

Methodological Appendix to the Paper “The Information Economy and the Labour Theory of Value” (published in the International Journal of Political Economy): The Information Sector and the International Standard Industrial Classification of All Economic Activities (ISIC)

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The empirical model used in this paper follows the assumption widely spread in Marxist theory that finance, insurance and real estate constitute unproductive realms of the capitalist economy. Marx argues that productive labour creates use-values that satisfy human needs and in capitalism take on the form of exchange-value and commodities. Real estate is an unproductive sector because rent can be generated without any labour. Once housing or a piece of land exists, it can be rented out. Financial capital's production process takes on the form $M-M'$, money results in more money through financial instruments such as loans, mortgages, financial derivatives, shares, etc. There is no commodity separate from money. This becomes evident when you think of a loan: You receive a sum of money that a bank lends to you. Over a specific period of time, you pay back the whole sum plus an interest that you pay over time from your salary. Given that there is no commodity separate from money involved and productive labour is in Marxian theory tied to the production of a new commodity, the realm of finance is often considered as being unproductive. It is therefore often excluded from calculations of productive labour (see Shaikh and Tonak 1994). The theoretical assumption that financial capital is not the result of productive labour can also be observed practical in financial crises: They emerge from financial bubbles that build up through processes that constitute a difference between the monetary profits attained from the sale of commodities produced by labour and market values the same companies selling these commodities achieve on financial markets. Large divergences between financial capital values and profits constitute a source of financial crisis. Marx (1894) speaks of financial capital as fictitious capital because it takes on artificial values that are decoupled from labour-values. From “time to time [...] flows of fictitious capital got out of hand to form speculative financial and commercial bubbles” (Harvey 2014, 239). The 2008 US housing market crisis that triggered a larger international economic crisis was the result of “fictitious capital run wild” (Harvey 2014, 33) because mortgages had been bundled together into derivatives that were traded as high-risk financial instruments.

Freeman (1998) uses input/output data from the UK National Office of Statistics that based on ISIC Revision 3 uses a highly aggregated distinction between 11 industries that does not allow focusing on the information sector in particular. The information industries are in these data supplied by the UK Office of National Statistics subsumed under the categories “real estate, renting and business activities”, “transport, storage and communication”, “manufacturing” and “other community, social and personal service activities”. So in ISIC Revision 3 the category “72 Computer and related activities” is part of K Real estate, renting and business activities. “642 Telecommunications” is part of “64 Post and telecommunications” that is again part of “I Transport, storage and communications” so that physical transport, communications and

postal services are merged together into a mobility sector that includes both physical and data transport. “22 Publishing, printing and reproduction of recorded media” (221 Publishing, 222 Printing and service activities related to printing, 223 Reproduction of recorded media) is part of the manufacturing sector “D Manufacturing”. “743 Advertising” is a subcategory of “74 Other business activities” that belongs to “K Real estate, renting and business activities”. Broadcasting and entertainment are merged as “92 Recreational, cultural and sporting activities” (921 Motion picture, radio, television and other entertainment activities, 922 - News agency activities, 923 - Library, archives, museums and other cultural activities, 924 - Sporting and other recreational activities) are part of “O Other community, social and personal service activities”. Given that statistical data tend to be highly aggregated and that disaggregation down to more detailed statistical levels is rare, it is based on ISIC Revision 3 rather difficult to calculate data for the information industries.

The United Nations Statistics Division introduced the ISIC Revision 4 in August 2008. The data that is available based on this classification is still limited in terms of countries and the available time period. At the time of analysis (January 2014), the UN’s Structural Analysis Database (STAN) Statistics Database provided data for 15 countries from 2000 until 2011 based on ISIC Rev. 4, whereas for Rev. 3 it held data for 35 countries from 1970 until 2009. Using the ISIC Rev. 3 data clearly poses advantages in terms of the available countries and time period, but it is impossible to disentangle the information sector data from other data. So for example for many countries there is only data for “C90T93 Other community, social and personal data”. The analysis of the information economy is interested in “C92 Recreational, cultural and sporting activities” that is not available separately, but only aggregated together with “C90 Sewage and refuse disposal, sanitation and similar activities”, “C91 Activities of membership organizations”, and “C93 Other service activities”. Similarly telecommunications is merged with postal services as “C64 Post and telecommunications”. If one is only interested in telecommunications, then no separate data is available.

ISIC Rev. 4 poses advantages for the analysis of the information economy. Its limit is that thus far only data for a few countries is available, that economically powerful countries are missing (for example China, Japan, the UK, Brazil, Russia, India, Canada, Australia, Spain, Mexico, Indonesia, Turkey), and that historical data has not been recoded. The advantage is however that the statistical aggregates are more user-friendly and ready to use for the analysis of the information economy. Another benefit is in this respect the introduction of a new sector “J Information and communication” that consists of the following statistical aggregates:

- 58 Publishing activities,
- 59 Motion picture, video and television programme production, sound recording and music publishing activities,
- 60 Programming and broadcasting activities,
- 61 Telecommunications,
- 62 Computer programming, consultancy and related activities,
- 63 Information service activities.

In addition, I have selected the following example sectors that are important for the analysis of the information economy:

73 Advertising and market research (part of 73 Professional, scientific and technical activities):

731 Advertising,

732 Market research and public opinion polling;

R Arts, entertainment and recreation:

90 Creative, arts and entertainment activities,

91 Libraries, archives, museums and other cultural activities,

92 Gambling and betting activities,

93 Sports activities and amusement and recreation activities.

Advertising is a communication service. Market research and public opinion are data collection services. Therefore arguably these two categories could be part of the information and communication sector.

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