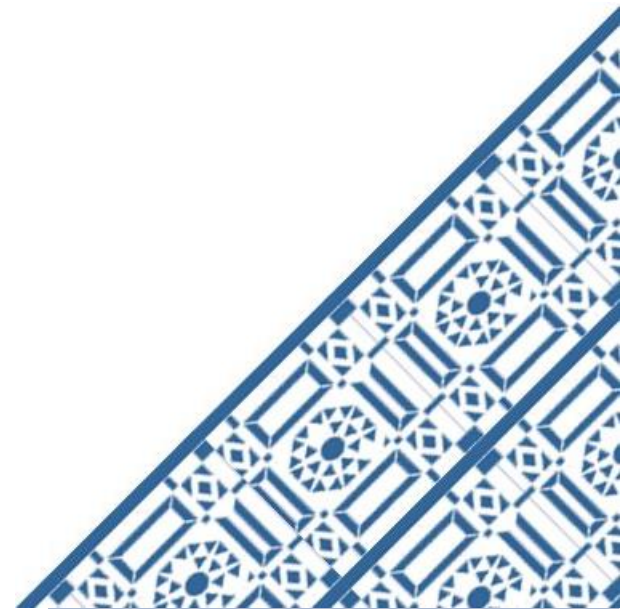# A supermultiplier demand-led growth accounting analysis applied to the Spanish economy (1998-2019)

Hector Labat (Université Sorbonne Paris Nord and UFRJ)

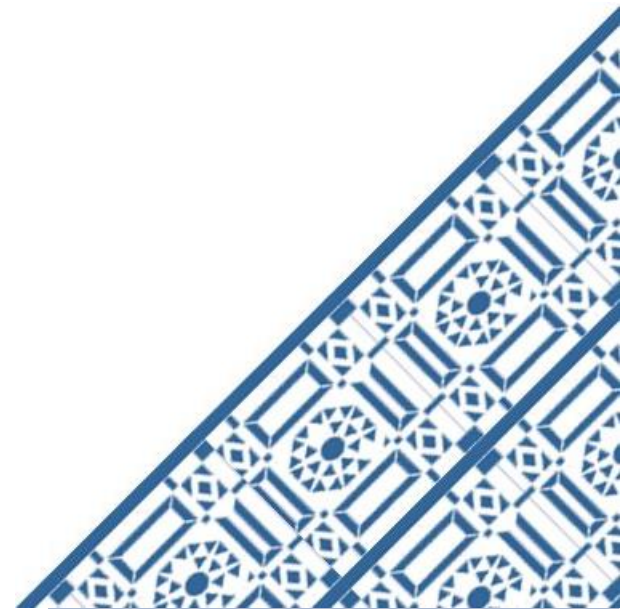Ricardo Summa (UFRJ and visiting at IPE Berlin 2021-2022)

IPE Online Workshop

October, 2022

Outline

- Introduction
- Supermultiplier theory and demand-led growth accounting
- Results
  - General Results
  - Three phases of growth
- A discussion with the literature
- Concluding remarks

- Demand-led growth:

  - Central to Post-Keynesians (Lavoie, 2014, Hein, 2023)

- Applied by:

  - Growth regimes (Hein, 2011, Hein and Martschin, 2021)

  - Drivers of growth (Kohler and Stockhammer, 2021).

  - CPE (Baccaro and Pontusson, 2016)

  - Supermultiplier demand-led growth accounting (Freitas and Dweck, 2013)

Introduction

- Aim of the paper:

    - Demand-led growth accounting contribution to analyze the **Spanish Economy**:

        - Advanced economies (Morlin et al., 2022); LAC (Passos and Morlin, 2022); BRICS (Campana et al., 2022);

        - Portugal (Bastos and da Silva Porto, 2016); Brazil (Freitas and Dweck, 2013; Haluska, 2021); US (Pariboni and Girardi, 2016, Barbieri-Goes, 2022);

    - Methodological contribution:

        - To include consumption out of public transfers (Haluska, 2021) and out of public wages (Serrano and Pimentel, 2019) as sources of public autonomous demand.

- Compare our results with other interpretations of the Spanish Economy performance in the 1998-2019.

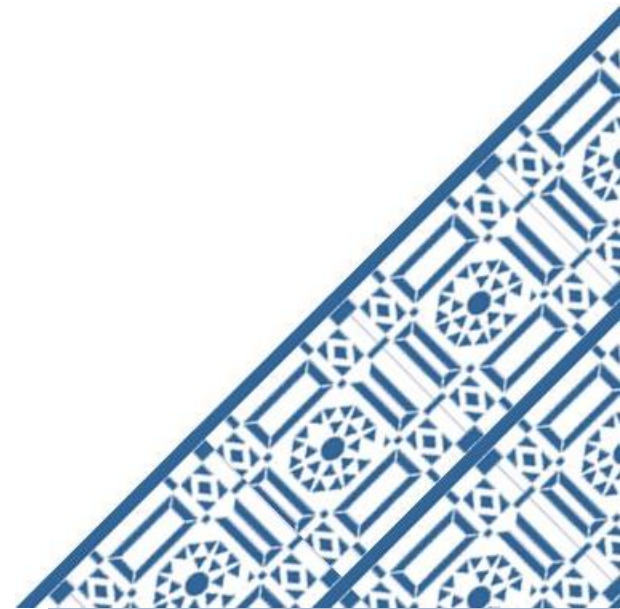# Supermultiplier demand-led growth accounting

- Supermultiplier demand-led growth accounting:

    - Demand-led growth accounting:

        - Alternative to supply-side growth accounting (Solow, 1975, Hulten, 2010)

        - Assume that growth is demand-led and decompose growth in terms of contribution of each component of demand.

- Supermultiplier: **'theoretically informed decomposition'**

    - Induced and autonomous components:

        - systematically related or not to the **production process**:

            - Consumption out of contractual wages and capacity creating business investment as induced components of demand

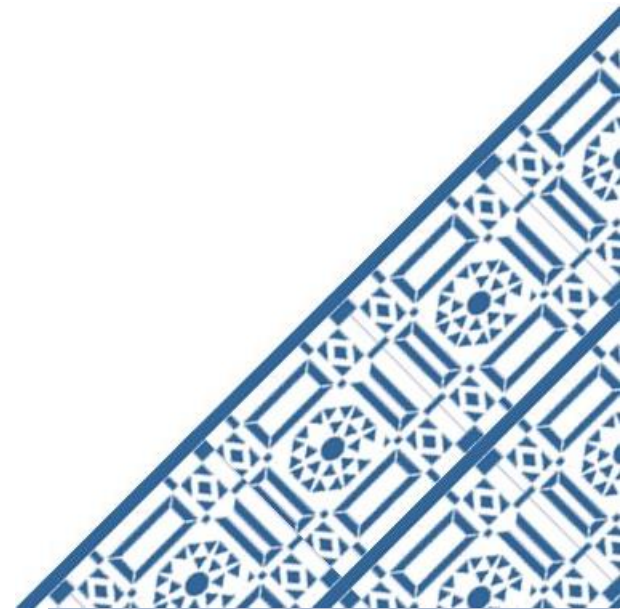   - Other components as autonomous demand.
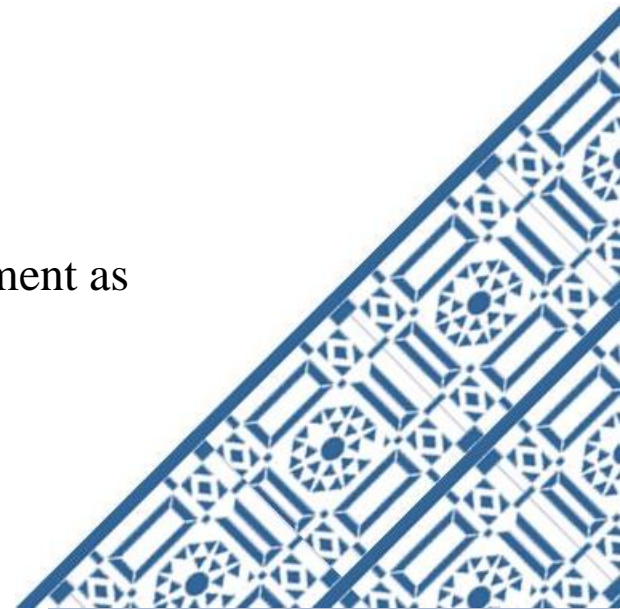
- Methodology of the Supermultiplier demand-led growth accounting:

  - Freitas and Dweck (2013)

- Output is equal to autonomous demand times supermultiplier:

  - $Y = \left[\frac{Z(1-m)}{1-(1-m)(c\omega(1-t)+h)}\right]; Z = C_A + I_A + G + X$

- Decomposition:

  - Growth rate of components of "autonomous demand" (given the supermultiplier) and growth rate of components of the "supermultiplier":

Supermultiplier demand-led growth accounting

- Methodology of the Supermultiplier demand-led growth accounting:

  - Incorporate Consumption out of public transfers as Haluska (2021)

  - Incorporate Consumption out of public wages (Serrano and Pimentel, 2019)

- Both sources are considered autonomous to the production process;

- Public wages:

  - Direct effect as part of government consumption;

  - Indirect effect as a "transfer" for the public sector to households

    - Average propensity to consume → consumption;

  - Supermultiplier effect over this consumption;

    - Wage share of the private sector.

- Three phases of growth:

  - Boom 1999-2007,

  - Recession 2008-2013*

  - Recovery 2014-2019

- Demand-led growth of Spain is decomposed into:

  - Contributions of "Autonomous demand" and "Supermultiplier"

  - Net Contributions of institutional sectors: Public, Private and External sectors

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GDP	**3.69%**	**-1.09%**	**-0.87%**	**-1.20%**	**2.59%**	**2.09%**
Public expenditures	**2.00%**	**0.36%**	**3.45%**	**-1.18%**	**0.87%**	**1.25%**
Public entities' demand	1.28%	-0.34%	1.53%	-1.27%	0.30%	0.57%
Transfers	0.50%	0.65%	1.44%	0.26%	0.45%	0.53%
Public wages	0.23%	0.04%	0.47%	-0.17%	0.12%	0.15%
Private expenditures	**1.08%**	**-1.26%**	**-2.34%**	**-0.71%**	**0.73%**	**0.35%**
Consumption credit	0.36%	-0.49%	-1.05%	-0.20%	0.41%	0.14%
Private residential Investment	0.69%	-0.77%	-1.39%	-0.47%	0.28%	0.18%
Other autonomous investment	0.03%	0.00%	0.09%	-0.04%	0.04%	0.02%
External expenditures	**1.73%**	**0.56%**	**-1.88%**	**1.78%**	**1.55%**	**1.36%**
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Private wage share	-0.30%	-0.31%	-0.40%	-0.26%	0.04%	-0.21%
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Propensity to import	-1.52%	1.16%	4.20%	-0.36%	-0.60%	-0.54%
Wage taxation	0.01%	-0.15%	0.10%	-0.28%	0.12%	0.00%
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- Exports and public sector expenditures have the most important contribution to autonomous demand (also net contribution of these sectors);

- Stability to growth of the autonomous demand provided both by the component's "exports" and "consumption out of public transfers and public wage";

- Downward trend of the supermultiplier, which contributed negatively to growth in the whole period;

  - Private wage share and weak bargaining power of workers (Stirati & Meloni, 2021, Muñoz de Bustillo & Pérez, 2007, Blanco, 2004, Uxo et al., 2016)

  - Upward trend of the propensity to import (Gandoy, 2017, Myro, 2018, Bussière et al., 2013)

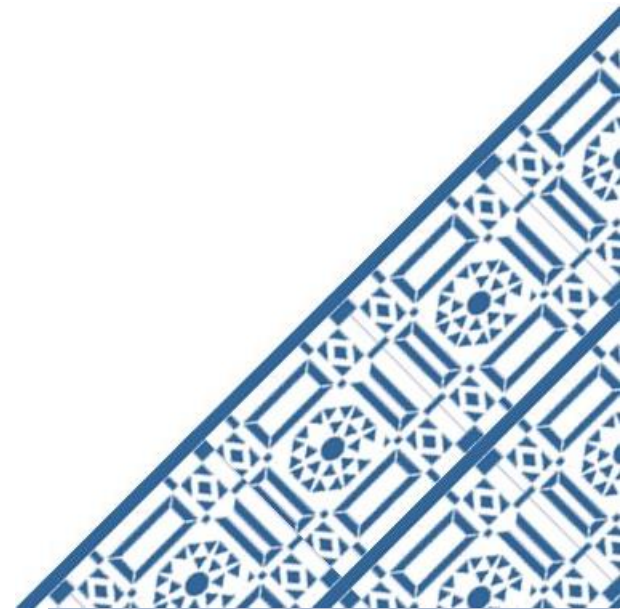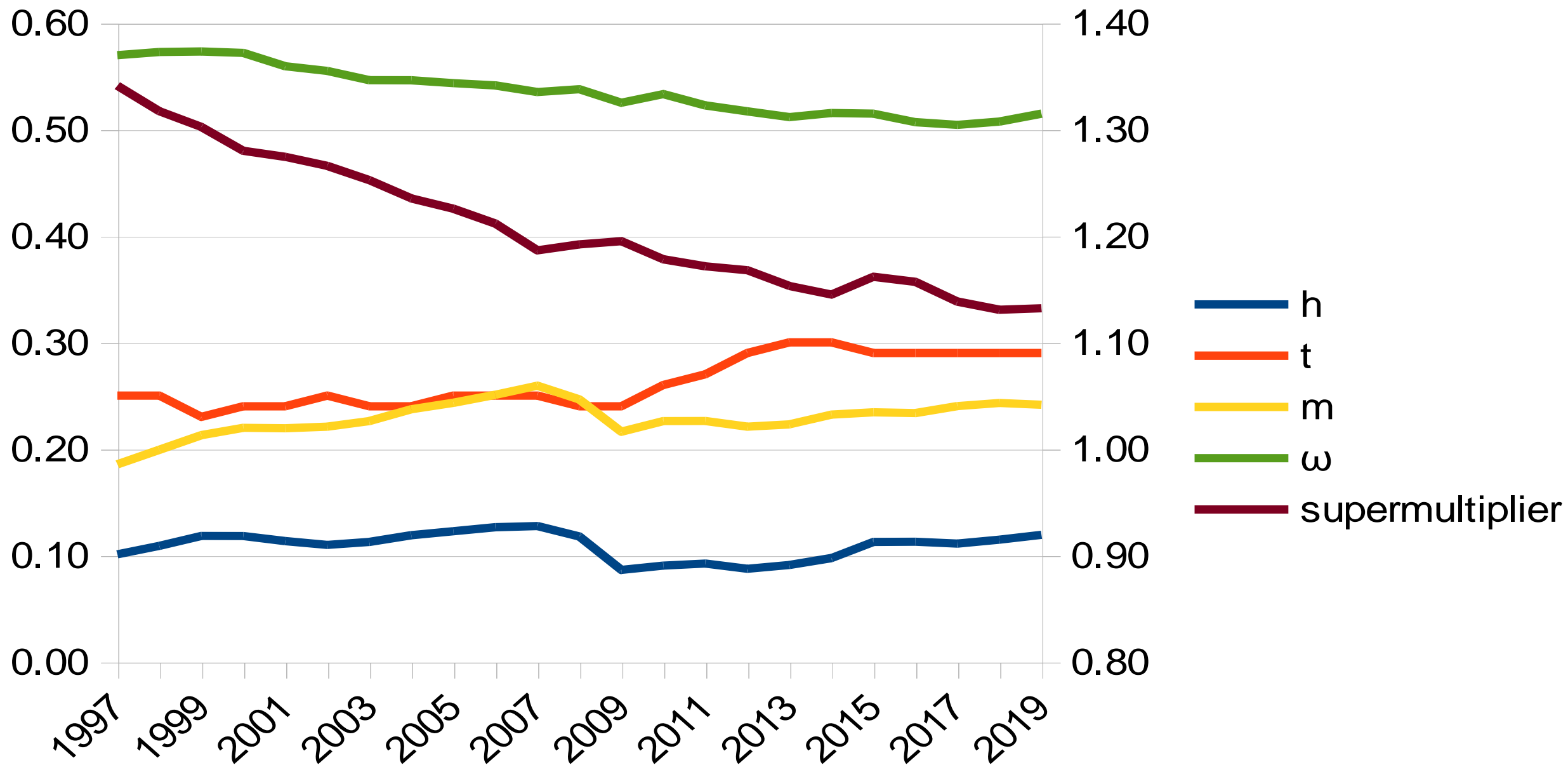 - Investment share and growth (Girardi and Pariboni, 2020, Perez-Montiel and Erbina, 2020)
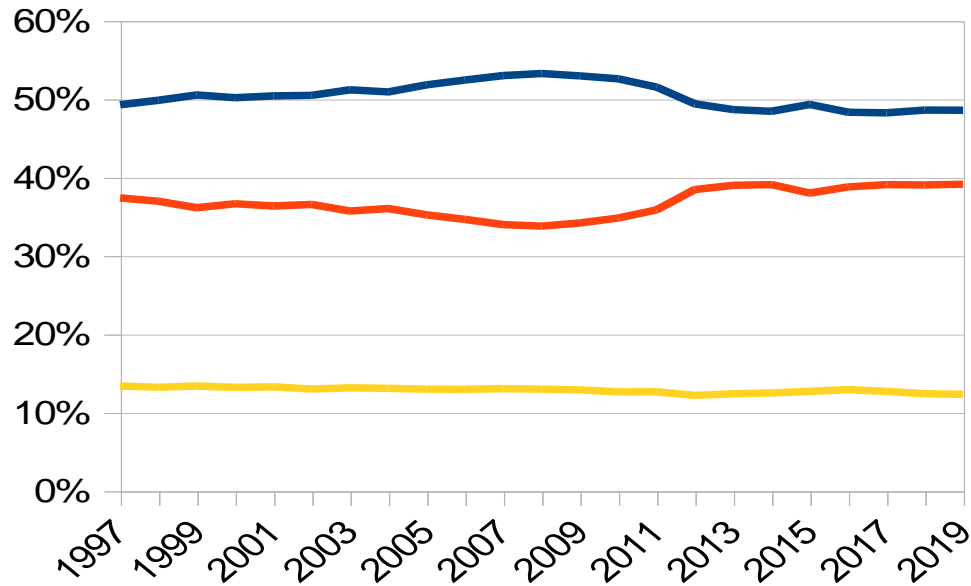
Public entities' consumption and investment

Households' consumption out of transfers

Households' consumption out of public wages
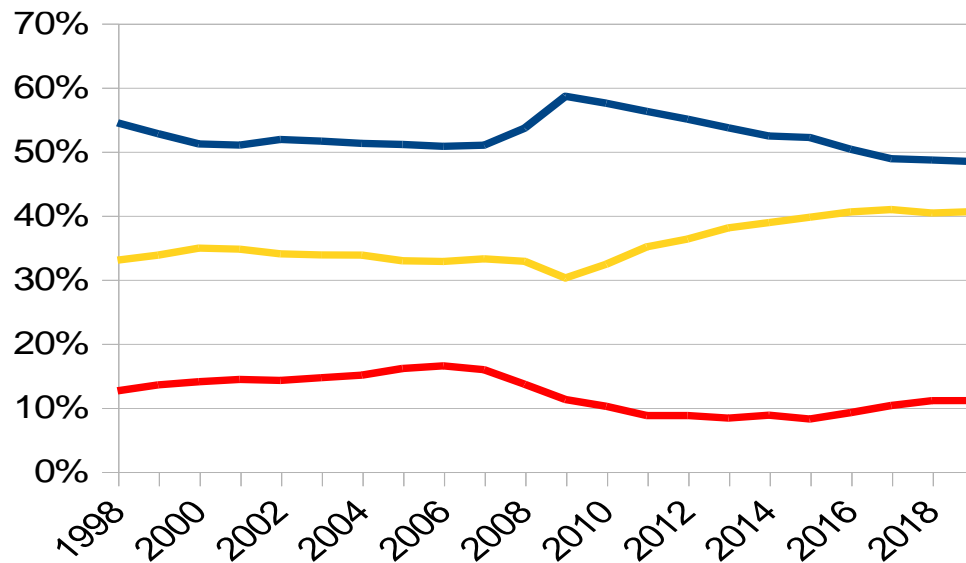
Public demand
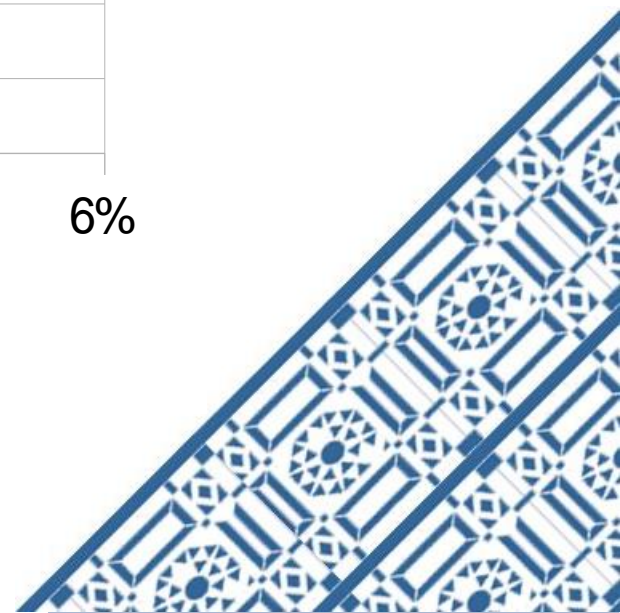
Private demand

External demand

Three phases of growth
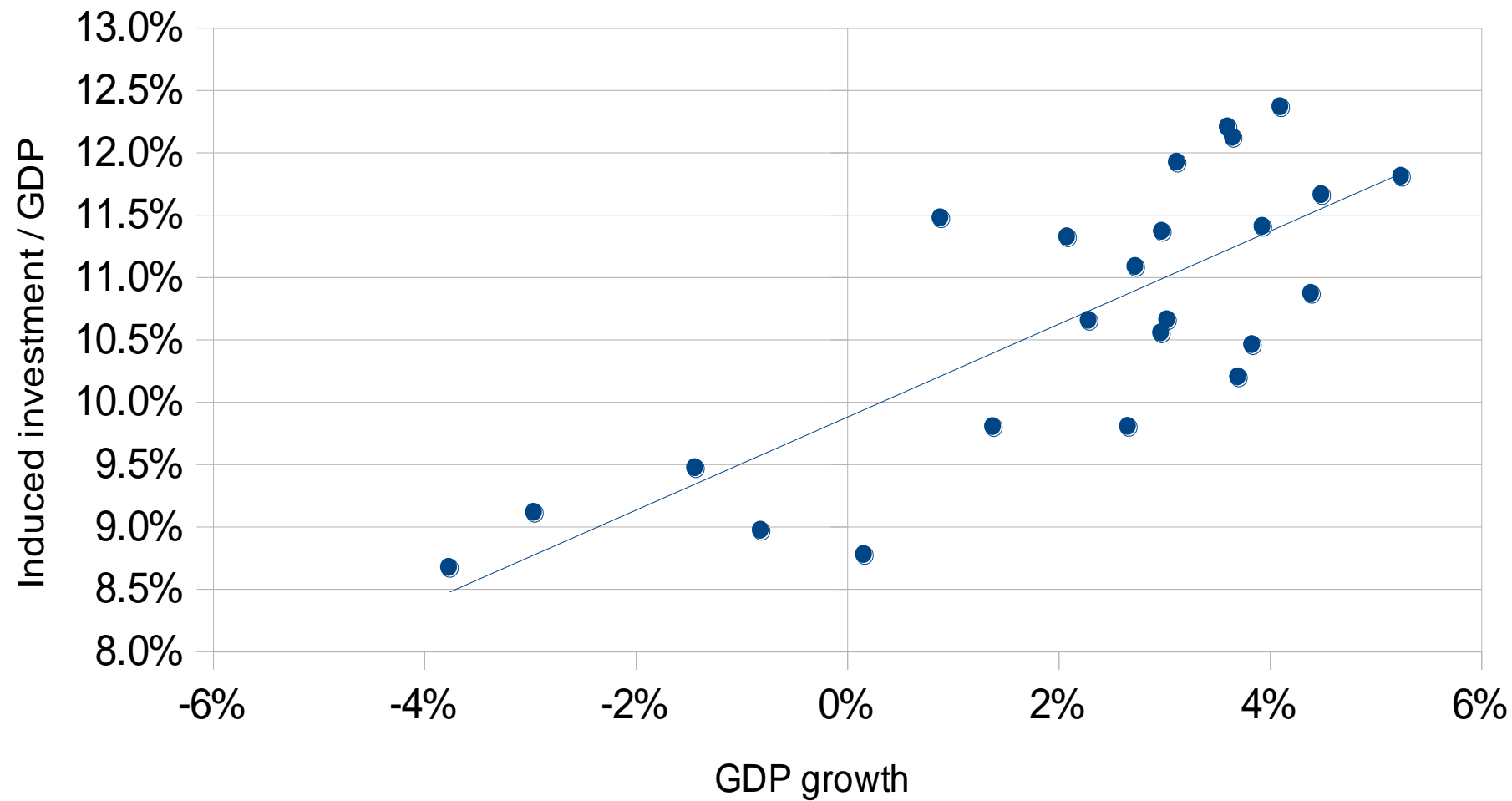
- 1998-2007: Boom

    - Public sector: most important net contribution to growth, followed closely by private demand and then external sector, but all of them positive contributions.

    - Autonomous demand growth was driven mainly by public spending and external demand, and then private demand (mainly residential investment)

- Supermultiplier contributed strongly to reduce growth (mainly with imports)

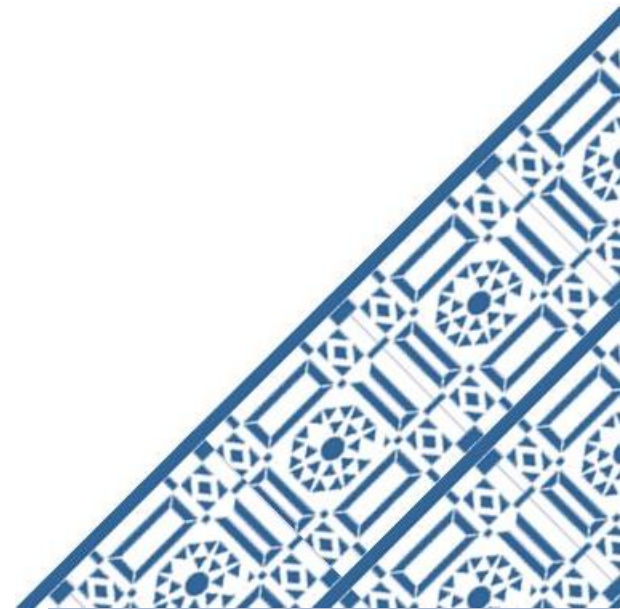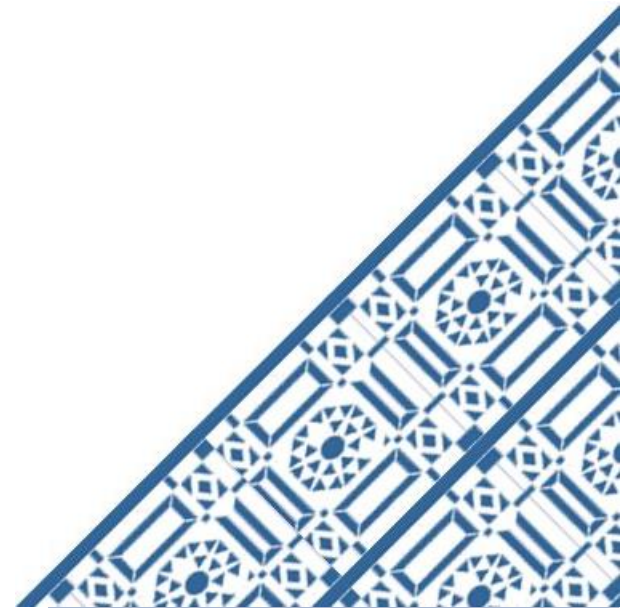|	**1998-2007**	**2008-2013**	2008-2009	2010-2013	**2014-2019**	**1998-2019**
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Three phases of growth

- 2008-2013: Crises and recession

  - Overall: strong negative contribution of private sector + moderate negative contribution of public sector, with positive contribution of the external sector.

  - 2008-2009: collapse in private sector demand and exports, not worse because of public sector (transfers + direct demand).

  - 2010-2013: fall in public sector net contribution (austerity), recovery of exports but not private sector demand.

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- 2014-2019: Recovery to more moderate growth

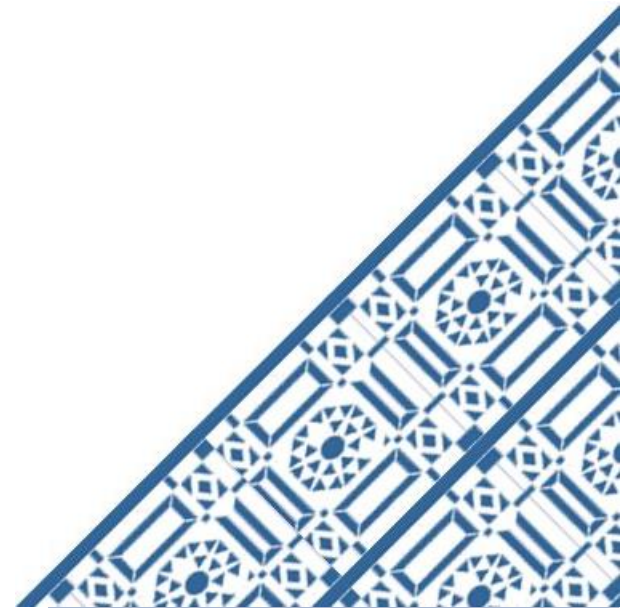 - Positive contributions of public, external and private demand.

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- 1998-2007: Boom

- Authors gave much emphasis on residential investment boom (Bank of Spain, 2004, Storm and Naastepad, 2015, Hein and Martschin, 2021, Rodríguez & Bustillo, 2008; Tilford & Whyte, 2011, Stockhammer, 2016, Febrero & Dejuán, 2009, Febrero et al., 2019)

- 'Debt-led private demand (boom)': Hein, 2019, Hein and Martschin, 2020, Hein et. al, 2021

- Main contributions to growth: public sector, and then private sector.

  - Even with surplus primary balances (Banco de España, 2017, Malo de Molina, 2014b; Ortega & Peñalosa, 2012, Hein and Martschin, 2021, Kohler and Stockhammer, 2021)

- Positive (but small) contribution of external sector

  - Even with negative net exports (Bank of Spain,2007, Hein and Martschin, 2021)

A discussion with the literature

- 1998-2007: Boom

- Direct vs indirect effects of residential investment:

    - Increase in tax followed by increase in public spending are expansionary a la Haavelmo (Serrano and Pimentel's, 2019)

    - Public and external demand and possible effects on households' disposable income to debt to continue this process of residential investment and autonomous consumption (Pariboni, 2016, Freitas and Christianes, 2020, Pedrosa et al. 2021)

- 2008-2013: Crises and recession

- Support the importance of the public sector consolidation to reduce the growth rate of the economy, although with a much smaller contribution than the private sector:

  - Collapse of private demand: Torrero-Mañas (2014), Febrero and Bermejo (2013), Álvarez-Peralta (2014), Febrero et al. (2019) and Hein and Martschin (2021)

  - Austerity: (Febrero & Bermejo, 2013, Uxó et al.,2016, Hein and Martschin, 2021)

- 2014-2019: Recovery to more moderate growth

- Our results seems to support that it was the recovery of public demand contribution and private sector contribution, instead of exports (that recovered much before, around 2010).

  - Debate on the "internal devaluation thesis": in favor (Bank of Spain, 2015) vs contrary (Cárdenas et al., 2020; Villanueva et al., 2020, Bilbao-Ubillos and Fernández-Sainz, 2022).

  - "export-led" (weak/mercantilism) (Hein, 2019, Hein and Martschin, 2020, 2021, Hein et. al, 2021)

- Public sector demand contributed more than external sector to growth.

  - Also, external sector net contribution decreased with the recovery of imports (following recovery of growth and increase in investment share)

- Recovery of private sector contribution

  - Monetary policy stance on diminishing the burden of the private debt on households and its effect on the recovery of spending (Cárdenas et al., 2020)
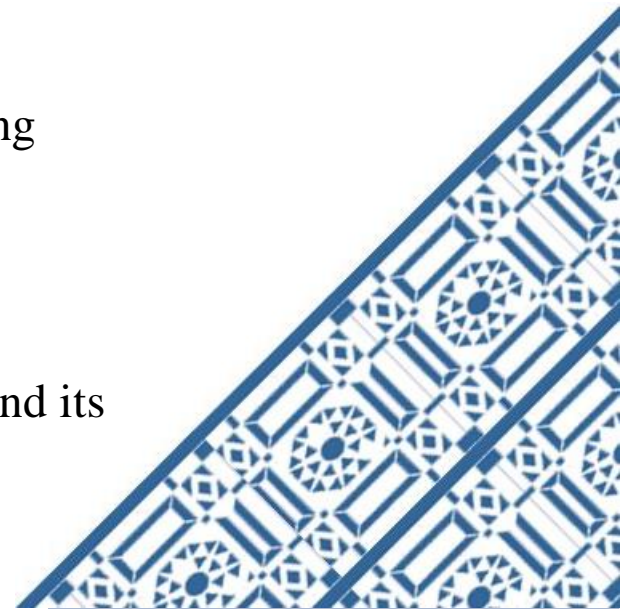
- Supermultiplier demand-led growth accounting

- **Contributions to growth**: autonomous/induced; institutional sectors

  - Different focus (I would say, narrower) than the literature on Growth Regimes/Growth Drivers;

  - Implications for definition of a growth driver:

    - the demand component that contributes more to growth?

    - or the demand component that grows more than the average?

  - Implications for 'distribution-led growth';

- Demand-led accounting as starting point to understand some patterns of growth and what are the relative contributions to it;

- Must be complemented by further theoretical, empirical and historical investigation of institutional, "political and social determinants of autonomous demand components" (Morlin et al. 2022, p.6) and the changes in the supermultiplier.

  - And thus benefited by a dialogue with PK and its various strands, as 'Growth Regimes' and 'Growth Drivers', but also with 'Comparative Political Economy' and the 'French Regulation Approach'.