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

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AtlantTIC

Universida de Vigo

¿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** (España)

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^2	hindex	MNCS
pub	0.64	0.08
hindex		0.49

R^2	urap	cwur	ntu*	rur	arwu	usn	the
pub	0.84	0.38	0.78	0.32	0.59	0.44	0.39
hindex	**0.87**	**0.61**	**0.92**	**0.56**	**0.82**	**0.73**	**0.71**
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 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 scales and H-index

Sampling adq

KMO	0.90

Reliability Statistics

Cronbach's Alpha	0.96

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

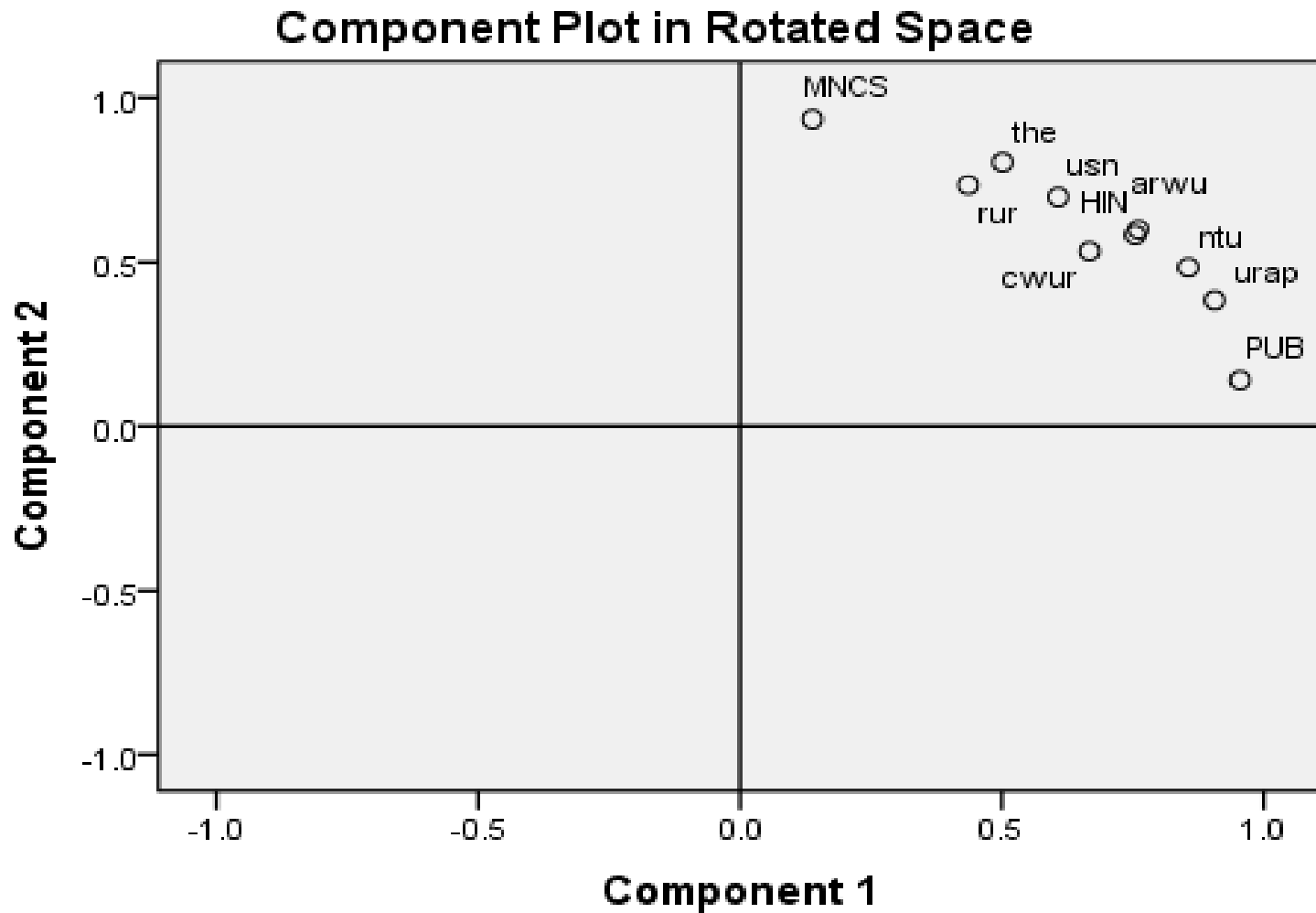| Sampling adq	
KMO	0.88

Reliability Statistics	
Cronbach's Alpha	0.96

SEVEN -H - LEIDEN						
Tot Var Expl (%)			Cumul	Rotated pca		
1	7.86	78.6	78.6	4.88	48.8	48.8
2	0.95	9.5	88.2	3.94	39.4	88.2
3	0.43	4.3	92.3			
4	0.29	2.9	95.2			
Extraction Method: PCA						

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

Component Plot in Rotated Space

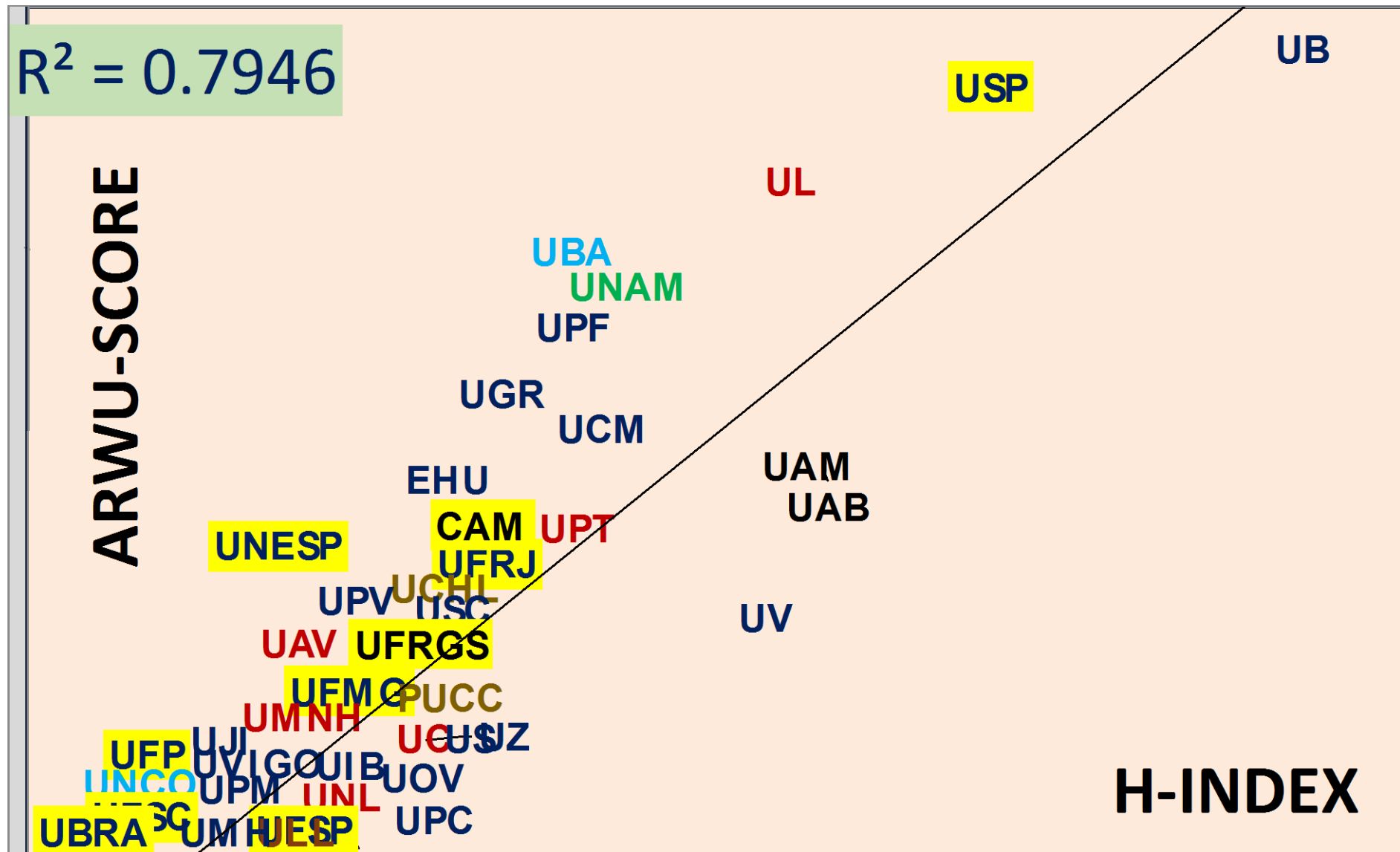# What ever happened to the teaching dimension
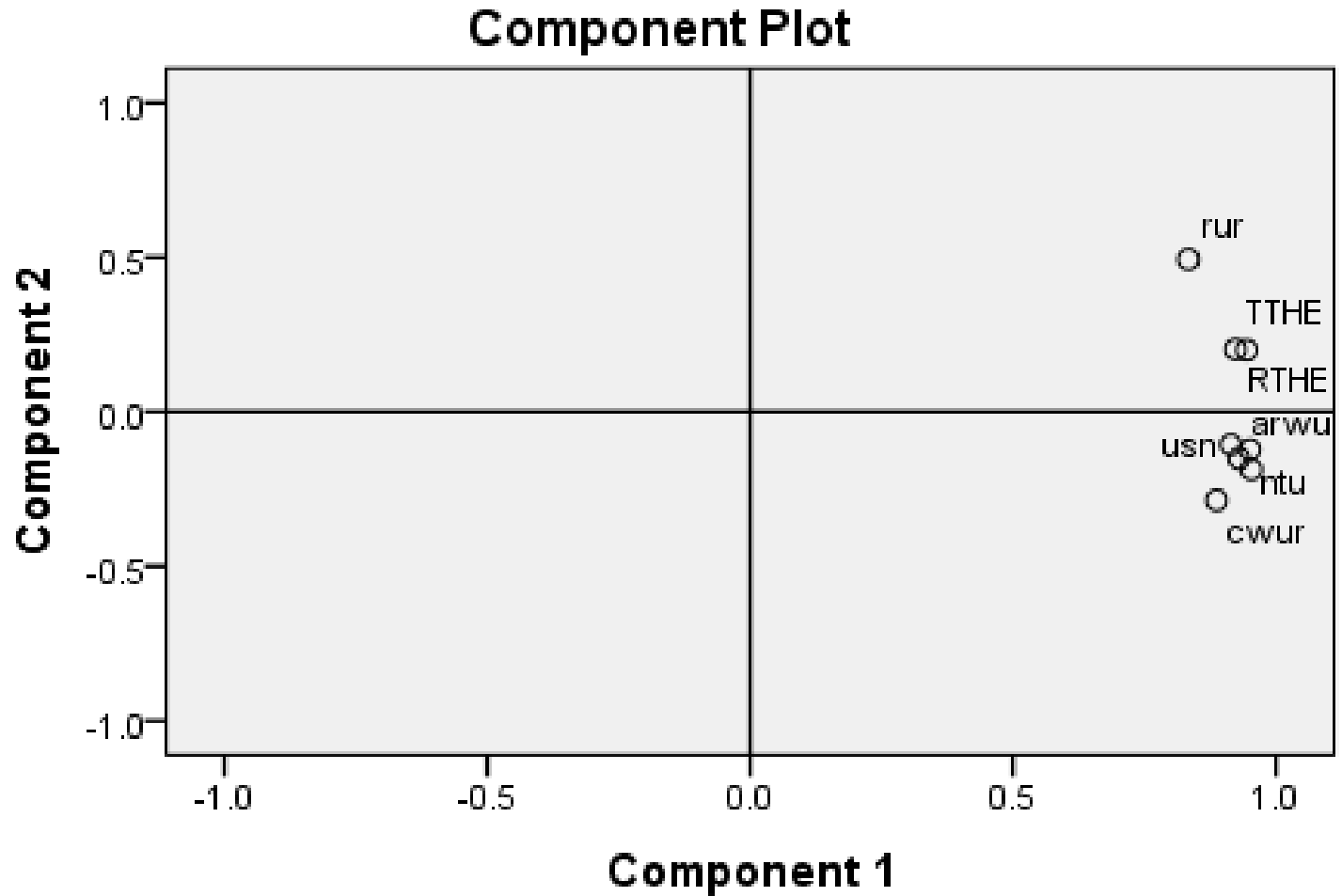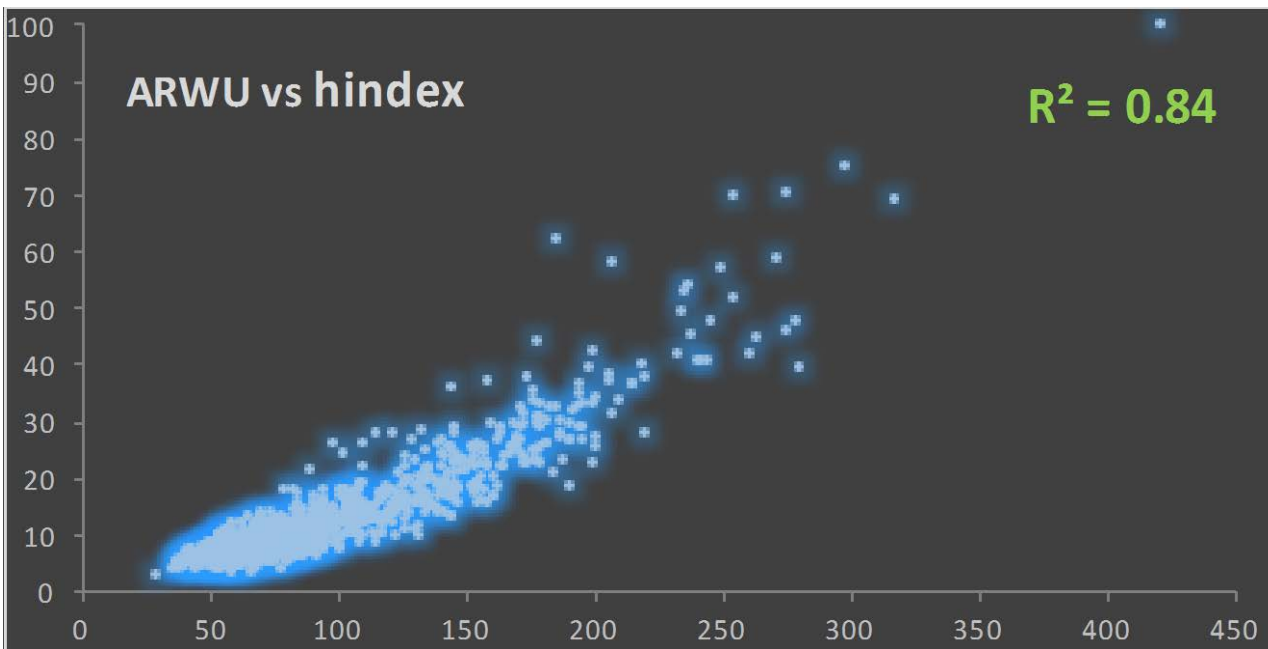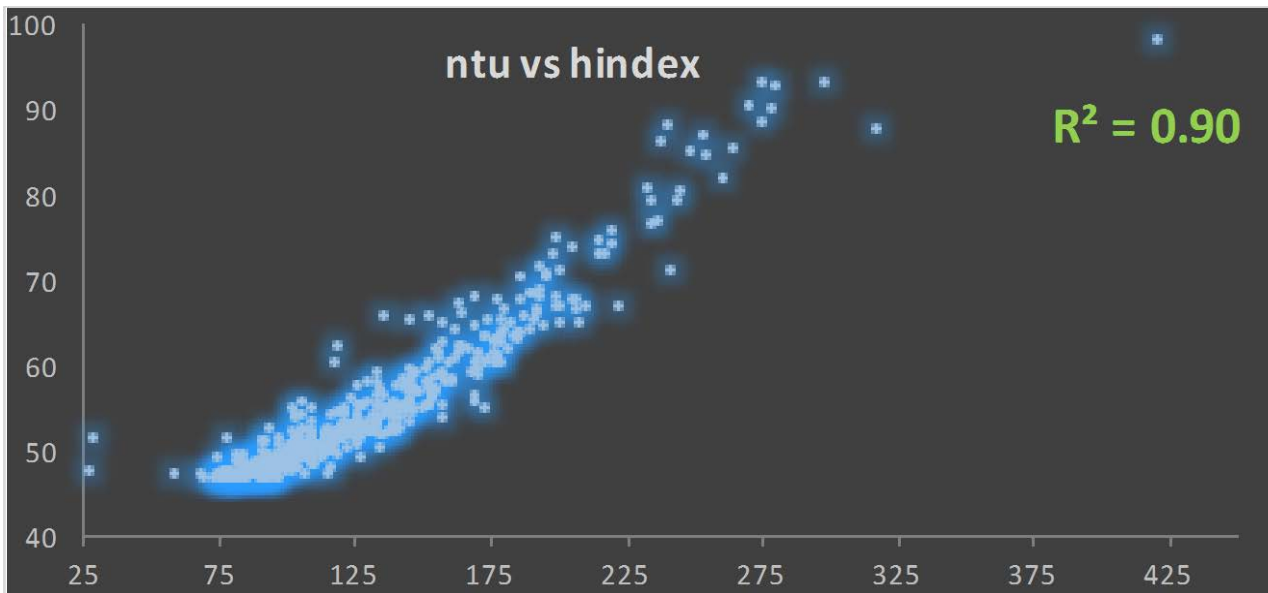
Para responsables universitarios

- **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

Social Science/Total scientific Production

ssci

$R^2 = 0.6175$

USP, UAB, UB, UL, UGR, UV, UCM, UPF, EHU, PUCC, UCHL, US, UFRJ, UPT, UZ, UNL, UAM, CAM, UNAM, UFSC, UFSC, UBRA, UC, UBA, UFRGS, UMU, UNESP, UFPE, UFP, UFC, UFSP, JPC, UPM, UNLP

total

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$R^2 = 0.62$

UPF

ssci

EHU

PUCC

UCHL US

UZ

UAM UFRJ UPT

UNL

UNAM

UOV

UFRGS CAM

UFSC

UBRA UC

UMNH UBA

UCLM

UMU

UERJ USC UPV

UMA

UNESP

UPM UFP

UAV UFSP

UFPE

UNC UPC

UFG UNLP

total
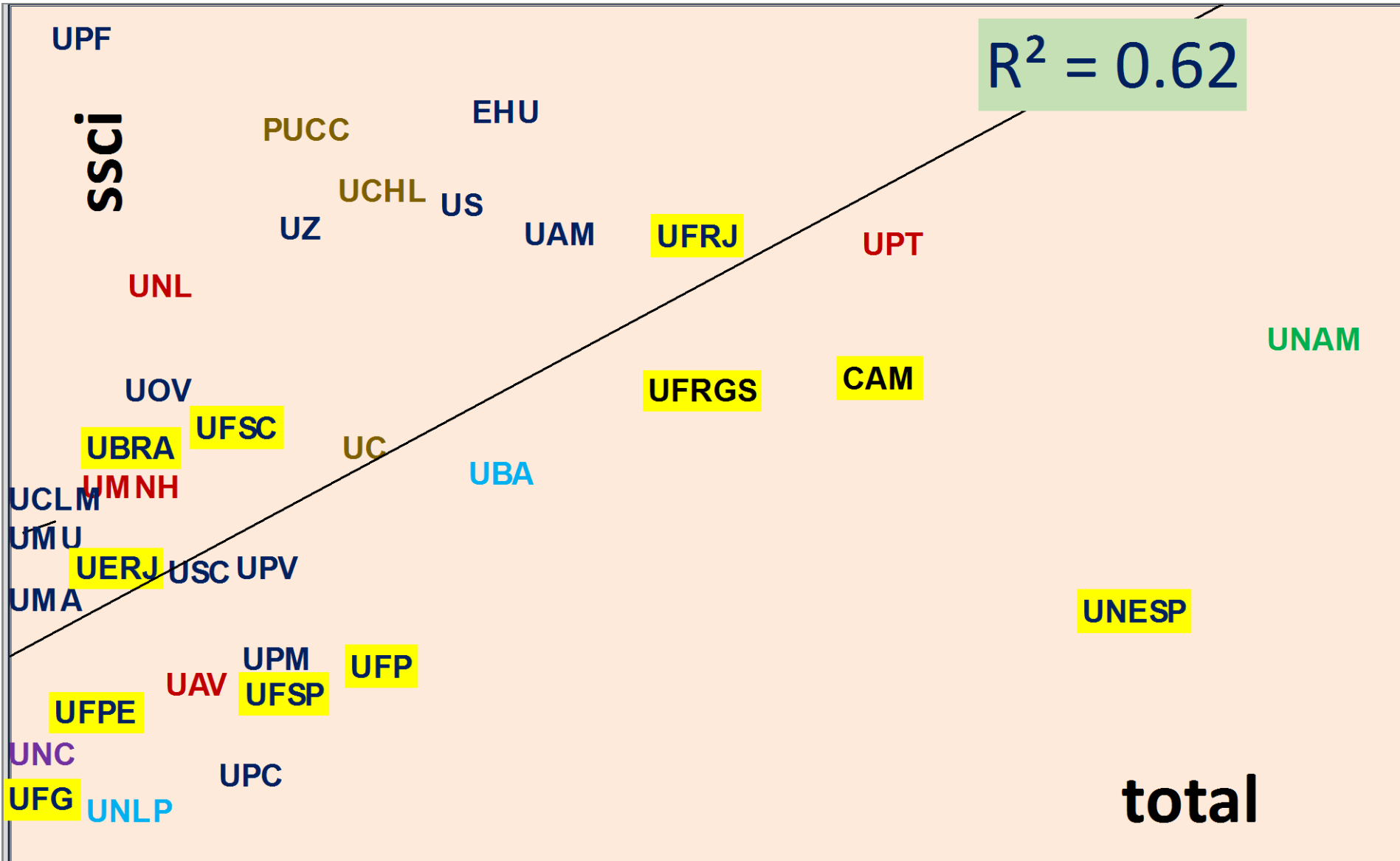
Posición ARWU/NUMBER OF FACULTY

Posición ARWU 2016 y FTE
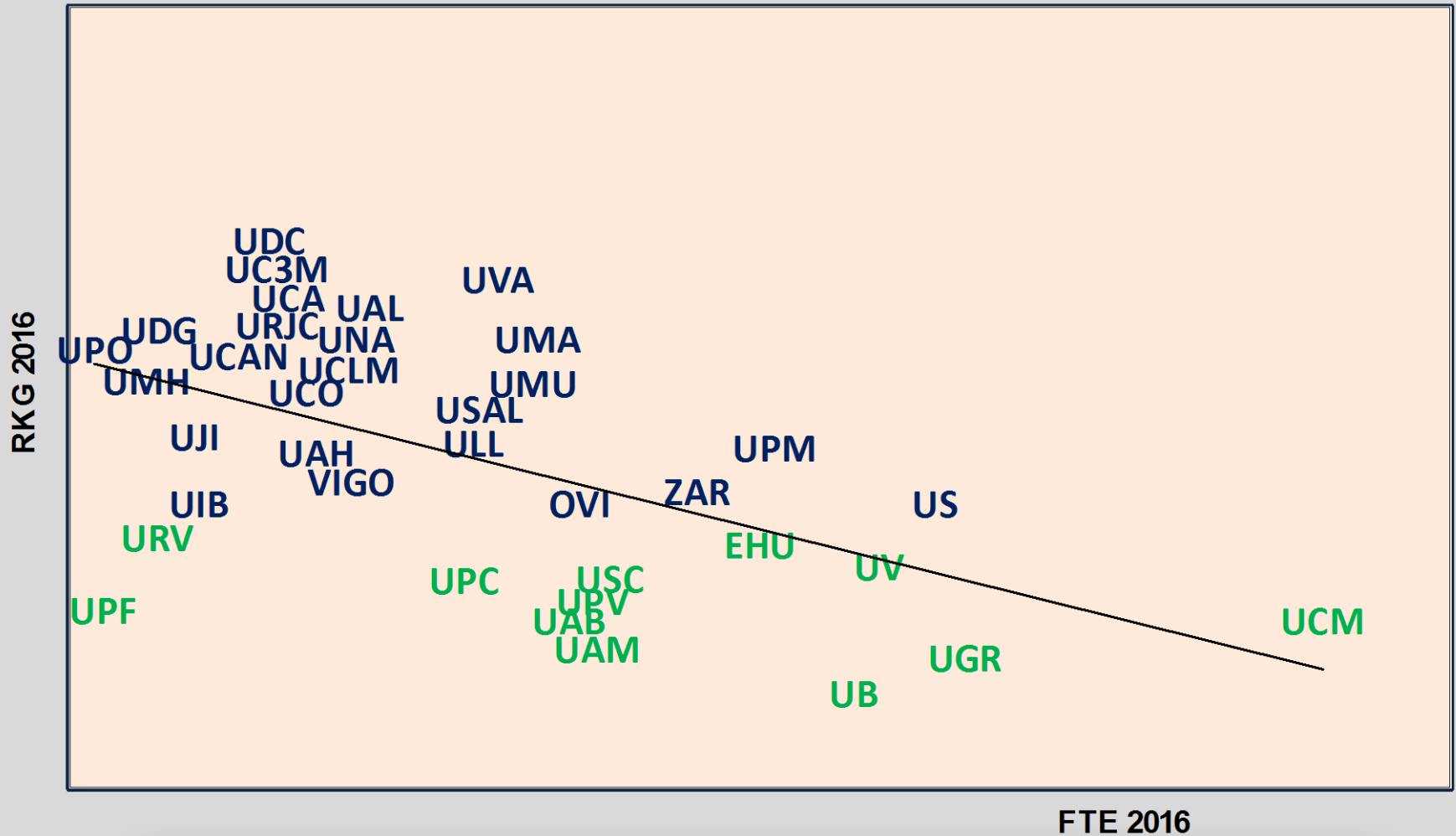
2017 SHANGHAIRANKING'S
GLOBAL RANKING OF ACADEMIC SUBJECTS

NATURAL SCIENCES

Mathematics   Physics
Chemistry   Earth Sciences
Geography   Ecology

LIFE SCIENCES

Biological Sciences
Human Biological Sciences
Agricultural Sciences
Veterinary Sciences

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

MEDICAL SCIENCES

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

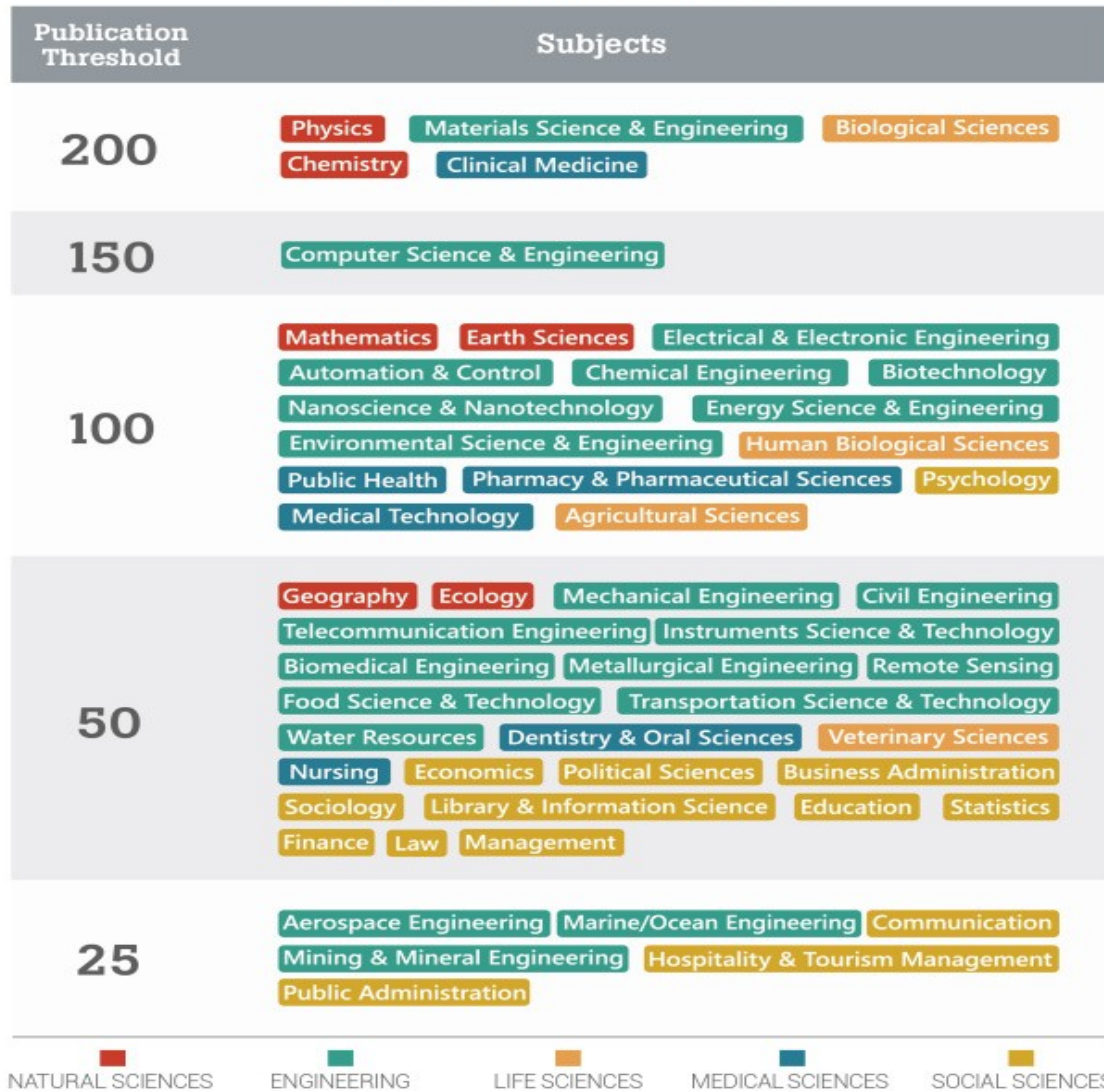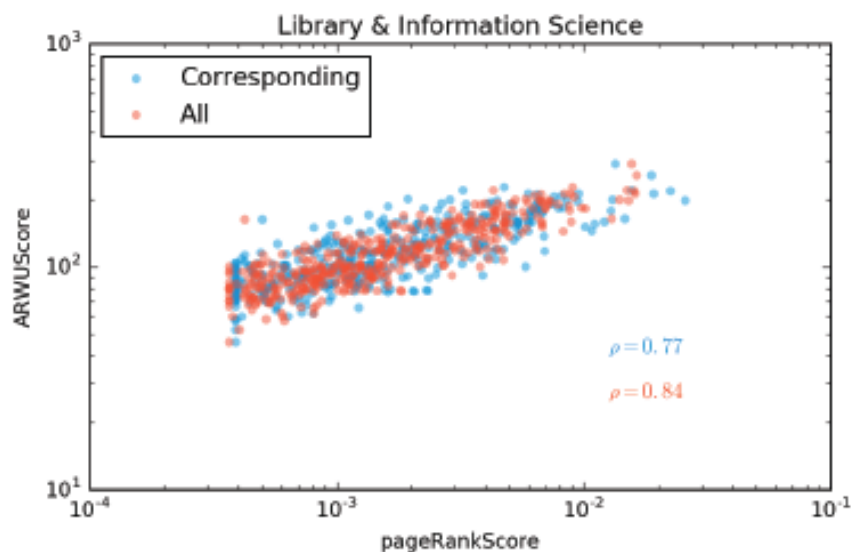## SOCIAL SCIENCES

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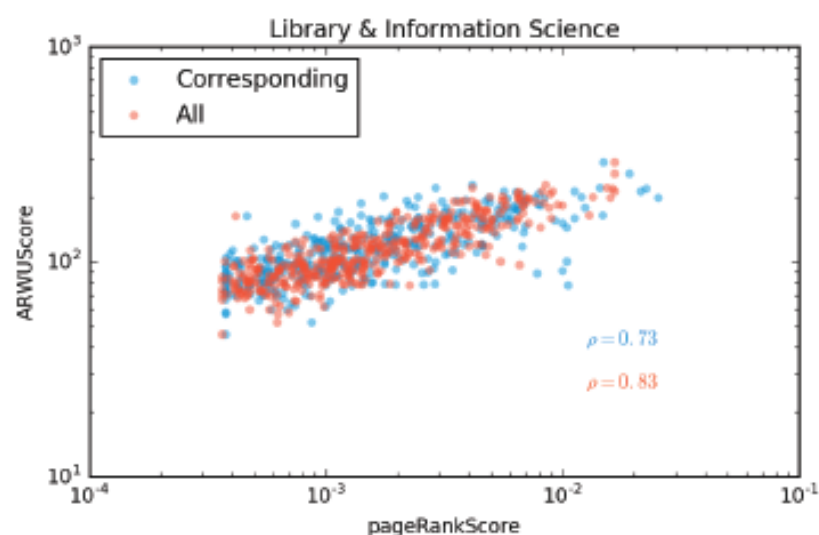Library & Information Science

2017 SHANGHAIRANKING'S
GLOBAL RANKING OF ACADEMIC SUBJECTS
PUBLICATION THRESHOLD

Publication Threshold	Subjects
200	Physics · Materials Science & Engineering · Biological Sciences · Chemistry · Clinical Medicine
150	Computer Science & Engineering
100	Mathematics · Earth Sciences · Electrical & Electronic Engineering · Automation & Control · Chemical Engineering · Biotechnology · Nanoscience & Nanotechnology · Energy Science & Engineering · Environmental Science & Engineering · Human Biological Sciences · Public Health · Pharmacy & Pharmaceutical Sciences · Psychology · Medical Technology · Agricultural Sciences
50	Geography · Ecology · Mechanical Engineering · Civil Engineering · Telecommunication Engineering · Instruments Science & Technology · Biomedical Engineering · Metallurgical Engineering · Remote Sensing · Food Science & Technology · Transportation Science & Technology · Water Resources · Dentistry & Oral Sciences · Veterinary Sciences · Nursing · Economics · Political Sciences · Business Administration · Sociology · Library & Information Science · Education · Statistics · Finance · Law · Management
25	Aerospace Engineering · Marine/Ocean Engineering · Communication · Mining & Mineral Engineering · Hospitality & Tourism Management · Public Administration

■ NATURAL SCIENCES ■ ENGINEERING ■ LIFE SCIENCES ■ MEDICAL SCIENCES ■ SOCIAL SCIENCES

Shanghai Ranking

Excluding self-citations

Including self-citations

Authors:

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Francesco A. Massucci   SIRIS

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

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

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