A Study of Sport Portion in Household Consumption Basket in Different Regions of Shiraz, Iran

Mohammad Deheshti, Majid Karimi Nemch and Sareh Gholami Shiri
Department of Sport Management, University of Qom, Qom, Iran

Abstract: The purpose of the present research was to study of sport portion in household consumption basket in Shiraz with an emphasis on deprived, semi well-fixed and well-fixed regions of the city. This study is an applied and descriptive survey study. The population included all households of Shiraz to a total of 441,784 households within 10 regions in 2014. The sample consisted of 400 households who had chosen by the Morgan table in the multistage cluster and randomly. The instrument was a researcher-developed questionnaire in three parts of demographic, attitude and level of physical activity and sports expenditure of households that the validity and reliability was confirmed. Data analyzing was done by descriptive and inferential statistics and the income elasticity determination method. The results indicated that however there is not a significant difference (p<0.05) between households attitudes to sport and physical activity based on their residential status (p>0.05), there is a significant difference (p<0.05) between sport expenditures of households on the basis of individual differences (education, occupation). About 0.83% of deprived, 1.03% of semi well-fixed and 0.7% of well-fixed household region expenditures were devoted to sports. Sport is considered as a necessary good in the semi well-fixed and well-fixed household regions and it is considered as a luxury good in deprived regions.

Key words: Sport, household consumption basket, region of residence, sports expenditure, Iran

INTRODUCTION

Civilization and increasing modern technology progress brought with ourselves a phenomenon called "poverty of movement". The inactivity and poor movement has caused an incompetency that affected the various aspects of physical, psychological and social factors. We need proper tools including exercise as a multidimensional instrument with broad impact on health, economic, social, helping to create a healthy and active leisure and happiness, to go out of the present situation (Qara, 2005). Promotion and demotion of a community of human society depends on every persons of the society members. Increasing in efficiency, healthcare costs reduction and economic growth improvement will be resulted by Increasing in health and vitality among society individuals. Learning the values such as the spirit of cooperation and discipline especially in the sport environment by individuals will have positive effects on the social life of the community undoubtedly (Farahani, 2011).

Therefore, sport has an important and special position as a good which can be a strong alternative and complementary rather than other goods such as food, clothing, health, recreation and study in the consumption basket of households. Also, the expenses related to the sports will affect the other mentioned consumption expenditures. The limitations about the levels of consumers income conduct us to classify the goods to essential, normal, luxury or picayune when we want to choose any goods (Ferguson, 2003). In general, household consumption expenditures include a wide variety of the costs for the goods and services that categorized to food and non-food products based on an axial split.

Food, beverages, tobacco
Non-edible materials including: Clothing and footwear housing, water, electricity and fuels supplies, equipment and family services health care transportation and communication recreation, entertainment and cultural services miscellaneous goods and services. The household sports expenditures are a part of leisure, recreation and cultural services expenditures in the non-edible materials section that is divided to eight categories including apparel, shoes all kinds of balls, learning various sports, preparing tickets, entrance fees, rental of equipment, books periodicals and other sports equipment are (Askarian and Jafari, 2008).

Primary social studies suggests that sports participation such as participation in leisure activities, does not have a communication with social classes. Advancing research and examining the topic has shown the relationship between social classes and participation.

Corresponding Author: Sarch Gholami Shiri, Department of Sport Management, University of Qom, Qom, Iran

6860
in sports in a way that sport appeared regular lines representing a clear classification of social classes perfectly (Alkhali, 2004). Studies showed that people in the upper socio-economic classes are more likely to have more knowledge; therefore they set her lifestyle according to their knowledge and awareness about the health issues. In the other hand, people in lower socio-economic classes don’t consider a great importance for the health and wellbeing (Hoseyni and Solrnabi, 2007). Provision and accesses to sports facilities for everybody in the city enhance the probability to engage in sports activities and thus increase the level of satisfaction of life (Huang and Humphreys, 2012). Also, the level of education affects individual motivation. Educated people have higher intrinsic motivation than those with lower education (Martner, 1992).

Sports participation require some certain sports goods and services. Economic variables such as annual income, household income or individual income influence on sports participation of individuals. Thus, financial problems have a negative relationship with participation in many sporting activities, entertainment centers and parks. Low-income acts as a barrier to sports participation and reduces the accessibility to facilities and supplies for a wide group who wants to be active in sports fields (Spinney and Millward, 2010; Scott and Murson, 1994). For example, increased leisure activities outside the home was a sign of increasing national production and income for people in the community in South Africa in 1997 (Kraus, 1997). Therefore, low socio-economic status is one reason that so many people don’t participate in recreational sports activities.

Given that household sports expenditures is proportional with the popularity of sports in each country to LIRC (2001) and every participant is considered as a buyer, so there is an association between the amount of household sports expenditures with the participation of the people in the sport. For example, the ratio of household sports expenditure to the total household expenditure in countries such as Scotland, England, Canada and Hong Kong is 2/5, 2/4, 2/18 and 1/24%, respectively (Mulholland, 2008; Nana and Sanderson, 2002). This amount was estimated 0/17% in Iran in 2001 that could mention the main reasons such as the high proportion of costs for food and housing in household expenditures basket, low levels of average annual household income towards the costs, high levels of inflation in the country and nonparticipation of a good percentage of people in sports compared with developed countries (Askarian and Jafari, 2008).

Sabbagh et al. (2011), in a study had done in Isfahan city found that there was a significant difference between the amount of household sports expenditures based on education, age and number of children differences so that only 0/88% of total household expenditures devoted to physical activity and sport participation among the population of the city is negligible. Eime et al. (2013) expressed the highest levels of participation in sports activities was associated with children whom that at least one of their parents were employed. Esfami et al. (2013), Arisoy and Tutkun (2012), Breuer et al. (2010), Piko and Keresztes (2008) in their studies concluded that there was a significant difference between households sports participation rates based on education (Lopez and Garate, 2007; Arisoy and Tutkun, 2012; Breuer et al., 2010). Shi et al. (2006) found that there did not exist a significant relation between physical activity variables, residence, age and socioeconomic status in a study was done on 824 Chinese adolescents. Adolescents with high socioeconomic status or by having fathers with higher education levels had lower levels of physical activity.

Also, Razavi and Taheri (2010) declared a significant relation between the rate of participation in sport with education and family population in their study. The results by Mozaffari et al. (2010)’s study refers to the difference in the attitudes of various groups of people about sport and physical activity as income levels differentiate (Mozaffari et al., 2010). Mohamadi and Hoseyni (2011) in a study on the people of Kurdistan Province found that orientation to motor and sports activities has a significant relationship with features such as age and total monthly household expenditures but has no significant relationship with other features such as number of family members, education level and occupation. Also, they had observed significant difference between attitudes to the motor sports activities and monthly income of persons (Mohamadi and Hoseyni, 2011).

The income limitation for the consumers is the reason for eliminating sport, recreation, reading, etc., from the household consumption basket in developing countries unfortunately. Because, they look at sports as short-term consumer goods and therefore are neglected the lack of resources and long-term losses. The studies suggests that physical activity has positive and significant effects on physical, mental and social health of people in all of life courses and considered as an efficient tool to enhance the quality of life of different groups of people.

Despite amenities of living in a big city, it is a place for growing threats and health, personal and social...
hazards for every individuals in a community. This issue will double the director’s responsibilities for planning and provision an appropriate strategies to maintain and enhance physical and mental well-being and creation the dynamism and vitality in different layers of the society. Among the techniques used to develop and promote a culture of physical activity and sport in the community. Therefore, this study aimed to determine the sport portion in household consumption basket in different regions of Shiraz, Iran.

MATERIALS AND METHODS

This study is an applied and descriptive survey study. The population included all citizens of Shiraz city consisted 441,784 households in 10 urban regions in 2014 according to the last official census in 2011. The sample consisted of 400 households who had chosen by the Morgan table in the multistage cluster and randomly. But given that the study participants probably are dropped so the sample size was increased to 480. Region 1 among the well-fixed regions, region 6 among semi well-fixed regions and region 8 among the deprived regions were selected in the simple random method based on 10 regional divisions of municipality. Then 5 street in the regions, 3 alleys in the streets and about 11 households in the alleys were randomly selected using urban maps and completed the questionnaires. The 419 of 480 distributed questionnaires returned and the analysis was done based on this number of questionnaires in this study. In general, 154 questionnaires from deprived region, 150 questionnaires from semi well-fixed region and 115 questionnaires from well-fixed region completed by the householders and received to the researcher that accordingly, the rate of questionnaires return was 88%, so redistribution was not necessary.

The instrument was a researcher-developed questionnaire in three parts of demographic that includes questions 1 till 12, attitude and level of physical activity that includes questions 13 till 28 and sports expenditure of households that includes questions 29 till 35. The questionnaire was designed by closed answering questions and options vary according to the type of questions.

The validity of the questionnaire confirmed by 12 members of academic experts in different disciplines of Physical Education, Management and Economics. To measure the reliability the test-retest technique we used. Accordingly, the revised questionnaire was distributed among 30 families and was redistributed among the people again after a week. The obtained reliability was equal with 0.88 that was indicating an acceptable reliability.

The data was analyzed using descriptive and inferential statistical methods (χ²-test) in this study. The regression based on ordinary least squares was used to determine the income elasticity. The equation of demand to income variable presented in the form of an exponential function. The analysis was done by using the Statistical Package for Social Sciences (SPSS Version 19) Software.

RESULTS AND DISCUSSION

Males and Females formed 60 and 40% of the sample volume, respectively. The highest and lowest percentage of people were belonging to the age category of (36-40 year old) with 1/17% and (20-25 year old) with 4/5%, respectively. The majority of studied subjects were married on 7/92% while the minority was 3/4% were divorced people. About the number of children, two children with 7/31% was the highest and six children and more had the lowest percentage with 1/3%. Highest and lowest levels of education were belonging to Diploma by 8/35% and PhD by 1/9%, respectively. The majority of subjects were employed by 8/57% compared with 9/89% of retired that is the lowest. The majority of subjects were households with 500 thousand to a million Tomans income by 8/40% while the minority of subjects were households with >2 million Tomans income by 5/11%.

According to the results in Table 1 indicates there is not a significant difference between the household sports expenditures based on age in Shiraz (p = 0.45>0.05).

According to the results in Table 2 indicates there is a significant difference between the household sports expenditures based on education in Shiraz (p = 0.02<0.05).

According to the results in Table 3 indicates there is not a significant difference between the household sports expenditures based on the number of children.

<table>
<thead>
<tr>
<th>Variable/statistical indicators</th>
<th>Degrees of freedom</th>
<th>Chi-square</th>
<th>Significance level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>42</td>
<td>42/136</td>
<td>0.45</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Variable/statistical indicators</th>
<th>Degrees of freedom</th>
<th>Chi-square</th>
<th>Significance level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education</td>
<td>35</td>
<td>63/76</td>
<td>0.02</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Variable/statistical indicators</th>
<th>Degrees of freedom</th>
<th>Chi-square</th>
<th>Significance level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of children</td>
<td>35</td>
<td>34/47</td>
<td>0.49</td>
</tr>
</tbody>
</table>
expenditures based on the number of children in Shiraz ($p = 0.045 = 0.05$). According to the results in Table 4 indicates there is a significant difference between the household sports expenditures based on occupation status in Shiraz ($p = 0.025 = 0.05$).

According to the results in Table 5 indicates there is not a significant difference at the comparison of Shiraz household's attitude about sports and physical activities based on residential region status ($p = 0.465 = 0.05$). According to above Table 6, households in the semi well-fixed region carry out the maximum sports expenditures in relation to total household expenditures while households in the well-fixed region had the lowest percentage of total household expenditures. About 80% of total household expenditures was devoted to sports activities expenditures in total of regions.

In terms of economics to determine the type of goods as luxury, necessary, ordinary or picayune income elasticity should be calculated for separated income groups. Regression method based on the ordinary least squares is used to calculate the income elasticity. Income elasticity determines the percentage of demand changes in quantity demanded for a good as a percentage change in the consumer's income. The purpose of the income elasticity for demand is changes in the amount of household sports expenditures by a percentage change in household income in this study. Also, if the income elasticity of a good be low (less than one), the quantity demanded is not very sensitive to changes in income and consumption almost remains constant regardless of income level. This subject indicates that the good is an essential item, if the income elasticity be greater than one indicates that the product is a luxury good approximately. Also, if the income elasticity be negative it means that consumption of the good is reduced by increasing in household income which means that it is picayune good

(Nama et al., 2013; Wicker et al., 2013). In the following tables Q35 represents monthly household sports expenditures and Q33 represents monthly household expenditures that is derived from information contained in the questionnaire.

According to the results of Table 7 show that the obtained coefficient is 1/12. As the coefficient is >1 therefore sports considered as a luxury good for this region. According to the results of Table 8 show that the obtained coefficient is 0.09. As the coefficient is between zero and one therefore sports considered as an essential good for this region. According to the results of Table 9 show that the obtained coefficient is 0.51. As the coefficient is between zero and one therefore, sports considered as an essential good for this region.

Now a days increasing different sports fields on the one hand and increasing participation in sports activities on the other hand suggests that although most people select the desired sports field on the basis of their interest but the surveys found several factors affect this choice. Some of these factors include monthly income, marital status, the number of family, occupation and so on.

The results indicated that there is not significant difference ($p = 0.45$) between household sports expenditures based on age. It seems this lack of significance is due to sport is an activity that people of all ages can use it and benefit from its myriad profits, therefore this activity is not only for a certain age. This finding is consistent with the findings by Qahramani et al. (2013), Shi et al. (2006) and Vasev (2000) that said there is no significant difference between the rates of participation in physical activity and age. But the results is not consistent with the findings by Sahbgh et al. (2011) Muhammadi and Hosseini (2012) that said there is a significant difference between the average of households sports expenditure and the spent time to sports based on individuals age.
The study findings expressed a significant difference (p = 0.02) in household sports expenditures based on education. It's expected that the educated people turn to sports activities with an exact planning and devote much more of household income to sports expenditures as they have more knowledge about the advantages of exercise than most people. This finding of the research is consistent with Wicker et al. (2013), Xianliang and Hongying (2012), Arisoy and Turkun (2012), Breuer et al. (2010), Piko and Keresztes (2008), Islami et al. (2013), Sabbagh et al. (2011), Razavi and Taheri (2010) results that said there is a significant difference between the amount of participation in sports and sports expenditure and persons education level. But the result is not consistent with Qahramani et al. (2013) Muhammadi and Hosseini (2011) based on the lack of significant difference between sports doing and physical activity and education.

The results indicated that there is no significant difference (p = 0.49) between household sports expenditures based on number of children. This finding is consistent with the findings by Muhammadi and Hosseini (2011) that said there is no significant difference between attitudes to physical activity and sports with the number of family members. However, the results is not consistent with the findings by Razavi and Taheri (2010), Sabbagh et al. (2011) that said there is a significant difference between sports doing and sports expenditure of households based on number of children either. It is likely that lesser number of children can have a direct impact on families sports planning and household sports expenditures.

Research findings indicated that there is a significant difference (p = 0.02) between household sports expenditures based on occupation status. It looks like those who have occupied are better able to meet household sports expenditures so they may undertake to pay more for sports expenditures while the people who are unoccupied can pay less for sports due to the lack of stability in the employment and income. Eime et al. (2013), Lopez and Garate (2007) concluded that there was a significant difference between sports doing and household sports expenditures based on occupation status. This finding is consistent with present findings. Mohammadi and Hosseini (2012), Ebrahimi et al. (2011), concluded that there was not a significant relationship between sports doing and occupation status so they are inconsistent with the present study.

The findings about households attitudes showed that there was no significant difference (p = 0.46) between attitudes toward sport and physical activity and the region residence. Now a days, its seems there is a suitable looking at the sports among all classes of people as a means to prevent anti-social behavior and disease. There has been increased awareness and attitude towards sport in the community for all levels of people rather only for a particular class. Bloom also considered that we can improve the values and prevent the growth of social damages in the society by increasing in positive attitudes among the people. In fact, the families positive looking at the sport is a necessity to make the community healthy. In this regard, Allison believe that sport development in all cities and regions should be taken for an increase in positive attitudes towards sport so that the well-fixed and deprived people regions can do sports equally. A positive attitude toward sport among family members may be the main reason for raising many elite athletes from deprived regions who had earned the first world championship seats. It is consistent with Attar Zadeh Hosseini and Sohrabi results based on the lack of significant differences between the attitudes of different people to the motor and sports activities. Mohammadi and Hosseini (2011) found that there were significant differences between the participants attitudes to sports and motor activities based on income levels (Mohamadi and Hoseyn, 2011; Mozafari et al., 2010). Sabbagh et al. (2011) found that the positive attitude levels in the residents of well-fixed and semi well-fixed regions is same but the positive attitude level is less in deprived region. This foundation is inconsistent with the results of the present study perhaps that is because low income people of the community didn’t have a positive attitude to sports and motor activities. Therefore they didn’t devote some expenditures for sports. Also, low-income people cannot participate in sports activities due to their financial difficulties and hardship of life and a positive attitude not created for them then their attitudes differ with others consequently.

The findings around the average of household sports expenditure ratio on the total household expenditures based on residential region status indicated that the highest amount of average of expenditures ratio is related to residents of semi well-fixed region and the lowest is related to residents of well-fixed region. This amount in semi well-fixed region is equal with 1/03 in deprived region is equal with 0/83 and in well-fixed region is equal with 0/79. The 0/89% of household total expenditures is devoted to sports and motor activities in general. While in other countries this ratio is higher than Shiraz city. For example, according Sanderson et al. (2000) results reported the amount of 2% in the UK. Holt et al. (2011) reported the amount of 3% in Canada. Anokye et al. (2012) reported the amount of 2/5% in London. Also, Askarian and Jafari (2008) reported the amount of 0/17% in Iran in 2001. Therefore, the ratio of household sports expenditure on the total household expenditures in Shiraz
Table 10: Deprived region

<table>
<thead>
<tr>
<th>Variables</th>
<th>Coefficient</th>
<th>SE</th>
<th>t-statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOG(Q33)</td>
<td>1.120600</td>
<td>0.190613</td>
<td>5.878940</td>
<td>0.0000</td>
</tr>
<tr>
<td>C</td>
<td>-2.886843</td>
<td>1.198467</td>
<td>-2.421733</td>
<td>0.0296</td>
</tr>
</tbody>
</table>

R²: 0.288837; Mean dependent var: 4.659481; Adjusted R²: 0.274123; SD dependent var: 1.042563; SE of regression: 0.888077; Akaike info criterion: 2.69661; Sum squared resid: 37.8555; Schwarz criterion: 2.716142; Log likelihood: -63.99153; Hannan-Quinn criterion: 2.68786; F-statistic: 19.50454; Durbin-Watson stat: 1.464886; Prob. (F-statistic): 0.000057; Dependent variable: LOG(Q35); Method: Least Squares; Date: 06/19/14 Time: 04:53; Sample (adjusted): 1108; Included observations: 50 after adjustments; HAC standard errors and covariance (Bartlett kernel, Newey-West fixed, bandwidth = 4.0000)

Table 11: Semi-well-fixed region

<table>
<thead>
<tr>
<th>Variables</th>
<th>Coefficient</th>
<th>SE</th>
<th>t-statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOG(Q33)</td>
<td>0.696371</td>
<td>0.164617</td>
<td>4.230241</td>
<td>0.0001</td>
</tr>
<tr>
<td>C</td>
<td>0.091128</td>
<td>1.105392</td>
<td>0.082142</td>
<td>0.9348</td>
</tr>
</tbody>
</table>

R²: 0.192888; Mean dependent var: 4.653461; Adjusted R²: 0.180659; SD dependent var: 1.040926; SE of regression: 0.950367; Akaike info criterion: 2.796883; Sum squared resid: 59.61103; Schwarz criterion: 2.830313; Log likelihood: -92.01114; Hannan-Quinn criterion: 2.790899; F-statistic: 15.77390; Durbin-Watson stat: 1.260540; Prob. (F-statistic): 0.000179; Dependent variable: LOG(Q35); Method: Least Squares; Date: 06/19/14 Time: 04:54; Sample: 1115; Included observations: 68; White heteroskedasticity-consistent standard errors and covariance

Table 12: Well-fixed region

<table>
<thead>
<tr>
<th>Variables</th>
<th>Coefficient</th>
<th>SE</th>
<th>t-statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOG(Q33)</td>
<td>0.511751</td>
<td>0.176808</td>
<td>2.894385</td>
<td>0.0031</td>
</tr>
<tr>
<td>C</td>
<td>1.462181</td>
<td>1.324817</td>
<td>1.038100</td>
<td>0.2737</td>
</tr>
</tbody>
</table>

R²: 0.090092; Mean dependent var: 5.232887; Adjusted R²: 0.076306; SD dependent var: 0.924890; SE of regression: 0.888003; Akaike info criterion: 2.631313; Sum squared resid: 52.1475; Schwarz criterion: 2.696593; Log likelihood: -87.4464; Hannan-Quinn criterion: 2.657179; F-statistic: 6.538188; Durbin-Watson stat: 1.694650; Prob. (F-statistic): 0.012987; Dependent variable: LOG(Q35); Method: Least Squares; Date: 06/19/14 Time: 04:56; Sample (adjusted): 1114; Included observations: 68 after adjustments; HAC standard errors and covariance (Bartlett kernel, Newey-West fixed, bandwidth = 4.0000)

is less than other countries. This is probably because of income levels, welfare, culture and facility differences between the two places. Britain, Canada, Spain and so on are countries with high welfare and the people earn higher income than Iranian people so they will spend more expenditures for sports activities. On the other hand, in these countries there is more facilities for public participation in sports activities and they can participate with the slightest problem.

A regard able point is that the household sports expenditure ratio on the total household expenditures was reported 0/1% in Iran at 2001 however, it is reported 0/85% in Shiraz city at 2014. This increasing must be related to different reasons such as increasing in culture level, people education and the their awareness about the role of sports in family and individuals well-being notwithstanding increasing in inflation and expansiveness.

According to the results, the obtained coefficient for deprived region was equal with 1/12%. As this amount is >1 so sport is considered as a luxury good in the region. The obtained coefficient was equal with 0/69 for semi well-fixed and 0/51 for well-fixed region. As the coefficient is between zero and one therefore sports considered as an essential good for this regions. Sabbagh et al. (2011) found that sport was considered as a picayune good for a group with >900 thousand Tomans income in a month however for groups with 100-899 thousand Tomans income sport was considered as a luxury or ordinary good.so we can consider that the group with >900 thousand Tomans income in a month are residents of well-fixed region and in the other hand, the groups with 100-899 thousand Tomans income are residents of deprived region in general. Therefore, our findings is inconsistent with Sabbagh et al. (2011) this is because we concluded that sport was considered as a necessary good for well-fixed region but Sabbagh et al. (2011) concluded that sport is considered as a picayune good for them. Also in the present study sport is considered as a luxury good for deprived region but Sabbagh et al. (2011) considered it as a luxury till ordinary good for them (Table 10-12).

CONCLUSION

In general, according to the findings we can conclude that sport has a little portion in household consumption basket in Shiraz (household sports expenditure ratio on the total household expenditures is equal with 0/89). This amount is reported >1% in some countries such as England, Canada and Scotland at the same time. It can be mentioned some important reasons like the more welfare and income, supplies and facilities provided from governments for people about the differentiation between Shiraz and the countries. So, the sport responsible and planners can attract the citizens to physical activity with providing free supplies and facilities or with a little expenditures. Also, the media managers can try to improve the culture of sport doing and create a positive attitude about physical activities and they can play a key role in convincing the citizens to pay more portion of their time and income to do sport activities. They can have a
noticeable portion in expansion of physical activity doing throughout the citizens by emphasizing on immnumerable advantages of sport.

REFERENCES

Ferguson, C., 2003. The Theory of Trivial Economy. 8th Edn., The University Publication Center, Iran.

