



ICSTEP'15

PUBLIC ENTREPRENEURIAL UNIVERSITIES: OVERCOMING INBRED LIMITS

GUILHERME ARY PLONSKI

CENTER FOR TECHNOLOGY POLICY AND MANAGEMENT

UNIVERSITY OF SÃO PAULO

Agenda

1. Significance of public universities

2. Analysis: institutional traits

3. An institutional innovation takes off

4. Tensions and tendencies

1. SIGNIFICANCE OF PUBLIC UNIVERSITIES





68% of the researchers are in
the **Higher Education System**



97% of the top 5% graduate programs in STEM & Medicine are offered by **public universities**

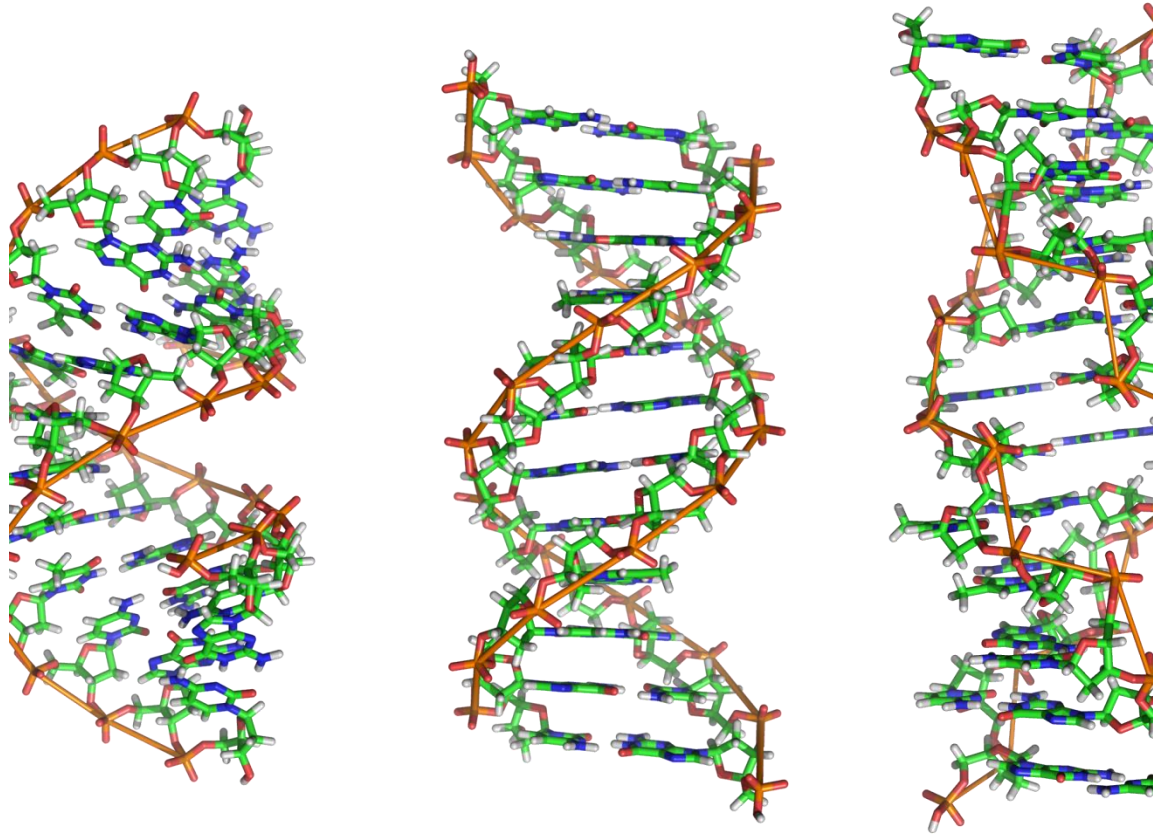


The **six** Brazilian universities
ranked by ARWU 2015 are **public**



What enabled **some** (top) public universities to become (more) **entrepreneurial**?

2. ANALYSIS: INSTITUTIONAL TRAITS



Each institution has inbred characteristics

Mission

Nationality

Legal nature



Mission (main)

Higher education -> **University**

Business -> **Company**

Regulation -> **Government**

...



Nationality

Local

Local operation of a multinational organization

Foreign



Legal nature

Private for-profit

State-owned

Private nonprofit

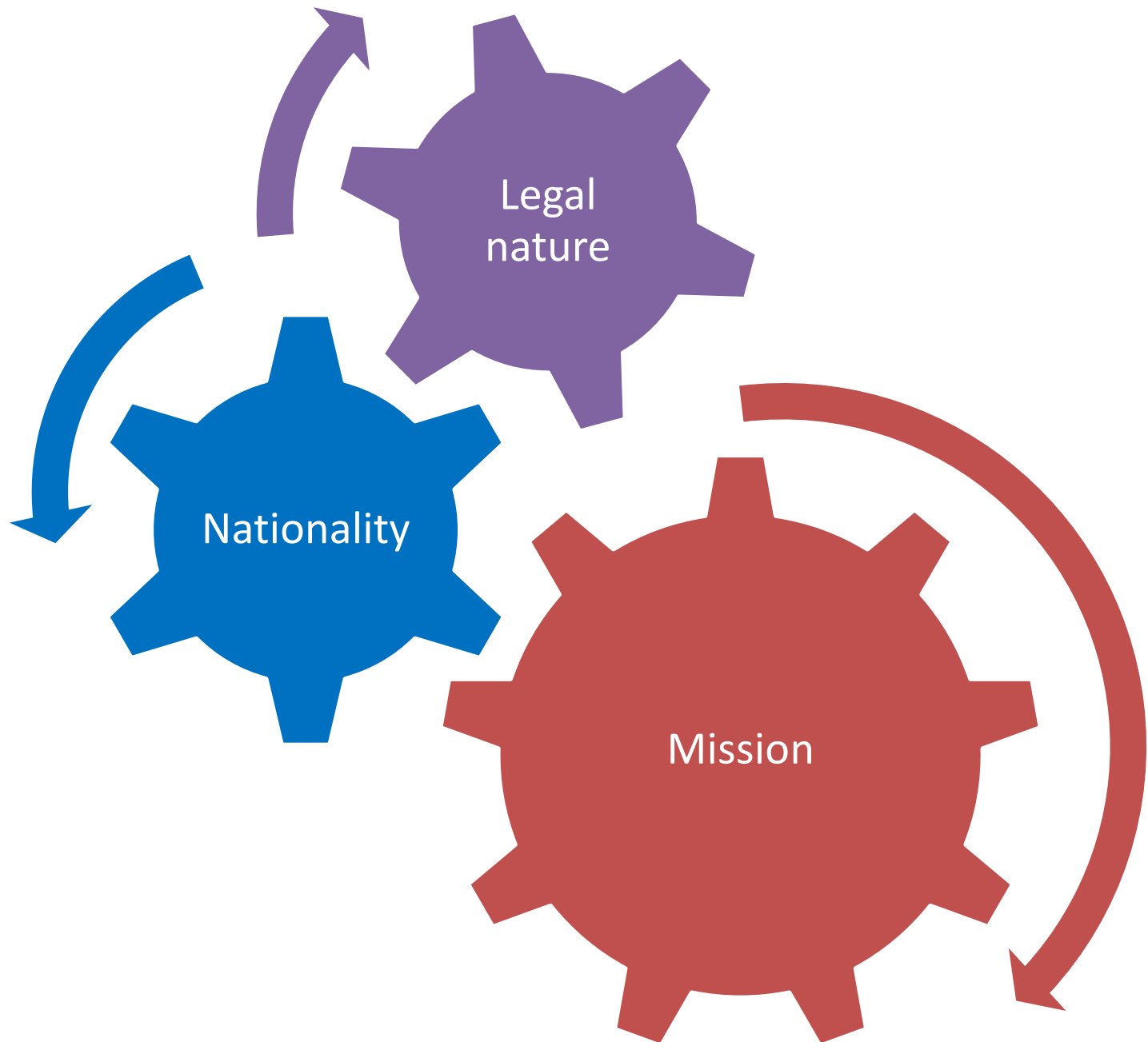
Public

Characteristics define degrees of freedom

- University-Company contracting
 - From free choices to cumbersome procedures
- Eligibility for public R&D funding
 - From easy access to impediment
- Managerial latitude
 - From good practices to unsound constraints
- Spin-out process
 - From natural to tricky



The use of **public R&D funds** also affects the management of **private-private** contracts



Triple Helix in action

<div> <div>Company</div> <div>University</div> </div>	Private for-profit	State-owned	Special cases
Public	2	3	
Private nonprofit	1 _b		
Private for-profit	1 _a		

Case 1 (1a or 1b)

Private University <—> Private for-profit Company

No public R&D funds

- ✓ Contract is decided solely among the parties
- ✓ Project speed is defined by the development of the results
- ✓ Project cost depends mostly on the managerial competency

Case 2

Public University <—> Private for-profit Company Using public R&D funds

- ✓ Limitations to contracting exist: choice of party, amount of documentation, maximum duration, IP management, ...
- ✓ Project speed is affected by constraints: hiring the team, complying with legal requirements for procurement, and overcoming restrictions for transferring \$ between budget items
- ✓ Project cost is affected by: legal requirements for procurement, and by the incertitude of firms supplying to public institutions

Case 3

Public University <—> State-owned Company

No public R&D funds

- ✓ Contracting is relatively easy, especially if both parties are in the same Government sphere

But problems to **manage the contract** remain:

- ✓ Project speed is affected by constraints: hiring the team, and complying with legal requirements for procurement
- ✓ Project cost is affected by: legal requirements for procurement, and by the incertitude of firms supplying to public institutions



Legal issues hinder the establishment and operation of **S&T parks** and **business incubators** by public universities

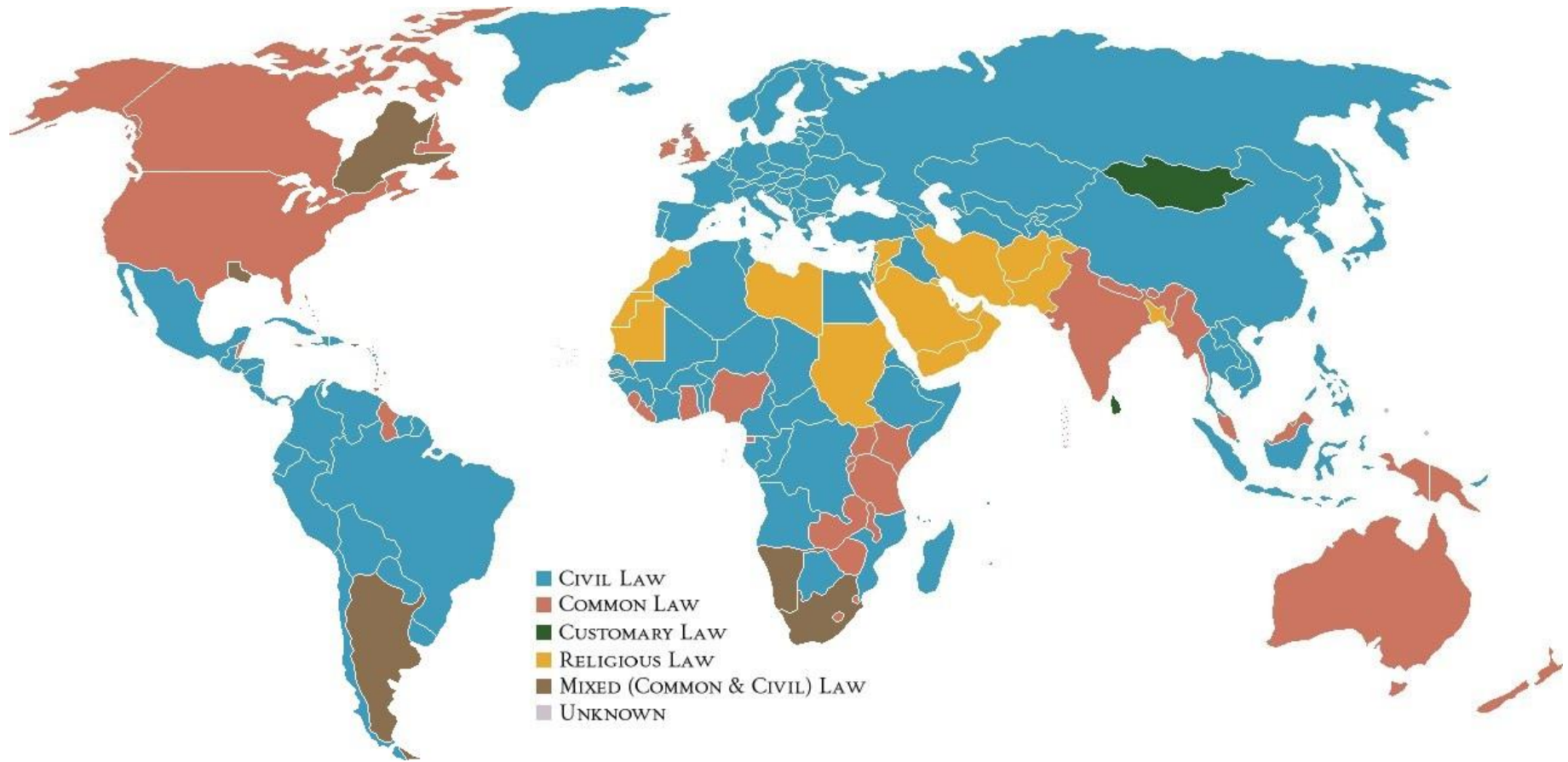
Real-estate issues

Access to **public** finance

Conflicts of interest



What blocks the entrepreneurial dreams of public universities from becoming reality?



Brazilian legal tradition: **civil law**

Private organizations can do **all** that is not prohibited
[Let's do it!]

Public organizations can do **only** what is allowed
[Who authorized you to do it?]



Collective mindset is shaped by the legal system

Penalties for noncompliance with **rules**, regardless of results

Generates **self-restrictions**



How does a **public university** overcome **inbred limits** in order to become (more) **entrepreneurial**?

3. AN INSTITUTIONAL INNOVATION TAKES OFF



Ruy Aguiar da Silva Leme
(1925 – 1997)

Member of a distinguished family of USP faculty members
(second of four generations)

1955

- 'Brazil: 50 years in 5'
- São Paulo turns into 'Detroit'

1958

- USP creates first **Production Engineering** course in Brazil (today 800)

1965

- A series of textbooks is published
- 'First Production Engineering Week'

1967

- **Vanzolini Foundation** is established with the proceeds donated by the authors

The new model

Aim

To support the **USP Production Engineering Department's (PRO)** outreach to the booming São Paulo industry: teaching and consulting

- Need to overcome hindrances (speed and cost)
- High inflation

Legal nature

Private nonprofit

Foundations differ from Associations

Foundations:

- **Mission:** unchangeable
- **Focus:** on the use (and growth) of the asset to benefit the original cause, not its members' interests
- **Legal watcher:** Public Prosecutor's Office ('Foundations Curator')

Some noteworthy PRO outcomes

(that would not be attained without a support foundation)

- **Since 1970's:** boosting the **competitiveness of the region's industry**, by educating the first generations of managers
 - 15k specialized engineers enabled as professional industrial managers
- **Since 1990's:** significantly **enhancing the quality of Brazilian companies** by massive training programs and by being the first Brazilian certification body
 - The only Brazilian member of IQNet - The International Certification Network
- **Since 2000's:** supporting the **modernization of the São Paulo State public education system** (5.5 million students, 5.2k schools, 645 cities) through techno-pedagogical initiatives to upgrade the 300k teachers and staff
 - 14 prizes earned
 - International showcase: the 'Knowledge Network'



Nowadays *circa* **180** ‘support foundations’

Some universities have **more than one** (USP has 30)

Heterogeneity: size, latitude, role (back office vs. protagonist), branding, governance,...



Economics Research Institute Foundation

Est. 1973, supports the **Economics Department** of USP Business School

Top reference for **indexes**: cost of life, vehicles, ...

Strategic **public policy** studies, continuing education



Luiz de Queiroz Agrarian Studies Foundation

Est. 1976, supports **USP School of Agriculture**

Reference in **extension** programs

Since 2000 manages a 3.7k ha (9k acres) **estate**
bequeathed by a former student

OS FAZENDEIROS DA USP

Por: Daniel Popov, de Londrina (PR)

Professores universitários administram uma fazenda de pecuária no Paraná e provam que o melhoramento genético pode ser muito lucrativo



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2014 FINANCIAL BAÇANCE SUMMARY

ORIGIN OF RESOURCES	2014	%	2013	%
Total Revenues	1,222.9	100%	1,206.4	100%
Government resources	967.4	79.1%	991.5	82.2%
Medical assistance - SUS	291.9	23.9%	282.5	23.4%
Grants	675.5	55.2%	709.0	58.8%
Medical assistance - Covenants and private	90.9	7.4%	86.9	7.2%
Donations	22.0	1.8%	16.2	1.3%
Private cooperation - national and international	4.8	0.4%	4.8	0.4%
Service delivery and / or sale of products	66.7	5.5%	54.0	4.5%
Other income	71.1	5.8%	53.0	4.4%

In 2014:
US\$ 1.00
= R\$ 2,50

RESOURCES APPLICATIONS	2014	%	2013	%
Total Expenses	1,187.5	100%	1,092.3	100%
Staff	666.5	56.1%	595.3	54.5%
Operating expenses	466.1	39.3%	447.8	41.0%
Procurement of goods	54.9	4.6%	49.2	4.5%

Medical School Foundation

Est. 1986 (by *alumni* donation), supports:

- **USP School of Medicine**, and
- Attached **University Hospital** (the largest health complex in Latin America)



USP Support Foundation

Est. 1992 to provide support to the Humanities and other schools that **did not 'have' a foundation**

Rector is the **President of the Board of Trustees**

3k projects; installed several **labs** and facilities



TANQUE DE PROVAS NUMÉRICO

Numerical Offshore Tank TPN

2012

PNV
USP
Departamento de
Engenharia Naval e Oceânica

ESCOLA POLITÉCNICA DA UNIVERSIDADE DE SÃO PAULO

USP
Universidade de São Paulo



Luciana Aith



Foundation of the Graduate Engineering Program

Est. 1993, supports Rio de Janeiro Federal
University's (UFRJ) **Graduate Engineering Program**
10k projects

Principais Clientes

GE	Queiroz Galvão
V&M	Siemens
EMC	Shell
FINEP	CSN
BNDES	Biomanguinhos
AMPLA	Statoil
STATOIL	CONFAB
REPSOL	FCC-Tarrio
SEBRAE	Porto de Açu Operações S/A
FURNAS	Oi Internet S/A
SIEMENS	Telemar Internet S/A
SINOCHEM	IKON Science do Brazil Ltda
BG GROUP	Transmissora Aliança de Energia Elétrica
TRACTEBEL	LIGHT
PETROBRAS	ALL - América Latina Logística do Brasil S/A
MINISTÉRIOS	Anglo Ferrous Brazil S/A
ELETRONORTE	CBMM
HALLIBURTON	FIOCRUZ
BAKER HUGHES	FIOTEC
SCHLUMBERGER	VALE S/A
TENARIS CONFAB	DERBA - Dept. de Infraestrutura e Transporte da Bahia
ELETRONUCLEAR	Diretoria de Programa Estratégicos da Marinha
NOVATRANS ENERGIA S/A	Concessão Metroviária do Rio de Janeiro S/A
SECRETARIA ESPECIAL DE PORTOS	FMTT - Fundo Municipal de Transporte e Transito
PREFEITURA DA CIDADE DO RIO DE JANEIRO	

4

Bolsas de Iniciação Científica e Pós-Graduação

TIPO	2007	2008	2009	2010	2011	2012	2013	2014
Bolsa de Iniciação Científica	365	253	611	766	874	1194	1207	1123
Mestrado	528	288	625	693	664	853	954	691
Doutorado	464	236	548	562	554	648	709	719
Pós Doutorado			20	35	74	99	149	266
Técnicos/Docente				24	11	33	8	-
DTI *				11	35	42	83	145
ITI *					5	17	44	51
DUPLO DIPLOMA						4	12	6
Bolsa PV - PESQ. VISITANTE						3	1	3
Bolsa Pesq. Servidor UFRJ						3	74	194
Bolsa EV- Especialista Visitante						1	-	4
Bolsa Estímulo à Inovação							20	41
Bolsa Ensino - Servidor UFRJ								25
Bolsa Extensão - Servidor UFRJ								8
Estg - SICONV - Nível médio								5
Estg - SICONV - Nível superior								83
Prêmio Gilberto Velho								6
Total	1.357	777	1.804	2.091	2.217	2.897	3.261	3.370
* DTI - Desenvolvimento Tecnológico Industrial								
* ITI - Iniciação Tecnológica Industrial								

Reflete o esforço para atrair os melhores estudantes de graduação, mestrado, doutorado e pós-doutorado para os projetos de pesquisa da COPPE e de outras unidades da UFRJ.

Fonte: COPPETEC ON-LINE



Rio de Janeiro Technology Park

World class R&D centers (GE, Schlumberger, ...)

Successful hi-tech business incubator



Fundação de
Desenvolvimento
da Pesquisa

Research Development Foundation

Est. 1975, supports the **Minas Gerais Federal University (UFMG)**

Nowadays supports two more Federal universities and several Federal research institutions

20k projects



Fundepar

Est. 2012, is the **venture capital branch of Fundep**

Promotes **entrepreneurship** among UFMG students and faculty

4. TENSIONS AND TENDENCIES



**The notable achievements also
turned the support foundations
into a fashionable **target****

Universidade pública

Fundações ditas de apoio

Educação não é mercadoria!



SINDICATO
ANDES
NACIONAL
Filial de *Coatitlán*

Some key **disputes**: the support foundations...

... privatize public universities

... bypass the constitutional provision that public universities are free of charge by charging expensive fees for MBAs and other courses

... really don't support public universities, but are supported by them, as they use the connection as a marketing tool

... are greedy faculty members doing private business on public paid time and in public space

... distort the faculty payment structure and boycott union strikes for improving university salaries

... establish an alternate and not-elected center of academic power by means of manipulation of contract allocation

... create conflict of interest when the academic authority also occupies key positions in the support foundation governance

REBELDIA, TAPAS E PONTAPÉS NA UnB



Sometimes the dispute about support foundations becomes an **instrument for political fights**

Some **conciliatory** mechanisms in effect

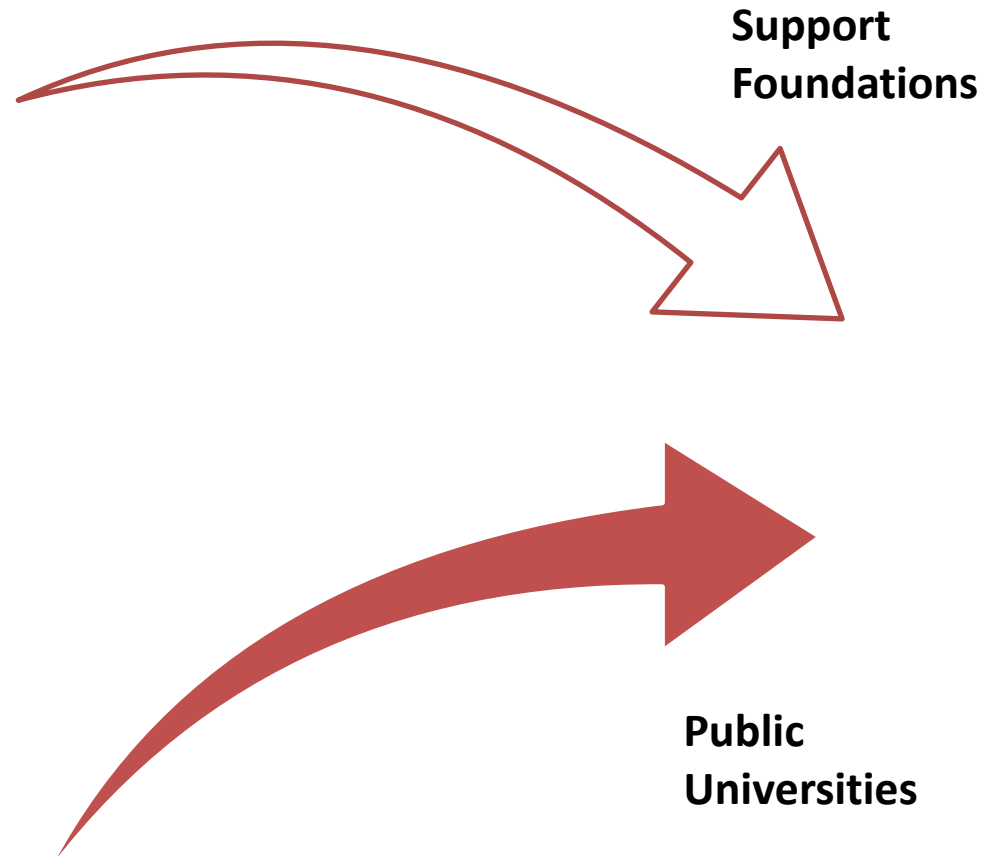
- **Law** regulating the support foundations of **Federal** higher education institutions
- **Agreement Term** proposed by the **São Paulo State** Prosecutor, accepted by USP Rector and by USP's major support foundations:
 - Limiting the use of **public space**
 - Regulating the use of the **University name** in publicity
 - Demanding rules for **procurement** and **staff** hiring
 - Requiring annual **report** of activities and financial statements
 - Depositing the agreed upon \$ contributions into the University treasury, rather than keeping them in the foundation account to be used at the discretion of the University authority (**most academic authorities prefer the latter...**)

Some other effects of the disputes

- The discussion about **paid MBAs** and other continuing education programs in public universities is currently in the Supreme Court
- The support foundations organized themselves to **lobby** for their interests
- One major foundation **cut all connections** to the University (changed the website and e-mail from **.org** to **.com**), but **continues to provide the same \$ support** to the 'mother' academic department



Management **degrees of freedom**



Reinforcing the foundation's **new role** of supporting the **entrepreneurial initiatives** of public universities





plonski2@usp.br