

Marxian Crisis Theory and the Method of Real Abstraction: Dialectics Among Rising Organic Composition of Capital, Profit Squeeze, and Technological Evolution Since the 19th Century and Evidence from China (1992-2018)

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Outline

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Marx's Method of Real Abstraction

- Postface to the Second Edition of *Capital*, Vol. 1:
- “Marx treats the social movement as a process of natural history...The only things of importance for this inquiry are that the facts be investigated as accurately as possible, and that they actually form **different aspects of development vis-à-vis each other**. But most important of all is the precise analysis of the series of successions, of the sequences and **links within which the different stages of development present themselves**.”

Marx's Method of Real Abstraction

- Marx:
- Theory as the reconstruction of reality in an orderly manner, i.e. unity of logic and history
- This requires not only the initial abstraction, but also the following ascendance from the abstract to the concrete
- Comprehensive understanding of how the universal laws manifest themselves through their interactions with the concrete historical settings
- Ilyenkov's “concrete universal”

Marx's Method of Real Abstraction

- Evald Ilyenkov, *The Dialectics of the Abstract and the Concrete in Marx' Capital*, 1982:
- “The question of the universal character of a concept is transferred to another sphere, that of the study of the real process of development...the concept should not express the abstractly universal but rather that universal which...embodies in itself the richness of the particular, the individual, the single. Being the ***concrete universal***.” (italic in the original text)
- “Contradiction as the unity and coincidence of mutually exclusive theoretical definitions was discovered by Marx to be the solution of the riddle of the concrete and a way to express theoretically the concrete in concepts.”

Marx's Method of Real Abstraction

- “Concrete universal” as a contradiction, a unity of mutually conditioning aspects
- The key is to identify “the **determining aspect**, that element in the unity of opposites which is in the given instance the leading or determining one” (Ilyenkov 1982, 99)
- This is the method of **real abstraction** and it applies to Marx’s analysis of the two crisis tendencies in the law of the falling rate of profit: profit squeeze & rising organic composition of capital (OCC)

Dialectical Relationship between the Two Crisis Theories in *Capital* from the Perspective of Real Abstraction

- *Capital* Vol. 3, Chapter 13-14: rising OCC as the long-run characteristic of capital accumulation, in spite of being affected by several countertendencies
- *Capital* Vol. 1, Chapter 25: depletion of the reserve army of labor and profit squeeze based on the assumption of a constant OCC
- This contradiction of rising vs. constant OCC is not necessarily one of formal logic but may be resolved by figuring out the concrete historical elements that dialectically connect and unify them
- OCC is a reflection of technical composition of capital (TCC), so the unifying concrete historical elements appears to be sought in the historical development of productive technologies

Unity of Logic and History: Development of Productive Technology & Crisis Tendencies in Advanced Capitalist Economies Since the Mid-19th Century (1)

- Mid-19th century (ca. 1830-1870):
- Rapid advancement in productive technology, in terms of the motor mechanism (steam engine), the transmitting and the working machines (cheap steel and metals owing to metallurgical developments)
- Profit squeeze due to stagnant TCC as a contingent exception of the general trend of rising TCC/OCC

Unity of Logic and History: Development of Productive Technology & Crisis Tendencies in Advanced Capitalist Economies Since the Mid-19th Century (2)

- Late 19th Century (ca. 1870-1890):
- Increasing interconnections between scientific research and productive technologies & capitalists' hesitation to widely adopt new technologies as in the mid-19th century due to the increasing costs of R&D:
- “The much greater costs that are always involved in an enterprise based on new inventions, compared with later establishments that rise up on its ruin, *ex suis ossibus*. The extent of this is so great that the pioneering entrepreneurs generally go bankrupt, and it is only their successors who flourish, thanks to their possession of cheaper buildings, machinery etc.” (Marx 1993, 199)

Unity of Logic and History: Development of Productive Technology & Crisis Tendencies in Advanced Capitalist Economies Since the Mid-19th Century (2)

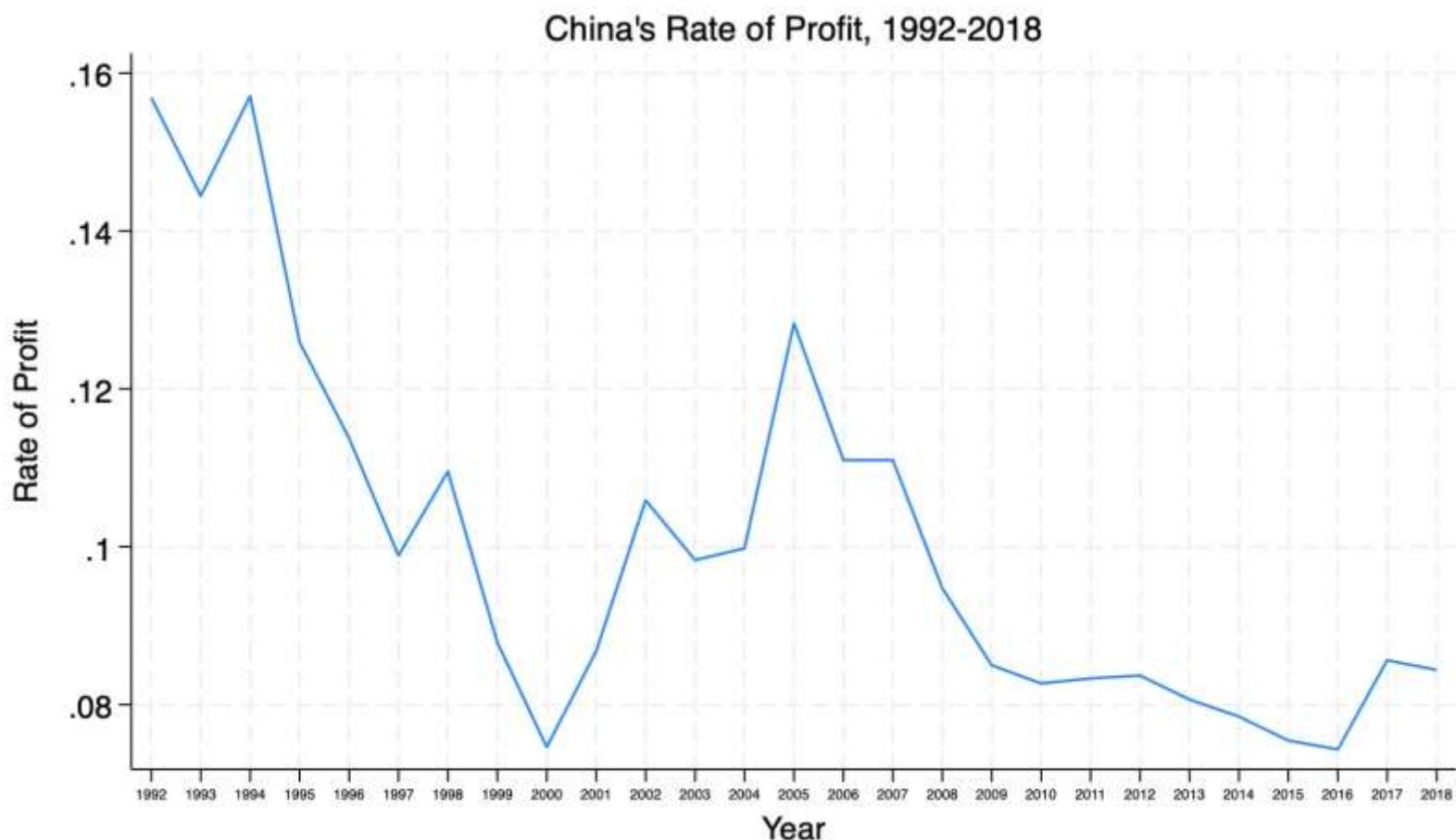
- Capitalists mainly relied on “the steadily improved performance of machines and structures” (Bernal 1969, 592), so the growth rate of OCC was slower and created conditions for profit squeeze:
- Steady growth rate of “basic innovations” in the UK and the US during the first decade of the long cycle 1873-1920 (Tsoulfidis & Papageorgiou 2019)
- Rising labor share of income and falling profit share of income in the UK during 1880-1890 (Li 2022)

Unity of Logic and History: Development of Productive Technology & Crisis Tendencies in Advanced Capitalist Economies Since the Mid-19th Century (3)

- Early 20th century (ca. 1900-1930): all-round incorporation of science into production & adoption of productive technologies from the second Industrial Revolution
- Similar story of rapidly rising OCC dominating profit squeeze as in the mid-19th century, plus the continuous absorption of reserve army of labor in agriculture
- Mid-20th century (ca. 1945-1970): initially rapidly rising TCC succeeded by a stagnation in terms of basic innovations (Tsoulfidis & Papageorgiou 2019), together with the continuous absorption of reserve army of labor and welfare state, once again creating conditions for profit squeeze in the mid-1970s (Boddy & Crotty 1975, Weisskopf 1979)

Empirical Illustration: China (1992-2018)

- Time-series analysis inspired by Basu & Manolakos (2013)
- Dataset: continuous input-output tables for Chinese economy from Zhang et al. (2021)
- Methodology: Shaikh & Tonak (1994)'s mapping from traditional national accounts to Marxian categories
- Minimalist verification of the previous theoretical reconstruction, rather than to centering around debates on Chinese political economy



- No long-run simple monotonic trajectory
- Medium-term phases, historically structured rather than purely cyclical
- Regime-sensitive & nonlinear understanding of accumulation dynamics, as suggested by Marx's real abstraction and concrete universal

Zoom-in: Tension during 2008-2018

Year	Rate of Surplus-Value (S/V)	Organic Composition of Capital (C/V)
2008	2.23	6.82
2009	2.14	6.79
2010	1.98	6.34
2011	2.00	6.08
2012	1.93	5.64
2013	1.94	5.66
2014	1.91	5.58
2015	1.99	5.50
2016	2.03	5.46
2017	1.88	4.66
2018	1.81	4.57

- Declining rate of profit & OCC, plus moderate profit squeeze
- Profit squeeze may operate at lower levels of abstraction, even when OCC pressure weakens
- May be a reflection of subtle changes in the technical composition of capital during this phase (e.g. digitalization) & requires further analysis

Conclusion

- Capital accumulation from the perspective of Marx's method of real abstraction:
- a "concrete universal" as the unity between the two crisis tendencies of rising organic composition of capital and profit squeeze, with one over the other as the primary aspect alternately in different stages of capitalism in advanced economies, periodized by major epochs of scientific and technological developments within specific historical configurations of capitalist development
- The Chinese case (1992-2018) provides a compact empirical case consistent with a historically conditioned, dialectical reading of Marxian crisis theory
- The results support a non-reductionist interpretation of crisis tendencies as interacting & historically specific mechanisms