Finance, Development and the Role of State: The "Entrepreneur in Chief" and China's Entrepreneurial State as the Mirror Image of Austerity*

A Keynes- Schumpeter – Minsky Approach

Leonardo Burlamaqui and Rainer Kattel*****

The paper's central claim is that China's ability to leapfrog its peer-nations in the last three decades stems and to, largely, ignore the 2008'financial crisis result from the fact that it is a fully developed Entrepreneurial State (ES). The paper also claims that China's "Keynes-Minsky" approach to public policy provides a crystal clear contrast – a mirror image – of the "austerian" route choosed by European policy makers, and that Europe has something to learn from China in that realm. From a theoretical perspective, the discussion seeks to dig deeper on ES as a bridging concept that fits well with the Schumpeter-Keynes-Minsky analytical framework and one that is particularly appropriated analyzing contemporary China's very susscessfull development trajectory. Although rooted in a historical perspective and using historical examples, the main purpose of the paper is analytical, not descriptive.

Key words: China, Europe, State, Finance, Austerity, Keynes, Minsky, Schumpeter

JEL Classification: 01, 033, 038

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** Associate Professor at University of the State of Rio de Janeiro (UERJ), and Research Scholar at The Levy Institute (New York) E-mail: Leonardo.burlamaqui@gmail.com.

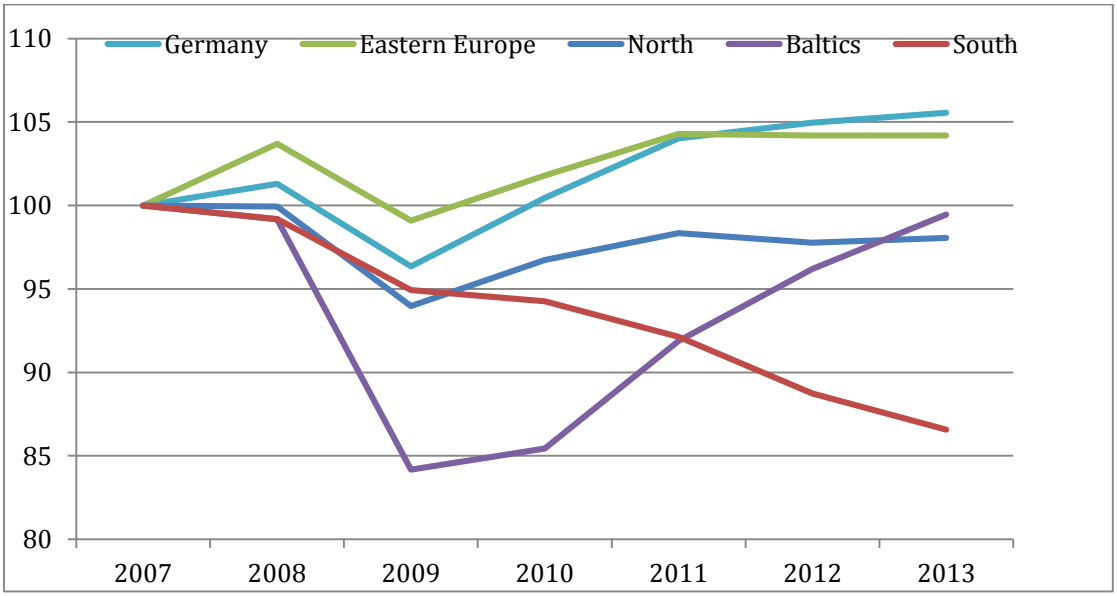
*** Professor of Innovation Policy at Tallinn University of Technology, Estonia, and visiting researcher at Earth Institute, Columbia University

1- Introduction- Austerian Europe versus Keynesian China

"What I really suggest is that the state should assume the role of Entrepreneur –in-Chief, directing the flow of productive resources to the employments in which can best serve human needs"
(H. Henderson, exchange with Keynes, 1943).

The European Union as a whole has not recovered from widespread financial turned fiscal crisis that emerged in 2008. The longer the crisis in the Eurozone drags on, the more it looks like the "Lost Decade" in Latin America in the 1980s than the "Phoenix Miracle" of the East Asian countries following their crisis in the 1990s (Eichengreen et alii: 2013, 1). However, this does not mean that some countries or even regions have not left recession behind. Europe has indeed become a region of different paths of crisis recovery. More precisely, we can see three different sets of countries as depicted on Figure 1.[1]

Figure 1. Gdp per capita since 2007, selected European regions (averages), in 1990 gk$, 2007=100.



Source: The Conference Board Total Economy Database™, January 2014, http://www.conference-board.org/data/economydatabase/ calculations by the author.

What seems to be happening is a three-tier Europe emerging: *First*, Germany and Eastern European economies – tightly knit together via Germany's transport equipment production networks[2] – experienced virtually no crisis (with the exception of Hungary). *Second*, Northern Europe and Baltics – knit together via electronics and tourism value chains of Northern Europe – have converged around similar growth rates after deep shocks in the Baltics in 2009-2010;[3] and *Third*, Southern Europe, with

[1] Here and on following figures not all EU or eurozone countries are depicted; in order to keep figures less clattered, the figures look at Germany and diverse regions within the EU: Northern European (Netherlands, Finland, Denmark, Sweden), Southern European (Greece, Italy, Spain, Portugal), Eastern European (Czech Republic, Hungary, Poland, Slovakia and Slovenia) and Baltic (Estonia, Latvia, Lithuania) countries. Here and on other figures regional figures are based on simple averages.

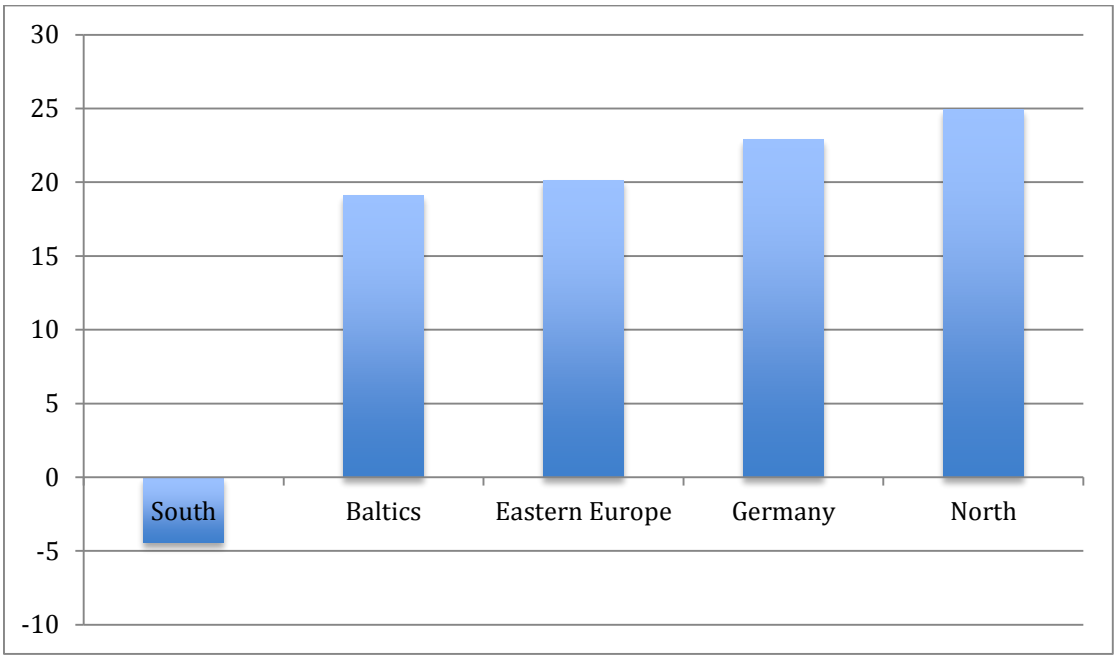
[2] For a detailed discussion, see IMF 2013.

[3] Kattel and Raudla 2013 offer further details; see also Reinert and Kattel 2013.

low levels of exports and accordingly without significant intra-European value-chain interdependence (see further below), are in continuous slow decline (Kattel: 2015, 1-2).

Why it is so is the key question to answer. The figures on government expenditures gives us a hint. They show a culprit – austerity is killing the South; all other regions under consideration here have rather noticeably increased government expenditures from 2007 to 2013 (latest year available), as we can see from Figure 2.

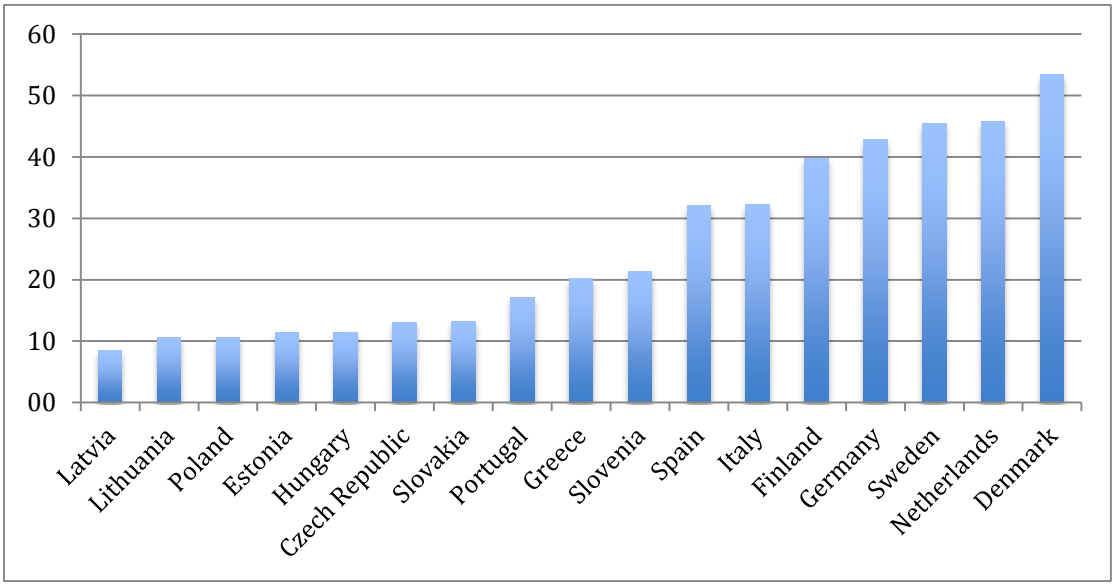
Figure2. Growth of government expenditure in selected European regions, 2007-2013, current prices.



Source: Eurostat; calculations by the authors.

A second reason usually displayed as a major factor explaining week performances in the South versus more robust recoveries in the North is productivity. Low in the former and high in the latter. Again, data does not support this claim: If we take labour productivity as a proxy for competitiveness of an economy, then the evidence that the Southern countries do not recover due to austerity is actually strengthened. In terms of labour productivity, Europe looks a rather linear ladder going upwards, as we can see on Figure 3: countries grow gradually more productive from the Baltics and Eastern Europe over Southern Europe towards Germany and Scandinavia.

Figure 3. Real labour productivity per hour worked, selected European economies, 2013.



Source: Eurostat.

What the data shows is not huge productivity gaps among countries like Spain, Italy, Finland and even Germany. However, comparing figures 2 and 3 is telling: here is where the difference is huge. Where domestic demand is weak, the hope is that external demand will take up the slack (Eichengreen et alii, 8). Since trade in the Eurozone is mostly within itself, austerity measures coupled with the lack of separate sovereign currencies to depreciate seems to explain the current European situation.

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By contrast, China gives us the perfect example of an aggressive "Schumpeterian State" equipped with a whole arsenal of "Keynes-Minsky" inspired policy tool-kit. In 1976, the country barely managed to cover the costs of sending its highest-ranking dignitary to speak at the UN (Walter and Howie: 2012: p.12). By 2014, it had become the second larger national economy, the largest exporter, the largest manufacturer, the possessor of the world's largest current account surplus[4], and the holder of the biggest amount of foreign reserves. (World Bank: 2012, p 25, Tselichtchev: 2012, Bergsten et Alii: 2010: p 9-10).

China also exhibits the fastest rate of growth of any nations over the past three decades, an extremely fast rate of technological upgrading (Keidel and Burlamaqui: 2014, Keidel: 2007 and 2011, Gallagher and Porzecanski: 2010, chapter 4) and one of the most successful set of policies for poverty alleviation, which allows it to take millions above the poverty line every year. In one sentence: China has become an economic superpower. It did not "catch-up" with the *west.* It leapfrogged.[5] In addition, let us recall that the country is already a nuclear power and has veto power at the UN Security Council[6].

[4] Direct investment overseas by Chinese companies has increased from just $5.5bn in 2004 to $56.5bn in 2009. About 70 per cent of the money invested in 2010 went to other parts of Asia. Latin America came in second place with 15 per cent ("The China Cycle" FT. 09.13.2010.)

[5] For a discussion, from an evolutionary perspective, of the pertinence of using that concept instead of "catch-up", see Burlamaqui and Kattel, 2014, and Gerschenkron (1962) for historical illustrations of leapfrogging without using the concept.

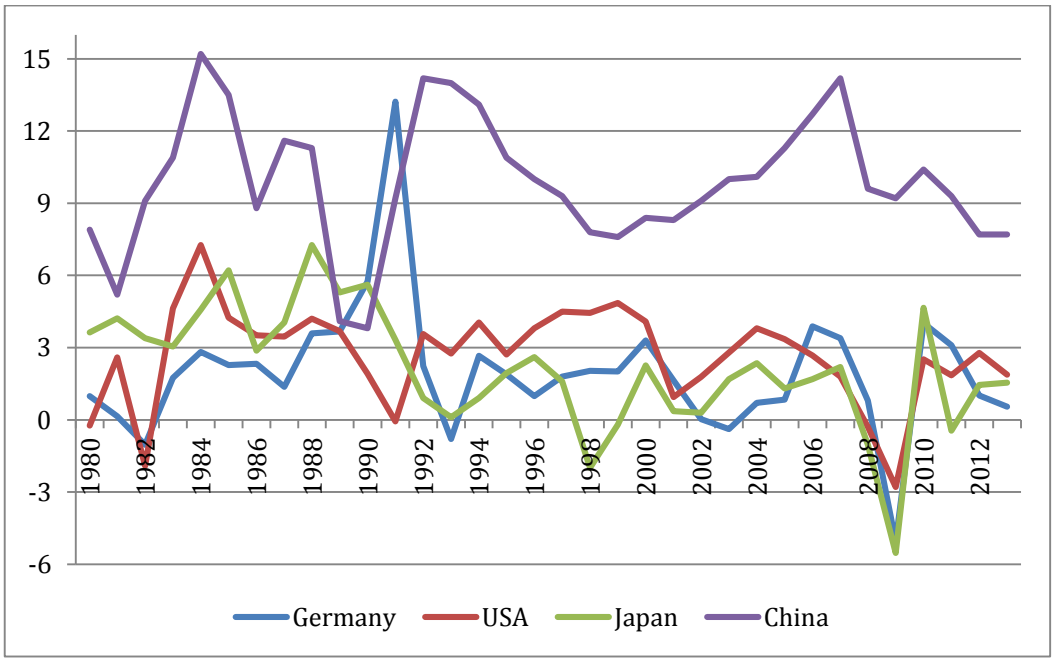
[6] And this whole scale structural transformation went beyond dry economic statistics: when deplaning in Beijing for the 2008 Olympic games, McGregor recounts, the New York Times architecture writer, Nicolai

To answer the question of how did all this happen is well beyond the purpose of this paper, but that's the "factual background" that we think is appropriate to use when discussing China's current situation and future prospects and the kind of institutional configuration that's likely to emerge from its successive waves of reform. The reason for that is the following: looking at China as a "big success case" (although obviously not lacking problems) invites searching for lessons instead of recommending emulation (especially of Anglo-American practices and institutions).

2- China's Recent Financial Evolution and Crisis Management: The mirror image of Austerity.

Although much "talk" about China's financial evolution has been going on in the press as well as in the blogosphere, there is surprisingly little material around that could be qualified as "robust"[7]. The best analysis of the response to the crisis and its aftermath is still Nicholas Lardy's "Sustaining China's Economic Growth after the Global Financial Crisis" (2011). Before getting to Lardy's main conclusions, let us just state the obvious fact (and the comparison): China ignored the crisis, and in terms of growth rates, the country is in a league of its own.

Figure 4- GDP growth compared:



Source: International Financial Statistics/IMF, 2013

Nick Lardy's account of Chinese policy makers and regulators is sthraitforward :

> "China's policy response to the global financial and economic crisis was early, large, and well designed. Although Chinese financial institutions had little exposure to the toxic financial assets that brought down many large Western investment banks and other financial firms, China's leadership recognized that the country's high dependence on exports meant that it was acutely vulnerable to a global economic recession" (Lardy: 2011,Kindle Locations 260-262).

Ouroussoff, compared arriving at the city's new airport 'to the epiphany that Adolf Loos, the Viennese architect, experienced in New York more than a century ago. He had crossed the threshold into the future.'(2010: Locations 529-531).

[7] We are obviously excluding works in Chinese since we are not versed in the language.

In anticipation of a global slowdown, Lardy recounts, the central bank initiated a policy of monetary easing in September 2008. The State Council, China's cabinet, followed up a few weeks later by rolling out a RMB4 trillion ($586 billion) stimulus program..… In contrast, the American Recovery and Reinvestment Act of 2009 was not passed by Congress and signed into law by President Barack Obama until mid-February 2009 (Lardy: 2011,Kindle Locations 270-271)[8]. It's worth recalling that the Chinese stimulus package was twice the size of the US's as a proportion of GDP.

In fact, China's response to the crisis was much broader than the stimulus program. Targeted and nuanced regulatory measures preceded the program, complemented it and provided a follow up, swiftly changing course whenever it was needed (See appendix for a display of the most important regulatory measures taken). That's what we refer to as "proactive financial regulation". Furthermore, it is well known that the Chinese *public* financial sector played a crucial role in the State counter-cyclical policy. As already mentioned, the Chinese "stimulus package" was double of the US as a percentage of GDP – around 15%). The unprecedented scale of expansion in bank credits in 2008 and 2009 is a telling indication of the nature and role of the sector.

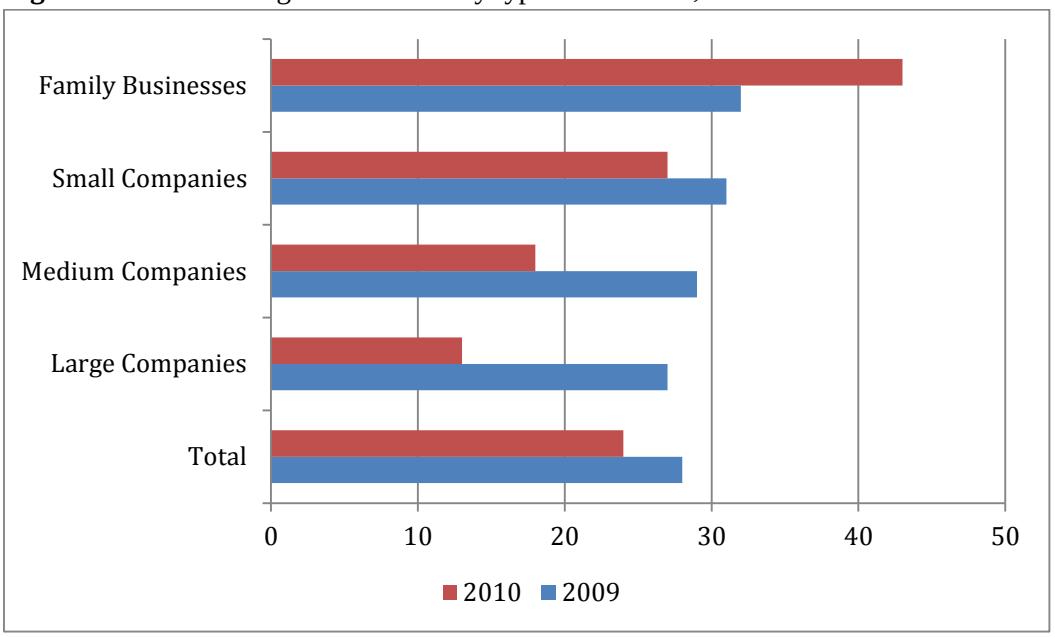
There have been, legitimate, concerns both inside and outside China that this prominently expansionary behavior of Chinese banks could result in severe disruptions to macroeconomic stability and in rampant inflation. Indeed, signs of speculative bubbles in properties and in the stock market were already evident amid the credit expansion (Walter and Howie: 2012, chapters 1-3and 8). It is well known that the State had to reign in from the second half of 2009 , as well as in 2015,to raise capital and reserve requirement ratios, and to put a brake on shadow banking and funding of speculation.

However, as Lardy, Sanderson and Forsythe and Albert Keidel point to, the credit expansion seems to be more deep-rooted than just a product of, temporary, State counter-cyclical policy. It rather reflects the expansionary instinct of the banks[9], particularly because expansion was already rather rampant well before it being boosted by State policy from 2008 (Sanderson and Forsythe: 2013, Keidel: 2011). But note, by recalling Lardy's statement that "contrary to the often repeated assertion, *bank loans in 2009–10 did not flow primarily to state-owned companies and that the access of both private firms and household businesses to bank credit improved considerably*",Table 5 provides a concrete measure of that statement.

[8] Concerning the comparison between the US and the Chinese stimulus package, Lardy gives such a clear and concise explanation, that it's worth quoting it at length: "the US stimulus package compared with China's suffered in two respects. First, relative to the size of the respective economies the US stimulus was much smaller. Second, while the Chinese program consisted overwhelmingly of increased expenditures, about a third of the US stimulus consisted of tax cuts. But much of the increased income received by US households as a result of these tax cuts was used to pay down debt rather than to finance additional consumption expenditures. While this was rational from the point of view of heavily indebted individual households, paying down debt did nothing to increase aggregate demand. These differences in the timing, size, and design of the two stimulus programs contributed to the markedly different economic outcomes in the two countries in 2009—a sharp absolute decline in real output in the United States but only a modest growth slowdown in China" (Lardy: 2011, Kindle Locations 271-279).

[9] As already mentioned, government policies were implemented within close coordination with, and under close supervision of, the Communist Party (McGregor: 2010 chapter 2).

Figure 5 - Bank lending to businesses by type of borrower, 2009-10.



Source: Lardy, 2011, Kindle edition, location 881.

Conceptually, the expansionary path of the Chinese financial sector appears to fit Minsky's financial instability hypothesis. The inclination of the sector toward asset price inflation, along with funding productive investment, could led to a Ponzi type of financial expansion in the near future[10]. On the other hand, however, the State's corrective action also reflects a "Minskyian policy prescription": it is the closest validation I can see nowadays of, both "big government" and "big lender of last resort", as well as quite an efficient regulator whenever needed. This suggests that it is very much aware of such danger. Nevertheless, the State has had to balance this concern with its broader consideration of sustaining economic growth, particularly over the recession-hit years. Fragile finance structures are bound to emerge.

This explains why its corrective policy has emphasized prudent banking and the selective allocation of financial resources, rather than curbing credit expansion altogether. Given the complexities involved in the interaction between the market players and the State policy-institutional regime in the evolving Chinese financial sector, it remains a formidable task for the State (particularly the banking regulators) to maintain this fine balance. As Minsky has written, several times, the struggle between regulation and financial innovation is always an open one. That holds for China and for any other capitalist economy with a complex and interlayered financial system (Minsky: 1982, 1986a and 1986b).

Summing up, in comparing Europe's Austerity-based response to the crisis and post crisis with China's Keynes-Minsky approach we submit the facts speak for themselves. China is about to overtake the US as the biggest economy in the planet (and it did it in roughly 35 years!) and, while accomplishing that, it removed more than 500 billion people from the poverty line. Europe, by contrast, is still largely shackled by a chain of austerity measures and lack of State capacity to implement an alternative agenda. Furthermore, it is trowing people back to unemployment and poverty, not rescuing them. Our analysis suggest a key question: what lays "behind" China's performance in delivering, simultaneously, structural transformation, poverty alleviation and competent crisis management? A strong, and fully developed Entrepreneurial State is our answer , and to clarify what we mean by that is to where we turn now.

[10] Is 2015 the "future" ? We don't know yet.

3- The Entrepreneur –in-Chief: Conceptualizing the Entrepreneurial State

"A context of deliberately created stability achieved by risk-spreading mechanisms … can facilitate industrial deepening, export expansion, and political compromises to share adjustment costs. ... Unassisted entrepreneurs may not have either the foresight or the access to capital to follow long-term prospects. Their decisions may lock in the country into a specialisation in industries with inferior prospects" (Wade: 1990)

Wade's model was Taiwan. Continental China followed the path, and went further, on steroids. From a theoretical point of view, China's achievements reaffirm key elements of works of Hilferding, Schumpeter, Keynes, Minsky and the "Developmental State" approach to economic analysis and public policy. Some of those features are well known: The centrality of credit for innovation and development (instead of "savings"); the key role of the State in steering and governing the development process (instead of "free markets"); the strategic role of investment-development banks to provide the necessary funding; and the functionality of *financial restraint* to avoid the build-up of "financial casinos" (for the last point, see Hellman, Murdock and Stiglitz: 1996 and Bresser-Pereira: 2010).

China's development trajectory has them all. Briefly discussed below, they point towards a two folded conclusion: First, it suggests that ***the concept*** of Entrepreneurial State should synthesise three core elements: a) a "Hilferding-Schumpeter's" type of banking system; b) an extension, to the State, of Schumpeter's entrepreneurial function; and c) the presence of a robust degree of socialisation of investment as stated by Keynes in the General Theory (1936: ch.24), by Schumpeter in his characterisation of "socialism" (1942: part 3), and in Minsky's "Big-Government plus Big-Bank policy prescriptions (1986: part 5) . The second conclusion is that the Chinese State encapsulates all three dimensions and therefore should be taken as the prototype of a developed Entrepreneurial State. These are admittedly bold propositions, which should invite further debate and discussion.

Concerning ES's first element: from a "macrofinancial" perspective, China is *Minsky on steroids*. To be more precise, of what Minsky characterised, echoing Hilferding, as a (reinvigorated) form of *Finance Capitalism*[11]; a financial system dominated by universal banks with close ties with commerce and, especially, industry, and *geared towards finance for development* (Hilferding: 1981[1910], Minsky: 1978, 1992, 1996, and Wray: 2010, for a discussion of Minsky's analysis)[12] [13].

If accessed through its finance-investment behavior, China's banking system – the "Big 4" banks plus China's Development Bank and their – public- SIV's ramifications - is, the newest incarnation of the Hilferding-Schumpeter's model of finance capitalism. The especially "Minskyian" traces in the model are the pervasiveness of *speculative finance,* the buildup of situations of "financial fragility", but also the presence of a "Big Bank" and of robust financial governance[14]. Public ownership of the main banks is a new feature in that financial design. An important point to stress here is that *animal spirits* in the Hilferding-Schumpeter's model come largely from the investment banks. It is their money, not the entrepreneur, which is at stake. In the Developmental-State version, they shift to the

[11] As opposed to a "money manager capitalism" where the value-extraction component of finance went much beyond its value-creation dimension.

[12] Minsky treated these as "phases of capitalism" instead of *varieties*. According to him, that phase of finance capitalism collapsed in the Great Depression. What emerged afterwards was a new stage of capitalism: managerial welfare-state capitalism (Minsky 1992, Wray 2010). I don't agree with that taxonomy. It is very much US-rooted. A state-led variety of "Finance capitalism" resurfaced in Asia and was a key feature of the "Asian miracles". China is the latest example of that pattern (on steroids).

[13] From the nineteen century to WWII, Germany had in its own Big 4's. The "4 Ds": Deutsche, Dresdner, Darmstader and Disconto (Hilferding: 1981 [1910], Landes: 1969: chapter 5).

[14] Which were not in Hilferding's model.

Government producing a clear case of "Socialisation of investment", an issue I will address below.

The second element backing up the ES concept points to an obvious and badly needed extension of Schumpeter's theoretical approach: to the State. The state is, more often than not, an entrepreneur and should be at the center of a theory of economic development. An institution that combines the functions of *macro-strategist* (managing interest and exchange rates, capital flows and price and financial stability); *venture capitalist in chief* (forging and funding industrial, innovation and technology policies) and *creative destruction management* (stimulating the creative part of the process in order to speed productivity enhancement and innovation diffusion and acting as a buffer to its destructive dimension) clearly "qualifies" as entrepreneurial[15]. In fact, the Developmental States – especially in their Asian incarnations – and the National Security State in the US – *are different forms of a "Schumpeterian- or Innovation- State"*[16]

The third element for structuring the concept of ES is the presence of a robust degree of socialisation of investment. As stated by Keynes in GT's last chapter:

> "The State will have to exercise a guiding influence on the propensity to consume partly through its scheme of taxation, partly by fixing the rate of interest, and partly, perhaps, in other ways. Furthermore, it seems unlikely that the influence of banking policy on the rate of interest will be sufficient by itself to determine an optimum rate of investment. I conceive, therefore, that a somewhat comprehensive socialization of investment will prove the only means of securing an approximation to full employment; though this need not exclude all manner of compromises and of devices by which public authority will co-operate with private initiative" (Keynes,1936: p 377-8).

Keynes's central message for conceptualising the Entrepreneurial State, we suggest, is that it should extend itself much beyond the "Schumpeterian dimensions" (finance, innovation and creative-destruction management). Income distribution, employment, regulation and public-private partnerships were already at the core of his *vision*. However, the relevant, and scarcely noticed, fact we would like to call the reader's attention to, for the purposes of the following discussion, is the close resemblance between Keynes's idea of socialisation of investment and Schumpeter's discussion of "Socialism". Schumpeter's broad – and unconventional- description of Socialism (Schumpeter: 1942: chapters 16-17) provides us with a concrete illustration of his arguments that "Socialism" *can* work and *can* beat "Capitalism" on the grounds of conflict management and economic efficiency. Take China as the materialization of the Keynes-Schumpeter concepts of socialisation of investment /Socialism and perceive what a good fit it provides.

Schumpeter begins his analysis with a, well-known, rhetorical question: Can Socialism work? His answer is "of course it can" (1942: 167). However, Schumpeter's definition of socialism does not focus on *statisation* of the means of production nor on the eradication of private property, but rather on *their socialisation*, which involves essentially *redesigning the frontiers and modes of interaction between the private and public spheres*[17]. In his own words:

> "By socialist society we shall designate an institutional pattern in which the control over means of production and over production itself is vested with a central authority—or, as we may

[15] See Ruttan: 2006, Block and Keller: 2011, Mazzucato: 2013 and Weiss: 2014 for complementary analyses of the US case, the whole literature on the developmental state for Asia's cases (for instance: Johnson: 1982, Wade: 1990, Vogel: 2011, Kim and Vogel –eds.- 2011 and Musacchio and Lazzarini: 2014 for Brazil.

[16] See Lundvall: 1992 and Nelson: 1993 for attempts to fill that gap, but the emphasis is mostly on "Collective entrepreneurship" – Lundvall - and "the institutions and mechanisms supporting technical innovation …in various countries- Nelson. The state is there, but not front and center.

[17] This discussion elaborates on material from Burlamaqui: 2000.

say, in which, as a matter of principle, the economic affairs of society belong to the public and not to the private sphere" (1942: 168).

The core concept in the definition is *control* by a central authority. Translating it to China, the Communist Party's Politburo Standing Committee provides a perfect fit. The author also does not mention absence of private property that could, and should exist. About the day-to-day operations of that system, "regulated managerial freedom" should be the norm:

> "There may also be a supervising and checking authority—a kind of cour des comptes that could conceivably even have the right to veto particular decisions. As regards the second point, some freedom of action must be left, and almost any amount of freedom might be left, to the "men on the spot," say, the managers of the individual industries or plants. For the moment, I will make the bold assumption that the rational amount of freedom is experimentally found and actually granted so that efficiency suffers neither from the unbridled ambitions of subordinates nor from the piling up on the desk of the minister of reports and unanswered questions" (Schumpeter: 1942,168).

Thirdly, the innovative process could be *co-ordinated* taking into account *timing and locational considerations.* In the process of creative destruction, *creation* would be performed in a *co-ordinated* manner and *destruction* by means of *exit policies:*

> "...the planning of progress, in particular the systematic co-ordination and the orderly distribution in time of new ventures in all lines would be incomparably more effective in the prevention of bursts ... and of depressive reactions ... than any automatic or manipulative variations of the interest rate or the supply of credit can be... And the process of discarding the obsolete, that in capitalism – specially in competitive capitalism – means paralysis and losses that are in part functionless could be reduced to what discarding the obsolete actually conveys to the layman's mind within a comprehensive plan providing in advance for the shifting to other uses of the non-obsolete complements of the obsolete plants or pieces of equipment." (Ibid, p. 200, my italics).

Fourthly, the relation between *technological change* and *employment* could be also rationalised by co-ordination policies so that it would be possible to "re-direct the men to other employments which, if planning lives up to its possibilities at all might in each case be waiting for them" (ibid, p. 201). Finally, the *resistance to changes* could be "strongly discouraged", and consequently the *promotion of innovations* would be operated in a quicker and more rational way.

McGregor (2010) gives a good example, which sums up the whole picture:

> "Most foreigners dealing with large Chinese state companies in the early days of economic reform felt much like the Japanese executives from the giant Mitsubishi conglomerate negotiating to build a power plant for Baoshan Steel... The Japanese were aggrieved when the Chinese side got the better of them during the talks and they were forced into concessions. 'Yes, you win the negotiations,' the Mitsubishi executives exclaimed. 'But it was your national team fighting our company team!' Chen Jinhua, a titan of state industry who recounted this story in his biography, said the Japanese were right**.** 'We had invited many capable experts from China's electrical power system to join our negotiating team, but Mitsubishi, as a single company, had been unable to do so,' Chen wrote**.** 'This example showed the superiority of our wide socialist co-operation." (McGregor: 2010 Locations 1155-1161, my italics).

4- The Entrepreneurial State in Finance

"The money market is always, as it were, the headquarters of the capitalist system, from which orders go out to individual divisions and that which is debated and decided there is always in essence the settlement of plans for further development" (Schumpeter, 1912,Ch.3).

China's development trajectory fully supports Schumpeter's statement, which is clearly a forerunner of Minsky's "Wall-Street paradigm". However, the first fact to register when looking at the Chinese financial sector is that the state and publicly owned banks are by large and far the biggest players:

Table 1 - Relative holdings of financial assets in China, FY2010 (RMB trillion)

RMB trillion	2006	2007	2008	2009	2010	2010 US$ trillion
PBOC	12,86	16,91	20,70	22,75	25,93	3,9
Public Banks	43,95	52,6	62,39	79,51	95,3	14,4
Securities companies*	1,6	4,98	1,19	2,03	1,97	0,3
Insurance companies*	1,97	2,9	3,34	4,06	5,05	0,8
∑	60,38	77,39	87,62	108,35	128,25	19,4

Note: *Includes brokerages and fund management companies.
Source: Walter and Howie p 106.

The framework of China's current financial system was set in the early 1990s. The process of establishing a legal framework for these reforms gathered momentum with the passage by the National People's Congress (NPC) of a central bank law, a commercial bank law and a company law. China in the mid-1990s created the so-called policy banks, for agriculture, foreign trade and domestic infrastructure, as a way of relieving commercial banks of the burden of making government policy-directed loans- which continued on a large scale nevertheless (Keidel:2007, p.1). As for financial regulation, the Chinese system is lean and quite straightforward. The financial sector is regulated by one bank - the People's Bank of China (PBOC, the central bank[18]) and three commissions: the regulatory commissions for banking, securities and insurance.

The banking sector falls under the supervision of the People's Bank of China and the China Banking Regulatory Commission (Cousin: 2011, p.21). The China Banking Regulatory Commission (CBRC) was established in March 2003 with the aim of increasing the independence of the central bank and, especially, making the regulatory function of financial institutions more robust. The CBRC is the supervisor of financial institutions *under the leadership of the State Council*. It turned to be a key player in the guidance of the financial system through reform and recapitalization after the Asian Crisis and, even more, in preventing China's financial system from diving into the kind of "casino capitalism" that was growing in the US and all over Europe since the eighties[19]. Lardy affirms this very clearly:

"Most obviously, since China's financial regulatory agencies had steadfastly refused to permit the creation of complex derivative products in the domestic market and severely limited

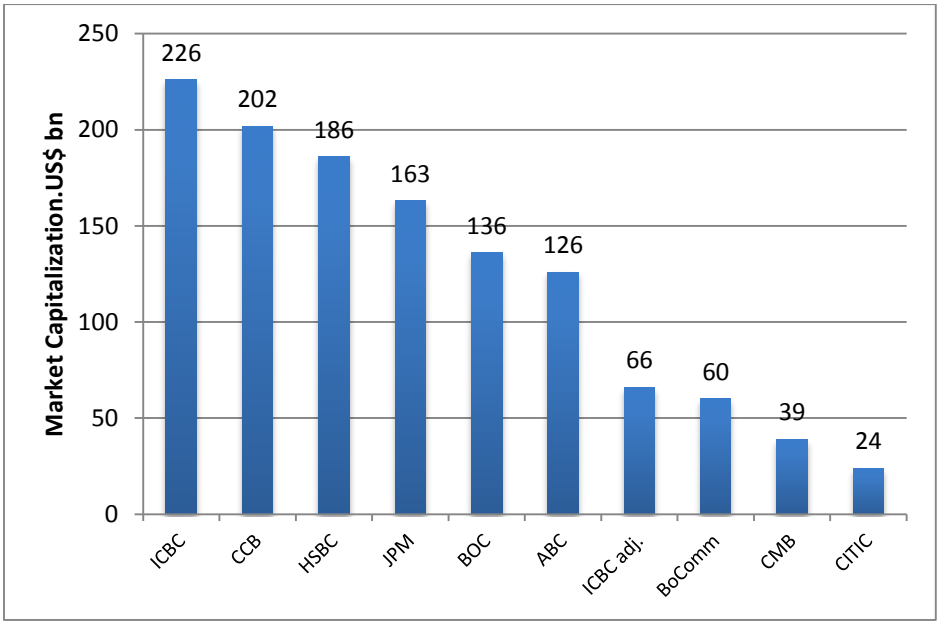
[18] Founded in 1948.
[19] When the savings-and-loan fiasco erupted in the US.

financial institutions' exposure to foreign sources of these products, Chinese financial institutions had little exposure to toxic financial assets" (2011, Locations 452-454).

In fact, when in the summer of 2008, a small group of foreign "financial experts" headed to China to give financial advice, Wang Qishan, the vice-premier in charge of China's financial sector, quickly made it clear that China had little to learn from the visitors about its financial system. His message concisely: "You have your way. We have our way. And our way is right!" (Mc Gregor: 2010, Locations 51-52).In the same vein, Chen Yuan, the celebrated chair of China's Development Bank was thinking along these lines when he declared, in July 2009, "[We] should not bring that American stuff and use it in China. Rather, we should develop around our own needs and build our own banking system" (Yuan quoted by Walter and Howie: 2012, 27).

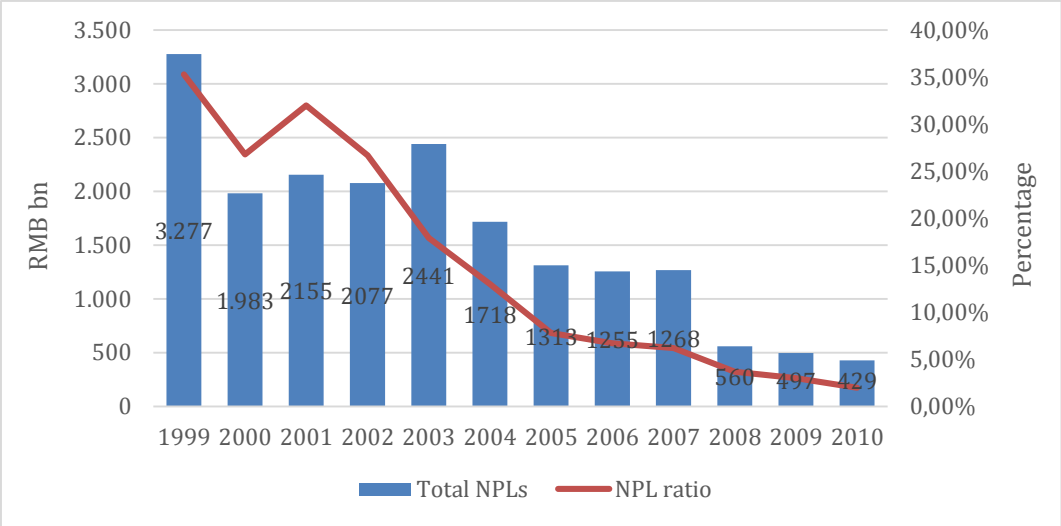
They had a point. If we look at Chinese Banks's capitalization and non-performing loans at the height of the crisis (compared to JP Morgan, the go-to bank for the Obama administration), the data speak for itself.

Figure 6- Chinese Bank's Capitalization Compared with J P Morgan (JPM) in 2010



Source: Walter and Howie, Location 1069

Figure 7 – Non-Performing Loans of Top Chinese Banks: 1999-2010



Source: Walter and Howie, p 137.

This provides a snapshot what "socialization of finance" (Schumpeter's style) can produce by combining robust financial regulation with countercyclical measures and a strategic stimulus package (Keynes and Minsky).

However, the most *entrepreneurial* player in China's finance is China's Development Bank (CDB). Sanderson and Forsythe put it concisely: "In one decade, CDB has become the financial enabler of both China's global expansion and domestic boom" (2013, introduction).

With that strong statement, the authors begin their analysis of what they claim to be "the core of China's state capitalism"… "A system of government-controlled banks and companies that many development countries see as an alternative to a more free market-focused system" (Ibid). Founded in 1994, with "global operations springing from Asia to Africa and Latin-America" (more on that in section 3 below), with total assets of almost 1 trillion dollars and a non-performing loan ratio of 0.4 % by the end of 2010, CDB is in fact the "pilot agency" of China's aggressive financial diversification in the last ten to fifteen years. In 2011 CDB had a loan portfolio of around US$ 884 Billion and "a business presence in 116 economies around the globe (Yuan: 2012, Chairman's message for the 2011 CDB Annual Report http://www.cdb.com.cn/english/Column.asp).

CDB's hallmark financial innovation was the system of local government finance, which transformed China's landscape in just over a decade. To understand this innovation, I have to recount the reversal of one of the core principles of the Communist Revolution: the redistribution of land from rich property owners to landless peasants. Between 1996 and 1997, as the Asian crisis started, countercyclical spending on infrastructure in China doubled, and by 2002, it had risen by nearly three times.

This massive urbanization was a sensible response to collapsing "global demand", an event that would be repeated in 2008-09. However, it came with a serious downside, requiring a re-appropriation of land by the state as a condition to create "development zones" where bullet trains, sports complexes, shopping malls, apartment blocks and all kinds of urban facilities where produced/erected at a very fast pace. This re-appropriation of land was the equivalent of a vast *enclosure movement* where millions of peasants were obliged to leave their land in order to give way to urban expansion[20]. This growth spurt of urban construction required finance and funding in large scale, but there was still a problem to solve.

[20] They received compensation, but well below their market value and especially to their "expected future value" once urbanization was in place. Of course if we stay within this somewhat *Marxist* way of looking at the picture, the same stroke also helped produce a sizable labor force, Marx's "industrial reserve army", available to sell its labor force in the new factories for a very modest price by any international standard.

In 1994, China's premier Zu Ronjin cut local governments off from direct borrowing due to spiraling inflation. In the words of Chen Yuan[21], "While our national government enjoys virtually unlimited credit, the initiators of urbanization projects, local governments, have little" (http://www.cdb.com.cn/english/NewsInfo.asp, and Sanderson and Forsythe: 2013). Here, CDB enters the scene. The bank is funded by treasury bonds, which are typically bought by China's commercial banks, and had no difficulty in giving seed money to local governments to *start* the projects. However, more credit would have to follow in order to provide for the full funding of the projects. Collateral was the problem to solve.

Here, Yuan's entrepreneurial vision coupled with CDB's *innovation* solved it. Yuan knew that urbanization would vastly increase land's prices and land was, now, in the hands of local governments, which meant the local governments were sitting into a potential "gold mine". The innovation was the local-government financing vehicle (LGFV), a public SIV. A company set up by local governments to allow them to spend beyond the limits of their budgets (Sanderson and Forsythe: 2013). They would get *additional* money from CDB *but trough* LGFVs, giving land as collateral, collateral whose value was bound to increase *because of investments made possible by the bank's strategy*. Higher land prices would mean more local government income; hence, more room for loans – and spending.

This was a self-fulfilling strategy, a type of financial operation already devised by Soros (1987) who pointed out that the willingness of a bank to finance an investment project has a direct impact on its viability and thus, on its returns, and therefore, on its price (Kregel: 2001). It was also a Schumpeterian one where credit allowed investment to occur, raised the collateral's value and, as the investment matured, generated the cash-flows to repay the loan. The "Wuhu Model", as it was labeled[22], worked. As Sanderson and Forsythe recount it: "[this system] managed to transform a sleepy city into a bustling metropolis that today is home to one of China's most prominent car makers, Chery Automobile, which happens to be owned by one of the first LGFVs".

Furthermore, the model's success in Wuhu was replicated across the country, with CDB lending money to LGFVs in Shanghai (home to former president Jiang Zemin), Tianjin (home to Premier Wen Jiabao) and Suzhou. The system spread across the country, and came into its own in 2008 when it helped shield China from the worst effects of the global financial crisis. Now, every province in China has set such companies to finance infrastructure investments. (Sanderson and Forsythe: 2013, 9-12).

At this point, the reader should be wondering the obvious: wasn't that precisely the type of financial behavior that produced the sub-prime crisis in the US – a leveraged lending binge backed by the assumption that real estate prices would never collapse. If so, why so much enthusiasm about it? My answer to that question is no, and for several reasons, all related to the existence and course of action of the Chinese Entrepreneurial state. First, all the players involved were public entities. The loans came from public banks to local governments and had guaranties from both the People's Bank of China and the Ministry of Finance (MOF). Secondly, under those circumstances what we have is a State-sponsored – public bank's -funded expansion, which could last for a very long time. It did. The non-performing-loan rates consistently declined for the top Chinese banks between 1999 and 2010 (Recall table 3 above).

Thirdly, in the worst-case scenario, the banks could become filled with "bad loans". Even then, they would never face credit freeze or a "let the market do its job" in the way it happened in the Lehman Brothers – difficult to understand - decision[23]. The banks would be recapitalized again, and the collateral

[21] Echoing one of Modern Money Theory's key statements.

[22] Because it started in the city of Wuhu.

[23] Note that after Lehman, there were many mergers and acquisitions as well as restructurings and an ocean of cash and guarantees injected by the FED and the Treasury in the US "too big to fail" banks, insurance and corporations. After Lehman, no other big institution closed in the US, supposedly the "land of the market" (See Blinder: 2013 for an excellent discussion of these issues). From that perspective China's preemptive policy action of recapitalizing the banks when they needed it and then making sure that finance and funding would be

would still be there, waiting for the urban migration already gaining momentum. However, that scenario never materialized. Fourthly, and critical, there was no "destructive lending" in the process: no "NINJA" loans, no synthetic layers of leverage over leverage (naked selling or derivatives such as CDO's and CDS's) pilling over the loans to enhance trader's gains, and no betting against a "client" such as Goldman Sachs- *ABACUS, Paulson* style.

Finally, and most importantly, the Party treats its banks as basic utilities that provide unlimited capital to the cherished state-owned enterprises (Mc Gregor: 2012.p27). Zhou Xiaochuan, a PBOC's Director has framed the purpose of the banking system straightforwardly when discussing the need for the previous banking reforms-cum-recapitalization: "…China's financial system would be a drag on its economic growth, making it impossible for the system *to service the economy and support development*" (2009, quoted by Cousin 2011, my italics).

5- The Entrepreneurial State and Industrial & Technology Policy

"[The State] gave leads. It exerted pressure. It helped in various ways in financing and promoting ... This active leadership was, of course, ***something very different from mere control or regulation****, and also from mere conditioning" (Schumpeter: 1939, Vol2, p. 973, our emphasis).*

The quote above refers to Schumpeter's analysis of the German recovery in the thirties[24]. Nevertheless, he could be commenting on China's Entrepreneurial State. China's 12th five-year plan for 2011 to 2015 launched in March 2011contains a *vision* of the importance of the "magic seven" industries: (1) energy saving and environmental protection, (2) next-generation information technology, (3) biotechnology, (4) high-end manufacturing, (5) new energy, (6) new materials and (7) clean-energy vehicles. The plan's objective is to "shape" those industries in order to raise their share from 3 percent to 15 percent of the economy by 2020[25]. No wonder that, way before the Plan's announcement, China's banks were already pouring money in order to fund the long-term projects whose purpose is to turn that scenario into reality.

In fact, Chinese companies have started to win first places in global markets. Huawei has overtaken Sweden's Ericsson to become the world's largest telecoms-equipment-maker. The company is becoming an increasingly powerful global player, capable of going head-to-head with the best in intensely competitive markets. It follows Haier, which is already the leading white-goods-maker; now Lenovo is challenging Hewlett-Packard as the world's biggest PC-maker. Much more will follow (cf. The Economist/ Leader: August 2012). The Economist's piece also raises a key issue from the perspective of "western competitors": "Western governments are also suspicious of the subsidies, low-interest loans and generous export credits lavished on favored champions". The article has the right perception. The arsenal behind China's industrial and technology policies is formidable and to downplay it would be a huge mistake.

Take environment. In 2010, China invested some $ 51.1 billion into clean energy, the largest

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there when needed was not surprising at all: as mentioned before, Big Government *plus* Big Bank *plus* industrial policy. A Keynes-Minsky-Schumpeter approach to "policy in hard times".

[24] Before the reader jumps to political judgments here, let me make clear that Schumpeter was *not* praising Hitler in that passage, but – surprisingly for most "Schumpeterians"- a way of state directed development. In addition, let us recall that when Hitler gained power, Germany was **already** on her way to recovery and full employment– via infrastructure spending- and that the turn to militarization did not start until 1936 (cf. Tooze: 2006). As Joan Robinson has aptly put it: "Germany had already eliminated unemployment before Keynes had time to explain it" (Robinson: Collect Works, Vol 3).

[25] For a thorough analysis of the plan, see "China 2030 - Building a Modern, Harmonious, and Creative High-Income Society". The World Bank and Development Research Center of the State Council, the People's Republic of China, 2012.

investment by any country in the world. However, in 2006, four years before that record, two Chinese companies were already on the list of top-ten solar cell producers. In 2010, six made the list, according to a BNEF report[26]. Among them is Yingli, founded in 1998, and one of the biggest beneficiaries of CDB loans in the solar industry, borrowing at least $ 1.7 billion in dollar-denominated loans from CDB from 2008 through early 2012[27]. In 2009, Yingli opened offices in New York and San Francisco; by the year's end, it held 27 percent of the California market. China simply took over. "*In 2011, the country supplied some 72 percent of global crystalline-silicon module production, the most popular type of solar module that converts light to energy"*. (Sanderson and Forsythe: p. 150, my emphasis.) A clear and stunning case of Leapfrogging.

In fact, 2010 saw an explosion of loans to renewable energy, mostly from CDB. The bank lent $ 14.7 billion to clean energy and other energy-saving projects. The European Investment Bank lent € 8 billion for clean energy projects in 2010; BNDES lent $ 3.16 billion and the US Federal Financing Bank $ 2.12 billion. In all, since 2010, CDB – alone- has made available at least $ 47.3 billion in credit lines to support Chinese solar and wind companies (BNEF: October 2011).

Let's return to telecom and, in particular, to Huawei. A private firm founded in 1987 with just 21,000 Yuan, a bit more than $5,000 at the time, Huawei at first struggled to win customers even in China. In 2012, as mentioned, it surpassed Ericsson to become the world's largest telecoms-equipment-maker. Now, it is a $32-billion business empire with 140,000 employees, customers in 140 countries and 65% of its revenue coming from outside China. In Europe it is involved in over half of the superfast 4G telecoms networks that have been announced, and it has become a strong competitor in mobile phones, In Africa, Huawei's cheap but effective equipment helped make the continent's mobile-telecoms revolution possible (The Economist, "Huawei: The Company that Spooked the World: August 2012).

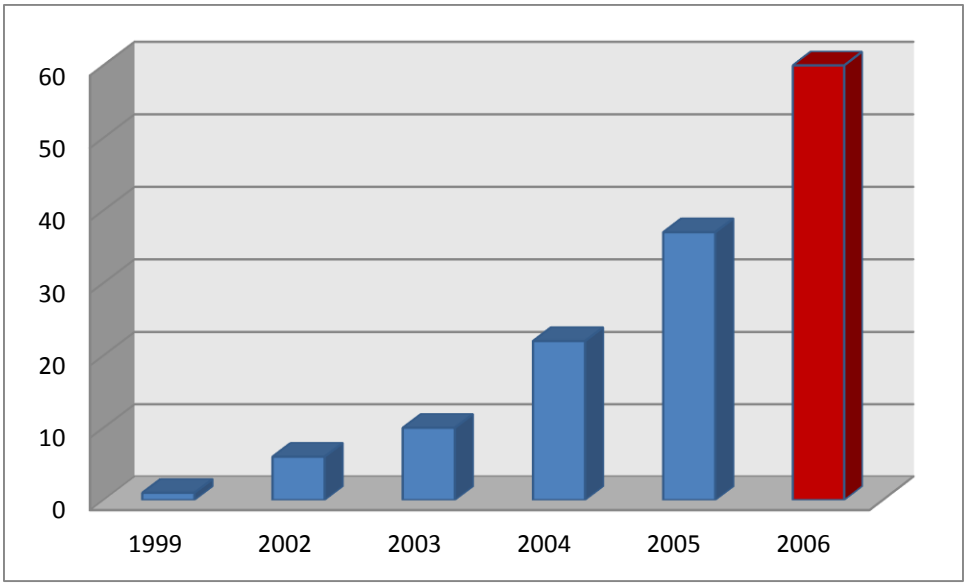
On December 27, 2004, in Beijing, Huawei and CDB signed a $ 10 billion agreement for overseas markets, the first of many CDB credit lines to its customers across the developing world that would allow it to gain significant market share. It also was the beginning of CDB's support of Chinese firms to "go global." In April 2005, Huawei and CDB signed a risk-sharing "win-win" agreement and agreed to share information on clients and projects after the loan had been dispensed. In December 2005, Vodafone Group, then the world's largest mobile phone company, named Huawei its first Chinese-approved supplier of network equipment. Huawei's road to global domination had begun[28] (Sanderson and Forsythe, p. 160). How did this happened? I am not aiming to provide a comprehensive answer here, but the one-liner is public funding and, ultimately, China's entrepreneurial state as the key player in forging and backing up the whole process.

Figure 8: Huawei's Overseas Sales after CDB Loan

[26] BNEF: Bloomberg New Energy Finance.

[27] When fiscal deficits were ballooning and the credit for long-term projects from private finance were frozen in most of the "North".

[28] At that point, a high official of Alcatel-Lucent remembers telling his boss, the Chairman… "We won't die at the hands of Huawei; if we die, it will be at the hands of China Development Bank."



Source: Sanderson and Forsythe, p. 162

6- Conclusion

There is no space for further elaboration of these points here. Nevertheless, we trust the discussion above has provided some concrete evidence to the key propositions of the paper. a) The advantages of Keynes-Minsky inspired approaches to crisis management over Austerity –based policy packages. b) The usefulness of the Entrepreneurial State as a *bridging concept* – and the need to have it as *the* key concept of a contemporary Schumpeter-Keynes-Minsky based theory of economic change. c) The concept's fitness to contemporary China – and its potential to improve development theories in general which lack a proper treatment of the state as a key constitutive agent in producing and shaping development[29]. In closing, we invite the reader to evaluate China's growth path as well as its innovation pace under the Entrepreneurial State's analytical lenses. Our bet is that it will throw more light than heat- although it will bring heat – to the discussion.

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[29] Furthermore, we also claim its relevance to understand properly successful credit-based development-cum-technological upgrading processes in West.

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Appendix

Chronology of Major Policy and Regulatory Changes in China: 2007 - 11

Date	Policy/Regulatory Change
January/2007	• people's bank of China (PBC) increases required reserve ratio due to fears of an overheated economy
March/2007	• First of five increases in benchmark interest rates in 2007
September/2007	• Down payment for investment properties increased to 40 percent. • Interest rate penalty for mortgages on investment properties raised to 10 percent premium over benchmark lending rate. • Property ownership tax-exemption period lengthened to five years.
Late 2007 September/2008	• Quantitative limits put on bank landing • PBC begins monetary easing as part of stimulus effort. • State Council unveils RMB4 trillion stimulus plan. • Mortgage loan discount from benchmark interest rate increased. • Minimum down payment for all mortgages cut to 20 percent.
January/2009	• Property ownership tax-exemption period shortened to two years.
Mid-2009	• PBC strengthens guidance and other policies to slow bank lending. • China Banking Regulatory Commission (CBRC) strengthens requirements for bank inclusion of subordinated debt.
December/2009	• 40 percent down payment for mortgages on investment properties reinstated
January/2010	• CRBC announces tightening measures to slow growth of lending, including mandatory loan quotas for some banks. • First of six increases of required reserve ratio in 2010.
April/2010	• State Council raises down payment for investment properties to 50 percent, reintroduces penalty interest rates for mortgages on investment property, limits property purchases by foreign investors, and suspends mortgage lending to nonresidents.

Late 2010	• PBC shifts to a tighter monetary policy stance, increases the benchmark rate and reserve requirement.
January 2011	• Down payment for mortgages on investment properties increased to 60 percent. • Property tax pilot program begins in Shanghai and Chongqing. • First of six increases of required reserve ratio in the first half of 2011.
February/2011	• First of four increases in benchmark interest rates in the first half of 2011.

Source: Lardy, 2011: Kindle Edition, Location 321.