

# Spinoffs, Parents, and Cluster Dynamics: Evidence from the Italian Motorcycle Industry

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EURAC - BOLZANO

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# Introduction

- Spinoffs: new firms from existing organizations within the same industry  
(Klepper, 2009; Agarwal et al., 2004)
  - Perform better than “de novo” and if generated from better parents
  - Have peculiar generation patterns (related to age, performance and organizational changes within the parent)
- Heritage theory  
(Klepper, 2002, 2007; Buenstorf and Klepper, 2009)
  - Spinoffs inherit organizational routines from parents
  - Spinoff dynamics drive both the agglomeration process generating a cluster and the superior performance of the cluster

# Introduction

- A reappraisal

(Boschma, 2015; Boschma and Morrison, 2015)

- Industry similarities: US / UK automobiles (Klepper, 2002, 2007; Boschma and Wenting, 2007); US / Germany lasers (Klepper and Sleeper, 2005; Buenstorf, 2007)
- Industry peculiarities: German machine tools (Buenstorf and Guenther, 2011); Global video game (De Vaan et al., 2013); Portuguese plastic mould (Costa and Baptista, 2015); Italian ceramic tile (Cusumano et al., 2015); Comparative study of automobiles, lasers, asbestos removal and disk drives (Capone et al., 2018)
- Cluster peculiarities: institutions, social capital, externalities

# Literature Review

- The dark side of spinoff story:  
what is the effect of a spinoff generation event on the parent?

## Negative

- Loss of human capital / routines disruption  
(Law firms in California: Philips, 2002)
- Competition  
(Dutch accounting industry: Wezel et al., 2006)

## Positive

- Realignment / increased coherence  
(Global Disk Drives: McKendrick et al., 2009; US Auto: Ioannou, 2013)
- Learning from spill-ins, reputational effects  
(US information technology: Kim and Steensma, 2017)

# Research Question and Hypotheses

- Is the effect of parenting affected by contextual / institutional factors?
  - Hyp1: In the motorcycle industry the effect on the parent of spinoff generation events is positive.
  - Hyp2: The effect on the parent of spinoff generation events is weaker or even negative if the institutional context constrains the response of the firm to the human capital and routines disruption.  
(Autarchy; Shortage of key resources because of a related industry)
  - Hyp3: The positive effect on the parent of spinoff generation events is stronger if the institutional context favors knowledge spill-ins  
(The Emilian Model)

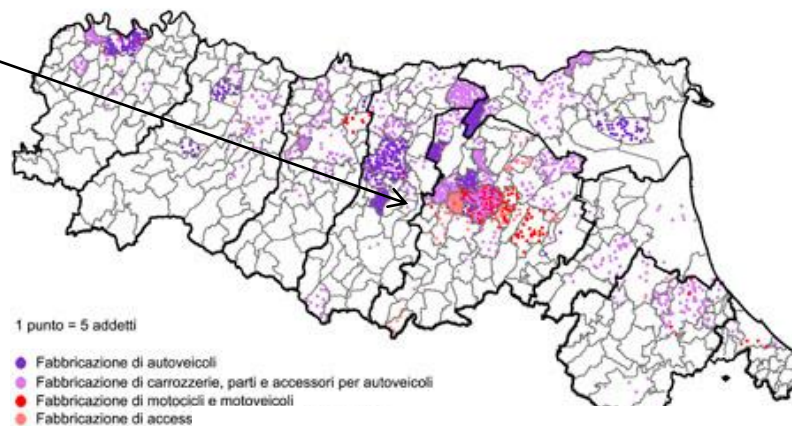
# The Italian Motorcycle Industry



**Motor Valley**



Filiera della motoristica. Fabbricazione auto e moto. Addetti 2006  
(fonte ISTAT-ASIA)



*Cambridge Journal of Economics* 1982, 6, 167-184



**The Emilian model: productive decentralisation and social integration**

# The Italian Motorcycle Industry

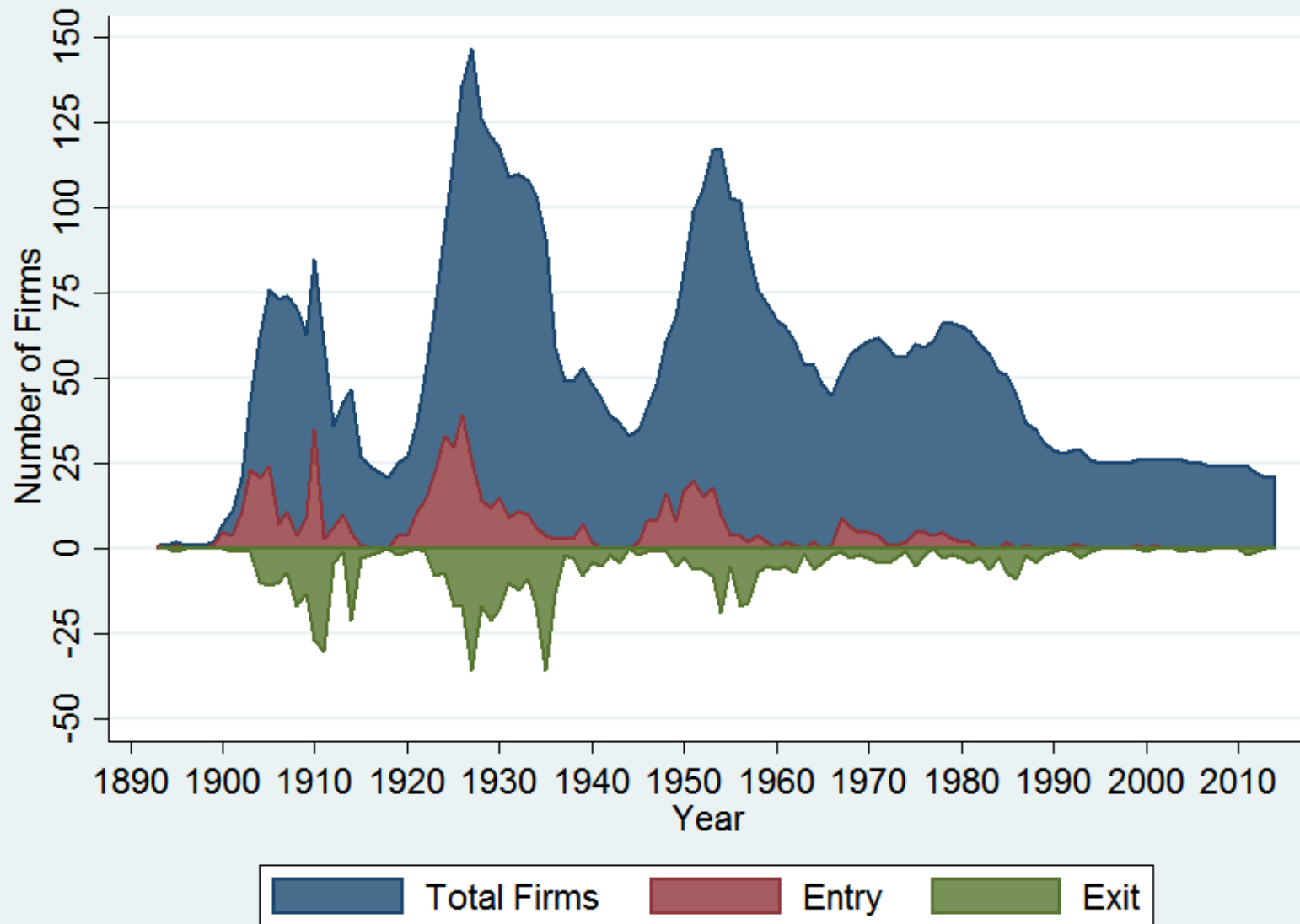
- Emerged in 1890s and quickly took off
- Became world leader after WWII – largest European producer in the 1960s
- Multiple industrial agglomerations: Motor Valley in the south-east of Emilia Romagna; Milan area in West Lombardy; Turin area.
- Multiple distinct eras in founding patterns: until WW1, the period between the two World Wars, and the period after WW2.

# Data

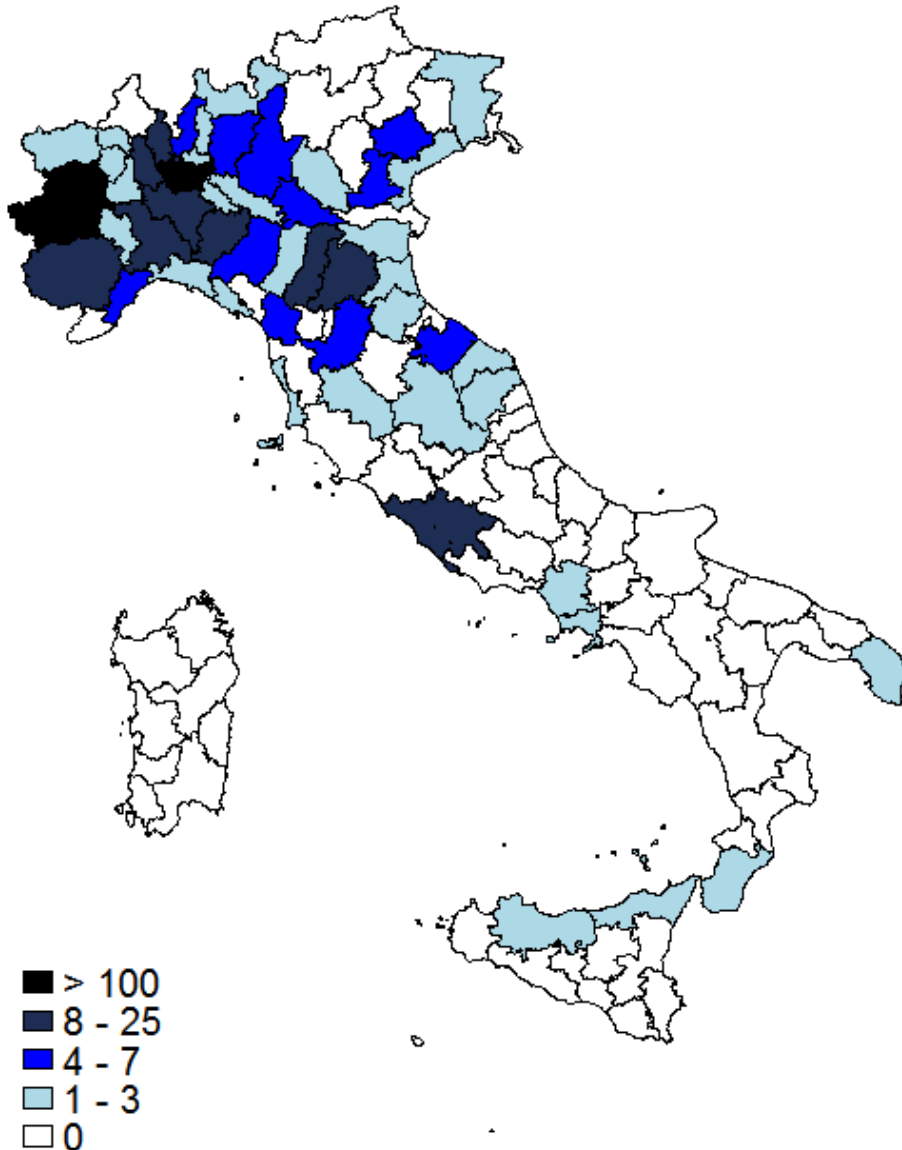
- Entry, exit, founders/firm background, location:
  - “Moto Italiane, i primi 50 anni (1895-1945)” (Milani 1998)
  - Enciclopedia della Motocicletta (Wilson, 1996)
  - Complemented with sector magazines, web sources
  - Classification of backgrounds: spinoffs, experienced (firm, entrepreneur)
- Control variables (Employment, population, ...): ISTAT, Bank of Italy, Cainelli and Stampini (2002), Felice (2013).
- Time span: 1893-1993
- Sample: 641 firms that commercialized at least one motorcycle before 1993



# Entry & Exit

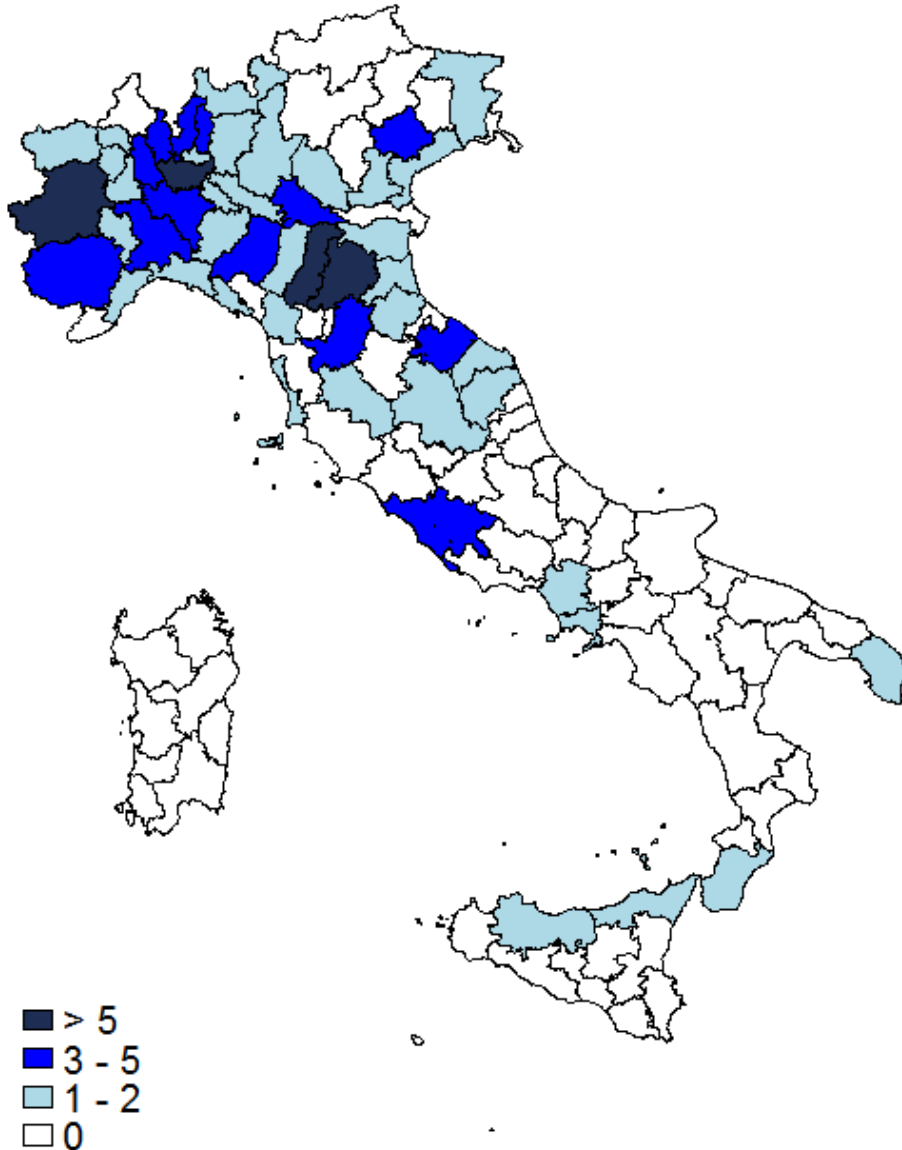


# Total Entrants



Province	Num
Turin	120
Milan	117
Bologna	23
Pavia	16
Varese	16
Modena	12
Rome	11
Cuneo	9
Novara	9
Alessandria	8
Piacenza	8

# Max Incumbents



Province	Num
Milan	50
Turin	38
Bologna	12
Modena	6
Alessandria	5
Cuneo	5
Pavia	5
Roma	5
Varese	5
Como	4
Mantova	4

# Results: Overview

- A spinoff generation event has a positive impact on the survival chances of the parent firm, confirming results from previous literature in manufacturing industries.
- The effect of spinoff generation events is not the same over time: it changes over different historical eras, and is affected by historical/institutional factors.
- The effect of spinoff generation events is not the same across space: it changes over different geographical clusters, and is affected by local/institutional factors

# Results: Details

- Results presented below report hazard ratios from Cox Proportional Hazard Models with time dependent effects of cohort variables and standard errors clustered at province level, including the following controls:
  - Founder Background Dummies:  
Spinoff\*\*\*, Exp\_Firm\*\*\*, Exp\_Entrepr\*\*\*
  - ParentDuration\*\* (defined for spinoffs)
  - Cluster Dummies:  
Motorvalley\*\*\*, Milan Area, Turin area
  - Cohort of Entry Dummies:  
BefWW2\*\*\*, BtwWars\*\*\*
  - Regional Controls:  
GDP\*\*\*, Density\*\*\*, Population, RelVariety\*\*\*, Education\*\*\*

# Results: Time

Expl Variables	Cox Proportional Hazard Model					
	(1)	(2)	(3)	(4)	(5)	(6)
<b>SpinGen</b>	0.701**	0.661**	0.707*	0.444**	0.932	
<b>SpinGenClock</b>		1.007				
<b>SpinGenBWW1</b>			0.927*			0.681***
<b>SpinGenBTW</b>				2.244**		0.995
<b>SpinGenAWW2</b>					0.402**	0.379**
<i>Observations</i>	641	641	641	641	641	641

# Results: Space

Expl Variables	Cox Proportional Hazard Model					
	(1)	(2)	(3)	(4)	(5)	(6)
<b>SpinGen</b>	0.718	0.553***	0.746	0.730	0.501***	0.936
<b>SpinGenClock</b>				0.999	1.011	0.975
<b>SpinGenMotor</b>	0.88			0.421**		
<b>SpinGenClockMotor</b>				1.071***		
<b>SpinGenTurin</b>		2.721***			1.673**	
<b>SpinGenClockTurin</b>					1.119***	
<b>SpinGenMilan</b>			0.865			0.526
<b>SpinGenClockMilan</b>						1.049
<i>Observations</i>	641	641	641	641	641	641

# Results: Time and Space

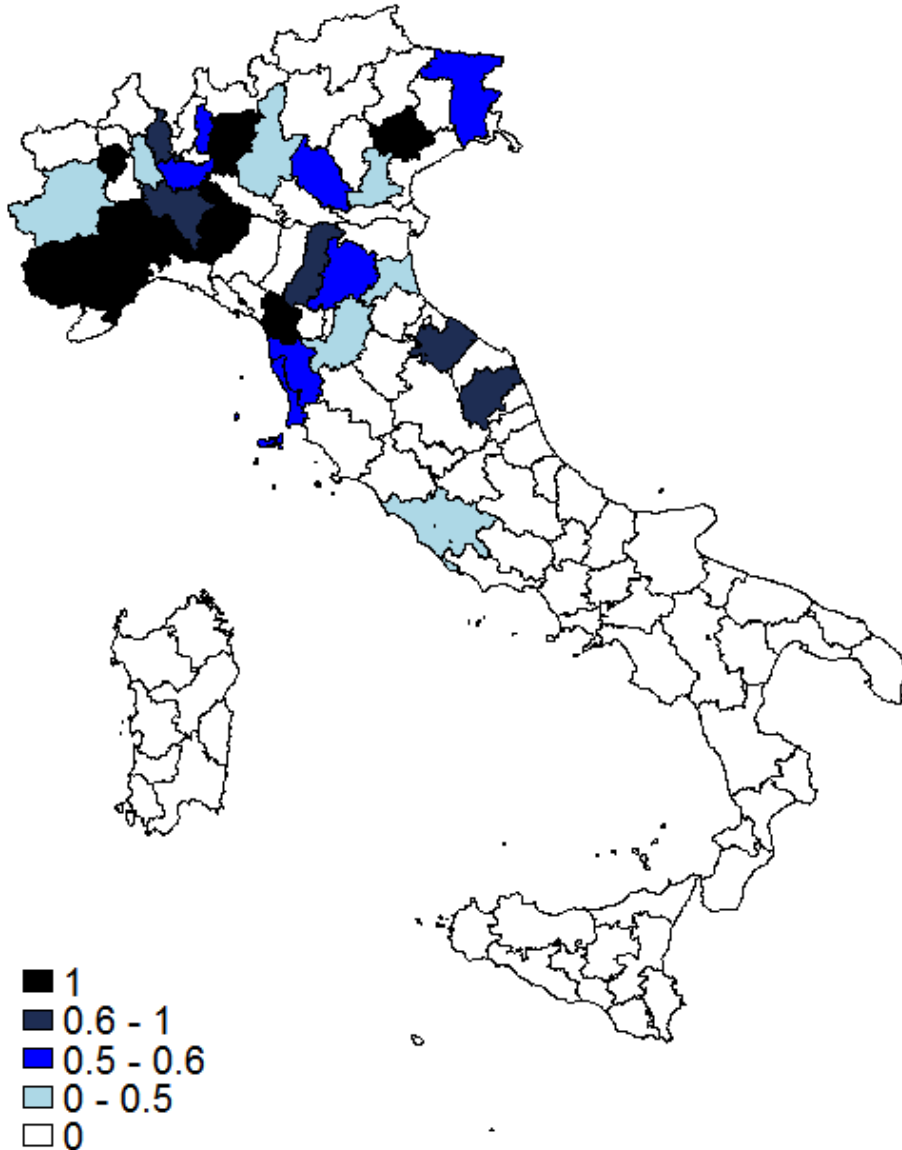
Expl Variables	Cox Proportional Hazard Model					
	(1)	(2)	(3)	(4)	(5)	(6)
<b>SpinGen</b>	0.527***	0.308***	0.297***	0.442**	0.438**	0.438***
<b>SpinGenClock</b>	1.002	1.034	1.030			0.995
<b>SpinGenMotor</b>	0.592*		0.378**			0.364**
<b>SpinGenClockMotor</b>	1.064***		1.083***			1.082***
<b>SpinGenTurin</b>	1.589**		0.954			0.917
<b>SpinGenClockTurin</b>	1.129***		1.144***			1.159***
<b>SpinGenBTW</b>		3.434***	3.331**			
<b>SpinGenClockBTW</b>		0.961	0.955			
<b>SpinGenBAutarchy</b>				2.145	1.905	1.812
<b>SpinGenAAutarchy</b>				2.594***	3.403***	2.786*
<i>Observations</i>	641	641	641	641	641	641



# A Larger Sample

- Adding 169 firms never entered; 323 info on pre-entry of entered firms
- Pre-entrants:
  - Firms / individuals producing bicycles with a separated motor
  - Firms / individuals producing only a prototype
  - Firms / individuals producing not for sale (for a race)

# Fraction Entry/Pre-entrants



Province	Num
Modena	0.833
Varese	0.818
Pavia	0.714
Bologna	0.583
Milano	0.511
Torino	0.438
Roma	0.429
Novara	0.375
Padova	0.167
Firenze	0.143
Rest of Italy	0.486

# Conclusions

- In the Italian Motorcycle industry parent firms benefit from spinoff generation.
- This effect however is heterogeneous across time space, and it could be driven by institutional / contextual factors (autarchy, related industry, socio-economic model).

# Thank You!

For any question or comment:

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