business and Economics, 6(1), 53–62.

Simões, R. M. C. D. A. (2019). Challenges and Success Factors on the Implementation of a Shared Services Center. (Doctoral dissertation, Instituto Superior de Economia e Gestão).

Song, P., Zhao, J., Mubarak, S. M. A., & Taresh, S. M. (2022). Critical success factors for epidemic emergency management in colleges and universities during COVID-19: A study based on DEMATEL method. Safety Science, 145, 105498.

Tang, X., & Zainal, S. R. B. M. (2022). Reflections on the Shared Mode of HR Services Practice in China: A Case Study on the Cooperation between HRBP and HRCOE. Global Business & Management Research: An International Journal, 14(3s), 1222–1229.

Tzeng, G. H., Chiang, C. H., & Li, C. W. (2007). Evaluating intertwined effects in e-learning programs: A novel hybrid MCDM model based on factor analysis and DEMATEL. Expert systems with Applications, 32(4), 1028-1044.

Ulrich, D., & Dulebohn, J. H. (2015). Are we there yet? What's next for HR? Human Resource Management Review, 25(2), 188–204.

Ulrich, D., & Grochowski, J. (2012). From shared services to professional services.

Strategic HR Review, 11(3), 136-142.

Wang, S., & Wang, H. (2015). Shared services management: Critical factors. International Journal of Information Systems in the Service Sector, 7(2), 37–53.

Zhao, G., Irfan Ahmed, R., Ahmad, N., Yan, C., & Usmani, M. S. (2021). Prioritizing critical success factors for sustainable energy sector in China: A DEMATEL approach. Energy Strategy Reviews, 35, 100635.

Yazdi, M., Khan, F., Abbassi, R., & Rusli, R. (2020). Improved DEMATEL methodology for effective safety management decision-making. Safety science, 127, 104705.