# Schumpeter, the entrepreneurial state and China

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# Schumpeter, the entrepreneurial state and China

Leonardo Burlamaqui^

## Abstract

The paper aims to show that Schumpeter's unsystematic reflections on "state action" constitute a hidden and unexploited gem in his work. Their reconstruction points toward an institution that, through history, exercised the functions of market maker, macro-strategist, venture capitalist in chief (forging and funding industries, and crafting innovation and technology policies) and creative destruction manager (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). The main claim then, is that these traces constitute the building blocks of a proper economic theory of the State as an "entrepreneur", and they are all in Schumpeter. Additionally, the paper submits that their contemporary relevance shows up in many developmental trajectories, but especially in China today. It closes with the proposition that bringing the State into Schumpeter's creative destruction paradigm doesn't harm or violate it. It's a needed improvement.

Keywords: Schumpeter, Entrepreneurial State, Socialisation of Investment, China

JEL codes: E02 ,H10, L16, N15, O25, O30, O43

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# 1. Introduction

> "During the twentieth century, the line of evidence from Schumpeterian ideas to policies to outcomes is perhaps clearest in the high-performing East Asian economies of the late twentieth century, especially
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> Japan, Korea, Taiwan, and Singapore" (Mc Craw 2007,182).

Mc Craw's observation is an appropriate starting point for an inexcusably absent discussion with respect to Schumpeter's development theory: The absence of a proper role for the state within it. This constitutes another puzzle in Schumpeter's evolution, given the fact that early on, in 1918, in *The Crisis of the Tax State*, he explicitly acknowledged the key role of the State and of fiscal measures, and of policy in general, in shaping development processes[1].

> "Fiscal measures have created and destroyed industries, industrial regions, even where this was not their intent, and have in this manner contributed directly to the construction (and distortion) of the edifice of the modern economy" (1918 [1991]:101).

However, as Swedberg has pointed out that essay was mostly concerned with whether the Austrian State as well as its economy would be able to withstand the financial pressures of World War I, or whether they would break down (1991, p.47). The answer given by Schumpeter was that they should not break down, but only if reconstruction was left to the market economy and private entrepreneurs and ultimately, that an appropriate level of taxation was engineered, a tax policy that could preserve the state finances without putting too much pressure on private enterprise (1918 [1991] 126-7]). Therefore, markets and private enterprise are seen as the *engines of growth*, which stands in conformity with his Theory of Economic Development (TED). Notwithstanding, the sentence above: "Fiscal measures have created and destroyed industries, industrial regions …" stands, along with the supremely insightful observation that … "There is a great difference between … *entrepreneurial and rentiers states"* [2] (1918 [1991] p.111, my

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[1] See Burlamaqui (2000) for a previous attempt to recover Schumpeter's, important but unsystematic, comments on State action and leadership as well as their convergence with the East Asian Developmental States' structural transformation strategies, and some policy and institutional building lessons. This paper is an effort to build on that discussion and to give it more analytical robustness, and focusing exclusively on China for empirical corroboration. Ebner (2009) provides another contribution to, essentially, the same end. Covering substantially the same ground I did in the referred paper – but without knowledge of it – underlining the importance of the concept of Entrepreneurial State in Schumpeter – which I did not in 2000 - and pointing to very similar conclusions in respect to the nature of the East Asian Development States' industrial strategy (however not referring China), his brilliant paper clearly constitutes a travel companion to the present one. I will come back to Ebner's reasoning.

[2] Although scarcely explored from a theoretical point of view, the *idea* of an "Entrepreneurial State" has a respectable pedigree in development thinking that goes back, at least, to Hamilton, List, Carey, the German Historical School, Hilferding, Lenin and Gerschenkron. It also percolates Keynes' thinking on the role of state, his exchanges with Hubert Henderson resurfacing in the flood of books and papers on the Asian Developmental State as well as in recent Works by Fred Block and his collaborators and Linda Weiss (See Reinert: 2007 for the early literature and a wonderful historical exploration on the subject, Keynes: 1932, 1936, Henderson: 1943, Gerschenkron: 1962, Crabtree and Thirlwall:1993, Woo-Cummings: 1999, Block and Keller: 2011, Weiss: 2014). Mazzucato 2013 did a laudable job not only recasting the term but, more important, carrying the discussion to a much wider audience. Previous books which feature "Entrepreneurial State" in their tiles include Holland:1974, Eisinger: 1989, Duckett: 2006 and Tiberghien: 2007.

emphasis), but they are not developed further and end up, from a theoretical point of view, orphans in the text.

The take away here is that the *Tax State* essay is fundamentally a historical excursus within which an institutional and policy message is attempted: The modern state is dependent on a healthy private economy from which it extracts revenue. If no wealth is generated, there will be nothing to tax (1918[1991] 112-14). A special emphasis is placed on not burdening entrepreneurial profit, the prize for successful innovation, with a heavy tax load. Ultimately, Schumpeter's characterisation of the Tax State is essentially *Austrian*, with a *Von Misean* flavour, a perspective that would resurface with full force under the Public Choice approach championed by Buchanan, Tullock, Wagner and others (Buchanan and Wagner 1977; Buchanan, Tollison, and Tullock 1980).

In point of fact, there is no incoherence so far. The way Schumpeter conceived his Theory of Economic Development, the 1912 book, *excludes the state by design*. As I showed in elsewhere, the economic system is analysed as self-regulating, and the roots of innovation and structural transformation are to be found in private entrepreneurial activity and credit creation by private banks (Burlamaqui 2019). They are necessary and sufficient conditions for development. The State – the *Tax* State – is bound to become a burden on that process if taxation is not carried out in a way that preserves entrepreneurial activity and innovation.

However, it's likely that Schumpeter's ideas started to change, or evolve, right after the publication of that essay. It is well known that in 1919 he was invited by Rudolf Hilferding and Emil Lederer, his former socialist colleagues in Boehm-Bawerk's seminar, to take part in the German Socialization Commission (cf. Allen 1991, vol. 1, Ch. 9). Although not a socialist, Schumpeter promptly accepted the invitation, quipping when asked about it that "if somebody wants to commit suicide, it is a good thing if a doctor is present" (Allen 1991, vol.1,163). Although the quip would underwrite his previous *Austrian* view on State-market boundaries, it did not reflect Schumpeter's work in the commission. He endorsed the commission's rationale of finding ways to increase the productivity of the German coal industry by bringing it under social or public control and worked hard to set it up. Specifically, he favoured "a *public coal corporation* that would take *strong leadership* from the existing Coal Board" (Allen 1991, vol 1, p.163-4, my emphasis). Such public enterprise would be run on the basis of productivity improvements and efficiency, and independently of (central) government interference and direction.

The Commission's work was not exactly a success, but here, I find three elements which are central for the discussion ahead: first, Schumpeter was hinting at a possibility he would further develop: the entrepreneurial action could take many forms. Not only "new men" but "new organisational forms" could get the job done, given the appropriate institutional settings, or circumstances[3]. Second, the State could develop, or acquire entrepreneurial skills and perform entrepreneurial functions. It could become and innovator. Schumpeter would come back to this point and I will show it. Third this new organisational arrangement would concoct a sort of socialisation of investment which, if managed properly in regard to productivity, efficiency and political independence, could rival (or even outpace) private entrepreneurship.

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[3] Which was obviously not the case of Weimar Germany.

All three themes would be developed further, and more coherently, only in Capitalism, Socialism and Democracy (CSD), especially in the its third part, on Socialism. I will try to show how they shape up there, and argue for their contemporary relevance. The truth of the matter is that Schumpeter's reflections and insights, demonstrated vividly by the Asian developmental states, as suggested by Mc Craw, and on "steroids" by China, never made it into his "models". Neither the cycles models (TED and BC) nor the "creative destruction" paradigm. However, there is no theoretical reason preventing us to work in that direction. The State functioning both as an *entrepreneur for all seasons* and as a *lender of first resort* is perfectly compatible with the "creative destruction" paradigm. In fact, it is a much-needed complement which shall improve it.

Capitalism Socialism and Democracy constitutes, as just mentioned, the closest of a coherent set of propositions by Schumpeter on state action in economic affairs. The cover roughly three elements: the entrepreneurial state, socialisation of investment and "creative destruction management

## 2. Schumpeter and the State: Entrepreneurial leadership, socialisation of investment and creative-destruction management.

> *"In his 'Tax-State' paper, Schumpeter recognizes the legitimate role of government, a theme that was developed at length in Capitalism, Socialism and Democracy"*
>
> *(Musgrave, 1992)*

In his substantive reworking of *Theory of the Economic Development* in order to be published in English, which happened in 1934, the closing pages exhibit a *new view* already taking place in his thinking about state action. In referring to the process of "abnormal liquidation" brought about by the depressions and the possible measures towards mitigation of their predatory effects, he argues:

> "But [instead of a policy of indiscriminate credit restriction] a c*redit policy* is also conceivable – on the part of the individual banks as such, *but still more on the part of the Central Banks, with their influence upon the private banking world* – which would differentiate between the phenomena of the normal process of the depression, which have an economic function, and the phenomena of the abnormal process, which destroy without function. *It is true, such a policy would lead far into a special variety of economic planning* which would infinitely increase the influence of political factors upon the fate of individual and groups ... Theoretically, it is of interest to establish that such a policy is not impossible and is not to be classed with chimeras or with measures which are by nature unsuited to attain their ends"
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> (Schumpeter 1934, p. 254, my emphasis).

In fact, what is being raised by the author is the functionality — and theoretical support — of a selective credit policy, orchestrated by the Central Bank and intended to differentiate the "old" from the "new" so as to prevent innovations from undergoing the destructive process inherent in depressions. The outcome would be a selective intervention, by the State, in order to preserve successful innovations from financial bankruptcy. It is obviously an exaggeration to label these actions as suggestive of a full blown, state directed industrial policy, but it is also evident that Schumpeter's arguments display a considerable change in his appraisal of state capacities and their potential to help manage creative destruction. The excursions get more explicit in Business Cycles.

Although absent from the theoretical sections of the book,[4] there are a host of passages in the "historical outlines" chapters which, very explicitly, address state's *entrepreneurial action* in forging industry, and shaping economic rationalisation:

> "Was it not – again, in *Germany – the state rather than the entrepreneur which initiated modern industry? The answer is … in the affirmative*, and with the dosing appropriate to each case, similar answers would have to be returned for other countries. The German principality in many cases… directly filled the entrepreneurial function, particularly in mining. Beyond that it conditioned enterprise by reshaping the institutional framework (legal reforms and so on) and improving the environment (canal and road building and the like), and by fostering it in various ways, some of which in fact come within what we usually under- stand by mercantilist policy (1939, Vol. 2, p. 235, my emphasis).

However, Schumpeter's most comprehensive endorsement for the entrepreneurial state, in the book, comes from his analysis of the "State-Directed Economy of Germany" between 1933 and 1938. At that time, the German economy was operating at almost full capacity and its investments were filled with innovations (Schumpeter 1939, Ch. 15 [E]; Landes 1969, Ch. 6; Tooze 2006). That chapter of Business Cycles allows for a critical evaluation of my argument[5] , inasmuch as it places us before Schumpeter's interpretation of a fully developed version of State-led Capitalism in whose core was a state-induced industrial strategy.

> "The outstanding feature is the rapid progress, practically without relapse, toward full employment of resources in general and labour in particular, in fact more than that: unmistakable symptoms of overemployment in our sense. In many industries, shortage of labour. (Schumpeter 1939, vol. 2, p. 971).

In his attempt to diagnose the nature and effects of the "Government Leadership and Control" (ibid. p. 972), Schumpeter focuses on the State's leadership towards building a self-sufficient economy and on the measures for speeding expansion by analysing them through the lenses of their impact upon the introduction of innovations. In his words:

[4] Considering that few people read the first four chapters of the first volume, we wonder whether a great number of Schumpeter-minded researchers have *indeed* read the second volume.

[5] And Ebner's as well.

> “A large part of the new investments in industry was for the development of resources that were to replace imported materials … But that was not all. New things were done involving *the distinct entrepreneurial act that constitutes creative adaptation*".

To which he adds a note specifically referring to the role of the State:

> "It 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*" (ibid. p. 973, my emphasis).

Schumpeter's argument concerning this matter is subtle but extremely relevant for the discussion. The crucial point in his interpretation does not concern state-directed investment or expansionary fiscal policy *alone*, but their operation under the framework of his theory: as *fundamental structural transformation parameters*, as carriers of *industrial rationalisation, productivity increases, and innovation*. Therefore, policies should be selective and directed to maintain and speed the innovative process.

In contradistinction, antitrust — or trust busting — policies aiming to chain them according to a neoclassical “perfectly competitive” normative standard could result, in a depression, and from an evolutionary perspective, in deepening *market structure instabilities* and even in *discouraging future innovations*. State intervention could thus also have a perverse effect jeopardising the system's performance: it would, in addition, produce *conflicts* between public bureaucracy and private managers, bringing about a situation of *reciprocal distrust* which, according to Schumpeter, would neither be useful nor efficient. This argument is the basis of his rejection of Roosevelt’s New Deal, or more precisely what he dubbed an *anti-business bias* of the *New Deal* policies.

However, in a piece on Economic Theory and Entrepreneurial History, written in 1949, one year before his passing, Schumpeter reinforces his changed perception of entrepreneurship, as a *function*, not necessarily attached to a person, and enthusiastically endorses state action towards innovation by the US Department of Agriculture:

> “Finally, as has been often pointed out, the entrepreneurial function need not be embodied in a physical person and in particular in a single physical person. Every social environment has its own ways of filling the entrepreneurial function. For instance, the practice of farmers in this country has been revolutionized again and again by the introduction of methods worked out in the Department of Agriculture and by the Department of Agriculture’s success in teaching these methods. *In this case then it was the Department of Agriculture that acted as an entrepreneur”* (1949[2005]: 260).

No doubt his views had changed at that point. Back to the German State directed economy, and into the financial policies’ sphere, Schumpeter explicit approval of targeted credit, curbing speculative behaviour and, if needed, “business and social disciplining” policies, were justified on the same grounds. Stimulating investments, productivity increases and innovations. In this regard, we read:

> "It is reasonable to attribute [such success] to the manner in which it was done in this case, and to concomitant policy … Creation of purchasing power was an incident but it was not pursued as an end. Speculation was not encouraged, infraction of social discipline was discouraged. No attempt was made to raise costs … Saving and accumulation were encouraged … and in many instances, enforced" (1939, vol. 2, p. 975).

To which he adds in a footnote:

> " … Compulsion to invest in some lines frequently implied prohibition to invest in other lines, but these prohibitions were no longer dictated by the recovery purpose and carry a different meaning" (ibid.).

The crucial point is Schumpeter's *positive* evaluation on this *redesign* of the boundaries between public and private spheres. It should be stressed that his opinion is not grounded on the political regime in course, but rather on the position of the State vis-à-vis *long-term* economic rationality. In Schumpeter's words:

> "The strength of the Fascist State as against group interests [rested in] its fundamental attitude to economic life (which) facilitated a behaviour in accordance with the rules of long economic rationality" (1939, vol. 2, p. 976).

Based upon this diagnosis, Schumpeter makes a consideration that calls our attention to the relationship between structural change and macroeconomic stability:

> "Theoretically it is possible so to plan the sequence of innovations as to iron out cycles: but after strenuous periods of advance there will be recessions even in the corporate State: most of the symptoms of *depressions*, however, need not occur at all. " (1939. Vol. 2, p. 977).

That's clearly a receipt for socialisation of investment and "creative destruction management" which would, as he points out, in a similar way Keynes did, smooth the range of economic fluctuations – or the business cycle – and eliminate the wasteful, and theoretically unnecessary, "abnormal liquidation" brought by depressions. In addition, it is worth recalling those were the same policies that in Joan Robinson's phrasing, caused the German economy "to eliminate unemployment when Keynes was still concerned about explaining its causes" (Robinson, quoted in Garvy 1975).

Summing up: State guided selective intervention, entrepreneurial leadership, encouragement of *investment cartels*, efficiency and productivity improvements, and industrial rationalisation were the elements stressed by Schumpeter in his rather positive account of the German economic policy and industrial strategy in the thirties[6]. The extraction of analytical considerations from this maze of

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[6] I'm well aware that this positive, even enthusiastic, diagnosis by Schumpeter of the Nazi State is, from a political perspective – and in retrospect- difficult to swallow. However, let's recall he was writing from a strictly economic point of view, and well before the Third Reich imposed war and destruction both East and West, and exposed the madness of its holocaust actions. Furthermore, let's also recall Keynes' preface to the 1936 German edition to the General Theory, which raised a host of debates after Schefold's note in CJE (1980): "[…] For I confess that much of the following book is illustrated and expounded mainly with reference to the conditions existing in the Anglo-Saxon countries. Nevertheless, the theory of output as a whole, which is what the following book purports to provide, is much more easily

massive historical evaluation is not the easiest task, but once one gets through them, it appears that Schumpeter was developing an approach — a hidden one — to State involvement in economic activity. To use his own taxonomy, it is more than a "vision", but less than a theory. Nonetheless, it provides us with enough material to propose that it is possible to extract from Schumpeter an analytical framework where Development *can be* forged, facilitated and accelerated by state action. If this will in fact happen is a matter of state structures, capacities, and type of political coalitions in place. In case it does happen, the linchpin is an Entrepreneurial State[7].

The elaboration on these arguments would only be done, however, in his 1942 book. In *Capitalism, Socialism and Democracy*, Schumpeter is already fully operating within the concepts of competition via innovations, creative destruction and corporate capitalism where big companies and oligopolistic market structures shape the typical economic structure. That book constitutes, if little noticed, a major theoretical breakthrough with Schumpeter's previous cycle models. In this context, there is a whole set of industrial policy measures which *acquire their substantive rationality only within this theoretical framework*. State-guided *cartel policies*, as instruments of stabilisation and/or speeding technical progress, are fully understandable only under this theory of competition as a creative destruction process filled with technological and financial uncertainties, the threat of *cut-throat* price competition, and the possibility of bankruptcies and involuntary unemployment.

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adapted to the conditions of a totalitarian state [the German text carries the official expression: Totaler Staat], than is the theory of the production and distribution of a given output produced under conditions of free competition and a large measure of laissez- faire. This is one of the reasons which justify calling my theory a General [emphasis in the original] theory. Since it is based on less narrow assumptions than the orthodox theory, it is also more easily adapted to a large area of different circumstances. Although I have thus worked it out having the conditions in the Anglo-Saxon countries in view—where a great deal of laissez-faire still prevails—it yet remains applicable to situations in which national leadership [staatliche Führung] is more pronounced. (Schefold: 1980. p 175). Let me just add here that to balance the search for understanding with the commitment to persuade and the demands of what today goes under the rubric of "political correctness" is certainly not an easy task.

[7] Here, a mandatory comment on Gerschenkron's thesis is due. Gerschenkron, the doyen of economic history in Harvard during the fifties and sixties, was a product of the same cultural constellation Schumpeter has experienced in Europe and, like Schumpeter himself, influenced a whole generation of Harvard economists through his required graduate course in economic history (Fishlow 2001). Although often associated with catch-up narratives, his thesis on the 'advantages of backwardness' (Gerschenkron 1962, chapter 1) puts him far away from stages theories a la Rostow, and brings him very close to the hypothesis advanced by what Kattel and myself of 'development as a leapfrogging process, not convergence, not catch-up" (Burlamaqui and Kattel: 2015). In his 2001 review of the classic book, Fishlow provides a well-balanced perspective pointing toward that conclusion:

> "Gerschenkron's analysis is conspicuously anti-Marxian. It rejected the English Industrial Revolution as the normal pattern of industrial development and deprived the original accumulation of capital of its central force in determining subsequent expansion. It is likewise anti-Rostovian. There were no equivalent stages of economic growth in all participants. Elements of modernity and backwardness could survive side by side, and did, in a systematic fashion. Apparently, disadvantageous initial conditions of access to capital could be overcome through new institutional arrangements. Success was indicated by proportionally more rapid growth in later developers, signaled by a decisive spurt in industrial expansion. (2001, p. 1)"

I cannot delve into a comprehensive discussion of his thesis here, by will say it offers a complement to Schumpeter's Entrepreneurial State. However, in my view, Schumpeter brings more analytical material than Gerschenkron to this endeavor of making the State a central subject of economic <u>theory</u>, and especially to the <u>theory of economic development</u>, where its absence is appalling. Nonetheless, Gerschenkron's thesis, historically and institutionally rather than theoretically crafted, would certainly be a key supplement in this task of putting the State into the core of development theory (See Shin and Chang: 2003 for a clever use of Gerschenkron's thesis for analyzing South Korea's development spurt).

> "Restraints of trade of the cartel type, as well as those consisting only of tacit understandings about price competition may *be effective under conditions of depression. As far as they are, they may in the end produce not only steadier but also greater expansion of total output* than could be secured by an entirely uncontrolled rush that cannot fail to be studded by catastrophes" (1992, [1942], p. 91, my emphasis).

Its counterpart would be a *cartel-monitoring* set of measures designed in order to guarantee their "efficiency commitment" and encourage entrepreneurial strategies concerning technological creativity and organisational rationalisation.

> "It is certainly as conceivable that an all-pervading cartel system might sabotage all progress as it is that it might realize, with smaller social and private costs, all that perfect competition is supposed to realize. *That is why our argument does not amount to a case against state regulation. It does show that there is no general case for "trust-busting" or the prosecution of everything that qualifies as a restraint of trade.* Rational as distinguished from vindictive regulation by public authorities turns out to be a an extremely delicate problem, which not every government agency … can be trusted to solve. (1992 [1942], p 91 my emphasis).

However, as already mentioned, Schumpeter's most effective support of an active-entrepreneurial State along with an institutional framework where investment is largely socialised is not contained in the second part of CSD, but rather in the third part, where he discusses and compares the potential efficiency of corporate capitalism to an eventual "socialist project" of economic administration. His key thesis is that just as corporate capitalism represents an acceleration of potential growth and economic rationality vis-à-vis Adam Smith's early stage capitalism, a "socialist economy" might as well surpass corporate capitalism by means of these same criteria. Here two issues must be clarified: (a) what Schumpeter understood as a Socialist Economy, and (b) what was his reasoning to support its potential superiority.

The analysis departs from a, well-known, rhetorical question: Can Socialism work? His answer is "of course it can" (1942, p. 167). Yet, Schumpeter's definition of socialism does not focus on *state seizure* 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*[8]. 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 say, in which, as a matter of principle, the economic affairs of society belong to the public and not to the private sphere" (1942, p.168).

The core concept in the definition is *control* by a central authority. 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:

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[8] This discussion builds on Burlamaqui: 2000.

> "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" (1942,168).

Thirdly, the innovative process could be *coordinated* taking into account *timing and locational considerations.* In the process of creative destruction, *creation* would be performed in a *coordinated* 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 emphasis).

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.

Summing up: what Schumpeter considered as possibilities of a "socialist economy" ,measures whose implementation would render it more rational and efficient than corporate capitalism itself, are, in my view, *crucial elements of a structural transformation agenda tied to a different type of capitalism:* although rejected on an a priori basis by mainstream economic theory, and therefore largely absent[9] from Anglo-American *thinking* about market-capitalism[10], they are the "bread and butter" of the German-Scandinavian pattern of "alliance capitalism". Their central elements are grounded exactly on the ideological acceptance of State involvement in the economic sphere besides a non-individualist economic culture (although compatible with a high degree of individual freedom, as Germany and the Scandinavian countries unmistakably show), and on an economic

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[9] Or formulated in a rather *ad hoc* way.

[10] And I underline mainstream *thinking* because there is a shelf of economic history books that describe and analyze state involvement both in the US and the UK. For the US, see Bensel, R. F. :1990 and 2000. For the UK, see Brewer: 1990. Furthermore, recent work - already cited in note 2- by Block and associates, Mazzucato and Weiss reiterate the historian's case: Behind the endurance and economic preeminence of the US (and of the UK in the past) there was/is an active entrepreneurial, state

and institutional structure marked by a substantively higher degree of socialisation. It should be stressed that this is my interpretation of Schumpeter's ideas, although the author appears to be pointing in the same direction when he states that:

> "… the whole of our argument might be put in a nutshell by saying that *socialization* means a stride beyond big business on the way that has chalked out by it or, what amounts to the same thing, that socialist management may conceivable prove as superior to big-business capitalism has proved to be to the kind of competitive capitalism of which the English industry a hundred years ago was the prototype" (Schumpeter 1992 [1942] p. 196)

The crucial point I want to underline here is the author's definition of "Socialism" as … "an institutional pattern … where the economic issues of society belong to the public sphere". There should not be any doubt what this definition really addresses: the centrality of the economic role of the State in forging and guiding structural transformation. The Asian developmental state, which piloted the most astonishing development "explosion" of the twentieth century's second half presents strong evidence of the power of Schumpeter's conception. Yet, it is China, the most successful case of development as leapfrogging, which impersonates the core traces of the Schumpeterian entrepreneurial state. The Chinese state executes simultaneously, as I will try show below, the functions of Ephor in finance, entrepreneur-in-chief in science, innovation and crucial decisions in investment, and creative-destruction manager which means it works within Schumpeter's conception of socialisation of investment. According to Schumpeter's "Socialism" an institutional pattern with those traces would not only "work", it would beat capitalism in terms economic efficiency and growth. In the next section I will submit that China's *managed* structural transformation provides a solid empirical foundation for Schumpeter analytical insights on the entrepreneurial state.

## 3. Schumpeter (rekindled) goes to China: The Chinese Entrepreneurial State and structural transformation

> *"Firms around the world face ever more intense competition from their Chinese rivals. China is not the first country to industrialize, but none has ever made the leap so rapidly and on such a monumental scale. Little more than a decade ago Chinese boom towns churned out zips, socks and cigarette lighters. Today the country is at the global frontier of new technology in everything from mobile payments to driverless cars".*
>
> *(The Economist, 9/24//17)*

In 1976, China 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, the country had become the second larger national economy, the largest exporter, the largest manufacturer, the possessor of the world's largest current account surplus[11], the holder of the biggest amount of foreign reserves as well as the largest sovereign wealth fund (World Bank 2012, p. 25; Tselichtchev 2012; Bergsten et al. 2010, p. 9-10). The country also exhibits the fastest rate of growth of any nations over the past two decades, an extremely fast rate of technological upgrading (Zhou, Lazonick and Sun 2016; Keidel and Burlamaqui 2015; Keidel 2007 and 2011; Gallagher and Porzecanski 2010, chapter 4; Pettis 2013) 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.

In fact, in 2014, according to the International Monetary Fund (IMF), China *surpassed* the U.S economy in size, measured in purchasing power parity terms. The Chinese economy is now worth $17.6tn, slightly higher than the $17.4tn the IMF estimates for the US (Giles: FT, October 7, 2014). This is a highly symbolic data: For the first time in more than 140 years, the US has lost the title of the world's largest economy — it has been taken over by China. The bottom line is clear, China *did not "catch-up" with the west. It* leapfrogged.[12] In addition, let me recall that the country is a nuclear power and has veto power at the UN Security Council[13].

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 I think is appropriate to use when discussing the kind of institutional configuration that brought China to these successive achievements. The reason is that looking at China as a "big success case" (although obviously not lacking problems) should invite searching for lessons instead of recommending emulation (especially of Anglo-American practices and institutions).

However, the main purpose in what follows is analytical, not descriptive, and the central claim is that China's speed and ability to leapfrog its peer-nations in the last three decades stems, largely, from the fact that it is that possesses a fully developed *Entrepreneurial State* (ES)[14.] From a theoretical point of view, China's achievements reaffirm all the elements contained in Schumpeter's *vision* of successful State involvement in economic activity. The centrality of selective credit for innovation and development, the key role of the State in steering innovation and exercising leadership towards development, 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".

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[11] 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.)

[12] For a discussion, from an evolutionary perspective, of the pertinence of using that concept instead of "catch-up", see Burlamaqui and Kattel, 2015, and Gerschenkron (1962) for historical illustrations of leapfrogging without using the concept.

[13] 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 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).

[14] China scholars have been using the Entrepreneurial State rubric to help explain the countries' stunning structural transformation for a while (Blecher, 1991, Duckett: 2006, and Sun: 2015 provide a few examples). Therefore, my claim in terms of adding to the discussion is, obviously, not in linking the term to the country, but rather in presenting it as a concept, as part of a theoretical construct which should improve the comprehension of the Chinese developmental trajectory trough an evolutionary, Schumpeter-based approach.

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, whose roots are in Schumpeter as we saw, should synthesize three core elements: (a) A "Schumpeterian" type of banking system; (b) State directed involvement in forging structural transformation agendas and implementing them, which means performing the Schumpeterian entrepreneurial function; and (c) A robust degree of socialisation of investment which would allow it to implement "creative destruction management policies and exercise a robust financial regulation over the financial system that curtailed "excessive speculation". The second conclusion is that the Chinese State encapsulates all three dimensions and therefore should be taken as the prototype of a Schumpeterian Entrepreneurial State. These are admittedly bold propositions, which should invite further debate and discussion.

## Conceptualising the entrepreneurial state in China

The State was (is) a prominent, key, actor in East-Asian industrial transformation. China followed the path, and went further. Concerning ES's first element: from financial perspective, China is *Schumpeter on Steroids* (See Burlamaqui 2015 for a first attempt on this conceptualisation). To be more precise, of what Minsky characterised, echoing Hilferding, as a (reinvigorated) form of *Finance Capitalism*[15]; a financial system dominated by development 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 Finance Capitalism, as well as its demise in the west)[16].

If accessed through its finance-investment behaviour, China's banking system — the "Big 4" banks plus China's Development Bank and their SIV's ramifications[17]. — is, the newest incarnation of the Hilferding-Schumpeter's model of Finance Capitalism. Furthermore, they are, today, the biggest banks in the world. And they are public policy and development banks. The especially "Minskyian" traces in the model are the pervasiveness of *speculative finance,* the build-up of situations of "financial fragility", but also the presence of a "Big Bank" and of robust financial governance[18]. An important point to stress here is that *animal spirits* in the Hilferding-Schumpeter's model come largely from the public policy and investment banks, that is, from the State. It is public issued credit, not private wealth which funds the bulk of structural transformation. In that institutional configuration, development springs largely from "socialised investment".

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

[16] 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.

[17] 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). They were private universal banks that operated mostly as development-oriented financial institutions.

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

The second element backing up the ES concept refers forging science and innovation. Again, the Chinese State is the prototype for executing those functions. China's five year's plans as well as its strategic longer terms proposals, such as China 20230 and — more recently — the One Belt One Road (OBOR) initiative configure full blown cases of exercising Schumpeter's entrepreneurial function. In fact, the Developmental States — especially in their Asian incarnations are different forms of a "Schumpeterian- or innovation-oriented State"[19]

The third element for structuring the concept of ES is the presence of a robust degree of socialisation of investment. I showed this is key in Schumpeter's endorsement of public entrepreneurship, but Keynes provides, in that realm, a broader understanding of its meaning. As stated in the General Theory'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" (1936, p 377-8).

Keynes's central message for conceptualising the Entrepreneurial State, I suggest, is that it should extend itself much beyond the strictly "Schumpeterian dimensions" (finance, entrepreneurship, innovation and creative-destruction management). Income distribution, employment, regulation and supervision and public-private partnerships were already at the core of Keynes *vision*. However, the relevant, and scarcely noticed, fact I would like to call the reader's attention is the close resemblance between Keynes's idea of socialisation of investment and Schumpeter's, previously discussed, conceptualisation of "Socialism". Schumpeter's broad — and unconventional — characterisation of Socialism provides us with a concrete illustration of his arguments of *why* "Socialism" *can* work and *can* beat "Capitalism" on the grounds of conflict management and economic efficiency. If we take China as the materialisation of the Schumpeter-Keynes concepts of entrepreneurial state plus socialisation of investment, the result is, I submit, a very strong case for their policies and institutional reform prescriptions. And China should be presented as their poster country.

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 – he writes- 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*

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[19] 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.

> *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).

An institution that combines the functions of macro-strategist (managing interest and exchange rates, capital flows along with prices' 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[20]. Summing-up, from a Schumpeterian (rekindled) perspective, the Chinese entrepreneurial state encompasses the functions of Ephor, Entrepreneur-in-chief and policy coordinator.

## The entrepreneurial state in finance

China's development trajectory fully supports Schumpeter's emphasis on reliance on credit and the banking system as sine-qua-non-conditions for successful development processes. 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. 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[21]) 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 recapitalisation after the Asian Crisis and, even more, in preventing China's financial system from

[20] See Ruttan: 2006, Block and Keller: 2011, Mazzucato: 2013 and Weiss: 2014 for analyses of the US case. On the developmental state for East-Asia's cases see Johnson: 1982, Amsden, 1989, Wade: 1990, Weiss and Hobson: 1995, Vogel: 2011, Kim and Vogel –eds.- 201l

[21] Founded in 1948.

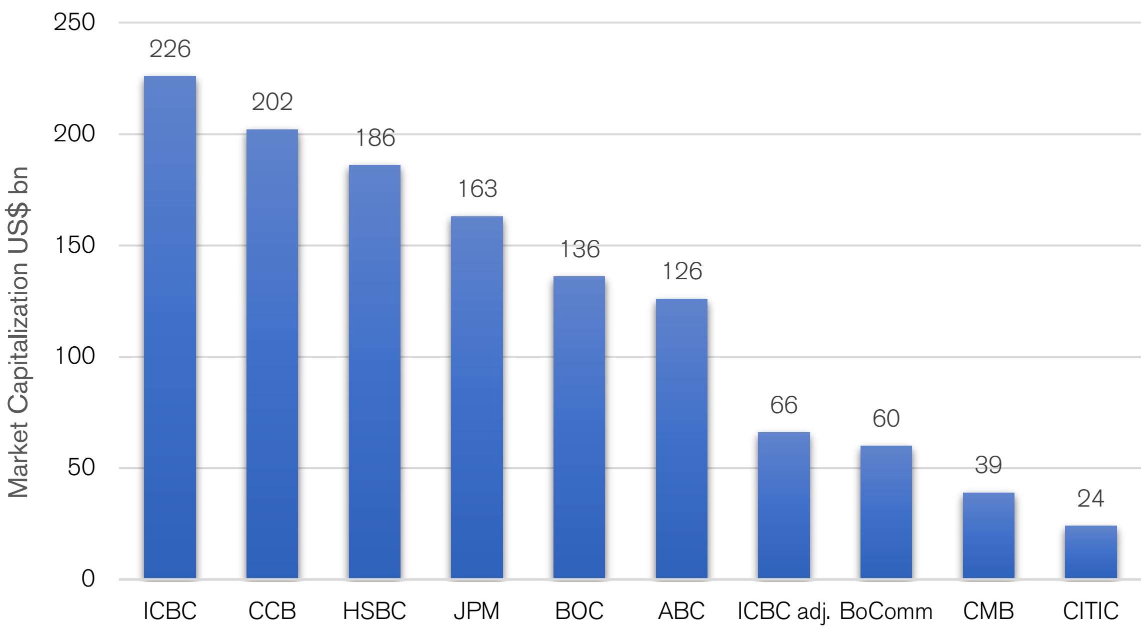
diving into the kind of "casino capitalism" that was growing in the US and all over Europe since the eighties[22]. Lardy affirms this very clearly:

> "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 financial institutions' exposure to foreign sources of these products, Chinese financial institutions had little exposure to toxic financial assets" (2011, Kindle 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 same 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 capitalisation and non-performing loans at the height of the "global financial crisis" (compared to JP Morgan, the go-to bank for the Obama administration), the data speak for itself.

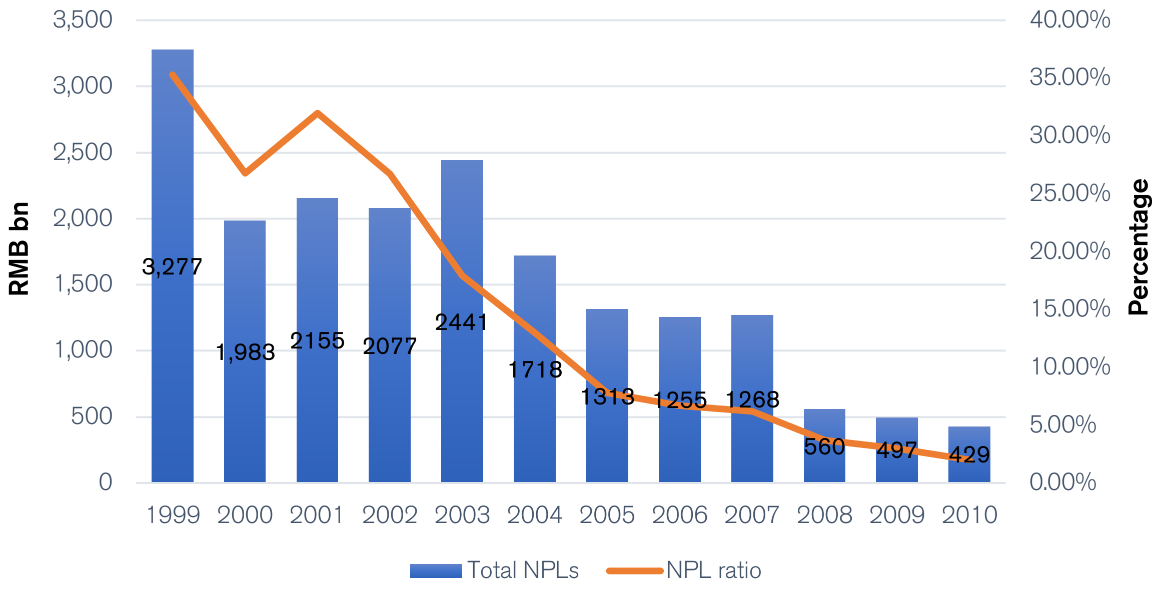
Table 1: Chinese Bank's capitalisation compared with JP Morgan (JPM) in 2010




Source: Walter and Howie, Kindle Location 1069

22 When the savings-and-loan fiasco erupted in the US.

Table 2: Non-performing loans of top Chinese Banks: 1999-2010




Source: Walter and Howie, Kindle Location 1114

This provides a snapshot what "socialisation of finance" (Schumpeter's style) can produce by combining robust financial regulation with countercyclical measures and a strategic stimulus package (Keynes and Minsky)[23]. 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 freer market-focused system" (Ibid). Founded in 1994, with "global operations springing from Asia to Africa and Latin-America", with total assets of 1.7 trillion dollars and a non-performing loan ratio of 0.4 per cent, 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 refer to 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 urbanisation was a sensible response to collapsing "global demand", an event that would be repeated in 2008-09. However, it came with a serious downside,

[23] For a comprehensive analysis of China's response to the financial crisis, see Lardy: 2011.

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.

The land re-appropriation 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[24]. This growth spurt of urban construction required finance and funding in large scale, but there was still a problem to solve. In 1994, China's premier Zu Ronjin cut local governments off from direct borrowing due to spiralling inflation. In the words of Chen Yuan[25], "While our national government enjoys virtually unlimited credit, the initiators of urbanisation 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, or better the State, entrepreneurial vision coupled with CDB's *innovation* solved it. Yuan knew that urbanisation 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 strategy 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 labelled[26], 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

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[24] They received compensation, but well below their market value and especially to their "expected future value" once urbanisation 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 labour force, Marx's "industrial reserve army", available to sell its labour force in the new factories for a very modest price by any international standard.

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

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

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 behaviour 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. And it did. The non-performing- loan rates consistently declined for the top Chinese banks between 1999 and 2010 (Recall table 2 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[27]. The banks would be recapitalised again — as they were between 1999 and 2004 under the assets-liabilities restructuring plan undertook by Zhu Rongji — and the collateral would still be there, waiting for the urban migration already gaining momentum. However, that scenario never materialised. 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, p. 27). 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-recapitalisation: "… 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).

I close this section, with a reference to the current discussion over China's escalating debt coupled with the speedy increase of "shadow banking" organisations. Both issues are of concern, no doubt about that. From a Minskyan perspective, they are also destabilising factors in China's financial evolution, as Wray, Kregel, Pettis, Sheng and others have warned. The easy escape to that threat would be the suggestion that it's too early to tell, which is true.

However, let me make two points here and leave them for further reflection. First, in contrast with other financial systems in place, China's beside having a smooth relationship between its treasury and central bank is home of the five biggest banks in the world, and there are all public. In case of

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[27] 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 pre-emptive policy action of recapitalising the banks when they needed it and then making sure that finance and funding would be 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".

any financial distress, those institutions can, as I just pointed out above, absorb a vast amount of bad debts and expand their balance sheets considerably and continually — in the same fashion the FED does — with the advantage of having no legislative constrains to do it. In sum, China has Minsky's big bank and big government on steroids along with hands on financial regulation. As Schumpeter put it, in another context, it's like a car that can speed up more confidently *because* it has good brakes.

Second, in recently released book, Barry Naughton and Andrew Sheng, two seasoned researchers of China's economic and financial affairs, back what I just affirmed with empirical investigation. According to Naughton and Tzai, "Despite progress toward marketisation and opening of finance, and the ongoing reality of shadow banking, on balance, state control over finance remains considerable. This is evident both in the banking sys system and in equity markets" (2015, Kindle Location 796). As for Sheng, "With the economy still growing at 6–7 percent per annum, low fiscal deficit, a high savings rate and very large foreign reserves, the book concludes that a systemic financial meltdown is unlikely as China has adequate resources and policy flexibility to address what is essentially a domestic debt problem with no direct global implications" (2016: Kindle Locations 311-312). Past and current performance doesn't guarantee future outcomes but, so far, the evidence does not look bad.

## The entrepreneurial state in industrial and technology policy

The opening quote to this section was already seen as part of Schumpeter's reflections, and endorsement, on the German state in the thirties. Nevertheless, he could be addressing China's Entrepreneurial State today. China's 12th five-year plan for 2011 to 2015 was launched in March 2011. The plan highlights 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[28]. 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[29]. 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 favoured

[28] 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.

[29] That is the root of the recent "technology war" the US launched towards China, and especially Huawei. This will involve set-backs to China's companies and the Chinese Strategy. But, for China, it's a very long-term strategy game.

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 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[30]. 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[31]. 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[32] (Sanderson and Forsythe, p. 160). I am not aiming to provide a comprehensive case-study here, but the one-liner is public funding and, ultimately, China's

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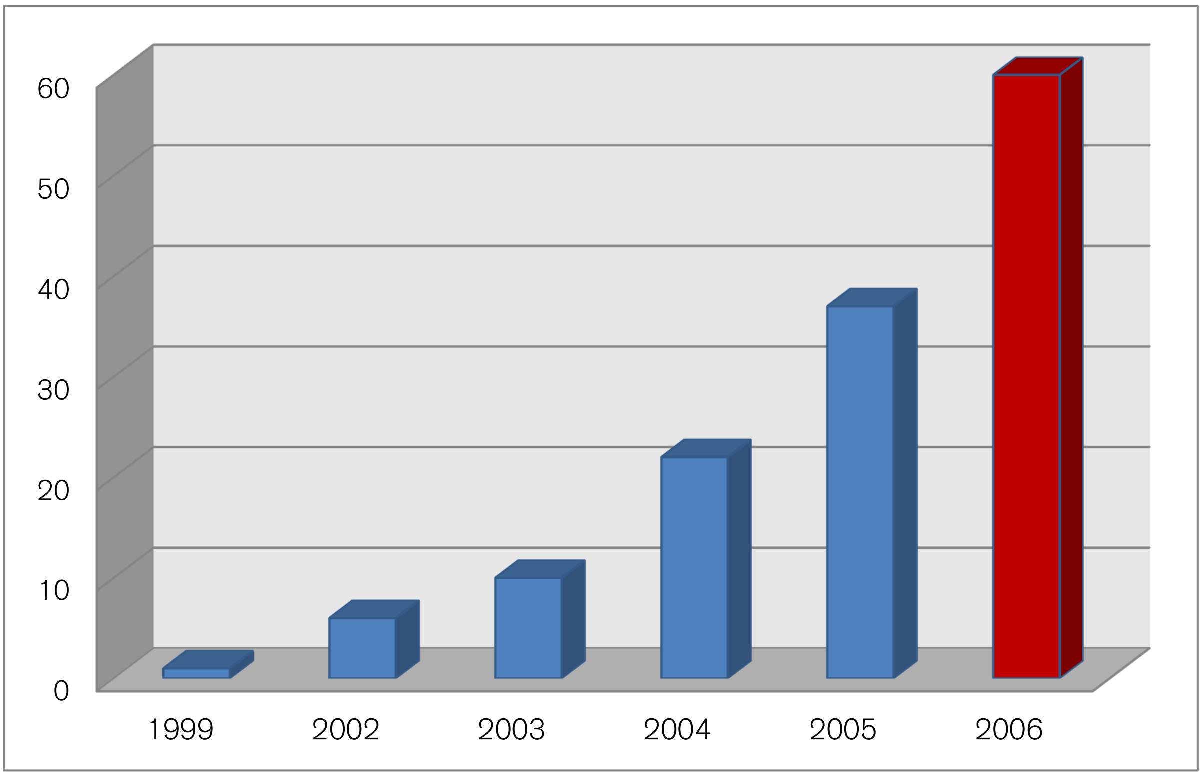
[30] BNEF: Bloomberg New Energy Finance.

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

[32] 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."

entrepreneurial state acted, via CDB, as the key player in forging and backing up the whole process.

Table 3: Huawei's overseas sales after CDB loan (CNY Billion) [33]




Source: Sanderson and Forsythe

## The entrepreneurial state and socialisation of investment: OBOR as China's global strategy

China has amassed more than U$ 3 Trillion in foreign reserves. This place its Entrepreneurial State in a very special position in the global financial landscape. Furthermore, in implementing China's global strategy, China's Sovereign Wealth Fund (CIC) plus the "Big 4" policy banks, and China's Development Bank (CDB) are the crucial players. By carrying out the goals of the state, China's banks, and especially CDB among them, are helping further China's goal of securing energy supplies and positioning its "national champions" in a global strategy. Since much of the proceeds of the international loans are used to buy Chinese goods and services, from Huawei phones to CITIC-built railroads, China wins twice, and the policy and development banks help foster another Chinese goal, pushing its top companies to "go out" (Sanderson and Forsythe 2012, p.131).

[33] In 2016 Huawei's total sales reached $75.1 billion, according to Fortune magazine (March 31, 2017 edition)

Africa was its first stop. Aided by Chinese demand for its exports and raw materials, Africa has experienced its best decade and a half of economic growth since independence from colonialism[34]. CDB is at the core of that "reversal of fortunes" by helping to change failed development policies by stimulating manufacturing and building the infrastructure that most African countries require to climb the developmental ladder (Sanderson and Forsythe, p 86). CIC (China's sovereign wealth fund) is another big player on those endeavours. The establishment of five special economic zones, promised by President Hu Jintao in 2006 and shortly after, in place - Nigeria, Mauritius, Egypt, Algeria, Ethiopia and Zambia. The creation, in 2007, of the China-Africa Development Fund (CADF) as a private equity arm of CDB to "boost investment in Africa by Chinese firms and offshore, to Africa, some of China's manufacturing. The fund itself says its model is "investment + loan". In February 2012, the fund signed an agreement with Xinjiang Goldwind Science and Technology, a wind turbine manufacturer, to develop the African market. In 2010, CDB had given the company a $ 6 billion credit line for international expansion (Sanderson and Forsythe, pp. 98-99). It also formed a venture with carmaker Chery Auto, to set up factories in Africa.

In Latin America, Chinese lending is continuously gaining momentum. It has taken off from almost nothing prior to 2008 to the point where, in 2010, its loan commitments were more than those of the World Bank, Inter-American Development Bank, and the US Export-Import Bank combined (Gallagher et al. 2012, p. 5). CDB seems confident about the soundness of its oil-for-loans program. So much confident, that it lent Ecuador in 2010, $ 1 billion in a four-year loan at 6 percent interest, two years after the Country defaulted on $ 3.2 billion of bonds. Chinese lending to Venezuela and Ecuador is filling in for the sovereign debt markets which vanished. "Chinese financing is often the 'lender of last resort.' It is not a cheap one, but due to the concern the international financial community has over Venezuela and Ecuador, and the large risk premiums they would charge, Chinese lending is an attractive option" (Tissot quoted by Gallagher et al. 2012, p. 8). The loan-for-oil model seems to be broader. It's being used around the globe, "from Russia, to Ghana, to Brazil, as a means for China to secure energy supplies and for its state-owned infrastructure companies to win contracts". In sum, Chinese banks maintain some oversight over their loans by attaching either purchase requirements or oil sale agreements. Most Chinese loans require the borrowers to use a portion for Chinese technology or construction Gallagher et al. 2012, p. 17).

As of 2015 China has become the second major investor in the global economy. Chinese global investments have risen at a compound rate of 16% from 2011 to 2014. The volume of foreign direct investment from China reached US$ 183.2 billion surpassing the foreign direct investment into China which amounted to US$ 126.0 billion in 2016. In 2015 Chinese firms executed 579 mergers and acquisitions abroad covering 62 countries and regions with transaction value of US$ 54.44 billion out of which US$ 37.28 billion were financed by sources within China. In 2016 Chinese companies spend US$ 227 billion on acquiring foreign companies, outbound mergers and acquisitions have grown 33% per year for the past five years (Jaguaribe 2017, 6)

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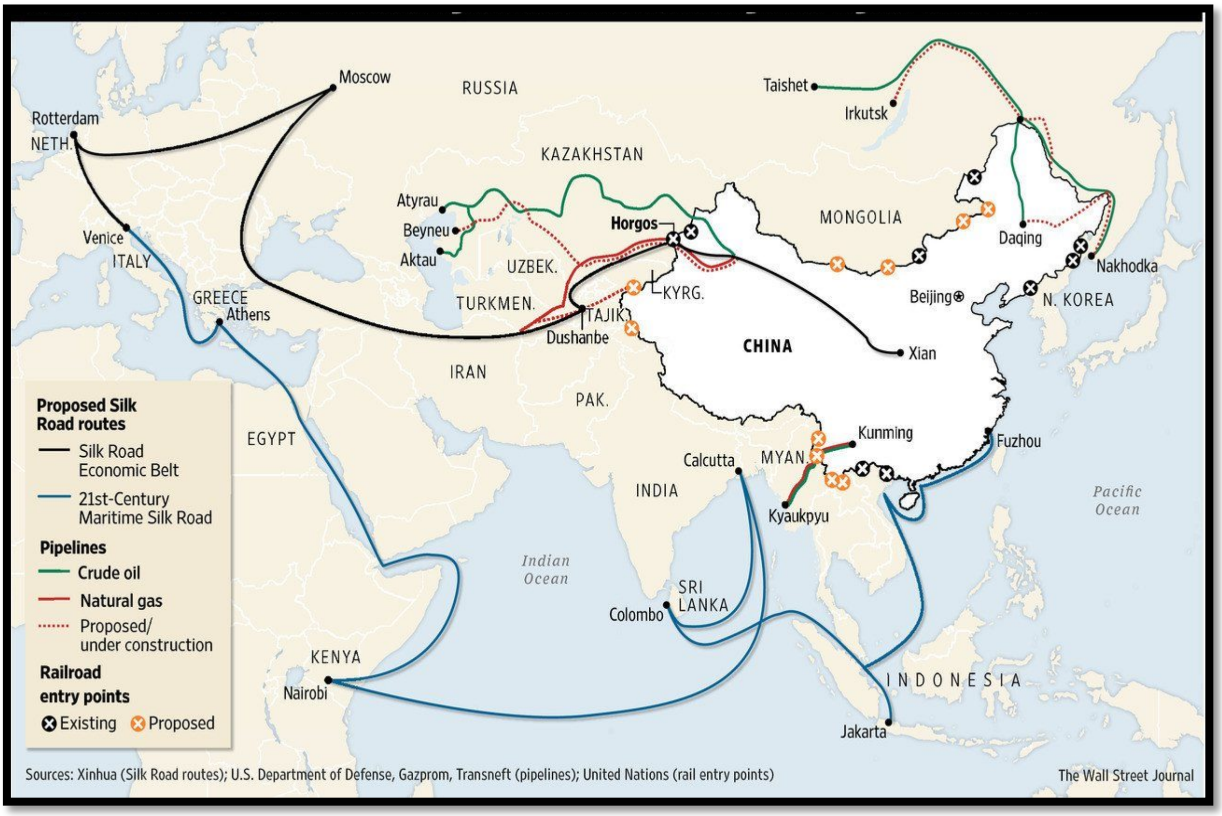
[34] For a broader analysis and discussion of China's strategy for Africa, see Carmody and Owusu in Leão, Pinto and Acioly (eds): 2011

However, the most strategic role the Chinese Entrepreneurial State refers to promoting Chinese business on a global scale, forging homegrown global players. 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[35].

Yet, the apex of that State-guided strategy, at the time of writing this paper,[36] is the "one belt, one road" (OBOR). Launched in 2013, OBOR has two parts. There is a land-based "belt" from China to Europe, evoking old Silk Road trade paths, then a "road" referring to ancient maritime routes. OBOR will span 65 countries (see map), and China has so far invested over $900bn in projects ranging from highways in Pakistan to railway lines in Thailand. In May 2017, more than a hundred world leaders gathered in Beijing for un update on the strategy. The host, president Xi, labeled OBOR the "project of the century" and reaffirmed the estimated $ 5 trillion the financial Times in infrastructure spending spanning across Asia, the Middle East, Europe, and Africa. The Financial Times (FT) stamped "President Xi Jinping Positions China at Center of New Economic Order" as headline, adding "President Xi of China delivered a sweeping vision of a new economic global order on Sunday, positioning his country as an alternative to an inward-looking United States under President Trump" (Financial Times: August 3, 2017).

Figure 1: One Belt, One Road map




[35] 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.
[36] First version in the summer of 2017 and current version summer 2020.

At the same gathering, China's prime minister pledged more than $100 billion from Chinese development banks for the next round of infrastructure renewal. The next gathering, in Beijing, will take place in 2019. Public entrepreneurship and public funding on that scale is unheard of. However, as I tried to show in the previous section, that is precisely what Schumpeter had in mind when he wondered if "Socialism" could work. China incarnates, in fact, Schumpeter on steroids. Or, I must add, the Chinese state should be seen also as the materialisation of Hubert Henderson wishes, expressed in 1943, one year after Capitalism, Socialism and Democracy was published. In a little noticed exchange with Keynes, his co-author, Henderson, wrote:

> "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" (1943, p. 233).

The required amendments here are: … best serve China's interests and needs on a global scale.

## 4. Conclusion: Beyond Schumpeter — state structures, public leadership and structural transformation

> *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 specialization in industries with inferior prospects"*
>
> *(Wade: 1990)*

Given the arguments discussed so far, and despite the current (sometimes enraged) neo-liberal statements that continue to view State action and bureaucracies as always ineffective ,or at best irrelevant (Cf. Buchanan, Tollison and Tullock 1980) the reason seems to remain with Karl Polanyi, for whom "The road to free markets was opened and kept by an enormous increase in continuous, centrally organised and controlled interventionism" (1992 [1944]: p.127) and with Max Weber, whose statement that "Capitalism and bureaucracy found each other and belong intimately together" is as true today as when it was written, in the beginning of the last century (1968: p.1395, n. 14]).

China's compressed "case-study" provides us, I trust, with sufficient empirical evidence to validate the claims about the effectiveness of a properly developed Entrepreneurial State as a vehicle for carrying out structural transformation in a superior fashion than "markets alone"[37]. I also submit that a close examination of Schumpeter's writings on that subject offer a solid *starting point* for a *theory of the Entrepreneurial State*. This updating and extension of Schumpeter's agenda, when accomplished, would fill two critical lacunas:

[37] Something (structural transformation by markets alone) which, by the way, never happened in history. That makes the comparison irrelevant, and I'm only referring to it because it's so much embedded in economics fairy tales encyclopedia

(a) It would add a crucial building block to Schumpeter's "creative destruction paradigm" which still misses a comprehensive role for the state as an effective player (b) It would provide the field of "development studies" with a proper, *theoretical*, space for the *economic role* of the state as a key actor in forging successful development processes *in evolutionary environments*, which is something surprisingly lacking so far, in spite of the extremely competent studies delivered under the "Developmental State" rubric.

In the conceptual framework conceived by Schumpeter post-CSD, where*, technology, finance and competition are always pushing towards unexpected outcomes and unpredictable possibilities,* let me submit that entrepreneurial states and government policies crafted to forge and assist, structural transformation *are a permanent necessity dictated by the market's behaviour rather than by its failures.* Consequently, their making must be based upon a correct understanding of the characteristics that, under this framework, *define the actually existing capitalist economy*: finance as its "headquarters", competition as creative destruction, endogenous technological progress, entrepreneurial strategies conceived to *differentiate* each firm from its competitors and monopolise market opportunities, irreversible decisions ,"crucial decisions", in G. Shackle's catch phrase (1955), and multiple types of uncertainties .

Additionally, the perception of economic progress under capitalist conditions as *turmoil* where new and old assets, firms, and sectors coexist *and compete*, allows for the introduction of the concepts of *sunrise and sunset industries*, as well as potential and effective conflicts between them. On the other hand, the perception of the economic environment as a *darwinian-lamarkian arena* where survival does not necessarily belong to those with *better technologies or productivity potential*, but rather to *those with best adaptation skills*, legitimises sector-based and selective financial, technological and industrial policies[38], as well as the need for collective entrepreneurial action in order to forge and produce the system's future competitiveness, a task that each separate sector has no means to anticipate or even map. Under this framework, policies designed to *manage the creative destruction process,* and whose aims are investment co-ordination, innovation diffusion, and conflict management become not only economically rational, and business friendly, but badly needed. The overall desired *policy result* is to decrease the system's inescapable elements of financial and technological instability and uncertainty.

Drawing on Schumpeter's reflections on entrepreneurial leadership by the State paired with his economic sociology, taking on board Keynes and Minsky's discussion of the need for a "substantive degree of socialisation of investment" in order to preserve technological dynamism[39], and applying them to China, I submit that both macroeconomic stability and structural transformation are (a) *best achieved when designed and assisted*, (b) *best assisted* by public policies designed taking a long term-term strategic orientation, and (c) *best achieved* when these policies are implemented by State structures that are entrepreneurial[40] *but* connected with

[38] In order to either encourage or discourage investments according, for instance, to sunrise and sunset industry criteria.
[39] Ever ahead of his time, Minsky submits the following observation in closing his 1990 paper on "Schumpeter: Finance and evolution": "Capitalism *may require intervention to remain technologically dynamic* in an era of managed money capitalism" (37, my emphasis). It seems Chinese policymakers caught the message.
[40] Which means, states possessing capacities that enables them to forge long term, strategic agendas for structural transformation as well as the means to help implement them.

corporate interests (without being captured by them) which means "embedded". The question of social organisations and civil society participation, or social embeddedness, raised by Evans (1995) is a crucial, and difficult, subject. However, it is outside the scope of the present discussion. It will have to wait for a follow up.

In conclusion, I suggest that despite the slippery and unsystematic way Schumpeter handled his reflections and observations on the role of state leadership and action under his evolutionary framework, he provided us with sufficient material for extending and updating the boundaries of his own research agenda. Furthermore, the empirical evidence displayed by the East-Asian developmental transformations, and specially by the Chinese Entrepreneurial State offers the data set for working it out. Bringing the State into Schumpeter's creative destruction paradigm doesn't harm or violate it. It's a needed improvement.

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