

# ¿Qué es lo que realmente miden las clasificaciones globales de universidades?

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**AtlantTIC**

UniversidadeVigo



# ¿Vale la pena tomarse interés en las clasificaciones internacionales?

- ¿De verdad miden algo?
- En su caso, ¿qué miden?
- ¿Tiene interés lo que miden?
- ¿Pueden ser útiles para informar la política científica de las instituciones?
- ¿Cómo combinar la información que aportan los rankings con otros datos bibliométricos institucionales?

# Global Rankings

- **ARWU** (China)
- **THE** (UK)
- **US News** (USA)
- **NTU** (Taiwan)
- **CWUR** (United Arab Emirates)
- **URAP** (Turkey)
- **RUR** (Russia)
  
- **LEIDEN** (Holanda)
- **SIR** (Espanña)

# Ranking Taxonomy

RANKING INDICATORS	RANKING WEIGHTS (%)						
	THE	URA	CWU	NTU	USN	ARW	RUR
Teaching Performance	15		25				32
Teaching Reputation	15						8
Research Performance	12	49	10	50	25	45	32
Research Reputation	18				25		8
International awards			50			33	
Citations	30	36	10	50	40	22	
International outlook	7.5	15			10		10
Knowledge transfer	2.5		5				

# Underlying structure

- Size-dependent (total research throughput)
- Size-independent? (Avg Norm Citation Impact)
- **In-between (Institutional H-Index)**

R <sup>2</sup>	hindex	MNCS
pub	0.64	0.08
hindex		0.49

R <sup>2</sup>	urap	cwur	ntu*	rur	arwu	usn	the
pub	0.84	0.38	0.78	0.32	0.59	0.44	0.39
<b>hindex</b>	<b>0.87</b>	<b>0.61</b>	<b>0.92</b>	<b>0.56</b>	<b>0.82</b>	<b>0.73</b>	<b>0.71</b>
MNCS	0.26	0.31	0.36	0.40	0.42	0.52	0.62

# Fiducial PCA based upon the H-index

Results for the seven scales

**Sampling adq**

KMO 0.87

**Reliability Statistics**

Cronbach's Alpha 0.95

seven scales and H-index

**Sampling adq**

KMO 0.90

**Reliability Statistics**

Cronbach's Alpha 0.96

## SEVEN INDICATORS

	Tot Var Explained(%)		Cumulative
1	5.79	82.7	82.7
2	0.53	7.6	90.4
3	0.30	4.3	94.7
4	0.18	2.5	97.2

Extraction Method: PCA

## SEVEN IND and H

	Tot Var Expl		Cum
1	6.71	83.8	83.8
2	0.54	6.7	90.6
3	0.33	4.2	94.7
4	0.18	2.2	96.9

Ext Meth: PCA

# Fiducial PCA: H-index and two (size-dependent and size-independent?) Leiden indicators

## Sampling adq

KMO	0.88
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## Reliability Statistics

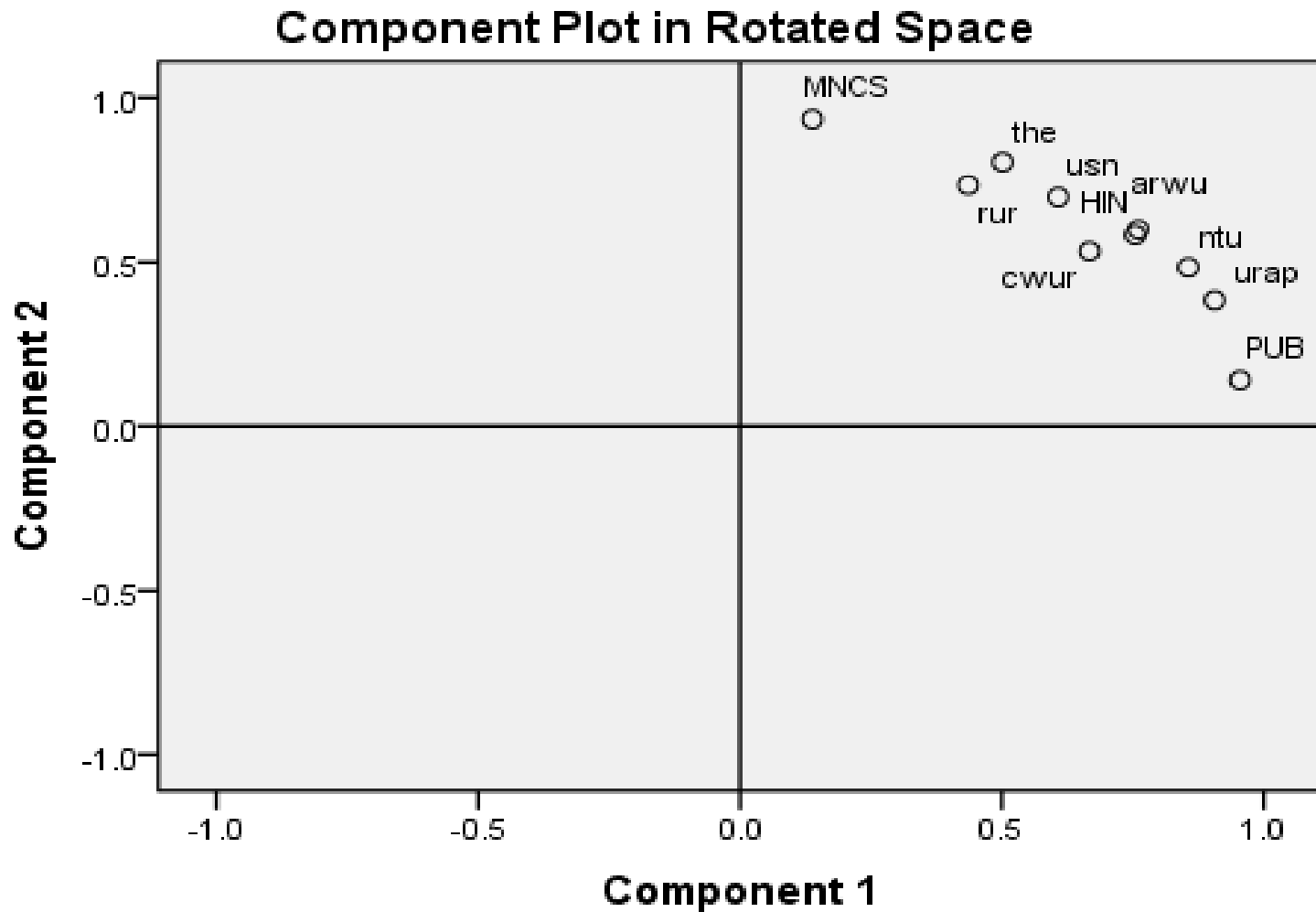
Cronbach's Alpha	0.96
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## SEVEN -H - LEIDEN

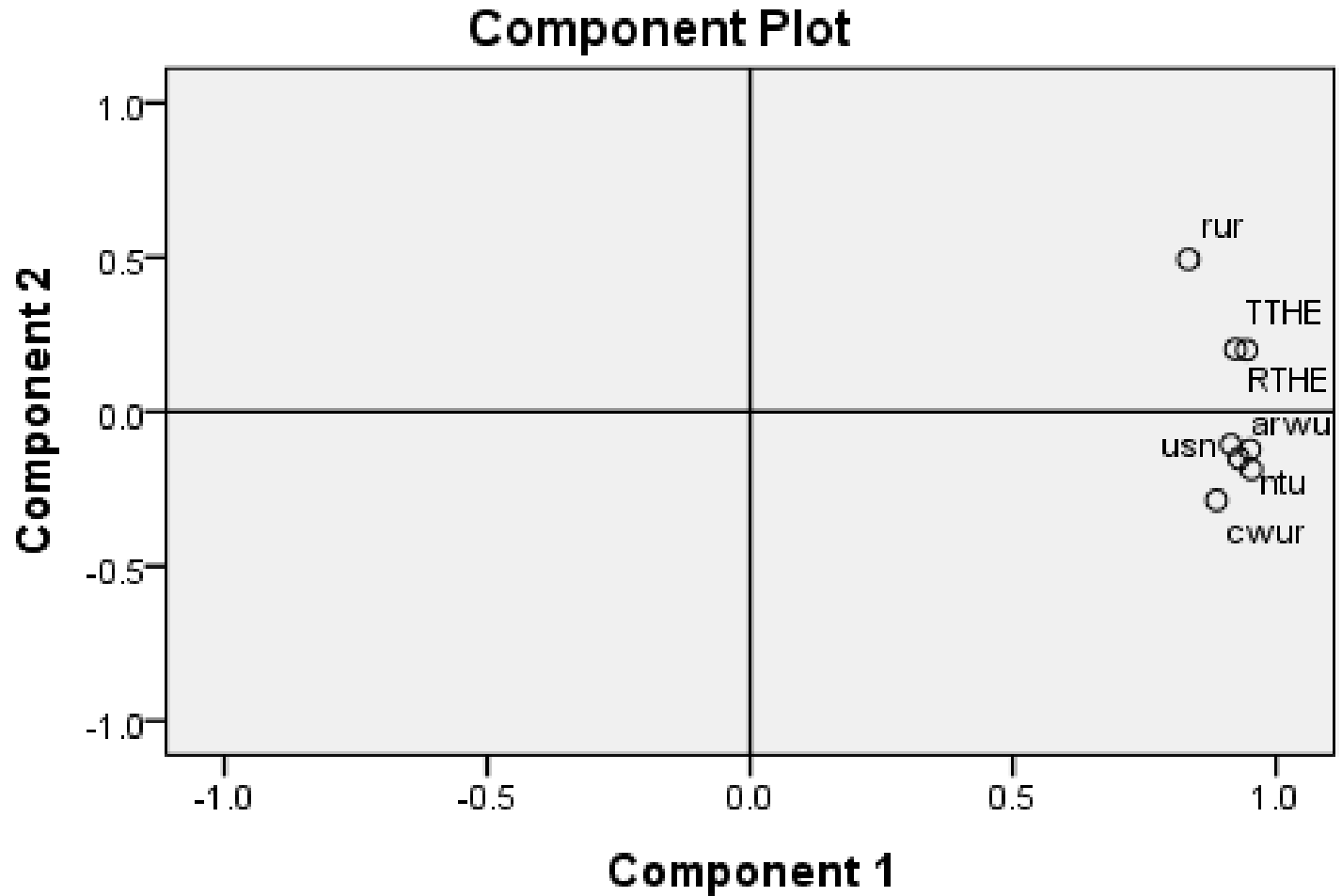
Tot Var Expl (%)		Cumul	Rotated pca		
1	7.86	78.6	4.88	48.8	48.8
2	0.95	9.5	3.94	39.4	88.2
3	0.43	4.3			
4	0.29	2.9			

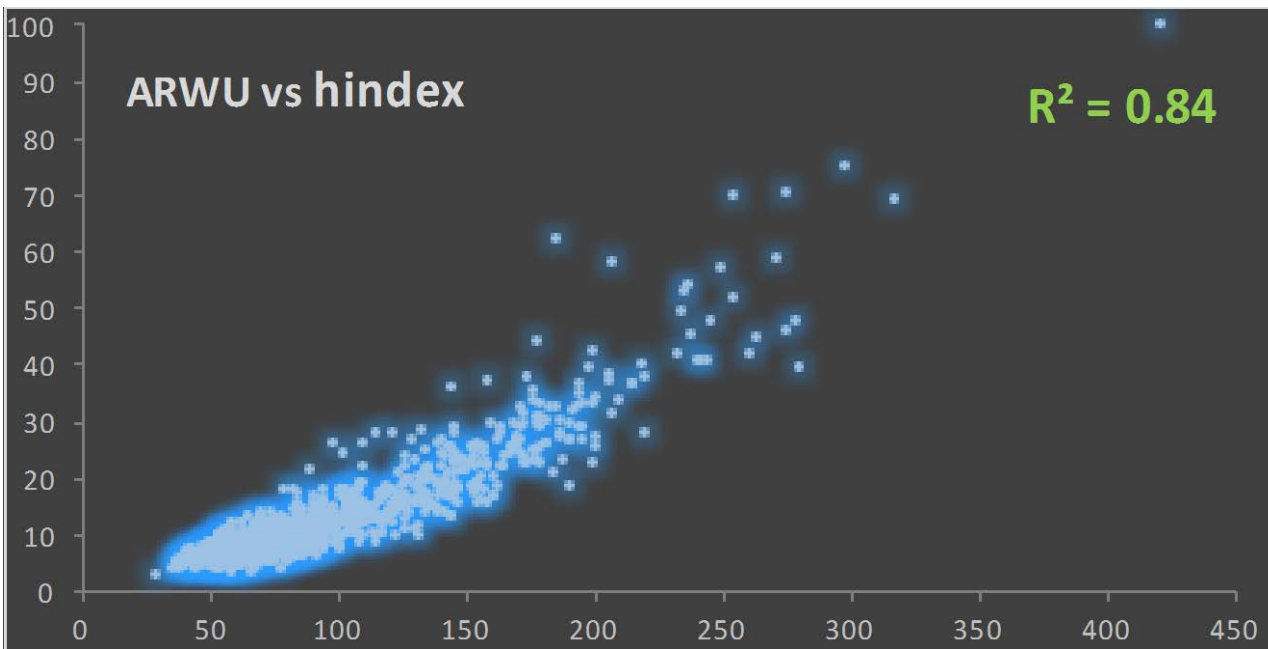
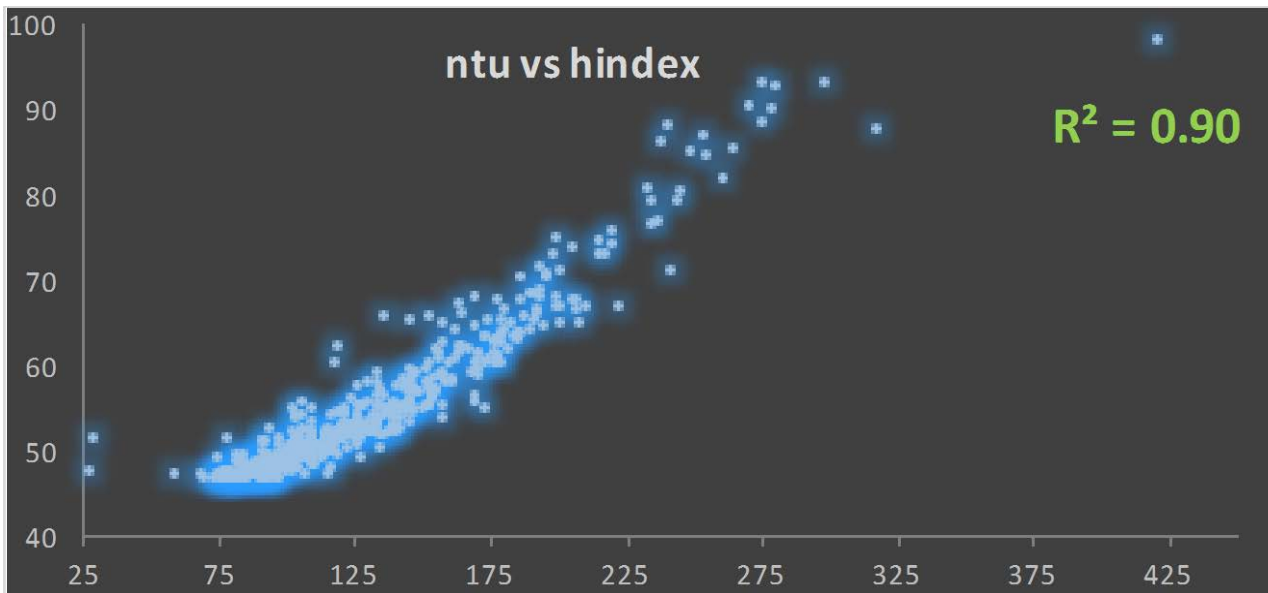
Extraction Method: PCA

# Fiducial Analysis: adding Leiden size-dependent and size-independent variables



# What ever happened to the teaching dimension





# Para responsables universitarios

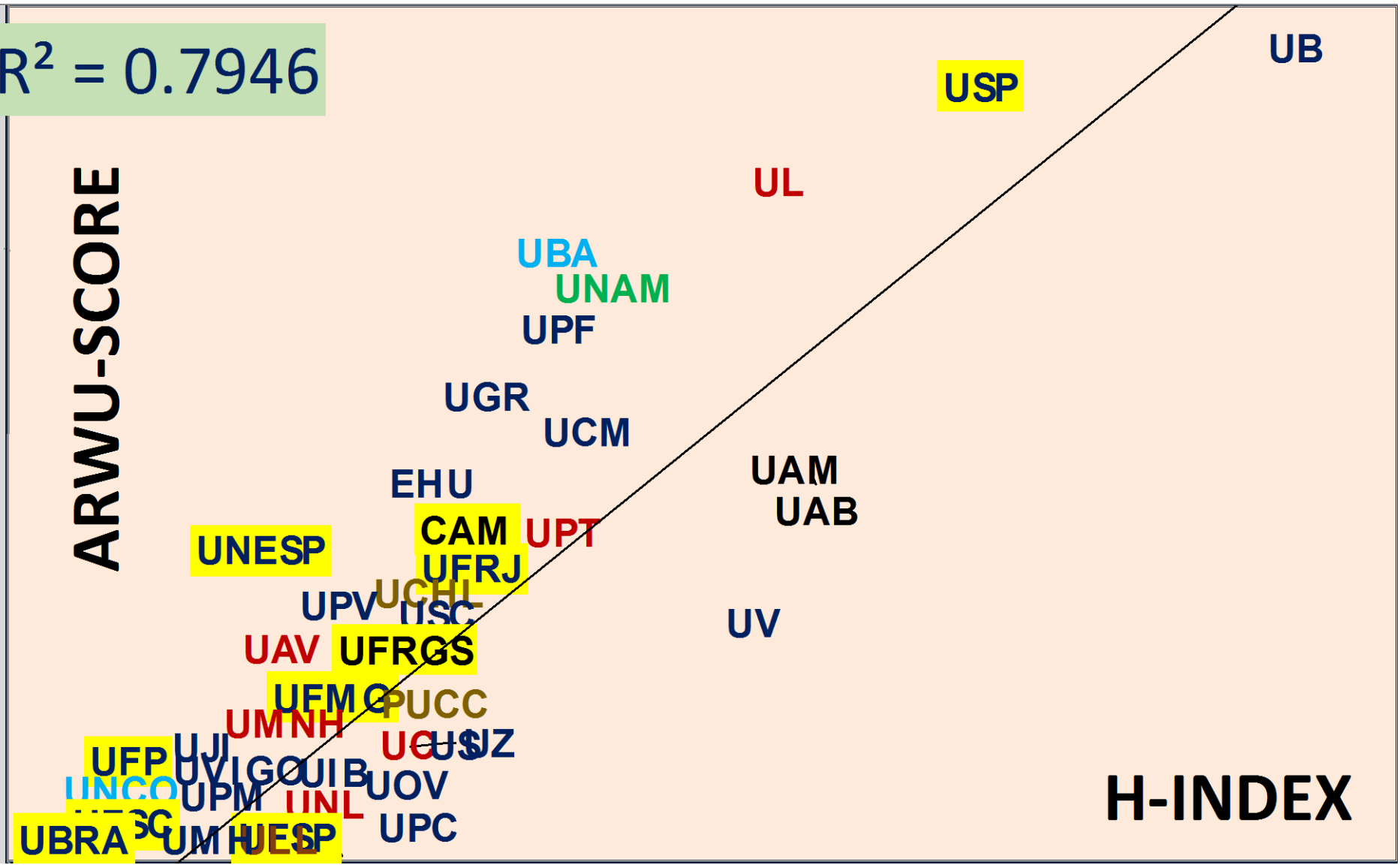
- **La dimension investigadora es la componente principal (y única) del conjunto de clasificaciones internacionales.**
- **De extender a dos components rotadas, una apuntaría cuenta de la cantidad y otra a la calidad de la producción investigadora**
- **La mejor dirección (para estar adecuadamente “indexado” en los rankings) es hacer (seguir haciendo) un buen trabajo investigador.**

# Puntuación ARWU 2018/H INDEX

$R^2 = 0.7946$

ARWU-SCORE

H-INDEX

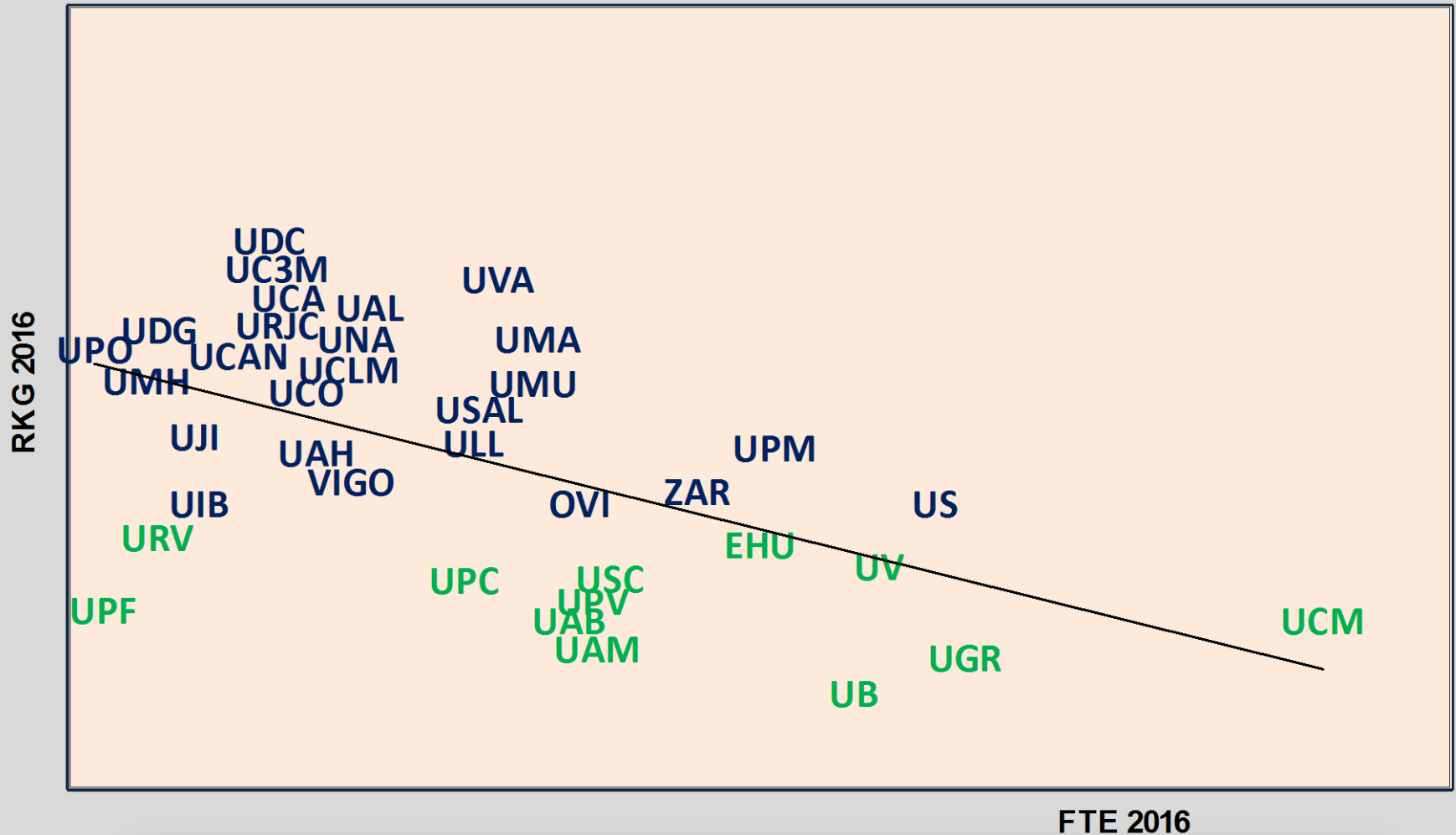






# Posición ARWU/NUMBER OF FACULTY

Posición ARWU 2016 y FTE



# 2017 SHANGHAI RANKING'S GLOBAL RANKING OF ACADEMIC SUBJECTS

## NATURAL SCIENCES

Mathematics   Physics  
Chemistry   Earth Sciences  
Geography   Ecology

## LIFE SCIENCES

Biological Sciences  
Human Biological Sciences  
Agricultural Sciences  
Veterinary Sciences

## MEDICAL SCIENCES

Clinical Medicine  
Public Health  
Dentistry & Oral Sciences  
Nursing   Medical Technology  
Pharmacy & Pharmaceutical Sciences

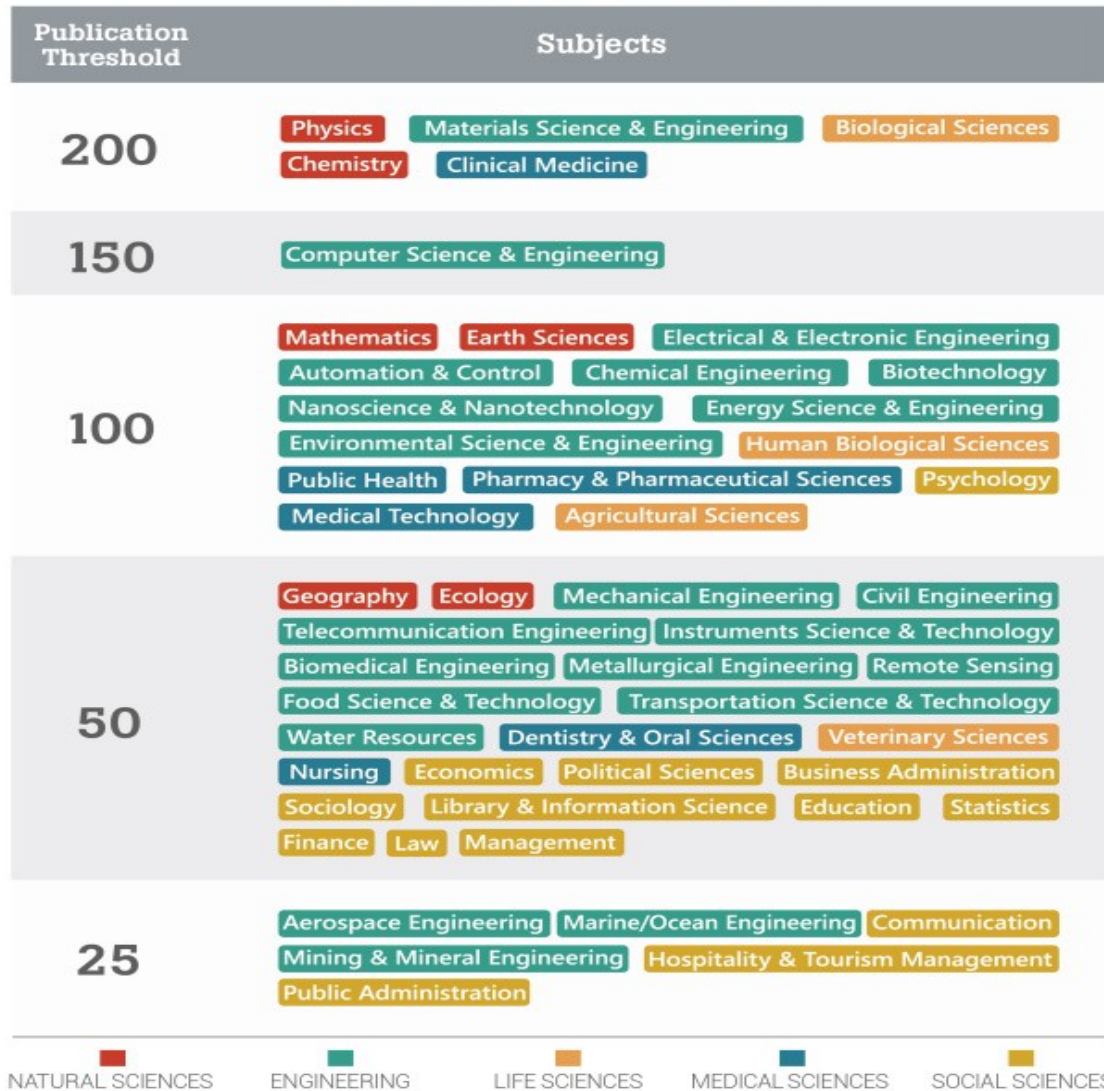
## ENGINEERING

Mechanical Engineering   Electrical & Electronic Engineering  
Automation & Control   Telecommunication Engineering  
Instruments Science & Technology   Biomedical Engineering  
Computer Science & Engineering   Civil Engineering  
Chemical Engineering   Materials Science & Engineering  
Nanoscience & Nanotechnology   Energy Science & Engineering  
Environmental Science & Engineering   Water Resources  
Food Science & Technology   Biotechnology  
Aerospace Engineering   Marine/Ocean Engineering  
Transportation Science & Technology   Remote Sensing  
Mining & Mineral Engineering   Metallurgical Engineering

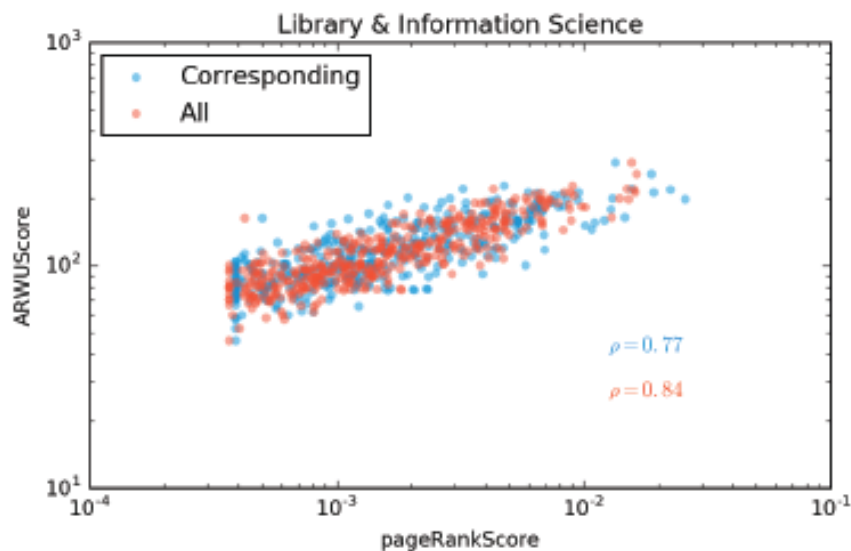
## SOCIAL SCIENCES

Economics   Statistics   Law   Political Sciences   Sociology  
Education   Communication   Psychology  
Business Administration   Finance   Management  
Public Administration   Hospitality & Tourism Management  
Library & Information Science

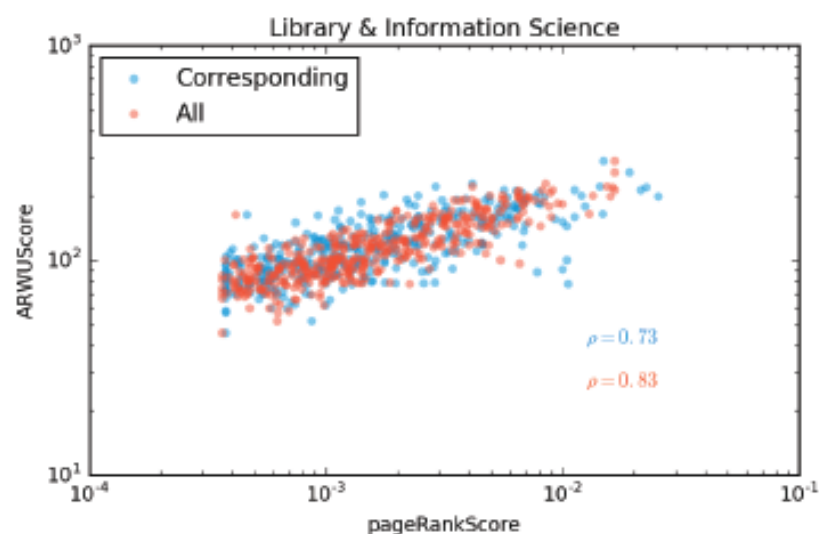
2017 SHANGHAIRANKING'S  
**GLOBAL RANKING OF ACADEMIC SUBJECTS**  
**PUBLICATION THRESHOLD**



## Excluding self-citations



## Including self-citations



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ACADEMIC

Source: Clarivate analytics, specifically provided for this project

# Information Science & Library Science (2017)

RANK	acr	ARWU DATA					INCITES RAW DATA				TOP
		PUB	CNCI	INT	TOP	score	PUB	CNCI	INT	TOP	PUB
<b>11</b>	UGR	78.6	54.5	55.0	57.2	207.9	163	1.01	23.3	57	<b>35%</b>
<b>42</b>	UC3M	69.1	49.7	67.4	42.2	177.4	125	0.85	35.2	31	<b>25%</b>
<b>72</b>	UPV	52.1	66.2	61.8	39.4	156.8	71	1.71	29.6	27	<b>38%</b>
<b>113</b>	UB	54.5	43.6	54.8	26.3	135.3	78	0.67	23.1	12	<b>15%</b>
<b>118</b>	USP	53.4	36.9	49.2	29.4	132.9	75	0.48	18.7	15	<b>20%</b>
<b>124</b>	UCM	54.5	34.5	48.3	24.0	127.8	78	0.42	18.0	10	<b>13%</b>
<b>131</b>	UV	44.0	46.4	42.2	28.4	121.8	51	0.76	13.7	14	<b>27%</b>
<b>132</b>	UFMG	54.1	28.2	36.7	20.1	119.0	77	0.28	10.4	7	<b>9%</b>
<b>133</b>	UNAM	55.5	20.6	35.8	21.4	118.5	81	0.15	9.9	8	<b>10%</b>

## Segunda conclusión

- **Las decisiones informadas precisan de la comparación con modelos de referencia.**
- **Se puede utilizar la información que aportan las clasificaciones e índices bibliométricos, como herramientas de benchmarking.**
- **Dicho esto, recordemos que hay mucha vida fuera de la bibliometría...**

# PARA SABER ALGO MÁS

Thursday workshop: **Utilizar la herramienta INCITES para reproducir los indicadores del Shanghai Subject Academic Ranking.**

## Bibliografía

[https://www.researchgate.net/profile/Domingo\\_Docampo](https://www.researchgate.net/profile/Domingo_Docampo)