

Research Statement

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My research is primarily in the fields of applied statistical and mathematical methods, econometrics, time series, production and labor economics. I also have expertise in Macroeconomics, applied and empirical methods in macroeconomics. One line of my current work, which will constitute my dissertation, is in labor economics, and deals with migration and the economic impact that migration influx has in the USA economy. In my research, I apply advanced econometric techniques such as spatial econometrics, duration models, limited dependent variable models, and panel data models, as well as some non parametric estimation techniques. In what follows I describe in greater detail my research agenda.

Labor Economics

My research in the area of labor economics analyzes the economic impact that arises from the migration influx coming into the USA, and derives policy implications. Currently, I have three working papers in this area that will constitute my dissertation. This is an ongoing work and only the first chapter is fully finished so far. The first paper, “Self Selection and Economic Impact of Mexican Immigration to the USA”, analyzes how the productive characteristics of Mexican emigrants to the United States compare to non-migrants. In other words, it analyses how emigrants self select. In regards to its contribution to the literature, we can point out that most of previous literature analyzing the issue of selectivity using data sources different from the Mexican Migration Project database that I’m using in this paper. The few that does tend to find positive selection instead of the negative selection commonly reported in the literature. Furthermore, these papers use either the MMP52 or the MMP71 dataset, where the number after MMP refers to the number of Mexican communities covered in the survey. Yet as of June of 2007 a new, enhanced dataset is available. MMP114 is now available and includes not only a broader survey base of 114 Mexican communities, but also new variables that may enrich the empirical analysis of the selectivity problem. So we can state that this paper contributes to the literature not only by analyzing the self selection issue utilizing new evidence previously unavailable, both also by using novel estimation techniques. The methodology used in this paper includes advanced data analysis and non parametric estimation techniques. The second and third papers will also use advanced econometric methodologies, such as duration and proportional hazard models, limited dependent variable models, and panel data models.

A line of research I plan to undertake in the near future but that I’m not considering for my dissertation is to reevaluate the effects of migration on native population wages. A few new empirical studies have found evidence that seems to contradict the stylized fact that

the migration influx should have a net negative impact on the wages of native population. I would like to revisit this stylized fact and contribute on this issue. Also, I would like to contribute with research on the economic impacts of the immigration on the source economy.

Spatial and Regional Economics

Another line of research that I took during the course of my field work deals with spatial economics, in particular efficient market allocation, and multi-market equilibrium models. We published a paper in the peer reviewed journal *Agribusiness* (ISBN # 0742-4477) entitled: "Non-Homogeneous Products and the Law of One Price" (Forthcoming in *Agribusiness*, Vol. 23, Issue No. 3, Summer 2007) This paper develops a theoretical model that determines fresh grapefruit prices FOB the packinghouse. After an analysis of the first order conditions, we find that the FOB packinghouse prices are equal for products with the same product characteristics. The theoretical conditions show a difference in FOB prices when the product characteristics are different. Then we perform a small comparative static exercise. The product characteristics that are varied include packing costs and pack-out rates. The results from a non-linear programming optimization routine demonstrates the importance of using data that accurately represents homogeneous products for LOP studies. Different packing costs and pack-out percentages are shown to cause different FOB packinghouse prices for fresh grapefruit destined for domestic and export markets.

This line of research is very suitable to be applied in cost minimizing firms that need to optimize its distribution networks, and can provide both interesting publishable articles as well as opportunities to provide consultations to firms.

Monetary Economics

I was always fascinated in the way changes in nominal variables the money may end up having effects in the real side of the economy. In that interest I wrote up an empirical money demand estimation for Mexico, in which interesting results are found. For instance, evidence of parametric instability is confirmed, but contrasting with other studies, CUSUM tests shows evidence that, for the Mexican case, such instability was due the Peso devaluation, rather than improved credit technologies. This is a paper that I wrote up as part of the requirements for the Econometrics requirement in our program, and I have received encouraging comments to polish it so it can be send to a peer review Journal, such as *Applied Economics*. Is definitively an interesting line of research that I would love to resume in the near future.

Sincerely,

Carlos Raul Pitta Arcos