

Research Paper: Development of a Model for Rural Tourism Supply Chain Management: A Case Study of Touristic Villages of Central Mazandaran, Iran



Fatemeh Mohammadzadeh Larijani¹, Alireza Darban Astane^{*2}, Mohamad Reza Rezvani³

1. PhD, Geography and Rural Planning, Tehran University, Tehran, Iran.

2. Associate Professor, Tehran University, Tehran, Iran.

3. Professor, Tehran University, Tehran, Iran.



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ABSTRACT

Purpose: The purpose of this study is to develop a model for tourism supply chain management in the mountainous forest villages of central Mazandaran.

Methods: In this research, rural tourism supply chain management processes were detected through a systematic review and the Delphi method. To analyze the data and to build a model, ISM and MicMac methods were employed.

Results: The final model shows that knowledge management is the most basic process in the tourism supply chain in the region. This is owing to the great influence of this process and lack of its strong dependence on other processes. Information management processes, risk, market, service performance, demand, capacity and customer relationship have a linking role in this model. These parameters have a great influence and a strong dependence on the other parameters of the chain.

Conclusion: Financial management is the most dependent process in the tourism chain of the region with a low influence but a high dependence on the other processes. Order management is an autonomous process in the tourism chain of the studied region. Indeed, it has both a low influence and a low dependence on the other processes of the chain.

1. Introduction

The modern business environment and the present economic structure are largely dependent on the service sector. Due to economic globalization, the share of the service sector in the world economic growth

has invariably increased (Liu et al., 2017). Despite the rapid growth of the economic sector and the importance of managing it, service supply chain management has not yet received the due attention. Compared to the production sector, understanding of the meaning of service supply chains, methods of model building, identification of measurement scales and rating of

* Corresponding Author:

Alireza Darban Astane, PhD

Address: Department of Geography & Rural Planning, Tehran University, Tehran, Iran.

Tel: +98 (21) 61113793

E-mail: astaneali@ut.ac.ir

service supply chain performance have been considerably ignored in the literature (Zailani & Kumar, 2011). Moreover, the intangibility of services, inseparability, dissonance, non-storability, synchrony of production, distribution and consumption processes, change of the structure of service supply chains from linear to network, and lack of a framework for standard unified management have made the rating of service supply chains more complex (Boon-itt et al., 2017; Leończuk, 2016; Zhang & Chen, 2015). Hence, it is incumbent to gain a high level of unity and a close relationship between suppliers and customers if service supply chains are to enjoy a collaboration advantage (Baltacioglu et al., 2007; Ellram et al., 2004).

Nowadays, one of the biggest service industries in the world is "Tourism" (Turner & Freiermuth, 2015). It is known as a significant catalyzer for development, especially in developing countries (Roe & Urquhart, 2001). Its advantages include exchange of currencies, accrual of tax revenues, entrepreneurship, and contribution to GDP (Hummel, 2012; Pratt, 2011).

By taking the advantage of local and natural resources and through its own diverse supply chains, tourism can considerably help to reduce poverty in developing countries, particularly in rural regions via job creation especially for women, the youth and the marginalized people (Spenceley & Meyer, 2012).

The growth of competition in the tourism business and the rise of tourists' expectations have led to a new issue in tourism, referred to as 'tourism supply chain' (Lee & Fernando, 2015). An offshoot of this chain is the rural tourism supply chain. Due to the complexity of this sector, only a few studies have been conducted on rural supply chains. The published studies mostly zoom on marketing and product development. Furthermore, most of the literature on the tourism supply chain is related to developed countries; only a few studies are dedicated to developing countries (Jena & Jog, 2017; Lee & Fernando, 2015; Rusko et al., 2009).

The purpose of this study is:

1. Identify the processes of the rural tourism supply chain through systematic review and, Delphi;
2. Develop a comprehensive model of rural tourism supply chain management;
3. Determine a communication structure and logical direction between the processes.

to develop a comprehensive model of service supply chain management in the rural tourism sector, to postulate an integrating structure among the processes, and to give them a logical direction. The study is conducted with the interpretive and structural modeling methods (i.e. ISM and MicMac) in the mountainous forest villages of central Mazandaran, northern Iran. To do so, via a systematic review of the existing literature, the processes and indices used in the relevant studies are extracted, and their credibility is evaluated. Then a model is proposed to create standard units for the evaluation of performance criteria. In this regard, specific attention is paid to the unique role of service supply chains to manage and improve the performance of rural tourism supply chains. Central Mazandaran has always been a tourist area for Iranians. This is because of its diverse and valuable natural, local and human resources as well as its proper geographic position. Paying attention to the tourism supply chain management of the studied region and proposing a proper model to improve the supply chain performance can potentially help to reduce laggings and failures in the rural tourism sector and to develop the region.

2. Literature Review

Supply chain management is turning into an important key factor to enhance the efficiency of activities. The competition among companies has changed from an individual pattern to competition among supply chains. This change has occurred because companies cannot work and compete independently and in detachment from other companies (Lee & Fernando, 2015). So far, in fact, any attempt to optimize structural processes without taking external companies into account, especially suppliers and customers, has been futile. Those organizations that have collaborated to achieve common goals have performed better. It was exactly based on such observations that the concept of supply chain originated (Stavrulaki & Davis, 2010).

A supply chain is defined as a collection of approaches used to effectively connect suppliers, producers, warehouses and stores so that the products can be distributed in proper proportions, in proper places and at a proper time to reduce the high costs of the system and, at the same time, maintain the customer satisfaction (Simchi-Levi et al., 2008).

Although many fields of research such as service marketing, service operational management, service science and service engineering have already been established, the number of studies on service chain management is very low (Johnston & Clark, 2008). As the case is, the

ever-growing competitive world calls for more attention to be paid to service sectors to increase service potentials in supply chains (Giannakis, 2011; Van Ark et al., 2008).

The ever-growing customer demand poses a challenge to the improvement of services. The companies in new markets, indeed, need a fair level of customer satisfaction. Due to their low budgets, necessity of continuing their activities, deficiency of infrastructures and certain other external factors, however, those companies face logistic shortages (De la Torre et al., 2014; Liu & Wang, 2015).

The inherent problems in the creation of standard models for services account for the scarcity of research in this field. These problems include the strange nature of exchange of services and the complexity of planning and rendering service processes beyond organizational borders (Banomyong & Supatn, 2011; Ellram et al., 2004; Goodman & Steadman, 2002).

Demirkan and Cheng (2008) define a supply chain service as a system comprising three components: infrastructure service producer, small-service renderer and customer.

Nowadays, tourism is one of the biggest service industries in the world (Turner & Freiermuth, 2015). A very important form of tourism, favored by many tourists, is rural tourism. Just as in all service businesses, due to the diversity of requirements, requests and expectations of tourists, rural tourism comprises several organizational sectors, each offering a different service to satisfy part of the needs of tourists. Achieving tourists' satisfaction to help secure and empower tourism is the result of the attempts and plans of all the involved sectors. According to the new precepts of tourism management, inter-organizational coordination and the cooperation and interrelationship of all the sectors involved are mentioned as key factors in the creation of the competitive advantage among those sectors and the development of tourism. Researchers deal with this issue under the title of tourism supply chain management (Zargar et al., 2011). The philosophy behind tourism supply chain management is to move from free exchange to a concordance among all the cooperating organizations in the supply chain (Ujma, 2001).

A tourism supply chain serves as a network of active organizations in the field of tourism, performing a wide variety of tasks ranging from providing various tourism products or service supports (such as air travel services and accommodation) to the distribution and marketing

of the final products of tourism in a particular region. Such a chain comprises a large number of participants both in the public and the private sectors and makes provisions for customer satisfaction in all tourism activities (Chen & Yi, 2010; Zhang et al., 2009). The cooperation and competition among agencies in a tourism supply chain and between tourism supply chains and other chains indicates that active organizations in the field of tourism are not independent sectors but are part of a same supply chain (Yang et al., 2009). The main difference between a tourism supply chain and other chains is that this is the tourist who seeks the product and that the product he buys should have multiple service features (Zhang et al., 2009).

If a business adopts tourism supply chain management, it can have certain benefits including retention of customers, income increase, cost reduction, optimization of performances, maintenance of competition in order to evaluate and react to market risks and opportunities, risk management, improvement of the staff performance, success in employment and retention of the staff, keeping the assets and core capitals of the business (e.g. ecology and culture), increase of the brand value (i.e. trade name), credibility and share in the market, and protection of the reputation and conditions of the business (Sigala, 2008).

Supply chain management is vital for the completion of the business cycle. Tourism cycle chain management plays a key role to sustain tourism for long. A review of the literature shows that very few studies have been conducted on tourism supply chain management. So, little knowledge exists on tourism supply chains and their management as a new concept. Due to the destructible nature of tourism products, like all other service products, the improper policies of policy-makers and lack of expertise and long-term exchange of information among the stakeholders, tourism supply chain management is definitely a tough job.

3. Methodology

The Studied area

The studied area is the mountainous forest districts of the towns in central Mazandaran including Savadkuh, Babol, Amol and Nour. First of all, according to document-based studies, interviews with the experts in the Cultural Heritage, Handicraft and Tourism Organization of Mazandaran province, interviews with the local authorities and field studies, 28 tourist routes and 164 resorts in those routes were identified in the mountainous

forest villages of the towns in central Mazandaran. Then, 72 main resorts were chosen as the research sample, 19 of which were located in Savadkuh, 17 in Babol, 19 in Amol and 17 in Nour (Figure 1).

Research methodology

The present study is applied in terms of purpose and eclectic in terms of methodology. It aims to make a model for tourism supply chain management in the mountain-

ous forest villages of central Mazandaran. The processes and criteria involved in tourism supply chains were collected and identified by systematic review studying and then became the basis for a questionnaire to evaluate and interpret the quantitative part of the research. They were validated by Delphi method with questions from 32 academic experts and tourism entrepreneurs (Table 1). Of 131 indices related to the tourism supply chain management processes, 129 were approved by the experts with a mean of more than 1.5 out of 3.

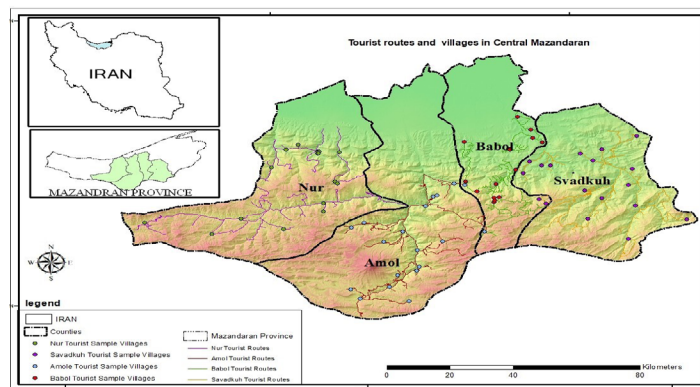


Figure 1. The location of the studied area



Table 1. Processes and indices¹ effective in tourism supply chains identified on the basis of expert opinions

Process	Index
Demand management	Customer need prediction, prediction precision, ability to meet various and changing demands, accordance of capacity with demand
Capacity management	Specifying service capacity, using capacity, making the planning techniques efficient, managing tangible and intangible resources
Supplier relation management	Evaluating suppliers' performance, specifying needs, detection of supplier, supplier's credibility, specifying service limits
Customer relation management	Effective relationship with customers to retain their loyalty, attracting new customers, good appraisal of customer needs, concentration on meeting the needs, customer priority
Order process management	Method of service order registration, lead time of service orders, routes of customer service orders, total cycle time, efficiency of the reservation system
Service performance management	Assessment of service performance, customer questioning time, capacity flexibility, speed of service rendering, service limitations, total cost of the rendered services
Information management	Rate of sharing information, precision of information, timeliness of information, credibility of information exchange, sufficiency of information, rapid access to information
Financial management	Rate of capital recovery, duration of fund circulation, budget circulation among sectors, total inventory cost, timing and specifying the payments based on purpose fulfilment
Market management	Pricing flexibility in market (self-evaluating pricing, dynamic pricing), market accessibility, discount and sale promotion, innovation and advertisement
Knowledge management	Backing up knowledge management, encouraging the staff to find and examine new operational methods, realization of knowledge significance by the staff, sharing new knowledge
Risk management	Detection of risks in the company supply chain, defining the effects of potential threats and the severity of their consequence, proper responses to risks, cooperation among the members to respond

References: Silvestro & Cross (2000); Gunasekaran et al. (2001); Stank et al. (2001); Ellram et al. (2004); Rogers (2006); Rodríguez-Díaz & Espino-Rodríguez (2006); Baltacıoglu et al. (2007); Field & Meile (2008); Sigala (2008); Johnson & Mena (2008); Foxx et al. (2009); Font et al. (2008); Sharma & Loh (2009); Yang et al. (2009); Zhang et al. (2009); Huang et al. (2010); Boon-itt & Pongpanarat (2011); Hua et al. (2011); Zailani & Kumar (2011); Yap & Tan (2012); Cho et al. (2012); Maull et al. (2012); Guo & He (2012); Guo et al. (2013); Ling et al. (2014); Mehparvar et al. (2014); Topolšek et al. (2014); Lee & Fernando (2015); Sharma (2016); Boon-itt et al. (2017); Elgazzar & Elzarka (2017); Jena & Jog (2017); Rezaei Pandari et al. (2015); Jafarnejad et al. (2014); Mostaghimi et al. (2015); Hamidi (2014); Sadeghi Moghadam et al. (2015); Fekri et al. (2015); Shahin & DezTaherian (2015); Darban Astanah et al. (2016)



1. *Due to the large number of the indices, only a few of them are mentioned here.

To build a model for tourism supply chain management, ISM and MicMac questionnaires were used. Besides, the views of 35 academics and local tourism entrepreneurs were collected and analyzed by the ISM and MicMac software programs (Figure 2).

4. Findings

Developing an optimal model to improve the performance of tourism supply chains

The data obtained from the experts and tourism activists were classified and analyzed through binary component comparisons. Then, they were used in the formation of SSIM, which is the basis for designing a model of tourism supply chain management.

A reachability matrix was formed by the replacement of the symbols existing in the SSIM matrix with the relationships defined in Table 3. Symbols V, A, O and X were also practically turned into a group of 1 and 0 digits.

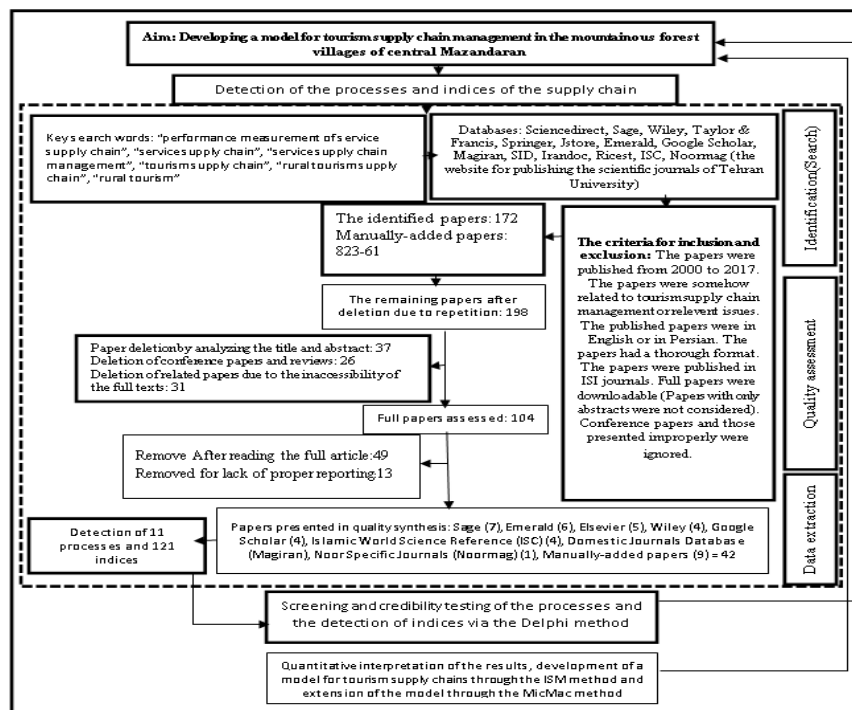


Figure 2. The process of performing the research



Table 2. Structural Self-Interaction Matrix

No	Process	Index									
		2	3	4	5	6	7	8	9	10	11
1	Demand management	A	V	X	X	X	X	V	X	X	A
2	Capacity management	-	V	X	X	X	A	X	V	A	A
3	Supplier relation management	-	-	A	O	A	X	X	A	O	A
4	Customer relation management	-	-	-	X	X	X	V	A	X	A
5	Order process management	-	-	-	-	X	X	V	X	A	A
6	Service performance management	-	-	-	-	-	A	V	X	A	A
7	Information management	-	-	-	-	-	-	X	X	X	X
8	Financial management	-	-	-	-	-	-	-	X	A	A
9	Market management	-	-	-	-	-	-	-	-	X	X
10	Knowledge management	-	-	-	-	-	-	-	-	-	X
11	Risk management	-	-	-	-	-	-	-	-	-	-



Table 3. The method of transforming conceptual relationships into digits

symbols	i to j	j to i
V	1	0
A	0	1
X	1	1
O	0	0



At this stage of the study, the influence score and the dependence of the processes were evaluated too. In order to achieve the influence score of each process, the figures in each row, and, in order to obtain the rate of dependence of each process, the figures in each column of the corresponding index were added up in the final reachability matrix, the result of which is shown in Table 4.

Based on the opinions of tourism experts and activists, the capacity management process and market and financial management in the primary model of the tourism supply chain emerged to have the highest and the lowest influence respectively.

At this stage of the study, the post- and pre-score, role, net score, total scores, and the level of each process were evaluated.

In Table 5, the post-score of the capacity management process equals 10, which signifies this process affects most other processes. Also, as opposed to the pre-score, number 0 shows that this process is not dependent on any other process.

Based on Figure 3, in the primary model, capacity management is known as the most basic infrastructure, and market and financial management processes are known as the most super structural processes in the tourism supply chain of the studied area.

Table 4. Final reachability matrix and the influence and dependence of the processes

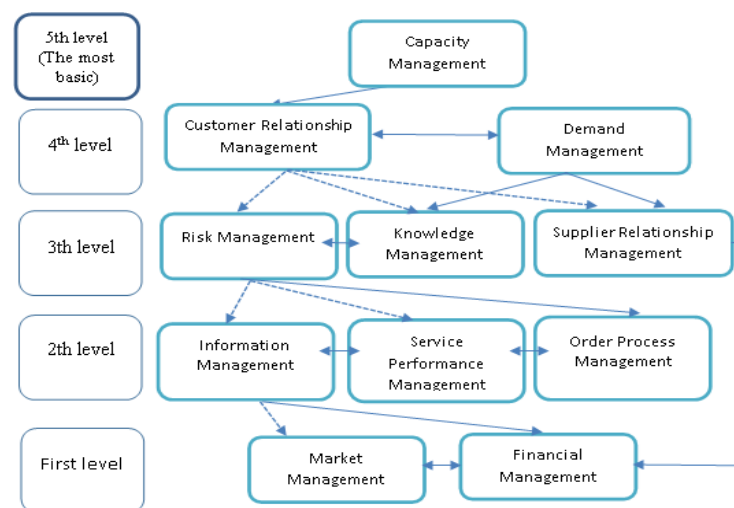
No	Process	Index											influence
		1	2	3	4	5	6	7	8	9	10	11	
1	Demand management	1	0	1	1	1	1	1	1	1	1	1	10
2	Capacity management	1	1	1	1	1	1	1	1	1	1	1	11
3	Supplier relation management	0	0	1	0	0	0	0	1	1	0	0	3
4	Customer relation management	1	0	1	1	1	1	1	1	1	1	1	10
5	Order process management	0	0	0	0	1	1	1	1	1	0	0	5
6	Service performance management	0	0	0	0	1	1	1	1	1	0	0	5
7	Information management	0	0	0	0	1	1	1	1	1	0	0	5
8	Financial management	0	0	0	0	0	0	0	1	1	0	0	2
9	Market management	0	0	0	0	0	0	0	1	1	0	0	2
10	Knowledge management	0	0	0	0	1	1	1	1	1	1	1	7
11	Risk management	0	0	0	0	1	1	1	1	1	1	1	7
	dependence	3	1	4	3	8	8	8	11	11	5	5	



Table 5. Leveling of the processes of the optimized model of rural tourism supply chain management

No	Process	pre- score	post - score	Role score	net score	Total net score	level
1	Demand management	2	9	11	7	11	4
2	Capacity management	0	10	10	11	16	5
3	Supplier relation management	3	2	5	-1	2	3
4	Customer relation management	2	9	11	7	11	4
5	Order process management	7	4	11	-3	-1	2
6	Service performance management	7	4	11	-3	-1	2
7	Information management	7	4	11	-3	-1	2
8	Financial management	10	1	11	-9	-8	1
9	Market management	10	1	11	-9	-8	1
10	Knowledge management	4	6	10	2	5	3
11	Risk management	4	6	10	2	5	3

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**Figure 3.** Primary model for the region's tourism supply chain without considering the potential relationships (ISM technique)

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MicMac analysis and development of the tourism supply chain model

With regard to the scores of influence and dependence of each process obtained through the ISM technique, supplier relationship management (3) is placed at the first level of the matrix, showing that this process has less influence and dependence than the other processes. Five processes are placed at the second level, including order process management (5), service performance management (6), information management (7), financial management and knowledge management (10). All of these processes have a high dependence on the other processes. On the other hand, at the third level, where

processes would be considered to have interrelationships with other processes, there is no process. Five other processes including capacity management (2), demand management (1), customer relationship management (4), knowledge management (10), and risk management (11) are placed at the fourth level, which is the level of those processes that have a significant influence on the other processes (i.e. high influence advantage) (Figure 4).

The ISM technique only considers the type and direction of the relationships among the processes in direct and indirect ways (Yes/No) without exactly pinpointing the degree and efficiency of the potential relationships among those processes. To settle this problem in the de-

velopment of the primary model, the MicMac technique was employed. Besides considering the direct and indirect influence and dependence, the technique could account for the potential relationships among the processes (in the shape of a Likert spectrum) and present a more comprehensive model.

At first, the primary model resulting from the ISM technique was set as a basis. Then, it was elaborated on by using the results of the MicMac analysis. The final model was proposed for the improvement of the tourism cycle performance in the region (Figure 5).

With regard to the MicMac analyses and considering the potential direct and indirect influence and dependence of the processes, the place of those processes in the matrix were highly changed. This shows the importance of potential relationships in the drawing of the model. The position of information, knowledge and capacity management shifted from the fourth level to the third, and that of information management process shifted to the second level. No process existed at the fourth level, signifying the high dependence of the processes on other processes. At this stage, the potential direct dependence of the financial management process decreased and its position shifted from the third level toward the second level of the matrix.

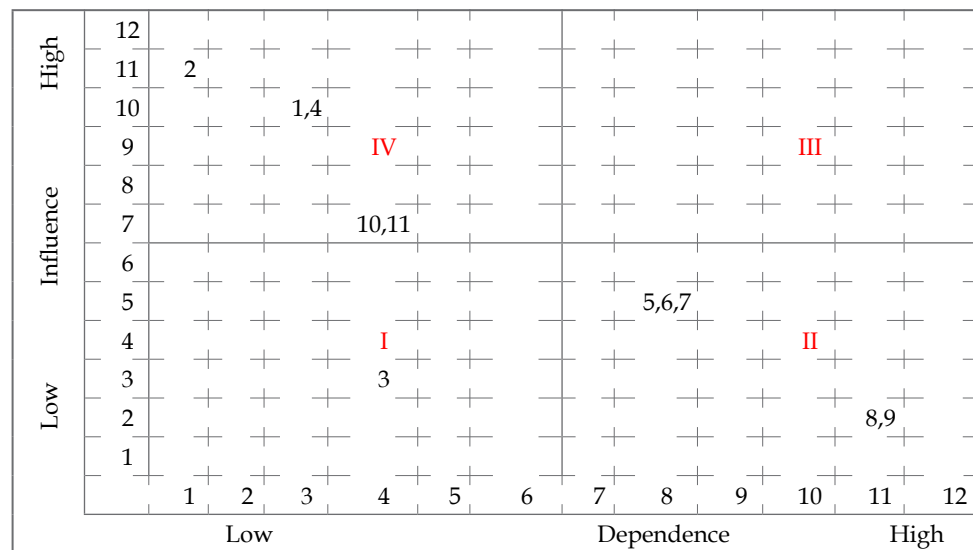


Figure 4. Influence-dependence matrix

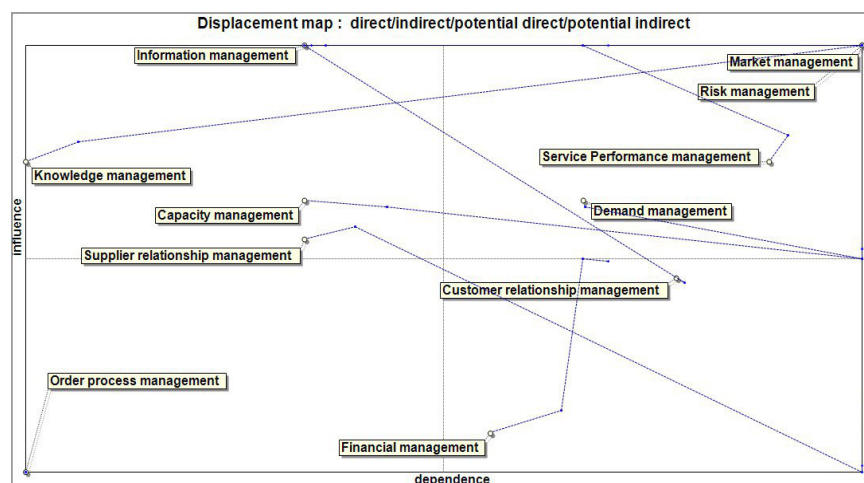


Figure 5. The trend of displacement of processes in the matrix with regard to the potential direct and indirect influence and dependence among them



As in the previous stage, the positions of the processes did not considerably change in terms of potential indirect influence and dependence. The only change belonged to the financial management process; although it had decreased in terms of the potential direct influence and dependence, its dependence increased back.

The position of each process in the final model was determined with respect to its direct and indirect influence and dependence as well as potential direct and indirect scores (Figure 6).

Considering the obtained results, knowledge management process was placed at the first level of the matrix, which shows its highest influence on the other processes.

In contrast, information, market, service performance, capacity, demand, supplier relationship and customer relationship processes were placed at the second level, showing both high influence and dependence of these processes on the supply chain. Financial management process was placed at the second level of the final matrix, signifying the high dependence of this process on the processes of the previous two levels. Order management was placed at the first level, which shows that its influence is lower as compared to the other processes. The final model of the research was presented on the basis of the results obtained from the analysis of the tourism supply chain management scenario (Figure 7).

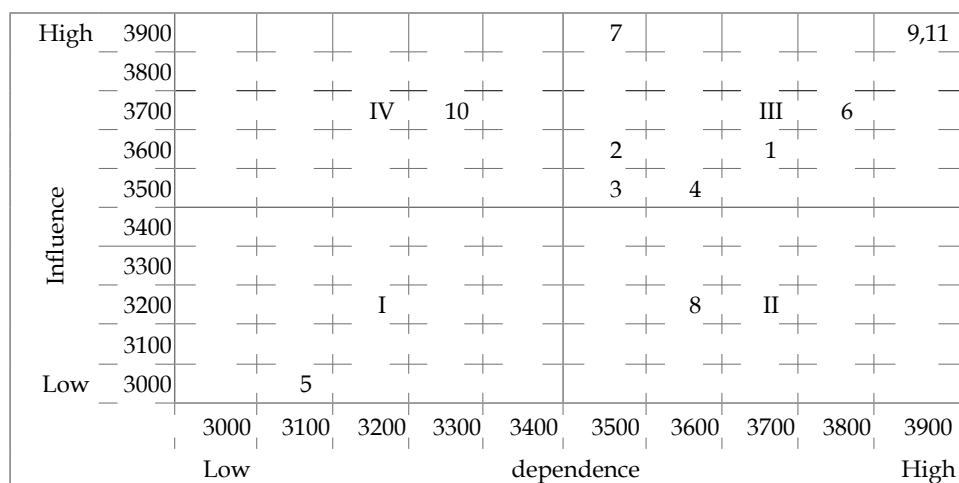


Figure 6. Influence-dependence matrix

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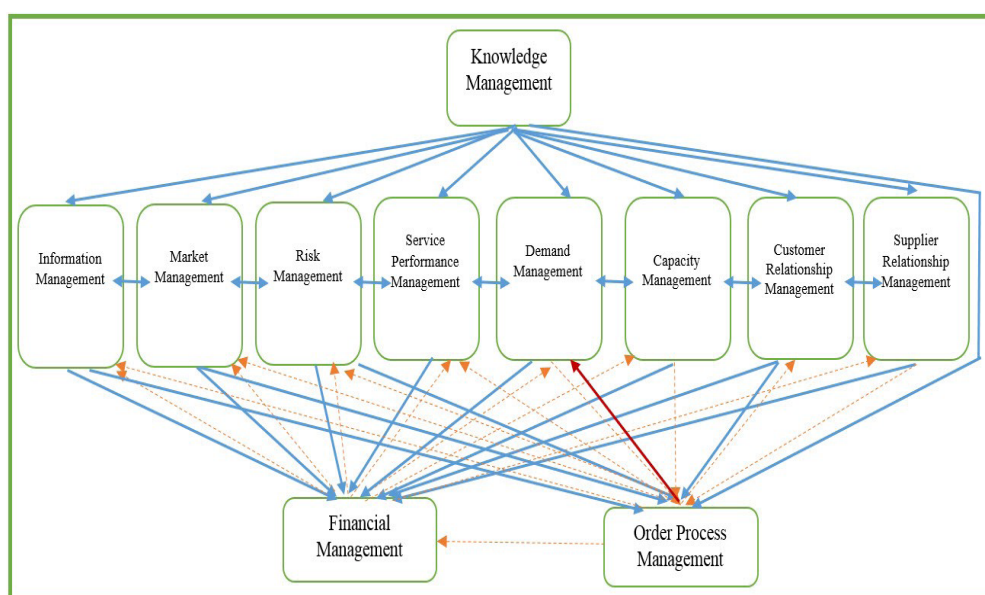


Figure 7. The final model presented for the region's tourism supply chain management (MicMac technique)

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With respect to the final model (Figure 7), it is noted that knowledge management comprises the basic process of the tourism supply chain in the studied region. According to the experts, service agencies should firstly have the knowledge of every aspect of the supply chain process so as to have a proper performance of the cycle. The process of knowledge management is a key process and a significant source for competitive advantage to succeed in the supply chain. Knowledge management, with its direct influence on other processes, can increase the intra- and inter-relationships among the processes and reduce the unnecessary or repeated stages. This, in turn, leads to a reduction in the costs of the supply chain and finally ends in the high quality of the trade name and the better appraisal of that by the customer.

At the second level, the other eight processes of the cycle are located with a mutual influence on one another. These processes, while dependent on the processes of the first level, have an influence on the processes of the third and the fourth levels, i.e. financial management and service management.

After knowledge management, the second most important process in the direct model of tourism supply chain management is information management. Information flow creates relationships among all the processes in the supply chain through collection, transference, and processing of data. When the speed of information flow increases, the optimization and influence of the supply chain improves and helps organizations meet the demands of their customers faster.

Next to information flow, risk and market management are the most important processes in the tourism supply chain.

Market management paves the way for marketing measures, which leads to a higher value for the customer, his satisfaction and loyalty. All this, in turn, leads to a higher profit for the organization and the cycle.

Risk management process is known as another necessary process of the supply chain especially in the service sector. This is because services have a complex and durable cycle. Undoubtedly, when risk is modified, the financial performance and the competitive advantage of the supply chain improve.

Service performance management is considered as the fourth influential process at the second level of the final model. It has a basic role in the service supply chain and is able to manage and improve service performance and

provide a comparison between customer expectation and supplier performance.

Demand management is considered as the fifth influential process in the region's tourism cycle chain. It serves to predict and manage customer needs with the aim of facilitating the information flow to make operational decisions in the service supply chain. Due to the high uncertainty in the demand models of service industries, demand management is vital for the influential management of service supply chains.

Capacity management is the sixth influential process at the second level. The purpose of this management is to create a balance between the high and low consumptions of resources by means of the existing limited network and operation facilities. Since service demand is produced and consumed simultaneously, service agencies should continually update capacity and resource information.

Customer relationship management and supplier relationship management are the two final influential processes in the supply chain placed at the second level of the model. The purpose of customer relationship management is to develop and retain relationships with customers. This helps organizations run a more prosperous business and make a better assessment of customer needs. As for the process of supplier relationship in the service supply chain, it directly helps service production and is usually in direct touch with the customer. Hence, suppliers have an important role in the appraising of the services by the customers and their customer satisfaction. Failure in a supply unit can lead to failure in the service providing performance.

Financial process, as the most dependent process in the proposed model, is placed at the third level. It is directly and potentially dependent on all the processes at the second level and slightly on the fourth-level process.

The financial management of a supply chain helps companies exceed the boundaries of their agency and view the entire cycle. This holistic view concentrates on the cooperation of the other members inside the cycle. It has been generalized as an appropriate approach in financial flow management to preserve the strategic components of supply chains. One of the components in the creation and development of a stable competitive score for modern businesses is the effective management of financial flow in networked and cycle-based businesses.

Order process management is the only process placed at the fourth level of the matrix. This process is highly and directly dependent on the other processes including knowledge management, information, market, risk, supplier relationship, and customer relationship. It is limitedly dependent on capacity and demand management, but it highly influences demand management. Customer order path process defines a combination of activities necessary for the development of services. After the detection of these activities, the time spent on other aspects or non-important activities can be identified and proper measures can be taken to eliminate them. Order process can have a great influence on the customer's notion of the services as well as customer's satisfaction with the determining goals shared by companies in a service supply chain.

5. Discussion

Increase of competition in the tourism market and the rise of tourists' expectations have led to discussions on tourism supply chains, one of which is the rural tourism supply chain. To have an efficient and effective supply chain, a thorough framework of the constructive processes of service supply chain management should be designed. Hence, an attempt was made in the present study to detect tourism supply chain processes and to design a standard tourism supply chain model. With respect to the results obtained from the analysis of the data given by experts and local entrepreneurs, it emerged that knowledge management is the most basic process in the rural tourism supply chain of the studied area. This process was identified as the most important one in both of the models designed in this study. It may, thus, be said that any initiative in a tourism supply chain mainly depends on knowledge management. Mehrparvar & Shahin (2014) believe that knowledge management not only serves as an important step in the success of supply chains but also can increase mutual cooperation, competition and resilience in all supply chain processes. Therefore, organizations can benefit from this finding to make the most of their resources.

Information management process is placed at the third level of the matrix developed in this study. It is considered as one of the most important process in the final model for the tourism supply chain of the studied area, only second to knowledge management and dependent on it. Ellram et al. (2004), Baltacioglu et al. (2007), Boon-itt and Pongpanarat (2011), Johnson and Mena (2008), Mehrparvar et al. (2014), and Elgazzar and Elzarka (2017) emphasize that attention to information management leads to an increase in customer satisfac-

tion, growth of competition in the organization, faster delivery of services to customers, facilitated access of organizations to competitive scores, acceleration of supply chain performance and its stability.

In the final model of this research, with regard to the potential indirect and direct relationships, processes such as demand management, capacity management, customer relationship, risk, supplier relationship, market, and service performance are placed at the third level of the matrix. These processes have an integrating role in the region's tourism supply chain. Ellram et al. (2004), Baltacioglu et al. (2007), Boon-itt and Pongpanarat (2011), Johnson and Mena (2008), Mehrparvar et al. (2014), and Elgazzar and Elzarka (2017) refer to the non-staticity of these processes. This is because any kind of change in them can affect the entire system, and the system feedbacks can finally change these processes again.

Order process management is among those processes located at the second level of the primary model but moved to the first level of the matrix in the final model. This means that this process is weaker than the other processes in terms potential influence and dependence. It is also just slightly dependent on the other processes.

Financial management, placed at the second level of the matrix, is the most dependent process in the tourism supply chain of the studied region. Liquidity cycle management, optimized management of revenue/payment accounts and balance, financing supply management, financial risk management, legal management, insurance and other necessary special services are among the urgent requirements and prerequisites to achieve success in the cycle-based businesses. These parameters deserve special attention beside the management of such other aspects as the flow of goods and information throughout the supply chain. In many studies, the efficiency of the supply chain management in an organization has been considered as the result of the coordination between diverse processes such as service and knowledge and information management on one hand and financial process management on the other. With respect to the obtained results, it can be said that, by the strengthening of the potential direct and indirect relationships among the existing cycle processes, the tourism supply chain in the region can be improved in the future. Researchers and local and regional tourism authorities are suggested to utilize the final model proposed in this study. The model is the result of the review and analysis of local data through which the tourism supply chain processes in the studied area were identified and the interactions among

these processes were shown at direct, indirect and potential levels.

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Conflict of Interest

The authors declared no conflicts of interest.

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