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# Institutions & HDI

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Ministry of the Economy, the Industry and the Employment

# The Importance of Institutions

- Institutions recognized as important determinants of **growth, income and TFP differentials**.
- In recent growth models, they determine use of Capital, Labor, as well as technology and ideas absorption (Banerjee and Duflo 2005, Hsieh and Kleenow 2009, Jones and Romer 2009)
- A major field of intervention for donors since mid-90s
- Growing international research agenda on **institutions**: North, Acemoglu, Khan, Rodrik, Greif, Chang, Williamson, ...

# AFD 2009-2011 Research on “Institutions and Long-term Growth”

- What are the **institutional determinants of LT growth**?
- The **political economy** of long-run growth = about 20 country case studies with World Bank + North, Wallis (Univ. of Maryland), Weingast (Stanford), Khan (SOAS).
- Explore **interactions** between Institutions and Growth = theoretical research & cross-country analysis = Work on Institutional Databases and notably IPD 2009 with Maastricht University.
- Research on both sides of the equation: **Institutions** as a means and as an end + growth vs **other developmental outcomes**

# Governance Indicators

- **WB:** Worldwide Governance Indicators (WGI) 1996 by KKZ; Doing Business 2003 IFC; CPIA
- **Other indicators:** Corruption Perception Index (TI); Economist Intelligence Unit; ICRG; World Economic Forum; Freedom House; ...
- **WGI:** Voice and Accountability, Rule of Law, Government Effectiveness, Control of Corruption, Political Stability, Regulatory Quality based on enterprise, expert and HH surveys ; 200 countries.
- Widely used by investors, donors, academics, journalists.
- Problem: How to measure institutions?

# WGI: Limitations

- Huge theoretical & measurement problems (Arndt and Oman, *Uses and abuses of gov. indicators*, OECD)
- WGI supposed to be comparable but **very little comparability** through time and across countries. Confidence intervals often overlap.
- **Changing definitions of concepts** due to changes in sources and weights
- **A premium to majority perceptions** because weights are assigned to each source according to its correlation with other sources → assigns less weight to sources that differ from majority
- **Selection bias**: most sources are **business-oriented firm and expert surveys**, not population / hh surveys.

→ Strong implicit normativity

# Institutional Profiles Database

- Project led by French Ministry of the Economy + AFD
- **99%** of World's GDP and 96% of world's Population
- **3 Surveys:** 2001, 2006 (85 countries), 2009 (123 countries)
- broad definition of **Institutions**
- '**de facto**' rather than '**de jure**' approach (Doing Business)
- aggregation of **380 elementary items** into 70 indicators
- possibility to build many other indicators depending on research needs
- Transparent = free access to all data  
<http://www.cepii.fr/anglaisgraph/bdd/institutions.htm>

# IPD: A broad definition of institutions

1- Political institutions	4 - Free functioning of markets	7 - Regulations
2 - Public order, safety	5 - Coordination, anticipations	8 - Openness
3 - Functioning of administration	6 - Secure transactions	9 - Social cohesion

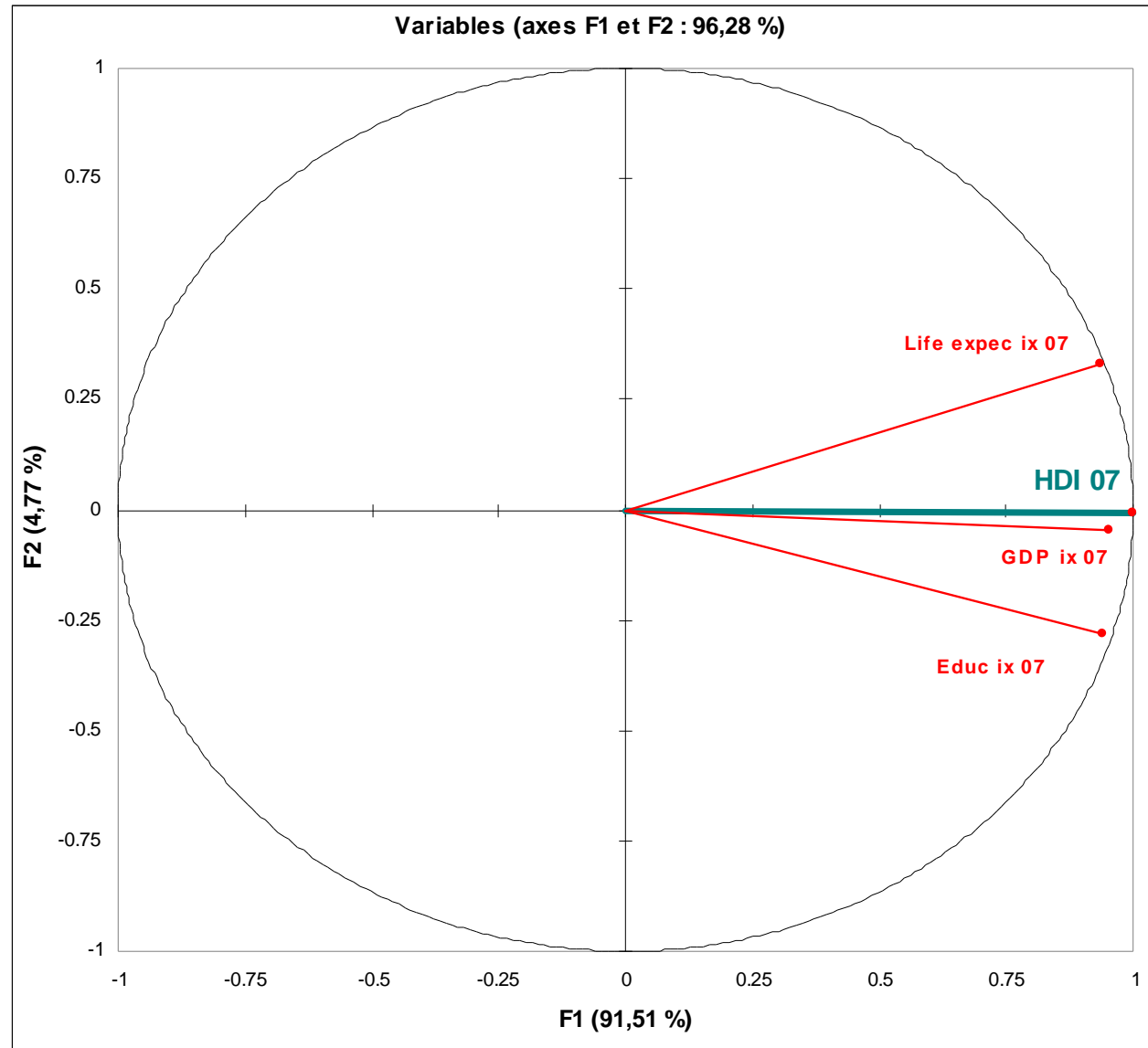
# Institutions and HDI

- Institutions are clearly a fundamental dimension of Human development
- HDI could be improved in this respect by incorporating WGI

But:

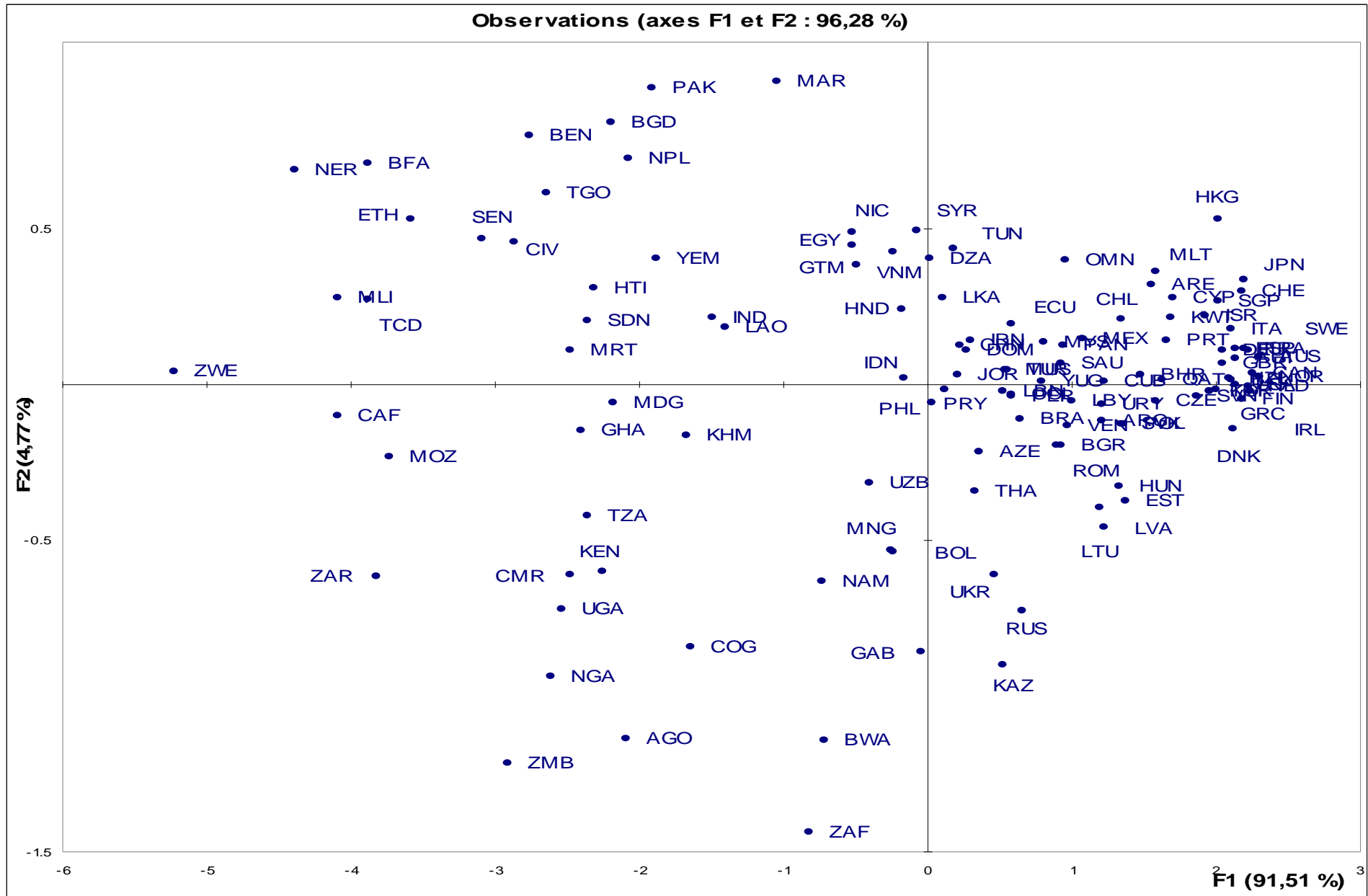
1. Methodological problems (see above)
2. WGI don't cover the whole field of institutions that matter for human development:
  - Social cohesion
  - Openness of Social orders,
  - Control of violence
3. We present here the relationships between HDI and a few institutional indicators on these three fields extracted from IPD 2009.

# HDI: Current situation



Source: Principal component analysis on IPD 2009. 123 countries. TAI has arbitrarily the same data as KOR. ZWE has the same data as NER, the last country on the HDI ranking.

# HDI: Current situation



## HDI: Current situation

Matrice de corrélation (Pearson (n)) :

Variables	HDI 07	Life expec ix 07	Educ ix 07	GDP ix 07
HDI 07	1	<b>0.930</b>	<b>0.937</b>	<b>0.956</b>
Life expec ix 07	<b>0.930</b>	1	<b>0.810</b>	<b>0.836</b>
Educ ix 07	<b>0.937</b>	<b>0.810</b>	1	<b>0.845</b>
GDP ix 07	<b>0.956</b>	<b>0.836</b>	<b>0.845</b>	1

*Les valeurs en gras sont significativement différentes de 0 à un niveau de signification  $\alpha=0,05$*

6 WGI and HDI (axes F1 et F2 : 88,78 %)

# The 6 WGI and HDI

**K1**: Voice and accountability

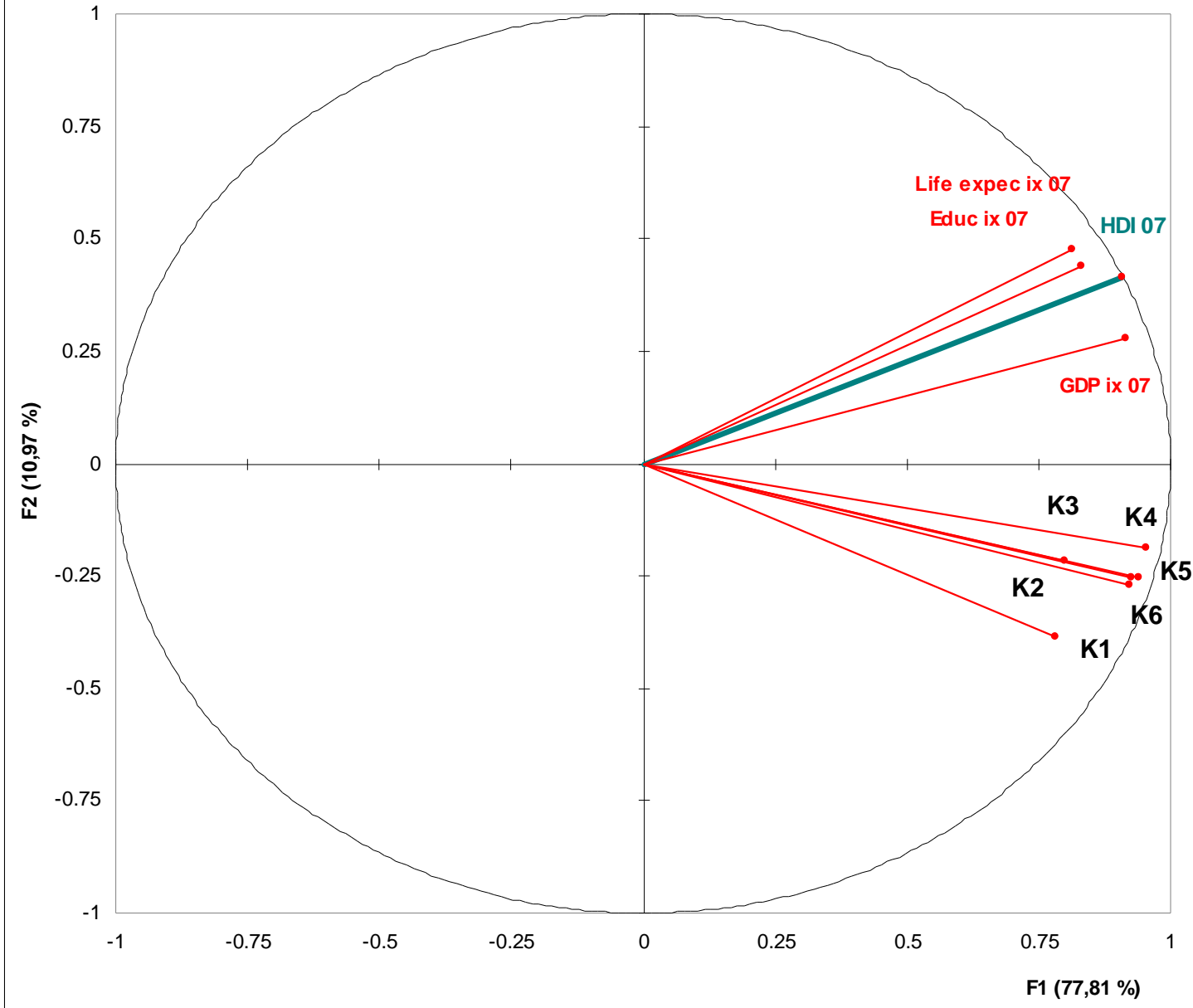
**K2**: Political Stability & Absence of Violence/Terrorism

**K3**: Government Effectiveness

**K4**: Regulatory Quality

**K5**: Rule of Law

**K6**: Control of Corruption



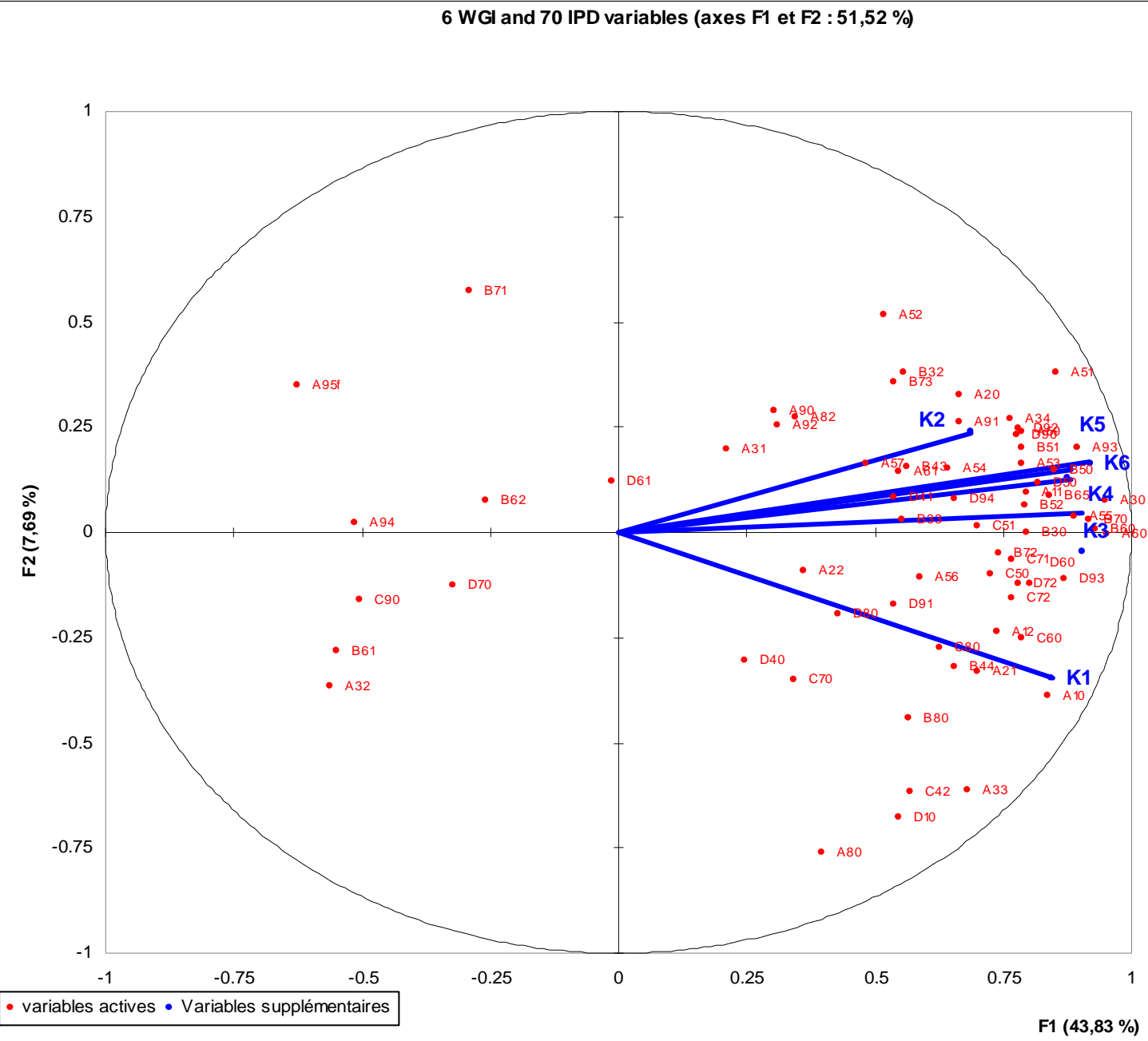
# 6 WGI and HDI

Matrice de corrélation (Pearson (n)) :

Variables	HDI0 0 7	Life expec ix 07	Educ ix 07	GDP ix 07	K1	K2	K3	K4	K5	K6
<b>HDI 07</b>	<b>1</b>	<b>0.930</b>	<b>0.937</b>	<b>0.956</b>	<b>0.567</b>	<b>0.636</b>	<b>0.786</b>	<b>0.737</b>	<b>0.746</b>	<b>0.725</b>
Life expec ix 07	0.930	1	0.810	0.836	0.484	0.529	0.716	0.663	0.687	0.661
Educ ix 07	0.937	0.810	1	0.845	0.525	0.576	0.665	0.630	0.611	0.595
GDP ix 07	0.956	0.836	0.845	1	0.583	0.676	0.824	0.780	0.794	0.774
K1	0.567	0.484	0.525	0.583	1	0.640	0.766	0.825	0.764	0.765
K2	0.636	0.529	0.576	0.676	0.640	1	0.754	0.723	0.784	0.753
K3	0.786	0.716	0.665	0.824	0.766	0.754	1	0.939	0.965	0.955
K4	0.737	0.663	0.630	0.780	0.825	0.723	0.939	1	0.935	0.905
K5	0.746	0.687	0.611	0.794	0.764	0.784	0.965	0.935	1	0.962
K6	0.725	0.661	0.595	0.774	0.765	0.753	0.955	0.905	0.962	1

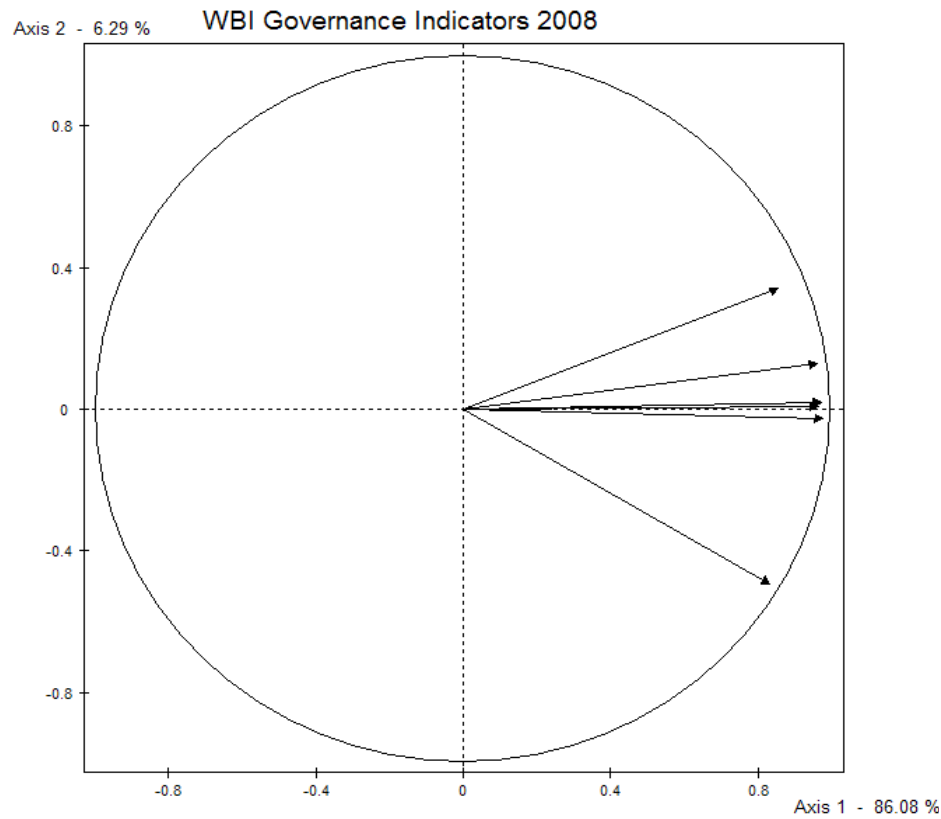
*Les valeurs en gras sont significativement différentes de 0 à un niveau de signification alpha=0,05*

# Information contained in the 6 WGI vs IPD 2009

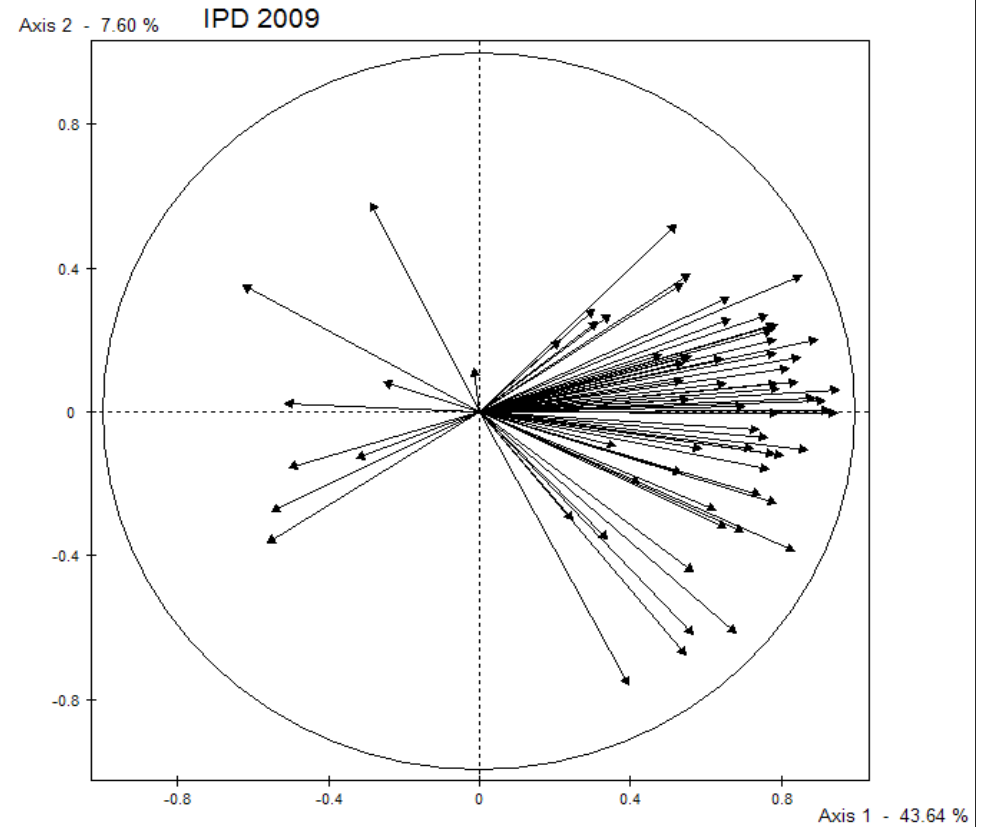


# WGI covers a limited field of institutions

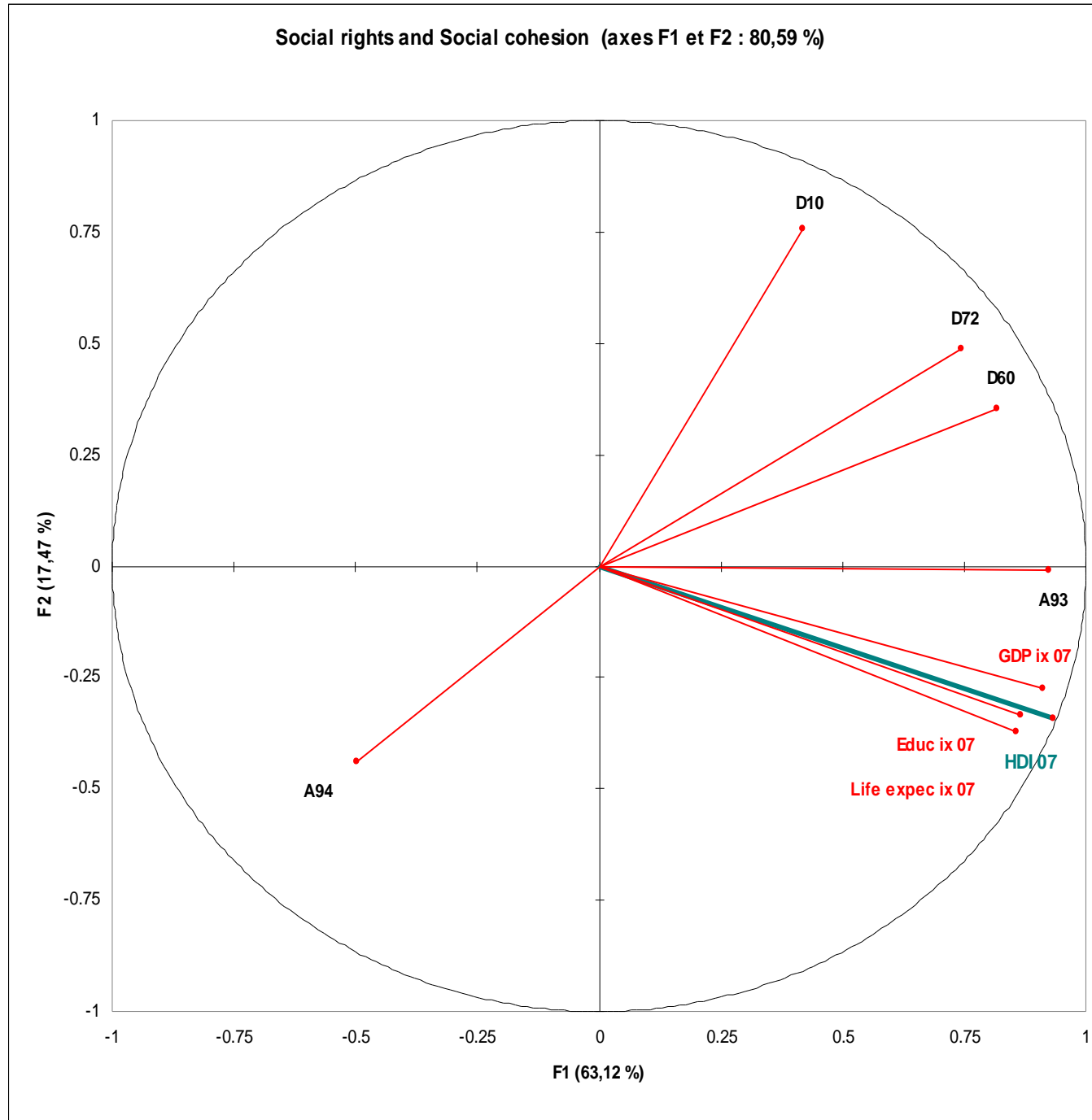
## 6 WGI



## 70 IPD indicators (reduced from 367 elementary indicators)



# Social cohesion and HDI



D10: Freedom of association and trade union pluralism

D72: Quality of social dialogue

D60: Respect of workers rights

A93: Inclusive institutional solidarities

- GDP index
- HDI 07
- Educ index
- Life expec index

A94: Traditional solidarity (interpersonal)

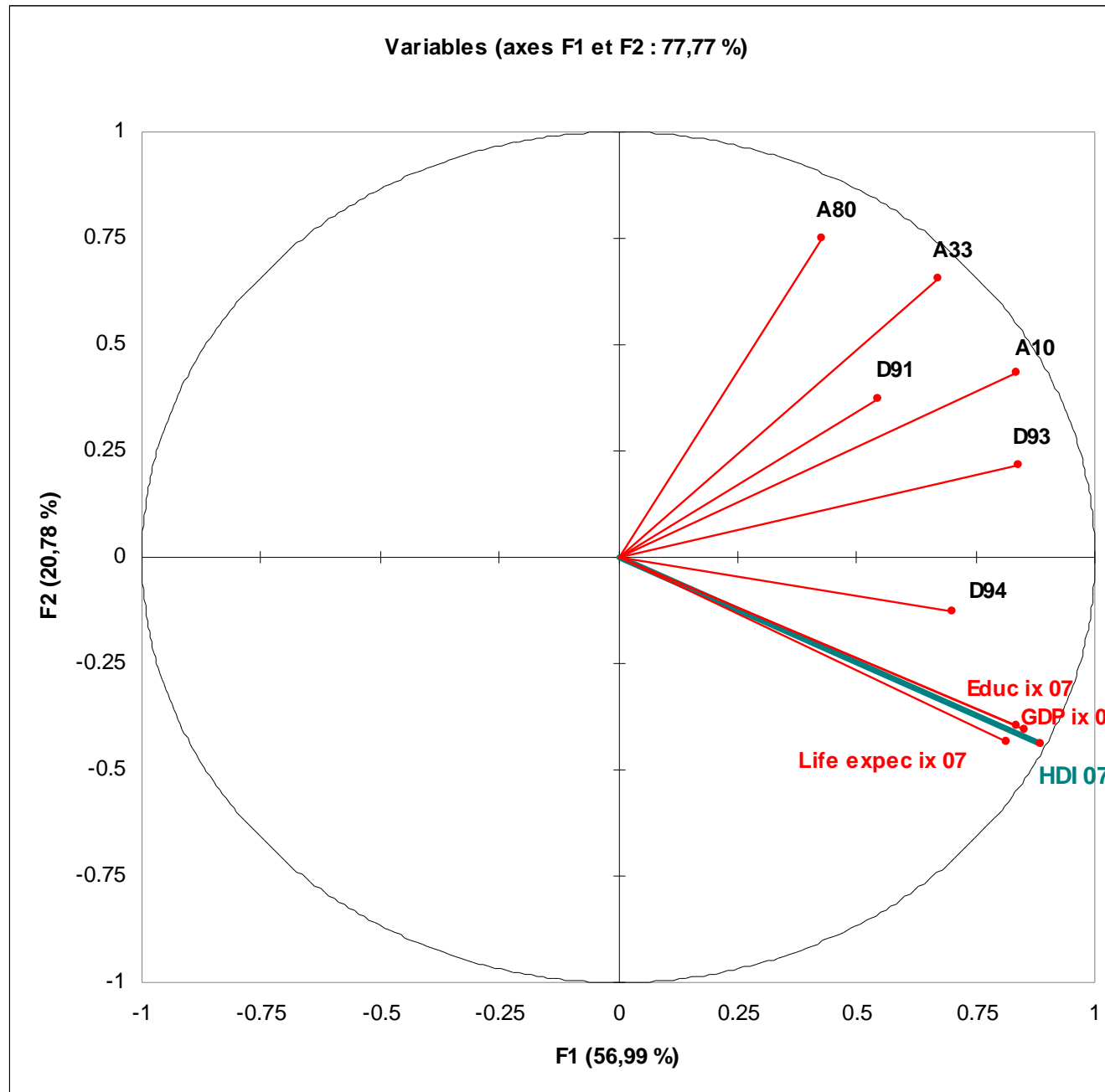
# Social cohesion and HDI

Matrice de corrélation (Pearson (n)) :

Variables	HDI 07	Life expec ix 07	Educ ix 07	GDP ix 07	A93	A94	D10	D60	D72
<b>HDI 07</b>	<b>1</b>	<b>0.930</b>	<b>0.937</b>	<b>0.956</b>	<b>0.837</b>	<b>-0.322</b>	<b>0.164</b>	<b>0.620</b>	<b>0.514</b>
Life expec ix 07	0.930	1	0.810	0.836	0.777	-0.248	0.123	0.537	0.459
Educ ix 07	0.937	0.810	1	0.845	0.751	-0.294	0.152	0.571	0.464
GDP ix 07	0.956	0.836	0.845	1	0.825	-0.357	0.181	0.632	0.522
A93	0.837	0.777	0.751	0.825	1	-0.396	0.359	0.764	0.683
A94	-0.322	-0.248	-0.294	-0.357	-0.396	1	-0.342	-0.422	-0.506
D10	0.164	0.123	0.152	0.181	0.359	-0.342	1	0.577	0.586
D60	0.620	0.537	0.571	0.632	0.764	-0.422	0.577	1	0.747
D72	0.514	0.459	0.464	0.522	0.683	-0.506	0.586	0.747	1

*Les valeurs en gras sont significativement différentes de 0 à un niveau de signification alpha=0,05*

# Openness of social orders and HDI



A80: Free movement of people and information

A33: Autonomy in operation and creation of organizations

D91: Weak segmentation of the labour market

A10: Democracy, Legality and Freedom

D93: Social mobility

D94: Social mobility : young graduate

- Educ index
- GDP index
- **HDI 07**
- Life expec index

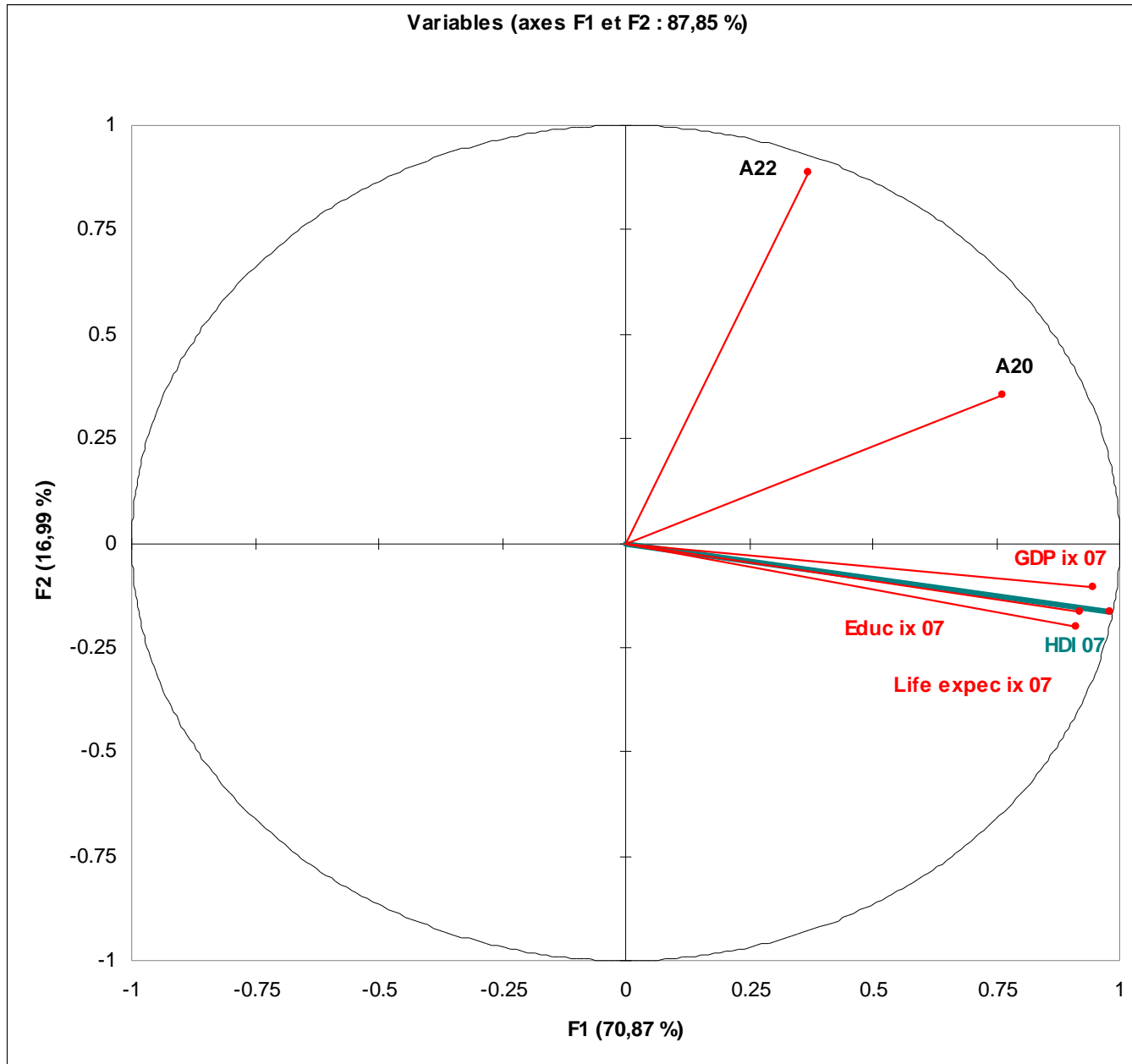
# Openness of social order and HDI (North et alii, 2007)

Matrice de corrélation (Pearson (n)) :

Variables	HDI 07	Life expec ix 07	Educ ix 07	GDP ix 07	A10	A33	A80	D91	D93	D94
HDI 07	<b>1</b>	<b>0.930</b>	<b>0.937</b>	<b>0.956</b>	<b>0.547</b>	<b>0.324</b>	0.097	<b>0.306</b>	<b>0.610</b>	<b>0.595</b>
Life expec ix 07	<b>0.930</b>	<b>1</b>	<b>0.810</b>	<b>0.836</b>	<b>0.495</b>	<b>0.274</b>	0.079	<b>0.259</b>	<b>0.553</b>	<b>0.531</b>
Educ ix 07	<b>0.937</b>	<b>0.810</b>	<b>1</b>	<b>0.845</b>	<b>0.515</b>	<b>0.301</b>	0.113	<b>0.343</b>	<b>0.542</b>	<b>0.575</b>
GDP ix 07	<b>0.956</b>	<b>0.836</b>	<b>0.845</b>	<b>1</b>	<b>0.531</b>	<b>0.336</b>	0.093	<b>0.258</b>	<b>0.616</b>	<b>0.572</b>
A10	<b>0.547</b>	<b>0.495</b>	<b>0.515</b>	<b>0.531</b>	<b>1</b>	<b>0.859</b>	<b>0.633</b>	<b>0.529</b>	<b>0.799</b>	<b>0.515</b>
A33	<b>0.324</b>	<b>0.274</b>	<b>0.301</b>	<b>0.336</b>	<b>0.859</b>	<b>1</b>	<b>0.759</b>	<b>0.484</b>	<b>0.663</b>	<b>0.338</b>
A80	0.097	0.079	0.113	0.093	<b>0.633</b>	<b>0.759</b>	<b>1</b>	<b>0.351</b>	<b>0.401</b>	<b>0.181</b>
D91	<b>0.306</b>	<b>0.259</b>	<b>0.343</b>	<b>0.258</b>	<b>0.529</b>	<b>0.484</b>	<b>0.351</b>	<b>1</b>	<b>0.532</b>	<b>0.290</b>
D93	<b>0.610</b>	<b>0.553</b>	<b>0.542</b>	<b>0.616</b>	<b>0.799</b>	<b>0.663</b>	<b>0.401</b>	<b>0.532</b>	<b>1</b>	<b>0.562</b>
D94	<b>0.595</b>	<b>0.531</b>	<b>0.575</b>	<b>0.572</b>	<b>0.515</b>	<b>0.338</b>	<b>0.181</b>	<b>0.290</b>	<b>0.562</b>	<b>1</b>

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# Control of Violence and HDI (North et alii, 2007)



**A22: External security**

**A20: Domestic security and Control of violence**

- GDP index
- **HDI 07**
- Educ index
- Life expec index

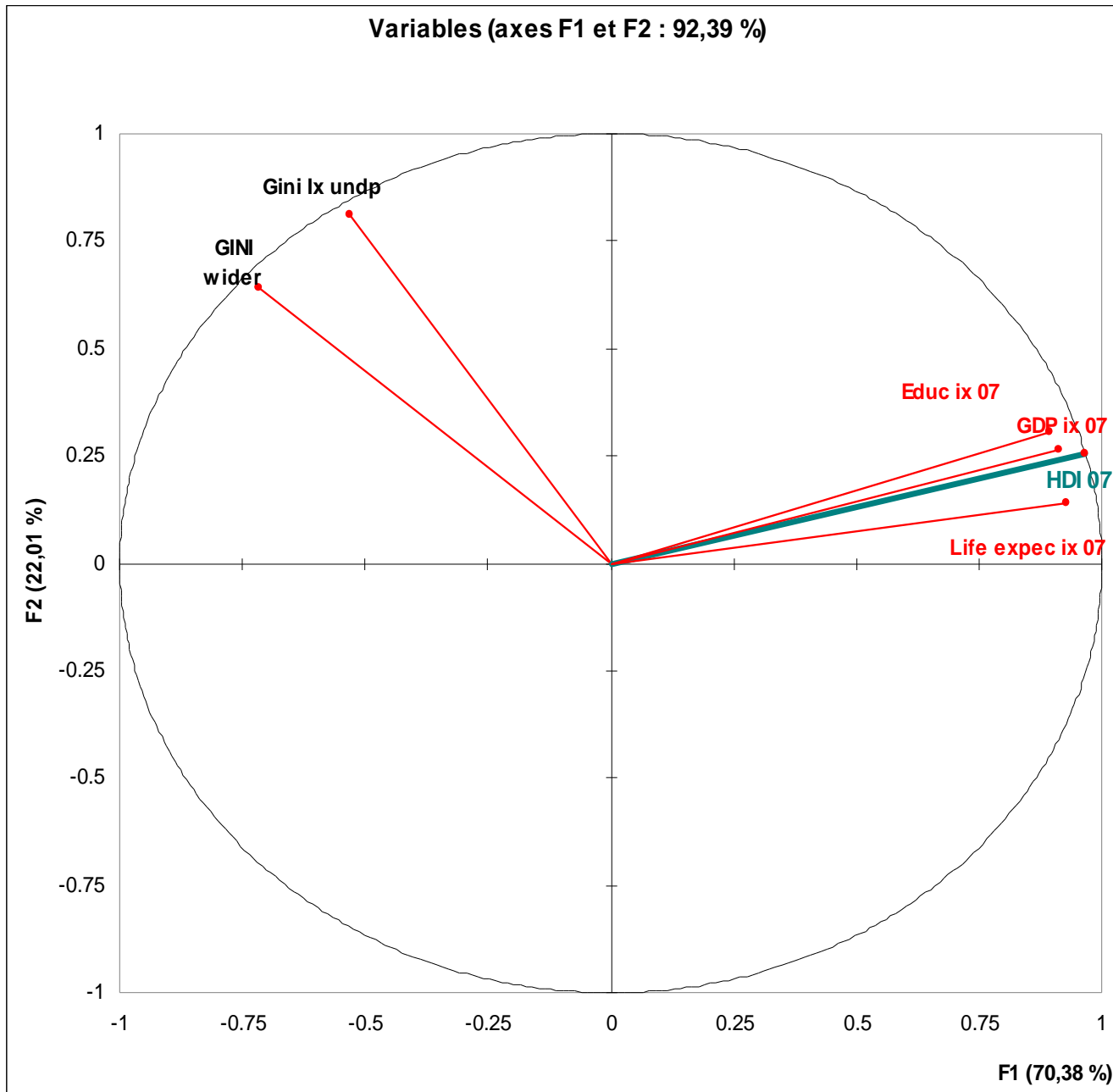
# Control of Violence and HDI (North, Wallis, Weingast – 2007)

Matrice de corrélation (Pearson (n)) :

Variables	HDI 07	Life expec ix 07	Educ ix 07	GDP ix 07	A20	A22
<b>HDI 07</b>	<b>1</b>	<b>0.930</b>	<b>0.937</b>	<b>0.956</b>	<b>0.646</b>	<b>0.240</b>
Life expec ix 07	<b>0.930</b>	<b>1</b>	<b>0.810</b>	<b>0.836</b>	<b>0.581</b>	<b>0.187</b>
Educ ix 07	<b>0.937</b>	<b>0.810</b>	<b>1</b>	<b>0.845</b>	<b>0.582</b>	<b>0.224</b>
GDP ix 07	<b>0.956</b>	<b>0.836</b>	<b>0.845</b>	<b>1</b>	<b>0.656</b>	<b>0.261</b>
A20	<b>0.646</b>	<b>0.581</b>	<b>0.582</b>	<b>0.656</b>	<b>1</b>	<b>0.449</b>
A22	<b>0.240</b>	<b>0.187</b>	<b>0.224</b>	<b>0.261</b>	<b>0.449</b>	<b>1</b>

*Les valeurs en gras sont significativement différentes de 0 à un niveau de signification alpha=0,05*

# GINI\* and HDI



\* GINI calculated by Wider & UNPD. Gini Wider = means of the last available data. Some missing data have been estimated.

## GINI AND HDI

Matrice de corrélation (Pearson (n)) :

Variables	GINI WIDER	Gini lx UNDP	HDI 07	Life expec ix 07	Educ ix 07	GDP ix 07
<b>GINI wider</b>	<b>1</b>	<b>0.839</b>	<b>-0.522</b>	<b>-0.568</b>	<b>-0.451</b>	<b>-0.476</b>
<b>Gini lx undp</b>	<b>0.839</b>	<b>1</b>	<b>-0.311</b>	<b>-0.369</b>	<b>-0.234</b>	<b>-0.283</b>
HDI 07	<b>-0.522</b>	<b>-0.311</b>	<b>1</b>	<b>0.930</b>	<b>0.937</b>	<b>0.956</b>
Life expec ix 07	<b>-0.568</b>	<b>-0.369</b>	<b>0.930</b>	<b>1</b>	<b>0.810</b>	<b>0.836</b>
Educ ix 07	<b>-0.451</b>	<b>-0.234</b>	<b>0.937</b>	<b>0.810</b>	<b>1</b>	<b>0.845</b>
GDP ix 07	<b>-0.476</b>	<b>-0.283</b>	<b>0.956</b>	<b>0.836</b>	<b>0.845</b>	<b>1</b>

*Les valeurs en gras sont significativement différentes de 0 à un niveau de signification alpha=0,05*

We are open to pursue collaboration on  
human development's institutional  
characteristics!

Thank you