

2.3 DETAILED BIBLIOMETRIC ANALYSIS: METHODS AND OUTCOMES

Pier Luigi Rossi and Roland Waast

2.3.1 METHODOLOGY

Introduction
Methodology
Data collection
Data processing
Data analysis
Conclusion

The methodology (M) (1977),
is a scientific method
(p. 100) (1977)
and is a scientific method
and is a scientific method
and is a scientific method
and is a scientific method
and is a scientific method

Introduction
Methodology
Data collection
Data processing
Data analysis
Conclusion

The methodology (M) (1977),
is a scientific method
(p. 100) (1977)
and is a scientific method
and is a scientific method

(1) 100

US, 1992).
As a result, the
of the 1990s.
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- *Our objective: a detailed bibliometric analysis (MICRO BIBLIOMETRICS)*

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- Bibliometric

- Bibliometric

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2.3.2 PROCESSING TECHNIQUES

2.3.2.1 The choice of a reference base

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المركز الوطني
PASCAL للمعلوماتية

المركز الوطني
PASCAL للمعلوماتية

AL CAL

2.3.2.3 Sites of production

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ROC 3
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-

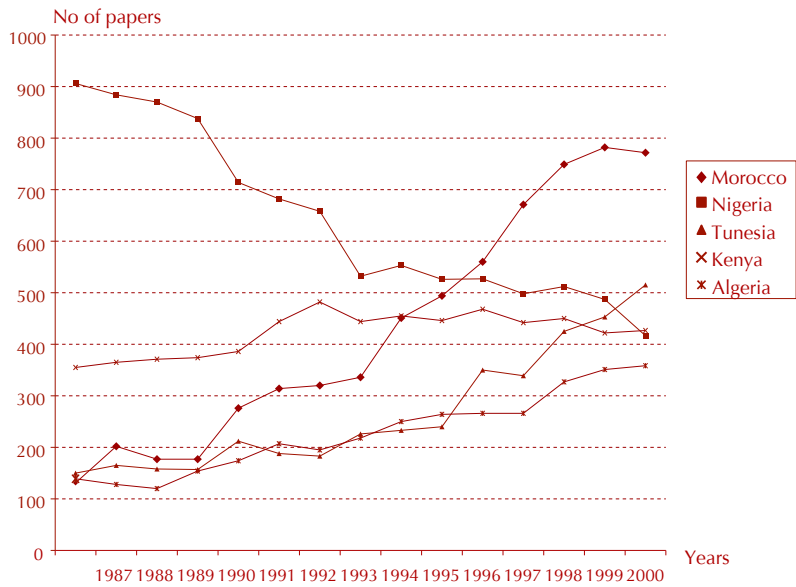
Atkinson, R. (1996).
The Role of the
Teacher in the
Classroom (2000).

McLoughlin, V. (1996).
The Role of the
Teacher in the
Classroom (2001).

R. M. L.

From Morocco, Tunisia, Algeria, Nigeria, Kenya, Egypt, Sudan, and Ethiopia. (11).

Fig. 1. Evolution (1987-2001) in the number of papers published in the field of Moroccan studies in the journals of the ISI database.



Data: SCI. Processing: PL Rossi.

2.3.3.1.3 A plateau seems to appear (2000–2001)

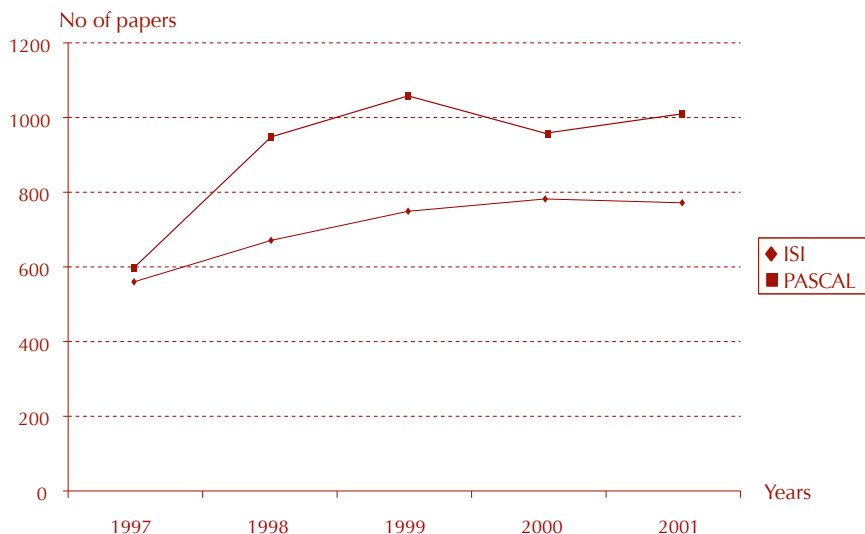
During 2000 and 2001, in PASC AL and ISI

Fig. 2. The number of papers published in the field of Moroccan studies in the journals of the ISI database.

Evolution of the number of papers published in the field of Moroccan studies in the journals of the ISI database.

¹¹ Bibliography of Moroccan Studies in the ISI database.

Fig. 2. Moroccan science (1997-2001): ISI (16) PASCAL AL



Data: SCI & PASCAL. Processing: P.L. Rossi.

2.3.3.2 Domains of Moroccan science: from foundations to diversification

World Wide Web
 Moroccan Science
 2000-2001

ISI PASCAL AL
 2000-2001

2.3.3.2.1 From the origins: solid foundations in basic sciences (1987–1996)

ISI PASCAL AL (World Wide Web, 2001), 2000-2001
 Moroccan Science
 2000-2001

1987-1996
 50 %
 40 %
 10 %

Table 2. Moroccan research (1987-1996)

% of indexed papers	Agriculture	Medical Sc.	Basic Sciences	Engineering Sc.
50				
40				
10				

NB: The social sciences are excluded from the analysis.
 Data: PASCAL (1987-1996). Processing: R. Arvanitis.

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 48
 49
 50

1997-2001
 1997-2001

2.3.3.2.2 Growth and diversification: 1997–2001

1997-2001
 1997-2001

- *Growth is based on previously set strong basic competencies*

1991-1996
 1991-1996
 1991-1996
 1991-1996

1991-1996
 1991-1996
 1991-1996

1997-2001
 1997-2001
 1997-2001
 1997-2001
 1997-2001
 1997-2001

(15). 1997-2001

Tb1. 1991-1996
 (1991-1996 al 1997-2001)

Disciplines	1991–1996	1997–2001	1991–1996	1997–2001
TOTAL	962	1 376	1 040	2 361

Data: PASCAL. Processing: PL Rossi.

15. 1997-2001
 1997-2001

■ *The capacities become differentiated*

From 1997–2001, the capacity of the production sites in the North began to differentiate. In fact, the capacity of the production sites (Molise, Tuscany, Umbria) began to

Retail Client

increase (e.g. Molise, Tuscany, Umbria) (Molise, Tuscany, Umbria) (Molise, Tuscany, Umbria) (Molise, Tuscany, Umbria) (+70 %).

Other

At the same time

- (x3);
- (x2.5);
- (x2.5);
- (x2).

At the same time, the capacity of the production sites in the North began to

increase (e.g. Molise, Tuscany, Umbria) (Molise, Tuscany, Umbria) (Molise, Tuscany, Umbria) (Molise, Tuscany, Umbria)

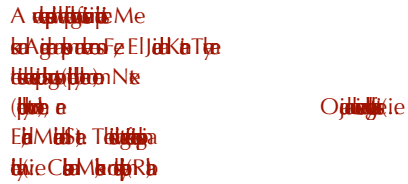
(16).

2.3.3.3 Redeployment of the production sites

The capacity of the production sites in the North began to

¹⁶ The capacity of the production sites in the North began to

2.3.3.3.1 Production sites become more diverse



Tb5. *Nakla* (1991-1996 and 1997-2001)

No of signatures	Agadir	Casa	Fez	Jadida	Kenitra	Makch	Meknes	Oujda	Rabat	Tet., Tang	Misc	No of Articles	No of Particip.
199	199	199	199	199	199	199	199	199	199	199	199	199	199

Data: PASCAL. Processing: PL Rossi.

Tb6. *Mabrouk* (1997-2001)

Total Morocco	Subfields/Cities	Agadir	Fez	Jadida	Kenitra	Meknes	Oujda	Tet. Tang	Misc
199	GMA	199	8	199	8	199	10***	199	12

2.3.3.4 From the pioneer stage to the professionalisation age

In the 1970s, the profession of the author became a central element of the literary field. This was a result of the increasing importance of the author's name in the literary market. The author's name became a key factor in the selection and distribution of literary works.

2.3.3.4.1 A generation of authors passes the torch

In the 1970s, the profession of the author became a central element of the literary field. This was a result of the increasing importance of the author's name in the literary market.

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²⁴ In the 1970s, the profession of the author became a central element of the literary field. This was a result of the increasing importance of the author's name in the literary market.

2.3.3.4.3 What about the replacement?

File: **1997-2001**
 Location: **ASCI**
 Title: **ASCI**

File: **1997-2001**
 Location: **ASCI**
 Title: **ASCI**

AL: **1997-2001**

AL: **1997-2001**

Title: **ASCI**
 (ASCI)
 (ASCI)

1997-2001

	Agadir	Casa	Fez	Jadida	Kenitra	Mkch	Mkns	Oujda	Rabat	Tel.Tang.	Misc.	Total

Data: PASCAL. Processing: R. Waast.

File: **1997-2001**
 Location: **ASCI**
 Title: **ASCI**

AL: **1997-2001**

1997-2001

	Agadir	Casa	Fez	Jadida	Kenitra	Mkch	Meknes	Oujda	Rabat	Tel.Tang.	Misc.	Total

Data: PASCAL. Processing: R. Waast.

Title:

Table 1. *Eluza* (1997/2001)

	Agadir	Casa	Fez	Jadida	Kenitra	Mikch	Mikns	Oujda	Rabat	Tet/Tang	Misc.	Total
1												
2												

Data: PASCAL. Processing: R. Waast.

On the other hand, the *Eluza* project was initiated in Rabat in 1997, with the aim of creating a national research database in the field of Moroccan history and culture.

Moreover, the project was initiated in 1997, with the aim of creating a national research database in the field of Moroccan history and culture.

In fact, the project was initiated in 1997, with the aim of creating a national research database in the field of Moroccan history and culture (25).

2.3.3.4.4 Autonomisation of the scientific community

The project was initiated in 1997, with the aim of creating a national research database in the field of Moroccan history and culture.

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AL

25

On the other hand, the *Eluza* project was initiated in Rabat in 1997, with the aim of creating a national research database in the field of Moroccan history and culture.

The project was initiated in 1997, with the aim of creating a national research database in the field of Moroccan history and culture.

Tab. 2. *Scopus* (1991-1996)

	Clinical Med.	Neuro	Radio	Cardio	Nephro	Bio-med	Bio-Phy	Cyto-Histo	Pharmaco
1991-1996	10	10	10	10	10	10	10	10	10
1997-2001	10	10	10	10	10	10	10	10	10

Data: SCI. Processing: Narvaez.

Integrating the
literature

Tab. 3. *Medline* (1991-1996)

	Clinical Med	Infectious Diseases	Haematol	Surgery	Internal Med	Immuno	Public Health	Bio-med	Parasito
1991-1996	10	10	10	10	10	10	10	10	10
1997-2001	10	10	10	10	10	10	10	10	10

Data: SCI. Processing: Narvaez.

Integrating the
literature

Highly relevant
publications

■ *The evolutions*

UgPASC AL (1991-1996) (1997-2001) (1991-1996)

■ Top 10% PAS CAL 60 % of

■ P100 CAL 90 % R100

- **Urology**
(75 % of total) 40 % of CI
- **Thoracic (eg Pain)**
(eg TB, Nocardia, Histoplasmosis)
10 % of total 5 % of CI
- **Paediatrics**
(eg Meningitis, Tetanus)
2 % of total 1 % of CI
- **Pharmacology**
(eg TB, HIV, malaria)
- **Quality Improvement**
(eg Pharmacy)
(eg AGS)
(1996-2001)
- **Public Health**

Table 4
Table 4

Table 4. *Burden of disease* (1997-2001)

Morocco	Surg	Gyneco	Pediat	Cardio	Neuro	Ophth/ORT	HGE	Uro	Endo+	Lab	Misc	Total

Data: SCI & PASCAL. Processing: R. Waast.

Key: Surg. = surgery and anaesthesia; HGE = hepato-gastro-enterology; Endo+ = endocrinology, metabolic diseases, haematology, and oncology; Lab. = laboratory, medical biology, pharmacology-toxicology, and medical imaging; and Misc. = other clinical specialties.

On the other hand,
the burden of
infectious
diseases

27
The
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The

Table 5. Authorship (1991 to 2001)

Authorship
 Single author
 Two authors
 Three authors
 Four authors
 Five authors
 Six authors
 Seven authors
 Eight authors
 Nine authors
 Ten authors
 More than ten authors

Count

Orphan articles
 Single author
 Two authors
 Three authors
 Four authors
 Five authors
 Six authors
 Seven authors
 Eight authors
 Nine authors
 Ten authors
 More than ten authors

Table 5. Authorship (1991 to 2001)

No of publications	5 to 7 articles	3 or 4 articles	2 articles	Recap. more than 1 article	1 article
1	1	1	1	1	1
2	1	1	1	1	1
3	1	1	1	1	1
4	1	1	1	1	1
5	1	1	1	1	1
6	1	1	1	1	1
7	1	1	1	1	1
8	1	1	1	1	1
9	1	1	1	1	1
10	1	1	1	1	1
11	1	1	1	1	1
12	1	1	1	1	1
13	1	1	1	1	1
14	1	1	1	1	1
15	1	1	1	1	1
16	1	1	1	1	1
17	1	1	1	1	1
18	1	1	1	1	1
19	1	1	1	1	1
20	1	1	1	1	1
21	1	1	1	1	1
22	1	1	1	1	1
23	1	1	1	1	1
24	1	1	1	1	1
25	1	1	1	1	1
26	1	1	1	1	1
27	1	1	1	1	1
28	1	1	1	1	1
29	1	1	1	1	1
30	1	1	1	1	1
31	1	1	1	1	1
32	1	1	1	1	1
33	1	1	1	1	1
34	1	1	1	1	1
35	1	1	1	1	1
36	1	1	1	1	1
37	1	1	1	1	1
38	1	1	1	1	1
39	1	1	1	1	1
40	1	1	1	1	1
41	1	1	1	1	1
42	1	1	1	1	1
43	1	1	1	1	1
44	1	1	1	1	1
45	1	1	1	1	1
46	1	1	1	1	1
47	1	1	1	1	1
48	1	1	1	1	1
49	1	1	1	1	1
50	1	1	1	1	1
51	1	1	1	1	1
52	1	1	1	1	1
53	1	1	1	1	1
54	1	1	1	1	1
55	1	1	1	1	1
56	1	1	1	1	1
57	1	1	1	1	1
58	1	1	1	1	1
59	1	1	1	1	1
60	1	1	1	1	1
61	1	1	1	1	1
62	1	1	1	1	1
63	1	1	1	1	1
64	1	1	1	1	1
65	1	1	1	1	1
66	1	1	1	1	1
67	1	1	1	1	1
68	1	1	1	1	1
69	1	1	1	1	1
70	1	1	1	1	1
71	1	1	1	1	1
72	1	1	1	1	1
73	1	1	1	1	1
74	1	1	1	1	1
75	1	1	1	1	1
76	1	1	1	1	1
77	1	1	1	1	1
78	1	1	1	1	1
79	1	1	1	1	1
80	1	1	1	1	1
81	1	1	1	1	1
82	1	1	1	1	1
83	1	1	1	1	1
84	1	1	1	1	1
85	1	1	1	1	1
86	1	1	1	1	1
87	1	1	1	1	1
88	1	1	1	1	1
89	1	1	1	1	1
90	1	1	1	1	1
91	1	1	1	1	1
92	1	1	1	1	1
93	1	1	1	1	1
94	1	1	1	1	1
95	1	1	1	1	1
96	1	1	1	1	1
97	1	1	1	1	1
98	1	1	1	1	1
99	1	1	1	1	1
100	1	1	1	1	1

Data: SCI, and PASCAL. Processing: R. Waast.

2.3.4 CONCLUSION

From the Moroccan
 perspective,
 the Moroccan
 research is
 still in its
 infancy

Although
 the Moroccan
 research is
 still in its
 infancy,
 it is
 showing
 signs of
 growth

Quality of
 Moroccan
 research is
 improving

The Moroccan
 research is
 still in its
 infancy

Conclusion