

DOI: 10.53555/ks.v10i2.3407

Multilevel Relational Constraints on Adopting Hrm Practices in Micro-Enterprises In Tamil Nadu, India: Interpretive Structural Model

C. Saranya¹, M. Malarkodi², K. Uma³, K. M. Shivakumar⁴, and S. Sridevy⁵

¹Department of Agricultural and Rural Management, CARDS, Tamil Nadu Agricultural University. Mailing address: B7 Hall Mark Villa, Parsn Sesh Nestle, Nanjundapuram Road, Coimbatore -36, Email:saranyakani27.dinu@gmail.com
Contact number:9655976035

²Directorate of Agricultural and Rural Management, CARDS, Tamil Nadu Agricultural University.

³Department of Agricultural and Rural Management, CARDS, Tamil Nadu Agricultural University.

⁴Department of Agricultural Economics, CARDS, Tamil Nadu Agricultural University.

⁵Department of Physical Sciences & Information Technology, Tamil Nadu Agricultural University.

***Corresponding Author:** C. Saranya

*Email:saranyakani27.dinu@gmail.com

Abstract

The study explores the intricate web of multilevel relational constraints affecting the adoption of Human Resource Management (HRM) practices in micro-enterprises in Tamil Nadu, India using an Interpretive Structural Model (ISM) framework. This research delves into the nuanced relationships and dependencies among various constraints, including limited access to financial issues, market scenarios, regulatory issues, problems, the nature of employment, and cultural norms. By employing the ISM methodology, the study provides a comprehensive understanding of how these constraints interact and influence one another for a vastly extended sector. The findings from this research shed light on the complex challenges faced in adopting HRM in this sector and offer valuable insights for policymakers and practitioners seeking to develop strategies that can foster the integration of HRM practices and enhance the productivity, sustainability, and overall well-being of the workforce in Tamil Nadu micro-enterprises.

Keywords: Micro-enterprises, HRM practices, Constraint interdependencies, Rural development, HRM adoption strategies.

INTRODUCTION

The agricultural sector is a cornerstone of the Tamil Nadu economy, providing livelihoods to a significant portion of the population. In this context, micro-enterprises play a vital role by contributing to rural development, employment generation, and economic sustainability. Human Resource Management (HRM) practices are pivotal for enhancing the productivity, efficiency, and overall well-being of the workforce in these enterprises. However, despite the growing importance of HRM, micro-enterprises face a multitude of constraints when it comes to adopting and implementing effective HRM practices. This study aims to identify and analyze the specific constraints faced by micro-enterprises regarding HRM adoption. These constraints collectively represent a substantial barrier to the advancement of HRM practices in micro-enterprises, warranting a comprehensive investigation and the development of tailored solutions. By uncovering these constraints, this research intends to offer insights that can inform policymakers, business owners, and other stakeholders on how to develop strategies and interventions that can foster the integration of HRM practices in this crucial sector.

LITERATURE REVIEW

Tamil Nadu known for its rich heritage, is home to many small and micro-enterprises engaged in various aspects of agriculture, from production and processing to marketing and distribution (Agricrop, 2023). These enterprises often operate with limited resources and face unique challenges that hinder their ability to adopt modern HRM practices (Hamouche S, 2021; Oladimeji Samuel Olasoji, 2019). This study seeks to shed light on the myriad constraints that impede the effective integration of HRM practices within the context of micro-enterprises.

The adoption of HRM practices in micro-enterprises is beset by a multitude of constraints. These constraints encompass a complex web of socio-economic, cultural, and structural factors that hinder the effective implementation of modern HRM strategies in this sector (Hamadamin HH, Atan T., 2019; Piwowar-Sulej K. 2021). First and foremost, the majority of the workforce in micro-enterprises often lacks access to formal education and training, limiting their ability to understand and embrace contemporary HRM concepts and techniques. Additionally, the informal nature of employment prevalent in these enterprises creates challenges in establishing clear job roles, performance evaluation, and employee development programs. Moreover, deeply ingrained cultural and traditional norms governing labor relationships can often clash with the principles of HRM, making it difficult to introduce practices such as merit-based promotions, lack of professionalism, equitable compensation, technical changes, and participative decision-making (Hazudin, S. F., et al. 2023; Susilawati, S., et al. 2023).

The need for such an investigation is underscored by the potential benefits that can be realized through the adoption of sound HRM practices in these enterprises (Alkhoraiif, A.2023). Effective HRM can enhance labor productivity, promote the welfare

of the workforce, and contribute to the overall development of the agricultural sector. It can also play a significant role in addressing critical issues such as labor exploitation, income inequality, and the sustainability of rural livelihoods (Mohiuddin, M. et al. 2022).

MATERIALS AND METHODS

This study uses the hybrid method research design, which focuses on a combination of qualitative and quantitative approaches to data collection and analysis and multiple stages of the research process. The data is collected through the use of a structured interview schedule, observation, and case studies. Both primary data and secondary data will be collected from the entire district of rural Tamil Nadu. Researchers use some scientific techniques to gather primary data for their study. With the nature of the study in mind, it is decided to use a structured interview schedule to collect sensitive data. All respondents will be interviewed in person at their industries. Therefore, it has been decided to hold informal talks with all human resource manager and their entrepreneur. Later, it is realized that this method will also act as a channel to establish good relations with the respondents. This method makes a lot of sense for the next interview. This improves the validity of the collected responses.

SAMPLING METHODS

The interview schedule has been prepared considering the multilevel relational constraints on adopting HRM practices in micro-enterprises in Tamil Nadu, Tamil Nadu: Interpretive Structural Model (ISM). The researcher designed a prepared interview schedule for primary data collection. The convenient sampling method is used for human resources managers and entrepreneurs of micro-enterprises.

STUDY AREA

The study area refers to the specific geographic or spatial scope of your investigation. It defines the boundaries within which you will gather data and conduct your analysis. The choice of study area depends on the research objectives and the nature of the phenomenon you are studying. By carefully considering these factors, you can identify a study area that aligns with your research objectives and facilitates the selection of an appropriate sample for your research. This study selected the districts of Coimbatore, Erode, Salem, Namakkal, Tiruchirappalli, Thanjavur, Madurai, Tirunelveli, Vellore and Krishnagiri in Tamil Nadu, Coimbatore.

SAMPLE SIZE

There are more than 4.91 lakh micro-enterprises in Tamil Nadu, (Annual Report of MSME 2020-21), among them micro-enterprises were remarkable due to their wide existence to meet the increasing demand and entrepreneurial opportunities. The snowball technique was adopted to identify the micro-enterprises in the sample area for collecting primary data. The research was conducted across Tamil Nadu, as the sample size was too large, the sample will be selected using the Krejcie-Morgan method where a sample of 200 micro-enterprises that were appropriate to the study was taken by random selection of 20 districts in Tamil Nadu.

DATA PROCESSING

The data collected from the respondents were scored and tabulated using Microsoft Excel and analyzed using Statistical Package for Social Sciences (SPSS 26.0) and advanced tools like the ISM model were employed using ISM Professional V.4.0.

METHODOLOGY

Interpretive Structural Modeling (ISM) is a method for analyzing the interrelationships between various aspects of a system and creating a hierarchical structure for the system. It was an effective tool for comprehending the complexities of a system and identifying the fundamental components that drive it. In the framework of explicit constraints in adopting HRM practices, ISM was applied to identify those that are impeding HRM practice adoption by micro-enterprises.

1. Determine the important variables: Determining the important variables pertinent to the constraints for adopting HRM practices was the first stage. This may involve elements relevant to the study through literature review and expert opinions. Establish relationships among the identified constraints.
2. Developing Structural self-interaction Matrix (SSIM): Building an SSIM (Structural Self Interaction Matrix) for factors involves determining how one constraint affects or is influenced by others. This matrix represents the respondent's observation of factor-to-factor absorbed relationship. By considering the contextual relationship for each factor four symbols A, B, C, and O are used to represent the type ISM model in which i and j are in rows and columns of the system under consideration.
3. Create an initial reachability matrix: it is created after the consultation with the specialists to determine the extent to which each variable could affect the others. In this, the SSIM is converted to a binary model with 1 and 0 in the place of A, B, C, and O.
4. Create a final reachability matrix: The initial reachability matrix is used to form the final reachability matrix by applying the transitivity rule. In this factor, values are added to get the dependency power and driving power.
5. Level partitions: The reachability set and antecedent sets for each factor are obtained from the final reachability matrix. The factor and any other factors it may affect make up the reachability set, while the factor and any other factors it may affect make up the antecedent set. The levels of various factors were then ascertained by deriving the intersection of these sets for each factor. At the top of the ISM hierarchy are the factors for which the intersection sets and reachability are equal. The factors at the top of the hierarchy are those that won't push the other elements past them.

6. ISM Model: The final hierarchy model is created from the level partitioning and the priority of constraints to implementing HRM practices is framed model by substituting statements that were mentioned in each level. This entails determining the crucial factors that require attention and creating plans of action to overcome them.
7. MIMAC Analysis: The strength of driving and dependence power of each factor from the final reachability matrix were analyzed here. As such the quadrant graph will be formed in which the clusters i.e. autonomous, dependent. Linkage and independence are formed for the factors.

RESULTS

1. **Identify Constraints:** This helps in identifying the specific barriers that hinder the adoption of HRM practices in the organization. These constraints can be related to various aspects such as organizational culture, resources, leadership support, employee resistance, or external factors such as legal regulations and market competition. So, the constraints were taken through the literature review and experts' opinions. These constraints in the study are in line with studies (Kurosh & Hoda,2019). Thus the list of constraints for the study is given in Table 1

Table 1. Constraints for adoption of HRMP in Micro-Enterprises

S.No	Constraints	Definition	Dependency
1.	Financial issues	Financial issues encompass a range of challenges and difficulties related to managing money and resources.	F1
2.	Uncertainty of Market scenario	The unpredictable and volatile nature of economic conditions, consumer behavior, and competitive dynamics within a market	F2
3.	Regulatory issues	Challenges arising from the need to comply with laws, rules, and standards set by governing bodies	F3
4.	Problems of surplus/shortage of employee	When an organization either has an excess or insufficient number of staff, leading to inefficiencies, decreased productivity, and strain on existing employees.	F4
5.	Lack of professionalism	Situations where organizations fail to maintain expected standards of behavior, ethics, or quality in business practices.	F5
6.	Time-consuming	Activities or processes are those that require a significant amount of time and resources to complete, often resulting in delays, reduced productivity, and inefficiencies.	F6
7.	Recruitment fairness	Impartial and equitable practices in the hiring process	F7
8.	Infrastructure	The physical and organizational structures, facilities, and systems necessary for business operations	F8
9.	Pandemic issues	The impact of widespread health crises, such as the COVID-19 pandemic, on businesses, economies, and societies, including disruptions to supply chains, changes in consumer behavior, and health and safety concerns.	F9
10.	Conflict resolution	Fair resolution to maintain a positive work environment by addressing disputes	F10
11.	Technical changes	Advancements, updates, or innovations in technology that affect business operations	F11
12.	Lack of standardized policies	Inconsistencies or deficiencies in establishing, implementing, or enforcing policies and procedures within organizations.	F12
13.	Lack of innovation	Failure to develop or adopt new ideas, products, or processes that drive growth, competitiveness, and value creation.,	F13

2. Developing Structural Self-interaction Matrix

Establish relationships among the identified constraints. It involves determining how one constraint affects or is influenced by others. It is achieved by building an SSIM (Structural Self Interaction Matrix) for factors, which shows pairwise relationships among them under a considered system. This matrix represents the respondent's observation of component to component absorbed relationship. By considering the contextual relationship for each factor four symbols are used to represent the type of Interpretive Structural Modeling (ISM) for constraints that can exist between two factors i and j in rows and columns of the system under consideration.

These are:

- A: Factor i will help achieve factor j
- B: Factor i will be achieved by factor j
- C: Factors i and j will help achieve each other
- O: Factor i and j are unrelated

Thus Table 2 shows the Structural Self Interaction Matrix (SSIM) developed for the constraints under contemplation using the above relationship rules.

Table 2 Structural Self-Interaction Matrix (SSIM)

Factors	F13	F12	F11	F10	F9	F8	F7	F6	F5	F4	F3	F2	F1
Financial issues	O	O	C	O	B	A	A	A	A	A	O	C	
Uncertainty of Market scenario	O	O	A	C	A	A	O	O	O	C	A		
Regulatory issues	A	A	A	O	A	O	O	O	A	A			
Problems of surplus/ shortage of employee	O	A	O	A	A	A	A	O	1				
Lack of professionalism	O	O	A	A	O	O	O	C					
Time-consuming	A	O	C	O	A	A	O						
Recruitment fairness	O	O	O	A	C	O							
Infrastructure	O	O	C	O	A								
Pandemic issues	A	A	A	A									
Conflict resolution	A	A	O										
Technical changes	O	C											
Lack of standardized policies	A												
Lack of innovation													

As such this initial reachability matrix is used to form the final reachability matrix by applying the transitivity rule. In this factor, values are added to get the dependency power and driving power and it is presented in the

Developing the Initial Reachability Matrix

In ISM after the formation of the structural self-interaction matrix, the initial reachability matrix (SSIM) is formed. Here the symbols A, B, C, and O in SSIM are converted into a binary matrix by substituting 0s, and 1s. Thus the initial reachability matrix is formed and presented in Table 3

Table 3 Initial Reachability Matrix for Constraints in Adopting HRMP

Factors	F13	F12	F11	F10	F9	F8	F7	F6	F5	F4	F3	F2	F1
F1	0	0	0	0	0	1	1	1	1	1	0	1	1
F2	0	0	0	0	1	1	0	0	0	0	1	1	1
F3	1	1	1	0	1	0	0	0	1	1	1	0	0
F4	0	1	0	1	1	1	1	0	1	1	0	0	0
F5	0	0	1	1	0	0	0	0	1	1	1	0	1
F6	1	0	0	0	1	1	0	1	1	1	1	0	0
F7	0	0	0	1	0	1	1	0	0	1	0	1	0
F8	0	0	1	0	1	1	1	0	1	0	0	1	1
F9	1	1	1	1	1	0	0	1	1	1	1	0	1
F10	1	1	0	1	0	0	0		0	0	1	1	0
F11	0	0	1	1	1	0	0	0	1	0	0	1	1
F12	1	1	1	0	0	1	0	1	1	0	0	1	0
F13	1	1	1	1	1	0	0	0	1	0	1	0	0

Table 4 Final Reachability Matrix for Constraints in Adopting HRM Practices

Factors	F13	F12	F11	F10	F9	F8	F7	F6	F5	F4	F3	F2	F1	Driver Power
F1	0	0	0	0	0	0	0	0	0	0	0	0	1	1
F2	0	0	0	0	0	0	0	0	0	0	0	1	0	1
F3	0	0	0	1	0	0	0	0	0	0	1	1	0	3
F4	0	0	0	0	0	1	0	0	0	1	1	0	0	3
F5	0	0	1	1	1	0	1	0	1	1	1	1	1	9
F6	1	1	1	1	0	1	1	1	1	1	1	1	1	12
F7	0	1	1	1	1	1	1	1	1	1	1	1	1	12
F8	0	0	0	0	1	1	0	0	0	1	1	1	0	5
F9	0	0	0	1	1	0	0	1	1	0	1	1	1	7
F10	0	0	0	1	0	1	1	1	1	1	1	1	1	9
F11	0	1	1	1	0	1	0	1	1	1	1	0	1	9
F12	0	1	1	0	1	1	0	1	0	0	0	1	1	7
F13	1	0	0	1	0	0	0	1	0	1	0	0	1	5
Dependence Power	2	4	5	8	5	7	4	7	6	8	9	9	9	83

3. Level partitioning

Level partitioning is done from the final reachability matrix factors with driving power and dependency power. The reachability and antecedent set for each factor are found from the final reachability matrix, (Warfield, 1974). The reachability set consists of the factor itself and the other factor that it may help achieve, whereas the antecedent set consists of the factor itself and the other factor that may help in achieving it. Thereafter, the intersection of these sets is derived for all the factors. The factors

for whom the reachability and the intersection sets are the same, occupy the top level in the ISM hierarchy and it is described in Table 5

Table 5 Initial Iteration -Level Partitioning

Factors	Reachability set	Antecedent set	Intersection set	Level
F1	1	1,5,6,7,9,10,11,12,13	1	I
F2	2	2,3,5,6,7,9,10,12	2	I
F3	10,3,2	3,4,5,6,7,8,9,10,11	10,3	
F4	8,4,3	4,5,6,7,8,10,11,13	4,8	
F5	11,10,9,7,5,4,3,2,1	5,6,7,9,10,11	5,7,9,10	
F6	13,12,11,10,8,7,6,5,4,3,2,1	5,6,7,9,10,11	5,6,7,9,10,11	
F7	12,11,10,9,8,7,6,5,4,3,2,1	6,7,9,10,11,12,13	12,11,10,7,6	
F8	9,8,4,3,2	4,6,7,8,10,11,12	4,8	
F9	10,9,6,5,3,2,1	5,7,8,9,12	5,9	
F10	1,2,3,4,5,6,7,8,10	3,5,6,7,9,10,11,13	3,5,6,7,10	
F11	12,11,9,8,6,2,1	2,5,6,7,11,12	2,6,11,12	
F12	12,11,9,8,6,12	6,7,11,12	6,11,12	
F13	13,10,6,4,1	6,13	6,13	

The factors undergo step-wise iteration and given levels, thus the final iteration gives the level for each factor considered in the study. This provides the basis for developing the ISM model to prioritize the influencing constraints.

Table 6 Final Iteration - Level Partitioning

Factors	Reachability set	Antecedent set	Intersection set	Level
F1	1	1,5,6,7,9,10,11,12,13	1	I
F2	2	2,3,5,6,7,9,10,12	2	I
F3	10,3,	3,4,5,6,7,8,9,10,11	10,3	II
F4	8,4,	4,5,6,7,8,10,11,13	4,8	II
F5	10,9,7,5,	5,6,7,9,10,11	5,7,9,10	III
F6	7,6,	6,7,10,	6,7	VI
F7	10,7,6,	6,7,10,13	10,7,6	VI
F8	8	6,7,8,10,11,12	8	III
F9	10,6,5,	7,9,12	5,9	IV
F10	6,7,10	6,7,10,	6,7,10	V
F11	12,11,6,	6,7,11,12	6,11,12	V
F12	12,11,6,	6,7,11,12	6,11,12	V
F13	13,6	6,13	6,13	III

4. Developing ISM Structural Model

The constraints at different levels influence the micro-enterprises to adopt the HRMP with varied vigor but act as complex. By leveraging the insights provided by the matrix, organizations can navigate the complexities of HRMP adoption more effectively, leading to ultimately better organizational performance. Thus the influencing constraints have been examined at different levels from the level partitioning and it is used to depict the model in Figure 1.

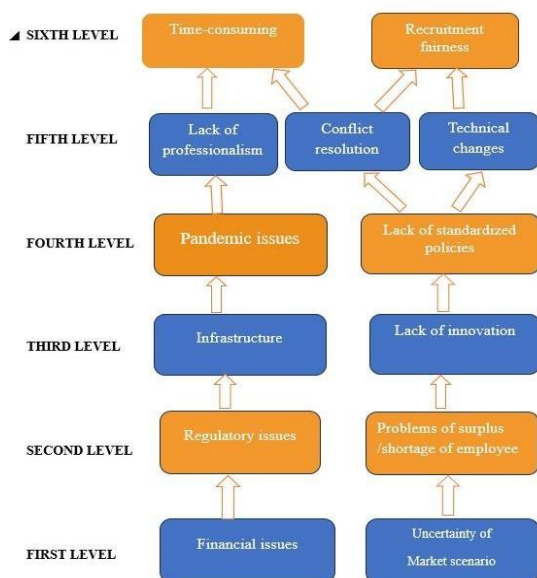


Figure 1 ISM -Framework for constraints in adopting HRM practices in Micro- Enterprises

MICMAC ANALYSIS

MICMAC Analysis analyzed the strength of driving power and the dependence of the factors in the quadrant graph. It is the Driving and Dependence diagram as shown in Figure 2

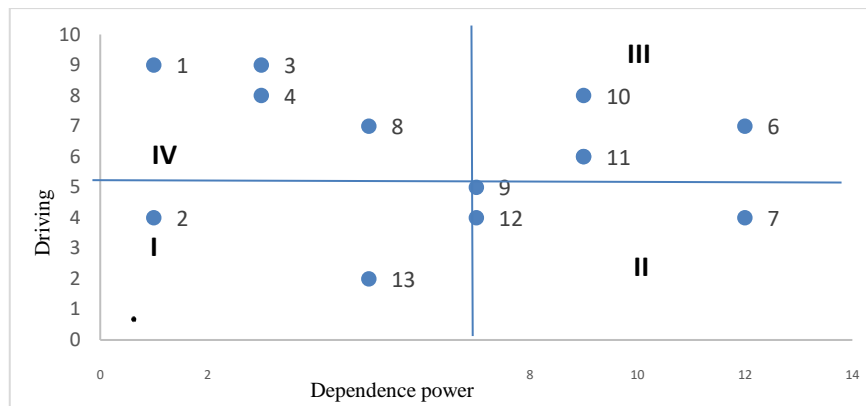


Figure 2 Clustering of Constraints

It could be inferred from Figure 2 that the constraints are classified into four clusters. The first cluster consists of the autonomous constraints that have weak driving power and weak dependence. These constraints are relatively connected to the system, with which they have only a few links, which may be strong. The second cluster consists of the dependent constraints that have weak driving power but strong dependence on other benefits. These constraints primarily come at the top of the ISM model.

The third cluster has linkage constraints that have strong driving power and also strong dependence. These constraints are unstable because any action on these constraints will have an effect on other constraints and also react to themselves. The fourth cluster includes the independent constraints having strong driving power but weak dependence. These constraints primarily lie at the bottom of the ISM model like 'ease of retrieval of information' and multi-locational availability of information' The constraints, which lie in the third cluster, need special attention and proactive attention from the management, since these have high driving power but they are also dependent on other constraints.

Thus recognizing and addressing these constraints is essential for organizations to maximize the benefits of HRM and enhance overall performance. By systematically identifying and mitigating these constraints, organizations can improve the alignment of HRM practices with their strategic objectives, reduce resistance to change, allocate resources more effectively, address cultural and organizational barriers, invest in employee development, navigate legal requirements, and enhance leadership and communication practices.

DISCUSSION

The discussion surrounding the constraints of adopting HRM practices in micro-enterprises highlights, that these small-scale operations frequently grapple with limited financial resources, unpredictable income streams, and irregular cash flows. Overcoming these financial challenges is crucial to enable the integration of HRM practices that can enhance workforce productivity, well-being, and overall business sustainability in Tamil Nadu micro-enterprises (Soosai, V., & Lalitha, N. 2019; Hamadamin, H. H., & Atan, T. 2019). Additionally, the uncertainty of the market scenario these enterprises often operate in a highly dynamic and unpredictable market environment (Drechsler, M., & Holzapfel, A. 2023). This uncertainty can hinder the adoption of HRM practices, which are essential for improving workforce productivity and adapting to changing market conditions. Addressing this constraint requires innovative approaches that align HRM strategies with the variable market scenarios, helping micro-enterprises in remain competitive and resilient.

More, Regulatory issues as navigating the complex web of labor laws and regulations can be a daunting task for these small-scale operations, which often lack the resources and legal expertise to ensure full compliance. Adhering to numerous legal requirements, such as minimum wage regulations, working hour limitations, and employee benefits, poses administrative and financial challenges. Addressing these regulatory constraints is essential for creating a business environment in which HRM practices can thrive and contribute to the overall well-being and productivity of the workforce in micro-enterprises.

A multitude of issues compounds the challenges surrounding the adoption of HRM practices in micro-enterprises. A dearth of innovation and a lack of employee handbooks can result in unclear expectations and a dearth of standardized policies, further muddying HRM efforts. Inadequate conflict resolution mechanisms can foster an unhealthy work environment, while slow adaptation to technical changes can render HRM practices outdated. The absence of professionalism and fairness in recruitment processes, combined with the time-consuming nature of HRM activities, highlights the multifaceted nature of the constraints facing micro-enterprises. Addressing these diverse challenges requires tailored strategies that consider the unique characteristics and demands of this sector.

CONCLUSION

The constraints to the adoption of Human Resource Management (HRM) practices in micro-enterprises are a complex web of socio-economic, cultural, regulatory, and infrastructure-related challenges. These constraints encompass limited access to education and training, the informal nature of employment, deeply ingrained cultural norms, financial limitations, a lack of awareness, regulatory hurdles, and a host of other issues. While these constraints are substantial, they are not insurmountable. Addressing these challenges necessitates a multifaceted approach that includes tailored education and training programs, awareness campaigns, and the development of HRM solutions adapted to the unique needs and constraints of this sector. By surmounting these challenges, micro-enterprises could enhance the well-being and productivity of their workforce, contributing to the growth and sustainability of the region's sector, and thereby fostering rural economic development and prosperity.

REFERENCES

- Welfare Government of Tamil Nadu, New Delhi,
https://agricoop.gov.in/Documents/annual_report_english_2022_23.pdf.
1. Hamouche S. Human resource management and the COVID-19 crisis: implications, challenges, opportunities, and future organizational directions. *Journal of Management & Organization*. 2021 Apr 19:1–16. doi: 10.1017/jmo.2021.15. PMID: PMC8111198.
 2. Oladimeji Samuel Olasoji (2019) Challenges of Human Resource Management in Regards to Organizational Effectiveness, Vaasan Ammattikorkeakoulu University Of Applied Sciences,
 3. Hamadamin, H. H., & Atan, T. (2019). The Impact of Strategic Human Resource Management Practices on Competitive Advantage Sustainability: The Mediation of Human Capital Development and Employee Commitment. *Sustainability*, 11(20), 5782. <https://doi.org/10.3390/su11205782>.
 4. Piwowar-Sulej K. (2021). Human resources development as an element of sustainable HRM - with a focus on production engineers. *Journal of cleaner production*, 278, 124008. <https://doi.org/10.1016/j.jclepro.2020.124008>.
 5. Hazudin, S. F., Zaki, S. M., Soffiq, M., Saripin, F. A. J., Ramayah, T., & Mohamad, N. I. (2023). Sustainable entrepreneurship practices as a predictor of micro-enterprises performance in a rural context: a structural equation modeling approach. *Journal of Sustainability Science and Management*, 18(7), 11-35.
 6. Susilawati, S., Muharram, S., & Arbain, T. (2023). Local government strategies in facing the impact of the COVID-19 pandemic on micro-enterprises at the cooperatives, micro-enterprises, trade, and industry office of Tanah Bumbu Regency. *International Journal Political, Law, and Social Science*, 4(1).
 7. Alkhoraiif, A. (2023). Exploring the influence of entrepreneurial motivation on the environmental performance of small businesses. *International Journal of Entrepreneurship*, 27(4).
 8. Mohiuddin, M., Hosseini, E., Faradonbeh, S. B., & Sabokro, M. (2022). Achieving Human Resource Management Sustainability in Universities. *International journal of environmental research and public health*, 19(2), 928. <https://doi.org/10.3390/ijerph19020928>.
 9. Taghavifard, M. T., Khani, A. M., & Beyrami, S. (2023). Green HR model design in small and medium industries using interpretive structural modeling (ISM). *Management Studies in Development and Evolution*, 32(107), 75-108.
 10. Ardakani, D. A., Bagheri, M., Kiani, M., & Soltanmohammadi, A. (2022). An integrated ISM-PLS model for green human resources management practices. *International Journal of Procurement Management*, 15(4), 463-487.
 11. Pandey, P., Agrawal, N., Saharan, T., & Raut, R. D. (2021). Impact of human resource management practices on TQM: An ISM-DEMATEL approach. *The TQM Journal*, 34(1), 199-228.
 12. Soosai, V., & Lalitha, N. (2019). *Micro Enterprises and its impact on livelihood*. MJP Publisher.
 13. Drechsler, M., & Holzapfel, A. (2023). Horticultural supply chain network design of small and medium-sized enterprises. *Sustainability Analytics and Modeling*, 3, 100014.
 14. Shah, N., Michael, F., & Chalu, H. (2020). Conceptualizing challenges to electronic human resource management (e-HRM) adoption: A case of Small and Medium Enterprises (SMEs) in Tanzania. *Asian Journal of Business and Management*, 8(4).
 15. Bashir, F., & Venkatakrishnan, S. (2022). The impact of human resource management practices on affective commitment: An empirical study in micro, small and medium enterprises using partial least squares structural equation modeling. *South African Journal of Business Management*, 53(1), 10.
 16. Triwahyono, B., Rahayu, T., & Kraugusteeliana, K. (2023). Analyzing the Role of Technological Innovation in Improving the Operational Efficiency of MSMEs. *Jurnal Minfo Polgan*, 12(1), 1417-1426.
 17. Kyal, H., Mandal, A., Kujur, F., & Guha, S. (2022). Individual entrepreneurial orientation on MSME's performance: the mediating effect of employee motivation and the moderating effect of government intervention. *IIM Ranchi journal of management studies*, 1(1), 21-37.
 18. Kokkaew, N., Peansupap, V., & Jokkaw, N. (2022). An Empirical Examination of Knowledge Management and Organizational Learning as Mediating Variables between HRM and Sustainable Organizational Performance. *Sustainability*, 14(20), 13351.
 19. Coco, N., Colapinto, C., & Finotto, V. (2023). Fostering digital literacy among small and micro-enterprises: digital transformation as an open and guided innovation process. *Re&D Management*.