
SPORT, TIME AND MONEY: A COMPARISON OF THE DETERMINANTS OF TIME SPENDING VERSUS MONEY EXPENDITURE ON SPECIFIC SPORT ACTIVITIES.

Abstract ID: EASM-2015-188 - (536)

All authors:

Erik Thibaut, John Eakins, Jeroen Scheerder

Date submitted: 2015-03-16

Date accepted: 2015-03-27

Type: Scientific

Keywords: sports participation, expenditure, time, determinants, income elasticity, Tobit

Category: 6: Sport Economics and Finance

Synopsis:

This study compares the determinants of sports expenditure and time spent on sports participation, and calculates income elasticities across a wide variety of sporting activities.

Abstract:

SPORT, TIME AND MONEY: A COMPARISON OF THE DETERMINANTS OF TIME SPENDING VERSUS MONEY EXPENDITURE ON SPECIFIC SPORT ACTIVITIES.

AIM OF THE ABSTRACT – RESEARCH QUESTION

The main aim of the study is to analyse the determinants of sports expenditure and time spent on sports participation, and to calculate income elasticities across a wide variety of sporting activities. A key contribution of the study is the fact that two measures of sports participation are used, one based on the amount of time (in minutes) the sport is practiced and the other based on the amount of money that is spent on these activities. A comparison of the results from these models will provide a number of interesting insights, particularly from the perspective of Becker's (1965) household production theory which suggests that both time and money are important inputs of sports participation, and that both factors are affected by income. The calculated income elasticities will be useful for categorizing sporting activities into luxuries, necessities and possible even inferior goods with respect to both time and money.

THEORETICAL BACKGROUND OR LITERATURE REVIEW

Recent studies that have focussed on the determinants of sports expenditures, explain variations in household sports expenditures as a function of household

characteristics such as location, gender, age, education, working/social status, number of persons present, number of children present etc. (see Thibaut, Vos & Scheerder, 2014 for an overview). Some of these studies provide estimates of elasticities, for example Løyland and Ringstad (2009) found sports expenditures to be income elastic while Pawlowski and Breuer (2012) obtained both elastic (by means of the Tobit model) and inelastic (by means of the Heckman selectivity model) results. The present study contributes to literature in two ways. First, most of previous studies analyse broad sports expenditure categories rather than specific sports. Second, previous research has not explicitly incorporated actual time spent as a continuous variable, and compared these results with the expenditure analyses.

METHODOLOGY, RESEARCH DESIGN AND DATA ANALYSIS

The data set is based on a large scale sports participation survey in Flanders, which is the northern Dutch speaking part of Belgium. The data was collected in 2009 and 3,004 Flemish families with at least one school-aged (6-18 years old) child were surveyed. Besides sports participation time data and sports expenditure data, other data recorded included the age of the head of household, education of the head of household, the number of members, location of the household and overall household expenditure. As the data was collected during an economic downturn, its effects on sports participation can also be investigated. Because of the presence of a large number of zeros in the dependent variable, the econometric Tobit regression method is applied.

RESULTS, DISCUSSION AND IMPLICATIONS/CONCLUSIONS

The Tobit regression results indicate that for most sports activities, income positively influences money expenditure and time expenditure. Also with regard to the other independent variables, no contradicting results are obtained, indicating that sports expenditure is a good proxy for the amount of time that is spent on a certain sports activity. The elasticity results based on the sports expenditure regression indicate that aerobics, running, tennis and winter sports are luxury goods, while the income elasticity of volleyball is equal to one. The other ten sports activities are normal goods. With time expenditure as the dependent variable, only winter sports and tennis turn out to be luxury goods. This finding is in line with Becker (1965), who states that an increase in income will guide agents to spend more money on sports participation, while reducing the time spent on sports because of the risen implicit cost of leisure time. A policy implication is that increasing income does not necessarily increase the amount of time spent on sports participation to the same degree. Thus policies should focus on removing other barriers to augment the sports participation figures of their population, such as increasing leisure time, providing sufficient infrastructure, etc. For sports managers of the private sector, these results give insight in both the income class they should focus on to alter their profits, and in which sports activities become more popular in economic bear markets and which in bull markets.

References:

Becker, G. (1965). A theory of the allocation of time. *The Economic Journal*, 75(299), 493-517.

Løyland, K., & Ringstad, V. (2009). On the price and income sensitivity of the demand for sports: has Linder's disease become more serious? *Journal of Sports Economics*, 10(6), 601-618.

Pawlowski, T., & Breuer, C. (2012). Expenditure elasticities of the demand for leisure studies. *Applied Economics*, 44(26), 3461-3477.

Scheerder, J., Vandermeerschen, H., Borgers, J., Thibaut, E., & Vos, S. (2013). *Vlaanderen Sport! Vier decennia sportbeleid en sportparticipatie*. [Sports participation in Flanders. Four decades of sports policy and sports participation] (SBS Series 5). Ghent: Academia Press.

Thibaut, E., Vos, S., & Scheerder, J. (2014). Hurdles for sports consumption? The determining factors of household sports expenditures. *Sport Management Review*, 17(4), 444-454.