

## **DEBARSHI INDRA**

Postdoctoral Scholar

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### **Education**

Ph.D., University at Buffalo, 2014

*Dissertation: Essays in Applied Econometrics*

*Dissertation committee members: Alex Anas (Chair), Peter Morgan, Neel Rao*

MA, University at Buffalo, 2010

BSc, University of Calcutta, 2004

### **Fields of interest**

Urban Economics, Real Estate Economics, Transportation Economics, Discrete Choice Theory and Applications, Applied Econometrics, Geographical Information System (GIS)

### **Teaching experience**

Teaching Assistant, Department of Economics, University at Buffalo, 2007-2011

Lecturer, Department of Economics, University at Buffalo, summer sessions, 2010, 2011, and 2013

### **Research experience**

Postdoctoral Scholar, Center for Sustainable Suburban Development, University of California, Riverside, 2014 to present

Research Associate, Center for Sustainable Suburban Development, University of California Riverside, 2011 to 2014

### **Awards**

College of Arts and Sciences fellowship from University at Buffalo, 2007-2011

Goodyear Fellowship from University at Buffalo, 2010

## **Working papers**

“Choice of Residence Location and Mode of Commuting: A Cross-Sectional Analysis of 275 US Metropolitan Areas” (under review)

“Regional Variations in Labor Demand Elasticities: Evidence from U.S. Counties” (with Abhradeep Maiti) (under review)

## **Research in progress**

“A Discrete Choice Model of Housing Construction and the Supply of Housing” (with Alex Anas)

“Effect of Income Inequality on Urban Sprawl” (with Ivgeni Kudko)

## **Skills**

Computer: Matlab, SAS, R, SQL, ArcGIS, Python  
Languages: English

## **Citizenship**

India (currently on F1 OPT)

## **References**

### **Alex Anas**

Professor  
Department of Economics  
University at Buffalo  
Phone: (716) 645-8663  
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### **Richard Arnott**

Distinguished Professor  
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### **Peter Morgan**

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### **Neel Rao**

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## **Debarshi Indra**

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### **Choice of Residence Location and Mode of Commuting: A Cross Sectional Analysis of 275 U.S. Metropolitan Areas:**

A nested logit model is employed to capture workers' joint choice of residence location and mode of commuting in a U.S. metropolitan area. The nested logit model is estimated using tract level aggregated data from the U.S. Census Bureau's transportation planning package (CTPP) and summary file 3 from the 2000 U.S. decennial census. The estimation covers worker flows of more than four million work-residence census tract pairs contained in 275 metropolitan areas. The effects of accessibility to water bodies, limited access highways, central cities, and consumption opportunities in workers' decision process are considered. The nested logit model is estimated using a national sample pooled across all MSAs and individual MSAs. We find that the mode choice elasticity with respect to commuting time has declined in the U.S. and that it follows the Burr distribution in the population of MSAs. Higher mode choice elasticity is also found to increase MSA population density or decrease urban sprawl.

### **Regional Variations in Labor Demand Elasticities: Evidence from U.S. Counties (with Abhradeep Maiti):**

We use a large panel dataset covering the years 1988 to 2010 to estimate county specific total wage elasticities of labor demand for four highly aggregated industries in the United States. Our industries are construction, finance/real estate/service, manufacturing, and retail trade, which together employ on average over eighty percent of the U.S. national labor force per year. We use both the conventional constant coefficient panel data model and a random coefficients panel data model to estimate labor demand elasticities in various industries. We find the labor demand curves in all the industries studied to be downward sloping. We also find significant evidence that the total wage elasticity of labor demand exhibits regional variation. The labor demand estimates obtained in this study are useful to investigate the differential impact of various shocks and policy changes on the labor market. As an example, we use the estimated county specific labor demand elasticities to identify the impact of union membership and right to work laws on labor demand. We show that labor demand tends to become less elastic with higher union membership rates. We also find that labor demand becomes more elastic if a right to work law is in place.

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**A Discrete Choice Model of housing construction and the supply of housing** (with Alex Anas):

Using a panel data set on land parcels zoned for single family development over the period 1988-2012 in Los Angeles County, we estimate a discrete choice model of new housing construction under the assumption of rational expectations on land and floor prices. The probability that a parcel will be developed at any given year depends on construction costs, city-year specific constants of the difficulty of developing and anticipated idiosyncratic random shocks on forward profits. The mixed logit specification is superior to multinomial logit. The construction elasticity and the long run housing supply elasticity can be derived over any time horizons and these are compared to those obtained from a stunningly varied set of approaches in the extant literature. The estimates are used to obtain model-predicted excess returns from land development, pinpointing periods of bubble like expectations as in 2005-2007.