

## The Effect of Creativity on Performance of Sports Federations with the Mediating Role of Knowledge Sharing

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### Abstract

**Purpose:** The purpose of this study was to investigate the effect of creativity on performance with the mediating role of knowledge sharing in sports federations. **Method:** This field study was a descriptive-correlative research and a practical one. The research population consisted of all presidents, vice presidents, general secretaries, committee managers and experts in 51 sport federations (N=780), and 267 subjects were studied through stratified random sampling approach that was consistent to recommended sample by Krejcie & Morgan table. The research tools were adopted from the existing literature to collect the data. The reliability of the research tools were confirmed according to Cronbach's alpha. Face, content, and construct validity were used to evaluate the validity of the research tools. To test the research hypotheses, structural equation modeling was conducted by applying Smart PLS. **Results:** The findings demonstrated that "Creativity" had a positive and significant effect on "Performance", as well as "Knowledge sharing". Moreover, "Knowledge sharing" had a positive and significant effect on "Performance". The results also showed that "Knowledge sharing" mediate the relationship between "Creativity", and "Performance" in sport federations. **Conclusions:** The findings of this study, with emphasis on the role of creativity and knowledge sharing in improving the performance, can be regarded as a platform for enhancing the performance of sports federations. Creativity and knowledge sharing can play a significant role in empowering the human capital that ultimately result in performance development.

**Keywords:** Creativity, Knowledge Sharing, Performance, Sports Federations

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## INTRODUCTION

To be successful, sports organizations requires moving along the evolution process. Organizations will not be able to respond to their stakeholders' demands without improving their performances (Ullah et al., 2020). To improve the organizational performance, effective management of human capital provide a basis for sustained competitive advantage (Dastmalchian et al., 2020). Creativity and knowledge sharing are critical concepts that can empower the human capital that ultimately generate valuable competitive advantages for sport organizations.

Organizational performance is one the most important variable of interest for scholars concerned with any area of management (Richard et al., 2009). The nature of performance can be defined as a process that assist individuals or organizations in obtaining their objectives, as well as the behaviors exhibited by group members to reach the expectations and needs (Campbell, 1990). The performance denotes the quality and quantity of tasks fulfilled by individuals or groups at work (Schermerhorn et al., 1999). Kao and Wu (2016) stated that improving knowledge processes can lead to creative, financial, market and organizational performance, (Kao and Wu, 2016). Organizational performance can be said to be the output of knowledge processes (Abubakar et al., 2019). Focusing on the knowledge management and the creativity infrastructure is crucial to the survival of sports organizations and improving their performances. Attention to knowledge management and in particular, knowledge sharing as one of the important aspects of knowledge management can provide sport organizations with dynamic performance in different fields.

Creativity has been defined as a seed of all innovations (Amabile et al., 1996). In ever-increasing environmental complexity and uncertainty, creativity has been regarded as a critical factor to survival and growth of organizations (Woodman et al., 1993). Amabile et al. (1996) argued that creativity is a capability that creates useful and valuable processes, procedures, ideas, services and products by the individuals that further help to establish value for the stakeholders. Creativity is closely linked to the knowledge (Law and Ngai, 2008). It can be the base of organizational effectiveness and a source of competitive advantage for the organization (Grant, 1996). Creative atmosphere can support the sharing of knowledge, and organizational learning.

Recognizing the value of knowledge is one of the most strategic resource for the maintaining competitive advantage as well as superior organizational performance (Prieto and Revilla, 2004; Schwaer et al., 2012). The knowledge management as well as the creativity have been regarded as critical factors in social and organizational studies. Knowledge seems to be increasingly recognized as a key concept in understanding the behavior of various organizations (Grant, 1996). Knowledge-based organization can succeed and survive in the competitive environments. Therefore, learning organizations should enhance structures and cultures appropriate to the knowledge sharing process (Mizen, 2009). Knowledge sharing in organizations is positively associated with innovation (Zhou and George, 2001). Structural dimensions of knowledge management in the organizations have positive impact on creativity (Skerlavaj et al., 2010). Knowledge management has a positive impact on the organization's innovative outputs, product improvement and employee advancement. On the other hand, not only the domain of knowledge but also the innovative behavior seems to have a great impact on the knowledge management system. Previous researches have shown a positive relationship between knowledge acquisition and increased creativity in the organizations (Da, 2010). The findings of the Gondai et al. (2011) indicated a positive and significant effect of creativity and innovation on organizational performance (Gondai et al., 2011). Kurtzberg and Amabile (2001) stated that in situations and environments where individuals work together, ideas are integrated and the creativity is facilitated (Kurtzberg and Amabile, 2001). Therefore, in sports organizations and their related activities where individuals, staff, volunteers and athletes work together, potential and appropriate opportunities are created that provide the necessary context for creativity and knowledge sharing.

Knowledge sharing in sports organizations can pave the way for organizational activities and for the smoothing of work operations. As a result, researchers and practitioners in related fields have increasingly focused on organizational capabilities for identifying, obtaining, creating, sharing and collecting knowledge. Since sports organizations have different units depending on their missions and performance, their effectiveness can be largely influenced by the sharing of their units' knowledge. According to Kogut and Zander (1996) knowledge sharing

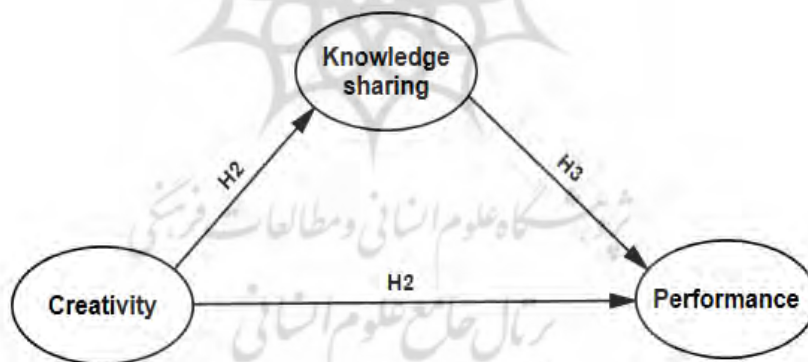
behavior is essential for the performance of organizations (Kogut and Zander, 1996). Therefore, it seems that sport organizations are able to directly and indirectly improve their performance by promoting knowledge sharing behaviors among their employees. Organizational effectiveness today is largely dependent on how knowledge is shared between individuals, teams, and units (Argote and Ingram, 2000). Knowledge-sharing behaviors are believed to be important in building different organizational competencies, including creativity that plays a vital role in organizational performance (Kogut and Zander, 1996).

Previous studies have demonstrated that sharing knowledge has a positive impact on cost savings, team performance, innovation capabilities, and organizational performance (Mesmer-Magnus and DeChurch, 2009). Gold et al. (2001) investigated the impact of the knowledge process on organizational performance. The results of this study showed that knowledge gathering and sharing can provide the organization with a competitive advantage and ultimately improve the performance of the organization (Gold et al., 2001). Choi and Lee (2003) explored how different KM styles influence organizational performance. The results showed that implicit knowledge management and explicit knowledge had the most effects on organizational performance (Choi and Lee, 2003). The Thornhill (2006) demonstrated that in organizations with high innovation, the interaction of knowledge, affects performance (Thornhill, 2006). Harlow (2008) showed that there is a significant relationship between implicit knowledge sharing and the firm performance (Harlow, 2008). The findings of Wang and Wang (2012) showed that knowledge sharing practices (implicit and explicit) affect innovation and performance (Wang and Wang, 2012). This findings demonstrated that knowledge sharing has a significant impact on innovation, and financial performance. Shahin and Rabbanimehr (2013) indicated that innovation and learning improve the outcomes of operations (Shahin and Rabbanimehr, 2013). Hsu (2008) found that knowledge sharing, innovation, and sharing practices have a positive relationship with collaborative effort, and organizational performance (Hsu, 2008). Law and Ngai (2008) also found that knowledge sharing and organizational learning lead to better performance by improving the business process and service delivery of the organization (Law and Ngai, 2008). By studying the relationship between knowledge sharing and

organizational performance, Du et al. (2007) found that different dimensions of knowledge sharing play different roles in the organization that ultimately lead to diverse performance (Du et al, 2007). Wang and Wang (2012) believe that explicit and explicit knowledge sharing plays an important role in facilitating organizational performance and creativity (Wang and Wang, 2012). In line with this, the research by Skerlavaj et al. (2010) showed the impact of organizational learning on the creativity of organizations and their performance improvement (Skerlavaj et al., 2010)). Based on the results of Badri Azin et al. (2012), knowledge sharing had a significant impact on human resource performance in physical education departments in East Azerbaijan (2). A review of the literature on creativity, knowledge sharing, and organizational performance suggests that sports organizations can provide the basis for improving and enhancing organizational performance by encouraging the process of knowledge sharing and creativity. Undoubtedly, paying attention to various intra-organizational processes such as creativity and knowledge sharing can greatly affect the performance of sports federations.

Although empirical relationships between knowledge sharing and organizational performance have been tested, very little research has focused on the specific relationships of creativity and performance of sports federations with the mediating role of knowledge sharing. Sports organizations in Iran have begun their journey towards professionalization, and a successful move to the professionalization requires the strengthening of knowledge and creativity of human capital to improve the performance. This study is one of the few studies that has examined the concepts of creativity and knowledge sharing and their impact on the performance of sports federations in Iran. The importance of knowledge sharing in organizations has been emphasized by many researchers and professionals in the field of organizational behavior in order to maintain competitive advantage. Recent empirical research has discussed the effects of knowledge sharing on organizational performance. But little research has examined the impact of creativity alongside knowledge sharing on the performance of sports organizations through a holistic model.

Undoubtedly, creativity and knowledge sharing are key elements in sports organizations that can lead to creating organizational values and maintaining competitive advantages. On the other hand, given the specific nature of sports organizations that are often volunteer-driven, attention to the integrated process of creativity, knowledge sharing and performance can play a key role in human resource development. Despite the importance of these issues and their impact on organizational performance, these concepts have not been studied through an integrated model in sports organizations. Therefore, focusing on the importance of studying these variables in sport federations, this study examined the creativity, knowledge and performance through a comprehensive model in sports federations in Iran. Therefore, the this study was set up to answer these questions: “what is the role of creativity in knowledge sharing in sport federations?, what is the role of creativity in performance of sport federations?, and finally, what is the role of knowledge sharing in performance of sport federations?”. In this study, a conceptual model has been proposed in which the effects of creativity, and knowledge sharing on performance sport federations will be investigated. The proposed model has been given in Figure 1.



**Figure 1:** The conceptual model

## METHOD

The current study was a descriptive-correlative research and practical one that has been conducted by applying a quantitative approach. To

fulfill the research objectives, along with literature review, a field study using a questionnaire was employed. The statistical population of this research included all presidents, vice presidents, general secretaries, committee managers and experts in 51 sport federations (N= 780), and 267 subjects were studied through stratified random sampling approach. Of 300 distributed questionnaires among the research sample, 278 questionnaires were returned, 267 of which were initially eligible for incorporating in data analysis.

The questionnaires used in this study were adopted from the existing literature with some modifications to fit the context of this study. Knowledge sharing with eight items were measured by the Wang and Wang (2012) questionnaire (Wang and Wang, 2012). Performance was measured using a 12-item questionnaire designed and developed by Shahin et al. (2014) (Shahin et al., 2014). Creativity was also measured by four items adapted from the Coelho et al. (2011) questionnaire (Coelho et al., 2011). The research questionnaire was designed and distributed based on a five-point Likert scale ranging from 1 (strongly agree) to 5 (strongly disagree) in a three-page format. Face and content validity of the scales were confirmed according to the opinions of 8 experts in the field of strategic management and organizational behavior.

The results of the measurement model structures were presented in Table 1. Internal reliability was assessed by alpha coefficient and composite reliability (CR). Internal consistency, indicators reliability, convergent validity, and divergent validity were also assessed. Internal consistency reliability was tested by calculating composite reliability and indicators reliability by indicator outer loading. The acceptable value for both indices should be higher than 0.70 (Hair, et al., 2016). Convergent validity was assessed using the average variance extracted (AVE). The acceptable value of AVE should be higher than 0.50 (Forenell and Larcker, 1981). Because the AVE values extracted by each construct was greater than the variance shared between the other variables, divergent validity has also been confirmed (Forenelland Larcker, 1981). The results of measurement properties have been given in table 1.

**Table 1:** Results of measurement properties

Construct	OL (>0.70)	CR (>0.70)	AVE (>0.50)
Knowledge sharing Wang and Wang (2012)			
People frequently share existing reports and official documents with members of my organization.	0.90 <sup>a</sup>	0.83	0.69
People frequently collect reports and official documents from others in work.	0.83 <sup>a</sup>		
People are frequently encouraged by knowledge sharing mechanisms.	0.88 <sup>a</sup>		
People are frequently offered a variety of training and development programs.	0.79 <sup>a</sup>		
People frequently share knowledge based on their experience.	0.82 <sup>a</sup>		
People will share lessons from past failures when they feel necessary.	0.78 <sup>a</sup>		
People frequently collect knowledge from others based on their experience.	0.85 <sup>a</sup>		
People frequently collect knowledge from others based on their expertise.	0.82 <sup>a</sup>		
Creativity Coelho et al. (2011)			
I try to be as creative as I can in my job.	0.85 <sup>a</sup>	0.84	0.71
I experience new approaches in performing my job.	0.80 <sup>a</sup>		
I am creative in doing my job.	0.82 <sup>a</sup>		
On the job I am inventive in overcoming barriers.	0.83 <sup>a</sup>		
Performance Shahin, Shabani Naftchali and Khazaei Pool (2014)			
This sport federation has been successful in its use of investment.	0.85 <sup>a</sup>	0.80	0.67
This sport federation has been successful in reducing unnecessary cost.	0.84 <sup>a</sup>		
This sport federation has a good rate of profitability and revenue.	0.79 <sup>a</sup>		
The average productivity rate in the sport federation is desirable.	0.85 <sup>a</sup>		
This sport federation is successful in achieving customers' satisfaction.	0.86 <sup>a</sup>		
This sport federation is successful in identifying customers' demands.	0.83 <sup>a</sup>		
This sport federation is successful in providing proper services.	0.79 <sup>a</sup>		
This sport federation is successful in addressing customer complaints.	0.82 <sup>a</sup>		
This federation is successful in improving the quantity and quality of services.	0.90 <sup>a</sup>		
This federation has been successful in research and development.	0.86 <sup>a</sup>		
This federation pays attention to increase the skills and knowledge of staff.	0.84 <sup>a</sup>		
This federation pays great attention to increase employee's satisfaction.	0.87 <sup>a</sup>		

Notes: a: P < 0.05. OL= Outer Loading. CR= composite reliability. AVE= Average variance extracted.



After determining and confirming the fitness of the measurements models, the results of the structural model as well as the coefficient significance of the research paths were assessed by conducting PLS approach.

**RESULTS**

To measure the significance of causal relationships between variables, t value and p value were used. Less than this value, the corresponding parameter in the model is not considered significant, and also values less than 0.05 indicate a significant difference for the P value calculated for the regression weights with zero at 0.95. The model of structural equations with regression coefficients is presented in Figure 2.

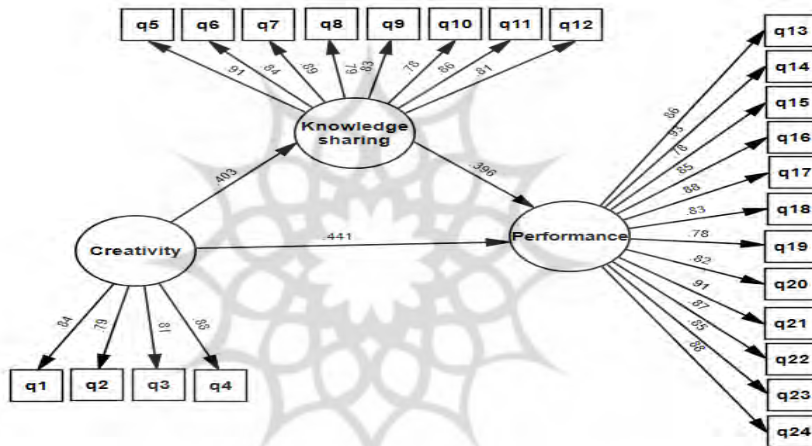


Figure 2: Structural model

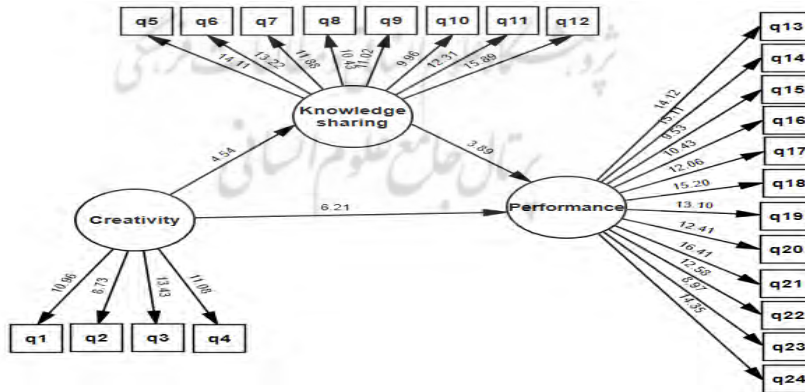


Figure 3: t value output

The causal paths along with the regression coefficients and the values of the relevant component indices are presented in Table 2.

**Table 2:** The hypothesis results

Hypothesis	Path	t-value	$\beta$	P	Result
H1	Creativity → Performance	6.21	0.441	***	Supported
H2	Creativity → Knowledge sharing	4.54	0.403	0.002	Supported
H3	knowledge sharing → Performance	3.89	0.396	***	Supported

According to the results in Table 2, all the relationships proposed in the research model were confirmed. To test the mediation effect, bootstrap test was conducted. The result of bootstrap showed that knowledge sharing had a significant effect on the relationship of creativity and performance (Boot value= 0.12,  $p= 0.001$ ). One approach to estimate the quality is calculating the ratio of the indirect-to-total effect. This ratio is also defined as the variance accounted for (VAF) value. VAF determine the extent to which the mediation process explains the dependent variable's variance. The ratio of VAF for the mediation effect in this research model was 27%. In this study, VAF was found to be larger than 20% and less than 80% that could be characterized as a typical partial mediation (Hair et al., 2016).

## DISCUSSION

This study contributes toward getting a more complete understanding of the role of creativity and knowledge sharing to organizational performance. It provides a useful operational and theoretical approach to organizational performance via the use of knowledge sharing and creativity framework. The findings of this study can be considered as a platform for developing the performance of sport federations with the emphasis on knowledge sharing and creativity. The role of knowledge sharing and creativity in improving the performance of sport federation can also be considered as significant contribution of this research.

Investigating the effect of creativity on performance in sports federations organizations Iran showed that creativity had a positive effect on the performance of sports federations ( $= 0.28$ ,  $t= 7.53$ ,  $P < 0.001\beta$ ). Research findings by Gunday et al. (2011) also indicated the positive effects of creativity on organizational performance. These studies have

defined creativity as an essential element of competitive advantage that affect the processes, structures, and services of the organization (Gunday et al., 2011). Many studies have reported a positive relationship between creativity and organizational performance. Loof (2000) examined the relationship between creativity and performance and confirmed the positive relationship between creativity and organizational performance indicators (Loof, 2000). Therefore, developing and encouraging employees in sports federations can be associated with enhancing employees' motivation and, directly and indirectly, improving organizational performance dimensions.

The findings of hypothesis1 demonstrated that creativity has a significant and positive effect on knowledge sharing ( $\beta= 0.403$ ,  $t= 4.54$ ,  $P<0.001$ ). The studies conducted by Kogut and Zander (1996) also found a close relationship between knowledge sharing behaviors and organizational creativity (Kogut and Zander, 1996). Marina (2007) also believes that the ability to transfer and apply knowledge can determine the level of creativity (Marina, 2007). Chiang and Hung (2010) and Gachter et al. (2010) argued that knowledge sharing can be defined as valuable inputs for organizational creativity and innovation (Gachter et al., 2009; Chiang and Hung, 2010). According to the findings of Xunfeng (2009), knowledge sharing among organizations is positively related to innovation (Xunfeng, 2009). Annouk and Mirella (2009) also found in their research a positive relationship between knowledge sharing and increased creativity (Annouk and Mirella, 2009). Since there is a positive relationship between knowledge acquisition and sharing with increased creativity in the organization (Da, 2010), sports organizations can improve knowledge sharing behaviors by investing on creativity-enhancing indicators. Consequently, improvements in various aspects of organizational performance help. On the other hand, many researchers believe that knowledge-sharing activities play a valuable role in creating organizational legacies, learning new techniques, solving problems, developing core competencies, and situational innovations (Hsu, 2008; Hu et al., 2009; Huang et al., 2010). Underpinning the knowledge management culture in the sports can provide a platform for organizational innovation and creativity that finally may results in encouraging and promoting knowledge sharing behaviors in the sport

federations. Providing atmosphere of trust, and reinforcing team work conditions can lead to efficient knowledge sharing in sport federations.

The results of the present study also indicated that knowledge sharing had significant and positive impact on the performance of sports organizations. These results are in line with the findings of Du et al. (2007), Hsu (2008), and Law and Ngai (2008) (Hsu, 2008; Du et al., 2007; Law and Ngai, 2008). Dhanaraj et al. (2004) also found that both implicit and explicit knowledge sharing would improve the performance (Dhanaraj et al., 2004). Studying the impact of knowledge management on managers' performance. Given the increasing attention paid to knowledge as a strategic lever of organizational performance, the specific focus of sport organizations on the various dimensions of knowledge management and, above all, knowledge sharing can improve the capabilities and performance of sports federations. Therefore, sports federations can achieve greater performance and efficiency by investing on the areas of knowledge sharing. The success of organizations largely depends on the creativity and innovation of managers, hence sport managers need to be aware of the process of managing creativity in sports federations. Employing creative staff can be effective, and this can lead to developing creative ways of doing organizational tasks. Creativity and knowledge are closely linked (Edmonds and Candy, 2002), therefore, in order to get a high level of creativity, we need to devote a lot of time to internalizing knowledge in the sport federations. Sharing knowledge for at least two reasons can lead to improved performance. Sharing knowledge on the one hand can influence decision making, and on the other hand it can enhance team coordination and collaboration. In the process of interaction between employees to share knowledge, the level of coordination may increase and proper information will be provided to the members that can ultimately lead to more credible decisions.

Given the positive impact of knowledge sharing on the performance of sports federations, creating knowledge documentation procedures of staff experiences, using motivational process, and appropriate training programs to cultivate the knowledge sharing process among employees, along with the use of a comprehensive database recording, storing, and retrieving knowledge can lead to effective use of organizational knowledge to enhance performance. According to the findings, knowledge sharing leads to better organizational performance.

Therefore, developing the necessary programs for training and implementation of knowledge sharing will improve the performance of sport federations. Educating senior managers, project managers, and experts on new concepts and approaches to knowledge sharing can be helpful. These trainings can be delivered through relevant formal and informal channels. Developing science and technology parks is also recommended in this field.

Designing and implementing documentation mechanisms of the knowledge and the experiences of members in sports federations, and applying information systems to record, maintain and to handle the KM process, is appropriate to evaluate periodically the quality and quantity of organizational knowledge. Providing rewards and incentives for members who employ a great deal of effort in sharing of knowledge at the organization level, enhances the motivation for knowledge sharing in sports federations, and this in turn can improve the performance. Sports federations need to create a calm, healthy, dynamic and secure environment to help creative staff to align their knowledge with the organizational performance.

Sport federations should provide the infrastructures for institutionalizing the sharing of existing knowledge and new knowledge in order to empower the human capital. To meet the demands of stakeholders in the field of sport in the best possible way, providing an effective structure is necessary for facilitating knowledge transfer. Because the technology plays a key role in the success of knowledge management, sport managers should be aware of the significance of technology in Sports federations and make effective use of these tools to facilitate the dissemination of knowledge.

## **CONCLUSIONS**

Finally, managers of organizations are recommended to invest on transferring knowledge of experienced staffs in order to improve the human resources performance in sports federations. In general, efficient use of knowledge sharing process, makes staff more efficient, creates innovative services, improves financial performance, reduces workloads, saves time, stimulates creativity, and enhance the competitive position.

Applying other organizational variables such as organizational learning in the proposed model in this research, and developing the present model in future research can help to explain organizational

performance infrastructures in sport federations. This research is typically a quantitative research, while the tendency for qualitative research in the field of sport management is increasing, so it is suggested to examine the process of performance improvement from a qualitative perspective for a more in-depth investigation.

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