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Article

The Transfer of Managerial Expertise in Romanian Companies through the Application of the DEMATEL Method

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Abstract—In the digital era, the rapid acceleration of change necessitates that organizations cultivate adaptability as a core capability. To maintain a competitive edge, businesses must develop agile structures that facilitate continuous learning, foster innovation, and enable dynamic responses to shifting market conditions. Digital transformation and globalization have intensified the need for leveraging data, automation, and advanced analytics as strategic assets, reinforcing information's central role in the knowledge economy. This study advances research on knowledge transfer by investigating the critical factors influencing the dissemination of managerial know-how within organizations. Utilizing the DEMATEL (Decision-Making Trial and Evaluation Laboratory) method, the research systematically maps the causal relationships between key enablers and constraints, offering a more nuanced understanding of how managerial knowledge flows in technology-driven business environments. By identifying the most influential drivers, this study provides actionable insights for enhancing knowledge transfer efficiency and optimizing organizational adaptability.

CCS Concepts: Mathematics of computing • Applied computing → Machine learning, social and behavioral sciences → Digital economy.

Keywords: Managerial know-how; Digital transformation; DEMATEL method; Knowledge transfer; Adaptive management

1. Introduction

In today's digital age, information holds unprecedented value, serving as a cornerstone of contemporary economic and social landscapes. Digital transformation has accelerated the shift toward a knowledge-based economy, where data, innovation, and adaptability determine organizational success. In this dynamic framework, management plays a crucial role, and the efficient transfer of managerial know-how becomes a key factor for business competitiveness and sustainability [10].

Managers are key actors in this knowledge transfer process. To facilitate this dynamic, they must possess both strong theoretical knowledge and advanced methodological skills, enabling them to connect new scientific discoveries with practical applications. Adaptability and awareness of the need for change through know-how are thus essential elements in the managerial transformation process [2].

In a globalized environment where competition is increasingly fierce, organizations must develop their responsiveness and innovation capacity to meet market demands. The DEMATEL method serves as an effective approach for examining the cause-and-effect relationships between factors impacting the transfer of managerial expertise. This method helps identify interdependencies

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between different factors and clarifies their relationships, thus facilitating strategic decision-making in organizations [10].

The factors considered in utilizing the DEMATEL method to analyze the transfer of managerial expertise in Romanian companies encompass:

The population's education level, which directly influences the effective use of managerial knowledge.

Proficiency in foreign languages among the workforce, a key enabler of management in a globalized environment.

Mobility and personal freedom, enhanced by Romania's EU membership, fostering the informal exchange of managerial expertise.

Organizational control level, inversely proportional to the ease of know-how transfer.

Company size, where smaller organizations are more flexible and open to adopting new information.

Mentality, which plays a significant role in the adoption of managerial knowledge [7].

The process of managerial know-how transfer involves several essential stages:

Identifying transfer channels, i.e., understanding the connections between knowledge providers and recipients, including intermediaries such as consultants and organizations.

The actual know-how transfer, which may involve entire managerial models or only specific components.

Implementation and customization of managerial practices to align with the specific needs of the recipient organization.

Integrating know-how transfer with the assessment of managerial practices and the adaptation of organizational structures.

In the European Union, economic integration provides opportunities for companies through unrestricted access to the single market but also challenges in terms of competitiveness. European managerial know-how is characterized by dynamic, complex, and modern knowledge, yet barriers may arise, such as:

Interpersonal barriers, including language differences, differing perceptions of stakeholder roles, and lack of synchronization.

Inter-system barriers, such as codified norms, resistance to external influences, cultural and social differences [11].

Managers are key facilitators in speeding up the transfer of managerial expertise by tailoring external knowledge and insights to fit their organization's unique framework. In this process, technology import alone is insufficient without effective managerial oversight. Thus, assimilating new managerial knowledge can contribute to fostering an environment conducive to innovation and creativity, thereby stimulating technological progress [12].

In Romania, where businesses are in a continuous state of transformation, the transfer of managerial expertise from countries with strong economic and social performance is becoming more critical. To establish a conducive environment for this transfer, the following factors are essential:

Economic stability and the growth of a robust middle class.

A well-functioning banking system.

A consistent legislative framework that supports economic development.

The efficient operation of the capital market.

In conclusion, transferring managerial expertise within Romanian companies is both essential and achievable. By identifying the key factors driving this process and utilizing effective methods like DEMATEL, it becomes possible to gain a clearer understanding of how various elements interconnected, ultimately enhancing the optimization of managerial strategies. Originally developed by the Battelle Memorial Institute, the DEMATEL method is a powerful tool for analyzing causal relationships in complex systems and has demonstrated its utility across various domains, including organizational management [4].

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2. Literature Review

The transfer of managerial expertise has been widely explored within knowledge-driven economies. [10] argue that organizational knowledge creation depends on both explicit and tacit knowledge, which must be successfully shared to foster innovation and maintain competitiveness. [2] also highlights that knowledge is the primary economic resource in modern organizations, replacing traditional resources like labor and capital.

A key challenge in knowledge transfer is the existence of cultural and structural barriers. [7] discusses the impact of cultural differences on managerial practices, emphasizing the role of national and organizational cultures in shaping knowledge transfer mechanisms. Similarly, [11] argues that organizational culture determines how new managerial knowledge is assimilated and implemented.

The DEMATEL method, first developed by the Battelle Geneva Research Center [5], has proven highly effective in mapping the intricate relationships between factors influencing knowledge transfer. Recent research by [13] affirms that DEMATEL can be used to assess the impact of organizational structure, leadership, and the external environment on the transfer of managerial expertise. In the European context, Teece (2009) highlights the importance of dynamic capabilities in fostering knowledge transfer across organizations. The European Single Market facilitates the free movement of managerial knowledge, yet structural and institutional differences remain significant barriers [13]. Additionally, [4] demonstrate that identifying causal relationships among influencing factors is crucial for effective decision-making in managerial knowledge transfer.

Recent advancements in digital technologies have further transformed knowledge transfer dynamics. [6] discuss how digital platforms enhance knowledge-sharing practices by facilitating real-time collaboration and information exchange. Digital tools, including AI-driven knowledge management systems, play an increasing role in reducing barriers to expertise transfer. [8] emphasize that digital capability acts as a mediator between technological innovation and organizational performance, reinforcing the idea that effective digital integration is essential for knowledge transfer. Furthermore, [1] highlights how digital innovation supports knowledge management systems, enabling more structured and efficient expertise dissemination.

Studies on Romanian organizations [13] indicate that knowledge transfer is essential for aligning local businesses with European standards. The key influencing factors include the educational level of the workforce, which determines the capacity to assimilate new managerial practices; foreign language proficiency, enabling better integration into the globalized market; mobility and openness to change, influenced by EU membership; company size, with smaller firms showing greater adaptability to new knowledge; regulatory and economic stability, which provides a foundation for sustainable knowledge transfer. Moreover, the increasing adoption of digital tools in Romanian businesses suggests that digital transformation policies at the European level may further enhance expertise transfer [3]; [15].

In conclusion, the literature supports the idea that managerial know-how transfer is a multi-faceted process influenced by organizational, cultural, and external factors. The application of methods like DEMATEL provides valuable insights into these interdependencies, offering a structured approach to improving knowledge transfer practices. Furthermore, the growing role of digital platforms and AI-driven knowledge-sharing tools suggests that organizations must continuously adapt to technological advancements. Aligning with ongoing European policy discussions on digital transformation and managerial innovation could further contextualize and strengthen future research in this area.

3. Research Methodology and Results

Stage 1 of the DEMATEL Method involves identifying the factors that impact the decision to transfer managerial know-how and understanding how these factors interrelate. To accomplish this, I developed the direct relation matrix (Table 2), based on the impact of the factors as reported by the 10 managers interviewed and using the comparison scale outlined in Table 1.

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Table 1. DEMATEL Method Comparison Scale.

Numeral	Definition
0	No influence
1	Low influence
2	Medium influence
3	High influence
4	Very high influence

Source: [9].

Stage 1: The process of constructing the direct relationship matrix, as shown in Table 2, involves identifying and mapping the interactions between the various factors that influence the transfer of managerial know-how. This matrix helps to visually represent the degree of influence each factor has on the others, providing a clear framework for understanding the complex relationships that guide the decision-making process.

Table 2. Direct Relationship Matrix.

	Education	Foreign Languages	Personal Mobility	Control Level
Education	0	3	1	1
Foreign Languages	2	0	3	2
Personal Mobility	2	3	0	2
Control Level	2	2	1	0

Source: [9].

Research Hypotheses:

H1: The education level of the workforce positively influences the transfer of managerial know-how.

H2: Proficiency in foreign languages enhances the transfer of managerial knowledge, especially in international contexts.

H3: Personal mobility, facilitated by factors like EU membership, significantly supports the informal exchange of managerial expertise.

H4: The level of control within an organization affects the efficiency of managerial know-how transfer, with higher control levels either facilitating or hiding the process.

Where: $\sum_{j=1}^{n} a_{ij}$It is the sixth column that allows us to identify the maximum value, enabling us to proceed to the next step of the method: normalizing the direct-relation matrix using the following formula:

$$\boldsymbol{X=kA,} \quad (1)$$

$$\boldsymbol{k}=\frac{\mathbf{1}}{\underset{\mathbf{1\le i\le n}}{\boldsymbol{max}}\sum_{\boldsymbol{j=1}}^{\boldsymbol{n}}\boldsymbol{a_{ij}}}, \text{ i,j} = 1,2,\ldots n \quad (2)$$

The key factors, as identified from the perspective of the managers interviewed, are as follows:

Education (Factor 1 = F1): This refers to the level of education within the workforce, which plays a critical role in determining how well managerial knowledge is understood, applied, and transferred within the organization. A highly educated workforce is typically better equipped to adapt to new knowledge and integrate it into their practices.

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Foreign Languages (Factor 2 = F2): The ability to communicate in foreign languages is crucial in a globalized business environment. This factor highlights the importance of language proficiency for the transfer of managerial know-how, as it allows for smoother communication and knowledge exchange across international borders.

Personal Mobility (Factor 3 = F3): Personal mobility refers to the ease with which individuals can move across regions or countries, often facilitated by factors such as economic integration (e.g., EU membership). This factor is important for the informal transfer of managerial knowledge, as it enables managers to gain exposure to new environments, share best practices, and collaborate globally.

Control Level (Factor 4 = F4): This factor refers to the degree of control within an organization, particularly the authority that managers must implement changes and influence the transfer of knowledge. A higher level of control may streamline decision-making processes, making it easier to adopt and disseminate new managerial practices.

Each of these factors is crucial in understanding the dynamics of transfer of managerial knowledge within organizations and can have varying degrees of influence on the process.

Table 3. Presentation of key factors.

Factor	**Educa-tion = F1**	**Foreign langua-ges = F2**	**Personal mobility = F3**	**Control level = F4**	$\sum_{j=1}^{n} a_{ij}$
Educa-tion = F1	0	3	1	1	$\sum_{j=1}^{n} a_{2j} = 5$
Foreign langua-ges = F2	2	0	3	2	$\sum_{j=1}^{n} a_{3j} = 7$
Personal mobility = F3	2	3	0	2	$\sum_{j=1}^{n} a_{4j} = 7$
Control level = F4	2	2	1	0	$\sum_{j=1}^{n} a_{5j} = 5$

From this table results that $\max_{1 \le i \le n} \sum_{j=1}^{n} a_{ij} = 7$

By applying formula (1), the normalized initial direct-relation matrix X is calculated as follows.

Table 4. Normalized Initial Direct-Relation Matrix - X.

F1	0	0.43	0.14	0.14
F2	0.29	0	0.43	0.29
F3	0.29	0.43	0	0.29
F4	0.29	0.29	0.14	0
F1	0	0.43	0.14	0.14

Source: processing authors [9].

The third stage involves calculating the total-relation matrix (T). To do this, we need to apply the following formula, which considers the direct and indirect relationships between the factors, enabling a comprehensive understanding of their interconnectedness. This step allows us to aggregate the effects of all factors, both direct and through their influences on other factors, resulting in the total-relation matrix.:

$T=X(I-X)^{-1}$ (3)

 doi:10.20944/preprints202503.0895.v1

The first step of this stage is to compute the inverse of the matrix, which is necessary for further calculations in the process. This step allows us to determine how the factors relate to one another in a more comprehensive way, enabling the derivation of subsequent matrices.

$$\mathbf{(I-X)=Q} \qquad (4)$$

Table 5. Presentation of the matrix.

	F1	F2	F3	F4
F1	1	-0.43	-0.14	-0.14
F2	-0.29	1	-0.43	-0.29
F3	-0.29	-0.43	1	-0.29
F4	-0.29	-0.29	-0.14	1

Source: processing authors [9].

$$|Q| = 1 + 0.00249 + 0.00333 + 0.01498 - (0.00749 + 0.08162 + 0.00499 + 0.04079) = 0.88591$$

The process begins by taking the transpose of the Q matrix, referred to as Qt (as seen in Table 6). This transpose is an essential step in deriving the Q* matrix, which is outlined in the following calculations.

Table 6. Transpose of Q Matrix (Qt).

	F1	F2	F3	F4
F1	1	-0.2857	-0.2857	-0.2857
F2	-0.4285	1	-0.4285	-0.2857
F3	-0.1428	-0.4285	1	-0.1428
F4	-0.1428	-0.2857	-0.2857	1

Source: processing authors [9].

Starting with the transpose of the Q matrix (Qt), we move on to compute the Q matrix* (Table 7). This involves calculating the determinant of several matrices, as represented in various tables, where each element of the Q* matrix is derived from specific determinants, such as d11, d12, d13, and so on.

For instance, d11 is the determinant of the matrix shown in Table 8, and similarly, each determinant for d12, d13, d14, etc., is computed using its respective matrix.

Here is an example of the calculation for d11 (determinant of the matrix in Table 8):

Table 7. Matrix for d11 Calculation.

	F1	F2	F3
F1	1	-0.4285	-0.2857
F2	-0.4285	1	-0.1428
F3	-0.2857	-0.2857	1

Source: processing authors [9].

The determinant calculation for d11 is:

d11 = 1 - 0.12242 - 0.01748 - (0.08162 + 0.04079 + 0.18361) = 0.55408.

Thus, the determinant of this matrix (denoted d11) is 0.55408.

 doi:10.20944/preprints202503.0895.v1

This determinant represents the impact or "weight" of the relationships captured by the matrix in the context of the DEMATEL method, specifically regarding the interactions between the factors.

The matrix T is represented in the form shown in Table 27 below."

Table 7. The matrix T.

Factor	F1	F2	F3	F4
F1	t11	t12	t13	t14
F2	t21	t22	t23	t24
F3	t31	t32	t33	t34
F4	t41	t42	t43	t44

Source: [9].

Where:

The calculations for the elements of the matrix T are as follows:

- For t**11**:

t11=(0.4285×0.59228)+(0.59228×0.1428)+(0.46066×0.1428)=0.40414t11 = (0.4285 \times 0.59228) + (0.59228 \times 0.1428) + (0.46066 \times 0.1428) = 0.40414t11=(0.4285×0.59228)+(0.59228×0.1428)+(0.46066×0.1428)=0.40414

- For t**12**:

t12=(0.97093×0.4285)+(0.74689×0.1428)+(0.55604×0.1428)=0.60209t12 = (0.97093 \times 0.4285) + (0.74689 \times 0.1428) + (0.55604 \times 0.1428) = 0.60209t12=(0.97093×0.4285)+(0.74689×0.1428)+(0.55604×0.1428)=0.60209

- For t**13**:

t13=(0.4285×0.57575)+(0.1428×0.79979)+(0.1428×0.39804)=0.41775t13 = (0.4285 \times 0.57575) + (0.1428 \times 0.79979) + (0.1428 \times 0.39804) = 0.41775t13=(0.4285×0.57575)+(0.1428×0.79979)+(0.1428×0.39804)=0.41775

- For t**14**:

t14=(0.4285×0.43436)+(0.1428×0.52645)+(0.1428×0.65836)=0.3553t14 = (0.4285 \times 0.43436) + (0.1428 \times 0.52645) + (0.1428 \times 0.65836) = 0.3553t14=(0.4285×0.43436)+(0.1428×0.52645)+(0.1428×0.65836)=0.3553

- For t**21**:

t21=(0.2857×0.62543)+(0.4285×0.59228)+(0.46066×0.2857)=0.56408t21 = (0.2857 \times 0.62543) + (0.4285 \times 0.59228) + (0.46066 \times 0.2857) = 0.56408t21=(0.2857×0.62543)+(0.4285×0.59228)+(0.46066×0.2857)=0.56408

- For t**22**:

t22=(0.2857×0.60205)+(0.4285×0.74689)+(0.2857×0.55604)=0.6509t22 = (0.2857 \times 0.60205) + (0.4285 \times 0.74689) + (0.2857 \times 0.55604) = 0.6509t22=(0.2857×0.60205)+(0.4285×0.74689)+(0.2857×0.55604)=0.6509

- For t**23**:

t23=(0.2857×0.44409)+(0.4285×0.79979)+(0.2857×0.39804)=0.5833t23 = (0.2857 \times 0.44409) + (0.4285 \times 0.79979) + (0.2857 \times 0.39804) = 0.5833t23=(0.2857×0.44409)+(0.4285×0.79979)+(0.2857×0.39804)=0.5833

- For t**24**:

 doi:10.20944/preprints202503.0895.v1

t24=(0.2857×0.39476)+(0.4285×0.52645)+(0.2857×0.65836)=0.52645t24 = (0.2857 \times 0.39476) + (0.4285 \times 0.52645) + (0.2857 \times 0.65836) = 0.52645t24=(0.2857×0.39476)+(0.4285×0.52645)+(0.2857×0.65836)=0.52645

- For t**31**:

t31=(0.2857×0.62543)+(0.4285×0.59228)+(0.2857×0.46066)=0.56375t31 = (0.2857 \times 0.62543) + (0.4285 \times 0.59228) + (0.2857 \times 0.46066) = 0.56375t31=(0.2857×0.62543)+(0.4285×0.59228)+(0.2857×0.46066)=0.56375

- For t**32**:

t32=(0.2857×0.60205)+(0.4285×0.97093)+(0.2857×0.55604)=0.57487t32 = (0.2857 \times 0.60205) + (0.4285 \times 0.97093) + (0.2857 \times 0.55604) = 0.57487t32=(0.2857×0.60205)+(0.4285×0.97093)+(0.2857×0.55604)=0.57487

- For t**33**:

t33=(0.2857×0.44409)+(0.4285×0.43436)+(0.2857×0.65836)=0.50109t33 = (0.2857 \times 0.44409) + (0.4285 \times 0.43436) + (0.2857 \times 0.65836) = 0.50109t33=(0.2857×0.44409)+(0.4285×0.43436)+(0.2857×0.65836)=0.50109

- For t**34**:

t34=(0.2857×0.39476)+(0.4285×0.43436)+(0.2857×0.65836)=0.48699t34 = (0.2857 \times 0.39476) + (0.4285 \times 0.43436) + (0.2857 \times 0.65836) = 0.48699t34=(0.2857×0.39476)+(0.4285×0.43436)+(0.2857×0.65836)=0.48699

- For t**41**:

t41=(0.2857×0.62543)+(0.2857×0.59228)+(0.1428×0.46066)=0.41367t41 = (0.2857 \times 0.62543) + (0.2857 \times 0.59228) + (0.1428 \times 0.46066) = 0.41367t41=(0.2857×0.62543)+(0.2857×0.59228)+(0.1428×0.46066)=0.41367

- For t**42**:

t42=(0.2857×0.60205)+(0.2857×0.97093)+(0.1428×0.74689)=0.45347t42 = (0.2857 \times 0.60205) + (0.2857 \times 0.97093) + (0.1428 \times 0.74689) = 0.45347t42=(0.2857×0.60205)+(0.2857×0.97093)+(0.1428×0.74689)=0.45347

- For t**43**:

t43=(0.2857×0.44409)+(0.2857×0.57575)+(0.1428×0.79979)=0.40557t43 = (0.2857 \times 0.44409) + (0.2857 \times 0.57575) + (0.1428 \times 0.79979) = 0.40557t43=(0.2857×0.44409)+(0.2857×0.57575)+(0.1428×0.79979)=0.40557

- For t**44**:

t44=(0.2857×0.39476)+(0.2857×0.43436)+(0.1428×0.52645)=0.31204t44 = (0.2857 \times 0.39476) + (0.2857 \times 0.43436) + (0.1428 \times 0.52645) = 0.31204t44=(0.2857×0.39476)+(0.2857×0.43436)+(0.1428×0.52645)=0.31204

These calculated values represent the matrix T, which is an essential part of the overall analysis for determining the relationships between the different factors affecting managerial know-how transfer.

Table 8. The Comprehensive Relationship Matrix

Factor	F1	F2	F3	F4
F1	0,40414	0,60209	0,41775	0,3553
F2	0,56408	0,6509	0,5833	0,52645

 doi:10.20944/preprints202503.0895.v1

F3	0,56375	0,57487	0,50109	0,48699
F4	0,41367	0,45357	0,40557	0,31204

Source: [9].

Stage 4 involves creating a causal diagram. To achieve this, we need to compute D, the sum of the rows, and R, the sum of the columns. These sums, represented as D and R, are derived from the total relation matrix using the following equations:

$T = t_{ij}$, i, j =1, 2,..., n (6)

$D = \sum_{j=1}^{n} t_{ij}$, (7)

$R = \sum_{i=1}^{n} t_{ij}$ (8)

Next, the horizontal axis vector, referred to as "driving power," is calculated by adding D and R together. On the other hand, the vertical axis, known as "dependence," is derived by subtracting R from D. Typically, if (D - R) is positive, the criterion is categorized as part of the "driver" group. Conversely, if (D - R) is negative, the criterion is classified as part of the "effect" or "dependent" group, indicating that it is influenced by other criteria rather than being a source of influence. The causal diagram is then created by plotting the values of (D + R) against (D - R).

Table 9. Creation of the Causal Diagram: Plotting (D + R) Against (D - R).

Factor	D	R	D-R	D+R
F1	1,77928	1,94564	-0.16636	3.72492
F2	2,32473	2,28143	0.11043	4.60616
F3	2,2167	1,90771	0.30899	4.12441
F4	1,58485	1,68078	-0.09593	3.26563

Source: [9].

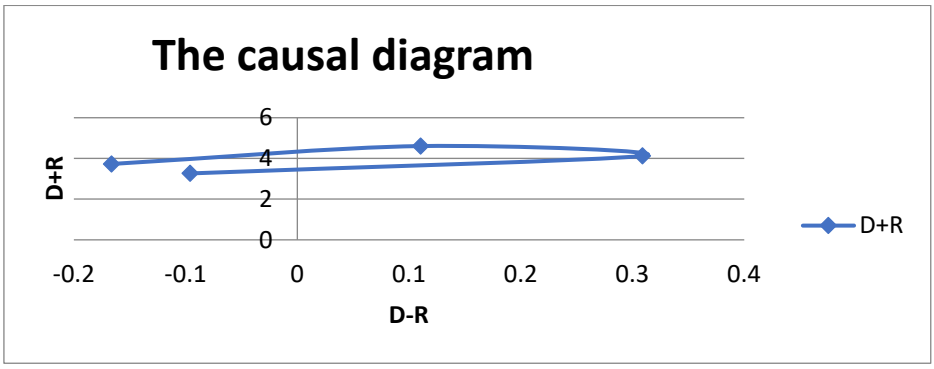

Figure 1. Causal Relationship Diagram Causal Relationship Diagram. Source: [9].

D+R reflects the level of influence a criterion holds, showing the extent of its connection with other criteria. A higher D+R value signifies a stronger relationship with the other factors. In this case, foreign languages stand out as the most influential criterion, as it demonstrates the highest degree of connection with the remaining three factors.

The causal diagram illustrates the interconnections between the various factors. Specifically, Education (F1) and Control Level (F4) are identified as driving factors that contribute to perceived risks. On the other hand, Foreign Languages (F2) and Personal Mobility (F3) emerge as key contributors to perceived benefits. This visual representation demonstrates the direction and nature of influence, highlighting how each factor impacts the others within the framework of managerial know-how transfer. Thus, the diagram visually confirms that Education and Control Level lead to risks, while Foreign Languages and Personal Mobility foster benefits, aligning with the proposed hypotheses.

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The causal diagram and the relationships between the factors can help address the hypotheses presented:

1. H1: The education level of the workforce positively influences the transfer of managerial know-how.

o Based on the causal diagram; Education (F1) is positioned as a significant factor influencing the transfer process. As a driving factor contributing to perceived risks, Education can indirectly enhance managerial know-how transfer by ensuring that the workforce is knowledgeable and capable of managing and navigating risks. Therefore, H1 is supported by the diagram, as Education plays an essential role in the knowledge transfer process.

2. H2: Proficiency in foreign languages enhances the transfer of managerial knowledge, especially in international contexts.

o The diagram shows that Foreign Languages (F2) have a strong influence on the perceived benefits, which aligns with the hypothesis that foreign language proficiency can facilitate the transfer of managerial knowledge in international contexts. This connection between Foreign Languages and perceived benefits supports H2, demonstrating that language skills enhance communication and knowledge sharing across borders.

3. H3: Personal mobility, facilitated by factors like EU membership, significantly supports the informal exchange of managerial expertise.

o Personal Mobility (F3) is depicted as influencing perceived benefits in the causal diagram, indicating that it plays a crucial role in the exchange of knowledge. With increased mobility, managers are more likely to engage in informal exchanges of managerial expertise. Therefore, H3 is confirmed as personal mobility supports the free-flowing exchange of know-how.

4. H4: The level of control within an organization affects the efficiency of managerial know-how transfer, with higher control levels either facilitating or hindering the process.

o the diagram indicates that Control Level (F4) is a driving factor for perceived risks. A high control level could either enhance the efficiency of managerial know-how transfer by creating structured processes or hinder it by limiting flexibility and information flow. This dual influence supports the hypothesis that the control level can either facilitate or restrict the transfer process, confirming H4.

In summary, the relationships highlighted in the causal diagram align with the proposed hypotheses, supporting the idea that education, foreign language proficiency, personal mobility, and control levels all play important roles in the transfer of managerial know-how

4. **Discussion**

The use of the DEMATEL method to analyze the transfer of managerial know-how has provided a comprehensive understanding of the causal relationships among key influencing factors. This methodology enables a structured categorization of criteria into two main groups: driving factors, which actively shape the knowledge transfer process, and dependent factors, which are influenced by external conditions rather than exerting control over the system.

In DEMATEL analysis, two essential dimensions define the interaction between factors:

The driving power axis (D + R) represents the total influence of a factor, combining both its direct (D) and indirect (R) effects on the system. A higher value indicates a greater overall impact on the knowledge transfer mechanism.

 doi:10.20944/preprints202503.0895.v1

The dependence axis (D - R) differentiates factors based on their autonomy within the system. If (D - R) is positive, the factor is a driver, meaning it plays a key role in initiating or facilitating knowledge transfer. Conversely, if (D - R) is negative, the factor is dependent, signifying that it is primarily influenced by other variables rather than driving change independently.

By plotting these values on a causal diagram, we can visualize how various factors interact, helping to distinguish between core drivers of knowledge transfer and those that are more reactive to external forces.

Key Findings and Their Implications

The analysis reveals several critical insights regarding the dynamics of managerial knowledge transfer:

Education Level and Foreign Language Proficiency as Primary Drivers

The findings confirm that education level and foreign language skills serve as fundamental enablers of managerial knowledge transfer. Highly educated employees with multilingual capabilities can more effectively assimilate, interpret, and implement managerial best practices across different cultural and organizational contexts. These results align with existing research emphasizing the role of human capital in knowledge absorption and dissemination [13]; [17].

Company Size and Organizational Culture: Context-Dependent Influences

The study identifies company size and organizational culture as factors exhibiting mixed characteristics, sometimes acting as drivers, while in other cases being dependent on external conditions. Larger companies, with established knowledge management frameworks, tend to facilitate more structured knowledge transfer. However, in smaller firms, knowledge transfer mechanisms are often more informal and reliant on interpersonal relationships. Similarly, organizational culture can act as a driver when it promotes knowledge-sharing behaviors, yet in more hierarchical or rigid environments, it may become a limiting factor, dependent on managerial policies and leadership attitudes.

Regulatory and Economic Stability as an External Enabler

Regulatory frameworks and macroeconomic stability play a critical role in shaping the effectiveness of knowledge transfer. While they do not directly drive knowledge transfer within organizations, their presence creates a favorable environment for the adoption and implementation of managerial know-how. Countries or regions with robust regulatory institutions and stable economic conditions provide businesses with the confidence and resources necessary to invest in knowledge-sharing initiatives.

These findings reinforce previous studies that highlight the interplay between human capital, institutional frameworks, and knowledge transfer efficiency. By applying DEMATEL, this research extends our understanding of these relationships, offering a more granular perspective on how different factors interact within complex organizational ecosystems.

Practical Strategies for Organizations in Rapid Digital Transformation

Given the increasing pace of digital transformation across industries, organizations must develop tailored strategies to optimize the transfer of managerial know-how. One critical approach is investing in technology-driven knowledge platforms that enable seamless sharing and collaboration across teams. These platforms can centralize information, making it easily accessible for employees at all levels, and leverage artificial intelligence or machine learning to personalize knowledge distribution based on individual needs and roles. Such platforms can bridge the gap between dispersed teams and facilitate a continuous flow of relevant knowledge, ultimately improving decision-making and responsiveness to market changes.

Furthermore, continuous upskilling and reskilling programs are essential for maintaining a competitive edge in the digital age. Organizations should establish regular training sessions focused on both technical skills and soft skills, such as leadership and adaptability, that are necessary for navigating rapid digital shifts. This will not only enhance employees' ability to absorb and implement new knowledge but also foster a culture of learning and innovation. By prioritizing these strategic

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initiatives, organizations can ensure that their workforce remains agile and capable of handling the evolving demands of the digital economy.

Theoretical Contributions

Beyond its empirical insights, this study contributes to the broader theoretical discourse on knowledge management and organizational learning. The findings enhance existing theories in several keyways:

Refinement of Knowledge Transfer Models: Traditional models of knowledge transfer often emphasize a linear or unidirectional flow of information. By incorporating DEMATEL's causal mapping, this study provides a more dynamic perspective, illustrating how various factors influence each other in cyclical and interdependent ways.

Bridging Structural and Human Capital Theories: The results highlight the interplay between structural enablers (regulatory stability, company size) and human capital factors (education, language proficiency). This integration reinforces the idea that knowledge transfer is not solely dependent on infrastructure or resources but also on the capabilities and adaptability of the workforce.

Contextualization of Organizational Culture in Knowledge Transfer: The findings add nuance to existing discussions on organizational culture by showing that its impact is highly context dependent. While an open, collaborative culture facilitates knowledge transfer, more rigid corporate structures may hinder the process, making culture both a driver and a dependent factor depending on external and internal conditions.

Practical Implications for Organizations and Policymakers

The insights gained from this study have important practical applications:

For Organizations: Companies should prioritize investments in employee education and language training, as these are proven drivers of effective knowledge transfer. Additionally, fostering a knowledge-sharing culture and leveraging company size advantages can enhance learning processes.

For Policymakers: Governments and regulatory bodies can play a crucial role by creating policies that support economic stability and encourage foreign language proficiency, both of which have been identified as critical enablers of knowledge transfer. Policies that promote corporate learning initiatives, such as tax incentives for training programs, can further strengthen knowledge dissemination across industries.

This study underscores the complexity of managerial knowledge transfer and the diverse factors influencing its effectiveness. By employing DEMATEL, the research provides a structured approach to identifying key drivers and dependencies within the system. The findings contribute not only to the empirical understanding of knowledge transfer but also to theoretical debates in management studies, emphasizing the interconnected nature of human capital, organizational structures, and institutional frameworks.

Further research could explore additional contextual variables, such as industry-specific dynamics or cross-cultural variations in knowledge transfer mechanisms. By continuing to refine and expand the application of causal mapping techniques, future studies can deepen our understanding of how organizations can optimize their knowledge management strategies in an increasingly globalized business environment

5. Conclusions

The results of this research highlight the critical roles of education, foreign language skills, and economic stability in enhancing the transfer of managerial expertise. By utilizing the DEMATEL method, the study established a clear and organized framework for mapping out the causal links between these factors, offering valuable insights into how they interact and influence one another in the context of knowledge transfer. This approach not only clarified the dynamics at play but also illuminated the underlying drivers that shaped the flow of managerial know-how.

Study Limitations:

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The study is limited to a specific geographical context (Romania), which may not be generalizable to other regions.

The analysis focuses on predefined factors, potentially overlooking emerging influences in managerial knowledge transfer.

The DEMATEL method provides a static view, and further longitudinal studies are required to assess changes over time.

Future Research Directions:

Expanding the study to include comparative analyses across different countries.

Investigating the role of digital transformation in enhancing managerial knowledge transfer [18].

Integrating qualitative insights through interviews and case studies to complement the quantitative findings.

By tackling these limitations and pursuing new research directions, both researchers and practitioners can deepen their understanding of knowledge transfer processes, ultimately refining managerial strategies in a world that is becoming ever more interconnected.

General Conclusion

The study confirms that continuous adaptation and innovation are essential for organizations to remain competitive in the digital era. The capacity to effectively transfer managerial know-how is essential for organizational success and crucial for maintaining sustainable long-term growth. In this context, the DEMATEL method has demonstrated its effectiveness as a powerful tool for uncovering the interrelationships between factors that impact knowledge transfer, offering valuable insights for both managers and policymakers. By fostering an environment conducive to knowledge exchange, businesses can ensure sustained development and improved managerial effectiveness in an increasingly globalized and competitive market.

Acknowledgments: The results of this research provide valuable guidance for managers, helping them focus on the key factors that influence the transfer of managerial expertise. It is hoped that the insights gained from this study, along with the proposed causal model, will assist managers in engaging more effectively in the process of managerial know-how transfer. In this paper, I utilized the Dematel method to gain a deeper understanding of the factors involved and the relationships between them that contribute to a successful transfer of managerial knowledge.

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