

Who rules the world? The corporatocracy!

Dynamic system science (physics) derives quantitative and qualitative economic data as evidence to previous conspiracy theories and debates about new world order, shadow governments and failed democracy or states:

The Network of Global Corporate Control

August 28, 2011

<http://planetsave.com/2011/08/28/who-runs-the-world-network-analysis-reveals-super-entity-of-global-corporate-control/> = <http://s.tt/138oe>



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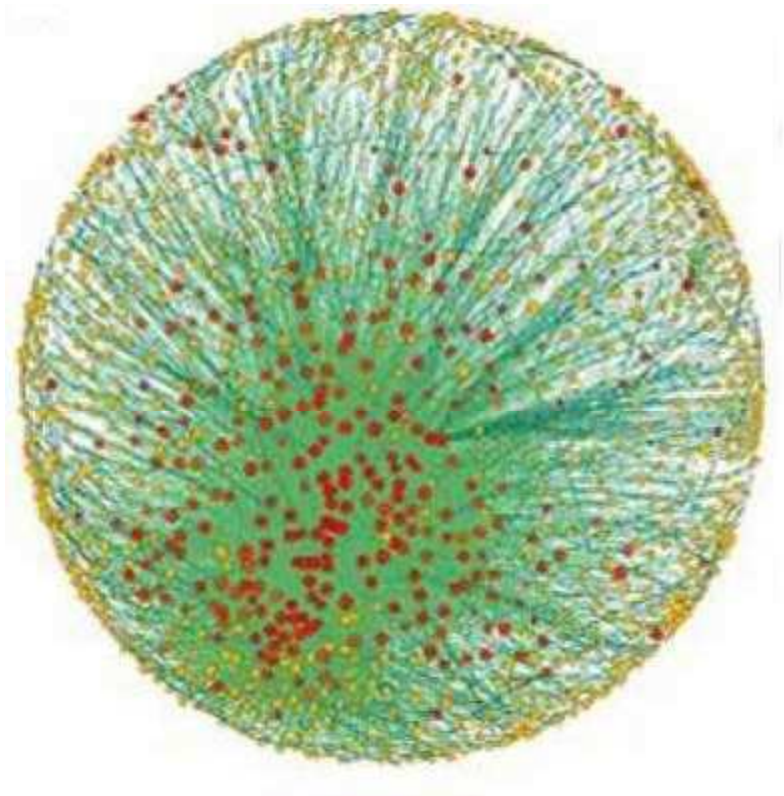
In the first such analysis ever conducted, Swiss economic researchers have conducted a global network analysis of the most powerful transnational corporations (TNCs). Their results have revealed a core of 787 firms with control of 80% of this network, and a "super entity" comprised of 147 corporations that have a controlling interest in 40% of the network's TNCs.

International ownership network of the core world economic markets: The strongly connected component (SCC).

Layout of the SCC comprising of 737 transnational corporations (TNCs), 1,318 nodes and 12,191 links.

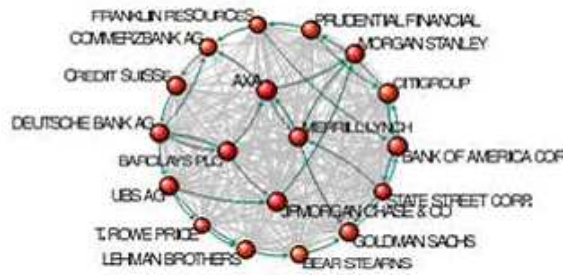
Node size scales logarithmically with operation revenue,
node color with network control (from yellow to red).
Link color scales with weight.

Software program: Cuttlefish [Tintenfisch]
dynamic network visualisation:
<http://sourceforge.net/projects/cuttlefish/>
<http://www.sg.ethz.ch/services/software/cuttlefish>



Economic super-entity with 147 top control holders (TCHs): Ranking of the top 50

Table columns: 1 rank , 2 economic actor name, 3 country, 4 NACE industrial sector code (65xx-67xx = finance), 5 network cumul. network position in the bow-tie sections of LCC (i.e. IN, OUT, T&T side arms or SCC core), 6 cumulative network control by share holders (superior, calculated with threshold model (TM), in %, e.g.: 4% reads four percent (only!) controlled from outside i.e. being almost not controlled [Source 4].) [Orbis database 2007, before the financial crisis 2008!]



Detail of the super-entity depicting top 18

1	2	3	4	5	6
1	BARCLAYS PLC	GB 1	6512	SCC	4.05%
2	CAPITAL GROUP COMPANIES INC, THE	US 1	6713	IN	6.66
3	FMR CORP (Fidelity Investments)	US 2	6713	IN	8.94
4	AXA	FR 1	6712	SCC	11.21
5	STATE STREET CORPORATION	US 3	6713	SCC	13.02
6	JP MORGAN CHASE & CO.	US 4	6512	SCC	14.55
7	LEGAL & GENERAL GROUP PLC	GB 2	6603	SCC	16.02
8	VANGUARD GROUP, INC., THE	US 5	7415	IN	17.25
9	UBS AG	CH 1	6512	SCC	18.46
10	MERRILL LYNCH & CO., INC.	US 6	6712	SCC	19.45
11	WELLINGTON MANAGEMENT CO. L.L.P.	US 7	6713	IN	20.33
12	DEUTSCHE BANK AG	DE 1	6512	SCC	21.17
13	FRANKLIN RESOURCES, INC.	US 8	6512	SCC	21.99
14	CREDIT SUISSE GROUP	CH 2	6512	SCC	22.81
15	WALTON ENTERPRISES LLC	US 9	2923	T&T	23.56
16	BANK OF NEW YORK MELLON CORP.	US 10	6512	IN	24.28
17	NATIXIS	FR 2	6512	SCC	24.98
18	GOLDMAN SACHS GROUP, INC., THE	US 11	6712	SCC	25.64
19	T. ROWEPRICE GROUP, INC.	US 12	6713	SCC	26.29
20	LEGG MASON, INC.	US 13	6712	SCC	26.92
21	MORGAN STANLEY	US 14	6712	SCC	27.56
22	MITSUBISHI UFJ FINANCIAL GROUP, INC.	JP 1	6512	SCC	28.16
23	NORTHERN TRUST CORPORATION	US 15	6512	SCC	28.72
24	SOCIÉTÉ GÉNÉRALE	FR 3	6512	SCC	29.26
25	BANK OF AMERICA CORPORATION	US 16	6512	SCC	29.79
26	LLOYDS TSB GROUP PLC	GB 3	6512	SCC	30.30
27	INVESCO PLC	GB 4	6523	SCC	30.82
28	ALLIANZ SE	DE 2	7415	SCC	31.32
29	TIAA	US 17	6601	IN	32.24
30	OLD MUTUAL PUBLIC LIMITED COMPANY	GB 5	6601	SCC	32.69
31	AVIVA PLC	GB 6	6601	SCC	33.14
32	SCHRODERS PLC	GB 7	6712	SCC	33.57
33	DODGE & COX	US 18	7415	IN	34.00
34	LEHMAN BROTHERS HOLDINGS, INC.	US 19	6712	SCC	34.43
35	SUN LIFE FINANCIAL, INC.	CA 1	6601	SCC	34.82
36	STANDARD LIFE PLC	GB 8	6601	SCC	35.20
37	CNCE	FR 4	6512	SCC	35.57
38	NOMURA HOLDINGS, INC.	JP 2	6512	SCC	35.92
39	THE DEPOSITORY TRUST COMPANY	US 20	6512	IN	36.28
40	MASSACHUSETTS MUTUAL LIFE INSUR.	US 21	6601	IN	36.63
41	ING GROEP N.V.	NL 1	6603	SCC	36.96
42	BRANDES INVESTMENT PARTNERS, L.P.	US 22	6713	IN	37.29
43	UNI CREDITO ITALIANO SPA	IT 1	6512	SCC	37.61
44	DEPOSIT INSURANCE CORPORATION OF	JP 3	6511	IN	37.93
45	VERENIGING AEGON	NL 2	6512	IN	38.25
46	BNP PARIBAS	FR 5	6512	SCC	38.56
47	AFFILIATED MANAGERS GROUP, INC.	US 23	6713	SCC	38.88
48	RESONA HOLDINGS, INC.	JP 4	6512	SCC	39.18
49	CAPITAL GROUP INTERNATIONAL, INC.	US 24	7414	IN	39.48
50	CHINA PETROCHEMICAL GROUP CO.	CN 1	6511	T&T	39.78%

Many of the top actors belong to the core or strongly connected core (SCC) of the market.

This means that they do not carry out their business in isolation but, on the contrary, they are tied together in an extremely entangled web of control.

Top 50 Control-Holders Ranking:

This is the first time a ranking of economic actors by global control is presented. Notice that many actors belong to the financial sector (NACE industrial sector codes starting with 65,66,67 belong to the financial sector) and many of the names are well-known global players.

The interest of this ranking is not that it exposes unsuspected powerful players. Instead, it shows that many of the top actors belong to the core. This means that they do not carry out their business in isolation but, on the contrary, they are tied together in an extremely entangled web of control. This finding is extremely important since there was no prior economic theory or empirical evidence regarding whether and how top players are connected.

Shareholders are ranked by network control (according to the threshold model, TM). Columns indicate country, NACE industrial sector code, actor's position in the bow-tie sections, cumulative network control.

No. of TNCs per country		
US	24	48%
(EU)	18	36%
GB	8	16%
FR	5	10%
DE	2	4%
CH	2	4%
NL	2	4%
CN	1	2%
CA	1	2%
IT	1	2%
	50	100%

NACE (Industrial sector code)

Nomenclature statistique des activités économiques dans la Communauté européenne =

Statistische Systematik der Wirtschaftszweige in der Europäischen Gemeinschaft.

Notice that NACE codes starting with 65,66, or 67 belong to the financial sector.

http://de.wikipedia.org/wiki/Statistische_Systematik_der_Wirtschaftszweige_in_der_Europ%C3%A4ischen_Gemeinschaft

The biggest fish was the Capital Group Companies, with major stakes in 36 of the 48 countries studied.

[www.livescience.com/9704-world-stocks-controlled-select.html]

www.capgroup.com Los Angeles, est. 1931 (founder Jonathan Bell Lovelace. By 1929, before the stock market crash, he could see no logical relationship between stock market prices and their underlying values, so he sold his interest in the Detroit firm, took his investments out of the market and moved to California.), today 8.000 workers und volume of investment of more than 1 trillion \$ (1 Billion).

Ownerships in Germany:

- Bayer AG (10%)
- Böwe Systec AG (5,%)
- Continental AG (5%)
- Fraport AG (5%)
- GEA Group AG (5%)
- Infineon Technologies AG (4%)
- SAP AG (3%)
- Siemens AG (3%)
- Volkswagen AG (4% Beteiligung, 6% Stimmrechte)
- Linde AG (ca. 10% Beteiligung)

http://de.wikipedia.org/wiki/Capital_Group_Companies

Theory of economic control models:

1. Ownership
2. Voting Rights

Models for direct control:

1. Linear model (LM). One share – one vote.
2. Threshold model (TM). Cf. ruling majority. In the TM, full control over a company is assigned to the actor holding a number of shares higher than a predefined threshold (50% in our case), while the other holders are assigned zero control.
[Quelle 4.: La Porta, R, de Silanes, FL, Shleifer, A (1999) Corporate ownership around the world. J. Finance 54:471–517.]
3. Relative control model (RM). Herfindhal-like concentration index, cf. blocking minority. RM assigns high control to a shareholder with a small share in absolute terms, if this share is significantly bigger than the shares of all the other shareholders.

It should be stressed that the global findings are insensitive to the chosen model of direct control.

Calculations of network control (value)

'C control net' (cumulative control (TM), %), for column 6 in the Top 50 control holder (TCH) table, (using the threshold model, TM) [Source 5].

'C net' can be interpreted as the value of control an economic actor gains from all its direct and indirect paths in the network.

$$C \text{ net} = C \text{ control net} + C \text{ value}$$

C net: Value of company in network is based on recursively determined ownership pathways network algorithm analysis based on the Orbis database data.

C value: Intrinsic value of company is based on public available revenue data.

Subtracted gives the 'C control net' value.

$$C \text{ control net} = C \text{ net} - C \text{ value}$$

Can be solved by Matrix calculation. Has the same form as:

$$\text{Flow at a node} = \text{Adjacency matrix} * \text{Flow} + \text{Adjacency matrix} * \text{Value}$$

Adjacency matrix defines the portion of flow in the node given by the network structure or topology.

The value of a corporation lies in the fundamental company value and its internetworking.

Der Wert einer Firma steckt in ihrem Fundamentalen Selbstwert plus ihrer Vernetzung:

$$\text{Value of company in network} = \text{Control of network} + \text{Value intrinsic of company}$$

The network value of an economic actor is given by its intrinsic value plus the value gained from network control. Network value and network control of a company can differ considerably. E.g. Wall Mart is in top rank by operating revenue (value) but it has no equity shares in other TNCs and thus its network control is zero. In contrast, a small firm (with small intrinsic value) can acquire enormous network control via shares in corporations with large operating revenue.

Network control can either be understood as:

- the value of control gained from the intrinsic value reachable by all direct and indirect paths or
- the value of control given by the network value of directly controlled firms.

The network portfolio value of a node is determined by the total inflow of value entering the node.

$$C_{i,\text{net}} = \sum_j (C_{ij} * v_j) + \sum_j (C_{ij} * c_{j,\text{net}})$$

Control of a corporation i within network

= sum over all dependant corporations j (Control i on j * Value j)

+ sum... (Control i,j * Control i in network).

This sums up the value controlled by i through its shares in j, plus the value controlled indirectly via the network control of j. Thus, network control has the meaning of the total amount of economic value over which i has an influence. Because of indirect links, control flows upstream (cf. arrow in bow-tie diagram) from many firms and can result in some shareholders becoming very powerful.

Corrections needed for:

- Control assigned to firms that are part of cross-shareholding structures is overestimated (incestuous power circle).
- The second is a similar overestimation of the control of the shareholders who are themselves not owned by others (isolated big player).

Network structure analysis

When we hear conspiracy theorist talk about this or that powerful group (or alliance of said groups) “pulling strings” behind the scenes, we tend to dismiss or minimize such claims, even though, deep down, we may suspect that there’s some degree of truth to it, however distorted by the theorists’ slightly paranoid perception of the world. But perhaps our tendency to dismiss such claims as exaggerations (at best) comes from our inability to get even a slight grip on the complexity of global corporate ownership; it’s all too vast and complicated to get any clear sense of the reality.

But now we have the results of a global network analysis that, for the first time, lays bare the “architecture” of the global ownership network. In the paper abstract, the authors state:

“We present the first investigation of the architecture of the international ownership network, along with the computation of the control held by each global player. We find that transnational corporations form a giant bow-tie structure* and that a large portion of control flows to a small tightly-knit core of financial institutions. This core can be seen as an economic “super-entity” that raises new important issues both for researchers and policy makers.” [emphasis added]

* This “bow tie” structure is similar to the structure of the WWW (analyzing for most influential/most *trafficked* websites); see diagram below.

Principle bow-tie structure of a dynamic flow network consists of in-section (IN), out-section (OUT), core or strongly connected component (SCC), and tubes and tendrils [Ranken] (T&T).

Data from previous studies neither fully supported nor completely disproved the idea that a small handful of powerful corporations dominate much or most of the world’s commerce. The researchers acknowledge previous attempts to analyze such networks, but note that these were limited in scope to national networks which “neglected the structure of control at a global level.”

What was needed, assert the researchers, was a complex network analysis.

“A quantitative investigation is not a trivial task because firms may exert control over other firms via a web of direct and indirect ownership relations which extends over many countries. Therefore, a complex network analysis is needed in order to uncover the structure of control and its implications.”

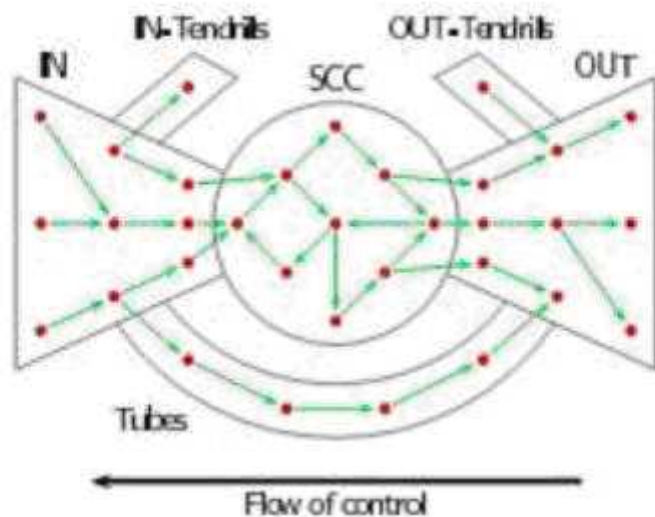
To start their analysis, the researchers began with a list of 43,060 TNCs which were taken from a sample of 30 million “economic actors” contained in the Orbis 2007 database www.bvdep.com/en/ORBIS [Bureau von Dijk, link broken]: The Orbis 2007 marketing database www.orbisGlobal.com comprises about 37 million economic actors, both physical persons and firms located in 194 countries, and roughly 13 million directed and weighted ownership links (equity relations).

This data set is intended to track control relationships (Stimmrechte) rather than patrimonial relationships (Eigentums-Anteile). Whenever available, the percentage of ownership refers to shares associated with voting rights. Accordingly, we select those companies which hold at least 10% of shares in companies located in more than one country. Overall we obtain a list of 43,060 TNCs located in 116 different countries, with 5,675 TNCs quoted in stock markets (13%).

TNCs were identified according to the Organization of Economic Co-operation and Development (OECD) definition of a transnational corporation: The definition of trans national corporations (TNCs) given by the www.oecd.org states that they “...comprise companies and other entities established in more than one country and so linked that they may coordinate their operations in various ways...”

They next applied a recursive search algorithm (breadth-first-search (BFS)) which singled out the “network of all the ownership pathways originating from and pointing to these TNCs.”

Breitensuche <http://de.wikipedia.org/wiki/Breitensuche> Verfahren zum (uninformierten) Durchsuchen bzw. Durchlaufen der Knoten eines Graphen. Ausgehend vom Startknoten wird der Graph *in der Breite* nach einem Element durchsucht.



Results and findings within four structural levels

The resulting trans national corporation (TNC) network includes 43,060 TNCs, 600,508 nodes and 1,006,987 ownership ties (links).

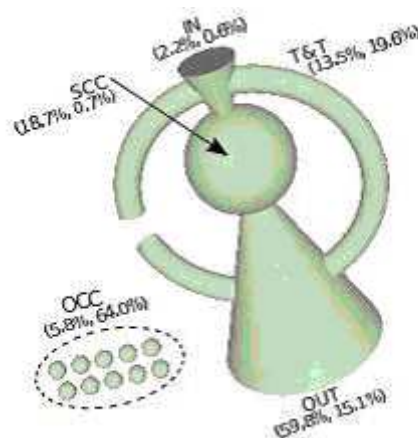
1. Visualisation of the whole market: the international ownership network has many OCCs and only one LCC

Computed results:

Largest connected component (LCC) has bow-tie structure (93,2% revenue by 36% or 15.000 companies) and includes strongly connected component (SCC) (18,8% by 0,7% or 300 companies) etc., but not the other connected components (OCC) (5,8% revenue by 64% or 28.000 companies).

Each section volume scales logarithmically with the share of its TNCs operating revenue.

In parenthesis, percentage of operating revenue and relative number of TNCs (trans national cooperations).



Largest Network: includes all top TNCs and 94% revenue and ¾ or 75% of all nodes:

In terms of the connectivity of the network, the researchers found that it consists of many small connected components, but the largest one (LCC encompassing ¾ or 75% of all nodes) "contains all the top TNCs by economic value, accounting for 94.2% of the total TNC operating revenue."

Market concentration statistics

Table 1: (Bow-tie statistics).

Percentage of total trans national corporations (TNC) number (#) of nodes and operating revenue (OR) in the sections of the bow-tie (LCC). Economic actors types are: shareholders (SH, superior), participated companies (PC, inferior).

	TNC (#)	(%)	(%)	SH (#)	PC (#)	OR (%)
Market	43.060	100		77.456	479.992	100.00
OCC	27.569	64		29.637	80.296	5.83
LCC	15.491	36	100	47.819	399.696	94.17
T&T	8.426		54	42.614	80.471	13.46
OUT	6.488		42	0	318.073	59.85
IN	282		2	5.205	129	2.18
SCC	295		2	0	1.023	18.68
TCH	147		1			40.00
Top50CH	50		<1			?

SCC: In our sample we observe 2.219 direct cross-shareholdings (4.438 ownership relations), in which 2.303 companies are involved and represent 0.44% of all the ownership relations [page 29].

Table S4: Top Control Holder (TCH)

TCH-Probability that a randomly chosen economic actor (transnational corporation TNC or share holder SH) belongs to the group of top control-holders (TCH) with respect to its position in the network structure. The first column refers to all top control-holders, the second column to the first 50 TCH.

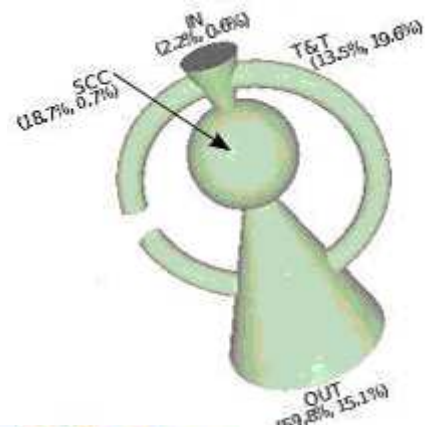
	All TCH	First 50 TCH
SCC	49.831%	11.525%
IN	6.233%	0.273%
OUT	0.432%	0%
T&T	0.413%	0.002%
OCC	0.016%	0%

The following onion skin layers and generalized characteristics were identified:

2. The structure of the largest connected component (LCC) in the market

LCC comprised of 15.000 TNCs, 1.347 nodes [0,2% of all nodes].

Contains only one dominant, strongly connected component This network, like the WWW, has a bow tie structure.



3. The strongly connected component (SCC) within LCC

300 up to 737 TNCs, 1.318 nodes and 12,191 links

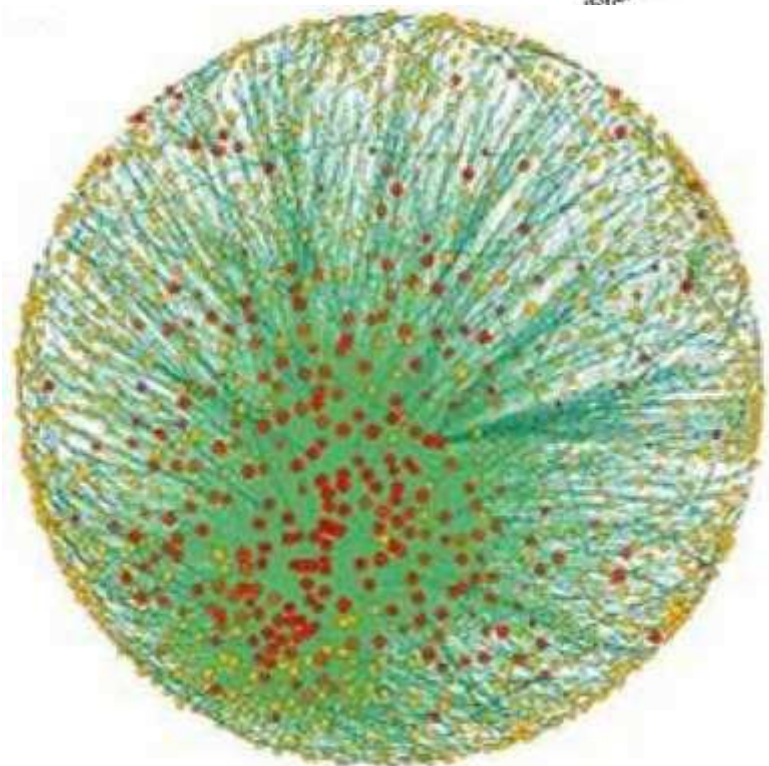
It is a set of firms in which every member owns directly and/or indirectly shares in every other member. The emergence of such a structure can be explained as a

- means of preventing take-overs,
- reducing transaction costs,
- risk sharing and
- increasing trust between "groups of interest."

What's more, they found that this component, or core, is also very densely connected; on average, members of this core have ties to 20 other members. "Top actors" occupy the center of the bow tie (SCC).

In fact, a randomly chosen TNC in the core has about 50% chance of also being among the top holders, as compared to, for example, 6% for the in-section. [emphasis added] "As a result, about 3/4 of the ownership of firms in the core remains in the hands of firms of the core itself. In other words, this is a tightly-knit group of corporations that cumulatively hold the majority share of each other."

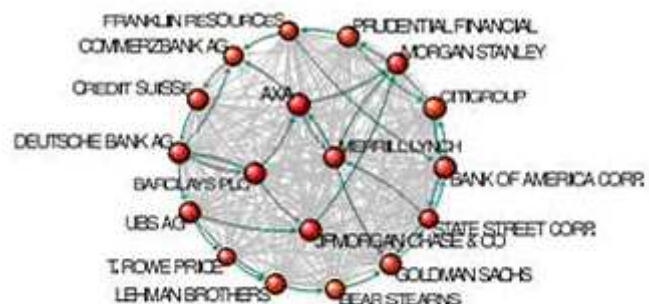
In examining the details of this core, the analysis also showed that only 737 top holders [2% TNCs] accumulate 80% of the control over the value of all TNCs (in the analyzed network).



4. The economic super-entity within SCC comprises of 147 TCHs

Final zoom on the top control holders (TCHs) in the economic sector. Some cycles are highlighted.

Part of the super-entity showing 18 leading corporations (cf. the top 50 'control holder' (TCH) list above)



147 or 0,3% trans national corporations (TNCs) control 40% revenues

(Note: data for this analysis comes from the 2007 Orbis database -- prior to the 2008 financial crisis, thus, firms such as Bear Stearns and Lehman Bros. are included.)

Further, “despite its small size, the core holds collectively a large fraction of the total network control. In detail, nearly 4/10 [40%] of the control over the economic value of TNCs in the world is held, via a complicated web of ownership relations, by a group of 147 TNCs in the core, which has almost full control over itself. The top holders within the core can thus be thought of as an economic “super-entity” in the global network of corporations.”

Incestuous power core:

The core of the TNC network (SCC) could be seen as a generalization of the rich club phenomenon with control in the role of degree. The so-called rich club phenomenon [20, 21] refers to the fact that in some complex networks the nodes with the highest degree tend to be connected among each other.

Ownership and control is distributed over large numbers of people, which is entirely misleading. When other factors are included, such as the way ownership changes as shares are bought and sold (important variable is the market capitalization), it turns out that stock markets are controlled by a very small number of companies.

Outlook and political implications

Concerning the implications of this super entity, the researchers asked two fundamental questions: First, what are the implications for *market competition*, and, second, what are the implications for *economic stability*?

Regarding the first question on competition, the authors assert that no matter the origin of the SCC, due to its high degree of TNC network control, “The super entity weakens market competition”.

It is clear just from the history of anti-trust laws in this country (the U.S.) that

Concentrated ownership

- stifles [ersticken] free market competition and innovation,
- reduces over-all employment,
- leads to excessive pricing,
- susceptible to systemic risk ('to big to fail').

In regards to the second question on stability, the researchers note that “the existence of such a core in the global market was never documented before and thus, so far, no scientific study demonstrates or excludes that this international ‘super-entity’ has ever acted as a bloc.”

However, there is historical data — such as within the airline, auto and steel industries [oil, railroad, central banks??] — supporting this possibility.

“...top holders are at least in the position to exert considerable control, either formally (e.g., voting in shareholder and board meetings) or via informal negotiations.”

Additionally, recent studies (Battiston S, Delli Gatti D, Gallegati M, Greenwald B, Stiglitz J (2009) Liaisons dangereuses: Increasing connectivity, risk sharing and systemic risk. Working Paper 15611, NBER. www.nber.org/authors/stefano_battiston) have shown that densely connected financial networks are highly susceptible to systemic risk. Despite the fact that such networks may seem robust in good economic times, in times of crisis however, member firms tend to enter ‘distress mode’ simultaneously. This was seen recently in the 2008 (“near”) financial collapse (note: 3/4 of the network core in this analysis are financial intermediaries).

Calling their findings “remarkable”, they suggest that because “international data sets as well as methods to handle large networks became available only very recently, [this] may explain how this finding could go unnoticed for so long.”

While the researchers acknowledge that *verifying* whether the implications of their findings “hold true for the global economy” is beyond the scope of their current research, they assert that their unprecedented attempt to uncover the structure of corporate control is “a necessary precondition for future investigations.”

The Sources

[Original paper:]

The network of global corporate control

Stefania Vitali, James B. Glattfelder, Stefano Battiston
(Submitted on 28 Jul 2011)

The structure of the control network of transnational corporations affects global market competition and financial stability. So far, only small national samples were studied and there was no appropriate methodology to assess control globally. We present the first investigation of the architecture of the

international ownership network, along with the computation of the control held by each global player. We find that transnational corporations form a giant bow-tie structure and that a large portion of control flows to a small tightly-knit core of financial institutions. This core can be seen as an economic "super-entity" that raises new important issues both for researchers and policy makers.

Comments: Main Text (10 pages, 3 figures and 1 table) and Supporting Information (26 pages, 7 figures and 4 tables)

Subjects: General Finance (q-fin.GN); Social and Information Networks (cs.SI); Physics and Society (physics.soc-ph)

Cite as: [arXiv:1107.5728v1](https://arxiv.org/abs/1107.5728v1) [q-fin.GN]

Submission history

From: James Glattfelder B

[v1] Thu, 28 Jul 2011 14:57:51 GMT (1668kb)

Full PDF: <http://arxiv.org/pdf/1107.5728v1>
(Cornell Uni Library)

[Reference 5:]

Backbone of complex networks of corporations: The flow of control

J.B. Glattfelder, S. Battiston

(Submitted on 5 Feb 2009 (v1), last revised 21 Aug 2009 (this version, v2))

We present a methodology to extract the backbone of complex networks based on the weight and direction of links, as well as on nontopological properties of nodes. We show how the methodology can be applied in general to networks in which mass or energy is flowing along the links. In particular, the procedure enables us to address important questions in economics, namely, how control and wealth are structured and concentrated across national markets. We report on the first cross-country investigation of ownership networks, focusing on the stock markets of 48 countries around the world. On the one hand, our analysis confirms results expected on the basis of the literature on corporate control, namely, that in Anglo-Saxon countries control tends to be dispersed among numerous shareholders. On the other hand, it also reveals that in the same countries, control is found to be highly concentrated at the global level, namely, lying in the hands of very few important shareholders. Interestingly, the exact opposite is observed for European countries. These results have previously not been reported as they are not observable without the kind of network analysis developed here.

With full free PDF: <http://arxiv.org/abs/0902.0878>

Further reading – books, links and topics of interest:

Block, Walter – Anarchokapitalim, 1976 <http://mises.org/books/defending.pdf>

Corporatocracy = Plutocracy

Creutz, Helmut - Geld Syndrom, 1993

Dept crisis, surplus crisis, compound interest, usury...

Gladio, stay behind army by NATO against communism...

Globalisation and modern day slavery, undocumented/informal migration (trafficking discourse and moral panic)...

Heinsohn, Gunnar and Otto Steiger (Uni Bremen) – Debitism, ca. 1996

Keen, Steve (Uni Sydney) - Debunking Economics, Sydney 2001

Krysmanski, H-J (Uni Münster) - Wem gehört die EU, 2006 Studie Auftrag Sahra Wagenknecht, MdB

Lietaer, Bernard A – money as debt, www.lietaer.com

Minsky, Heyman - Business Cycles in Capitalist Economies, 1994

Militar industrial complex

Marx, Karl and Friedrich Engels – (crisis theory in:) Herrn Eugen Dührings Umwälzung der Wissenschaft, commonly known as Anti-Dühring, 1877

Monetar system, fractional reserve banking, central banks, IWF, monetary fund...

Ostrom Elinor - Governing the commons, nobel prize of economics 2009

Perkins, John - Confessions of an economic hit man, 2004

Secret societies, Bilderberger, undemocratic bodies, lobbying, revolving door, corruption...

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