What Men Want, What They Get and How to Find Out

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Summary

The first chapter of the thesis is entitled “Household Decisions on Arts Consumption” and is joint work with Caterina Mauri. In it, we explore the role of intra-household bargaining in arts consumption. We do this by estimating demand for various arts and cultural events such as the opera or dance performances using a large number of explanatory variables. One of these variables plays a special role. This variable is a distribution factor, meaning that it can be reasonably assumed to affect consumption only through the bargaining process, and not by modifying preferences. Such variables play an important role in the household bargaining literature. Here, three such variables are used. Among them is the share of household income that is contributed by the husband, the canonical distribution factor.

The chapter fits into a literature on drivers of arts consumption, which has shown that in addition to such factors as age, income and education, spousal preferences and characteristics are important in determining how much and which cultural goods are consumed. Gender differences in preferences in arts consumption have also been shown to be important and to persist after accounting for class, education and other socio-economic factors (Bihagen and Katz-Gerro, 2000).

We explore to what extent this difference in preferences can be used to shed light on the decision process in couples’ households. Using three different distribution factors, we infer whether changes in the relative bargaining power of spouses induce changes in arts consumption.

Using a large sample from the US Current Population Survey which includes data on the frequency of visits to various categories of cultural activities, we regress attendance rates on a range of socio-economic variables using a suitable count data model. We find that attendance by men at events such as the opera, ballet and other dance performances, which are more frequently attended by women than by men, show a significant influence from the distribution factors. This significant effect persists irrespectively of which distribution factor is used. We conclude that more influential men tend to participate in these activities less frequently than less influential men, conditionally on a host of controls notably including hours worked.
The second chapter centers around the recovery of resource shares. This chapter is joint work with Denni Tommasi, a fellow PhD student at ECARES. This project relies on the collective model of the household. Pioneered by Chiappori (1988) and Apps and Rees (1988), this model has become the go-to alternative to unitary approaches, where the household is seen as a single decision-making unit with a single well-behaved utility function. Instead, the collective model allows for individual utility functions for each member of the household. The model owes much of its success to the simplicity of its most fundamental assumption: That whatever the structure of the intra-household bargaining process, outcomes are Pareto-efficient. Though the model nests unitary models as special cases, it does have testable implications.

From the assumption of Pareto-efficiency, a relatively simple household problem can be formulated. Households can be seen as maximizers of weighted sums of their members’ utility functions. Importantly the weights, known as bargaining weights, may depend on many factors, including prices. Combined with a consumption technology, the household problem in turn implies structure for household demand, which is observed in survey data.

Collective demand systems do not necessarily identify measures of bargaining power however. In fact, the ability to recover such a measure, and especially one that is useful for welfare analysis, was an important milestone in the literature. It was reached by (Browning et al., 2013) (henceforth BCL), with a collective model capable of identifying resource shares (also known as a sharing rule). These shares provide a measure of how resources are allocated in the household and so can be used to study intra-household consumption inequality. They also take into account that households generate economies of scale for their members: By sharing goods such as housing, members of households can generate savings that can be used elsewhere.

Estimation of these resource shares involves expressing household budget shares as a function of preferences, a consumption technology and a sharing rule, each of which is a function of observables, and letting the resulting system loose on the data. But obtaining such a demand system is not free. In addition to the usual empirical specifications of the various parts of the system, an identifying assumption has to be made. In BCL, this is the assumption that singles and adult members of households share the same preferences. In Chapter 2, however, an alternative assumption is used.

In a recent paper, Dunbar et al. (2013) develop a collective model based on BCL that allows to identify resource shares using assumptions on the similarity of preferences within and between households. The model uses demand only for assignable goods, a favorite of household economists. These are goods such as mens’ clothing and womens’ clothing for which it is known who in a household consumes them. In this chapter, we show why, especially when the data exhibit relatively flat Engel curves, the model is weakly identified and induces high variability and an implausible pattern in least
squares estimates.

We propose an estimation strategy nested in their framework that greatly reduces this practical impediment to recovery of individual resource shares. To achieve this, we follow an empirical Bayes method that incorporates additional (or out-of-sample) information on singles and relies on mild assumptions on preferences. We show the practical usefulness of this strategy through a series of Monte Carlo simulations and by applying it to Mexican data.

The results show that our approach is robust, gives a plausible picture of the household decision process, and is particularly beneficial for the practitioner who wishes to apply the DLP framework. Our welfare analysis of the PROGRESA program in Mexico is the first to include separate poverty rates for men and women in a CCT program.

The third Chapter addresses a problem similar to the one discussed in Chapter 2. The goal, again, is to estimate resource shares and to remedy issues of imprecision and instability in the demand systems that can deliver them. Here, the collective model used is based on Lewbel and Pendakur (2008), and uses data on the entire basket of goods that households consume. The identifying assumption here is similar to that used by BCL, although I allow for some differences in preferences between singles and married individuals.

I set out to improve the precision and stability of the resulting estimates, and so to make the model more useful for welfare analysis. In order to do so, this chapter approaches, for the first time, the estimation of a collective household demand system from a Bayesian perspective. Using prior information on equivalence scales, as well as restrictions implied by theory, tight credible intervals are found for resource shares, a measure of the distribution of economic well-being in a household. A modern MCMC sampling method provides a complete picture of the high-dimensional parameter vector’s posterior distribution and allows for reliable inference.

The share of household earnings generated by a household member is estimated to have a positive effect on her share of household resources in a sample of couples from the US Consumer Expenditure survey. An increase in the earnings share of one percentage point is estimated to result in a shift of between 0.05% and 0.14% of household resources in the same direction, meaning that spouses partially insure one another against such shifts. The estimates imply an expected shift of 0.71% of household resources from the average man to the average woman in the same sample between 2008 and 2012, when men lost jobs at a greater rate than women.

Both Chapters 1 and 3 explore unconventional ways to achieve gains in estimator precision at relatively little cost. This represents a valuable contribution to a literature that, for all its merits in complexity and ingenious modeling, has not yet seriously endeavored to make itself empirically useful.
Bibliography


