Presenting and Explaining Job Rotation Implementation Model Based on Organization, Methods, and Value Chain of National Iranian Gas Company

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Highlights

- Presenting the operational model of job rotation with the foundation data method due to the absence of an operational model in this area;
- Job rotation is a program for skill development and essentially differs from the employee promotion system;
- The feasibility of implementing the rotation system in jobs should be carefully and expertly studied, and the field of implementation should be studied in general;
- All dimensions in this model are prioritized so that the executive committee of job rotation can pay more attention to the important components.

Abstract

The purpose of job rotation policies is to create a talent pool for the organization along with mutual training of employees. Ensuring that a planned job transfer benefits both the employee and the organization requires considering the organization and the company's value chain. The current research is conducted to design a job rotation implementation model based on the organization, methods, and value chain of Iran's National Gas Company. The qualitative research method is based on foundational data theorizing. Semi-structured interviews were used to collect information, and data analysis was conducted using the Strauss and Corbin method and the paradigm model. Sampling was performed theoretically and with the benefit of targeted (judgmental) and snowball (chain) techniques, based on which 18 interviews were conducted with knowledgeable professors and experts in human resources management and public administration. The results of the data analysis obtained from the interviews during the open, axial, and selective coding led to the creation of a job rotation implementation model based on the foundation's data theory, including 6 main dimensions, 64 sub-dimensions, and 186 characteristics.

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1. Introduction

Strategic policy-making in line with the maximum use of capacities and resources is the most critical possible action for the survival of organizations (Correia et al., 2020). Traditional management techniques have not been effective, and human resources management requires attention to new dimensions (Lima and Galleli, 2021). To perform successful and effective management, today's managers need to be aware of the latest findings of management knowledge. Human resources management is the strategic management of the organization's most valuable asset, i.e., where employees work and individually help each other achieve their goals (Armstrong, 2014). Career path development refers to preparing and equipping human resources for the organization's future (Caputo et al., 2019). Familiarity of employees with other areas and units can strengthen their strategic vision. In this regard, job rotation can be essential by adopting the appropriate approach to the organization's mission (Botti et al., 2021). Job rotation is the systematic movement of employees from one job to another to achieve various human resources goals, such as orienting new employees, training employees, increasing career advancement, and preventing boredom or burnout. Job rotation enables employees to develop knowledge, new skills, and a broader understanding of operations/programs and effectively utilize employees. A job rotation program involves temporarily assigning an employee to one position or department for a predetermined period to perform the specific duties of another position. In this process, the employee considers the assigned tasks part of his usual responsibilities. Any supervisor or employee may submit a request for a job rotation assignment after carefully evaluating other available workforce strategies (Padula et al., 2017).

The value chain separates a company into its strategically related activities so that the content of the organization's activities moves toward value-oriented (Pyburn and Kruijssen, 2020). A company's value chain and how it performs individual activities reflect its history, strategy, approach to strategy implementation, and the underlying economics of the activities. Every value activity uses purchased inputs, human resources (labor and management), and some form of technology to perform its function. Each value activity also uses information such as audience data, performance (test) parameters, and statistics of problems in the services and products offered (Noya et al., 2017). Industry structure shapes a company's value chain and reflects the collective value chain of competitors. It determines the structure of bargaining relationships with buyers and suppliers, reflected in the firm's value chain configuration and how margins are shared with buyers, suppliers, and alliance partners. The threat of industry substitution also affects service recipients' desired value activities (Hainzer et al., 2019).

Implementing a strategic and practical job rotation depends on the pillars of the company's value chain: The elements determining factors in assessing turnover needs based on expertise. Creating a rotating work environment based on the structure of the organization and its governing culture can strengthen new ideas and perspectives about the field and future of the company, promote resilience, and help reduce destructive factors such as job stress. Companies should strive to place employees in the most optimal position possible for the best output. Therefore, adapting job rotation strategies and decisions to the existing structure and culture in the company's value chain can improve the prospect of achieving the goals. Presenting the job rotation model in the National Iranian Gas Company and the research results can help managers implement job rotation to increase productivity and achieve a more efficient human force in this company. It is expected that the presentation of a model for the implementation of job rotation based on the organization and methods of Iran's National Gas Company will lead to the creation of public knowledge, a change in the attitude of the organization, the introduction of new ideas and opinions to different organizational units, and the encouragement of cooperation between organizational units due to the breadth of the managers' vision. Supervisors create flexibility in the organization due to the flexibility of managers and supervisors, creating suitable fields for the correct

evaluation of employees and including the advantages of other training methods such as on-the-job training. Establishing a job rotation system in Iran's National Gas Company can increase the quality of services and employee satisfaction and reduce the number of disturbances.

Considering the importance of job turnover, the present study seeks to provide a model for job turnover based on the organization, methods, and value chain of the National Iranian Gas Company for the first time in the studied society. The model will fill the study gap and develop the literature of the research field. Therefore, the current research aims to present and explain the model of job rotation implementation based on the organization, methods, and value chain of the National Iranian Gas Company. There is a research gap in job rotation based on the organization, processes, and value chain of the National Gas Company of Iran, considering that no previous model has been designed in this field. It is appropriate to the conditions of Iran and the need to localize the model based on the environment and culture of the country. It is necessary to design a job rotation model based on the organization, methods, and value chain of Iran's National Gas Company.

This article can reduce the ambiguity and frustration of gas company employees and, at the same time, increase their job security. The organization also provides appropriate educational programming for the growth and development of human resources. In turn, the employees can also easily convert their potential talents into actual ones.

2. Literature review

Job turnover is the systematic movement of employees between jobs in the organization to achieve various human resources goals, including orientation to new employees, employee training, increasing career advancement, and preventing fatigue or burnout (Al-Romeedy, 2019). Job rotation is a management approach in which employees are regularly moved between two or more tasks or jobs to expose them to all parts of an organization. It is a pre-planned approach aimed at testing the skills and competencies of the employees to place them in the right place. In addition, it reduces the monotony of work, gives them a broader experience, and helps them gain more insight (Padula et al., 2017). Job rotation is a well-planned exercise to reduce the boredom of doing a routine job and discover the hidden potential of employees. This process serves both management and employees. This process helps the management discover the employees' talent and determine their potential. On the other hand, it allows the individual to explore their interests and gain experience in different fields or operations (Van Wyk et al., 2018). The value chain is essential for identifying competitive advantage and finding ways to create and sustain it. However, the value chain can also be valuable in designing the organizational structure. Organizational structure groups certain activities under organizational units. The grouping logic is that the activities have similarities that should be used by placing them together in one section. With the separation of organizational units, there is a need to coordinate them, usually called "integration". Therefore, integration mechanisms must be established in a company to ensure that the necessary coordination takes place. Organizational structure balances the benefits of separation and integration. A strategic action in intra-organizational coordination is the optimal use of job turnover. By changing job duties and roles, job rotation programs can help break monotonous work routines and ensure integration (Ros-Tonen et al., 2019). A value chain is a step-by-step business model for turning a service from idea to reality. Value chains help increase the efficiency of a company so that the business can provide the most value at the lowest possible cost. The ultimate goal of a value chain is to create a competitive advantage for a company by increasing productivity while keeping costs reasonable (Fernandez-Stark and Gereffi, 2019). Due to the ever-increasing competition for unbeatable prices, exceptional products, and customer loyalty, companies must continuously review the value they create to maintain their competitive advantage. A value chain can help a company identify inefficient areas of

its business and implement strategies that optimize its processes for maximum efficiency and profitability. In addition to making sure that the production tools are integrated and efficient, it is essential that the company keeps the customers safe and secure enough to remain loyal. Value chain analysis can also help with this. The overall goal of a value chain is to provide the most value at the lowest cost in order to create a competitive advantage (Nor et al., 2020).

Revealing the conceptual aspects examined in this study requires examining some experimental studies conducted in this field. Further, the results of studies related to this field are examined to provide a suitable criterion for the direction. It should be a research study. Based on this, in this section, an attempt is made to present some of the most important and relevant studies.

Botti et al. (2021), in research titled "Job Turnover Modeling", stated that the increasing trend of the retirement age in Europe represents a vital phenomenon for production activities and material handling, in which repetitive activities include handling various loads. It is usually required at different frequencies. These tasks can lead to occupational diseases and work-related musculoskeletal disorders, which can severely affect older workers due to reduced functional and physical capacities. On the other hand, older workers contribute positively to production processes through their expertise and skills over time. This paper introduces a bi-objective mathematical valuable model for assigning different workers at risk of repetitive work to other workstations. A person-to-job fit approach is proposed that analyzes workers' physical capacities, competencies, and mental and relational skills along with the requirements of each workstation in terms of capabilities and ergonomic load. The purpose of defining the scheduling of activities is through two goals: the first is to consider the match between workers' abilities and workstations' activities, and the second is to reduce the ergonomic risk of repetitive work by changing tasks during the work shift. This method is also used for an industrial case where the results show its application and potential benefits in terms of ergonomics and overall efficiency improvement.

Fernando and Dissanayake (2019) studied the effect of job turnover practices on employee performance. The mediating role of intrinsic motivation states that many organizations widely use job turnover to make employees more committed than pursue work at different levels of the organizational hierarchy. This strategy was identified as a motivating factor for employee development. Therefore, the study focuses on two objectives: identifying the impact of employee job rotation practices on the job performance of operational-level employees in the banking industry and identifying the effects of employee turnover practices on job performance through the intrinsic motivation of operational-level employees. In the Sri Lankan banking industry, questionnaires were administered to collect primary data from 100 operational-level employees in private commercial banks in the Colombo region. To analyze the data from statistics, descriptive and regression analysis and Baron and Kenny's mediation analysis method were used using SPSS software. This study showed that job rotation is essential for employees to acquire new skills and increase worker productivity. Developing new relationships throughout the company and acquiring skills needed for future career advancement affect employee job performance. In addition, mediation analysis shows that intrinsic motivation partially mediates the relationship between job turnover practices and employee job performance. The findings of this study will be helpful for employers to structure their job rotation practices to develop employee performance in the future.

Al-Romeedy (2019) studied the Role of job turnover in increasing employee performance with the mediating role of organizational behavior. This article aimed to propose and test a conceptual model examining the effect of job turnover on employee performance through the mediating role of organizational behavior. It examined motivation, organizational commitment, job satisfaction, job conflict, and job burnout. Seven hundred eighty-eight questionnaires were analyzed using regression-based partial least squares structural equation modeling (PLS-SEM) using Smart PLS. The results

indicated that organizational behavior (motivation, commitment, job satisfaction, job conflict, and job burnout) mediates the relationship between job turnover and employee performance. This study contributes to the current literature by linking job turnover to employee performance through organizational behavior (motivation, organizational commitment, job satisfaction, job involvement, and job burnout). The findings of this study have practical and theoretical implications for public sector organizations.

Digiesi et al. (2018), in work, entitled "Minimizing and balancing the Ergonomic Risk of Employees of an Assembly Line of Occupational Bardash: MINLP Model", stated that in today's economic conditions, labor is a vital asset in manufacturing industries. The performance and productivity of employees are influenced by many factors related to the efficiency of the line on the one hand and to the well-being of employees on the other hand. Based on new technologies and guided by Industry 4.0 paradigms, the need for high production rates cannot ignore employee protection. If repetitive manual work is performed, workers are at risk of developing musculoskeletal disorders (MSDs), which can be reduced by applying ergonomic principles both in design (e.g., workstation design and identification of equipment tools) and in operational procedures (e.g., workload balance and assignment of tasks). In the action phase, job rotation is one of the most common methods to reduce physical fatigue and reduce stress caused by repetitive tasks. However, often, turnover strategies fail due to the lack of a systematic approach or effective management of turnover programs, and it is tough to identify an effective turnover program that allows maintaining the same productivity rate. This problem is of particular importance given the aging of the workforce, a European social phenomenon that also affects the performance of production systems. The design and scheduling of human-based assembly systems require a joint assessment of production system performance and a good balance between the risks of MSDs among workers. The authors proposed a model to minimize the exposure risk of employees engaged in repetitive manual tasks by balancing human workload and reducing ergonomic risk within acceptable limits for a given production target. Its risk and acceptability are evaluated using the RULA method, according to the mixed integer programming approach. The results show the model's effectiveness in identifying optimal job rotation plans to achieve productivity goals and ergonomic risk.

Hochdörffer et al. (2018), in research titled "Employee Planning in Job Rotation Environments, Taking into Account Ergonomic Aspects and Maintaining Qualifications", stated that demographic changes are an influential factor that has made social security systems in industrialized countries face challenges. In manufacturing, companies must cope with an increasingly heterogeneous workforce in terms of qualifications, defects, and an increasing average age. The development of more standardized processes and a tendency to move toward shorter lead times, along with demographic changes in the workforce, reveal the great importance of workforce planning. The right worker is assigned to the right job at the right time. The complexity of such scheduling problems is addressed in this paper using a heuristic, linear programming, which solves the scheduling problem incrementally for each rotation round and a job rotation schedule. Holistically, it makes for an entire workday. The presented approach for short-term staff scheduling was implemented in a VBA-based software prototype and tested in the final assembly line of a German car manufacturer.

There are no comprehensive studies in the field of job rotation implementation. The foundation data method should be used to formulate a suitable model for job rotation implementation so that a comprehensive model can be designed based on the research experts' opinions. Hence, according to the stated contents, the innovation of the current article can be examined in terms of the following:

- Identification of the causal factors affecting the implementation of job turnover based on the value chain organizations and methods of National Iranian Gas Company;

- Identifying the background factors affecting the implementation of job turnover based on the value chain organizations and methods of National Iranian Gas Company;
- Identifying the influential intervening factors on the implementation of job rotation based on the value chain organizations and methods of National Iranian Gas Company;
- Identification of effective strategies for the implementation of job rotation based on the value chain organizations and methods of National Iranian Gas Company;
- Identifying the consequences of the implementation of job rotation based on the organizations and methods of the value chain of the National Iranian Gas Company.

3. Research methodology

In terms of research directions, this research is fundamental. In terms of the qualitative research method and from the perspective of philosophy, it is interpretive. In terms of the research approach, it is inductive. It is a semi-structured interview regarding the time horizon of the single-section study and the data collection method. A researcher uses a particular method due to various factors, the most important of which is the research question. Whenever the researcher intends to explore the experiences and views of people to formulate a theory, the foundational data theory will be a suitable method. A researcher who tries to discover the meaning or nature of the experience of people involved with specific issues succeeds better by entering the real-life scene and reflecting on what has happened. On the other hand, qualitative methods can be used to discover areas of life that we know nothing about or know much about but want to gain a new understanding of. The primary purpose of the research is to determine the type of method that the researcher can use to answer the question more favorably. A researcher who intends to investigate people's experiences to create a theory can benefit from the foundational data method (Creswell, 2012).

The studies conducted in the theoretical framework show the absence of comprehensive studies in the field of job turnover implementation; therefore, grounded theory is used to design a comprehensive model based on the opinions of research experts.

The grounded theory is based on three types of open, axial, and selective coding:

- Open coding;
- Axial coding;
- Selective coding.

Open coding is the process of data analysis. It is a part of the data analysis process that deals with breaking down, comparing, naming, conceptualizing, and categorizing data. During open coding, the data are broken down into parts and analyzed for similarities and differences.

Axial coding is the second stage of analysis in the grounded theory. This step establishes the relationship between the categories generated in the open coding step. This coding is called axial because coding occurs around the axis of a category. At this stage, the researcher chooses one of the categories as the central category, explores it under the title of the central phenomenon in the center of the process, and determines the relationship of other categories.

Selective coding: The desired phenomenon is the central idea and thought, the event, the incident, or the event that the flow of actions and reactions are directed toward to manage, control, or respond to. The central phenomenon is related to the main question: what do the data indicate? The central category is an idea (image and concept) or a phenomenon that is the basis and axis of the process. This category is the same title (conceptual name or label) that is considered for the created framework or design. The

category chosen as the central category should be sufficiently abstract, and other main categories can be related to it.

3.1. Providing a paradigm model

The main categories and themes around the studied phenomenon are identified in open coding. In focus coding, categories are systematically refined and linked with subcategories. Finally, through selective coding, the research paradigm model is presented. A paradigm model includes the following:
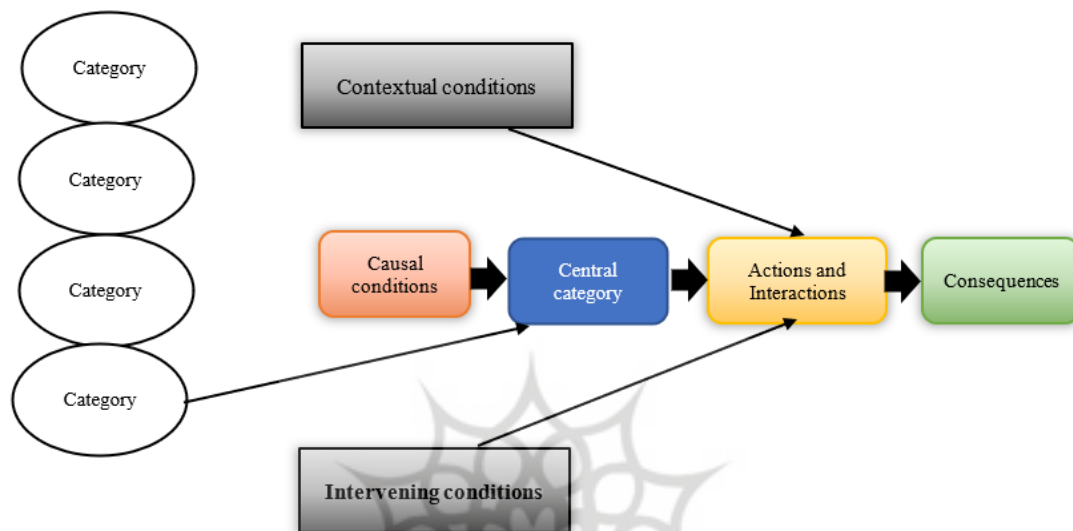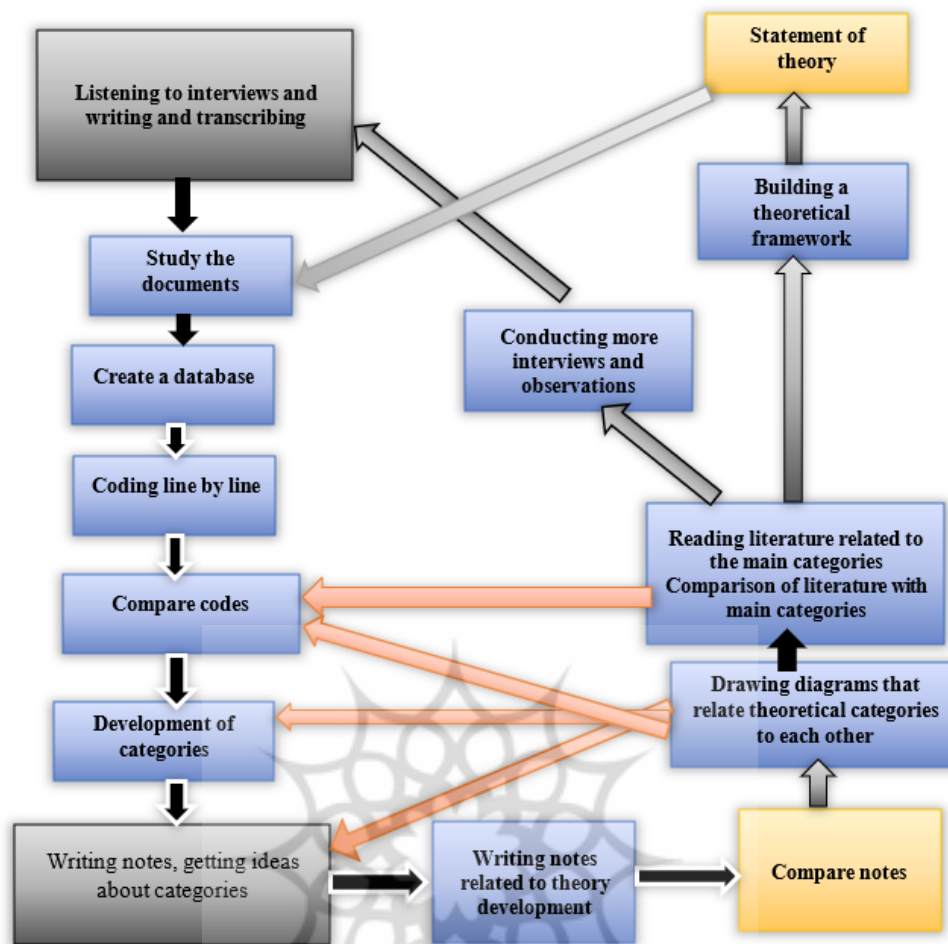

Figure 1

This research paradigm model

Through the paradigm model, the scope of research is narrowed down to one of several main social processes or conditions in the data. The appearance of the central variable in the study also acts as a guide for collecting and analyzing further data, that is, the central category gives direction to the theoretical sampling.

The statistical population of this research is professors and experts in public administration and human resources management. According to the research strategy, foundational data theorizing and sampling have been done theoretically using targeted and snowball techniques. This method determines the sample size during work, and the sampling continues until the data reach the saturation limit. In this research, 18 people were interviewed. No new concept was obtained from the 16th interview. However, to achieve theoretical saturation, two more interviews were also conducted. Based on the results of this interview, the initial questions listed in line with the main research question were revised. Therefore, the axes and questions of the interview were reviewed and modified gradually based on the answers provided and the feedback obtained from the initial interviews. A snowball fan was used to access other samples. Also, open, central, and selective coding were employed; this process makes the reasons and evidence of research validity clear (McFadzean, 2007).

Figure 2

Data analysis process in the data-driven theory (Strauss and Corboin, 1998)

4. Findings

Table 1 presents the sample members' demographic characteristics.

The process of information analysis in foundation data theorizing is based on three stages: open coding (creating concepts and categories), core coding (identifying the core category, causal conditions, intervening conditions, contexts, strategies, and consequences), and selective coding (creating the theory), which explains how to form the categories resulting from the concepts.

Table 1

Demographic characteristics

Gender	Education	Occupation	Work experience	Gender	Education	Occupation	Work experience
Male	Ph.D.	Faculty member	14	Male	Ph.D.	Senior manager	15
Male	Ph.D.	Senior manager	12	Male	Ph.D.	Middle manager	11
Female	Ph.D.	Faculty member	13	Male	Ph.D.	Faculty member	21
Male	M.S.	Former manager	18	Male	Ph.D.	Faculty member	14

Gender	Education	Occupation	Work experience	Gender	Education	Occupation	Work experience
Male	Ph.D.	Faculty member	10	Male	M.S.	Senior manager	17
Male	Ph.D.	Senior manager	12	Male	Ph.D.	Middle manager	21
Male	Ph.D.	Faculty member	11	Female	Ph.D.	Faculty member	7
Male	Ph.D.	Faculty member	14	Male	Ph.D.	Faculty member	4
Male	Ph.D.	Senior manager	19	Male	M.S.	Middle manager	14

4.1. Open coding

First, all the critical points of the interviews were extracted and coded, and after analysis, similar codes were assigned to specific concepts. The researcher identified and expressed their ideas in the open coding stage by reviewing the collected data sets. At this stage, naming was done without any restrictions. About 321 quotes were extracted from the interviews; some are listed in Table 2.

Table 2

An example of quotes extracted from the interviews

Relevant quote	Final code
I believe that the organization's structure should allow job rotation implementation. It is wrong for us to start the job rotation program without considering the type of organizational structure and issues of concentration and formality.	Organization structure
Companies consider strategies that lead to the synergy of activities, the improvement of the value chain, and ultimately, the creation of wealth and the progress of the living standard. Creating a talent fund is a long-term investment. Contrary to the view that the replacement approach had in the past on the subject of talents. Today's systems must have a long-term perspective. The effectiveness of the new talent search and talent management approach determines and measures the career path of people with its ability to promote talented people at a suitable speed and by providing opportunities and necessary training situations throughout the work.	Treasury of talent
In my opinion, in order to encourage employees to be creative and transfer their mentality, proper planning should be done concerning the job rotation of the units.	Instilling a creative mindset
All job rotation measures should be based on people's initial knowledge. It means that people who have the potential to flourish in the desired positions should be selected and participate in the tour.	Circulation based on ability

Based on this method, coding has been done for all categories and components. Open coding aims to break down the collected data set into the smallest possible conceptual components.

4.2. Axial coding

In the axial (core) coding process, the categories obtained from the open coding process have been formed into six categories: the core category, causal conditions, intervening conditions, contextual conditions, strategies, and consequences. Therefore, the central category can be placed in the center, and other categories can be related. The labels chosen for the central category are also abstract and comprehensive at the same time.

Table 3

An example of the axial coding of the research

Main category	Final codes
	Internship and coaching
	Performance and competency management
	Effective interactive model
	Focusing on human dignity
	Participatory management
	Procedural justice
	Strategies for coping with work-family conflict
	Ergonomics of the work environment
	Culture of excellence
	Creation of work teams
Consequences	Structural empowerment
	Psychological empowerment
	Strategic solidarity
	Harmony in processes
	Coherence in human resources architecture
	Unity in purpose
	Willingness to stay in the organization
	Continuous commitment and attachment to the organization
	Reducing the rate of voluntary resignation
	Improving the capacity and differentiation of leading units
	Horizontal convergence

4.3. Selective encoding

In selective coding, the researcher deals with the strength of the coding process according to the codes and concepts identified in the following two stages. Coding is correct if it is accompanied by continuous interaction with the data set. At this stage, the axial coding is placed in more detailed and general categories, and the results of these categories are listed in the following tables.

Causal conditions: Some categories (conditions) affect the main category and lead to the occurrence or expansion of the desired phenomenon. Causal conditions in the data are often expressed with words such as *when*, *while*, *since*, *because of*, and *due to*. Even when there are no such signs, the researcher can find the causal conditions by looking at the phenomenon itself, regularly looking at the data, and reviewing the events that precede the phenomenon in terms of time (Strauss and Corbin, 1990). Based on the analysis conducted on the interviews and the obtained codes, the subcategories of causal conditions and related concepts are listed in Table 4.

Table 4

Identified categories and concepts associated with causal conditions

Main category	Concept	Final codes
	Talent management	Treasury of talent
		Selection based on qualifications
		Correct understanding of people's abilities
	Meritocracy	Analysis and correct recognition of educational and functional needs
		Evaluation of constructive behaviors
		Forecast future trends
		Continuous assessment
		Alignment of individual and organizational goals
		Continuous transformation
		Creation of knowledge
		Written assessment
	Shared identity	Alignment of targets
		Collective commitment
	Adapting to changes	Adapting to challenges and changes
		Getting to know the corresponding jobs
	Improve skills	Multi-skill development
		Understanding the mission of the organization with the addition of new skills
Causal conditions		Adapting to emerging conditions
		Strategic order
		Hierarchy of goals and plans
	Strategic alignment	All elements in the same direction
		Correct explanation of strategies
		Correct transfer of final targets
		Strategic partnership
		Dealing with monotony
	Prevent burnout	Necessary measures to reduce the possibility of emotional exhaustion
		Resolving mental concerns
		Dealing with a toxic atmosphere
	Professionalization of employees	Improving skills
		Development of emotional intelligence
		Institutionalization of continuous innovation
	Innovation culture	Instilling a creative mindset
		Matching the structure with the creations
		Provide an opportunity to comment
	Innovation culture	Explanation of job dos and don'ts

Main category	Concept	Final codes
	Job–employee fit	Complementary fit
		Matching assigned tasks with individual characteristics such as age, sex, education level, marital and celibate status, work experience, knowledge, skills, and individual ability
		Complementary fit
		Proportion of needs and supplies
	Organization dynamics	Strong leadership and skilled and elite human resources
		Rich culture and compatible with the environment
		Ready to face surface and fundamental changes
		Continuous improvement of critical capabilities
		High performance
		Dominant strategy and process management
	Prevent functional impairment	Confusion in tasks
		Weakness in commitments
	Development of actions	Interaction between different departments
		Growth policy
		Staff training
		Time and cost management
	Focus on core issues	Targeted explanation of strategies
		Sustainable development
		Administrative ethics
	Technological changes and developments	Change information sharing
		Development of management information systems

4.4. Contextual conditions

These are the general and extensive conditions that affect the development, prosperity, and importance of the phenomenon. Table 5 lists the contextual conditions in this research and concepts and codes.

Table 5

Identified categories and concepts related to contextual conditions

Main category	Final codes	Concept
Contextual conditions	Organizational structure	Type of organizational structure
	Organization size	Magnitude of performance
		Structural segregation
	Dominant leadership style	Leadership characteristics
		Outlined vision of leaders
	Existing attitude	Attitude of senior managers
	Organization policies	Goals and policies
		Governing values
	Organization policies	dominant culture

4.5. Intervening conditions

Intervening conditions are general and broad and affect the way of interaction. Table 6 tabulates the related codes.

Table 6

Identified concepts and categories related to intervening conditions

Main category	Final codes	Concept
	Process-driven	Stagnation in the organization
		Solving homework
		Procrastinating
		Focus on repetitive processes
	Multiple stakeholders	Attracting stakeholders
		Apply pressure
		Noncooperation
	Weakness of job content	Failure to correctly explain the posts
		Weakness in human resources management infrastructure
	Lack of specialization	Lack of specialized attitude
		Lack of motivation for development programs
		Ignoring abilities
Intervening conditions	Failure in circulation strategies	Ambiguity in explaining strategies
		Intra-organizational conflict
		Sectoral conflicts
	Island thinking	Humanistic view
		Lack of convergence and harmony
	Governmental possession	Centralized system
		The existence of multiple stakeholders
	Structural barriers	Formality and excessive concentration
		Extreme standardization of behavior in the workplace
		Lack of flexible workspace
		Height of organizational structure
	Weak interactions	Contrasting moral characteristics
		Unwillingness to work in a team

Main category	Final codes	Concept
	Conflicting goals	Conflict in goals
		Group conflicts
		Different perceptions
	Lack of forward-looking attitude	The one-sidedness of the decision-making process
		Centralization of affairs
	Centralism	Lack of will to plan
		Lack of predictive mechanism
	Environmental uncertainty	Fluctuating environment
		Lack of sufficient knowledge and expertise to predict the future
		Quality of decision-makers
	Cognitive complexity	Environmental complexity
		Process complexity
	Desire for stability	Fear of change
		Getting used to the old approaches

4.6. Strategies

The intended strategies in the data theory of the foundation refer to providing solutions to achieving the phenomenon in question, the purpose of which is to manage, deal with, accomplish, and show sensitivity to the phenomenon under study. Open codes and related categories are presented in Table 7.

Table 7
Identified categories and concepts related to strategies

Main category	Final codes	Concept
	Assessment of circulation needs	Identify the weaknesses of each unit
		Planning according to the needs of each unit
	Selection of positions	Circulation based on ability
		Strategic selection of positions where job rotation is implemented
Strategies		Prioritize based on feedback
	Value chain analysis	A central value in the content of affairs
		Analyzing the organization of the company and adapting to the chain
		Understanding the value chain of the industry
		Step-by-step movement in the implementation of rotations

Main category	Final codes	Concept
	Compilation of circulating circulars	The requirement to implement circulation based on rules
		Vertical integration
	Integration mechanisms	Upgrade ERP systems
		Combination of subsystems
		Receive continuous feedback
	Feedback requirement	Providing individual and unit reports
		The main goal
	Process reengineering	Quality improvement
		Continuous adaptation to changes
		Dynamic thinking
	Systematic thinking	Operational thinking
		Holistic thinking
	SWAT analysis	Using the SWAT matrix to analyze the organization
		A bridge to connect thought and action
	Formation of think tanks	Structural decision-making and collective thinking
		Information bank and receiving thoughts

4.7. Consequences

Consequences are the results obtained from the strategies and actions related to the central category. Table 8 tabulates the concepts and categories pertaining to outcomes.

Table 8

Identified concepts and categories related to the consequences

Main category	Final codes	Concept
		External promotion (in career field)
		Effective training and guidance
		Cultivating talents
	Succession	Introduction of talents in meetings and programs of senior managers
Consequences		Drawing the future vision of the company based on the replacement of people
		Internship and coaching
		Performance and competency management
		Effective interactive model
	Improving the quality of working life	Focus on human dignity
		Participatory management

Main category	Final codes	Concept
		Procedural justice
		Strategies for coping with work–family conflict
		Ergonomics of the work environment
		Culture of excellence
		Create work teams
	Empowerment	Structural empowerment
		Psychological Empowerment
		Strategic solidarity
		Harmony in processes
	Integrity	Coherence in human resources architecture
		Unity in purpose
		Willingness to stay in the organization
	Perceived organizational commitment	Continuous commitment and attachment to the organization
		Reducing the rate of voluntary resignation
	Differentiation advantage	Improving the capacity and differentiation of leading units
		Horizontal convergence
	Horizontal management	Symmetric communication
		Horizontal responsiveness
	Development of the working spectrum of employees	Improving people's abilities and capabilities
		Expanding the range of actions
	Competitive advantage	Take advantage of opportunities
		Proactive measures
	Improve operational efficiency	Time-based efficiency
		Cost-effectiveness
	Improving the strategic balance	Triple strategic alignment between business strategies, information technology, and marketing
		Coordinated and focused search for organizational goals
	A network of competencies	Talent selection
		Using experts in each field
	Environmental awareness	Intelligent perception
		Awareness of changes
		Agreeableness
	Cohesion	Fundamental values
		Coordination

Main category	Final codes	Concept
	Development of dynamic capabilities	Integrating, building, and reconfiguring internal competencies
		Continued long-term profitability
	Value creation	Sustainable profit
		Enhance the prestige of the company
		Development of new approaches
	Synergy	

4.8. Creating theory

Selective coding is the main stage of foundational data theorizing, where the researcher presents the theory based on open and axial coding results. In the resulting paradigm model, the causal conditions are the conditions for implementing job rotation in the National Iranian Gas Company. These factors may have strengths and weaknesses from one period to another, but they played a prominent role during data collection and interviews. Selective coding considers the previous codings, selects the main category, connects it to other categories purposefully, validates the connections, and develops the categories that need further refinement and development. Selective coding starts the activity based on the relationship pattern identified between categories and subcategories in open and axial coding. Finally, 6 categories, 64 concepts, and 186 codes were identified and extracted from the open coding process, and examples of the codes related to each dimension were presented in tables. For a more transparent display, the model is also drawn as follows. A model that starts with causal conditions and ends with possible and expected consequences. The central phenomenon and strategies to respond to it must operate in a platform and conditions of intervention.

## 5. Checking the content validity of the theoretical model

Two indices, namely CVR and CVI, have been used to check the content validity of the model. For this purpose, the opinion of academic experts who participated in developing the model was used. The degree of necessity of the concepts was questioned to measure the CVR index and to estimate the CVI. The degree of connection of the final codes with the main ideas and categories was questioned. The formula for calculating the CVR index is as follows. *ne* is the number of experts who answered the necessary option, and *N* indicates the total number of experts. The CVI is the cumulative number of favorable points for each item divided by the total number of experts.

$$CVR = \frac{ne - \frac{N}{2}}{\frac{N}{2}}$$

The results of the CVR formula for all indicators are higher than 0.71, which indicates the content validity of the appropriate dimensions. The CVI index was also calculated based on the following formula:

$$CVI = \frac{\text{The number of experts who rated items 3 and 4}}{\text{Total number of specialists}}$$

The minimum acceptable value for the CVI index is 0.78, and if the CVI index of an item is less than 0.79, that item should be removed. All indicators related to dimensions scored higher than 0.85%.
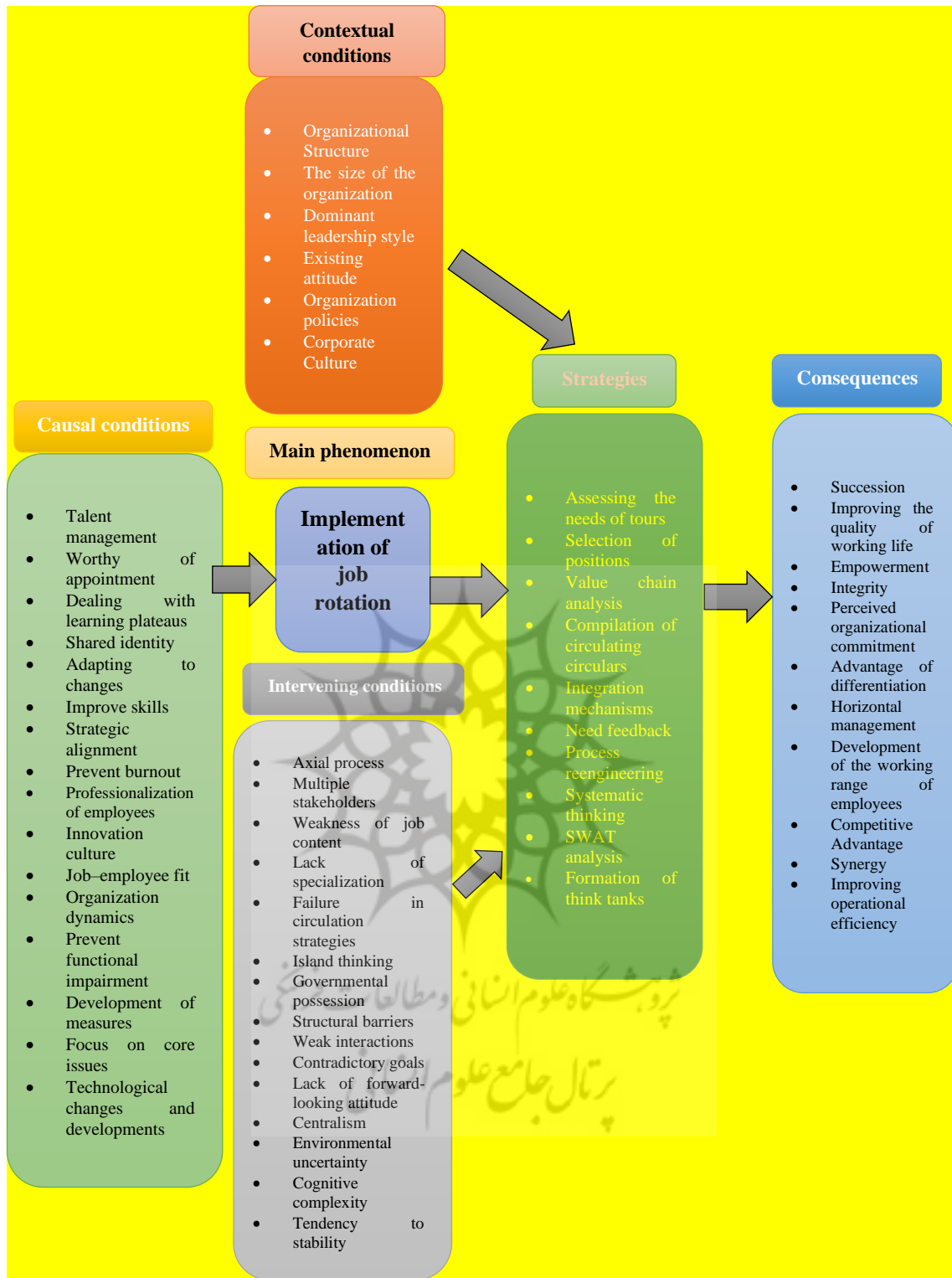
Figure 2

The paradigmatic model of the theory obtained from the research data

5.1. Reliability checks of the theoretical model

Cohen's Kappa index was used to check the model's reliability. In this research, according to what is proposed in the theoretical foundations of the research method, the primary researcher and another researcher have done selective coding again. For this purpose, the final codes and related data were

given to other researchers so that they could do the re-coding. The results were taken using the SPSS21 Kappa test, as stated below.

		Value	Asymptotic standard error	Approx. T	Meaningful
Measure of agreement	Kappa	0.693	0.118	6.569	0.000

a. Not assuming the null hypothesis;

b. Using the asymptotic standard error assuming the null hypothesis.

Considering the significant number and the test value above 60%, it can be claimed that the model has the necessary reliability.

6. Conclusions and suggestions

Job rotation is a systematic program that serves as an effective tool for placing employees in the right place where they can provide the best performance. Career rotation is the movement of employees in different roles that enriches their skills, ability to work on various roles, and experience. This process is a valuable strategy for human resources to create employee awareness about the types of jobs performed in the organization. With the development of organizational studies, job rotation was defined as a management technique to move employees from one job to another to familiarize them with an organization's requirements. Job rotation increases employee work experience, mutual training, and job satisfaction. The role of the employee job rotation policy is to inform the employees about the job rotation technique used by the organization, the rules and regulations related to job rotation, and the frequency of job rotation. Job rotation policies help reduce employee morale and play an essential role in making organizational results more efficient and improving employee productivity. Innovative thinking and creativity are also strengthened due to the effective employee job rotation policy implementation.

With this approach, the current research aimed to design and explain the implementation model of job rotation based on the organization, methods, and value chain of the National Iranian Gas Company. For this purpose, Strauss and Corbin's approach was used in the theory based on systematic data, and the resulting paradigm model was presented in the form of the previous page. Finally, the job rotation implementation paradigm model can be classified into 6 main dimensions, 64 sub-dimensions, and 186 characteristics. Based on the model designed in this research, it is suggested that industry policymakers and senior and middle managers of Iran's National Gas Company should achieve the benefits of optimal implementation of job rotation and avoid organizational challenges, causal conditions such as talent management, competent hiring, dealing with learning plateau, common identity, adapting to changes, improving skills, strategic alignment, preventing job burnout, professionalizing employees, culture of innovation, job–employee fit, organization dynamics, preventing functional weakening, developing measures, and focusing on core issues. They should also consider the technological changes and developments and understand these causal conditions in a decent and significant way. Further, after studying the causal conditions, the platforms and contexts needed for the optimal implementation of job rotation, such as organizational structure, organization size, prevailing leadership style, existing attitudes, organization policies, and organization culture, should not be neglected, and the necessary measures to improve the context conditions should not be neglected. Moreover, when choosing strategies and actions, the intervening conditions, such as the central process, multiple stakeholders, weak job content, lack of specialization, insufficiency in circulation strategies, insular thinking, government ownership, structural barriers, weak interactions, contradictory goals, lack of forward-looking attitude, centralism, environmental uncertainty, cognitive complexity, and desire for stability, should receive attention in order not to make mistakes in choosing their strategies and strategies such as assessing turnover needs, selecting positions, value chain analysis, compiling circulation guidelines,

adopting integration mechanisms, feedback requirement, process re-engineering, system thinking, SWAT analysis, and formation of think tanks.

In other words, industry policymakers and company senior managers should identify mechanisms and tools and strengthen the conditions of their use for optimal implementation of job turnover. In this case, they can focus on the consequences of job rotation, such as succession, improving the quality of work life, empowerment, integration, perceived organizational commitment, differentiation advantage, horizontal management, competitive advantage, value creation, synergy, improving operational efficiency, improving strategic alignment, a network of competencies, environmental awareness, coherence, development of dynamic capabilities, and development of the working spectrum of employees. Theoretically, the job rotation implementation model's design to improve Iran's National Gas Company's performance distinguishes it from other research. From the practical aspect, the findings can be used by the subsidiaries of the Ministry of Oil. Like most studies based on the data-driven theory, the findings of this study are obtained by relying on the views and experiences of people and the environmental conditions of the research, and the results can only be generalized in similar conditions and environments. The agreement and obtaining the experts' opinions in conducting research have also been another limitation for researchers. Examining the variables and the relationships between them through statistical research and using tools such as system dynamics to determine how the model's variables influence each other are recommended.

In this regard, it can be stated that Fernando and Dissanayake (2019) have also mentioned the job fit approach in their research, and based on the findings of the current study, the job fit approach is one of the causal factors affecting the implementation of job turnover. In addition, acquiring new skills is consistent with the findings of Digiesi et al. (2018). Al-Romeedy (2019) has also mentioned the role of job turnover in organizational performance and commitment, which is one of the consequences of implementing job turnover in the present study. Finally, the current research results are consistent with the findings of Hochdörffer et al. (2018).

6.1. Suggestions

The following are the leading suggestions proposed:

- Analyzing the penetration and infiltration of job turnover strategies using the Dimetal technique;
- Stratification of factors affecting strategic job turnover using multivariate decision-making techniques;
- Investigating the impact of contextual factors on job turnover using structural equation modeling;
- Comparative comparison of job turnover in subsidiaries as well as other government companies;
- Identification of structural barriers to job rotation.

Nomenclature

CVI	Content validity index
CVR	Content validity ratio
ERP	Enterprise resource planning
MINLP	Mixed-integer nonlinear programming
MSDS	Material safety data sheet
PLS–SEM	Partial least squares structural equation modeling
RULA	Rapid upper limb assessment
SPSS	Statistical package for the social sciences

SWOT	Strengths, weaknesses, opportunities, and threats
VBA	Visual basic for applications

References

Al-Romeedy, B. S.2019. The role of job rotation in enhancing employee performance in the Egyptian travel agents: the mediating role of organizational behavior. Tourism Review, Vol. 74, No. 4, p. 1003–1020.

Armstrong, M.2014. Strategic management of human resources (practical guide). Translated by Seyyed Mohammad Arabi and Davod Yazdi, Tehran: Cultural Research Office.

Bastug, S., Arabelen, G., Vural, A., and Deveci, A.2020. A value chain analysis of a seaport from the perspective of Industry 4.0. International Journal of Shipping and Transport Logistics, Vol. 12, No. 4, P. 367–397.

Botti, L., Calzavara, M., and Mora, C.2021. Modelling job rotation in manufacturing systems with aged workers. International Journal of Production Research, Vol. 59, No. 8, P. 2522–2536.

Buckley, J., Craig, T., and Mudambi, R.2019. Time to learn? Assignment duration in global value chain organization. Journal of Business Research, Vol. 103, P. 508–518.

Caputo, F., Garcia-Perez, A., Cillo, V., and Giacosa, E.2019 A knowledge-based view of people and technology: directions for a value co-creation-based learning organization. Journal of Knowledge Management, Vol. 23, No. 7, P. 1314–1334.

Correia, T., Gomes, I., Nunes, P., and Dussault, G.2020. Health workforce monitoring in Portugal: Does it support strategic planning and policy-making? Health Policy, Vol. 124, No. 3, P. 303–310.

Creswell, J.2012. Planning, Conducting, and Evaluating Quantitative and Qualitative Research. London: Pearson.

Digiesi, S., Facchini, F., Mossa, G., and Mummolo, G.2018. Minimizing and balancing the ergonomic risk of workers of an assembly line by job rotation: A MINLP Model. International Journal of Industrial Engineering and Management, Vol. 9, No. 3, P.129.

Fernandez-Stark, K., and Gereffi, G.2019. Global value chain analysis: A primer. Cheltenham: Edward Elgar Publishing.

Fernando, K., and Dissanayake, D.2019. The Effect of Job Rotation Practices on Employee Job Performance; Mediating Role of Intrinsic Motivation (with Special Reference to the Private Commercial Banks in Sri Lanka). International Journal of Engineering and Management Research e-ISSN, P. 2250–0758.

Hainzer, K., Best, T., and Brown, H.2019. Local value chain interventions: a systematic review. Journal of Agribusiness in Developing and Emerging Economies, V0l. 9, No. 4, P. 369–390.

Hernandez, V., and Pedersen, T.2017. Global value chain configuration: A review and research agenda. BRQ Business Research Quarterly, Vol. 20, No. 2, P. 137–150.

Ho, P., Nguyen, N., Adhikari, R., Miles, P.2018. and Bonney, L., Exploring market orientation, innovation, and financial performance in agricultural value chains in emerging economies. Journal of Innovation and Knowledge, Vol. 3, No. 3, P. 154–163.

Hochdorffer, J., Hedler, M., and Lanza, G.2018. Staff scheduling in job rotation environments considering ergonomic aspects and preservation of qualifications. Journal of Manufacturing Systems, Vol. 46, P. 103–114.

Lima, L., and Galleli, B.2021. Human resources management and corporate governance: Integration perspectives and future directions. European Management Journal, Vol. 39, No. 6, P. 731–744.

Linkov, I., Carluccio, S., Pritchard, O., Bhreasail, N., Galaitsi, S., Sarkis, J., and Keisler, M.2020. The case for value chain resilience. Management Research Review, Vol. 43, No. 12, P. 1–20.

Madhani, P.2019. Strategic supply chain management for enhancing competitive advantages: developing business value-added framework. International Journal of Value Chain Management, Vol. 10, No. 4, P. 316–338.

McFadzean, E.2020. Developing a Proposal: A Nine-Step Process. London: SAGE, 2007.

Nor, M., Gray, S., Caldwell, S., and Stead, M., A value chain analysis of Malaysia's seaweed industry. Journal of Applied Phycology, Vol. 32, No. 4, P. 2161–2171.

Noya, I., Aldea, X., Gonzalez-Garcia, S., Gasol, M., Moreira, T., Amores, M. J., and Boschmonart-Rives, J.2017. Environmental assessment of the entire pork value chain in Catalonia–A strategy to work towards Circular Economy. Science of the Total Environment, Vol. 589, P. 122–129.

Once, A. Z.2018. Redesigning Value Chain for Higher Education and a Proposal for Analysis Process. International Journal of Research in Business Management, Vol. 6, No. 4, P. 25–26.

Padula, S., Comper, C., Sparer, H., and Dennerlein, T.2017. Job rotation designed to prevent musculoskeletal disorders and control risk in manufacturing industries: A systematic review. Applied ergonomics, Vol. 58, P. 386–397.

Purcell, W., Crona, I., Lalavanua, W., and Eriksson, H.2017., Distribution of economic returns in small-scale fisheries for international markets: A value-chain analysis. Marine Policy, Vol. 86, P. 9–16.

Pyburn, R., and Kruijssen, F.2020. Gender dynamics in agricultural value chain development: Foundations and gaps. London: Routledge.

Ros-Tonen, A., Bitzer, V., Laven, A., De Leth, O., Van Leynseele, Y., and Vos, A.2019. Conceptualizing inclusiveness of smallholder value chain integration. Current Opinion in Environmental Sustainability, Vol. 41, P. 10–17.

Simatupang, T. M., Piboonrungroj, P., and Williams, S. J.2017. The emergence of value chain thinking. International Journal of Value Chain Management, Vol. 8, No. 1, P. 40–57.

Strauss, A., and Corbin, J.1998. Basics of qualitative research Techniques and procedures for developing grounded theory. Thousand Oaks, CA: Sage.

Van Wyk, A. E., Swarts, I., and Mukonza, C.2018. The influence of the implementation of job rotation on employee perceived job satisfaction. International Journal of Business and Management, Vol.13, No. 11, P. 89–101.