



**GREMAQ**  
Groupe de Recherche en Economie  
Mathématique et Quantitative

## PROGRAM

Workshop  
« The Theory and Empirics of Risk Sharing »

June 5,6 – 2008  
Manufacture des Tabacs – Aile JJ Laffont – MF 323

Organized by Pierre Dubois, Bruno Jullien and Thierry Magnac



## June 5

**14 :00 – 15 :30 – Tessa BOLD – New College, Oxford**

### « Implications of Endogenous Group Formation for Efficient Risk-Sharing »

This paper models the implications of endogenous group formation for efficient risk-sharing contracts in the dynamic limited commitment model. Endogenising group formation requires that any risk-sharing arrangement is not only stable with respect to individual deviations but also with respect to deviations by sub-groups. This requirement alters the central predictions of the dynamic limited commitment model for efficient bilateral risk-sharing. Firstly, consumption of constrained agents depends on the previous history of shocks and the interaction of the history of shocks with the current income realizations of other constrained agents. As a consequence, the efficient contract does not display amnesia. Secondly, the covariance between current consumption and past income can take on negative values. Based on the first result, we derive a formal test for the presence of endogenous group formation under limited commitment. In addition, we show how this test can be extended to distinguish a limited commitment/perfect information environment from a full commitment/imperfect information environment empirically.

**15 :30 – 16 :00 : Coffee break – MF 322**

**16 :00 – 17 :30 – Ethan LIGON – UC Berkeley**

### « Incentives and Nutrition for Rotten Kids : Intrahousehold Food Allocation in the Philippines » joint with P. Dubois

Using data on individual consumption expenditures from a sample of farm households in the Philippines, we construct a direct test of the risk-sharing implications of the collective household model. We are able to contrast the efficient outcomes predicted by the collective household model with the outcomes we might expect in environments in which food consumption delivers not only utils, but also nutrients which affect future productivity. Finally, we are able to contrast each of these two models with a third, involving a hidden action problem within the household ; in this case, the efficient provision of incentives implies that the consumption of each household member depends on their (stochastic) productivity.

The efficiency conditions which characterize the within-household allocation of food under the collective household model are violated, as consumption shares respond to earnings shocks. If future productivity depends on current nutrition, then this can explain some but not all of the response, as it appears that the quality of current consumption depends on past earnings. This suggests that some actions taken by household members are private, giving rise to moral hazard problem within the household.

## June 6

**9 :30 – 11 :00 – Sarolta LACZO – Toulouse School of Economics (Gremaq)**

### « Riskiness, Risk Aversion, and Risk Sharing »

This paper reconsiders the concept of riskiness, and relates it to risk sharing. In particular, I examine how informal insurance, characterized by limited commitment, depends on risk preferences and the riskiness of income. The level of informal insurance is defined as the reciprocal of the discount factor above which perfect risk sharing is self-enforcing. When complete insurance is possible, there is more risk sharing, if (i) the utility function is more concave, if (ii) income is more risky considering a mean-preserving spread. However, (ii) no longer holds when insurance can only be incomplete, that is, there is background risk. In the case of CARA (CRRA) preferences, informal insurance depends positively on both the coefficient of absolute (relative) risk aversion and the standard deviation (coefficient of variation) of the income process, and is independent of mean income. The level of informal insurance could be a general measure of riskiness, that disentangles risk and expected value.

**11 :00 – 11 :15 : Coffee break – MF 322**

**11h15 – 12h45 – Nicola PAVONI – University College London**

### « Risk Sharing in Private Information Models with Asset Accumulation: Explaining the Excess Sensitivity of Consumption, » joint with O. Attanasio,

We derive testable implications of model in which first best allocations are not achieved because of a moral hazard problem with hidden saving. We show that in this environment agents typically achieve more insurance than that obtained under autarky via saving, and that consumption allocation gives rise to « excess smoothness of consumption », as found and defined by Campbell and Deaton (1987). We argue that the evidence on excess smoothness is consistent with a violation of the simple intertemporal budget constraint considered in a Bewley economy (with a single asset) and use techniques proposed by Hansen et al. (1991) to test the intertemporal budget constraint. We also construct closed form examples where the excess smoothness parameter has a structural interpretation in terms of the severity of the moral hazard problem. Evidence from the UK on the dynamic properties of consumption and income in micro data is consistent with the implications of the model.

**12h45 – 14h00 Lunch - Hall building E**

**14 :00 – 15 :30 – Alexander KARAVANOV - Simon Fraser University**

### « Enterprise Dynamics and Finance : Distinguishing Mechanism Design from Exogenously Incomplete Markets Regimes » joint with R. Townsend

We formulate and solve a range of dynamic models of information-constrained credit markets that allow for moral hazard and unobservable investment. We compare them to the exogenously incomplete markets environments of autarky, saving only, and borrowing and lending in a single asset. We develop computational methods based on mechanism design theory, linear programming, and maximum likelihood techniques to structurally estimate, compare and statistically distinguish among the competing theoretical models of credit market imperfections. Our methods can be applied with both cross-sectional and panel data and allow for measurement error and unobserved heterogeneity in initial conditions. The models match major stylized facts from the empirical literature on firm dynamics e.g. as listed by Cooley and Quadrini (2001). Empirically, we find that using consumption, cashflow and investment data jointly or using dynamic data improves the researcher's ability to distinguish across the various model regimes relative to using consumption or investment only data, especially in the presence of high measurement error. We also estimate our models using data on Thai households running small business. We find that the borrowing and saving only frameworks provide the best fit using joint data on consumption, cashflow and investment.

**15 :30 Coffee break – MF 322**