



SAINT-PETERSBURG
STATE UNIVERSITY
OF ECONOMICS

New Industrial
Development
Institute (NIDI)



Marx In High Technology Era: Globalisation, Capital And Class

Evolution of the Marx's Surplus Value Concept in the conditions of the Transformation of Technological Generation

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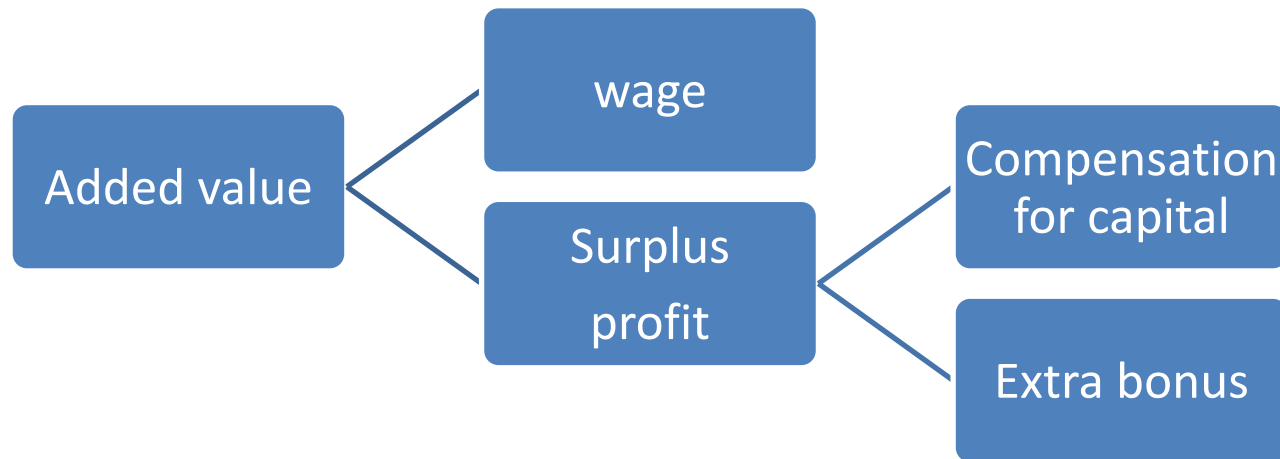
27th of October, 2018 Jesus College , Webb Library, Cambridge, United Kingdom





Motivation

According the Marx Theory of the labor value, the surplus profit is the result of labor value creation





Motivation

- The intellectual capital of an enterprise is a very complicated and dynamic system consisting of interdependent and interpenetrating elements. The cost of these elements changes under the influence of both internal and external factors of diverse nature and controverse dynamics. Roos, G. Pike, S. and Fernstrom, L. (2005), Dumay (2009) and Bratianu (2018).





Research Methodology

- Our research is based on the methods of observation, data collection, analysis and synthesis, mathematical modeling in economics and financial modeling.
- In addition, polling methods (questioning) and personal interviews have been used in this research.





Dispute of two Cambridge on the capital nature

Piero Sraffa, Joan Robinson, Luigi Pasinetti, Pierandzhelo Garegnani as representatives of the English school, Paul Samuelson, Robert Solow, Frank Khan and Christopher Bliss — the American (neoclassical) school.

Dispute essence:

role and, as a result, measurement of the capital in industrial capitalist societies

economic processes don't result in balance, and therefore the analysis of balance can't be considered the adequate tool for a research of processes of growth and accumulation of the capital.

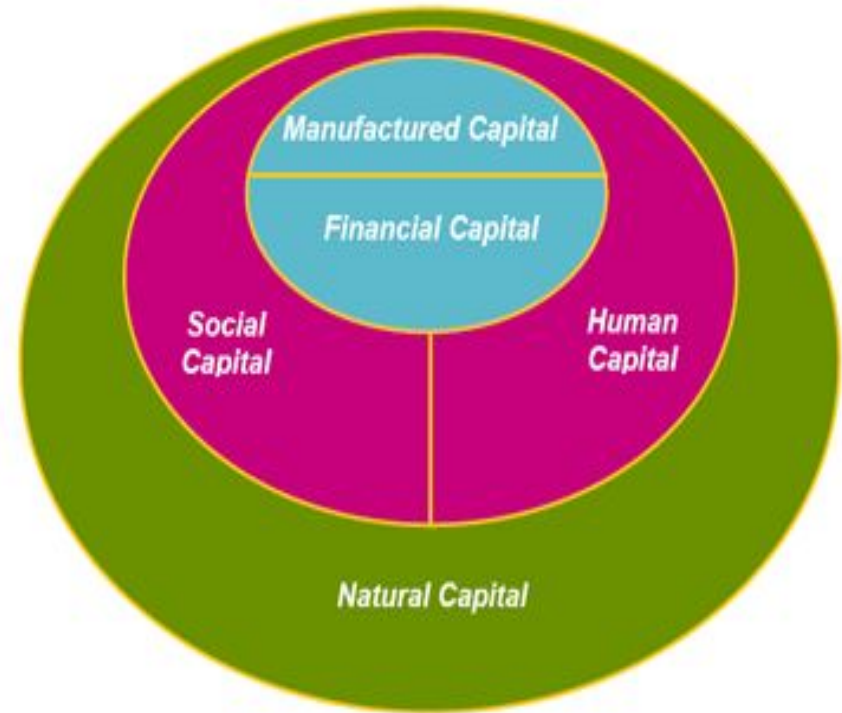
Polemic value of ideological representations in a situation when conclusions from simple models are unstable





Five capitals model

- Natural capital,
- Social capital,
- Human capital,
- Manufactured capital (physical + intellectual),
- Finance capital
- <http://www.forumforthefuture.org/projects/the-five-capitals>





- *Surplus profit method* (capitalization of goodwill) is separately identified among them as a method which the most correctly meets the conditions of the cost approach to business. It is connected with one more classification of non-material resources of the enterprise which allows to possess:
 - business goodwill (undivided intangible assets);
 - personal goodwill;
 - identifiable intangible assets





Regression analysis

- To reveal the relationship between intellectual capital investments and companies' financial performance, we carried out a survey of top managers of enterprises in St. Petersburg and Leningrad Region from January to May 2018. We selected sectors of shipbuilding industry with high level of innovation activities because these are the sectors where enterprises generally invest in intangibles, including technologies, research and development, human capital, brands etc.





Regression analysis

- Also we considered whether an intellectual capital management system or, at least, its elements exist within a company. The primary sample contained top managers of 87 companies.
- At the first stage it revealed that from 87 companies that formed the sample, only 40 private companies approved their interest in IC management and answered negatively at the question on implication of intellectual capital management methods in their practice. We included them at the sample for the second stage of the study.





Regression analysis

- Respondents were asked to state how they would estimate the investments in the following items of intellectual capital for the previous three years:
- 1 – investments in technologies
- 2 – investments in human capital
- 3 – investments in brands.
- The suggested answers were converted into points from 0 to 3, as illustrated in Table 3.





Regression analysis

Question	No investment s	Occasional investment	Several investments	Systematic investments according to the investment programm
1	0	1	2	3
2	0	1	2	3
3	0	1	2	3





Regression analysis

- To estimate financial performance, we asked respondents to express their opinion on the financial stability of their enterprises and proposed the following answers:
- 0 points – financial stability decreased
- 1 point – financial stability remained unchanged
- 2 points – financial stability increased. .





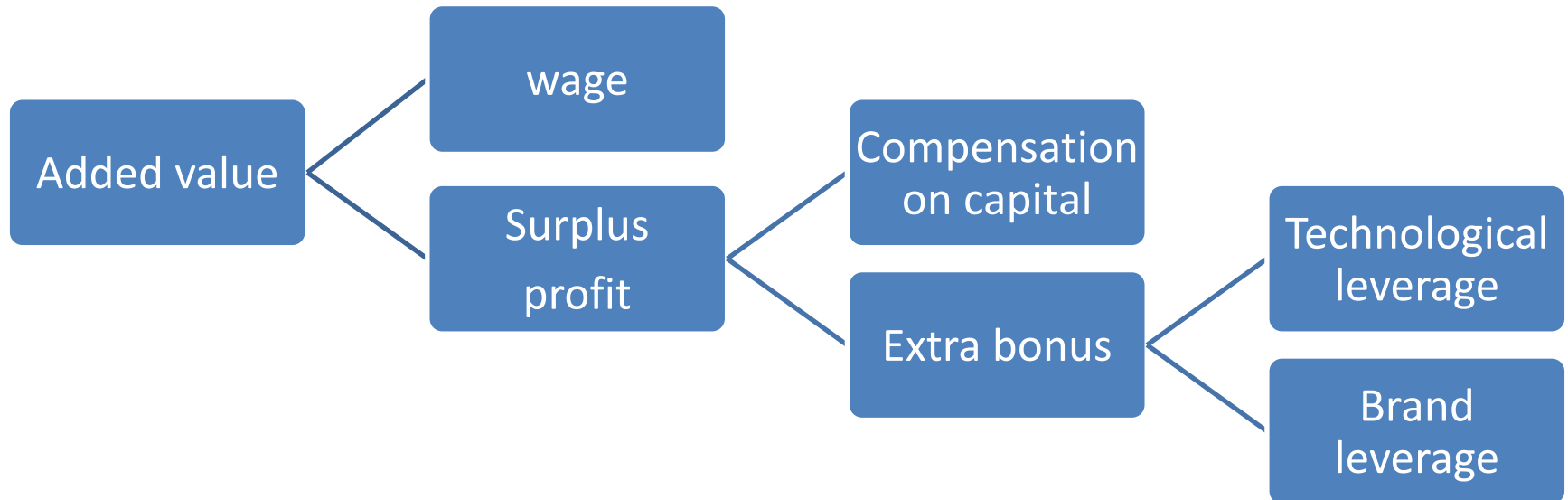
Regression analysis

- *Df* *Regression statistics*
- Multiple R 0,802399657
- R-squared 0,643845209
- Adjusted R-squared 0,614165644
- Std. error 0,855047741
- Multiple R 40
-
-
- Observations *SS* *MS* *F* *Df*
- Regression 3 47,58016 15,86005 21,69322 3,3811E-08
- Residuals 36 26,31984 0,731107
- Total 39 73,9
-
-
- *Coefficients* *Standard error* *t-statistics* *P-Value* *Lower 95.0%* *Upper 95.0%*
- Y – intersection0,792142948 0,370499 2,138042 0,039373 0,04073551 1,54355
- X 1 – technologies 0,555496875 0,148859 3,731693 0,000654 0,253596369 0,857397
- X 2 – human capital 0,337301126 0,239674 1,407335 0,167904 -0,148779439 0,823382
- X 3 – brands 0,699372159 0,225428 3,102414 0,003723 0,242182197 1,156562
-





The modified model of added value





Conclusion

- The dispute on the capital nature in modern conditions can be resolved by account on the different parties of balance the financial capital and the production capital including the physical capital, the natural capital and the intellectual capital
- The new essence of the surplus value is that intellectual capital becomes her source.
- In ideal model of fair strategic development the financial capital must invest the surplus income in development of technologies and respectively has to limit consumption
- The value of the intellectual capital can be estimated on the bases of surplus profit creation





Thank you for your attention
Your questions?

