

The financialisation-offshoring nexus and the capital accumulation of U.S. nonfinancial firms

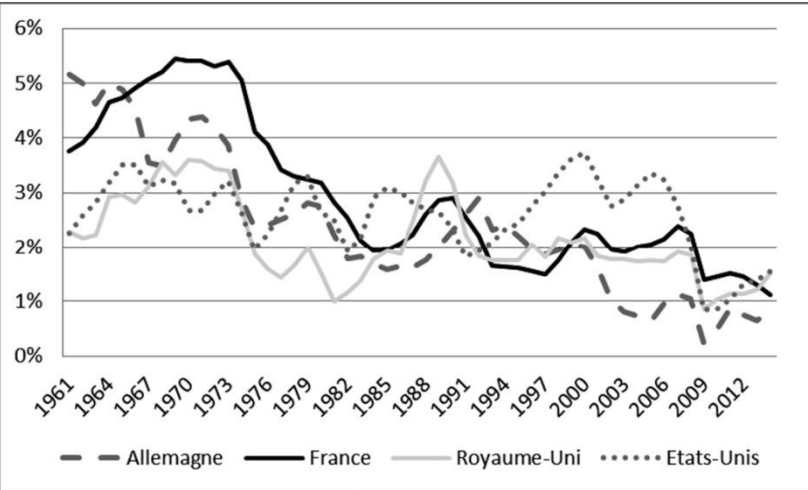
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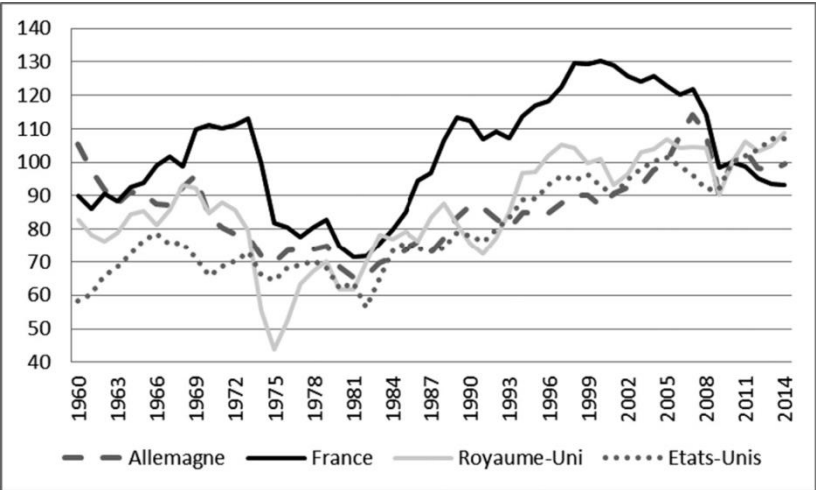
Econometrics EPOG – 19/09/2019

1. MOTIVATION: EXPLAINING THE WEAKENING PROFIT-INVESTMENT LINK

Rate of accumulation



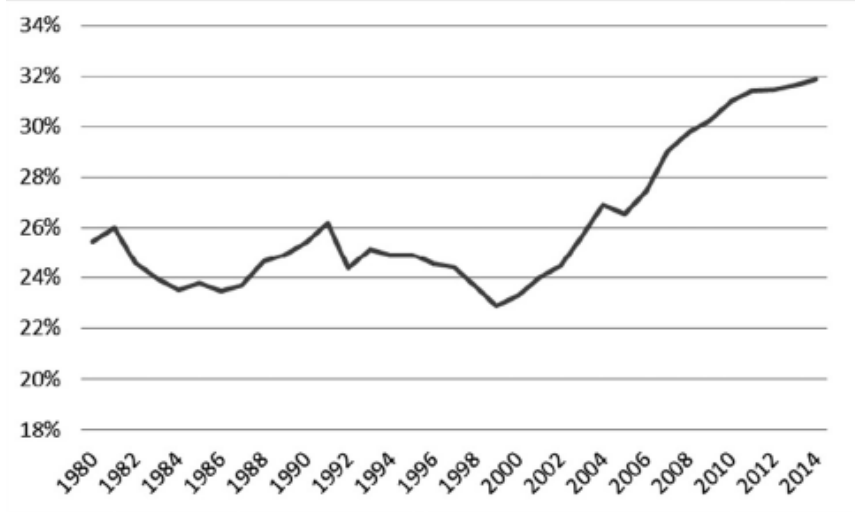
Profit rate



Investment in developed countries (%gdp)

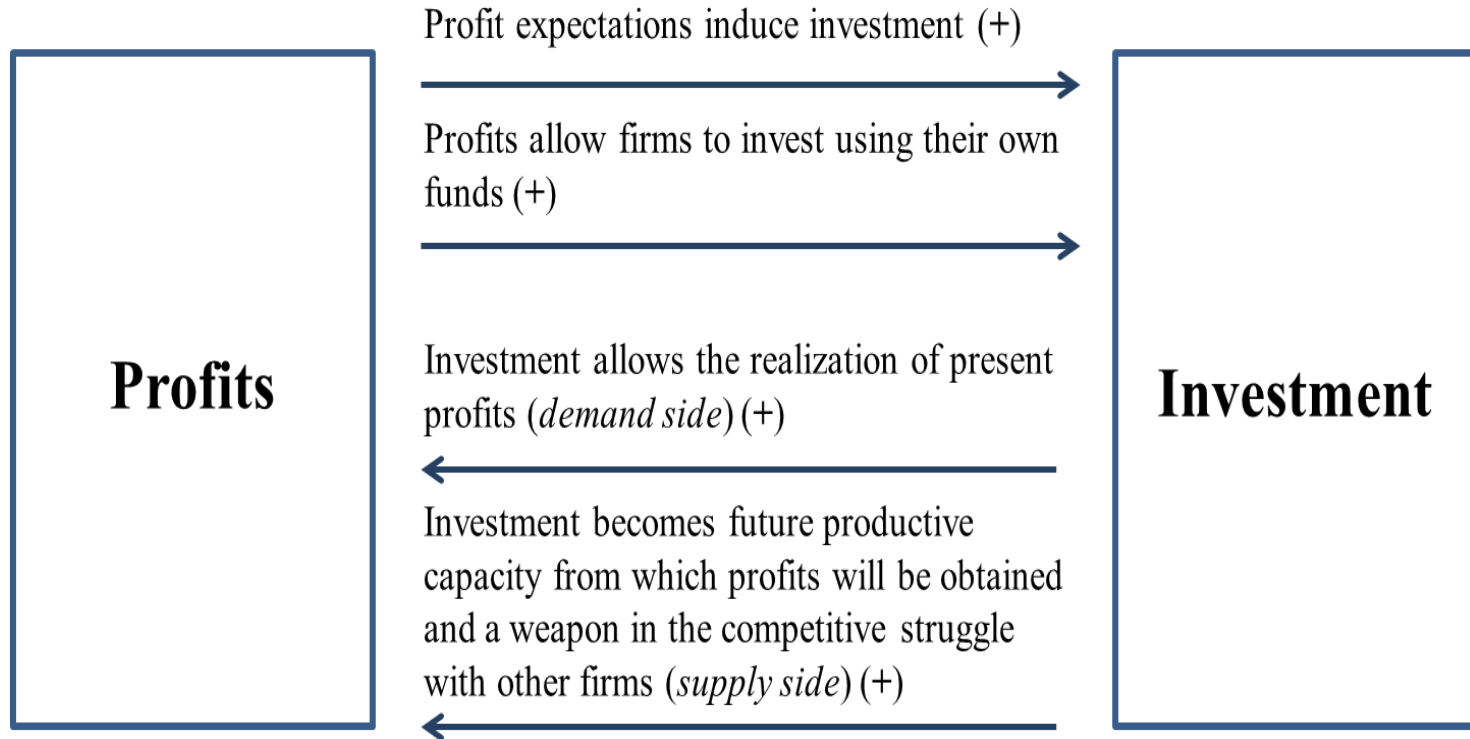


Investment in developing countries (%gdp)



Source: Auvray, Dallery, Rigot (2016)

Why a puzzle?

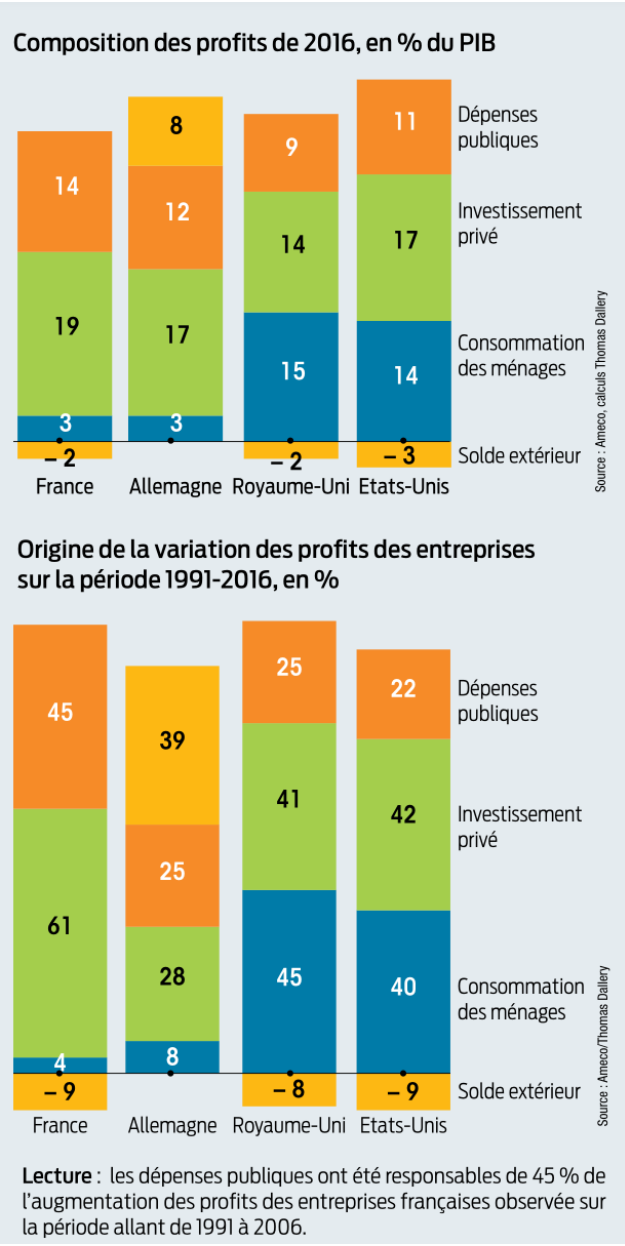


- Why are not firms investing in spite of high profitability?,*
- What are they doing with those funds?*
- Which alternative sources of effective demand compensate the reduction of investment at the aggregate level?*
- How can they remain profitable with their capacity to supply goods and one of their main weapons in competition diminished?*

1. MOTIVATION: EXPLAINING THE WEAKENING PROFIT-INVESTMENT LINK

- The solution for the puzzle points to the other sources of effective demand that allow to realize those profits at the **macroeconomic level**:
- $GNI_{MP} = C_W + C_\pi + I^g + G + X - M + FI_{A-H} - FI_{H-A}$
- $GNI_{MP} = W^n + T_W + \pi^n + T_\pi + D + T_{ind} - Z$
- $\pi^n = C_W - W^n + C_\pi + I^g - D + G - T_W - T_\pi - T_{ind} + Z + X - M + FI_{A-H} - FI_{H-A} = C_\pi + I^n + G^D + EXT - S_W$
 - capitalists' consumption (Cordonnier, 2006) and expenditure cascades (Behringer & van Treeck, 2015)
 - government deficits and external surpluses (Van Treeck, 2009).

Source: Ameco, calcul par Thomas Dallery (Alternatives Economiques, novembre 2017)

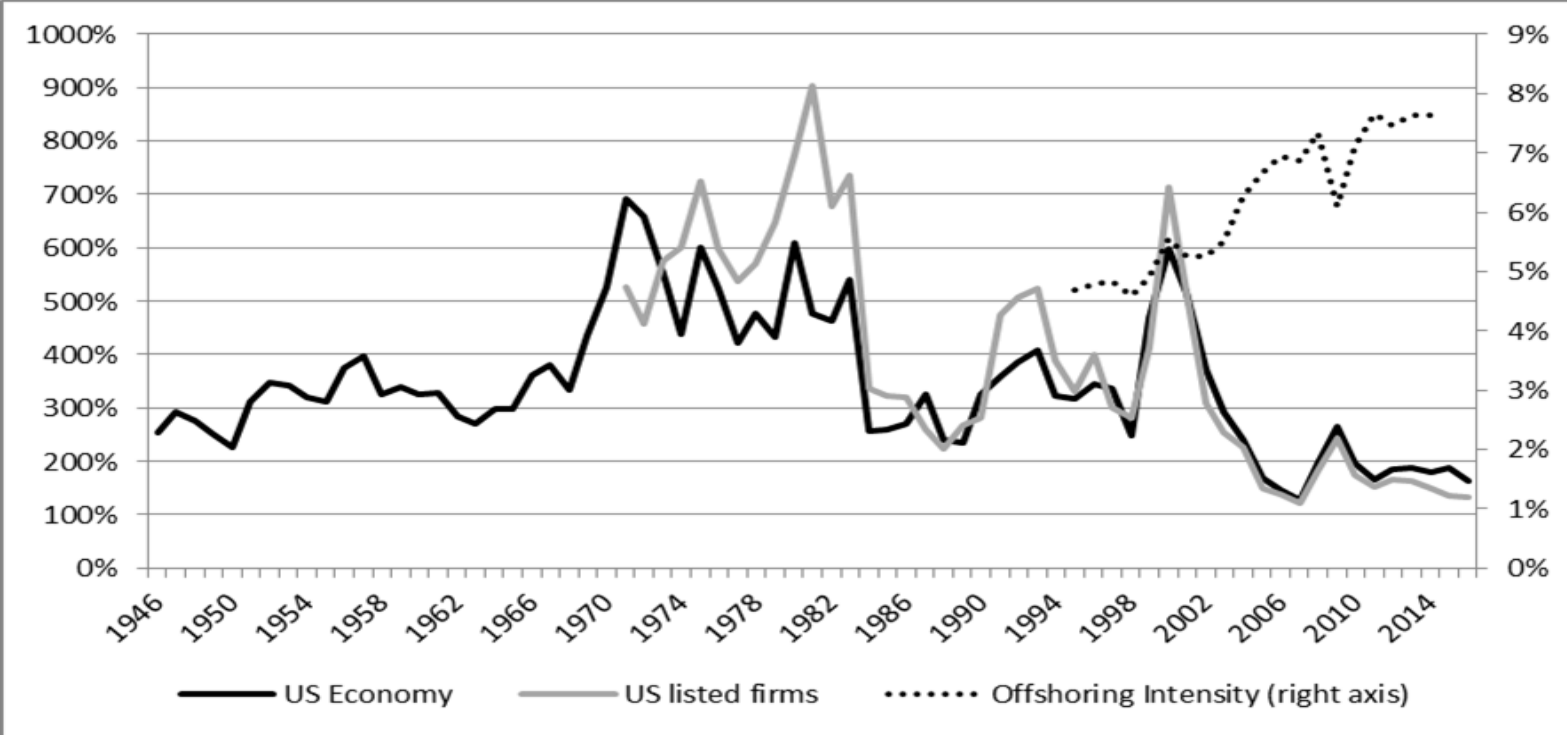


1. MOTIVATION: EXPLAINING THE WEAKENING PROFIT-INVESTMENT LINK

- At the **microeconomic level**, the 'investment-profit puzzle' is usually described as a consequence of the ***shareholder value orientation***: higher preferences for free cash flows and payouts rather than investment (Dallery, 2009; Lazonick & O'Sullivan, 2000).
 - Empirical studies (Barradas, 2017; Clévenot, Guy, & Mazier, 2010; Hecht, 2014; Orhangazi, 2008; Stockhammer, 2004; Tori & Onaran, 2018): ***negative correlation between financial payouts and real investment*** for different countries.

1. MOTIVATION: EXPLAINING THE WEAKENING PROFIT-INVESTMENT LINK

Sustainability of low investment and high payouts while ***today's firm capital accumulation is a prerequisite for tomorrow's profitability.***



Investment/Net Financial Payouts for the U.S. Economy and U.S. listed firms, and Offshoring Intensity

1. MOTIVATION: EXPLAINING THE WEAKENING PROFIT-INVESTMENT LINK



Larry Fink

BlackRock's CEO

The World's Largest Asset Manager - \$ 4600 billions

March, 2014, Larry Fink send a letter to CEOs of every S&P 500 companies to warning them about quick dividends and share buybacks in response to the “the short-term demands of the capital markets”. WSJ

Again in 2015, 2016, and 2017.

“Returning cash to shareholders should be part of a balanced capital strategy; however, when done for the wrong reasons and at the expense of capital investment, it can jeopardize a company’s ability to generate sustainable long-term returns.”

A short term performance is necessary, but companies have to “simultaneously make those investments – in innovation and product enhancements, capital and plant equipment, employee development (...) – that will sustain growth.”

1. MOTIVATION: EXPLAINING THE WEAKENING PROFIT-INVESTMENT LINK

- Orhangazi (2018)
 - **FINANCIALIZATION** (Crotty 2003, Stockhammer 2004, Orhangazi 2008, Hecht 2014)
 - **GLOBALIZATION/OFFSHORING** (Milberg and Winkler 2009, 2013)
 - **INTANGIBLE ASSETS** (Orhangazi 2018) : *“the increased reliance of the firms on intangible assets enable them to capture higher profits without a corresponding increase in investment”*
- Durand and Milberg (2019):
 - **GLOBALIZATION-INTANGIBLE ASSETS** link
 - The intellectual monopoly associated with intangibles assets is important to understand the polarization along GVCs and the ability of northern countries to benefit from higher level of value capture.
- This presentation:
 - **OFFSHORING-FINANCIALIZATION** link : financialisation (high dividends and low capital expenditures) because investment in tangible capital is no longer necessary.
 - This proposition is motivated by previous work done by Milberg (2008) and Milberg and Winkler (2013) who indicated that most of the gains associated with offshoring were used to sustain financialisation rather than investing in productive assets

1. OBJECTIVE ,HYPOTHESIS, AND CONTRIBUTION

- Objective

Measure the combined effect of financialisation and offshoring in capital accumulation of US NFCs between 1995 and 2011

- Hypothesis

The downsize and distribute strategy has been possible for firms belonging to industry highly involved in GVCs.

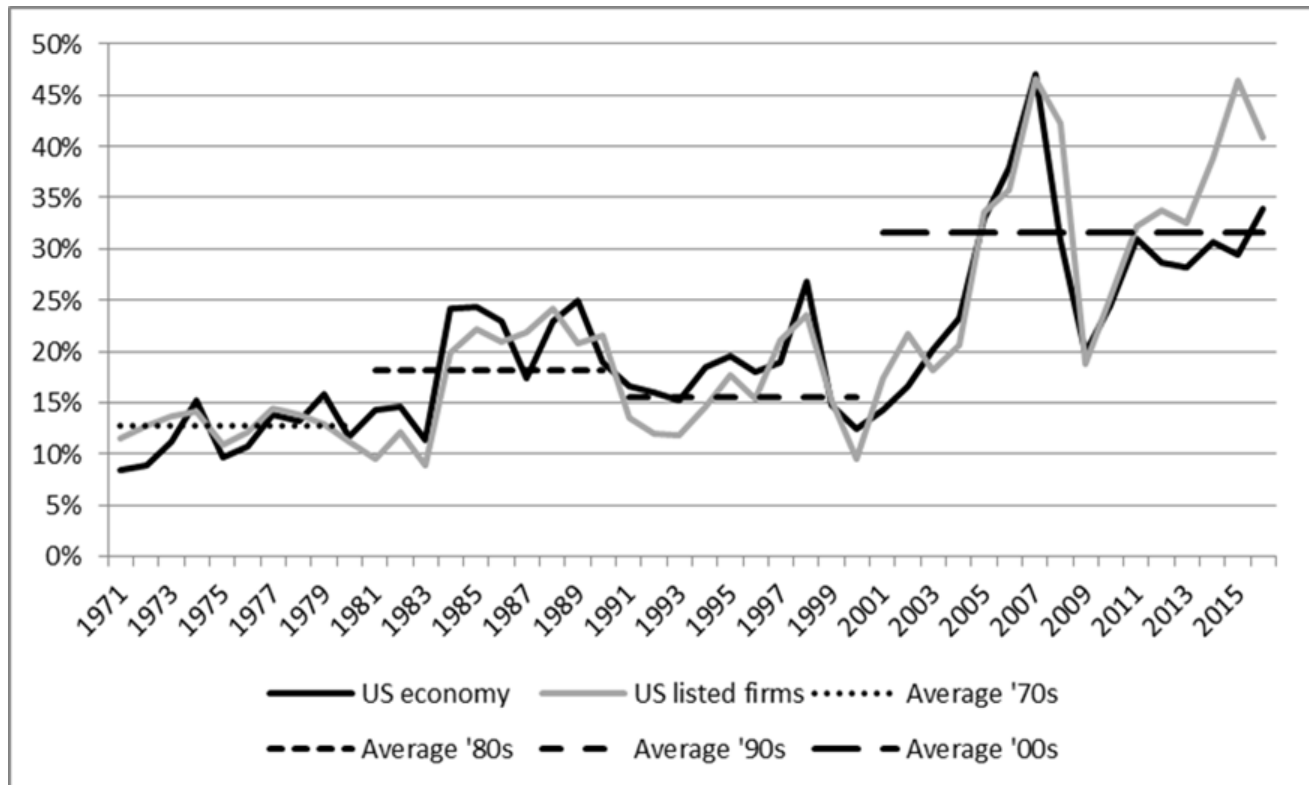
- Contribution:

- Offshoring (industry level) and capital accumulation (firm level)
- The negative correlation between financial payouts and investment in capital expenditures underlined by the literature is valid mainly for firms belonging to industries with high offshoring in non-core non-energy activities. Moreover, investment of firms in low offshoring sectors is not significantly correlated to their financial payouts.

2. FINANCIALISATION AND INVESTMENT

Investment negatively affected by two channels (Orhangazi, 2008):

- **Financial payouts** (interest expenditures, dividends and share buybacks).
- **Financial investment** which later reports an income.



Net financial payouts as percentage of operating surplus

Paper	Period	Data	Financialisation Variables	Effect on Investment
<i>Firm level studies</i>				
Orhangazi (2008)	1973-2003	Panel of U.S. nonfinancial firms	$(INT\ INC + DIV\ INC)/K$	Positive but non-significant for all and small NFC. Negative and significant for large NFC
			$(INT + DIV + STK\ REP)/K$	Negative and significant for all, large and small NFC
			$LT\ DEBT/K$	Negative and significant for all, large and small NFC
Demir (2009)	1991-2003	Panel Argentinian, Mexican and Turkish nonfinancial firms	$(INT\ INC + DIV\ INC)/FA$	Negative and significant
Hecht (2014)	1998 - 2008	Panel of Chinese, French, German, British, Indian, Japanese and U.S. nonfinancial firms (results for the financialisation specification, for the whole sample and the USA subsample, varied results for the other countries)	$(STK\ ISSUE - STK\ REP)/K$	Positive but non-significant for the USA. Positive and significant for the whole sample.
			$LT\ DEBT/K$	Positive but non-significant for the USA. Positive and significant for the whole sample.
			$(INT\ INC + DIV\ INC)/K$	Negative but non-significant for the USA and the whole sample.
			INT/K	Negative and significant for the USA and the whole sample.
			$DIV/SALES$	Negative and significant for the USA. Positive but non-significant for the whole sample.
Schoder (2014)	1970-2007	Panel of U.S. nonfinancial firms	$DEBT/A$	Varied results
			DIV/π	Negative and significant for 1971–1985, positive and non-significant for 1986–2007
			$DIV/MARKET\ VALUE$	Positive and significant for 1971–1985, negative and non-significant for 1986–2007
			$(DIV + STK\ REP)/K$	Positive and significant for 1971–1985 and 1986–2007
			$NON\ OPERATING\ INC/\pi$	Positive and significant for 1971–1985, positive and non-significant for 1986–2007
Sea et al (2016)	1990-2010	Panel of Korean firms	$DEBT/K$	Negative and significant
			$(DIV\ INC + INT\ INC)/K$	Positive and non-significant
			$(DIV + INT)/K$	Negative and non-significant
Davis (2017)	1971-2013	Panel of U.S. nonfinancial firms	$NON\ OPERATING\ INC/FA$	Negative and non-significant for all firms. Positive and significant for large firms
			$INT/DEBT$	Positive and non-significant for all firms. Negative and significant for large firms
			FA/A	Positive and significant for all firms and quartiles
			$DEBT/A$	Negative and significant for all firms and quartiles
			$STK\ REP/EQUITY$	Negative and significant for all and large firms
Tori and Onaran (2018)	1983 - 2013	Panel of UK nonfinancial firms	DIV/K	Negative and significant
			INT/K	Negative and significant
			$(INT\ INC + DIV\ INC)/K$	Negative and significant. Positive and significant for lower 25 percentile
			FA/K	Negative and significant

Paper	Period	Data	Financialisation Variables	Effect on Investment
Orhangazi (2008)	1973-2003	Panel of U.S. nonfinancial firms	$(INT\ INC + DIV\ INC) / K$	Positive but non-significant for all and small NFC. Negative and significant for large NFC
			$(INT + DIV + STK\ REP) / K$	Negative and significant for all, large and small NFC
			LT DEBT/K	Negative and significant for all, large and small NFC
Hecht (2014)	1998 - 2008	Panel of Chinese, French, German, British, Indian, Japanese and U.S. nonfinancial firms	$(STK\ ISSUE - STK\ REP) / K$	Positive but non-significant for the USA. Positive and significant for the whole sample.
			LT DEBT/K	Positive but non-significant for the USA. Positive and significant for the whole sample.
			$(INT\ INC + DIV\ INC) / K$	Negative but non-significant for the USA and the whole sample.
			INT / K	Negative and significant for the USA and the whole sample.
			$DIV / SALES$	Negative and significant for the USA. Positive but non-significant for the whole sample.
Davis (2017)	1971-2013	Panel of U.S. nonfinancial firms	NON OPERATING INC/FA	Negative and non-significant for all firms. Positive and significant for large firms
			INT/DEBT	Positive and non-significant for all firms. Negative and significant for large firms
			FA/A	Positive and significant for all firms and quartiles
			DEBT/A	Negative and significant for all firms and quartiles
			$STK\ REP / EQUITY$	Negative and significant for all and large firms

3. OFFSHORING AND INVESTMENT

- Offshoring: companies' purchases of intermediate goods and services from foreign providers at arm's length or the transfer of particular tasks within the firm to a foreign location, i.e. to foreign affiliates.
- Outsourcing: purchase of intermediate goods and services from outside specialist providers at arm's length either nationally or internationally

	Home nation	"Offshore"
In-house Domestic or foreign	Value of entirely in-house activities in home nation	Value of entirely in-house activities within owned foreign affiliates
Outsourcing Domestic or foreign	Value outsourced domestically in home nation	Value outsourced contractually from foreign providers

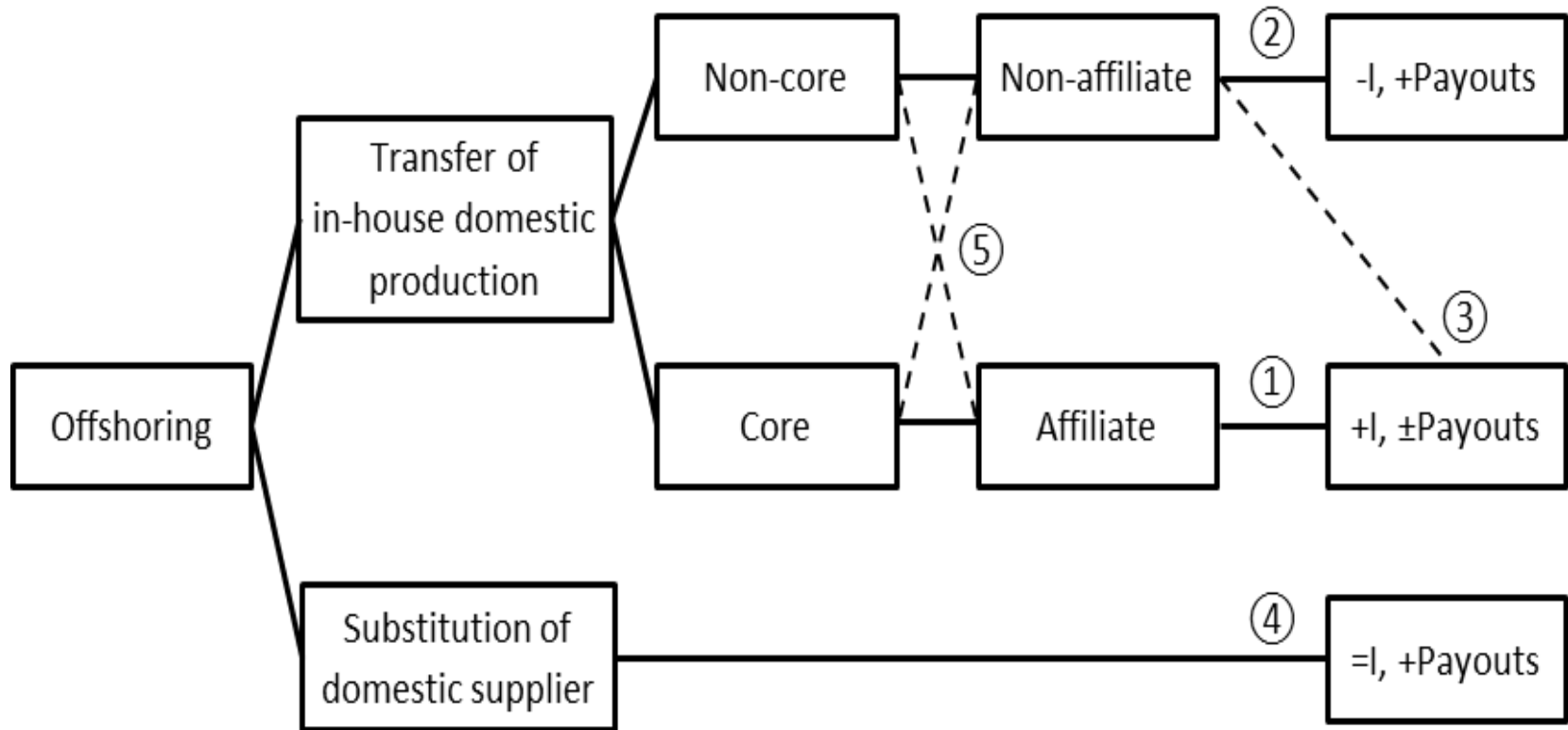
3. OFFSHORING AND INVESTMENT

- Maintaining mark-up in global competition:
 - Lowering prices: gain of productivity
 - Lowering wages & costs: wage stagnation & offshoring → the effective management of global value chains (Milberg, 2008).
- Management of global value chains:
 - Refocusing strategies (Gereffi et al., 2005; Lee & Gereffi, 2015; Schwörer, 2013; Serfati, 2008).
 - Establishing an asymmetric market structure (Milberg and Winkler, 2013; Chesnais, 2016; Gereffi, 1994) :
 - Monopsonic relation between various suppliers all over the world and the leading firms
 - Oligopoly power as sellers

4. FINANCIALISATION, OFFSHORING, AND INVESTMENT

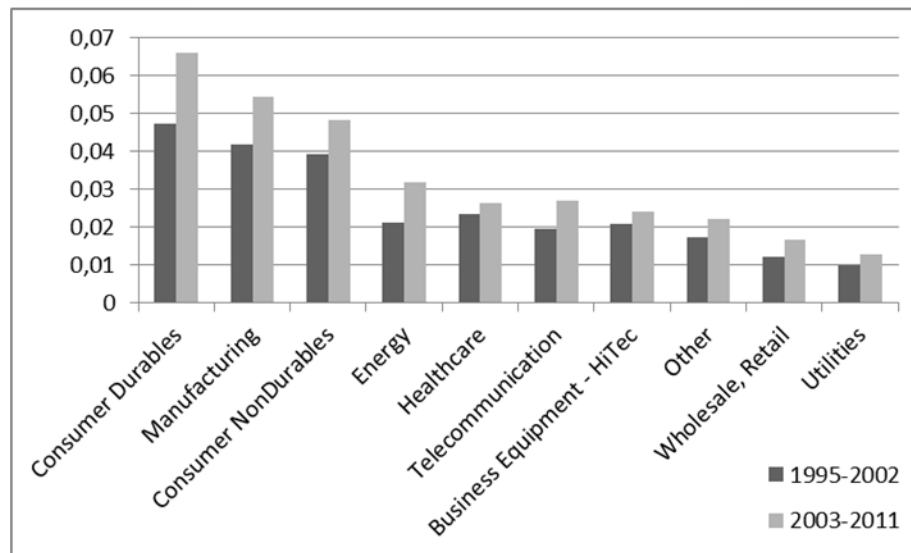
- Milberg's (2008): since firms own less productive facilities due to offshoring, profits are not reinvested in inputs, plants and equipment, but redirected to the purchase of financial assets and dividend payments which raises shareholder value.
- Milberg and Winkler (2013, p. 230) later showed, for different U.S. sectors between 1998 and 2006, that services offshoring increases financialisation in the USA.
- Soener (2015) analyses the apparel and footwear industry :
 - The more a firm divests from production, the more likely it will be financialised: branded marketers (firms that contract all production and sell their brands in retailers) have around 700% the level of financial assets, 300% the level of payouts and 430% the level of interest income compared with general retailers.
- Baud and Durand (2012) show, for the retail sector, that the development of international and financial operations contributed to its ability to provide high returns to shareholders.

4. FINANCIALISATION, OFFSHORING, AND INVESTMENT IN THE FIRM'S PERSPECTIVE

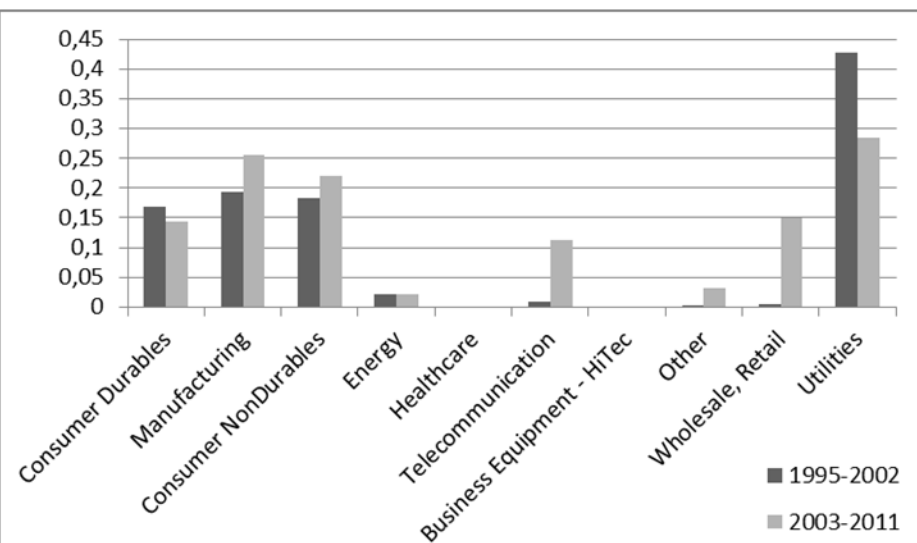


4. FINANCIALISATION, OFFSHORING, AND INVESTMENT

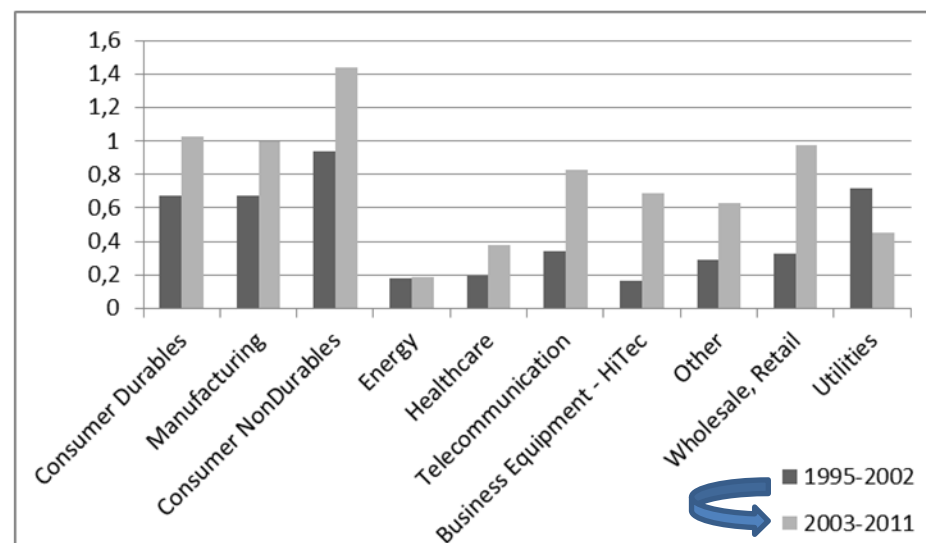
Non-core non-energy offshoring



Payout-to-investment ratio (median)



Payout-to-investment ratio (p75)



5. DATA AND ECONOMETRIC METHODOLOGY

Data

- Standard and Poors' Compustat Annual Industrial Database and the updated World Input–Output Database (WIOD) for the US.
- 1995-2011 (available WIOD information)
- NFCs (excluding SIC starting with 6)

Methodology

- Dynamic “Panel” Models (K-firms by T-time periods).
- Two-Step Difference General Method of Moments Estimation (GMM) with Instrumental Variables –Arellano-Bond-
- Useful for situations with “small T, large N” panels, fixed individual effects.
- Robustness check by collapsing instruments, non significant variables, different size, level of offshoring and periods.

METHODOLOGY

- The general form of the equation we are estimating can be summarized in the following way:

- $$y_{it} = \delta y_{i,t-1} + x'_{it}\beta + u_{it}$$

where

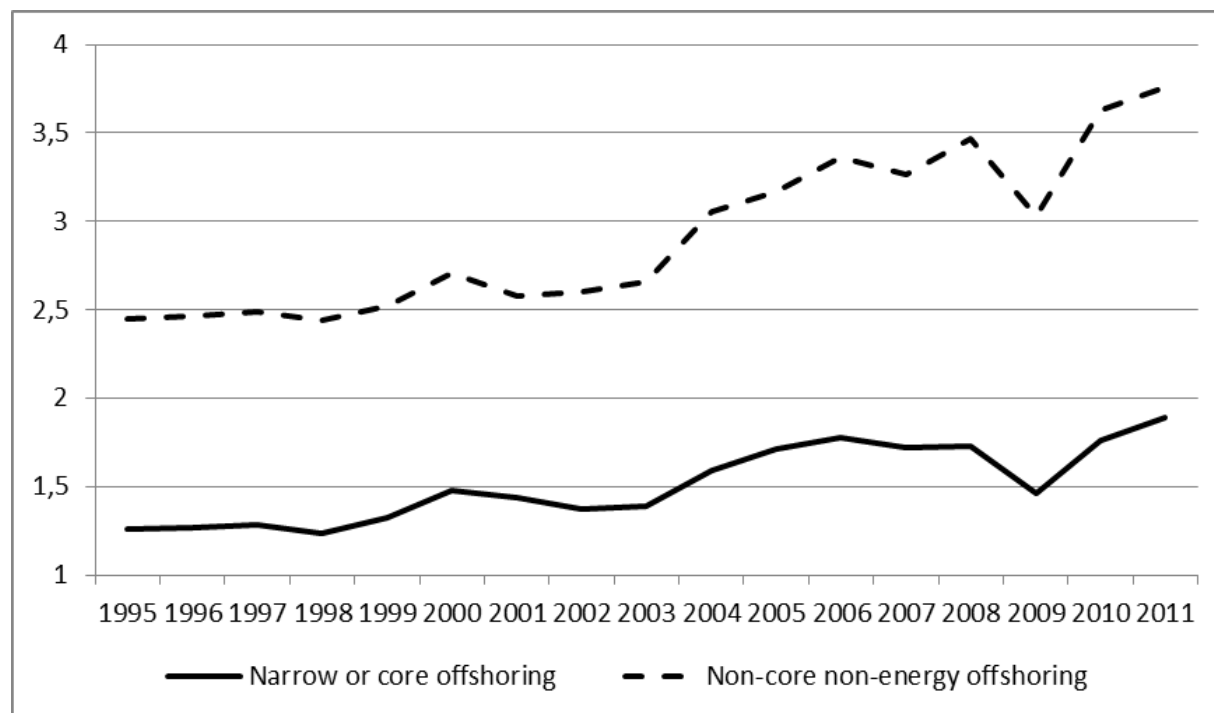
- $$u_{it} = \mu_i + v_{it}$$
- Both y_{it} and $y_{i,t-1}$ are a function of μ_i so $y_{i,t-1}$ is correlated with the error term making OLS estimator biased and inconsistent.

METHODOLOGY

- In the case of fixed effects estimator, the within transformation eliminates the μ_i but $(y_{i,t-1} - \bar{y}_{i,t-1})$, where $\bar{y}_{i,t-1} = \sum_{t=2}^T y_{i,t-1} / (T - 1)$, will still be correlated with $(v_{it} - \bar{v}_{it})$ because $y_{i,t-1}$ is correlated with \bar{v}_i since this average contains $v_{i,t-1}$. The Within estimator will be biased and its consistency depends upon T being large (Nickell, 1981).
- Instrumental variables (IV) methods can overcome endogeneity problems as long as the instrument chosen is also uncorrelated with the error term.
- GMM is a particular IV method where more than one instrument for each explanatory variable can be used. Moreover, rather than looking for instruments outside the model, GMM offers the possibility to use the lags of explanatory variables as instruments

5. DATA AND ECONOMETRIC METHODOLOGY

- Core activities offshoring of industry $i = \frac{II_{i,F}}{Y_i}$
 - ↗ Investment (firms keep core activities in subsidiaries)
- Non-Core activities offshoring of industry $i = \frac{\sum_{j \neq i} II_{j,F}}{Y_i}$
 - ↘ Investment (firms outsource non-core activities)



6. ECONOMETRIC REGRESSION

- Equation (1):

$$\begin{aligned}
 \ln\left(\frac{I}{K}\right)_{it} = & \alpha_0 + \alpha_1 \ln\left(\frac{I}{K}\right)_{i,t-1} + \alpha_2 \ln\left(\frac{\pi}{K}\right)_{i,t-1} + \alpha_3 \ln\left(\frac{S}{K}\right)_{i,t-1} + \alpha_4 \ln(Q)_{i,t-1} + \alpha_5 \ln\left(\frac{LONGDEBT}{K}\right)_{i,t} \\
 & + \alpha_6 \ln\left(\frac{INTEXP}{K}\right)_{i,t-1} + \alpha_7 \ln\left(\frac{INTINC}{K}\right)_{i,t-1} + \alpha_8 \ln\left(\frac{DIV}{K}\right)_{i,t-1} + \alpha_9 \ln\left(\frac{STKISSUE}{K}\right)_{i,t-1} \\
 & + \alpha_{10} \ln\left(\frac{STKREP}{K}\right)_{i,t-1} + \alpha_{11} \ln\left(\frac{NETDEBTISSUE}{K}\right)_{i,t-1} + \alpha_{12} \ln\left(\frac{INTERNF}{K}\right)_{i,t-1} + \gamma_{it} \\
 & + \sum_{t=1996}^{t=2011} \beta_t + \varepsilon_{it} \quad (1)
 \end{aligned}$$

- Equation (2):

$$\begin{aligned}
 \ln\left(\frac{I}{K}\right)_{ijt} = & \alpha_0 + \dots + \alpha_{13} \ln(COREOFF)_{j,t-1} + \\
 & \alpha_{14} \ln(NONCORENONENERGYOFF)_{j,t-1} + \gamma_{it} + \sum_{t=1996}^{t=2011} \beta_t + \varepsilon_{it}
 \end{aligned}$$

- The financialisation-offshoring nexus = Equation (2) for high and low level of NONCORENONENERGYOFF

6. ECONOMETRIC REGRESSION: EXPECTED SIGNS, FINANCIALISATION

- $\left(\frac{I}{K}\right)_{I_{t-1}} > 0, \left(\frac{I}{K}\right)_{\pi} > 0, \left(\frac{I}{K}\right)_{\frac{S}{K}} > 0, \left(\frac{I}{K}\right)_Q > 0, \left(\frac{I}{K}\right)_{\frac{LONGDEBT}{K}} \cong 0,$
 $\left(\frac{I}{K}\right)_{\frac{STKISSUE}{K}} > 0, \left(\frac{I}{K}\right)_{\frac{NETDEBTISSUE}{K}} > 0, \left(\frac{I}{K}\right)_{\frac{INTERNF}{K}} > 0$
- $\left(\frac{I}{K}\right)_{\frac{INTEXP}{K}} < 0, \left(\frac{I}{K}\right)_{\frac{DIV}{K}} < 0, \left(\frac{I}{K}\right)_{\frac{STKREP}{K}} < 0$ (*financial payout channel*)
- $\left(\frac{I}{K}\right)_{\frac{INTINC}{K}} \cong 0$ (*financial investment channel*)

6. ECONOMETRIC REGRESSION: EXPECTED SIGNS, OFFSHORING

$$\left(\frac{I}{K}\right)_{COREOFF}, \left(\frac{I}{K}\right)_{NONCORENONENERGYOFF}$$

- >0 : the NFC uses the funds for internal growth
- $=0$: the NFC does not use the funds for internal growth
- <0 : the NFC not only does not use the funds for internal growth but also is further downsizing the company.
- Based on the fact that non-core activities tend to be contracted at arm-level basis and core activities are maintained within the firm, we expect + sign for core and – for non-core.

7. RESULTS

○ Financialization:

- negative and significant values for **dividends**.
- negative and significant values for **share buybacks** only for large firms (defined as the upper median for assets).

○ Offshoring:

- **NONCORENONENERGYOFF** has negative and significant value for NFC.
- **COREOFF** has a positive and significant value for NFC and big NFC.

○ Financialization-Offshoring nexus:

- **Dividends** are significant only for high offshoring sectors (for all, large, and small firms).
- **Share buybacks** are significant only for high offshoring sectors (for all firms).

8. ROBUSTNESS CHECKS

- Two sub-periods, 1995-2002 and 2003-2011
 - Negative and significant effects of dividends and stock repurchases in 1995-2002
 - Dividends only are significant in 2003-2011.
- Non-linearity between offshoring and financialisation (four quartile of offshoring):
 - Negative and significant effects of dividends or stock repurchases in the two top quartiles
 - Non significant for the bottom 25%-50%
 - Share buybacks negative and significant for the bottom 25% (utilities and retail and trade sectors)
- Reducing the number of instruments
- Dropping nonsignificant variables
- Computing alternative size for firms (upper and lower 25%)
- Financialisation : The negative effect of **stock repurchases** on investment for **large firms** is significant in **eight cases out of eight**.
- Financialisation-Offshoring nexus: the negative elasticities of
 - **dividends** are significant in **5/5**,
 - **stock repurchases** are significant in **4/5** (non-significant for the 2003-2011 period).

9. CONCLUSIONS, MAIN FINDING, AND PERSPECTIVES

- Firms belonging to industries with high level of non-core offshoring tend to be more financialized.
- Cutting off the financial payout channel of financialisation is not enough to promote real investment because there is still other leakage.
- Linking financialisation, offshoring, and intangible assets.