



# The Effect Of The Minimum Wage When It Really Bites: A Reexamination Of The Evidence From Puerto Rico

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University of Puerto Rico

**Author:** Alejandro Ouslan

# Research Question

- ▶ This paper reinvestigates the evidence on the impact of the minimum wage on employment in Puerto Rico.  
[4]

# Justification of Research

- ▶ Sectors that are forced to raise wages in response to a minimum should reduce employment because of both substitution and scale effects.
- ▶ The recent wave of studies that conclude the minimum wage has not had an adverse impact on employment are somehow wrong.
- ▶ The minimum wage has the predicted effect when it is really high relative to the equilibrium wage.

# Literature Review

- ▶ The spike in wage distribution at the minimum wage is an indication that people with presumably different ability levels earn the same wage. [1]
- ▶ Case studies find that employment did not decline at establishments that were forced to raise wages by the minimum compared to others that were not [2]
- ▶ The employment increased in restaurants that were forced to raise their wages to meet the new minimum wage in the short run [3]

# Data Characteristics and Data Sources

- ▶ The data comes from Yearbook of Labor Statistics

# Methodology

- Estimating an employment demand equation

$$\frac{\partial X}{.5(X_0 + X_1)} - \frac{dN}{.5(N_0 + N_1)} = \alpha + \beta \frac{dW}{.5(W_0 + W_1)} \quad (1)$$

- The bias will be greater if profits and capital payments are small

$$\log X_1/X_0 - \log N_1/N_0 = \alpha + \beta \log W_1/W_0 \quad (2)$$

- The analysis is a cross-industry panel data analysis of employment.

$$\log EMP_{it} = \alpha + \beta \log(c_{it}m_{it}/w_{it}) + T_i + IND_i + \epsilon_{it} \quad (3)$$

# Results Figures

Table 3  
Examination of Puerto Rico Minimum Wage Effects, 1974-87  
Pooled Cross-Industry/Time-Series Data

Independent Var.	Dependent Variable and Model		
	Ln(Emp) Unweighted (1)	Ln(Emp) Weighted (2)	Employment Unweighted (3)
Ln(Minimum x Covg./ Avg. Wage)	-.91 (.24)	.03 (.19)	-1148 (2445)
Industry Dummies	Yes	Yes	Yes
Year Dummies	Yes	Yes	Yes
Root MSE	.37	.20	3739
R-Square	.95	.98	.99

# Descriptive Statistics

Table 4a  
Employment in the Textile, Wearing Apparel, and Leather Industries

ISIC	Employment (1,000s)			Percentage Change			
	1973	1984	1992	1973-84	1984-92	1973-92	
Puerto Rico							
Textiles	321	7.04	2.41	3.23	-65.8	34.0	-54.1
Apparel	322	38.44	31.08	28.76	-19.1	-7.5	-25.2
Leather	323	2.64	1.57	1.79	-40.5	14.0	-32.2
Footwear	324	3.64	3.56	3.7	-2.2	3.9	1.6
Total		51.76	38.62	37.48	-25.4	-3.0	-27.6
U.S.							
Textiles	321	1010	746	678	-26.1	-9.1	-32.9
Apparel	322	1438	1185	1018	-17.6	-14.1	-29.2
Leather	323	101	66	52	-34.7	-21.2	-48.5
Footwear	324	183	124	71	-32.2	-42.7	-61.2
Total		2732	2121	1819	-22.4	-14.2	-33.4

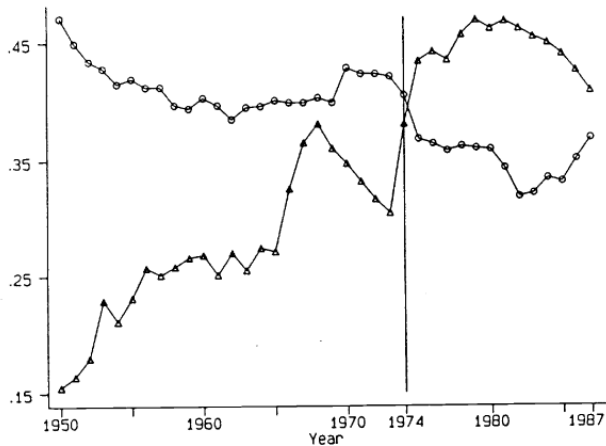


# Results

- ▶ Between 1973 and 1984 employment declined by 66% in textiles, by 19% in apparel, and by 41% in leather products.
- ▶ Between 1973 and 1984, the combined employment in these industries on the mainland fell by 600,000 jobs, or 22 percent of the initial level.
- ▶ Between 1973 and 1992, employment in these industries declined by more in the mainland than in PR.

# Graphs

Figure 1: Employment and Minimum Wage Trends



# Conclusions

- ▶ The evidence of adverse employment effects of Puerto Rico's minimum wage is fragile and inconclusive.
- ▶ Strongest evidence: Aggregate time series analysis suggests a negative effect on employment.
- ▶ Weakest evidence: Cross-industry analyses show limited support for negative effects.
- ▶ An intelligent skeptic would likely remain unpersuaded by the evidence.
- ▶ Economists should explore alternative models to explain limited or nonexistent adverse effects.

# Bibliography

- [1] Charles Brown. "Minimum wage laws: are they overrated?" In: *Journal of Economic Perspectives* 2.3 (1988), pp. 133–145.
- [2] D Card. "Minimum Wages and Employment: A Case Study of the Fast Food Industry in New Jersey and Pennsylvania". In: (1993).
- [3] David Card. "Using regional variation in wages to measure the effects of the federal minimum wage". In: *Ilr Review* 46.1 (1992), pp. 22–37.
- [4] Alan B Krueger. *The effect of the minimum wage when it really bites: A reexamination of the evidence from Puerto Rico*. 1994.