



Understanding Strategic Alignment Barriers in Public Organizations: An Application of Q Methodology

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ABSTRACT

The purpose of this study is to apply Q Methodology to identify the barriers to strategic alignment between the actions of the human resources manager and the organization's strategy in 21 public organizations in Tehran. The similar and conflicting perspectives of the participants, along with 11 Q factors, and mental patterns about different types of barriers were revealed. Based on the tables of arrays and Q factor scores, the indicators of each factor were identified. The indicators include, but are not limited to, the following: less alignment of goals of each unit or department with organizational goals (19% of 81%), non-alignment between job extension and physical and cognitive ability (11.5% of 81%), non-alignment between job description and job specification, and selection and recruitment (8% of 81%), and other indicators, which shows the importance of strategic management, and the necessity of interventions and actions of strategic human resource managers to increase strategic alignment in organizations. Therefore, the contribution of this study is presented through the explanation and interpretation of the determinants of strategic misalignment and in the form of misalignment indicators, which aim to develop researchers' understanding of how to achieve strategic alignment by strategic human resource managers.

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1. Introduction

To compete in today's competitive business climate, a firm's business plan must be well-defined and supported by other organizational strategies (Al-Surmi et al., 2020). As a result, managers' procedures must be not only effective but also consistent. This entails aligning behaviors vertically with organizational objectives and horizontally with one another. The phrase 'internal fit' refers to the alignment of human resource components, while 'external fit' refers to the alignment of human resource components with corporate strategy and the broader business environment (Storey et al., 2019). Cooney, Dencik and Marshall (2022) say that most organizations pursue innovation and align with sustainability through new business platforms. These organizations have established a sustainability strategy and have been able to align up to 37% of the sustainability goals with their business strategy.

Strategic alignment is also affected by the CEO's managerial beliefs and behaviors, and this alignment can lead to strategic commitment (Doz, 2020). Although the effect of human resource management or HR strategic partner on organizational performance and strategic alignment has been widely investigated in recent years, and recent articles have begun a comprehensive investigation into the effects of barriers to the alignment of human resource systems with organization strategy, researchers have rarely focused on the qualitative and non-positivism approaches to the issue of strategic alignment.

In this study, by examining the theoretical foundations for the issue of strategic alignment, qualitative indicators have been presented through combined methodology (Q Method).

Therefore, compared to previous research, the advantage of this research is to provide qualitative indicators of the research findings, which includes 11 indicators and shows the level of strategic alignment, or obstacles to strategic alignment. Through these indicators, it is possible to test and identify the alignment obstacles between the units' strategy and the company's strategy.

This research aims to identify the barriers to strategic alignment between the actions of the human resources manager and the organization's strategy in 21 government organizations in Tehran. In the current research, an attempt is made to reveal the similar and opposing views of the participants, as well as their mental patterns about the types of alignment obstacles using the Q method. So, in this method, according to the findings, it is possible to present the degree of alignment of the goals of each unit or department with organizational goals. Therefore, the researcher has answered four main questions, which are: (1) How many factors or mental patterns have been revealed regarding the barriers to strategic alignment between human resource management practices and organizational strategy? (2) In each mental pattern, what similarities and differences are revealed among barriers to strategic alignment? (3) In each mental pattern, which index is agreed upon? (4) Among the mental patterns, what is the dominant indicator or the most important barrier to strategic alignment that has a higher central effect among the identified indicators?

2. Literature Review

Scholars are paying increased attention to employee perceptions of human resource (HR) practices, examining whether and how employees' idiosyncratic or collective perceptions of HR practices influence employee outcomes. They discover that employee perceptions of HR practices are not a monolithic concept (Wang et al., 2020). The initial conceptual and empirical work on human resource practices focused on the 'determinants' of the different practices (Chacko & Conway, 2019). Employee perceptions of high performance work systems (HPWS) vary across organizations. However, understanding how management and employee perspectives relate to high performance work systems (HPWS) depends on employee discretionary behavior (Elorza et al. 2016). By developing a performance-focused strategy as a "deep goal," some companies can better understand every decision, action, and process and assess stakeholders more skillfully than others. These companies can create value for all stakeholders (Denning, 2022). The theory of horizontal and vertical alignment is used to explain the alignment of human resource competencies with the core competencies of the organization. Salmina et al. (2021) argue that the alignment of human resource competencies with the organization's core competencies, not only creates value, but also establishes the company's competitive advantage. In these organizations, it is necessary for the management to develop a core competence model and then develop a technical competence model in order to align the job descriptions of the positions with the orientation of strategic policies. In addition, based on the Person-Environment (P-E) model, attitudes and behaviors are derived from the alignment between the characteristics of the person and the environment. Individual

characteristics include needs, values, ultimate goals, personality, and abilities. Similarity in values can create a common approach to cognitive processing and interpretation of situations. Su et al. (2021) maintain that in the theory of strategic management of human resources, the main goal should be to ensure "vertical" fit/alignment with business strategy and "horizontal" fit/alignment between multiple human resource practices and methods.

Practices reflect an employer's genuine support and commitment to their staff (Choi, 2019). Ulrich and colleagues assert that social isolation is a contemporary dancer and potential liability of technology, and they recommend that HRM investigate methods to utilize technology to link workers to one another and to the enterprise. Additionally, Bean (2019) and Chakravorti et al. (2019) emphasize that given the competitive nature of the business world, with high volumes of data, limited resources, and a need for rapid decision-making, many organizations are motivated to adopt AI technologies, primarily due to the disruptive potential demonstrated by leading digital corporations. For future studies, the influence of this suggested research path on how common-good ideals may be incorporated into traditionally individual HRM core activities, as well as the long-term effect on HRM operational design and effectiveness, might be examined (Aust et al., 2020).

Studies have shown that the key to maximize business performance in business environment and corporate strategies lies in innovation strategies (de Zubielqui et al., 2019). Implementation of management information systems affects supply chain performance through process innovation and product innovation and paves the way for managers to improve supply chain performance (Hewett, Shantz & Mundy, 2019). In order to achieve organizational goals, there needs to exist alignment among the level of entrepreneurial activity, the proportion of talent to type of occupation, and alignment of human resource units and activities. Furthermore, the organizational function should be increased through establishing alignment between human resources managers' goals in units and those of the organization. (Zehir et al., 2016). Cooney, Marshall and Zaharchuk (2022: 34) stated that 'Executives are learning how to redefine how humans and technology work together. Businesses need to reinvent their operations holistically to realize the full benefits of digital transformation'. The study of theoretical foundations shows that so far, the issue of strategic alignment obstacles has not been addressed with the aim of providing qualitative indicators and also through qualitative methodology. This innovation includes 11 indicators that show the level of strategic alignment or obstacles to strategic alignment. In similar research, through these qualitative indicators, as a measure to create strategic alignment, the level of alignment between the units' strategy and the company's strategy can be checked.

The feature of this article is the use of the Q method to understand the obstacles to strategic alignment between human resource management strategies and the organization, which is based on the concurrence from the theoretical foundations of research and also arises from the mental patterns of the participants in public organizations. Therefore, the method of analysis and interpretation of the revealed mental patterns to recognize alignment obstacles is presented below.

3. Research Design and Method

The Q method is used to discover distinct mental perspectives in a group, and in different disciplines. The methodology is semi-qualitative, and the data are analyzed using data reduction methods to identify existing thought patterns (Zabala, 2014). The concept of mental patterns refers to the beliefs and attitudes about the subject of this study that indicate that research participants have had common or distinct choices in the process of selecting and ranking Q cards on the Q chart. Due to the differences and occasional conflicts, various types of mental pattern groupings have been created.

In this method, the Q-sample contains propositions which reflect different dimensions, width, and diversity of concurrence in itself. In the Q methodology, the concurrence or anything about the issue of barriers to strategic alignment between HRM practices and the strategy of the organization has been collected from the theoretical literature of the research and qualitative interviews with the participants (419 items). In the selection of statements (Q set), 419 items of the combined concurrence were identified, including concourses and items that adequately represent the views on beliefs about the factors influencing the alignment between the organizational strategies and human resource strategies. In step 2, the items were carefully reviewed, edited, deleted, and modified according to the above criteria, as well as considering lack of overlapping, non-repetition, lack of similarity of meaning, and unambiguity. Then, they were reduced to 53 items by merging, editing, and deleting the items that

overlapped or semantically interfered. Again, these items were also balanced, and by integrating the cases of similarity, their number was reduced to 48 and eventually to 44. Thus, the researcher could select 44 items or propositions of the alignment of HRM practices and organization strategy, from which the sample of statements (Q set) was designed. Then, the 44 statements were divided into two groups of propositions including 22 items with positive or contested content, and 22 items with uncontested or negative content, which was named the sample of statements (Q set). The final step of validity and reliability was written in cards in appropriate size.

Validity and reliability: A group of experts was selected for the scrutiny of the content of the propositions. These people were asked to comment on the appropriateness and importance of the statements. After several steps of editing the propositions, the validity of the measurement tool or the final cards was confirmed. Also, through conducting interviews, the appropriateness and comprehensiveness of the content of the proposition of the cards, such as the degree of difficulty and understanding of the concept of the proposition, the suitability and desirability of the cards were checked. A total of 31 academic and executive elites participated in this stage.

Then, these 44 samples of statements (Q set) were investigated in terms of validation and reliability through pilot or preliminary studies, or qualitative interviews with scholars and academic experts, further reducing the number to 42 items. After preparing the discourse regarding their balance, propositions were selected as Q-sample or Q set.

Table 1. Q-sample or Q set (N=42)

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| <ol style="list-style-type: none"> 1) Equipment and welfare facilities are not provided and are insufficient to carry out the tasks assigned to human resources. 2) The excellence programs of the organization and its human resources receive active support and participation of managers of all levels. 3) Decreased cohesion and integration among employees have led to declining productivity. 4) Managers have little knowledge of HR dashboards, metrics and key performance indicators. 5) Through dialogue, understanding, and agreement with employees, managers create a detailed knowledge of expectations and provide strategic alignment. 6) Employees' training is not up to date and does not meet their needs and has no effect on their individual development. 7) Managers do not engage in appropriate and constructive interactions to use the capabilities of human resources. 8) Salary is not proportionate to performance, and the payment system is not designed based on occupational position. 9) The work environment is harsh, soulless, and boring, and does not match the capabilities of the employees. 10) There are alignment plans to determine the career path, dedicated career content, and professional development of employees. 11) Employees are informed about the evaluation results, and the strengths and weaknesses of their performance, on time, regularly, and continuously. 12) There is no assurance of the fairness of decisions made by managers and supervisors, nor their compliance with laws and regulations. 13) Increasing understanding and flexibility of managers, through work experience, interaction with others and professional environment, has caused strategic alignment. 14) Employees consider physical presence in the workplace and avoid making effective effort. 15) A productive work culture and espoused value are institutionalized because the effective work of the employees is sufficiently valued. 16) The internal promotion of employees is unplanned, unregulated, and relationship-oriented, resulting in a mismatch between job characteristics and Employee qualifications. 17) Through intelligent systems, barriers to process variability have been removed and led to HR excellence. 18) Employees' jobs are not associated with thinking, problem-solving, and creativity. 19) Managers have made good investments in human resource planning, staffing, and recruitment methods. 20) Employees have not learned their job well and are not aware of an expert in their work. 21) Employees are not loyal to their organization and do not properly and committedly fulfill their job. 22) The appointment system is based on competence and expertise. 23) The autonomy of human resource managers is limited and there is no freedom of action to make effective decisions to enforce the law. 24) The lack of job stability of managers has hindered the improvement of employees' performance. 25) Doing work requires diverse skills and employees are interested in this type of work. 26) Employees are not cheerful, hopeful, self-confident, and optimistic, and there is no sense of effectiveness and spontaneity. 27) The job description is clearly and unambiguously communicated to the employees. 28) HRM practices do not encourage HR flexibility and the development of human resource competencies. 29) The job security of the employees is provided, such as adequate income, future employment and favorable working conditions. 30) There is no proportionality between the employees' talent and self-efficacy and their type of job. 31) The volume of work assigned to the employees is not proportionate to their capabilities and capacities. 32) Justice in the distribution of amenities, and receiving them fairly, has led to improved performance. 33) Employees cannot express their ideas freely and criticism is not accepted. 34) There are flexible work systems for employees, such as floating or remote working hours. 35) The participation of employees in decision-making, solving problems, and managing affairs has been strengthened. 36) Managers have no knowledge of the personal needs and mental abilities of employees and their problems. 37) Employees have valuable experiences related to their field of work. 38) Employees are determined and enthusiastic, and have job involvement. 39) The existence of commitment and responsibility towards work and the employees' work conscience has caused strategic alignment. 40) Employees do not have the opportunity to propose needs and demands appropriate to the work environment. 41) Modern methods of employees monitoring related to human resource performance management have not been implemented. 42) Managers cannot implement the laws related to the productivity of human resources well, so there is less alignment |
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The PC-QUANL program was used to analyze the Q sorts. Factor analysis was established to reveal groupings or patterns in the data after each participant's score was entered into the database. Therefore, in this method, the statements were based on and selected from a comprehensive body of scientific literature on the topic and were refined after several rounds of consultation with academic experts in the field. The factor analysis matrix shows similar and conflicting perspectives of the participants, 11 Q factors or mental patterns about different types of barriers were revealed, and then, based on the tables of arrays and Q factor scores, the indicators of each factor were identified.

3.1. P-set and completion of the Q-sort

Q methodology can be used to reveal the main perspectives on a topic. It is recommended that the number of respondents should be smaller than the number of statements because in the Q method, the statements rather than the respondents are the variable of analysis, and observations should exceed the number of variables (Webler et al., 2009). Furthermore, the respondents represent the core target group, with high levels of expertise in the field, and provide a strategically selected sample of diverging perspectives about different approaches, which can be considered of greater importance than the number of respondents (Watts & Stenner, 2012). The method involves asking selected respondents (the P set) to rank a sample of statements (the Q set) about some topic (the concourse) from most agreement to most disagreement according to their individual preferences (Zabala, 2014).

To ensure that the participants were well-informed about the subject of the study, two sampling methods were employed. Firstly, through purposive sampling, participants were carefully selected based on their experience, high reputation, and creditable information. Secondly, using snowball sampling, the participants with the above-mentioned characteristics were selected.

The selection of participants (P-Sample)

The time range of research implementation is 2020. A convenient P-sample consisting of 41 participants (managers) from 21 Human Resources Productivity and Excellence Committees (with a bureaucratic structure in Tehran, Iran) was asked to sort and evaluate the factors influencing strategic alignment barriers in the Q sort layout. Q is an example using a grid called a Q sort table.

Q interview: They yielded a systematic forced distribution of 42 Q statements. After each Q sort, each participant had the option of writing comments to describe the reasons why they sorted the statements to which they strongly disagreed (-4) and strongly agreed (+4). In the interview, we asked: "Do you miss specific statements?" and "Would you like to return to or add something to your answer to my earlier question?" The statements were printed on small cards. Respondents put the cards on a normal distribution printed on a sheet of paper. These descriptions were employed to interpret each classified factor.

3.2. Q-Sorting and Data Analysis

Reviewing the content of Q set through experts is one of the best ways to collect evidence in support of the validity of a measurement tool (Kerlinger, 1986). There may be points about the competence and adequacy of the content of the tool that are beyond the scope of the subjects' recognition, which may be hidden from the view of the researcher as well (Rubio et al., 2003).

Content validity and structure of Q set: The statements were based on and selected from a comprehensive body of scientific literature on the topic and were refined after several rounds of consultation with academic experts in the field. Experts were asked to comment on the appropriateness and importance of the propositions.

By conducting the interview, the appropriateness and comprehensiveness of the content of the propositions of the cards (Q sample), such as examining the difficulty of understanding the proposition, their appropriateness, and usefulness, as well as examining the possibility of ambiguity in the proposition or the possibility of misinterpretation of words, were considered.

In order to examine the comprehensiveness of the propositions, attention was paid to "the number of views that have dealt with different dimensions of concourse/discourse" and to the "Q set, whether it reflects all the different views on the subject of the study". In this step, 31 scientific and executive elites participated, and qualitative and exploratory interviews were conducted.

The purpose of this step is to identify the participants' preferences. The ranking of Q samples should be "valued" according to a pseudo-normal distribution in the range of -4 to +4. This valuation occurs through mandatory distribution.

The statements were printed on small cards. Respondents put the cards on the normal distribution that was printed on a sheet of paper. For example, the distribution of the Q sample (card numbers) for the participant of the eleventh factor is shown in (Figure 1):

Strongest disagreement				Undecided		Strongest agreement		
-4	-3	-2	-1	0	+1	+2	+3	+4
15	19	1	39	11	7	14	16	41
22	17	35	4	24	26	6	30	36
	38	31	10	5	29	28	20	
	34	2	27	32	12	3	18	
		13	23	8	40	9		
			37	33	21			
				42				
				25				

Fig. 1. Q- Sorting distribution of a participant in the eleventh factor

3.3. Factor interpretation

The present study discovered and interpreted eleven factors and mental patterns through the factor analysis matrix, and the valuation of the participants together with their indicators was done.

One of the ways which helped the researcher in the interpretation of the results of the Q factor analysis, and avoided the risk of bias in interpreting the results concerning individual mentality was the use of the Watts method or logic of abduction (Kaifeng, et al., 2012) which was attended to in the interpretation of the extracted factors due to the position of the item valuation (Watts & Stenner, 2012). The final step, the interpretation of the results, consists of "forming a note sheet" and "factor interpretation". Therefore, considering the position of the items, the interpretation of the factors was dealt with, and then indicators of each factor or mental pattern were discussed.

4. Results

The factor analysis matrix shows that 11 factors or mental patterns have been formed to explain the alignment barriers of HRM practices with organization strategy.

4.1. Descriptive statistics

An eigenvalue is the sum of squared loadings for a factor and it is affected by the number of variables included in the study. Descriptive statistics indicate that participants have been matched and compared with the number of Q set pairwise and have contributed to their evaluation and completion of the chart. Moreover, Table (1) represents the mean and variance for each of them. Of the 41 participants in this study, 14 were in the first factor, 5 were in the second factor, and 5 in the fourth factor. The most important factors among the eleven are four: the first factor accounted for 19% of all variance, the second factor for 11.5%, the third factor for 8%, and the fourth factor for 6.6%. The eigenvalues of each factor were 7.857, 4.714, 3.315, and 2.723, respectively (refer to Table 1).

- In answer to the first question of this study, how many factors or how many mental patterns have been revealed about the barriers to strategic alignment between HRM practices and organizational strategy?

The factor analysis matrix shows that 11 factors or mental patterns have been formed to explain the alignment barriers of HRM practices with organizational strategy (refer to Table 1).

Table 1. Variance Explained of factors (factor 1-11)

Factor	Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %
1	7.857	<u>19.165</u>	19.165
2	4.714	11.499	30.663
3	3.315	8.085	38.748
4	2.723	6.640	45.389
5	2.340	5.707	51.096
6	2.324	5.668	56.764
7	2.235	5.450	62.214
8	2.231	5.443	67.657
9	2.064	5.035	72.691
10	1.879	4.584	77.275
11	1.697	4.139	81.414

Participants who were classified in the first to eleventh mental patterns had valuable job experience in their field

Especially, in the first mental pattern (Factor 1), which is different from other groups, the number of people in this pattern was larger compared to the other patterns, and had the most important views and beliefs than others (factors 2 to 11), emphasizing the importance of this first mental pattern, which has an eigenvalue of 7.86%.

This template represents 19.17% of the common viewpoints (with a total cumulative view of 81.41). The eigenvalue of the first mental pattern is 7.86%. This template represents 19.17% of the common viewpoints (Total cumulative of views = 81.41).

- In answer to the second question of this study, in each mental pattern, what similarities and differences have been revealed of barriers to strategic alignment?

Similarities and differences between perspectives in highest-ranked statements are illustrated in Tables 2 and 3, which show the highest level of agreement and the highest level of opposition according to the findings of the mental patterns (factor 1-11) through the rate of z-scores and factor arrays.

Table 2 presents the highest level of agreement among the participants for the highest-ranked statements within each factor:

Table 2. Highest-ranked statements within each factor (N=42)

No.	Q-statement	Z-score	Array pos.
16	Internal promotion of employees is unplanned, unregulated, and relationship-oriented, and it has caused for mismatch between the job characteristics and employee qualifications (+3)	2.17937	42
30	There is no proportionality between the employees' talent and self-efficacy and their type of job (+4)	1.63738	41
41	Modern methods of employees monitoring related to human resource performance management have not been implemented (+4)	1.51787	39
20	Employees have not learned their job well and are not aware of an expert in their work (+4)	1.50648	38
18	Employees' jobs are not associated with thinking, problem-solving, and creativity (+3)	1.42694	37
6	Employee's training is not up to date and does not fit their needs and has no effect on their individual development (+4)	1.22572	36
14	Employees consider physical presence in the workplace and avoid effective effort (+4)	1.16574	35
3	Decreased cohesion and integration among employees have led to declining productivity (+3)	0.93045	33
21	Employees are not loyal to their organization and do not properly and committedly fulfill their job (+4)	0.71704	32

In the analysis of Q sorting, three points were taken into consideration: 1. The eigenvalues of at least 1.0 for final interpretation, 2. Performing varimax rotation to maximize the variance, and 3. Adopting the z-score as a measure of standard deviation (statements with a z-score above +1.0 as positive views and below -1.0 as negative views).

The highest level of disagreement among the participants for the highest-ranked statements within each factor is (refer to Table 3).

Based on the correlations (refer to Table 4) it seems that perspective 3 (R=29%) is most different from the other perspectives, as it has low correlations to the other perspectives. The highest correlations of 11 factors, it seems that perspectives of factors 8 and 10 (R=58%), 11 and 8 (R=56%), 2 and 5 (R=55%), 4 and 6 (R=53%) have more correlations between perspectives. Therefore, component transformation matrix correlations between factor scores suggest that the higher the correlation between two factors, the more similarity between two perspectives (factors). However, Perspective 1 (factor 1),—although may appear strong in a statistical sense as expressed by its correlation, reflects marginal perspectives.

Table 3. Lowest ranked statements within each factor (N=42)

No.	Q-statement	Z-score	factor arrays (Array pos.)
17	Through intelligent systems, barriers to process variability have been removed and led to HR excellence (-3)	-1.75492	1
19	Managers have made good investments in human resource planning and staffing and recruitment methods (-4)	-1.5.608	2
15	Productive work culture and espoused value is institutionalized because the effective work of the employees is sufficiently valued (-4)	-1.44195	3
22	The appointment system is based on competence and expertise (-4)	-1.26978	4
38	Employees are determined, enthusiastic, and have job involvement (-4)	-1.23247	5
34	There are flexible work systems for employees such as floating or remote working hours (-3)	-1.11364	6
1	Equipment and welfare facilities are not provided and are insufficient to carry out the tasks assigned to human resources (-3)	-1.01692	8
31	The volume of work assigned to the employees is not proportionate to their capabilities and capacities (-4)	-0.91372	9
10	There are alignment plans to determine the career path and dedicated career content and professional development of employees (-4)	-0.58379	14
37	Employees have valuable experiences related to their field of work (-4)	-0.52115	16

Table 4. Correlations between perspectives (factors 1-11)

	Factor r 1	Factor r 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7	Factor 8	Factor 9	Factor 10	Factor 11
Factor 1	.704	<u>.469</u>	.374	.286	.014	.163	.149	.097	.015	.061	-.009
Factor 2	.037	-.368	.181	-.156	<u>.548</u>	.171	.277	.475	.256	-.012	.329
Factor 3	.419	-.450	-.039	.016	-.088	-.433	<u>.288</u>	-.118	-.270	-.504	-.032
Factor 4	.232	-.064	-.156	-.549	.109	<u>.533</u>	.172	-.371	-.358	.147	-.058
Factor 5	-.328	.024	.205	.116	-.400	.195	.363	<u>.399</u>	-.574	.010	.135
Factor 6	.042	-.280	<u>.504</u>	.078	.120	.042	-.653	-.143	-.360	.027	.257
Factor 7	.162	-.235	.190	-.252	-.501	-.250	.133	-.101	.273	<u>.559</u>	.301
Factor 8	-.031	-.117	.053	.162	.391	-.345	.157	.032	-.305	<u>.584</u>	-.474
Factor 9	.243	-.491	-.331	.390	-.255	<u>.423</u>	-.203	.237	.103	.148	-.252
Factor 10	-.044	-.076	<u>.476</u>	-.421	-.188	.051	-.099	.220	.190	-.198	-.646
Factor 11	.275	.207	-.361	-.392	-.028	-.262	-.370	<u>.564</u>	-.246	.073	.088

4.2. Q Analysis

Factor analysis was established to reveal groupings or patterns in the data after each participant's score was entered into the database. Relevant to the analysis of Q sorts were the following three points: The eigenvalues of at least 1.0 for the final interpretation, conducting varimax rotation to maximize the variance between each type, and adopting a z-score as a measure of standard deviation (statements with a z-score above +0.1 as positive views and below -0.1 as negative views).

This comparison reveals interesting differences among perspectives on some—but not all—of these categories. The categories for which there are significant differences among the perspectives are described.

Differences in viewpoints on the theoretical foundations and contradictions of the participants' perspectives on recognizing the mental patterns from strategic alignment barriers in public

organizations have created a variety of views based on the Q strategy. In the present study, after factor analysis, based on factor arrays and standard scores, eleven mental patterns were identified in response to research questions.

Thus, in the Q analysis stage, participants who have similar views or opinions and have made joint choices in ranking or ranking of Q cards are placed in a category or group, and form a mental pattern. In other words, this mental pattern is formed from several common perspectives and is different from other mental patterns discovered. Thus, to the number of groupings, there are mental patterns that have been revealed as the Q factor. In these factors or mental patterns, strategic alignment barriers are ranked based on the cards chosen. Therefore, due to the diversity of mental patterns, barriers to strategic alignment also have conflicts and similarities, which thus reveals the most important barriers based on the Q method.

5. Discussion

Comparing the results of the present study with other similar studies shows that the alignment of individual values and the main values approved by the organization resolve the alignment gaps and ensures that the performance of employees is consistent with organizational strategies. In case of non-alignment or precedence of organizational values over individual values, there may be questions such as “what is the mandatory nature of organizational values?” and so on. Identifying this gap and recognizing the causes of the gap between individual and organizational values enables management to make decisions to strengthen alignment (Gelle-Jimenez & Aguilin, 2021).

Also similar to the findings of the present study, Combs et al. (2006) identified ninety-two studies that showed the degree of alignment of HR and performance measures using meta-analytic measures.

Most of the research studies on the relationship between human resource measures and performance show that there is a relationship between these two variables.

In the study of Storey et al. (2019), the importance of the link between business strategy and human resource strategy, as well as the creation of vertical and horizontal alignment in human resource policies and actions has been emphasized. Moreover, the role of human resource policies in the level of successful performance of the organization, in new hires, and in achieving goals has been recognized and confirmed as significantly important in research findings (Chandrasekaran, 2021).

Salmina et al. (2021), also paid attention to the criterion of alignment, which is not only linked to the strategy, but also to customers and investors outside the company. The effective HR department has professionals who create HR practices around aligned criteria. Franklin's findings (2019) also confirm that the core values of leaders and employees ensure that the purpose of their actions is strategically aligned with the organization's vision and mission. What can be interpreted from the mentioned results is that most foreign authors (e. g. Lopez-Cabrales & Valle-Cabrera, 2020) have emphasized the necessity of the existence of alignment among employees' behavioral indicators, management strategies of stable human resources, and presenting diverse programs for stable working relation. If these values do not contribute to the alignment, they should be discarded.

The above also requires a system of human resource management practices, which is an essential component of the working relationship, that must be well-defined and directed in order to be sustainable.

Based on this, it is expected that a set of special human resource management systems, according to the type of working relationship and sustainable human resource management strategy, will promote and increase the company's competitiveness.

Also, the findings of the studies show a concept based on the principle of horizontal alignment (internal distribution of human resource management behaviors in each sustainable employment model) and vertical alignment (correlation of employment relations with sustainable strategies of large companies and sustainable human resource management strategies) (Lopez-Cabrales & Valle-Cabrera, 2020).

Newman believes that Q-sorting analysis is very close to factor analysis and requires statistical knowledge and scaling (Kaifeng, 2012). A factor score can be used as a weight to create an indicator (Neuman Lawrence, 2014). In this regard, in social sciences and management studies, it is necessary to pay attention to qualitative approaches for making indicators, especially from a managerial view. By examining the diversity of beliefs in a small group of people, distinct social perspectives are revealed (Webler et al., 2005). In this study, 11 factors were shown based on the factor analysis matrix, which have been analyzed with respect to the research questions.

According to Ha (2014), the scores, expressed as indices, indicate the degree to which each component (factor) is associated with the intangible mental pattern.

In similar research, indicators are more from an engineering perspective than management and are based on a positivist rather than an interpretive approach. Therefore, this study (from an interpretive approach) demonstrates a comparison of the indicators. The first indicator belongs to the participants in the first mental pattern, with the highest Eigenvalue (7.9), and explains the highest variance (19%).

The second indicator is also distinguished from other indicators (Z -scores=1.80798) and belongs to the second mental pattern, with an Eigenvalue of 4.714 and accounting for 11.5% of the total variance explained, which is 81%.

The eigenvalues have been identified by Brown (1980) and Watts and Stenner (2012) as the most widely used method to determine the number of factors. To determine the most appropriate number of factors (i.e., perspectives), the following criteria were considered. First, the sum of squared loadings was calculated (called Eigenvalues in the Q method package) for each factor, and those for which the value was >1 were selected. Second, it was assumed that the higher the number of factors, “the lower the number of participants [would be] who ... significantly load on these factors” (Cogan & Herrington, 2011).

- In answer to the third question of this study, based on the mental patterns of participants, in each mental pattern, which indicator is agreed upon?

The significance comparison was done on the highest-ranked factors, and distinguishing statements were identified from the 11 factors using z -scores and Eigenvalue. The researcher compared these factors based on their significance and meaningfulness. (refer to Table 5).

In the following, as a contribution to this study, an indicator of each factor is provided through conceptualization and labeling.

Table 5. The Significance comparison of the eleven indicators, and the highest-ranked distinguishing indicator with z -scores and Eigenvalue

Indicator of factors (N=11)	Statements that received the highest positive for each factor or mental patterns	Z-score	Eigenvalue
Indicator 1	First mental pattern: Internal promotion of employees is unplanned, unregulated, and relationship oriented, and it has caused for mismatch between the job characteristics and Employed (S: 16)	2.17973	7.857
Indicator 2	Second mental pattern: The volume of work assigned to the employees is not proportionate to their capability and capacity (S: 31)	1.80798	4.714
Indicator 3	Eighth mental pattern: Salary is not proportionate to performance and the payment system is not designed based on occupational position (S: 8)	2.19063	2.231
Indicator 4	Fourth mental pattern: The autonomy of human resource managers is limited and there is no freedom of action to make effective decisions to enforce the law (S: 23)	2.18283	2.723
Indicator 5	Fifth mental pattern: Employees' training is not up to date and does not fit their needs and has no effect on their individual development (S: 6)	1.91069	2.340
Indicator 6	Ninth mental pattern: Employees consider physical presence in the workplace and avoid effective effort (S: 14)	1.90525	2.064
Indicator 7	Sixth mental pattern: Employee participation in decision-making and problem-solving has not been strengthened (S: 35)	1.8783	2.324
Indicator 8	Third mental pattern: There is no fit between the employees' talent and self-efficacy and their occupation type (S: 30)	1.86682	3.315
Indicator 9	Seventh mental pattern: Managers do not pay enough attention to the goals of the organization, so human resource strategies haven't the role in increasing performance	2.51038	2.235
Indicator 10	Eleventh mental pattern: Managers have little knowledge of HR dashboards and metrics and key performance indicators (S: 4)	1.80377	1.697
Indicator 11	Tenth mental pattern: HRM practices do not encourage HR flexibility and the development of human resource competencies (S: 28)	1.7407	1.879

- In answer to the fourth question of this study, based on the mental patterns of participants, what is the dominant Indicator or the most important barrier to strategic alignment?

Eleven factors of this study and their indicators show the barriers to "strategic alignment" in the studied organizations. Some pay more attention to structural barriers (organizational factors), others focus on behavioral barriers (individual factors), and still others on environmental barriers.

The labeling of the eleven indicators derived from the eleven factors is presented in order of importance. The labeling of indicators as alignment barriers, based on the mental patterns of participants, is crucial to reduce the degree of non-alignment. The indicators of this study, listed in order of priority and importance, are as follows:

Indicator 1: The degree of non-alignment between the goals of the units and organizational goals (19% of 81%); belongs to the first mental pattern.

Indicator 2: The degree of non-alignment between job extension and physical and cognitive ability (11.5% of 81%); belongs to the second mental pattern.

Indicator 8: The degree of non-alignment between job description and job specification, as well as selection and recruitment (8% of 81%); belongs to the eighth mental pattern.

Indicator 4: The degree of non-alignment between the delegated authority or employer branding strength and the assigned tasks (6.6% of 81%); belongs to the fourth mental pattern.

Indicator 5: The degree of non-alignment between training penetration with individual development plans (5.7% of 81%); belongs to the fifth mental pattern.

Indicator 7: The degree of non-alignment between job characteristics and employment (5.7% of 81%); belongs to the ninth mental pattern.

Indicator 3: The degree of non-alignment between goals of performance appraisal and performance-based pay (5.4% of 81%); belongs to the sixth mental pattern.

Indicator 9: The degree of non-alignment between on-time performance appraisal and performance management (5.4% of 81%); belongs to the third mental pattern.

Indicator 6: The degree of non-alignment between job motivation and job design (5% of 81%); belongs to the seventh mental pattern.

Indicator 11: The degree of non-alignment between the competencies required for the AB position and the core competency model of the organization (4.6% of 81%); belongs to the eleventh mental pattern.

Indicator 10: The degree of non-alignment between metrics, key performance indicators, and critical success factors in an organization (4% of 81%); belongs to the tenth mental pattern.

6. Conclusion

The contribution of this study is the explanation and interpretation of the determinants of strategic misalignment and in the form of misalignment indicators to develop researchers' understanding of how to perform strategic alignment of strategic human resource managers. Therefore, according to the findings of the current research, all organizations need three two basic pieces of knowledge for strategic alignment to gain a competitive advantage: 1) Based on the indicators presented in the current research, what are the best strategic measures of human resource management? and 2) Based on these indicators, what is the impact of each of these specific measures on the performance of the organization? and 3) Which indicators can be related to the performance of the organization? Is it possible to try for the best strategic alignment through a contingent approach, with a deeper and more detailed examination of various contextual variables?

Understanding and interpretation of strategic alignment barriers is a necessary condition, but not a guarantee for a forward view, and good dialogue practices of HRM and high potential leaders. In essence, this study has consistently found a positive relationship between the 11 indicators and the obstacles to strategic alignment of the performance of strategic managers and strategic human resource managers. Also, recognition of the obstacles is the first necessity to identify the solutions to address them. The indicators of this study show the importance of interventions and actions of strategic human resource managers at the organizational level, that must be designed and implemented in different ways. In all cases, a participatory approach and illustration of HR competency model are required to achieve greater alignment between strategies in the organization.

The indicators of this study also clearly show that SHRM can analyze its environment to identify issues and achieve a high level of strategic alignment; therefore, they need special expertise and support for designing actions tailored to workplace challenges. In all initiatives, there is a need for future-oriented research agendas, impactful HR competencies, special expertise in designing systems tailored to the individual differences of employees, and a participatory approach for more effective alignment in the organization is essential.

Among the eleven mental patterns (factors), five turn out to be more important and significant than other indicators: (1) non-alignment between goals of the units and organizational goals, (2) non-alignment between job development and the capabilities and abilities of the worker/employee, (3) non-alignment between job description and job specification, as well as selection and recruitment, (4) non-alignment between the delegated authority or employer branding strength and the assigned tasks, (5) non-alignment between training penetration with individual development plans.

The results of the present study are consistent with the study of Gelle-Jimenez and Aguilung (2021). They show that the alignment of individual values and the main values of the organization resolves the alignment gaps and ensures that the performance of employees is consistent with organizational strategies. Identifying this gap and recognizing the causes of the gap between individual and organizational values enables management to make decisions to strengthen alignment. Also similar to the findings of the present study, Combe et al. (2006) identified ninety-two studies that showed the degree of alignment of HR and performance measures with meta-analytic measures.

Furthermore, most of the research studies on the relationship between human resource measures and performance show that there is a relationship between these two variables.

In the study conducted by Storey et al. (2019), the importance of the link between business strategy and human resources strategy, as well as the creation of vertical and horizontal alignment in human resource policies and actions has been emphasized. The role of human resource policies in the level of successful performance of the organization and new hires and achieving goals has been recognized and acknowledged in research findings.

Salmina et al. (2021) believe that the quality of the strategic alignment is directly dependent on the specialization of human resources managers, meaning that these managers should be capable of planning and operating human resources tendencies which constitute "aligned criteria". Franklin's findings (2019) also confirm that the core values of leaders and employees ensure that the purpose of their actions is strategically aligned with the organization's vision and mission. If these values do not contribute to the alignment, they should be discarded. Comparing the results of the current research with other similar studies (for example, Lopez-Cabralez & Valle-Cabrera, 2020) demonstrates that there needs to be strategic alignment between the organization strategies and unit strategies, as well as between each and every HR management strategies, with respect to employees and organization's function.

The indicators of the present study clearly show that HRM can analyze its work environment to identify workplace issues and achieve a high level of strategic alignment, and design actions tailored to specific workplace challenges. Also, the indicators in the study show the importance and urgency of designing and implementing human resource management interventions and measures to achieve a high fit with strategies at the organizational level.

Strengths and Limitations: There are several strengths for this study. This study found 11 factors and a common understanding of participants at HR excellence and productivity committees of public organizations' attitudes toward strategic alignment barriers. The study also provided 11 indicators through qualitative research and using the Q methodology. The contribution of this study provided indicators such as non-alignment between goals of the units and organizational goals, non-alignment between job extension physical and cognitive ability, non-alignment between job description and job specification, and selection and recruitment.

Despite its potential for strategic HRM research, several limitations should be considered. Due to the public organizations (with bureaucratic structure) sample, the findings may not be broadly applicable to organizations with different experiences.

Future research could examine whether inside-out, competitive-oriented HR practices, such as rewards and compensation, training, and recruiting can be reframed in support of outside-in, common-good goals (Aust et al., 2020). This way, strategic alignment between the various characteristics of the

dynamic and competitive business environment together with the various strategies of innovation will be expected (de Zubielqui et al., 2019). This study also uncovers strong evidence of strategic alignment, as noted by Storey et al. (2019).

The innovative aspect of the current research is to provide solutions for the existing obstacles in strategic alignment, which are based on the mental patterns of people and are presented more precisely in the form of combined indicators (quantitative and qualitative). The difference between the findings of this study and other research is focused on the quality and method of indexing, as well as the indicators presented based on the Q method, especially based on the integration of the views of the participants and experts in this study.

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