ABSTRACT

Today, with the growth and development of marketing methods, their impact on the business environment cannot be ignored. The use of marketing and supply chain management enables organizations to succeed in creation of a greater value for customers and other interested people. Accordingly, after determining the objectives, variables and factors of designing the corresponding measurement tool(s), preliminary field studies and validation of the data measurement tool(s), preparation of the final questionnaire and its distribution among the relevant experts, according to the number of the statistical population which is equal to 1000, 390 samples were selected using Cochran method. Structural equations have been used in the field of statistical analysis results of the research questions and the PLS statistical software was selected. After investigation of the data, a significant positive relationship was found between the variables, the model had a good fit, and finally, the developed model was approved.

Keywords: Supply chain management; marketing strategy; organizational performance.
1. INTRODUCTION

Nowadays, taking advantage of the best marketing strategies has become the most fundamental concern for directors of manufacturing companies in order to achieve a superior performance and strengthen every single member's performance. Regarding the present changes in organizations and manufacturing systems, many tools and techniques are developed and employed. Lean thinking which is considered as one the most important of these techniques refers to an organization that operates the processes without wasting the resources and makes more production possible with spending lower resources. One of the requirements of a manufacturing company is adopting a kind of supply chain strategies.

Presence of a large number of suppliers and their close competition and the consumers’ increased expectations for higher quality and quicker servicing has put a great pressure on manufacturers and these factors has not been existing already. In this situation, commercial companies realized that they are not able to do all the things alone, and on the other hand, in addition to paying attention to internal affairs and resources, managing and monitoring the relevant resources and elements outside the company is also needed [1].

Supply chain is a network of nodes (manufacturing companies) that cooperate to meet the customers demand, and these manufacturing companies are organized in different parts. In this network, the position of each manufacturing company or the node is related to its relative position in reality. These nodes are connected to each other through supply-demand relationships. These nodes supply external demands that give orders to the lower layers of the supply chain using external supply that respond to the upper layers orders [2].

According to most of the studies on operation strategies (Oss ¹), one of the main management problems is managing the supply chain that the operating system theory cannot review the content points in terms of supply chain, especially in a developing economy in which technologies are almost weak and management is in lower levels. Changing the strategy and environment of the business unit requires changing the supply chain strategy, but the way of making this change requires an appropriate solution [3].

Supply chain management is one of the tools by which gaining value for the customer can be achieved. Customer's value has a great importance in supply chain and leads to changes in customer's demands and as a result, changes in the competitors' activities. Therefore, in order to gain and preserve a sustainable competitive advantage, it should be always paid attention. Providing real value for the customer is possible through creating a bilateral and direct communication platform between the organization and the customer. Larger values created for the customer lead to their more loyalty.

2. THEORETICAL BASES AND BACKGROUND

Changing the strategy and environment of a business requires changing the supply chain strategy, but the way of making this change is not clear. Therefore, operating systems need to be reviewed from the perspective of supply chain management (SCM²) in a new-fangled market. Moreover, designing supply chain network and manufacturing increasingly gain importance for getting competitive advantage [4].

Rapid changes and uncertainty of the markets have led to great importance of the organization’s recognition of the supply chains they are a member of which and the role they play in which. The companies that are aware of the way of building powerful supply chains and participating in them will gain major competitive advantages in their markets. Also, competition between the companies has had a growing procedure in global markets since the 1990s [5].

On-time delivery of the products to the customers with a lower selling price leads to increased competition power for the companies. Companies have found that they cannot achieve an improved performance in their organizations and businesses without focusing on supply chain [6].

A agile supply chain emphasizes market sensitivity and quick response to the customers. In order to provide these elements, companies

¹ Operations strategies
² Supply chain management
should raise their processes and performance integration by using the advanced technologies of manufacturing and information technology. In addition, continuous mobility chains can transfer the customer's request to all the functions existing in the manufacturer in order to facilitate the communication at the real time through information technologies, systems, and process coordination among different functions. Companies with agile management can strengthen the control of flexibility of physical change process and other flexible provision activities. Continuous delivery chains employ all the internal functions for cooperating with each other. Supply chain management includes systematic and strategic coordination of traditional parts of businesses and also tactics which are employed in these parts whether in a specific company or in the whole chain with the purpose of long term improvement of performance of each company and the whole supply chain [7].

Philip Kotler, the father of modern marketing, defines marketing in this way: marketing is a human activity to satisfy needs and demands using exchange process. Drucker, the father of modern management, believes that the aim of marketing is abundant sale. Marketing seeks to find a way to know the customer to understand his/her needs in a way that the good or service matches his/her needs and goods are sold [8].

Marketing is considered as a basis for creating value for the shareholders and the customers. So, this is the responsibility of marketing to provide the expected value for the organization and the customers through considering the customers' needs and creating trust and loyalty among them. As other commerce techniques, marketing should also be adapted to the technology changes and employ the concept of innovation in all affairs [9].

In fact, companies need to adopt marketing strategies in supply chain more than ever. The directors have found that a powerful supply chain strongly improves the financial results. The main purpose of this research is to study the effect of supply chain management and marketing strategies on the improved performance of organizations.

The main focus of marketing strategies is on proper allocation and coordination of marketing resources and activities in order to achieve the company's goals regarding the market of a specific product. Therefore, the major issue about the domain of marketing strategies is determining specific target markets for a family of products or a specific product. Then, through designing and executing an appropriate plan of integrated marketing elements (fundamentally the four elements of product, price, place, and promotion) based on the demands and needs of the potential customers in that target market, companies seek for gaining competitive advantage and synergy [10]. According to what has been discussed, price is only one of the marketing tools used by companies in order to achieve the goals. Price-related decisions should be in coordination with the product design, place system, and promotion, so that an effective and successful marketing plan is resulted, because decision related to other marketing factors influence the decisions related to pricing.

Regarding the importance of improving supply chain management, supply chain strategies (SCSs 3 ) should play an important role in determining the company’s operating system. From the SCM strategic perspective, designing supply chain should be coordinated with the company’s commission and strategies, and SCSs should operate as a logical bridge between the upper level strategies of companies and their supply chain activities [11].

2.1 Performance

Organizational performance is one of the most important structures discussed in management researches, and undoubtedly, it is considered as the most important criterion for measuring success in commercial companies. The term performance means the state or quality of function. Therefore, organizational performance is a general structure referring to the way of performing organizational operations. The most famous definition of performance has been proposed by (Nilly et al., 2002) as “the process of explaining the quality, effectiveness, and efficiency of the previous actions”.

2.2 Supply Chain Management

Nowadays in global markets, we are faced with products with short lifetime and various needs of customers that require a great deal of attention and focus on supply chain [12].

3 Supply chain strategies
There are various events over the supply chain: the raw material is produced, the products are manufactured by one or several factories and transferred to the warehouses, and finally, the products are delivered to the retailers or the customers. Supply chain is a complicated network of different facilities and organizations each of which have different and sometimes contradictory goals [13].

The term “supply chain management” was first introduced by some counselors in early 1980s and it has been paid much attention since then [14]. There are various definitions for the concept of supply chain management. As the first definition, state in their book titled “designing and managing the supply chain”: “supply chain management is a set of approaches employed for integration and efficiency of the supplier, manufacturer, warehouses, and stores. Therefore, the products is manufactured and distributed in appropriate number, time, and place and this leads to a minimized cost of the wide system, while the expected service level is achieved”. He looks at the concept of supply chain as “a network of logistics” and considers it as “a dynamic system” that is changed with the changes of the customer’s demand, the supplier’s capacities, and the existing relationships over time. This logistic network consists of the suppliers, warehouses, distribution centers, retail markets, raw materials, work in process inventory, and the products [15].

In another definition proposed by the council of supply chain management professionals, supply chain management is described as the following:

Supply chain management includes planning and managing all the activities related to sourcing, procurement, conversion, and all the activities of logistic management. Also, supply chain management includes coordination and cooperation with the parties including suppliers, mediators, third part service providers, and the customers. Specifically, supply chain management integrates supply and demand management in and among the organizations. In another definition [16], quoted by global supply chain forum, supply chain management is described as the following: “supply chain management is integration of key business processes from the final user to the initial manufacturer and this leads to providing projects, services, and information that increase the value for the customers and other stakeholders.

The theoretical basis of supply chain refers to Porter’s value chain 4 model. According to Porter’s viewpoint, through communicating the supplier’s value chain and the organization’s value chain, it is possible to provide opportunities for promotion of the organization’s competitive advantage [14].

2.3 Marketing Strategy

Nowadays with the advanced technologies and sciences and the changes of the customer’s demands and desires, running and implementing the process of market researches in business companies seems more necessary. The market environment, customers, competitors, etc. can be better understood through marketing researches and the probability of making mistake in decision making by the managers is reduced. At the moment, all the successful companies have a common characteristic and that is paying attention to the customers and the market. They make effort for identifying the target market, understanding the customer’s needs and meeting them in order to be able to provide higher values for the customers compared with the competitors, and they encourage all the organization members to take actions in this regards. The (p4 5) marketing mix is as the following:

- **Product:** In marketing integration, product refers to features such as designing, the technology used in the product, quality of packing, brand, after sale services, etc. All these factors should be determined with a high accuracy.
- **Price:** Strategy of pricing the products of the organization, their selling price, and the level of the present prices are considered as important stages that require a lot of attention. Pricing strategy can be as one of the following methods: pricing strategy with the goal of returning the investment cost (gaining profit from the market) such as the price of electronic devices that are sold with a high price at the beginning of entering the market and their prices are reduced over time, strategy of penetrating in the market (entering the market with a

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4 Porter’s Value chain
5 Price, Product, Place, Promotion
competitive price), pricing based on the trade price, or even the strategy of (losing the leader) i.e. selling the product with a loss for attracting customers.

- **Place**: In marketing mix, place includes distribution channels, selling, and ordering the company's products; it means that distribution channels be related to whether the wholesalers rather or the retailers, the orders are made by post or the internet, or selling in done personally or by multiple channels, etc.

- **Promotion and advertisement**: Include the following:
  
  Personal sale: It refers to selling by face to face contact between the salesperson and the customer

  Advertisement: Advertisement refers to public informing for raising sale through TV ads, Radio ads, newspapers, magazines, etc.

  Public relations: Public relations refer to having good relations with the customers and external agents of the organization through holding meeting with holders of industries, mines, and relevant companies, etc.

Sales promotion is a way of increasing the sales in a short period of time and temporarily. This is not a general and comprehensive solution and is done by giving advertisement gifts, selling on sale, gathering, etc [10].

In a paper titled "A single-manufacturer multi-buyer supply chain inventory model with controllable lead time and price-sensitive demand", a two-echelon supply chain inventory model is presented in which each buyer's demand depends on the product selling price. The manufacturer's lead time includes several elements and each element can be decreased by an additional crashing cost. In the proposed model it is supposed that the lead time demand has a normal distribution or is distribution-free, and the demand of each buyer is considered as a non-linear performance of price and the lead time is a decision making variable. Optimization is obtained by maximizing the total expected profit of the supply chain, including the profit of buyers, producer, and then the profit function of the entire system. Then using two integrated models, which both are divided into normal distribution and free-distribution, and gaming approach, the reduced lead time negligibly affects the selling price of the product but it increases the profit of the supply chain system [17].

In a paper titled "A multi-product multi-echelon inventory control model with joint replenishment strategy", the joint replenishment strategy is applied into the inventory system and builds a multi-product multi-echelon inventory control model, including four suppliers (divided in two parts each part has two suppliers), a main company, and two distributors, and two products. Then a designed genetic algorithm is used to solve this model, and finally, a model is simulated under three different ordering strategies. This model will minimize the ordering, maintenance, transportation, and shortage costs. In this research, assumptions such as the presence of a main company in the supply chain and the constant price of each product and single manufacturer can only provide one raw product. Additionally, lead time is constant for each node company. Moreover, the cost of storing each product is constant in each unit and the cost of storage in each node company can be different [18].

In a paper titled "A new methodology for multi-echelon inventory management in stochastic and neuro-fuzzy environments", an approach is presented for the effective multi-echelon inventory management. Then a neural network simulation of the model with the support of neuro-fuzzy demand of lead time is proposed; and finally, its performance is calculated using selected performance models from SCOR model. In this method, attempts are made to optimize the n-echelon supply system with tree structure in which the lower parts are fed by higher parts. The assumption is that the last part (central warehouse) is fed with unlimited inventory. In this model, the demand and lead time are determined using neuro-fuzzy computations. This method reveals the real results [17].

In the paper titled "Coordinating pricing and inventory decisions in a multi-level supply chain: A game-theoretic approach", the organizational decisions such as selection of suppliers and components, pricing and inventory in the multi-level supply chain composed of a single manufacturer and several retailers have been presented. This problem has been modeled as a non-cooperative dynamic game. In this research, Nash equilibrium has been applied to analyze the strategies of supplier, manufacturer, and retailers
in the whole RMS game. In order to show the game model and solution algorithm, a special case in computer industry has been presented, results show that the increased retail market scale reduces other retailers’ profit and decreases in refilling cycle [19].

In a paper titled "Cost allocation model for optimizing supply chain inventory with controllable lead time", the issue of decentralized supply chain coordination which is composed of a single vendor and a buyer is considered. The vendor presents a single product to the buyer and the lead time can be controlled by adding crashing cost. Two supply chain inventory models with controllable lead time are considered in different decision making states. One has been offered under decentralized model based on Stackelberg model and the other one under centralized model of the integrated supply chain. Additionally, the asymmetric Nash's model of bargaining has been presented based on satisfaction level in order to obtain the best cost allocation between the vendor and the buyer. The results show that the reduced lead time can decrease inventory cost and the cost allocation model has been presented based on satisfaction level [20].

In a paper titled "Two-echelon supply chain inventory model with controllable lead time and service level constraint" a two-echelon supply chain consisted of a vendor and a buyer is proposed. A vendor produces a product in a batch production environment and supplies it to a buyer who is faced with a stochastic demand. Additionally, it is supposed that the distribution is normal. Moreover, the buyer lead time is considered to be controllable and it can be reduced using added cost, and all shortages are backordered. A model for integrated vendor-buyer problem is formulated to determine the optimal rate of the order, lead time, and the number of shipments from vendor to buyer during a period of production. The aim is to minimize the total cost expected from the integrated vendor-buyer system, including the total costs of order, maintenance, and lead time in the time unit for buyer and the launching and maintenance costs in the time unit for vendor and service level constraints (SLCs) for buyer. Instead of having the shortage cost in the objective function, a SLC is included in the model which requires the demand to be certainly divided in each cycle. Additionally, an efficient method to find the bounds on the number of shipments is proposed and an algorithm to minimize the total expected cost is presented [21].

In a paper titled "Pricing, manufacturing and inventory policies for raw material in a three-level supply chain", the aim is the optimization of the supply chain network total cost by coordinating decision-making policy using Stackelberg–Nash equilibrium. In this research, the assumption is that the demand is sensitive to price and the shortage is not allowed. In the proposed model, the decision variables include the supplier's price, producer price, and the number of shipments received by the supplier and producer. The proposed model is a pricing-production-decentralized inventory model in the three-level supply chain consisted of a single supplier and a single producer and some retailers. In order to obtain an optimal solution, an exploratory algorithm is proposed, presenting the optimal policies of production, pricing and inventory management (Taleizeidah et al., 2017).

3. RESEARCH HYPOTHESES

1. (Product) marketing strategy has a significant effect on the performance of supply chain (on time delivery).
2. (Price) marketing strategy has a significant effect on the performance of supply chain (on time delivery).
3. (Promotion) marketing strategy has a significant effect on the performance of supply chain (on time delivery).
4. (Place) marketing strategy has a significant effect on the performance of supply chain (on time delivery).
5. Supply chain performance (on time delivery) has a significant effect on the organization's performance (marketing performance).
6. Supply chain performance (on time delivery) has a significant effect on the organization's performance (financial performance).
7. Marketing performance has a significant effect on financial performance.

4. CONCEPTUAL MODEL OF THE RESEARCH

In the present research, the model of the research conducted by Qi et al. [7] was used.
5. RESEARCH METHODOLOGY

In terms of the method of collecting data for testing the hypotheses, the present research is descriptive-survey of correlation type tested by questionnaire. In terms of purpose, this research is an applied one. In order to collect data for completing the theoretical bases, internet and library resources including books, articles, and English case studies have been used. In order to measure the research data, a questionnaire designed by the researcher was distributed among the target population and filled through interview. Then, using the collected data, the hypotheses of the population studied in this research include trade experts who are selected in a way that research goals can be achieved. The research data was collected by simple random sampling method from among the experts of this field.

To measure the validity of measurement variables, the content and construct validity were considered. In order to test content validity, the experts and specialists' opinions were used. Additionally, the construct validity was investigated using confirmatory factor analysis so that the researcher can assure that all questions and items belong to the related variable. In order to ensure the reliability of research variables,
Cronbach's alpha coefficient was calculated. As Cronbach's alpha coefficients were above 0.7 for all variables of the research, it can be concluded that the variables measurement tool has a good reliability.

The statistical population under study is consisted of 1000 cases of experts in the business area. In order to select sample, stratified random sampling method was used. In the current research, sample size was calculated using Cochran's formula for known population, and sample size was calculated to be 390.

After determining sample size and referring to business experts, a total number of 385 questionnaires were returned back and those which had not been filled out were removed.

In order to analyze data in this study, structural equation method (SEM) was used in the PLS software, and to analyze descriptive statistics data (statistical index of dispersion, and preparation of tables and charts), as well as to investigate reliability of the questionnaire, SPSS software was used. In the approach proposed by Cohen et al. (2003), first, predictor and moderator variables were standardized to avoid multicolinearity problem. Then, interaction term was created through multiplying each predictor variable by moderator and the multiple hierarchical regression is performed. To this purpose, the predictor and moderator variables, and the interaction term are entered into regression model in the first stage and second stage, respectively.

5.1 Data Analysis

After determining the research method and using appropriate tools, the data required for testing the research hypotheses was collected. Then, using appropriate statistical techniques that are compatible with the research method and the type of the variables, the collected data were classified and analyzed, and finally, the hypotheses guided until this stage were tested in order to determine a solution for answering the research question. Data analysis is considered as a scientific stage of the fundamental bases of every scientific research by which all research activities are directed and controlled until achieving the result.

As seen in table 1, there is a positive and significant relationship between the research variables.

In the following, the final research model and its fitness indexes are presented.

In Table 2, the coefficients of standard paths between the variables are presented.

As seen in Table 2, all the standard coefficients of extrinsic variables have become meaningful over intrinsic variables. In other words, it can be said that the variables have meaningful relationships with each other. In Table 3, fitting indexes of the final model of the research are presented.

Comparative fitting index (CFI) with the value of 0.97 and the root mean square error of approximation (RMSEA) with the value of 0.03 that shows an appropriate fitting suggests the suitability of the fitting model. GFI (goodness of fitting index) that represents absolute fitting has the value of 0.94 and close values for this model, and this suggests that in general, the collected data are acceptable near the range and the compiled model is approved.

![Fig. 3. The final research model in standard state](image-url)
Table 1.

<table>
<thead>
<tr>
<th>Product</th>
<th>Mean</th>
<th>Standard deviation</th>
<th>Price</th>
<th>Promotion</th>
<th>Place</th>
<th>Performance</th>
<th>Performance</th>
<th>Supply chain performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product</td>
<td>3/01</td>
<td>1/086</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Price</td>
<td>3/07</td>
<td>1/054</td>
<td>0/728*</td>
<td>0/652*</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Promotion</td>
<td>3/03</td>
<td>1/050</td>
<td>0/740*</td>
<td>0/268*</td>
<td>0/577*</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Place</td>
<td>2/89</td>
<td>0/333</td>
<td>0/482*</td>
<td>0/21**</td>
<td>0/48**</td>
<td>0/42**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Performance</td>
<td>3/12</td>
<td>1/17</td>
<td>0/479*</td>
<td>0/358*</td>
<td>0/42*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supply chain performance</td>
<td>2/97</td>
<td>1/07</td>
<td>0/814*</td>
<td>0/268*</td>
<td>0/729*</td>
<td>0/48**</td>
<td>0/326**</td>
<td>0/42**</td>
</tr>
</tbody>
</table>

**P<0.01

Table 2. Standard coefficients of extrinsic variables over intrinsic variables

<table>
<thead>
<tr>
<th>Extrinsic variable</th>
<th>Intrinsic variable</th>
<th>Standard estimation</th>
<th>Critical value</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Price</td>
<td>Supply chain performance</td>
<td>0/49</td>
<td>8/19</td>
<td>0/001</td>
</tr>
<tr>
<td>Product</td>
<td>Supply chain performance</td>
<td>0/29</td>
<td>5/93</td>
<td>0/027</td>
</tr>
<tr>
<td>Promotion</td>
<td>Supply chain performance</td>
<td>0/21</td>
<td>4/22</td>
<td>0/001</td>
</tr>
<tr>
<td>Place</td>
<td>Supply chain performance</td>
<td>0/15</td>
<td>4/36</td>
<td>0/001</td>
</tr>
<tr>
<td>Supply chain management</td>
<td>Organizational performance</td>
<td>0/38</td>
<td>4/92</td>
<td>0/001</td>
</tr>
<tr>
<td>Supply chain management</td>
<td>Organizational performance</td>
<td>0/35</td>
<td>5/57</td>
<td>0/001</td>
</tr>
<tr>
<td>Organizational performance</td>
<td>Organizational performance</td>
<td>0/64</td>
<td>6/63</td>
<td>0/001</td>
</tr>
</tbody>
</table>

Table 3. Standard coefficients of extrinsic variables over intrinsic variables

<table>
<thead>
<tr>
<th>Extrinsic variable</th>
<th>Degree of freedom (Df)</th>
<th>Chi-square model (X²)</th>
<th>Degree of freedom (Df)</th>
<th>The ratio of Chi-square to degree of freedom (X²/DF)</th>
<th>Goodness of fit index (GFI)</th>
<th>Comparative fitting index (CFT)</th>
<th>Proper comparative fitting index (PCFI)</th>
<th>Root mean square error of approximation (RMSEA)</th>
<th>The final model of the research</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>71/161</td>
<td>110</td>
<td>1/47</td>
<td>0/94</td>
<td>0/97</td>
<td>0/78</td>
<td>0/03</td>
<td>110</td>
<td>1/47</td>
</tr>
</tbody>
</table>
If the comparative fitting index (CFI) which is used for testing the model is more than 0/9, it shows the appropriate fitting of the model. Absolute index of (GFI) raises the question that whether the error variance remained after fitting the model is a significant value or not. In the present research, since this value is more than 0/9, it shows the proper fitting of the model.

6. CONCLUSION

According to the results of analysis, all the hypotheses are approved and according to the studies of the research backgrounds, the results of this research are consistent with the conducted researches and the positive effect of marketing strategies (promotion, price, product, and place) on supply chain performance and improved organizational performance is proven.

7. RECOMMENDATIONS

Regarding the results, companies and organizations should identify the customers’ needs and provide the products with the quality desired by the customers. Also, they should gain the customers’ satisfaction and loyalty through providing real after sale services. Companies and organization can increase the value of the products perceived by the customers by providing instruction and consultation for the customers. They can reduce the customers’ costs by discounts, festivals, providing fast and special side services, free consultation and help, etc. Companies and organizations can improve the customers’ access to the products by increasing their branches and suppliers, and raising the speed of delivering the products. Companies can improve their marketing strategies and supply chain performance through wide discounts, various pricing strategies, proper promotion strategies, and also reducing the required time and avoiding wasting the customers’ time, increasing sale channels (internet and electronic), delivery and distribution channels, and providing brochures. In this way, they can promote both their financial performance and their market performance and also satisfy their customers.

8. RESEARCH LIMITATIONS

However, the results of this research cannot be generalized to other countries and organizations with different conditions, because in developing and developed countries, each of variables may have different results of this research even in similar conditions and they may change the results of the research generally. For future researches, other factors influencing the performance, strategy, and supply chain can be studied in other fields and useful results can be extracted which can be used for development and progress of all guilds.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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