The demand for books estimated by means of consumer survey data

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Abstract In this analysis we present some results for book demand (schoolbooks are excluded) in Norway, obtained by means of a three-goods model (books, other cultural goods and non-cultural goods) and survey data for more than 18,000 households from the period 1986–1999. Various methods of estimation are used, and they provide surprisingly unambiguous results. Our hypotheses about the price and income sensitivity of book demand are confirmed. Books turn out to be “luxury” goods. Our calculations do also suggest that they are quite price sensitive and that they are close substitutes to other cultural goods. The results for socio-demographic variables indicate that access to outlets for books, sex and age matter for book demand. Moreover, we find that single persons and households with small children, especially those with children less than 7 years, are frequent book-buyers.

Keywords Book demand · Income elasticity · Price elasticities · Consumer survey data

1. Introduction

Reliable information about the determinants of book demand is important in several contexts. For instance, it is common to assume monopolistic competition for books due to many competing titles and large set up costs, cf. Dixit and Stiglitz (1977). This implies an adjustment of production to a level of demand where the price elasticity is less than −1. If demand analyses confirm that books are price sensitive, they confirm the model to be reasonably accurate as well. If not, they suggest that there could be something wrong with this model specification. The price elasticity of books is also of critical importance for the effects of the modes of public literature policy. Thus price sensitive demand makes subsidies a possible efficient means to increase book consumption. The welfare costs of fixed book prices, used in several European countries, are also critically dependent on the price elasticity, cf. Beck (2003) and Ringstad (2004). The impact of income on book demand is also important. The
income sensitivity of books, combined with a positive general trend in the income among consumers, is of decisive importance for the size of the book market. The bigger the income elasticity, the more likely it is for the book market to obtain a bigger share of gross national product over time. Books are also competing with a number of more or less related goods. The effect on the demand for books of price changes on such goods depends on the size of the cross-price elasticity and on how big the price changes actually are. The relative price of likely substitutes such as TV and video has decreased during the last decades. This could have had substantial crowding out effects on the demand for books.

The limited number of studies of book demand reflects the status of research about the economics of books in general. We have found only a few studies with fairly complete documentation of how the estimates on various parameters of the demand function are obtained. Bittlingmayer (1992) deals with the demand for separate titles on the German book market. The data are obtained from a publisher of a wide range of mostly professional books and the analysis is thus not necessarily representative for books in general. The analysis covers the years 1984–1986, but only a selection of the titles published these years is included. The central explanatory variable is the book price, and a main finding based on the more statistically reliable results, is a price elasticity between $-2$ and $-3$. Most of the differences in demand are due to other factors, however. This reflects the uncertainty of the demand for books, which implies a corresponding economic risk of book production.

Hjorth-Andersen (2000) postulates a relation for aggregate demand in the Danish book market with four explanatory variables: the price of books, aggregate disposable income, number of titles, and a trend measured by the number of years during the period studied, 1973–1991. This study also concludes that book demand is price sensitive, with an estimated price elasticity of about $-1.4$. It makes sense that aggregate book demand is less price elastic than the demand for single books, estimated by Bittlingmayer (1992). Increasing the price of a particular title reduces the demand for this title, but increases the demand for other books, leaving total demand for books less affected.

Hjorth-Andersen finds that the income elasticity of books in the Danish book market is about 1.8. Books are, thus, “luxury” goods. The number of titles does not seem to affect demand. On the other hand there is a significantly autonomous negative trend in book demand, perhaps due to the crowding out effect of new and cheaper close substitutes to books.

Prieto-Rodríguez et al. (2004) analyze book demand based on quarterly Spanish consumer survey data of about 3,200 households for the period 1985–95. They estimate a model consisting of 19 goods of which three are cultural goods. The first one is an aggregate of cinema, theater, museums and other cultural events (the CTM-good). The second consists of books, magazines and newspapers (the BMN-good). The third good is film and music on magnetic media (the FMM-good). For the BMN-good they find an income elasticity of about 1.4, confirming Hjorth-Andersen’s findings. They also obtain estimates of the own price elasticity of $-1.65$, which is in between the estimates of Hjorth-Andersen (2000) and Bittlingmayer (1992). Prieto-Rodríguez et al. (2004) also estimate cross-price elasticities between the three cultural goods in question, and find the BMN-good to be complementary to both the CTM- and the FMM-good, contrary to what is usually assumed.

Related calculations based on data for the years 1976–1990 are presented in Fishwick and Fitzsimons (1998). They suggest a price elasticity of about $-0.9$ and an income elasticity slightly above 1.4. Goolsbee and Chevalier (2002) have carried out an analysis of the demand

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1 Due to the economic sensitivity of the information used (prices, gross margins for the book stores and costs) the identity of the publisher is not disclosed.