

Extract from “Why Has CEO Pay Increased So Much?”

By Xavier Gabaix and Augustin Landier.

Published in *Quarterly Journal of Economics* (2008) Volume 123(1): 49–100.

James J. Heckman
University of Chicago

AEA Continuing Education Program
ASSA Course: Microeconomics of Life Course Inequality
San Francisco, CA, January 5-7, 2016



Figure 1: CEO Pay and Different Proxies for Firm Size

	ln(Total compensation)			
	(1)	(2)	(3)	(4)
ln(Market cap)	0.34 (0.021) (0.021)	0.27 (0.008) (0.012)		
ln(Income)	0.006 (0.0138) (0.0149)		0.22 (0.008) (0.009)	
ln(Sales)	-0.08 (0.018) (0.020)			0.21 (0.008) (0.014)
Year fixed effects	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes
Observations	9,777	9,777	9,777	9,777
R^2	0.498	0.494	0.455	0.439

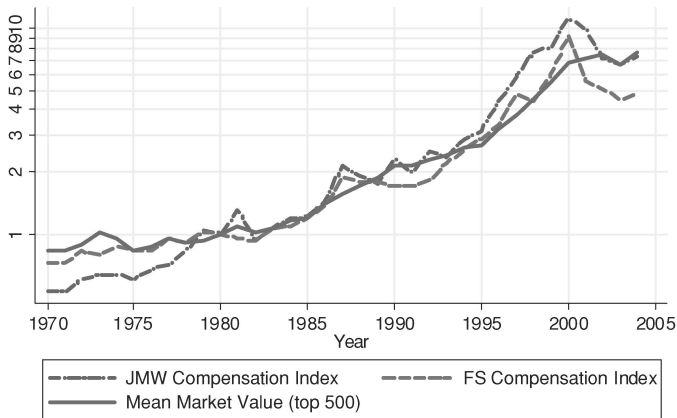
Explanation. We use ExecuComp data (1992-2004) and select for each year the 1,000 highest-paid CEOs, using the total compensation variable TDC1 at year t , which includes salary, bonus, restricted stock granted, and Black-Scholes value of stock-options granted.

Figure 2: Panel Evidence: CEO Pay, Own Firm Size, and Reference Firm Size

	ln(Total compensation)							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Top 1000				Top 500			
ln(Market cap)	0.37 (0.022) (0.016)	0.37 (0.020) (0.015)	0.37 (0.026) (0.015)	0.26 (0.056) (0.043)	0.38 (0.039) (0.020)	0.32 (0.039) (0.019)	0.33 (0.043) (0.026)	0.23 (0.074) (0.057)
ln(Market cap of firm #250)	0.72 (0.053) (0.066)	0.66 (0.054) (0.064)	0.68 (0.060) (0.061)	0.78 (0.052) (0.083)	0.73 (0.084) (0.089)	0.73 (0.085) (0.088)	0.74 (0.094) (0.081)	0.84 (0.080) (0.11)
GIM governance index			0.022 (0.010) (0.003)				0.023 (0.016) (0.007)	
Industry fixed effects	No	Yes	Yes	No	No	Yes	Yes	No
Firm fixed effects	No	No	No	Yes	No	No	No	Yes
Observations	7,936	7,936	6,393	7,936	4,156	4,156	3,474	4,156
R^2	0.23	0.29	0.32	0.60	0.20	0.29	0.32	0.63

Explanation. We use Compustat to retrieve firm size information at year $t - 1$.

Figure 3: Executive Compensation and Market Capitalization of the Top 500 Firms



Notes. FS compensation index is based on Frydman and Saks (2005).

Figure 4: CEO Pay and the Size of Large Firms, 1970–2003

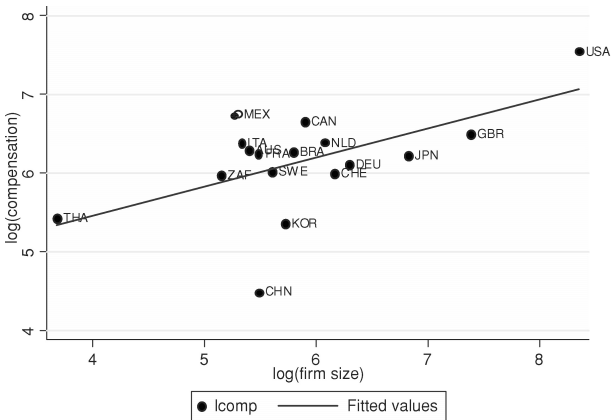
	$\Delta \ln(\text{Compensation})$	
	Jensen–Murphy–Wruck index	Frydman–Saks index
$\Delta \ln \text{Market}$	1.14 (0.28)	0.87 (0.30)
Constant	0.002 (0.032)	0.001 (0.033)
Observations	34	34
Adj. R^2	0.29	0.18

Explanation. We estimate for $t \geq 1971$

$$\Delta_t(\ln w_t) = \hat{\gamma} \times \Delta_t \ln S_{*,t-1},$$

which gives a consistent estimate of γ . We show Newey–West standard errors in parentheses, allowing the error term to be autocorrelated for up to two lags.

Figure 5: CEO Compensation versus Firm Size across Countries



Notes. Compensation data are from Towers Perrin (2002). They represent the total dollar value of base salary, bonuses, and long-term compensation of the CEO of “a company incorporated in the indicated country with \$500 million in annual sales.” Firm size is the 2000 median net income of a country’s top 50 firms in Compustat Global.

Figure 6: CEO Pay and Typical Firm Size Across Countries

	ln(Total compensation)			
	(1)	(2)	(3)	(4)
ln(median net income)	0.38 (0.10)	0.41 (0.098)	0.36 (0.096)	0.36 (0.12)
ln(pop)		-0.16 (0.092)		
ln(gdp/capita)			0.12 (0.067)	
“Social norm”				-0.018 (0.012)
Observations	17	17	17	17
R^2	0.48	0.57	0.58	0.52

Explanation. OLS estimates, standard errors in parentheses. Compensation information comes from Towers and Perrin data for 2000.

Figure 7: Size Distribution of the Top 500 Firms in 2004

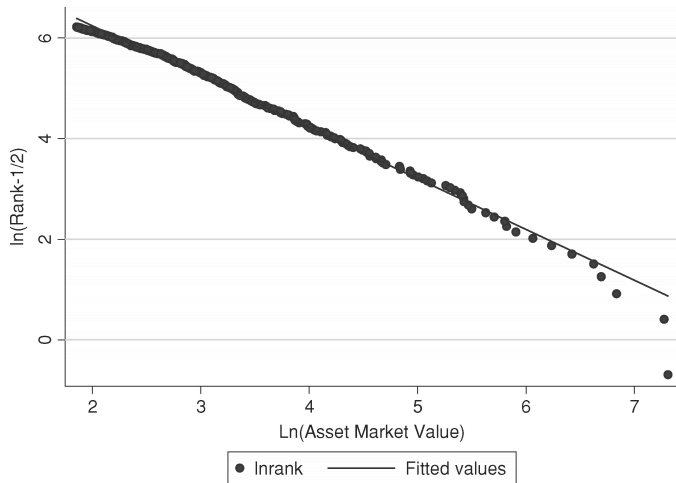


Figure 8: Shape of the Distribution of CEO Talent Inferred from the Calibration

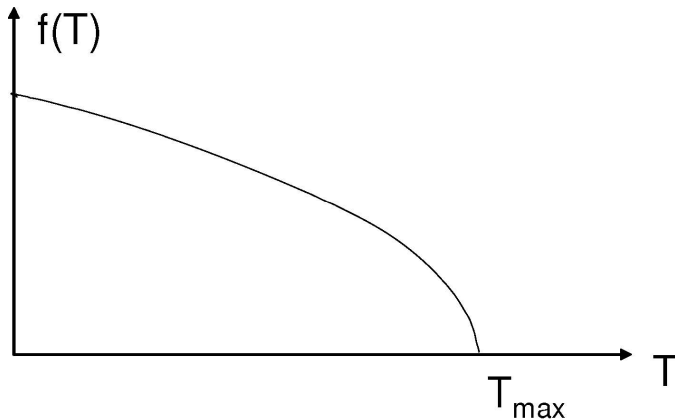


Figure 9: Increase in Firm Size Between 1980 and 2003

	Firm value		Operating income	
	Median	Mean	Median	Mean
Top 100	630%	720%	190%	170%
Top 500	400%	600%	140%	150%
Top 1,000	360%	570%	130%	150%

Figure 10: Illustration of the Quality of the Extreme Value Theory Approximation for the Spacings in the Talent Distribution

