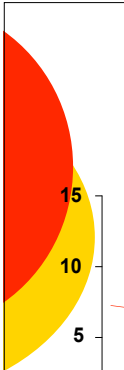




# Agents of Impatience:

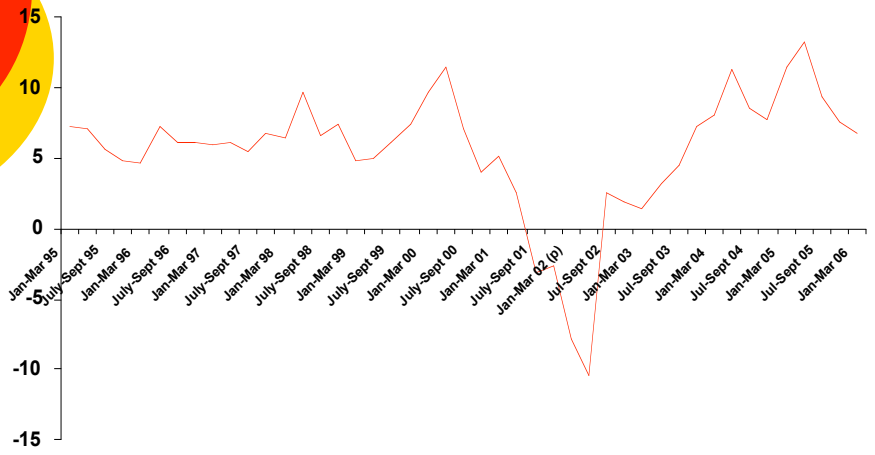
State Tax Policy & Administration

Gary Cornia  
Brigham Young University



# Rise - Fall - Rise of State Taxes

[Year over Year Change -- Total Taxes]



Source: Rockefeller Institute and FTA



## **Have “We” Learned Anything?**

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- **Most Recent 12 Month Period of Economic Expansion**



## **WHY ?**

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**WE ONLY  
THINK WE**

---

**UNDERSTAND  
RELATIONSHIPS**



## Known and Unknown Effects & Desirable and Undesirable Outcomes

---

Understand Cause and Effect?

Outcomes Acceptable To Everyone?

YES

NO

YES	1	2
NO	3	4



## Economic Development

---

- **Economic Development Has Trumped Almost Every Other Normative Criteria of Tax Policy**
- **Sufficient Revenue**
- **Horizontal Equity**
- **Vertical Equity**
- **Stability**
- **Compliance**
- **Administration**
- **Economic Development Has Become the Center of Gravity of Tax Policy**



# **TAX CHANGE**

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**ONE RESULT IS THAT WE  
DON'T FULLY  
APPRECIATE THE  
CONSEQUENCES OF TAX  
CHANGES**



## **EXAMPLE OF AN UNINTENDED CONSEQUENCE**

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- **Decentralization to  
Recentralization**
- **Duncombe, & Yinger**



# ASYMMETRIC INFORMATION

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○ **REAL**

○ **IMAGINED**





# **REBUDGETING**

---



## **DEALING WITH AGENTS OF IMPATIENCE**

---

**DEVELOPING METHODS AND A  
CULTURE TO USE  
ASYMMETRIC INFORMATION**



# RISK

## ADDRESS AND USE YOUR UNDERSTANDING OF RISK

### Horizontal Inequity in the Property Taxation of Apartment, Industrial, Office, and Retail Properties

**Abstract** - Researchers have carefully examined assessment uniformity in ad valorem taxation for single-family residential properties and they have frequently reported nonuniform outcomes in the appraisal of these properties. This study analyzes the uniformity of assessed valuations across apartment, industrial, office, and retail properties in Maricopa County (Metropolitan Phoenix), Arizona. Specifically, we investigate horizontal equity, which results when the assessment ratio (assessed value/sales price) is uniform across properties with similar market values. We examine horizontal equity over a five-and-one-half-year period (January 1998-June 2003). After applying both parametric and nonparametric tests, we find statistically significant evidence of horizontal inequity. We find that retail properties are underassessed compared to apartments, and office properties are overassessed compared to apartments; however, we find little difference between industrial and apartment properties. We also find that properties owned by out-of-state residents are overassessed compared to properties owned by in-state residents.

#### INTRODUCTION

Economists consider the property tax a critical component in the delivery of public services by local governments (Fisher, 1996). McGuire (1999) suggests that the benefits of the property tax as a source of local revenue have become "almost dogma" among public finance economists.<sup>1</sup> The property tax, however, does not always measure up to the benefits suggested in the literature. In practice, the property tax often suffers from several shortcomings, with one of the most serious shortcomings occurring when the property tax is nonuniform (Musgrave and Musgrave, 1989; Rosen, 2002). Administration of the property tax requires that a taxable value be set on a specific date (lien date) by an elected or appointed public official. Valuation is difficult, and assessors are often underfunded and understaffed, making the task even more difficult. The taxable value for other taxes is based on actual and recurring economic events such as sales or

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<sup>1</sup> See Hamilton (1975), Oates (1996, 2001), Gertz and McGuire (1991), Tidman, Akhavan, Johns and Wuthicharan (2002), Bruckner (1986), Case and Gyourko (1991).



**TABLE 5**  
**REGRESSION COEFFICIENTS FOR HORIZONTAL EQUITY ANALYSIS**  
(Data Are Segregated by Property Value)

Variable Name	Aggregate	Mortgage Lender Criteria			Quintile Criteria					Clapp Criteria		
		Lender 1	Lender 2	Lender 3	Quintile 1	Quintile 2	Quintile 3	Quintile 4	Quintile 5	Clapp 1	Clapp 2	Clapp 3
Industrial	0.0167	-0.0458	-0.0048	0.0166	-0.0593	-0.0956*	-0.0650	0.0118	0.0632	-0.0396	0.0103	0.0798*
Office	0.1009*	0.2095*	0.1237*	0.0738	0.2179*	0.1800*	0.2171*	0.2323*	0.1415	0.1132*	0.1368*	0.0679*
Retail	-0.1350*	0.0151	-0.1195*	-0.0398	0.0264	-0.0241	-0.0111	0.0749	0.0455	-0.0491	-0.1940*	0.0101
Seller Out-of-State	0.0284*	0.0432*	0.0441*	-0.0065	0.0579*	0.0443*	0.0363	0.0406	0.0232	-0.0002	0.0540*	0.0276
In Sq Ft	0.0786*	0.3242*	0.1709*	0.1949*	0.3597*	0.4142	0.3322*	0.3968*	0.1999	0.2266*	0.0845*	0.0784*
In No Floors	-0.0017	0.0036	-0.0428	0.0199	0.0425	-0.0117	-0.0899*	0.0346	0.0411	-0.0027	-0.0530	0.0650*
Land-to-Bldg Ratio	0.0004	0.0091*	0.0026*	0.0004	0.0094*	0.0183*	0.0020	0.0108*	0.0006	0.0060*	-0.0007	0.0004
Age	0.0078*	-0.0002	0.0045*	0.0223*	-0.0042	0.0018	-0.0053*	0.0021	0.0219	0.0007	0.0087*	0.0150*
Age Sq	-0.0003*	-0.0001*	-0.0001*	-0.0005*	-0.0001	-0.0001	-0.0001	-0.0002*	-0.0005*	-0.0001*	-0.0002*	-0.0003*
Better Condition	-0.2084*	-0.0398	-0.2398*	-0.0826*	-0.0482	-0.1294*	-0.1093*	-0.1136*	-0.1108	-0.0816	-0.2817*	-0.1115*
Worse Condition	0.0973*	0.0456	0.0468	0.2861*	0.0348	0.0252	-0.0157	0.0291	0.2675	0.0364	0.1196	0.2034*
Black & Stucco	0.0222	0.0090	0.0209*	0.0128	0.0110	-0.0084	0.0060	0.0017	0.0323	0.0035	0.0501	0.0271
Frame	-0.0328*	-0.0148	-0.0461	-0.0411	-0.0143	-0.1402*	0.0358	-0.0304	0.0043	0.0059	-0.0595	0.0111
Other Materials	-0.0320*	-0.0686*	-0.0212	-0.0301	-0.0037*	-0.0475	0.0394	-0.0602	-0.0243	-0.0782*	-0.0098	-0.0189
Scottsdale/CC	-0.0474*	-0.0144	0.0149	-0.0202	0.0089	0.0868*	0.0395	0.1573*	0.0100	-0.0006	-0.0794	-0.0342
Tempe	-0.0040	0.0145	0.0467	-0.0054	0.0304	-0.0705	0.0713	0.0913*	0.0079	0.0030	0.0242	-0.0266
East Valley	0.0425*	0.0375	0.0373	0.0446	0.0437	0.0371	0.0417	0.0088	0.0082	0.0360	0.0463	0.0329
West Valley	0.0412*	0.0438	0.0117	0.0100	0.0435	-0.0644	0.0394	-0.0154	0.0103	0.0538	0.0642	-0.0227
Year 1995	-0.0496*	-0.0532	-0.0453	0.0855	0.0645	-0.0494	-0.0797*	0.0147	0.0556	0.0017	-0.0826*	-0.0088
Year 2000	-0.0980*	-0.0935*	-0.0820*	0.0353	-0.0889	-0.0591	-0.0708*	0.0950*	0.0094	-0.0619*	-0.1496*	-0.0113
Year 2001	-0.1131*	-0.1220*	-0.0821*	0.0383	-0.0886	-0.0661	-0.1001*	0.0705	0.0352	-0.0902*	-0.1634*	0.0098
Year 2002	-0.1007*	-0.1279*	-0.0372	0.0453	-0.0602	-0.0938*	-0.0738	0.1057*	0.0551	-0.1020	-0.1367*	0.0272
Year 2003	-0.0912*	-0.0771*	-0.0807	0.0571	-0.0414	-0.0096	-0.0236	0.1491*	0.0655	-0.0480	-0.1415*	0.0196
Constant	-1.1997*	-3.1693*	-2.0869*	-2.8828*	-3.3812*	-4.1215*	-3.4387*	-4.6411*	-3.0024	-2.3751*	-1.1910*	-1.4770
F-statistic	107.81*	42.48*	53.88*	3.58*	31.28*	34.98*	31.88*	16.81*	3.01*	19.74*	71.73*	4.97*
Adj. R-Sq	0.1857	0.2925*	0.2428	0.3135	0.3175	0.3537	0.3234	0.4275	0.3167	0.2017	0.2195	0.1736
No. of Obs	4,499	1,363	2,383	753	918	863	908	899	899	1,173	2,016	3,310

Notes: F-statistic Null Hypothesis: Industrial = Office = Retail  
\*Significant at the 0.05 level

**The NEW ENGLAND JOURNAL of MEDICINE**

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**DNA Repair by ERCC1 in Non-Small-Cell Lung Cancer and Cisplatin-Based Adjuvant Chemotherapy**

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ABSTRACT

**BACKGROUND:** Adjuvant cisplatin-based chemotherapy improves survival among patients with completely resected non-small-cell lung cancer, but there is no validated clinical or biologic predictor of the benefit of chemotherapy.

**METHODS:** We used immunohistochemical analysis to determine the expression of the excision repair cross-complementation group 1 (ERCC1) protein in operative specimens of non-small-cell lung cancer. The patients had been enrolled in the International Adjuvant Lung Cancer Trial, thereby allowing a comparison of the effect of adjuvant cisplatin-based chemotherapy on survival, according to ERCC1 expression. Overall survival was analyzed with a Cox model adjusted for clinical and pathological factors.

**RESULTS:** Among 761 tumors, ERCC1 expression was positive in 375 (49%) and negative in 401 (50%). A benefit from cisplatin-based adjuvant chemotherapy was associated with the absence of ERCC1 (test for interaction,  $P=0.009$ ). Adjuvant chemotherapy, as compared with observation, significantly prolonged survival among patients with ERCC1-negative tumors (adjusted hazard ratio for death, 0.65; 95% confidence interval [CI], 0.50 to 0.86;  $P=0.002$ ) but not among patients with ERCC1-positive tumors (adjusted hazard ratio for death, 1.14; 95% CI, 0.84 to 1.55;  $P=0.40$ ). Among patients who did not receive adjuvant chemotherapy, those with ERCC1-positive tumors survived longer than those with ERCC1-negative tumors (adjusted hazard ratio for death, 0.66; 95% CI, 0.49 to 0.90;  $P=0.009$ ).

**CONCLUSIONS:** Patients with completely resected non-small-cell lung cancer and ERCC1-negative tumors appear to benefit from adjuvant cisplatin-based chemotherapy, whereas patients with ERCC1-positive tumors do not.

From the Laboratory of Radiobiology and Oncology, Centre for Research in Energy Conversion, European Joint Research Institute of the University of Paris (K.A.C., A.D., V.H., F.T., M.S., M.P., R.F., J.-P.P.) and the Departments of Pathology and Translational Research (P.F.) and Medicine (P.A., T.T., J.-C.S.), Institut Gustave Roussy, Villejuif; the Department of Pathology, Centre Hospitalier Universitaire Albert Michalon, Dijonville (E.B.); and the University of Medicine, Mainz (F.A.). Dr. Soria is the president of the Department of Internal Medicine, Mainz University of Applied Sciences (M.U.A.S.). Dr. Pignatelli is the Institute of Pathology, Laboratory of Medical Oncology, Graz, Austria (M.D., Ph.D.) and ERCC1 and ERCC1 for Chemoprevention, University Hospital Zurich (R.S.). Address reprint requests to Dr. Soria at the Department of Medicine, Institut Gustave Roussy, 114 Rue de la Cavallerie, 92000 Villejuif, France, or at soria@gr.fr.

\*Other investigators who participated in the International Adjuvant Lung Cancer Trial (IALT 3a) study are listed in the Appendix.

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**Table 1. Characteristics of the Patients.\***

Characteristic	All Patients (N=763)	Patients with ERCC1-Positive Tumors (N=333)		P Value†
		ERCC1-Positive Tumors number (percent)	ERCC1-Negative Tumors (N=426)	
<b>Age</b>				0.002‡
<55 yr	231 (30)	80 (24)	151 (35)	
55-64 yr	330 (43)	161 (48)	169 (40)	
≥65 yr	200 (26)	94 (28)	106 (25)	
<b>Sex</b>				<0.001
Male	424 (56)	202 (61)	222 (52)	
Female	340 (44)	131 (39)	209 (48)	
<b>Pathologic TNM stage</b>				0.97
Stage I	267 (35)	119 (36)	148 (35)	
Stage II	375 (49)	176 (53)	199 (46)	
Stage III	319 (42)	142 (43)	177 (41)	
<b>Tumor</b>				0.10
T1	134 (18)	66 (20)	68 (16)	
T2	452 (59)	188 (56)	264 (62)	
T3	181 (24)	85 (25)	96 (23)	
T4	10 (1)	2 (1)	8 (2)	
<b>Histologic type</b>				<0.001
Squamous cell carcinoma	428 (56)	236 (70)	192 (45)	
Adenocarcinoma	242 (32)	71 (21)	171 (40)	
Other	91 (12)	28 (8)	63 (15)	
<b>Performance status score‡</b>				0.86
0	426 (56)	188 (56)	238 (56)	
1	236 (31)	113 (34)	123 (29)	
2	79 (10)	34 (10)	45 (11)	
<b>Pleural invasion</b>				0.007
Yes	61 (8)	37 (11)	24 (6)	
No	700 (92)	299 (89)	401 (94)	
<b>Vascular invasion</b>				0.04
Yes	122 (16)	65 (20)	57 (13)	
No	539 (71)	250 (75)	289 (68)	
<b>Surgery</b>				0.35
Pneumonectomy	166 (22)	81 (24)	85 (20)	
Subtotal or segmentectomy	455 (60)	194 (58)	261 (61)	
<b>Radiotherapy</b>				0.35
Yes	169 (22)	82 (24)	87 (20)	
No	594 (78)	251 (75)	343 (80)	
<b>Planned dose of cisplatin</b>				0.67
80 mg/m <sup>2</sup> per cycle	139 (18)	58 (17)	81 (19)	
100 mg/m <sup>2</sup> per cycle	544 (71)	247 (74)	297 (70)	
120 mg/m <sup>2</sup> per cycle	78 (10)	32 (10)	46 (11)	

\* TNM denotes tumor-node-metastasis. Percentages may not total 100 because of rounding.  
 † P values were calculated by the chi-square test and univariate analysis.  
 ‡ P<0.001 for trends.  
 § World Health Organization scores for performance status range from 0 to 2, with a score of 0 indicating no symptoms, 1, mild symptoms, and 2 moderate symptoms.



# REPORT RISK



## **Assuming Too Much Knowledge**

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- **Half Life of Technical Skills**
- **Coverage in An Economics Class**



## **4<sup>TH</sup> DOWN**

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- **Carter & Machol (1978)**
- **Romer (2005)**
- **“Go for it”**



## **Systematic and Non-systematic Risk**

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## **DIFFICULT TASK**

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- **CRAWFORD (1972)**
  - **1300**
- **REVENUE FORECASTS (TOMORROW)**
  - **MILLIONS**

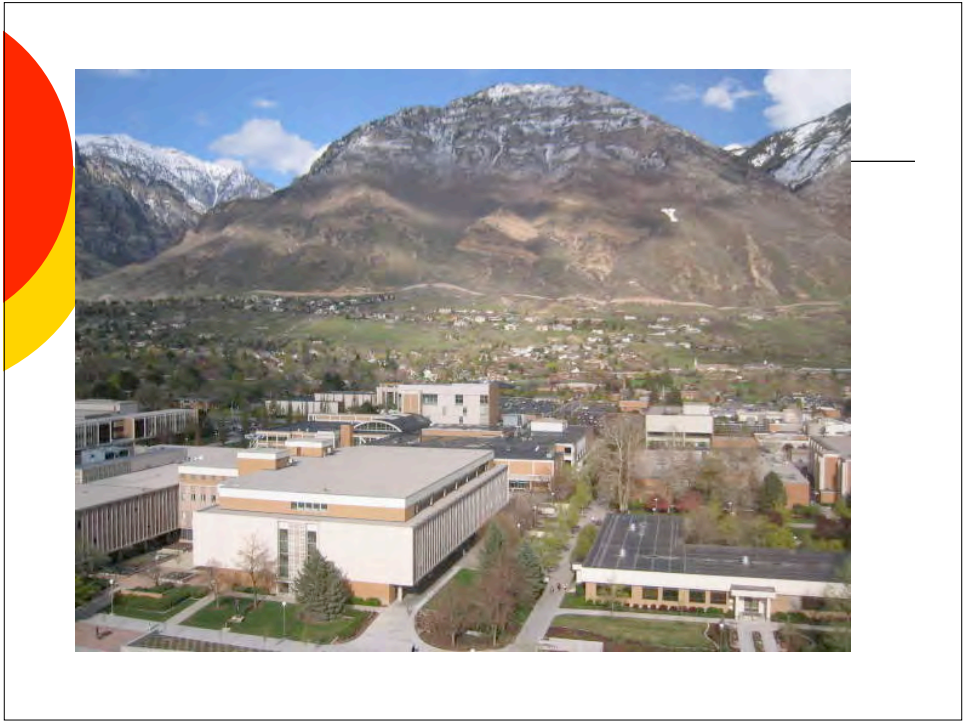
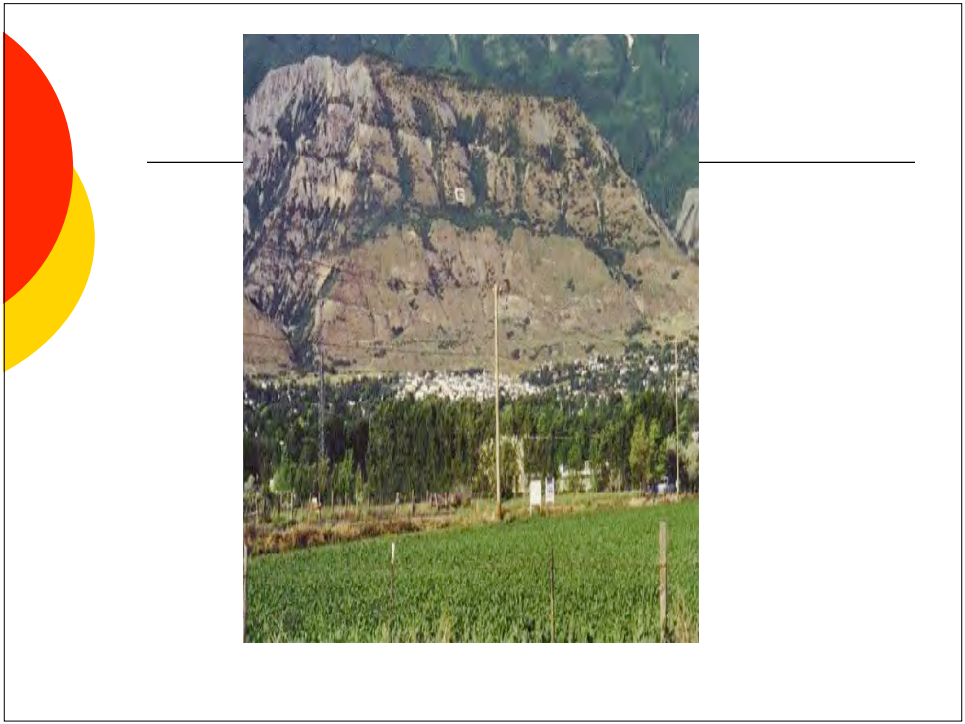




# WHAT HAPPENS IF YOU ALLOW THE "AGENTS" TO WIN?

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# TAX POLICY

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**U G \_ Y**








# TAX POLICY

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# UGLY



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