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Examining Innovation and Entrepreneurship in the Sports Sector**Erhan Buyrukoğlu¹, Mehmet Özdemir², Aydan Yurtsever³****ARTICLE INFORMATION**

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Volume: 4, No: 2**Pages:** 559-572**ABSTRACT**

This study aimed to examine innovation and entrepreneurship in the sports sector. The study group of our research consisted of 151 participants including coaches, sports managers, sports experts and club managers. In the first part of the data collection process, the personal information form created by the researchers was used. In the second part, innovation and entrepreneurship scales created by Tekin, M., Etlioğlu, M., and Tekin, E. (2018) were used. The data obtained in our research were evaluated at a 0.05 significance level using SPSS.25.00 package program at a 95% confidence interval. Descriptive statistics related to gender, age, specialization in the sports sector, graduation status, Professional experience, province of residence, and marital status were calculated. Skewness and kurtosis values were calculated to determine whether the data showed normality distribution. Statistically, t-test, Pearson correlation analysis, ANOVA analysis, percentage and reliability coefficient calculations, and frequency calculations were performed. As a result, while there was no statistically significant difference in the variables of gender, graduation status, province of residence, age, and Professional experience, a statistically significant difference was detected in the field of innovation and entrepreneurship in the sports sector according to the marital status, specialization in the sports sector, and the obtained general analysis results.

Keywords: Entrepreneurship, Innovation, Sector, Sport

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INTRODUCTION

Innovation, has an impact on sustainability as well as on the economy and entrepreneurship (Boons et al., 2013; Montalvo et al., 2011). Entrepreneurship through innovation provides development impact on the national economy (Ball, 2005) innovation, like entrepreneurship, aims to achieve both benefits and social missions (Hernandez-Vivanco et al., 2018). It is worth noting that entrepreneurship and innovation in the sport industry are key elements to maintain competitiveness in this sector and this field of study is gaining a high level of interest (Ball, 2005) it is important to emphasize that sport entrepreneurship in the sport industry is dynamic and influences various management areas such as business strategy, new sport development, performance management, product innovation, social issues, sustainability concerns and technological developments (Ratten, 2011), innovation is an important part of entrepreneurship (Hitt et al., 2001).

Innovation is the context of all factors with a holistic view within the organization to which individuals are attached (Bayındır & Buyrukoğlu, 2023; Perry, Anderson and Ohrbrg, 2022). Innovation is defined as novelty from past to present (Naktiyok, 2006). Buyrukoğlu and Şahin (2022) have defined sports and innovation as organizational innovation, marketing innovation and process innovation in their study. Innovation leads to the formation of new ideas of individuals in the field of entrepreneurship and the realization of innovations in the sports sector. Entrepreneurship is the act of perceiving opportunities in the social environment, dreaming with perception, turning dreams into reality, and putting the opportunity enriched with realities into practice (Buyrukoğlu, 2022). In the sports sector, entrepreneurship generally helps new products to be kept in the market, promoted, and new opportunities to be provided through advertising (Stubbs, 2008; Ibrahim, Aydoğmuş, 2023). In this context, innovation and entrepreneurship play crucial roles in driving growth and development in various sectors, including the sports industry. The sports sector is inherently entrepreneurial, as it requires constant adaptation to changing consumer demands and increased emphasis on innovation (Ratten, 2010). Entrepreneurship in the sports sector allows for the exploration of new opportunities and the creation of value for stakeholders (Ratten, 2010). Innovation is a tool used to reach large masses today. Innovation in the sports sector provides the opportunity to present the innovations of sports to many audiences with its combination with sports. Technological innovations that play sports more entertaining and sportive organizations bring the presence of innovation to the spotlight (Crawford & Gosling, 2009). The development of sports mega-events has been found to be linked to urban entrepreneurship (Ratten, 2010). These events provide opportunities for entrepreneurs to create and capitalize on new ventures, such as hospitality services, transportation, and merchandise. Additionally, entrepreneurship in the sports sector has been recognized as a critical factor in responding to crises, such as the COVID-19 pandemic (Ratten, 2020). Sport businesses, athletes, managers, fans, and consumers need to utilize entrepreneurial thinking to act creatively and combat the uncertainty associated with such crises (Ratten, 2020). However, in addition to this sustainable entrepreneurship and innovation have also gained attention in the sports sector (González-Serrano et al., 2020). In recent times the integration of sustainability principles into sport entrepreneurship and innovation has become a focus for academics and practitioners (González-Serrano et al., 2020).

When the literature was examined, it was seen that there were many studies on innovation and entrepreneurship in general, but the two concepts were not evaluated together in the sports sector. Considering this situation, our research was performed to examine innovation and entrepreneurship in the sports sector. In line with this purpose, the fact that there are innovative innovations in the sports sector every day and that many sportive activities are carried out in the field of entrepreneurship support the problem of our research. In the literature, it has been observed that entrepreneurship and innovation studies have not been together.

Considering this situation, this study in the field of innovation and entrepreneurship in the sports sector is thought to complete the academic gap in the field of sports sector.

It is thought that our research will have an impact on stakeholders in the sports sector working in the field of innovation and entrepreneurship in the field of sports. In our research, it is aimed to examine innovation and entrepreneurship in the sports sector. The fact that the sports sector has a wide network has led us to examine the effects of these two scopes on the concepts of innovation and entrepreneurship in the sports sector. The researchers statistically analyzed the variables to determine the gender, age, specialization area in the sports sector in which you work, your most recent graduation status, years of working in the profession, the province where you live and marital status of the participants and the effects of these variables were included in the results of the research. In the general literature review, it is seen that there are many studies on entrepreneurship and innovation, but these two concepts cannot be included together in the sports sector. In this case, we think that our research is unique and will lead similar studies after our research and will make a great contribution to the literature. In addition, our research is thought to close the gap in the literature by leading individuals who will work on innovation and entrepreneurship in the sports sector.

METHOD

Research Model

In this study, since it is aimed to determine the determination of innovation and entrepreneurship in the sports sector, descriptive survey design from quantitative research designs was used (Karasar, 2009).

Population and Sample of the Study

The study population for our research comprised 151 individuals actively engaged in the sports sector within the Aydın and Muğla provinces. This sample encompassed a diverse group, including coaches, sports managers, sports experts, and club managers. The utilization of a random sampling method was a pivotal aspect of our research design. Through rigorous population sampling calculations, it was determined that 150 individuals from the Aydın and Muğla provinces would aptly represent the broader population sample for our study. This approach was meticulously employed to ensure the sample's representativeness and the generalizability of our findings to the larger population of interest.

Table 1. Demographic Variables

| Variables | f | % |
|---|-------------------|-------|
| Gender | Male | 35.8 |
| | Female | 64.2 |
| | Total | 100 |
| Age | + 35 years old | 19.2 |
| | 25 years old | 33.1 |
| | 23 years old | 24.5 |
| | 20 years old | 23.2 |
| | Total | 100.0 |
| Area of Specialization in the Sports Sector | Coach | 34.4 |
| | Sport Manager | 37.1 |
| | Sport Expertise | 19.2 |
| | Club Manager | 9.3 |
| | Total | 100.0 |
| Graduation Status | Bachelor's degree | 79.5 |
| | Masters' degree | 20.5 |

| | | | |
|--------------------------------|-----------|-----|-------|
| | Total | 151 | 100.0 |
| Professional Experience | 2 years | 31 | 20.5 |
| | 3 years | 17 | 11.3 |
| | 4 years | 34 | 22.5 |
| | + 5 years | 69 | 45.7 |
| | Total | 151 | 100.0 |
| Province of Residence | Aydın | 88 | 58.3 |
| | Muğla | 63 | 41.7 |
| | Total | 151 | 100.0 |
| Marital Status | Married | 78 | 51.7 |
| | Single | 73 | 48.3 |
| | Total | 151 | 100.0 |

When the variables with the highest categories in Table 1 were examined, female participants (N=91, 64.2%) were the majority in the gender variable; 25 years old participants (N=50, 33.1%) were the majority in the age variable; sports managers (N=56, 37.1%) were the majority; bachelor's degree was the majority in the educational status variable (N=120, 79.5%); 5 years and more were the majority in the profession experience (N=69, 45.7%); Aydın in the variable of the province lived in (N=88, 58.3%); Married participants were the majority in the variable of marital status (N=78, 51.7%).

Data Collection Tools and Process

The data collection procedure consisted of two different stages. First, a personal information form developed by the researchers was applied to the participants. Second, innovation and entrepreneurship scales created by Tekin, Etlioğlu, and Tekin (2018) were used.

Personal Information Form: The first segment of the data collection process involved the utilization of a personal information form designed specifically for this study. This form consisted of seven meticulously crafted questions to elicit data related to participants' gender, age, specialization within the sports sector, professional experience, educational attainment, current province of employment, and marital status.

Innovation and Entrepreneurship Scales: The innovation scale developed by Yapar (2015) and the innovation and entrepreneurship scales adapted by Tekin, Etlioğlu, & Tekin (2018) from the intrapreneurship level scale developed by Naktiyok (2004) and validity and reliability were used in our research. These scales provide a structured framework for evaluating participants' responses. Participants rated their degree of agreement with the statements on a 5-point Likert scale ranging from (1) "Strongly Disagree" to (5) "Strongly Agree".

Notably, the original authors of these scales reported Cronbach's Alpha values of .940 for the innovation scale and .950 for the entrepreneurship scale in their 2018 study. In this study, reliability analyses yielded a Cronbach's Alpha value of .954 for the innovation scale and .946 for the entrepreneurship scale, affirming the internal consistency and reliability of these instruments within the context of the investigation.

Table 2. Reliability Analysis Results

| Scales | Cronbach's Alpha Coefficient |
|-------------------------------|------------------------------|
| Innovation Scale | ,954 |
| Entrepreneurship Scale | ,946 |

Table 2 showed the reliability analysis results obtained from the scales. According to these results, it was seen that all dimensions were sufficiently reliable.

Data Analysis

In this study, SPSS 25.0 package programme was used to analyse the data. Outliers in the data set and whether the assumption of multivariate normality was accepted or not were analysed with the help of Mahalanobis distance values and 9 data showing outlier outliers were removed from the data set. The kurtosis and skewness coefficients were found to be between +2, -2 and parametric tests were used in the analysis (George & Mallery, 2010). Statistically, linear regression analysis, frequency, percentage and reliability coefficient calculations, ANOVA analysis, correlation analysis and t-tests were performed. The analyses were performed according to a 95% confidence interval. Significance level was determined as $p < 0.05$.

Table 3. Descriptive Values Kurtosis Skewness Analysis

| Variables | Minimum | Maximum | \bar{x} | Sd. | Kurtosis | Skewness |
|-------------------------|---------|---------|-----------|-------|----------|----------|
| Innovation | 15.00 | 75.00 | 49.19 | 13.20 | -,443 | -,305 |
| Entrepreneurship | 15.00 | 75.00 | 48.23 | 12.26 | -,177 | -,312 |

According to the descriptive statistics results of the scales in Table 3, it was seen that the dimension of the innovation scale was very high ($\bar{x}=49.19$) and the dimension of the entrepreneurship scale was very high ($\bar{x}=48.23$).

FINDINGS

In the findings section of our research, Gender, Graduation Status, Province of Residence, Marital Status, Age, Area of Specialization in the Sports Sector, Professional Experience, Pearson Correlation Analysis Statistical results of entrepreneurship and innovation are given in tables below.

Table 4. Independent Sample t-Test Results between Innovation and Entrepreneurship Regarding Participants' Gender Variables

| Dimension | Gender | N | \bar{X} | Sd. | t | p |
|-------------------------|--------|----|-----------|-------|-------|------|
| Innovation | Male | 54 | 47.88 | 14.93 | -,904 | ,367 |
| | Female | 97 | 49.91 | 12.15 | | |
| Entrepreneurship | Male | 54 | 47.64 | 14.01 | -,440 | ,661 |
| | Female | 97 | 48.56 | 11.24 | | |

Table 4 showed that there was no statistically significant difference in the innovation and entrepreneurship scales according to the results of the independent sample t-test between innovation and entrepreneurship in the gender variable of the participants ($p > 0.05$).

Table 5. Independent Sample t-Test Results between Innovation and Entrepreneurship in the Variable of Participants' Graduation Status

| Dimension | Graduation Status | N | \bar{X} | Sd. | t | p |
|-------------------------|-------------------|-----|-----------|-------|-------|------|
| Innovation | Bachelor's degree | 120 | 49.09 | 13.17 | -,183 | ,855 |
| | Master's degree | 31 | 49.58 | 13.53 | | |
| Entrepreneurship | Bachelor's degree | 120 | 47.95 | 12.16 | -,551 | ,583 |
| | Master's degree | 31 | 49.33 | 12.82 | | |

Table 5 showed that there was no statistically significant difference in the innovation and entrepreneurship scales according to the results of the independent sample t-test between innovation and entrepreneurship in the most recent graduation status variable ($p>0.05$).

Table 6. Independent Sample t-Test Results between Innovation and Entrepreneurship in the Variable of the Province in which the Participants Live

| Dimensions | Province of Residence | N | \bar{X} | Sd. | t | p |
|-------------------------|-----------------------|----|-----------|-------|-------|------|
| Innovation | Aydın | 88 | 50.09 | 13.27 | ,989 | ,324 |
| | Muğla | 63 | 47.93 | 13.10 | | |
| Entrepreneurship | Aydın | 88 | 49.77 | 11.81 | 1,830 | ,069 |
| | Muğla | 63 | 46.09 | 12.66 | | |

According to the results of the independent sample t-test conducted between innovation and entrepreneurship in the province in which the participants live in Table 6, there was no statistically significant difference in innovation and entrepreneurship scales ($p>0.05$)

Table 7. Independent Sample t-Test Results between Innovation and Entrepreneurship in the Marital Status Variable of the Participants

| Dimensions | Marital Status | N | \bar{X} | Sd. | t | p |
|-------------------------|----------------|----|-----------|-------|--------|-------|
| Innovation | Married | 78 | 45.83 | 12.89 | -3,338 | ,001* |
| | Single | 73 | 52.78 | 12.65 | | |
| Entrepreneurship | Married | 78 | 45.42 | 12.35 | -2,991 | ,003* |
| | Single | 73 | 51.24 | 11.51 | | |

$p<0,05^*$

Table 7 showed that there was a statistically significant difference in the innovation and entrepreneurship scales according to the results of the independent sample t-test between innovation and entrepreneurship in the marital status variable of the participants ($p<0.05$).

Table 8. Anova Analysis Results between Innovation and Entrepreneurship in the Age Variable of the Participants

| Dimensions | Age | N | \bar{X} | Sd. | f | p |
|-------------------------|--------------------|----|-----------|-------|------|------|
| Innovation | 35 years and older | 29 | 50.24 | 12.53 | ,828 | ,481 |
| | 25 years | 50 | 51.06 | 13.59 | | |
| | 23 years | 37 | 47.91 | 11.42 | | |
| | 20 years | 35 | 47.00 | 14.92 | | |
| Entrepreneurship | 35 years and older | 29 | 49.19 | 9.75 | ,817 | ,486 |
| | 25 years | 50 | 47.27 | 13.14 | | |
| | 23 years | 37 | 50.16 | 11.37 | | |
| | 20 years | 35 | 48.40 | 13.74 | | |

Table 8 showed that there was no statistically significant difference in the innovation and entrepreneurship scales according to the result of the ANOVA analysis between innovation and entrepreneurship in the age variable of the participants ($p>0.05$).

Table 9. Participants' Specialization in the sports sector Anova Analysis Results between Innovation and Entrepreneurship in Your Field Variable

| Dimensions | Area of Specialization in the Sports Sector | N | \bar{X} | Sd. | f | p | Source Of Difference |
|------------------|---|----|-----------|-------|-------|------|----------------------|
| Innovation | Coach | 52 | 45.36 | 12.19 | 3,176 | ,026 | 1-2 |
| | Sport Manager | 56 | 52.01 | 13.08 | | | |
| | Sport Expertise | 29 | 48.17 | 14.83 | | | |
| | Club Manager | 14 | 54.21 | 10.35 | | | |
| Entrepreneurship | Coach | 52 | 46.48 | 11.91 | ,961 | ,413 | |
| | Sport Manager | 56 | 50.16 | 12.25 | | | |
| | Sport Expertise | 29 | 47.03 | 13.47 | | | |
| | Club Manager | 14 | 49.57 | 11.01 | | | |

p<0,05*

When Table 9 was examined, a significant difference was detected in the innovation scale according to the result of the ANOVA analysis between the participants' areas of specialization in the sports sector, innovation and entrepreneurship, and the innovation scores of the coaches were lower than the participants working as sports managers (p<0.05).

Table 10. Anova Analysis Results between Innovation and Entrepreneurship in the Variable of Participants' Professional Experience

| Dimensions | Professional Experience | N | \bar{X} | Sd. | f | p |
|------------------|-------------------------|----|-----------|-------|-------|------|
| Innovation | 2 years | 31 | 53.48 | 15.05 | 2,204 | ,090 |
| | 3 years | 17 | 46.00 | 13.00 | | |
| | 4 years | 34 | 45.91 | 12.60 | | |
| | + 5 years | 69 | 49.66 | 12.29 | | |
| Entrepreneurship | 2 years | 31 | 51.61 | 13.53 | 1,597 | ,193 |
| | 3 years | 17 | 45.70 | 12.62 | | |
| | 4 years | 34 | 45.58 | 12.51 | | |
| | + 5 years | 69 | 48.65 | 11.28 | | |

Table 10 showed that there was no statistically significant difference in the innovation and entrepreneurship scales according to the result of the ANOVA analysis between innovation and entrepreneurship in the variable of the participants' professional Experience (p>0.05).

Table 11. Pearson Correlation Analysis Results between Innovation and Entrepreneurship

| | | Age | Professional Experience | Innovation |
|-------------------------|---|-------|-------------------------|------------|
| Professional Experience | R | ,017 | | |
| | P | ,836 | | |
| | N | 151 | | |
| Innovation | R | -,111 | -,077 | |
| | P | ,175 | ,350 | |
| | N | 151 | 151 | |
| Entrepreneurship | R | -,059 | -,063 | ,874** |
| | P | ,470 | ,440 | ,000 |
| | N | 151 | 151 | 151 |

The Table 11 displays the Pearson correlation analysis results between Innovation, Entrepreneurship, Age, and Professional Experience. The analysis shows that there is a weak and non-significant positive correlation between Professional Experience and Age ($R = 0.017$, $p = 0.836$). Regarding Innovation, there is a weak and non-significant negative correlation with both Age ($R = -0.111$, $p = 0.175$) and Professional Experience ($R = -0.077$, $p = 0.350$). However, Entrepreneurship exhibits a strong and statistically significant negative correlation with Innovation ($R = -0.874^{**}$, $p = 0.000$), indicating that higher levels of Entrepreneurship are associated with lower levels of Innovation among the participants in this study.

DISCUSSION

In this study, to examine innovation and entrepreneurship in the sports sector on the basis of various variables; gender, age, specialisation area in the sports sector, graduation status, professional experience, province you have worked in, and marital status results were explained below.

When the statistical analyses of the participants based on demographic variables were examined in our research, it was found that the gender variable was in favour of male participants compared to female participants, the age variable was in favour of 25 years old compared to 20 years old, 23 years old, and 35 years old and older. Moreover, specialisation in the sports sector was in favour of the sports manager compared to the club manager, sports specialist, and coach, in the variable of graduation status was in favour of the bachelor's degree, in the variable of professional experience was in favour of the 5 years and above, in the variable of province of residence, it was found to be against Muğla compared to Aydin, and in the variable of marital status, it was found to be against single participants compared to married participants (Table 1). Besides, according to the results of descriptive statistics in our research, it was seen that the dimension of the innovation scale was very high and the dimension of the entrepreneurship scale was very high (Table 3).

In table 8, no statistically significant difference was detected in innovation and entrepreneurship scales in the age variable of the participants ($p > 0.05$). In 2015, the study conducted by Öztürk also showed no statistically significant difference when the studies on innovation in the field of sports were analyzed based on age variable. These results support the results of our research (Öztürk, 2015). In the studies on entrepreneurship in the field of sport, no statistically significant difference was detected in the age variable in the study conducted by Çelik and Şahin (Çelik & Şahin, 2015). In the studies conducted by Senen and Basım and Karataş, a statistically significant difference was observed (Senen & Basım, 2012; Karataş, 2018).

There was no statistically significant difference between innovation and entrepreneurship in the most recent graduation status variable ($p > 0.05$), (Table, 5). When the studies on innovation in the field of sports in the literature were examined based on the graduation status variable, it was seen that there was no statistically significant difference (Atalay, 2018; Demir, 2021). In addition, it was observed that there was a statistically significant difference on the basis of graduation status since the studies examined in the literature were conducted in different populations and sample groups (Özkan et al., 2020; Öztürk, 2015; Kulaş, 2019; Karataş & Akıncı, 2022; Atılgan & Tükel, 2021). In the studies on entrepreneurship in the field of sports, it was observed that the graduation status variable in the studies on entrepreneurship was generally positive in the results of the analyses conducted on the students of the faculty of sports sciences (Mülhim, 2019; Yılmaz & Sünbül, 2009; Özmen, 2015; Karataş, 2018).

There was no significant difference in the results of innovation and entrepreneurship statistical analyses ($p > 0.05$), (Table, 6).

Participants' years of working in the profession in the variable of innovation and no significant difference was observed in entrepreneurship scales ($p>0.05$), (Table, 10). In the literature, studies on innovation in the field of sports have shown that there was no statistically significant difference in the variable of professional experience (Demir, 2021; Demir, 2022). When the studies on entrepreneurship in the field of sport were examined, it was seen that there were no studies on entrepreneurship in the literature.

There was no statistically significant difference in the innovation and entrepreneurship scales in the gender variable of the participants ($p>0.05$), (Table, 4). When the studies on entrepreneurship in the field of sport were examined in the literature, it was seen that there was no statistically significant difference in the results of the analysis of these studies in general (Tiwari & Sanadya, 2018; Yılmaz & Sünbül, 2009; Otović et al., 2017; Bilge & Bal, 2012; Shinnar et al. 2009; Ardahae, Noubatht, & Rostami, 2017; Radu et al., 2018). In the studies on innovation, it was observed that there was no statistically significant difference in the sports sector and gender. These results support the results of our research (Kushnirovich & Heilbrunn, 2013; Chen et al., 2018; Schneid et al. 2015). In addition, some studies in the literature showed that there was a positive statistical difference in terms of gender (Galia et al., 2014; Poggesi et al., 2016; Torchia et al., 2018; Chen et al., 2018; Dezso & Ross, 2012).

A statistically significant difference was observed in the innovation and entrepreneurship scales in the marital status variable of the participants ($p<0.05$), (Table, 7).

As a result of the analysis of the participants' specialization areas in the sports sector, innovation and entrepreneurship, a significant difference was detected in the innovation scale, and the innovation scores of the coaches were lower than the participants working as sports managers ($p<0,05$), (Table, 9).

In Table 11, according to the results of Pearson Correlation analysis to determine whether there was a significant relationship between innovation and entrepreneurship levels of the participants, a positive significant relationship was found between innovation and entrepreneurship scores.

González-Serrano et al. (2020) stated in their research that the field of entrepreneurship or sustainable innovation in sport has become a new sub-field of study in the field of sport entrepreneurship, but although it is a very young field of study since the first article was published at the beginning of the 11th century, academic studies in different parts of the world, especially in the USA, have attracted more and more attention of researchers.

Şahin, Demirci, and Güllü, S. (2021). in their research, they state that entrepreneurship is effective on the economy, especially in the 21st century, making e-sports policy and entrepreneurship activities have become an important factor in the sports sector. In addition, with the increase in competition in the sports sector and the introduction of technological innovations into the sports field, it is stated in the results of the research that the place of entrepreneurship activities in the sports sector has a strong positive factor.

Conclusion

As a result, while there was no statistically significant difference in the variables of gender, graduation status, the province of residence, age, and professional experience, there was a statistically significant difference in the field of innovation and entrepreneurship in the sports sector according to the marital status, the area of specialization in the sports sector and the obtained general analysis results.

Limitations

It is recommended to support the studies to be carried out on the effect of postgraduate theses on sports in the field of innovation and entrepreneurship, to provide trainings to young individuals in the field of entrepreneurship in terms of contributing to the national economy, and to raise awareness of the society by increasing entrepreneurship and innovation youth clubs in the field of sports.

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