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Munich Institute for Sociology  
Dipl.-Soz. Marc Keuschnigg

# The Bestseller Phenomenon

Quality, Word of Mouth and Past Consumption

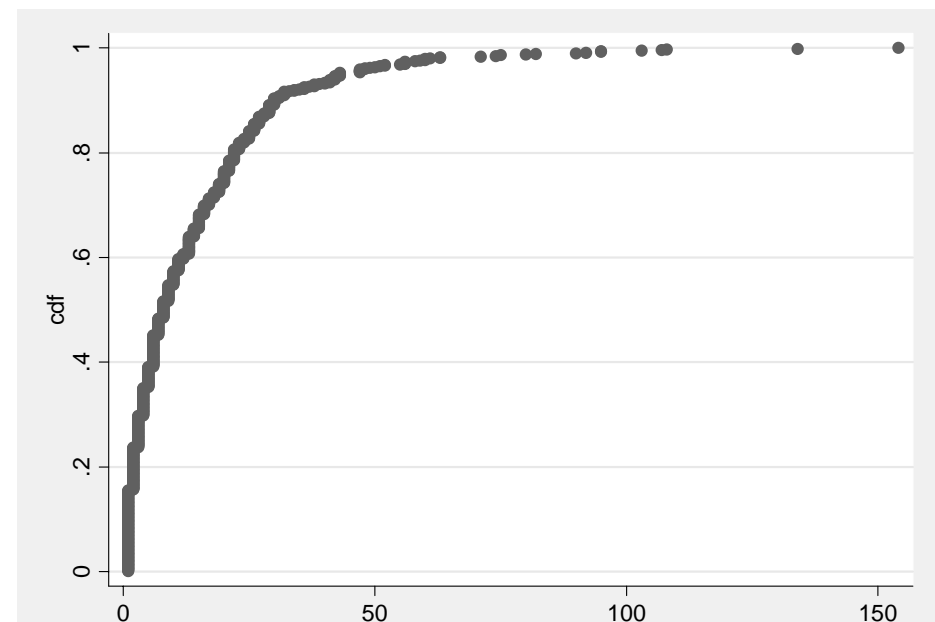
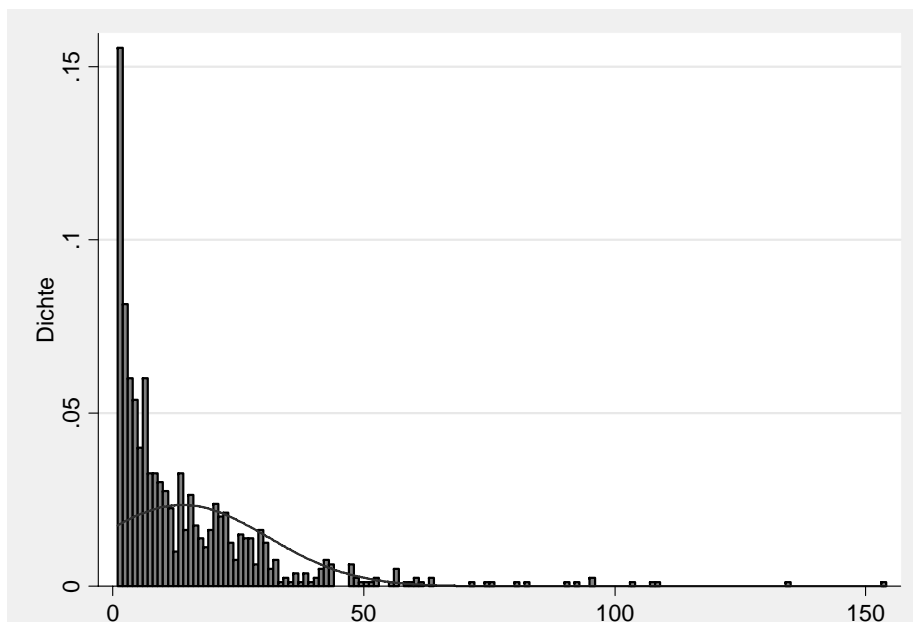
Venice International University  
03. – 07. December 2007





- 1 The Market for Fiction: Winners take all
- 2 What makes the Matthew Effect? - some theory
- 3 Determinants of Success - cross section analysis
- 4 Determinants of Diffusion - panel analysis
- 5 Price

## Distribution of Success, German Market for Fiction Books (2001-2006)

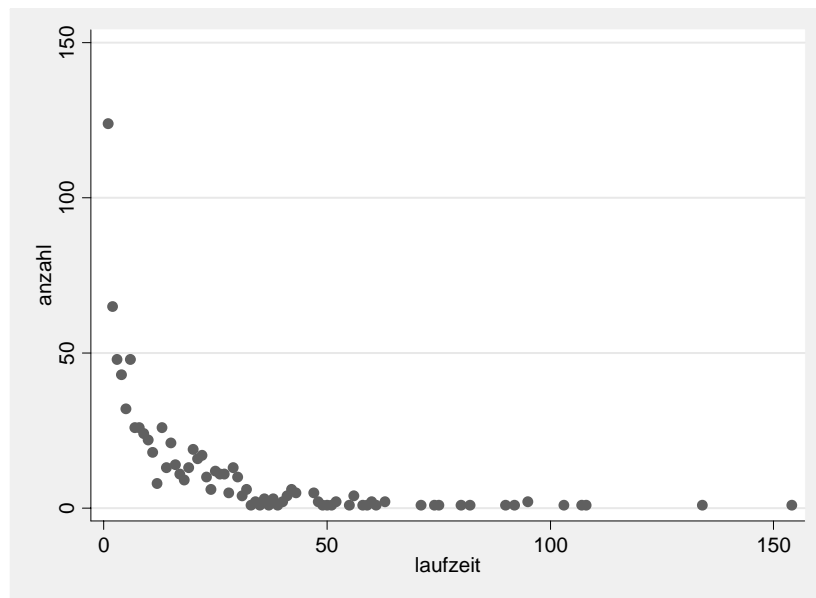


Total Running Time in Top 50 in Weeks

Gini: 0.555

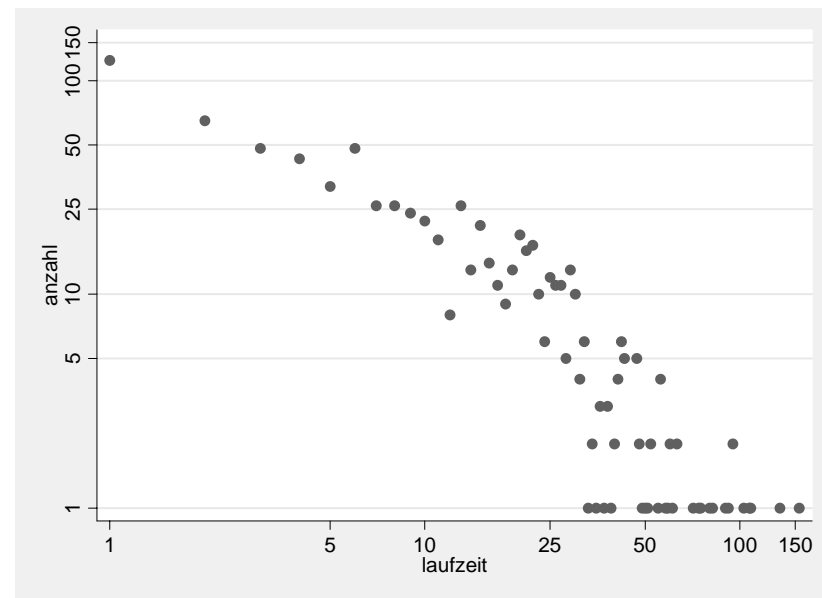
## Distribution of Success, German Market for Fiction Books (2001-2006)

PDF



$$y = ax^b$$

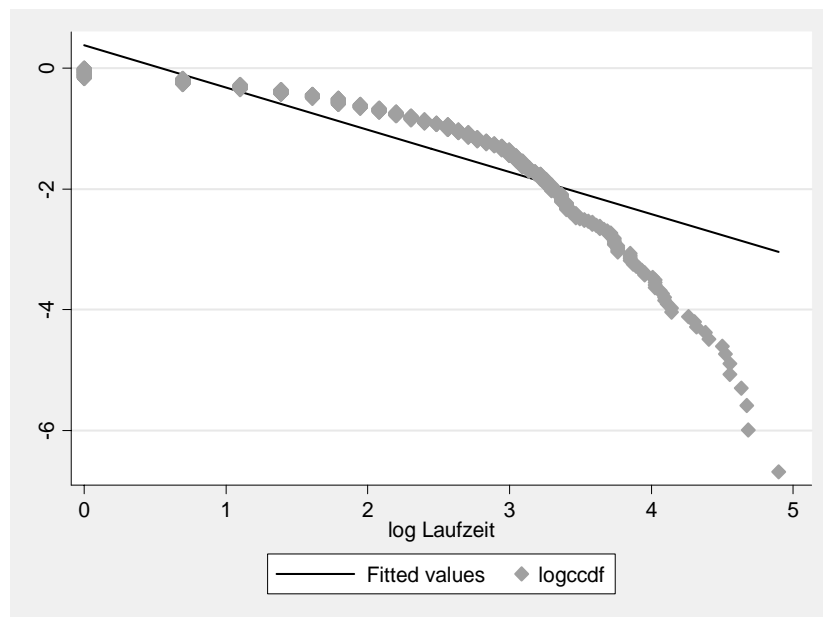
Log-Log PDF



$$\log y = \log a + b \log x$$

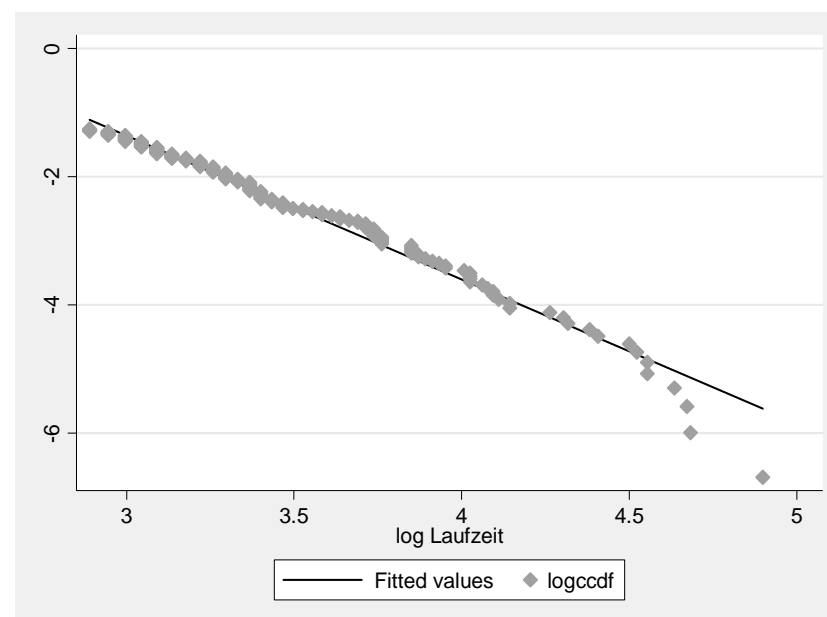
## Distribution of Success, German Market for Fiction Books (2001-2006)

### Overall CCDF



$$b = -.698; R^2 = 0.759$$

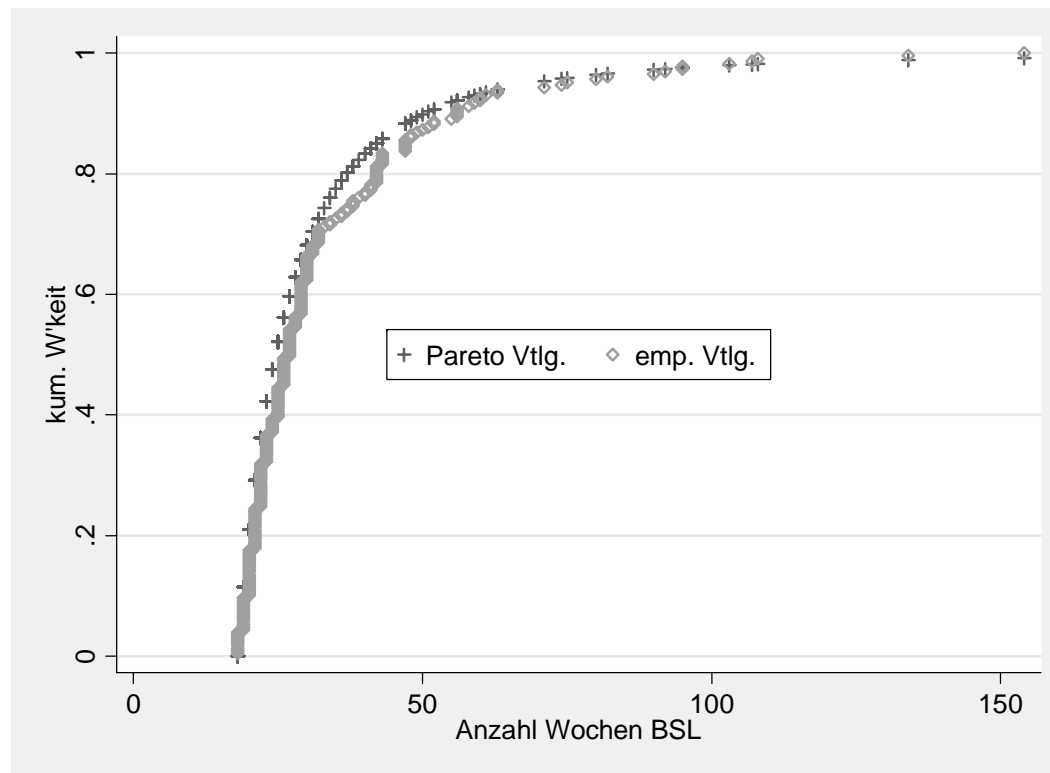
### Heavy Tail CCDF



$$b = -2.243; R^2 = 0.982$$



## Fit: empirical CDF vs. theoretical Pareto-CDF



Pareto Distribution:

$$F(x) = 1 - (x/a)^{-b}$$

$$b = - 2.243$$

 $a = 18$  weeks (heavy tail's cut off)

Rosen (1981)

**Herding for Quality:** perfect information about quality,  
non-substitutability of higher quality

Adler (1985)

**Spontaneous Herding:** experience goods and social learning,  
network externalities and thresholds

**Persistent Herding:** past consumption and addiction,  
collective habits and zeitgeist

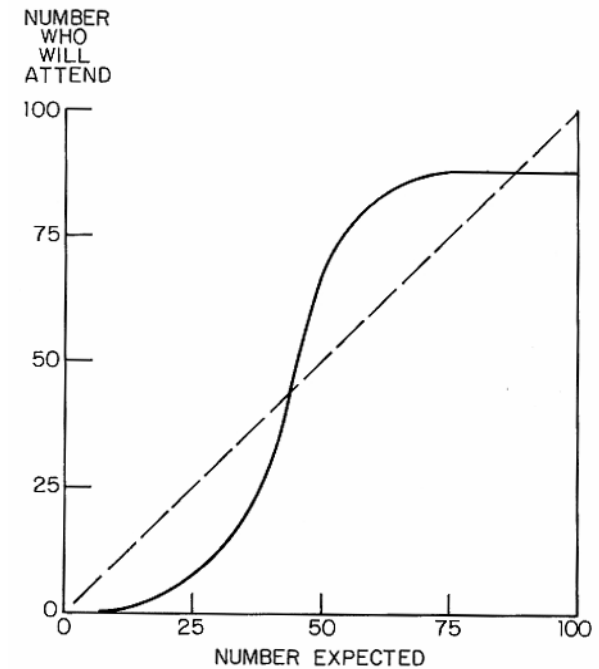


## Spontaneous Herding

- experience goods and social learning
- the more you know, the more you enjoy!
- network externalities thru coordinated demand
- threshold domino

## Persistent Herding

- past consumption and addiction:  $\delta u_x / \delta S_x > 0$ ,  $\delta^2 u_x / \delta S_x^2 > 0$
- collective habits and zeitgeist







## Hypotheses - Rosen (1981) vs. Adler (1985)

- The higher a book's *quality*, the higher a book's *success*.
- The more book specific *spontaneous consumption capital*, the higher a book's *success*.
- The more book specific *accumulated consumption capital*, the higher a book's *success*.

Concept	Indicator
Success	<i>cross section:</i> ➤ log weeks running in Top50 <i>panel:</i> ➤ rank Top50
Quality    reader based      review based	➤ Amazon score <sup>2</sup> ➤ Couch score  ➤ SWR's monthly list of „Best Books“, dummy and score ➤ published reviews, dummy and score
Announcement	➤ appearance in Elke Heidenreich's TV show „Lesen“?
Consumption Capital persistent      spontaneous	<i>cross section:</i> ➤ writer's 1 <sup>st</sup> time in Top50 ? ➤ log writer's weeks in Top50 with former books  <i>panel:</i> ➤ lagged rank in Top50

Skandinavien



Mankell, Henning



Die falsche Fährte

Die fünfte Frau

KC

Mittsommermord

KC

Die Brandmauer

KC

Wallanders erster Fall

KC

Die Rückkehr des  
Tanzlehrers

KC

Tiefe

KC

Vor dem Frost

KC

Kennedys Hirn

KC

Werbung



## Mörder ohne Gesicht

### Henning Mankell

#### In Kürze:

Ein altes Bauernpaar ist auf seinem Hog in der Nähe von Ystad ermordet worden. Nicht nur das Motiv der Tat liegt völlig im Dunkeln, vor allem deren furchtbare Brutalität irritiert die ermittelnden Polizisten um Kurt Wallander. Und dann hatte die alte Bäuerin, kurz bevor sie im Krankenhaus starb, den Beamten einen letzten, seltsamen Hinweis gegeben ...

Das meint Krimi-Couch.de:



„Erzählstil und Charaktere klasse,  
Handlung schwach und langatmig“

Krimi-Rezension von Thomas Kürten

46°

In Lenarp, einem Dorf in Südschweden, wird eines nachts ein altes Bauernehepaar überfallen. Als es von den Nachbarn entdeckt wird, ist das Schlafzimmer der Beiden blutverschmiert, der bestialisch hergerichtete Mann ist bereits tot, die Frau ist lebensgefährlich verletzt und wird einige Stunden später im Krankenhaus ebenfalls sterben. Kommissar Kurt Wallander aus dem nahen Ystadt übernimmt den Fall, der zunächst keine heiße Spur zu den Tätern aufweist. Die Bauersleute scheinen bettelarm und ohne Feinde gewesen zu sein. Einzig eine seltsam geknotete Schnur, die



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## The Effect of Consumption Capital, Quality, and Announcement on a Book's Success

OLS-Regressions, dependent variable: log weeks running in top 50.

All books:

log weeks top50	Couch-rated books	all books	SWR-rated books	all books	reviewed books
Consum.Cap. dummy	0.879 (0.000)**	0.712 (0.000)**	0.222 (0.392)	0.768 (0.000)**	0.687 (0.000)**
Amazon2	-0.034 (0.041)*	-0.014 (0.098)	-0.028 (0.307)	-0.014 (0.091)	-0.014 (0.285)
Couch score	0.007 (0.291)				
SWR dummy		0.406 (0.003)**			
SWR score			0.005 (0.343)		
Review dummy				0.464 (0.000)**	
Review score					0.020 (0.019)*
Announcement	1.412 (0.001)**	0.471 (0.001)**	0.407 (0.189)	0.374 (0.009)**	0.373 (0.027)*
Constant	1.436 (0.002)**	1.755 (0.000)**	2.399 (0.000)**	1.565 (0.000)**	1.802 (0.000)**
Observations	299	790	81	790	363
R-squared	0.175	0.104	0.054	0.127	0.096

p values in parentheses; \* significant at 5%; \*\* significant at 1%



## The Effect of Consumption Capital, Quality, and Announcement on a Book's Success

Established writers:

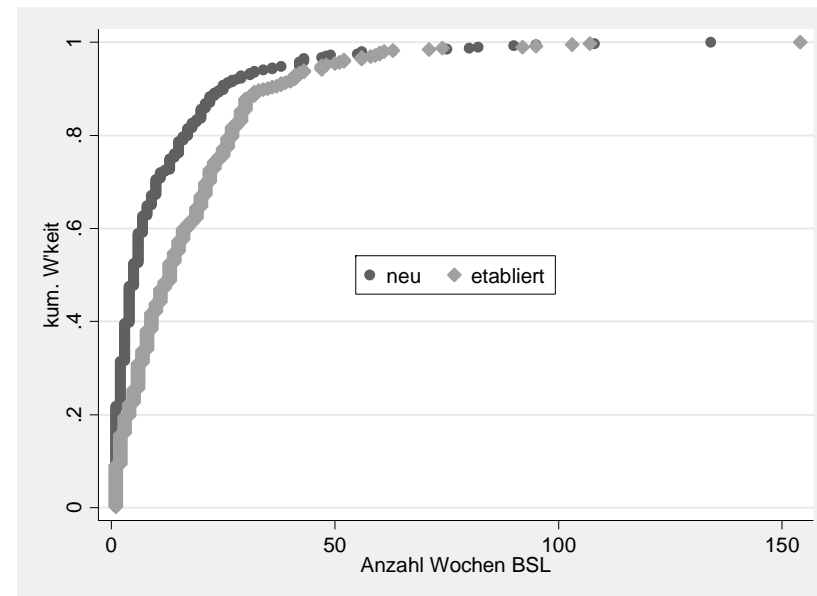
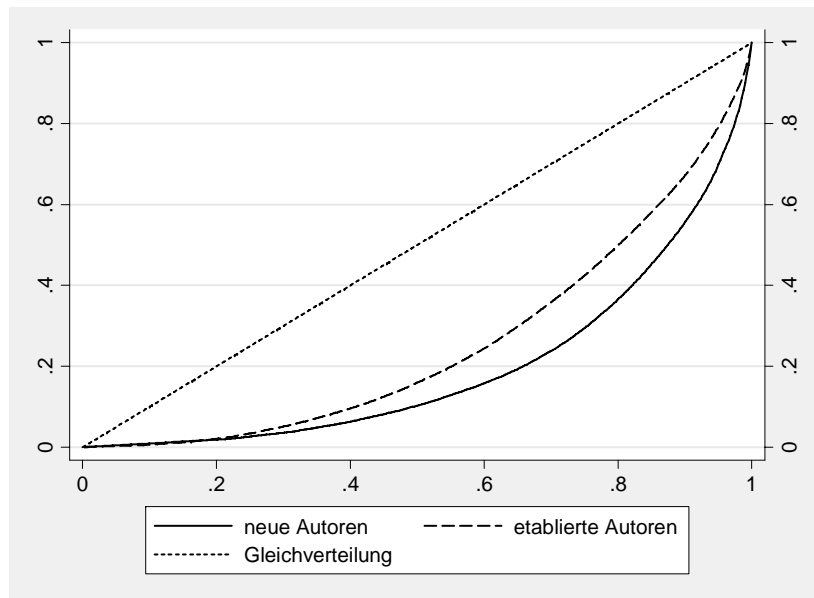
Newcomers:

log weeks top50	Established writers:					Newcomers:				
	Couch-rated	all	SWR-rated	all	reviewed	Couch-rated	all	SWR-rated	all	reviewed
log Consum.Cap.weeks	0.488 (0.000)**	0.444 (0.000)**	0.317 (0.047)*	0.436 (0.000)**	0.385 (0.000)**					
Amazon2		0.021 (0.032)*	0.048 (0.188)	0.018 (0.069)	0.025 (0.127)		-0.033 (0.007)**	-0.084 (0.037)*	-0.029 (0.015)*	-0.036 (0.040)*
Couch score	0.012 (0.025)*					0.006 (0.569)				
SWR dummy		0.304 (0.072)					0.671 (0.001)**			
SWR score			0.012 (0.119)					0.003 (0.709)		
Review dummy				0.341 (0.001)**					0.491 (0.000)**	
Review score					0.024 (0.020)*					0.015 (0.195)
Announcement	0.480 (0.243)	0.432 (0.053)	0.252 (0.519)	0.348 (0.113)	0.374 (0.116)	2.245 (0.014)*	0.538 (0.002)**	0.747 (0.116)	0.452 (0.012)*	0.455 (0.038)*
Constant	-0.416 (0.407)	0.376 (0.062)	0.230 (0.799)	0.350 (0.080)	0.466 (0.162)	1.089 (0.206)	2.056 (0.000)**	3.358 (0.000)**	1.824 (0.000)**	2.197 (0.000)**
Observations	214	435	40	435	168	87	355	41	355	195
R-squared	0.423	0.306	0.168	0.319	0.304	0.072	0.073	0.145	0.081	0.043

### The Effect of a Review by Newspaper

log weeks top50	SZ		FAZ		ZEIT	
	all books	reviewed books	all books	reviewed books	all books	reviewed books
Consum.Cap.dummy	0.727 (0.000)**	0.637 (0.000)**	0.733 (0.000)**	0.563 (0.000)**	0.731 (0.000)**	0.598 (0.000)**
SZ reviewed?	0.384 (0.000)**					
SZ quality		0.020 (0.029)*				
FAZ reviewed?			0.333 (0.000)**			
FAZ quality				0.010 (0.185)		
ZEIT reviewed?					0.414 (0.000)**	
ZEIT quality						0.010 (0.173)
Amazon2	-0.014 (0.081)	-0.014 (0.388)	-0.016 (0.054)	-0.009 (0.532)	-0.015 (0.066)	-0.004 (0.808)
Announcement	0.384 (0.008)**	0.406 (0.034)*	0.420 (0.004)**	0.402 (0.031)*	0.412 (0.004)**	0.357 (0.086)
Constant	1.687 (0.000)**	1.869 (0.000)**	1.707 (0.000)**	1.853 (0.000)**	1.693 (0.000)**	1.868 (0.000)**
Observations	790	240	790	279	790	229
R-squared	0.114	0.102	0.110	0.066	0.117	0.068

## Distribution of Success by Associated Consumption Capital



Ginis: Established writers 0.49  
Newcomers 0.60



## Diminishing Returns on Aged Consumption Capital (4 x 3 year-periods)

Established writers:

log weeks top50	(1)	(2)	(3)	(4)	(5)	(6)
consum.cap. 0-3yrs	0.369 (0.000)**					
consum.cap. >3-6yrs		0.331 (0.000)**				
consum.cap. >6-9yrs			0.273 (0.000)**			
consum.cap. >9-12yrs				0.197 (0.004)**		
consum.cap. >12-15yrs					0.018 (0.881)	
consum.cap. 0-12yrs						0.294 (0.000)**
Amazon2	0.002 (0.861)	-0.005 (0.732)	-0.000 (0.984)	-0.019 (0.326)	0.015 (0.722)	0.017 (0.141)
Announcement	0.964 (0.007)**	0.511 (0.108)	-0.015 (0.983)	0.004 (0.993)	-0.122 (0.849)	0.736 (0.005)**
Constant	1.648 (0.000)**	1.865 (0.000)**	1.828 (0.000)**	2.214 (0.000)**	2.348 (0.000)**	1.354 (0.000)**
Obs.	220	168	127	110	31	319
R-squared	0.295	0.252	0.125	0.086	0.007	0.232





## Different Effects by Genre?

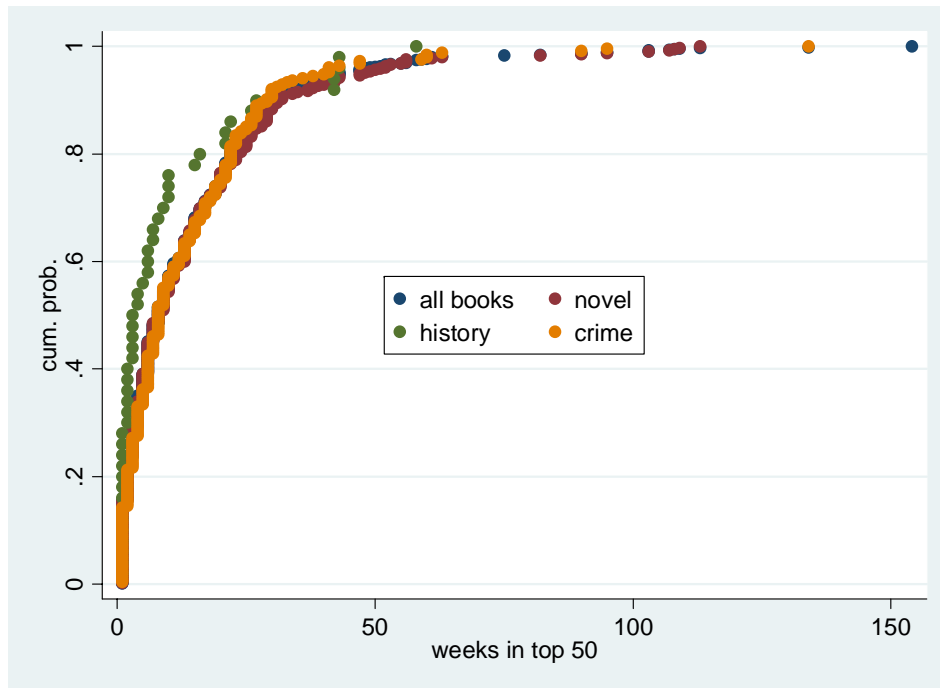
OLS-Regressions, dep. var.: log weeks running in top 50.

### All books:

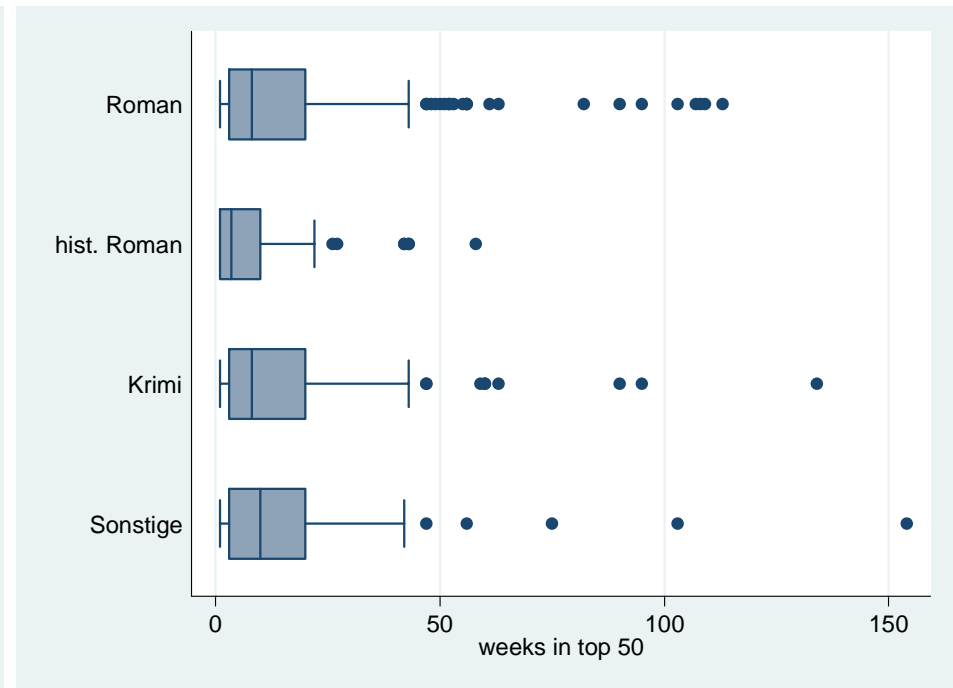
### Established writers:

log weeks top50	all Genres	Novels	History	Crime		all Genres	Novels	History	Crime
Cons.Cap.dummy	0.710 (0.000)**	0.704 (0.000)**	0.597 (0.123)	0.876 (0.000)**	log C.Cap.weeks	0.440 (0.000)**	0.398 (0.000)**	0.289 (0.154)	0.524 (0.000)**
Amazon2	-0.014 (0.096)	-0.010 (0.401)	-0.052 (0.143)	-0.019 (0.215)	Amazon2	0.021 (0.032)*	0.035 (0.027)*	-0.015 (0.807)	0.023 (0.122)
Announcement	0.528 (0.000)**	0.470 (0.004)**	-0.120 (0.926)	0.954 (0.024)*	Announcement	0.532 (0.014)*	0.574 (0.036)*	0.000 (.)	0.475 (0.228)
Constant	1.795 (0.000)**	1.799 (0.000)**	2.050 (0.001)**	1.683 (0.000)**	Constant	0.412 (0.041)*	0.411 (0.204)	1.263 (0.251)	0.088 (0.771)
Observations	790	408	50	253	Observations	435	191	24	176
R-squared	0.094	0.087	0.106	0.161	R-squared	0.300	0.238	0.100	0.450

### Genre-specific Skewness?



### A Star in Each Genre?

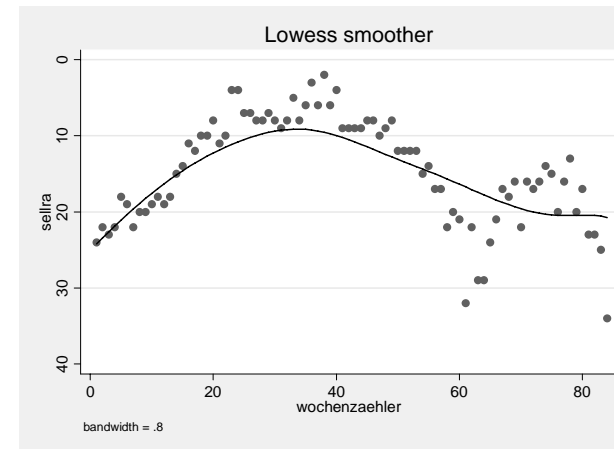
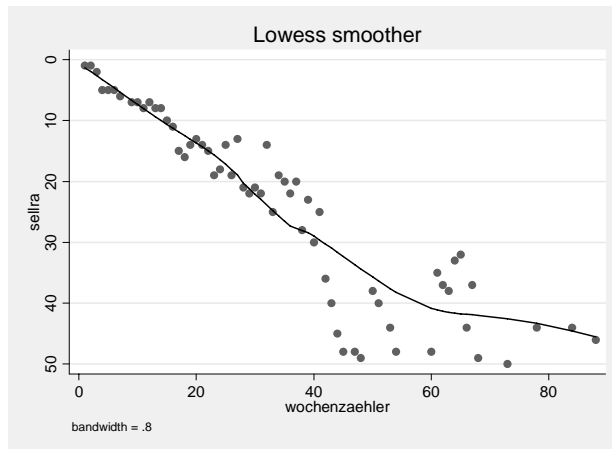


Ginis:	Overall	0.56
	Novels	0.56
	History	0.63
	Crime	0.53



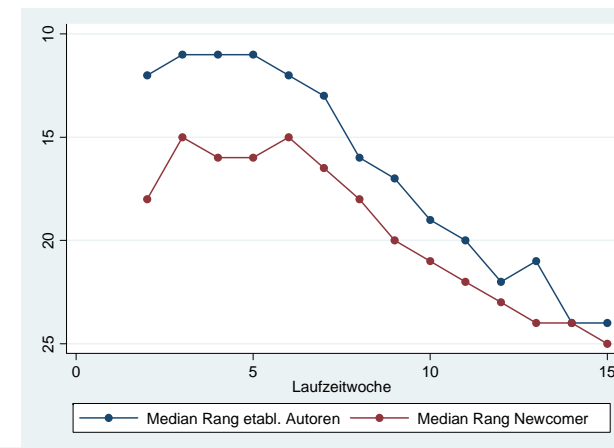
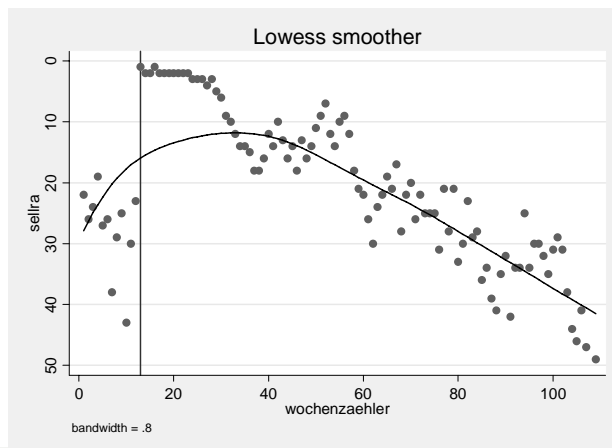
(1) high associated Consumption Capital

(2) no associated Consumption Capital



(3) Announcement

Median Ranks per week in Top50  
- books with total run  $\geq 12$  weeks only



## The Book Level: The Curves of Diffusion - total run, weeks 1-4

Fixed Effects-Regressions, dep. var: sales rank per week, successful books only ( $\geq 12$  weeks Top50)

Sales Rank (1-50)	establ. Writers total run	Newcomers total run	establ. Writers weeks 1-4	Newcomers weeks 1-4
lag sales rank	0.707 (0.000)**	0.654 (0.000)**	0.055 (0.017)*	0.021 (0.629)
weeks out	0.142 (0.000)**	0.150 (0.000)**	0.330 (0.082)	-0.257 (0.464)
Announce_t	0.138 (0.895)	-8.122 (0.000)**	-7.360 (0.011)*	.
Constant	4.478 (0.000)**	7.137 (0.000)**	11.699 (0.000)**	18.543 (0.000)**
Observations	6379	3955	618	322
Number of id	357	317	208	114
R-squared within	0.726	0.636	0.031	0.007

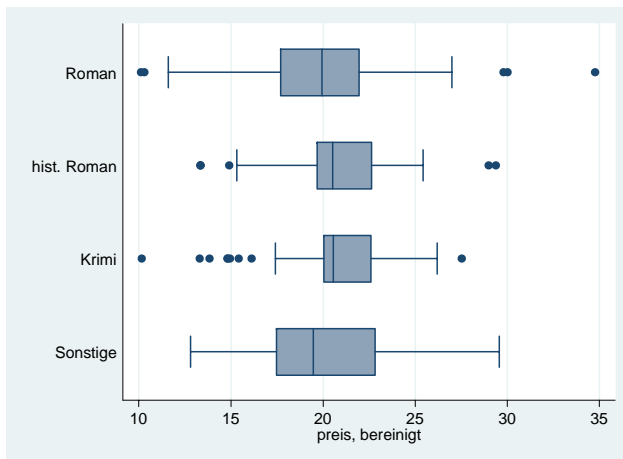
## The Effect of Being on the List - total run

Fixed Effects-Regressions, dep. var: sales rank per week

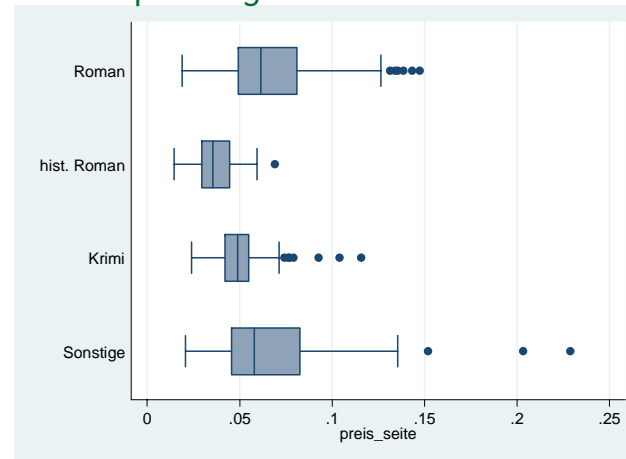
Sales Rank (1-50)	all books	establ. writers	Newcomer
lag 1 <sup>st</sup> week on the list	-2.829 (0.000)**	-3.211 (0.000)**	-2.129 (0.001)**
lag 2 <sup>nd</sup> week on the list	-2.423 (0.000)**	-2.626 (0.000)**	-2.036 (0.003)**
lag almost on the list	-0.332 (0.569)	-1.971 (0.007)**	1.986 (0.041)*
lag sales rank	0.677 (0.000)**	0.686 (0.000)**	0.651 (0.000)**
weeks out	0.141 (0.000)**	0.142 (0.000)**	0.145 (0.000)**
announce_t	-3.900 (0.000)**	-0.110 (0.916)	-7.847 (0.000)**
Constant	5.808 (0.000)**	5.362 (0.000)**	7.150 (0.000)**
Observations	10333	6600	3733
Number of books	674	391	283
R-squared within	0.697	0.724	0.649

## Price by Genre

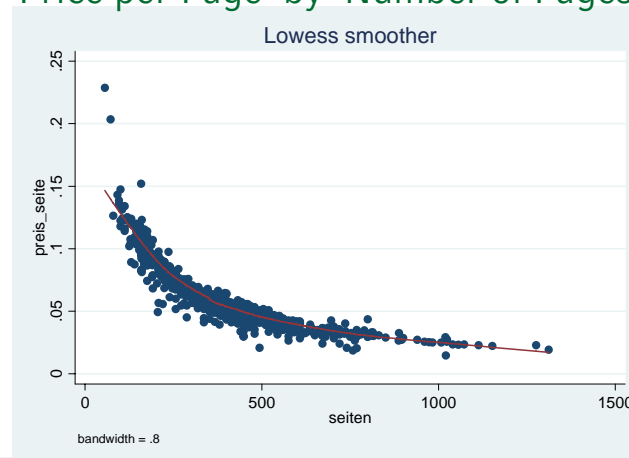
Total Price:



Price per Page:

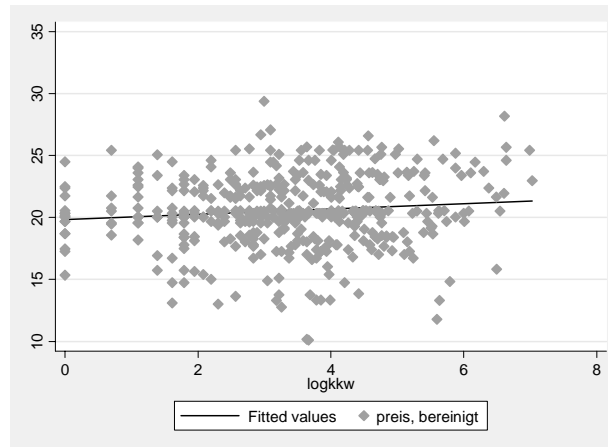


Price per Page by Number of Pages:



## Price by Consumption Capital - Is there an extra rent for star writers?

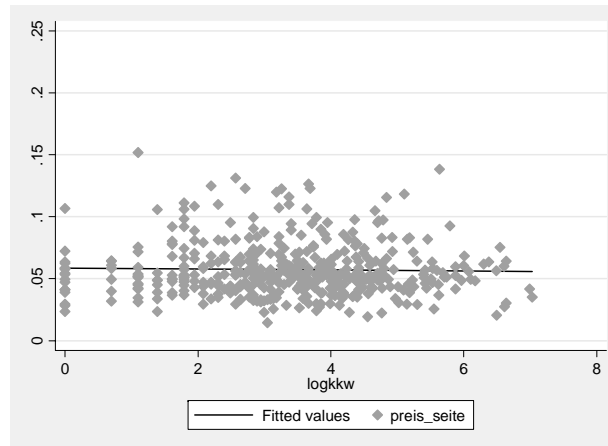
Consumption Capital  
&  
Total Price



$r = 0.109 ; p = 0.02$

Books of famous writers are a little more expensive...

Consumption Capital  
&  
Price/Page



$r = - 0.025 ; p = 0.6$

...but only, because they are more voluminous!



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Thank you for your attention!