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What do we teach in Macroeconomics?

Evidence of a theoretical discrepancy*

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Abstract

The aim of our paper is to assess what we call the ‘discrepancy hypothesis’. It states that the transformation of macroeconomics triggered by Lucas, Kydland and Prescott has failed to percolate in the contents of undergraduate textbooks. In the theoretical part of the paper, we draw a contrast between AS-AD and DGE modeling based on three benchmarks: the presence of microfoundations, the expectations assumption and the equilibrium concept used. In its empirical part, we measure how undergraduate textbooks fare with respect to AS-AD/DGE divide. We use two sources, the WorldCat database, and a survey of the undergraduate textbooks used for teaching in leading universities. The discrepancy hypothesis is confirmed. Thirty-four out of the thirty-nine textbooks retained from the WorldCat catalogue are based on the AS-AD, and three on the DGE core model. Eleven out of twelve most used undergraduate textbooks of the teaching sample adopt the AS-AD line.

Keywords: macroeconomics, textbooks, IS-LM/AS-AD, DGE

JEL codes: A22, A23, E00

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I Introduction

The aim of our paper is to investigate the ins and outs of an experience which, in our opinion, many graduate students in macroeconomics have experienced – a discrepancy in content between the undergraduate and graduate teaching they were provided.

In most economics departments, graduate programs includes advanced macroeconomics as core course. Once facing advanced macroeconomics textbooks, which are among the main vehicles for acquainting students with the content of a given field, like Ljungqvist and Sargent's *Recursive Macroeconomic Theory* or Romer's *Advanced Macroeconomics* students hardly recognize any connection with the content presented in undergraduate textbooks, like Mankiw's or Blanchard's ones. Some students will regret the breach they experience. Others will regard the study of Mankiw or Blanchard as a detour. Be that as it may, most of them must have perceived that there is a lack of congruence between the two levels of teaching. But having an impression of incongruence is one thing, establishing it is another. Hence, the aim we pursue in this article is to verify whether such impression of a *methodological* discrepancy between undergraduate and graduate courses is an actual regularity. We call it the "*discrepancy hypothesis*".

To the best of knowledge, this is an investigation that has not yet been undertaken in a systematic way. However, [Pearce & Hoover \(1995\)](#) evoked it incidentally, writing:

“Some people see the advent of the New Classical Macroeconomics as a revolution parallel to the Keynesian revolution. If that is so, the new revolution awaits its Samuelson. The existing new classical textbooks – Sargent 1987 at the graduate level and Barro 1993 at the undergraduate level – play roles like those played by the textbooks of Boulding and Tarshis. The new classical revolution has yet to be formulated in a textbook that could dominate the market” ([Pearce & Hoover \(1995\)](#): 212)

A reassessment is then needed, after almost thirty years from this quote and several shocks and crisis that questioned how macroeconomics has been taught, such as the 2008 financial crisis ([Blinder 2010](#), [Gärtner et al. 2013](#), [Bancarzewski 2015](#)). Moreover, such discrepancy would be even more stark, given the general methodological and architectural convergence

among mainstream macroeconomists ([Blanchard 2025](#)).

Recently, a new reflexive thinking on what a good textbook might consist of has arisen. Almost of the attention has been given to the teaching of Econ 101 or Principles of Economics ([Allgood et al. 2015](#), [Mankiw 2021, 2020](#), [Bowles & Carlin 2020](#)) with the Core Econ Project playing a leading role. Yet, macroeconomics textbooks have received less attention.¹ The few studies available consider a small set of textbooks, usually four or five. They focus on peculiar topics – e.g., the financial sector, liquidity traps, etc. – rather than on the broader theoretical content and methodological approach adopted in these textbooks. Finally, as they center on undergraduate teaching, these studies fail to address our object of study, the issue of a lack of congruence between undergraduate and graduate.

To make our claim, proceed in two steps. The first is theoretical. We begin with setting the scene with a summary of the history of macroeconomics focusing on the transition from Keynesian to Dynamic General Equilibrium (DGE) macroeconomics. Next, we single out the methodological benchmarks needed for assessing the existence of the discrepancy hypothesis. Finally, we sketch out the evolution of undergraduate macroeconomics textbooks.

The second step consists of an empirical investigation bearing on the teaching material used at the undergraduate and graduate levels. Our analysis is based on two pieces of evidence. The first is the WorldCat database, a unique catalogue of more than 72,000 libraries around the world. Its existence allows us to get a picture of the whole range of undergraduate macroeconomics textbooks available to students. The second, the ‘teaching sample’, is a database of our own construction. It strives to document the actual teaching of macroeconomics at the undergraduate and graduate levels in a sample of economics departments. *Mutatis mutandum*, the relationship between the two sets of data can be regarded as one of supply and demand.

Our investigation confirms the impression we ascribed to graduate students. The discrepancy hypothesis is thus confirmed. Thirty-four out of the thirty-nine textbooks retained from the WorldCat catalog are based on the AS-AD, three on the DGE core model, the last two being classified as others. Eleven of the twelve most used undergraduate textbooks in the teaching sample adopt the AS-AD line. The transformation of macroeconomics triggered by Lucas and

¹See, however, [De Araujo et al. \(2013\)](#), [Gärtner et al. \(2013\)](#), [Bowles et al. \(2025\)](#).

Kydland and Prescott has failed to percolate in the contents of undergraduate textbooks.

The paper is structured as follows. Section II tackles the theoretical matters evoked above. Section III exposes and discusses the results of our empirical investigation. Section IV concludes, providing a critical reading of such empirical regularity.

II Theory

II.A Historical Background

This section aims to outline the main steps of the evolution of macroeconomics in broad strokes. Rather than delve into every possible bifurcation and detour – many of which have been examined in De Vroey (2016) – our focus is to highlight the key breakthroughs that marked the teaching of macroeconomics.

Macroeconomics as a specific discipline is an offspring of Keynes's *General Theory* (Keynes 1936). Keynes's main contention was that economies can be plagued by spells of involuntary unemployment caused by insufficiencies of aggregate demand – an outcome which only governmental interventions can remedy. The message of Keynes's book was rapidly transformed into a body of knowledge centered on the IS-LM model.

For the first decades after the *General Theory*, there was no other macroeconomics than Keynesian. Yet the hegemony of Keynesian macroeconomics gradually crumbled, in large part the result of M. Friedman's harsh attacks on it. His expectation-augmented Phillips curve insight was a game-changer (Friedman 1968). It generated the transformation of the IS-LM model into the IS-LM/AS-AD, making the price level an endogenous variable. In this process, the role of the IS-LM part of the new model was reduced to serve as a mere instrument for constructing its AS-AD part. Fierce discussions between Keynesians and monetarists ensued, but they did not last long because the 'rational expectations revolution' – to become the Dynamic General Equilibrium (DGE) program – initiated by R. Lucas, swept away their common framework, the IS-LM/AS-AD model.²

²The DGE revolution was: "(...) impartial in the rough treatment it handed out to participants on both sides of the monetarist-Keynesian controversies." (Sargent (1996): 5).

After this transition, the study of business fluctuations became the primary explanandum of macroeconomics, rather than involuntary unemployment. Lucas's monetary model of business cycles was short-lived, but the set of standards he established for anchoring macroeconomics in the principles of microeconomics has endured. Kydland and Prescott took up the baton by conceiving the 'real business cycle' (RBC) modeling line wherein technology shocks are deemed to cause business fluctuations, "Time to Build and Aggregate Fluctuations" (Kydland & Prescott 1982). It is difficult to conceive a more unrealistic modeling practice, but it had at least two things going for it. First, it employed a novel and clever approach to posing issues (i.e., taking a planning economy rather than a competitive economy as the object of study). Second, it had a better-than-usual empirical fit. Moreover, RBC modeling soon testified to a strong cumulative development ability. Hence, most of the profession rallied to it. Four years after the publication of Kydland and Prescott's seminal article, RBC macroeconomics had expanded in such a way that several of its practitioners felt the time was ripe to reconstruct in an a posteriori way what can be considered its baseline model.³

The rise of DSGE macroeconomics (for dynamic stochastic general equilibrium) marked a further turn in the development of the DGE program, introducing real wage and price stickiness, and departures from perfect competition. It also brought about a new view of central banks and monetary policy, as well as new econometric methods. However, it cannot be regarded as antagonistic to RBC modeling. In Gali's words, it has "a core structure that corresponds to an RBC model on which a number of elements characteristic of Keynesian models are superimposed" (Gali (2008): 2).

II.B The Evolution of Undergraduate Macroeconomics Textbooks⁴

The first macroeconomic textbooks were published in the 1960s: Ackley's *Macroeconomic Theory* (1961), Dernburg and McDougall's *Macroeconomics* (1963) and Allen's *Macroeconomic Theory* (1967). With a few nuances, they aimed to introduce students to Keynesian theory, which involves demonstrating the possibility of involuntary unemployment on a partic-

³For example, King et al. (1988)

⁴Only Keynesian, IS-LM, AS-AD textbooks are our concern in this section. Textbooks based on DGE premises exist but, in their case, no genealogical line has to be drawn.

ular market day, assuming the price level is fixed. Its cause, it was claimed, was wage rigidity or sluggishness, even though Keynes himself wanted to exonerate wages from causing involuntary unemployment.

The second-generation type of modeling, IS-LM/AS-AD modeling, is an extension of IS-LM macroeconomics that incorporates an endogenous price level. More forcefully, IS-LM/AS-AD modeling can be regarded as ‘post-Friedman’s Presidential Address’ macroeconomics (Friedman 1968), in reference to Friedman’s 1967 American Economic Association Address in which he introduced the expectations-augmented view of the Phillips curve. It led to putting the issue of demonstrating the existence of involuntary unemployment on the back burner, whilst the problem of the trade-off between unemployment and inflation became front and center. The challenge Keynesian economists faced was to take stock of Friedman’s work whilst trying to preserve some parts of the Keynesian heritage. The first edition of Dornbusch and Fischer’s *Macroeconomics* book (1978) is an emblematic embodiment of the response of Keynesian economists. Although they did not use the expression, their book can be regarded as a synthesis between the Keynesian and the monetarist approach. As they wrote in the Preface of the first edition:

“The field [of macroeconomics] is often seen as one in which opposing Monetarist and Keynesian schools contend on almost every point. That is simply untrue. There are substantial areas of agreement amongst almost all macroeconomists. (...) Some prepublication reviewers of the book labeled us Keynesian’s others called us Monetarists. We are quite happy to be known as neither or both” (Dornbusch & Fischer (1987): VI).

Dornbusch and Fischer wavered between Keynesian and monetarist conclusions, attempting to determine the circumstances under which the government should intervene. According to them, the difference between the monetarist and the Keynesian schools’ hinges on whether wages adjustments to changes in employment are sluggish or “immediately flexible” (Dornbusch & Fischer (1990): 4). The bigger the sluggishness, the milder the slope of the AS curve to the effect that the benefit of demand activation outweighs the cost of inflation. Textbooks

published during the last two decades of the twentieth century were centered on the same core model as Dornbusch and Fischer.

At the turn of the present century, a transformation of the IS-LM/AS-AD model took place with the abandonment of the LM curve. Drawing from [Clarida & Gertler \(1997\)](#) article, which was later expanded in [Clarida et al. \(1999\)](#), David Romer wrote an article entitled “Keynesian Macroeconomics without the LM Curve?” ([Romer 2000](#)). He argued that the IS-LM/AS-AD model could be revived by assuming that the creation of money is endogenous. The transformed core model comprises three equations, associated with the IS curve, the monetary policy curve (MP), and the new Phillips curve, respectively.⁵ This transformation gave rise to what is known as the “AS/IS-MP” or the “Three-equations” model. The latter aligns more closely with the current practice of central banks, while dispensing with Friedman’s biased vision of what constitutes a sound monetary policy. It exists in two forms. It can consist of a one-shot methodological contribution, demonstrating that the DSGE model can be recast into the “AS/IS-MP” framework and therefore deserves to be branded as “New Keynesian.” This is how Romer, Clarida, Gali, and Gertler understand it. But it can also be considered an original research program, an alternative to the RBC one. This is how [Fuhrer & Moore \(1995\)](#) and [Carlin & Soskice \(2005\)](#) understand it.⁶

II.C Our Taxonomy

To assess the discrepancy hypothesis, we compare the AS/AD and the RBC baseline models. The AS/AD baseline model is the model forming the core of AS/AD textbooks, and exposed in two central chapters which, with scarce expectations, remain unchanged in all the subsequent editions. As for the RBC baseline, [King et al. \(1988\)](#) is an apt presentation of it. They introduce the RBC baseline model in the following words: “We consider an economy populated by many identical infinitely lived individuals with preferences over goods and leisure.” ([King et al. \(1988\)](#): 198). They notice that it “focuses on the optimal quantities chosen by a social planner or representative agent directly operating the technology of the economy” ([King et al. \(1988\)](#):

⁵The IS curve catches the idea that output depends negatively on the real rate of interest. The MP curve explains how the central bank achieves its inflation target by adjusting its interest rate. The PC expresses the price-making behavior of producers.

⁶For an in-depth analysis of the three-equation model, see [Cherrier & Saïdi \(2025\)](#).

200). A more systematic account runs as follows:

- (a) The typical agent produces and consumes a single physical good that serves as well as consumption and capital (e.g., corn).
- (b) The economy undergoes stochastic shocks.
- (c) Agents have rational expectations.
- (d) They face a dynamic optimization problem: maximizing their expected lifetime utility by deciding between leisure versus work, on the one hand, and immediate versus deferred consumption, on the other, subject to a budget constraint.
- (e) Their optimization decision rule, centered on intertemporal substitution, can be summarized as the Euler equation. It expresses the condition that the marginal utility cost of consuming one unit today equals the expected discounted marginal benefit of consuming one more unit tomorrow.⁷

These characterizations settled, we continue by selecting a few basic methodological choices which we deem sufficient for assessing the discrepancy hypothesis: (a) microfoundations: either explicit or implicit microfoundations; (b) the absence or presence of an Euler equation; (c) expectations: either adaptive or rational expectations.

Microfoundations

This bifurcation originates in a methodological difference between Marshall and Walras, both towering figures of neoclassical economics. Since the latter is part of methodological individualism, aggregates must be grounded in individual agents' optimizing decision-making. However, Marshall and Walras implemented this principle differently. Marshall hardly bothered to derive households' supply and demand functions from maximizing behavior. This is what we mean by "implicit microfoundations." By contrast, Walras strongly believed that aggregate functions needed to be explicitly grounded on agents' decision-making process (the "explicit microfoundations" modeling choice).

⁷From a history of economics viewpoint, the RBC baseline model can be regarded as mixing a special case of the Arrow-Debreu model (special, because it comprises no trade) and a special case of the Ramsey model (special, special because in a planning economy, the planner dictates to the participants in the economy what they must produce and consume, which implies that the planner and the agents are different actors. In the RBC baseline model, the planner and the agent are one and the same person.

Euler equation

We came to this methodological choice through a detour. A seemingly obvious benchmark is the market-clearing/ non-clearing divide. After all, involuntary unemployment is *The General Theory*'s central concept. Yet, for our purpose, it cannot do. Modigliani's seminal recasting of the IS-LM model ([Modigliani 1944](#)) focused on suboptimal market-clearing states rather than on market non-clearing. The same is true for the Dornbusch-Fischer model. Therefore, we have opted for a different criterion, also related to equilibrium formation: the scope of substitution attributed to households as signaled by the presence or absence of an Euler equation. Its presence means that intertemporal substitution is central to the model, its absence that substitution is limited to the market period under consideration. [Lucas & Rapping \(1969\)](#) is considered to have marked the start of the DGE research line. Its originality lay in conceptualizing the supply of labor by self-employed agents as an intertemporal substitution decision. To date, this assumption, as incorporated in an Euler equation, remains a defining characteristic of GE macroeconomics. By contrast, it is absent from AS-AD modeling.

Expectations

This third node concerns the way economic agents form their expectations about future economic conditions. Two modeling choices offer themselves. The first is *adaptive expectations*, wherein expectations are assumed to be backward-looking. Agents base their expectations on information gathered from their observation of past economic outcomes. The second is *rational expectations*, introduced by [Muth \(1961\)](#). Here, the expectations are forward-looking. More precisely, it is assumed that agents' expectations concerning any of the variables impinging on their decisions are consistent with the predictions of the model.

Table 1 summarizes our classification device. Are to be classified as belonging to the AS/AD cluster, the textbooks that are based on the implicit microfoundations and adaptive expectations modeling choices, and wherein no Euler equation is to be found. Are to be classified as belonging to the RBC baseline model (and hence to DEGE macroeconomics) the textbooks that are based on the explicit microfoundations, rational expectations modeling choices, and in

Table 1: Comparing the AS-AD and the baseline RBC model

	AS-AD	RBC
(a) <i>Microfoundations</i>	Implicit Microfoundations	Explicit Microfoundations
(c) <i>Euler Equation</i>	Absent	Present
(c) <i>Expectations</i>	Adaptive Expectations	Rational Expectations

which an Euler equation is to be found.⁸

Looking at textbooks in isolation, the discrepancy hypothesis is verified if their core theoretical apparatus differ between undergraduate and graduate textbooks. That is, when the AS/AD set of modeling choices is adopted among undergraduate textbooks, while the RBC set of modeling choices is prevailing among graduate ones. In section III we show that this is the general case.

III Empirics

To assess the current and persistent perceived discrepancy between undergraduate and graduate macroeconomics (Pearce & Hoover 1995), this section begins with a brief presentation of our two samples. Next, drawing from the WorldCat database, we describe the availability of undergraduate textbooks around world's libraries. We continue by examining graduate-level macroeconomics teaching, which serves as the benchmark for evaluating undergraduate textbooks. Finally, we briefly put our empirical results under scrutiny.

III.A The Two Samples

Our analysis is based on two samples. The first is the WorldCat database. Introduced in 1971, it itemizes the collections of more than 72,000 libraries belonging to the Online Computer Library Center (OCLC). While not being fully representative of the world wide population of libraries, it spans over 170 countries, containing over 412 million records with 2.6 billion

⁸We chose our benchmarks in such a way as to exclude mixed cases

cataloged items. Moreover, the catalog contains records from 491 different languages, 39% of which are in English. It allows us to identify the available macroeconomics textbooks published between 1960 and 2018.⁹

To define the sample of available textbooks that would allow to assess our 'discrepancy hypothesis' between current graduate and undergraduate teaching of macroeconomics, we adopted three selection criteria. First, the title of the textbook has to include the word 'macroeconomic'. Second, the textbook has to be designed and targeted for an undergraduate audience.¹⁰ Third, to assess the current presence of such discrepancy, we retain only the textbooks whose last edition was published after 2009. By doing so we take into account textbooks that have been published or updated after the 2008 financial crisis, which substantially questioned the fundamentals of teaching macroeconomics (Blinder 2010, Gärtner et al. 2013, Bancarzewski 2015). Therefore, we exclude those textbooks that have been inactive or less adopted in the last fifteen years, which are also more likely to be discarded by libraries. Thirty-nine textbooks satisfy these criteria.

The second sample is the Teaching Sample, a database coming from a survey of our own construction. To grasp the actual adoption of macroeconomics textbooks in graduate and undergraduate courses, we contacted the heads of the Economics Departments or the teachers of macroeconomics courses directly when they were easily identifiable on the university websites, and asked them the following two questions: (a) "What is the current sequence of macroeconomics courses in both undergraduate and graduate programs in your department?", and (b) "What are the textbooks used in these courses for the 2020-2021 academic year?"

To ensure a representative sample of universities across the full spectrum of prestige and reputation, we rely on data from the Tilburg University Economics Ranking. It ranks departments on the basis of number of publications in seventy-four leading peer-reviewed economics

⁹The available information for each of them consists of the authors, title, number of editions, year of the first and last edition, translations, and number of libraries holding a (digital or hardcover) copy of it.

¹⁰Therefore, we exclude from this sample all the textbooks targeting graduate students. We identify graduate textbooks based on textbook authors' description, and on the words included in the title making them apt to a graduate course or to a specific sub-area of macroeconomics. For instance, we excluded Romer's *Advanced Macroeconomics*, Blanchard and Fischer's *Lecture on Macroeconomics*, Obstfeld and Rogoff's *Foundations of International Macroeconomics* and Wickens' *Macroeconomic Theory*. Our sample selection was subsequently validated by responses from undergraduate macroeconomics professors, who adopted textbooks that overlapped with our selection.

journals since 2004. We focused on the four hundred and eleven departments with a publication index at least equal to ten.¹¹ From this subset, we randomly picked eight departments in each decile. Twenty seven of the eighty departments selected are in the U.S. and Canada, forty-four in Europe. The remaining nine departments are spread around the world. Among the 80 universities of our sample, 65 answered our query.¹²

III.B The Availability of Undergraduate Textbooks

Table 2 displays the thirty-nine undergraduate textbooks from the World Cat database sample. To provide the whole picture of the available textbooks, we do not currently distinguish between introductory and intermediate texts. Nonetheless, we take into account of such difference once comparing the different samples in section III.E.

In the left panel, from column (1) to (3), textbooks are ranked by the number of libraries holding at least one copy of them. This number is a proxy of textbooks diffusion and relevance. We call this number absolute availability (AA_b) for each textbook b . The right panel, columns (4) to (6), provides a second measure – their relative availability (RA_b). By considering the lifetime of textbooks, it allows us to cope with the over-representation in the sample of textbooks published in earlier dates. The measure of relative availability for each textbook b is the ratio between the number of libraries that hold a copy of it since its first edition:

$$RA_b = \frac{AA_b}{2021 - Year\ 1_b^{st}}. \quad (1)$$

Starting with the left-panel, the first textbook ranked in terms of absolute availability is *Macroeconomics* initially authored by Rudy Dornbusch and Stanley Fischer with Richard Startz becoming an additional author from the seventh edition onwards (in 1999). Its first edition dates

¹¹The rationale for this threshold is to avoid the inclusion of economics articles published in departments different from Economics.

¹²Table C-1 in the Appendix displays the list of selected departments. We consider all universities located within one of the 48 countries that are part of the European Higher Education Area (EHEA) as belonging to the same broad geographical area labelled as Europe. The EHEA is a group of countries that follow the directives of the so-called Bologna Process and that cooperate to achieve comparable and compatible higher education systems throughout Europe. It consists of the 27 EU Members plus Albania, Andorra, Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, Georgia, Iceland, Kazakhstan, Liechtenstein, Moldova, Montenegro, North Macedonia, Norway, The Russian Federation, San Marino, Serbia, Switzerland, Turkey, Ukraine, and the United Kingdom. The remaining universities are in Australia, Brazil, China, Israel, New-Zealand, and Singapore.

Table 2: Ranking of macroeconomics textbooks indexed in WorldCat (2021)

Absolute Availability			Relative Availability		
(1) Author(s) (1 st Ed.)	(2) Ranking (AA_b)	(3) AA_b	(4) Author(s) (Last Ed. - 1 st Ed.)	(5) Ranking (RA_b)	(6) RA_b
Dornbusch R. <i>et al.</i> (1978)	1	3722	Krugman P. & Wells R. (2021 - 2006)	1	141.73
Blanchard O. (1996)	2	3003	Blanchard O. (2021 - 1996)	2	120.12
Barro R. J. (1984)	3	2737	Kennedy P. (2019 - 2000)	3	93.24
Mankiw G. (1991)	4	2694	Mankiw G. (2020 - 1991)	4	89.80
Krugman P. & Wells R. (2006)	5	2126	Dornbusch R. <i>et al.</i> (2018 - 1978)	5	86.56
Gordon R. J. (1971)	6	2056	Barro R. J. (2010 - 1984)	6	73.97
Parkin M. (1984)	7	2055	Rossana R. J. (2011 - 2011)	7	63.30
Kennedy P. E. & Prag J. (2000)	8	1958	Abel A. <i>et al.</i> (2021 - 1991)	8	63.27
Abel A. <i>et al.</i> (1991)	9	1898	Parkin M. (2019 - 1984)	9	55.54
Colander D. (1986)	10	1531	Popescu G. (2018 - 2006)	10	54.93
Burda M. & Wyplosz C. (1993)	11	1363	Williamson S. D. (2019 - 2002)	11	50.16
Froyen R. T. (1983)	12	1280	Burda M. & Wyplosz C. (2017 - 1993)	12	48.68
McEachern W. (1988)	13	996	Richards D. <i>et al.</i> (2017 - 2016)	13	44.40
Hall R.E. & Taylor J.B. (1986)	14	983	Colander D. (2020 - 1986)	14	43.74
Williamson S. D. (2002)	15	953	Jones C. (2021 - 2008)	15	41.31
McConnell C. <i>et al.</i> (1990)	16	914	Gordon R. J. (2014 - 1971)	16	41.12
Gwartney J. D. (1976)	17	883	Hubbard G. & O'Brian P. (2021 - 2006)	17	37.73
Lindauer J. (1968)	18	828	Froyen R. T. (2014 - 1983)	18	33.68
Popescu G. (2006)	19	824	McEachern W. (2017 - 1988)	19	30.18
Rossana R. J. (2011)	20	633	McConnell C. <i>et al.</i> (2018 - 1990)	20	29.48
Hubbard G. & O'Brian P. (2006)	21	566	Hall R.E. & Taylor J.B. (2012 - 1986)	21	28.09
Jones C. (2008)	22	537	Chakraborty S. (2020 - 2009)	22	26.92
Gartner M. (1997)	23	510	Carlin W. & Soskice D. (2017 - 2014)	23	26.71
Samuelson P. & Nordhaus W. (1988)	24	502	Mishkin F. (2020 - 2011)	24	24.40
Bradford DeLong J. & Olney M. (1994)	25	405	Acemoglu D. <i>et al.</i> (2019 - 2014)	25	22.29
Boyes W. & Melvin M. (1991)	26	348	Gartner M. (2016 - 1997)	26	21.25
Slavin S. (1994)	27	329	Gwartney J. D. (2021 - 1976)	27	19.62
Chakraborty S. (2009)	28	323	O' Sullivan A. <i>et al.</i> (2020 - 2007)	28	17.71
O' Sullivan A. <i>et al.</i> (2007)	29	248	Chugh S. (2015 - 2015)	29	17.33
Mishkin F. (2011)	30	244	Lindauer J. (2012 - 1968)	30	15.62
Richards D. <i>et al.</i> (2016)	31	222	Samuelson P. & Nordhaus W. (2011 - 1988)	31	15.21
Carlin W. & Soskice D. (2014)	32	187	Bradford DeLong J. & Olney M. (2017 - 1994)	32	15.00
Acemoglu D. <i>et al.</i> (2014)	33	156	Gottfries N. (2013 - 2012)	33	12.22
Gottfries N. (2012)	34	110	Slavin S. (2019 - 1994)	34	12.19
Chugh S. (2015)	35	104	Boyes W. & Melvin M. (2016 - 1991)	35	11.60
Brooman F.S. & Jacoby F. D. (2008)	36	95	Brooman F.S. & Jacoby F. D. (2017 - 2008)	36	7.31
Handa J. (2010)	37	61	Karlan D.S. & Morduch J. (2021 - 2014)	37	7.00
Karlan D.S. & Morduch J. (2014)	38	49	Handa J. (2011 - 2010)	38	5.55
James E. M. <i>et al.</i> (2008)	39	9	James E. M. <i>et al.</i> (2012 - 2008)	39	0.69

Note: The list above is related to a WorldCat exploration made in March 2021. Columns (1) and (4) present the name(s) of the author(s), the year of the first edition and last edition of the textbook. Columns (2) and (5) show the ranking of the textbook, based on a measure of absolute availability, which captures the number of libraries that hold a copy of the book (AA_b), and on a relative availability, which is measured as the number of libraries that hold a copy divided by the number of years on the market (RA_b), presented respectively in columns (3) and (6).

from 1978 and it is available in almost 3,700 libraries. The other textbooks available in more than 2,500 libraries are Robert Barro's, Blanchard's, and Mankiw's. The broad diffusion of these four textbooks can be related to their lasting presence in the market, since their first editions were published more than 25 years ago. Except for Paul Krugman and Robin Wells' *Macroeconomics* which ranks fifth although its first edition dates from 2006, more recent textbooks rank lower in terms of absolute availability.

Turning to the right panel, we observe that Krugman and Wells's book occupies the first

place. Blanchard's, Mankiw's, and Barro's books roughly keep their rank. By contrast, Dornbusch *et al.* (1978) and Robert Gordon (1971) fall in the ranking, respectively by four and ten places. Krugman and Wells's textbook is not the only one that jumps in the ranking as compared to the AA_b -based ranking. Some notable mentions are Gheorghe Popescu's *Macroeconomics* (from 19th to 10th place), Peter Kennedy's *Macroeconomic Essentials: Understanding Economics in the News* (from 8th to 3rd place), Robert J. Rossana's *Macroeconomics* (from 20th to 7th place), Stephen Williamson's *Macroeconomics* (from 15th to 11th place) and Dan Richards, Manzur Rashid, and Peter Antonioni's *Macroeconomics For Dummies* (from the 31st to the 13th place).

The evidence presented hitherto provides a snapshot of the availability of undergraduate macroeconomics textbooks on a given period (in this case March 2021). To get a more dynamic view, we focus on the eleven textbooks whose first edition is posterior to 2008 and compute the growth rate of the number of libraries holding a copy of them (i.e., our absolute availability measure) between January 2019 and March 2021. Table C-2 in the Online Appendix shows that recent textbooks display a high growth rate in terms of availability. This is particularly true for Charles Jones's, Rossana's, and Acemoglu *et al.*'s books.

III.C Graduate Teaching

To grasp the potential discrepancy between undergraduate and graduate textbooks, we need first to acknowledge that the term 'graduate program' covers different realities. Subsequently to the Bologna Process, higher education systems across the European Higher Education Area have converged to a two-step teaching sequence beginning with a bachelor's degree (3 to 4 years), often followed by a master's degree (1 to 2 years). Two types of master's degrees are available, professional masters – targeting students interested in pursuing a professional career and offering a large set of subjects in economics – and research masters – providing advanced training in core subjects of economics and preparing students for Ph.D. programs. In the U.S., undergraduate programs take four years to be completed. Master's programs are the exception and graduate programs are about getting a Ph.D. In this section, we put the European research master's program and the first year of the U.S. Ph.D. program in the same bundle.

Table 3: Advanced textbooks referred to in graduate teaching

(1) Author(s)	(2) Title	(3) Overall	(4) <i>Professional</i> Master's	(5) PhD & <i>Research</i> Master's
Romer D.	Advanced Macroeconomics	32	23	9
Ljungqvist L. & Sargent T.	Recursive Macroeconomic Theory	21	1	20
Stokey N. Lucas R. & Prescott E.	Recursive Methods in Economic Dynamics	12	1	11
Gali J.	Monetary Policy, Inflation and the Business Cycle	10	/	10
Acemoglu D.	Introduction to Modern Economic Growth	7	1	6
Blanchard O. & Fischer S.	Lectures on Macroeconomics	5	2	3
Barro R. & Sala-i-Martin X.	Economic Growth	5	2	3
Walsh C.	Monetary Theory and Policy	5	1	4
Woodford M.	Interest and Prices: Foundations of a Theory of Monetary Policy	4	/	4
Cooley T.	Frontiers of Business Cycle Research	4	1	3
Wickens M.	Macroeconomic Theory. A Dynamic General Equilibrium Approach	4	2	2
Obstfeld M. & Rogoff K.	Foundations of International Macroeconomics	3	2	1
Adda J. & Cooper R.	Dynamic Economics: Quantitative Methods and Applications	2	1	1
Alogoskoufis G.	Dynamic Macroeconomics	2	2	/
Azariadis C.	Intertemporal Macroeconomics	2	1	1
McCandless G.	The ABCs of RBCs: An Introduction to Dynamic Macroeconomic Mod.	2	1	1

Notes: The table shows the sample of textbooks used in the economics departments considered in the academic year 2020-2021. Column (1) presents the names of the authors and column (2) displays the titles of the textbooks. Column (3) shows the number of institutions using the textbook in their graduate macroeconomics courses either as reference text or as a recommended readings, and columns (4) and (5) make the distinction between (i) *professional* master's and (ii) *research* master's/PhD courses. Only textbooks that are used in at least two universities appear in the table.

The data are described in Table 3. Two observations have to be made. First, and most important aspect for our purpose, all mentioned textbooks have the RBC model as their core baseline model. They adopt explicit microfoundations, rational expectations and dynamic optimizing modeling choices, which are modeling choices that can be hardly associated to the AS-AD approach. Therefore, as experienced by all graduate students, graduate courses are designed to expose students to more research oriented and cutting-edge approaches. Second, advanced textbooks are hardly the main and only teaching device in graduate courses. They do exist, yet most of the teachers in the sample declared that their teaching mixes chapters from different textbooks, seminal papers, and their own lecture notes. Therefore, our data no longer refer to textbooks used but rather to textbooks cited in syllabi.

The four most utilized textbooks are *Recursive Macroeconomic Theory* by Lars Ljungqvist and Thomas Sargent; *Recursive Methods in Economic Dynamics* by Nancy Stokey, Robert Lucas, and Edward Prescott; *Monetary Policy, Inflation and the Business Cycle* by Jordi Gali; and *Advanced Macroeconomics* by David Romer. A quick glance at them reveals that quantitative methods dominate graduate-level macroeconomics. As for content, growth theory and business cycles (with a specific focus on monetary policy) are the dominant objects of study.

III.D Undergraduate Teaching

Teaching of macroeconomics at the undergraduate level can take two forms: (a) a single course as often the case in three-year long programs; (b) a sequence of macroeconomics courses – either two (an introductory course followed by an intermediate one) – or three, the additional one being an advanced course; this is especially the case in four-year programs.¹³ To get a homogeneous set-up, we gather the textbooks used in type (a) courses with those used in intermediate courses in the type (b) sequence. Together, these textbooks form our main object of attention; we put them under ‘intermediate undergraduate course’ label.

Table 4 displays their ranking in the teaching sample. For each textbook, column (3) indicates the number of times a textbook is used as reference text for the course. To account for cases in which we received more than one answer (for example, when the course is given by several teachers with different preferences), column (4) presents a weighted indicator.

Table 4 shows the existence of a leading trio composed of Blanchard’s, Mankiw’s, and Williamson’s books, with Blanchard being the indisputable champion. The first two represent 52.4% the share in total weighted use, the first three 62.9% of the total. Noticeably, Burda and Wyplosz’s book fares quite well. By contrast, Dornbusch *et al.* textbook is less used in our sample of courses.

Two additional results are worth mentioning. First, Table C-3 in the Online Appendix displays the geographical distribution of our results, after splitting the sample of universities into three broad regions: North America (U.S. and Canada), Europe, and the rest of the world. Williamson’s and Mankiw’s stand out as the most taught textbooks in the U.S. and Canada. Blanchard’s is by far the most used in Europe, along with Burda and Wyplosz’s textbook.

The second result is that, as shown in Table C-4 in the Online Appendix, the positions of departments in the Tilburg ranking has no impact on our ranking of undergraduate textbooks. Splitting the sample between departments belonging to the first decile of the Tilburg ranking¹⁴

¹³We leave aside 101-type courses with half of the course devoted to microeconomics and the other half to macroeconomics because they are out of the scope of our research.

¹⁴The departments belonging to the first decile are: London School of Economics, University of Munich, Texas A&M University, MIT, University of Toronto, Boston University, Stanford University, and Tilburg University. Splitting the sample between the first two deciles and the rest, does not provide any substantial difference in the results.

Table 4: Ranking of textbooks used in undergraduate intermediate macroeconomics courses

(1) Author(s)	(2) Title	(3) # of citations	(4) Weighted use
Blanchard O.	Macroeconomics	30	22.8
Mankiw G.	Macroeconomics	20	11.3
Williamson S. D.	Macroeconomics	13	6.8
Burda M. & Wyplosz C.	Macroeconomics	7	6.3
Jones C.	Macroeconomics	5	4
Abel A. & Bernanke B.	Macroeconomics	4	2.5
Carlin S. & Soskice D.	Macroeconomics: Institutions, Instability and the Fin. Sys.	3	1.5
Dornbusch R. <i>et al.</i>	Macroeconomics	2	1.5
Gaertner M.	Macroeconomics	1	1
Gottfries N.	Macroeconomics	1	1
Flaschel et al.	Keynesianische Makroökonomik	1	1
Sachs J. & Larrain F.	Macroeconomics in the Global Economy	1	1
Hubbard G. R. & A. P. O'Brien	Macroeconomics	2	0.8
Mishkin F.	Macroeconomics	1	0.5
	The Economics of Money, Banking and Financial Markets	1	0.5
No reference text		3	2.5
Total		95	65

Note: The table shows the sample of textbooks used in the economics departments considered in the academic year 2020-2021. Column (1) presents the name(s) of the author(s). Column (2) shows the title of the textbook. Column (3) provides the number of departments using the textbook in their intermediate macroeconomics course. Column (4) displays the sum over economics departments of the probability for each textbook to be used as a reference textbook in the department's intermediate macroeconomics course. Probabilities are proxied by the actual use of the textbook: 0 if not used, 1 if it is the only reference textbook, 0.5 if two textbooks are used, etc. We label this indicator 'Weighted use.'

and the rest makes no major differences concerning the top two used textbooks. Surprisingly, Williamson's textbook is used in none of the eight top-ranked departments, whilst it fares well in the second sub-group.

III.E Comparing the Samples

In this section, we compare the WorldCat and teaching rankings. We narrow the comparison to the ten most diffused textbooks in the WorldCat database (using our relative availability measure) with the ten most used intermediate textbooks in the teaching sample. To make the two rankings comparable, we eliminate introductory textbooks from the WorldCat database.¹⁵

Table 5 displays the result of this comparison.

Seven textbooks are common to the two rankings. Among them, three hold the same place, Blanchard's textbook (first), Mankiw's (second), and Abel, Bernanke, and Croushore's (sixth).

¹⁵We eliminated six introductory textbooks from the WorldCat database: *Macroeconomics* by Krugman and Wells, *Macroeconomics Essentials: Understanding Economics in the News* by Kennedy, *Macroeconomics* by Parkin, *Macroeconomics for Dummies* by Richards *et al.*, and *Macroeconomics* by Colander. Among them, only Krugman and Wells and Parkin were mentioned in the teaching sample. We also deleted Popescu's book, *Macroeconomics*, because it has little analytical content.

Table 5: Comparison of rankings of textbooks in WorldCat and in the teaching sample

WorldCat		Teaching Sample	
1.	Blanchard O.	1.	Blanchard O.
2.	Mankiw G.	2.	Mankiw G.
3.	Dornbusch R. et al.	3.	Williamson S.D.
4.	Barro R. J.	4.	Burda M. & Wyplosz C.
5.	Rossana R. J.	5.	Jones C.
6.	Abel A. & Bernanke B.	6.	Abel A. & Bernanke B.
7.	Williamson S.D.	7.	Carlin S. & Soskice D.
8.	Burda M. & Wyplosz C.	8.	Dornbusch R. et al.
9.	Jones C.	9.	Gaertner M.
10.	Gordon R. J.	10.	Gottfries N.

Note: The first column of the table lists the authors of the 10 highest ranked textbooks according to the relative availability index and based on our WorldCat exploration in March 2021. The ranking has been adjusted to keep only intermediate macroeconomics textbooks. The second column gives the ranking of the textbooks in our representative sample of universities selected in the Tilburg University Economics ranking.

Williamson's, Burda and Wyplosz's, and Jones's textbook perform better in the teaching ranking than in WorldCat ranking. By contrast, Dornbusch *et al.*'s book undergoes a sharp drop. Absent from the WorldCat top ranking, yet present in the teaching sample top ranking, are Carlin and Soskice's, Gartner's, and Gottfries's books. Three books present in the WorldCat ranking – Gordon's, Barro's, and Rossana's – do not make it in the teaching ranking. Each of these 'excess supply' cases has a specific explanation. Gordon's one was a pioneering textbook, whose first edition was published in the late seventies. Therefore, it is little surprise that it has become somewhat outdated. The case of Barro's book, the pioneering anti-Keynesian textbook, is more surprising. It turns out that Williamson's book dethroned it, despite being, in our view, less consistent. Rossana's is still another story. It is a rather recent book. Its author was already emeritus at the time of its publication and has passed away since. Hence, its impact will probably fade away. Finally, it is worth commenting on the case of Krugman and Well's *Macroeconomics*. Its absence from Table 5 is justified since this table is limited to intermediate textbooks. However, when looking how it fares among textbooks of its category, as shown in Table C-5 of the Online Appendix, their book accounts for only 5% of the total (weighted) use of introductory textbooks. There seems thus to be a discrepancy between its presence in libraries and its use in teaching.

III.F Assessing the Discrepancy Hypothesis

In 1978, when Dornbusch and Fischer, the pioneers of AS-AD textbooks, published their first edition, the AS-AD model prevailed in advanced teaching. A situation of congruence between the two levels of teaching thus prevailed.¹⁶ During the 1980s, with the rise of the DGE program, macroeconomics research underwent a radical transformation. The discrepancy hypothesis asserts that, at present, this congruence has vanished. To assess it, we examined the core models of the 39 textbooks in the World Cat database classifying them in three categories (a) their core model is AS-AD, (b) they are an offspring of the RBC baseline model, and (c) they fit neither of (a) or (b). Table 6 displays the results of this exercise.

The left panel of Table 6 displays how the 39 textbooks from the WorldCat catalogue fare with respect to this divide. Thirty-four out of them are based on the AS-AD apparatus. Only three of them – Barro’s, Williamson’s, and Sanjay Chugh’s – are grounded on the RBC baseline model. Two textbooks are classified as others. Popescu’s, already commented upon, and Froyen’s to which we return shortly. The right panel of Table 6 displays the result of the same exercise for the teaching sample. Eleven of the twelve textbooks used adopt the IS-LM/AS-AD framework. Only one of them, Williamson’s, belongs to the RBC research line.¹⁷

Table 6 does not account for the share of libraries distributing these textbooks and the number of departments using them. It leaves open the possibility that another result arises when these shares are taken in account. Figure 1, in which each textbook is indexed by different measures of availability and relevance, shows that this is not the case.¹⁸ RBC textbooks account for less than 10% of the available (panel (a)) or used (panel (b)) textbooks.

Overall, it appears that the AS-AD apparatus is predominant among undergraduate macroeconomics textbooks. Concerning graduate textbooks, the classification by theoretical apparatus is rather straightforward: all of them have a strong quantitative standing, and they all abide by the methodological standards promoted by the DGE approach, and accepted by the researchers

¹⁶It can be argued that, with respect to contemporary standards, Dornbusch and Fischer’s first edition lied in between the undergraduate and graduate teaching levels.

¹⁷The other two present in the WorldCat database, Barro’s and Chugh’s, have not found a way into the departments in our sample.

¹⁸For the WorldCat sample, textbooks are weighted by the number of libraries holding a copy (i.e., absolute availability) and the indicator of relative availability (RA_b). For the teaching sample, textbooks are weighted by the number of departments using the textbooks and the weighted use index.

Table 6: Distribution of undergraduate textbooks according to their methodological lines

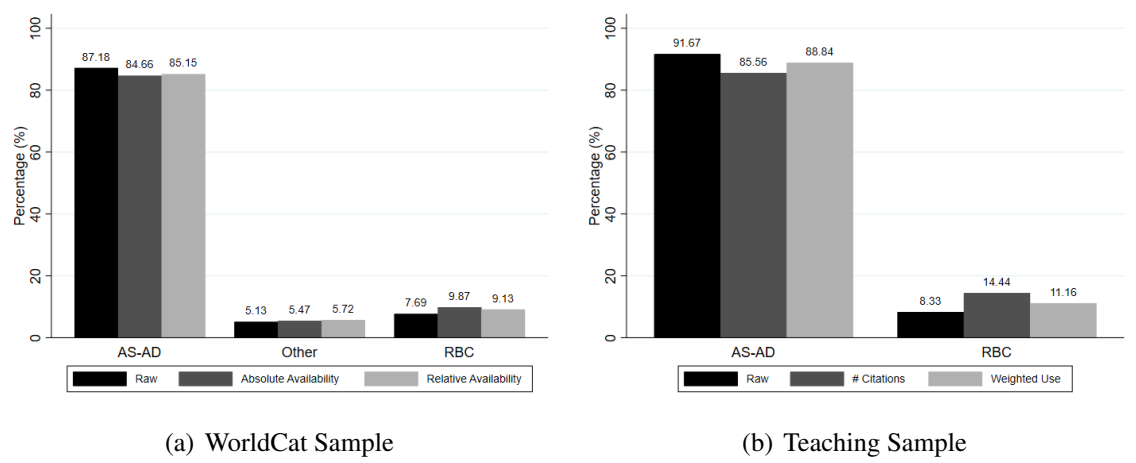
WorldCat Sample			Teaching Sample		
(1) Author(s)	(2) Typology	(3) Ranking (RA_b)	(4) Author(s)	(5) Typology	(6) Ranking (Weighted Use)
Krugman P. & Wells R.	AS-AD	1	Blanchard O.	AS-AD	1
Blanchard O.	AS-AD	2	Mankiw G.	AS-AD	2
Kennedy P.	AS-AD	3	Williamson S. D.	RBC	3
Mankiw G.	AS-AD	4	Burda M. & Wyplosz C.	AS-AD	4
Dornbusch R.	AS-AD	5	Jones C.	AS-AD	5
Barro R. J.	RBC	6	Abel A. <i>et al.</i>	AS-AD	6
Rossana R. J.	AS-AD	7	Carlin W. & Soskice D.	AS-AD	7
Abel A. <i>et al.</i>	AS-AD	8	Dornbusch R.	AS-AD	8
Parkin M.	AS-AD	9	Gartner M.	AS-AD	9
Popescu G.	Other	10	Gottfries N.	AS-AD	10
Williamson S. D.	RBC	11	Hubbard G. & O'Brian P.	AS-AD	11
Burda M. & Wyplosz C.	AS-AD	12	Mishkin F.	AS-AD	12
Richards D. <i>et al.</i>	AS-AD	13			
Colander D.	AS-AD	14			
Jones C.	AS-AD	15			
Gordon R. J.	AS-AD	16			
Hubbard G. & O'Brian P.	AS-AD	17			
Froyen R. T.	Other	18			
McEachern W.	AS-AD	19			
Campbell R. McConnell <i>et al.</i>	AS-AD	20			
Hall R.E. & Taylor J.B.	AS-AD	21			
Chakraborty S.	AS-AD	22			
Carlin W. & Soskice D.	AS-AD	23			
Mishkin F.	AS-AD	24			
Acemoglu D. <i>et al.</i>	AS-AD	25			
Gartner M.	AS-AD	26			
Gwartney J. D.	AS-AD	27			
O' Sullivan A. <i>et al.</i>	AS-AD	28			
Chugh S.	RBC	29			
Lindauer J.	AS-AD	30			
Samuelson P. & Nordhaus W.	AS-AD	31			
Bradford DeLong J. & Olney M.	AS-AD	32			
Gottfries N.	AS-AD	33			
Slavin S.	AS-AD	34			
Boyes W. & Melvin M.	AS-AD	35			
Brooman H.D. & Jacoby F. D.	AS-AD	36			
Karlan D.S. & Morduch J.	AS-AD	37			
Handa J.	AS-AD	38			
James E. M.	AS-AD	39			

Note: The list above is related to a WorldCat exploration made in March 2021 (col. (1) to (3)) and to the economic departments considered in the academic year 2020-2021 (col. (4) to (6)). Columns (1) and (4) present the names of the authors. Columns (2) and (5) show the broad methodological category associated with each macroeconomics textbook. Columns (3) and (6) present the ranking of textbooks based either on the relative availability measure (see Table 2) or on the number of departments using the textbook in their intermediate economics course (see Table 4).

community. Explicit microfoundations, rational expectations and a dynamic equilibrium concept are present in all these textbooks. Although the proximity to the frontier of knowledge of graduate textbooks compare to undergraduate ones is common across fields (Biasi & Ma 2022), the discrepancy in the theoretical benchmark it appears as a specific feature of macroeconomics.

These results confirm the claim that a methodological discrepancy between undergraduate and graduate teaching is present in macroeconomics.

Figure 1: Distribution of textbooks according to their methodological lines



Notes: Authors' calculations on WorldCat data and teaching sample. Figure (a) shows the distribution by category, giving each textbook the same weight (Raw) or weighting each textbooks by the number of libraries which hold a copy (AA_b) or by the index of relative availability (RA_b). Figure (b) shows the distribution of the sample of textbooks used in intermediate courses by category, using the same weight (Raw) or weighting them using the # of citations or the weighted use displayed in Table 4.

III.G Discussion

Our exercise may hide some nuances and discrepancies. First, the current availability of textbooks in libraries is an imperfect representation of the evolution of the supply of textbooks over time. Due to scarce storage capacities, libraries often need to dispose of books that are less popular than they used to be. Therefore, it is not easy to extract from the WorldCat database the full diversity of textbooks that have been available in the past. The historical part of our claim (i.e., that the discrepancy is observable since the very beginning of the rise of the RBC in graduate teaching, about 40 years ago) is not formally proven. However, we deem sufficient evidence to show that this discrepancy is still observed nowadays.

Second, our data collection procedure may influence the ranking of textbooks. Concerning the teaching sample, by design, our survey excludes universities that are low-ranked according to the Tilburg rankings, like polytechnics in the UK. Because these institutions do not necessarily aim at preparing their students for PhDs and academic research, we may under-sample textbooks that are chosen for pure pedagogical preferences or their heterodox content (see Guizzo 2025). Similarly, alternative sources or measures of the dispersion and popularity of textbooks could lead to different rankings compared to WorldCat. For instance, Open

Syllabus, which collects the information of English-only syllabi across 140 countries, would rank Mankiw's Macroeconomics textbook first, just before Blanchard's. Likewise, market performance indicators (such as the number of sales and search engine results) would also lead to different rankings of the textbooks. However, these alternative rankings would suffer from other relevant limitations (focus on English written syllabi only, or market performance), which would not change our conclusion regarding the existence of a visible methodological discrepancy between textbooks.

Finally, our taxonomy, while effective to provide an answer to our research question, hides a rich variety of textbooks. In particular, the common classification of most intermediate textbooks within the AS/AD category may overlook their strong heterogeneity in other regards. As each author has his/her own personal approach to the subject, diversity among textbooks cannot but arise. For lack of space, we cannot discuss the specific features of each textbook. Nonetheless, [Appendix B](#) discusses some relevant specific cases. First, we discuss Froyen's textbook, to which our taxonomy is ill-suited. Next, we set our sights on four AS/AD textbooks having some outstanding features and peculiarities: Blanchard's, Abel and Bernanke's, Carlin and Soskice's, and Jones's textbooks.

IV A Tale of a Persistent Discrepancy?

In the Introduction, we quoted [Pearce & Hoover \(1995\)](#)'s remark that the crowning element of the 'new classical revolution', namely the existence of a textbook that would dominate the market, had not occurred. Our study shows that it did not happen. Textbooks based on the DGE's basic methodological choices exist, but they have hardly dominated the textbook market.

Nonetheless, the present-day picture turns out to differ from what prevailed in the early days. Three observations are called for. The first concerns the treatment of growth. The second bears on how the authors of textbooks qualify their work: do they acknowledge the incongruence between undergraduate and graduate teaching and justify it, or do they ignore or minimize its existence? Finally, and this is our third and last query: this discrepancy is an anomaly. What then explains it?

The treatment of growth. In their early editions of textbooks, little attention was given to growth. Generally, it was addressed in a single chapter at the end of the book, much like an addendum. The contrary is valid for the recent editions. It receives pride of place in them. It is typically located at the beginning of the textbook, spanning several chapters. As for what concerns the content, it aligns with the developments found in mainstream growth theory. As a result, the overall undergraduate/ graduate discrepancy has decreased.

Acknowledging versus minimizing the discrepancy. As Mankiw and Blanchard authored the most used textbooks, we begin by exposing their standpoints. The first editions of Mankiw and Blanchard appeared in 1992 and 1996, respectively. At the time, the DGE was well-established. Both Mankiw and Blanchard were acquainted with it, appreciated it, yet despised it on several grounds. They both decided that their textbook would follow Dornbusch and Fischer's steps rather than Barro's.

Blanchard's choice was based on the view, widely held at MIT at the time, that, instead of having an all-purpose model, it is preferable to dispose of several models, each geared to a specific purpose. The following extract from an article he wrote twenty years after the first edition of his book can serve as a justification of his standpoint.

- “ (a) Foundational models. The purpose of these models is to make a deep theoretical point, likely of relevance to nearly any macro model, but not pretending to capture reality closely.
- (b) DSGE models. The purpose of these models is to explore the macro implications of distortions or sets of distortions.
- (c) Policy models. The purpose of these models is to help policy, to study the dynamic effects of specific shocks, to allow for the exploration of alternative policies.
- (d) Forecasting models. The purpose of these models is straightforward: give the best forecasts.
- (e) Toy models. Here, I have in mind models such as the many variations of the IS–LM model.” (Blanchard (2018): 52-53)

Mankiw expresses a similar standpoint in a 1990 article, entitled “A Quick Refresher Course

in Macroeconomics,” in which he discusses the discrepancy between theoretical developments in macroeconomics and applied macroeconomics by drawing an analogy between Ptolemy’s and Copernicus’s astronomical theories. Copernicus’s was more elegant and, ultimately, more useful. However, for some purposes, Mankiw claimed, Ptolemy’s theory it was appropriate: “If you had been an academic astronomer, you would have devoted your research to improving the Copernican system. [...] Yet if you had been an applied astronomer, you would have continued to use the Ptolemaic system.” (Mankiw (1990): 4). Replace ‘academic astronomer’ by ‘graduate teacher’ and ‘applied astronomer’ by ‘undergraduate teacher’, and you have a justification for AS/AD textbooks.¹⁹

Mankiw admitted that his differed from the DSGE model, writing: “we do not start with the household and firm optimizing decisions that underlie the macroeconomic relationships” (Mankiw (2018): 439). This remark can be interpreted as an indirect way of acknowledging that his analysis remains within the confines of the AS/AD research framework and, consequently, that the discrepancy hypothesis remains relevant. He, however, seemed to favor another, more radical, interpretation consisting of regarding his dynamic AS/AD model as a “good stepping stone towards DGE modeling” as he wrote in the conclusion of one of the newly included chapter, entitled “Toward DGE models”.

This move toward minimizing the undergraduate/graduate teaching distinction is also visible when examining the recent editions of the textbooks. Most of them now include sections presenting elements of the DGE program, such as rational expectations or intertemporal substitution. Thereby, the authors acknowledge its predominance. However, they stop short of pondering whether the core model of their textbooks can accommodate these elements. For his part, Jones goes a step further by declaring the DGE to be the “frontier of business cycle theory”. To him, the AS/IS-MP model is perfectly apt to explain episodes like the 2008 financial crisis, to which he devotes three chapters. Nor does he have any qualm about following Mankiw’s footsteps by considering the AS/AD model a “simplified setup that captures many of the insights of DSGE models” (Jones (2020):428) – all this without any argumentation.

These considerations do not affect our conclusion about the existence of a discrepancy

¹⁹Mankiw (2006) express a similar stance.

between the undergraduate and graduate teaching of macroeconomics; what they highlight, however, is another fact, that over time, the authors of AS/AD textbooks have come to prefer denying or minimizing this discrepancy.²⁰

Explaining the persistence of the dominance of AS/AD textbooks. Several factors may have contributed to this persistence. The first thing that comes to mind is a difference in mathematical standards. The understanding of DGE-based textbooks, such as those by Barro, Williamson, or Chugh, the view runs, requires mathematical skills that are too advanced for most graduate students. However, to us, this factor plays a minor role. Take the case of Barro (1984) textbook. It is full of equations, but the level of mathematical skill required to understand them is low. The deadlock lies elsewhere, in the fact that, over the entire book, Barro's reasoning evolves at a high level of abstraction. It deals with fictitious economies that have no resemblance to real ones, whereas students expect to learn about the functioning of real-world economies. Barro hardly establishes a connection between these two worlds, except for bringing out that the predictions based on his models have a good fit. To most students, all this goes much beyond their heads unless they have a prior affinity for abstract analyses or have benefited from a course in epistemology. Hence, such textbooks face a sales problem, which brings us to a second, more important factor.

The publication of economic textbooks has become a lucrative business in the hands of an oligopolistic private company, more oriented toward profitability than university publishers. High barriers to entry prevail. Gradually, the same organizational pattern has emerged with the following components. The narrative must be interspersed with boxes that illustrate the relevance of the narrative for historical occurrences or introduce alternative approaches to the issue under discussion. Summaries of the claims made in the chapter and questions to be answered by the students are also unavoidable requirements. Recurrently, new editions must be proposed for the sake of updating theory and data (and, of course, for the gain they provide to both the authors and publishers). Since the business is flourishing, the general attitude is conservative. The existence of new developments, theoretical or factual, is needed to justify

²⁰Leaving Froyen aside, Carlin and Soskice are the exception. They fiercely promote the view that AS/AD modeling – in its a ‘three-equation model’ form – is a robust alternative to DGE modeling.

new editions. Yet, they must remain peripheral rather than undermining the core model of the textbook.²¹ This market structure can explain the persistence of AS/ AD textbooks. It makes it hard to dethrone the first-arrived textbooks.

One final factor that we consider crucial must be discussed. Authors of undergraduate macroeconomics textbooks are torn between two alternative directions. The first goal is to meet students' aspirations to understand the workings of real-world, present-day economies, which involves addressing issues such as the existence of business cycles, financial crises, unemployment, inflation, and the role of government. The second direction is to acquaint the fraction of students who consider specializing in macroeconomics with its distinct way of reasoning and present practice. At stake is whether methodological principles that are compulsory for advanced research should also be applied to introductory content. From this perspective, the predominance of AS/AD textbooks can be explained by the fact that textbook authors have prioritized the first of these objectives. They address the issue mentioned above, yet with sloppy foundations. The methodological underpinning of the DGE program is poles apart. The following extract from a letter by Walras aptly captures its gist: "We must know what we want to do. If we want to harvest in the short term, we need to plant carrots and salads; if we have the ambition to plant oak trees, we must be wise enough to say: my grandnephews will owe me this shade."(Walras 1903).

From its 1986 baseline model to the present, the DGE research line has achieved tremendous progress: the introduction of monopolistic competition, Calvo pricing, endogenous money creation, and banks, as well as Bayesian econometrics, heterogeneous agents, and rational inattention, while still adhering to the Euler optimizing decision-making rule. Nonetheless, at bottom, writing an introductory textbook on it amounts to exposing the arcana of its baseline model. Baro did an excellent job in this respect. It remains, however, that in a contest between his direction and that of Jones, the latter has the higher chances of winning. Hence, the persistence of the discrepancy.

But this is not our last word. There is a book in our sample that does an excellent job in introducing the DGE paradigm quite differently from Barro, Williamson, and Chug: Foyen's.

²¹As one of the authors wrote to us in private correspondence: "The world of publishing rewards quick marginal improvements in normal sciences more than those involving paradigmatic changes."

In this one, Froyen adopts a historical perspective covering the evolution of macroeconomics from the time of Keynes to the present. Classical economics and the Keynesian revolution, the monetarist counterrevolution, and the DGE program in its different stages are all discussed. The AS/AD model is discussed in the chapter on monetarism, and the DGE models are discussed in the last chapters of the book. With such an organization, asking whether Froyen’s textbook belongs to the AS/AD or the DGE research line makes little sense. Hence, it is classified as “others.” This classification must hardly be taken as derogatory. On the contrary, historians of economics cannot help but applaud its existence.

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What do we teach in Macroeconomics? Evidence of a theoretical discrepancy

Online Appendix

For Online Publication

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Appendix A List of Textbooks

Undergraduate textbooks

1. Abel, A. B., Bernanke, B. S. & Croushore, D. (2016), *Macroeconomics*, Pearson 9th Edition
2. Acemoglu, D., Laibson, D. & List, J. A. (2017), *Macroeconomic (Global Edition)*, Pearson
3. Barro, R. J. (2007), *Macroeconomics: A Modern Approach*, Thomson South-Western
4. Blanchard, O. (2017), *Macroeconomics*, Pearson Higher Ed. 7th Edition
5. Boyes, W. & Melvin, M. (2015), *Macroeconomics*, Cengage Learning 10th Edition
6. Bradford DeLong, J. & Olney, M. (2005), *Macroeconomics*, McGraw-Hill/Irwin. 2nd Edition

7. Brooman, F. S. & Jacoby, H.D. (2017), *Foundations of macroeconomics: Its theory and policy*, Routledge
8. Burda, M. & Wyplosz, C. (2017), *Macroeconomics: a European text*, Oxford University Press
9. Carlin, W. & Soskice, D. W. (2014), *Macroeconomics: Institutions, instability, and the financial system*, Oxford University Press, USA
10. Chakraborty, S. K. (2010), *Macroeconomics*, Himalaya Pub. House
11. Chugh, S. K. (2015), *Modern macroeconomics*, MIT Press
12. Colander, D. (2016), *Macroeconomics*, McGraw-Hill Education. 10th Edition
13. Dornbusch, R., Fischer, S. & Startz, R. (2018), *Macroeconomics*, McGraw-Hill Education. 13th Ed.
14. Flaschel, P., Groh, G. & Proano, C. (2007), *Keynesianische Makroökonomik: Unterbeschäftigung, Inflation und Wachstum*, Springer-Verlag
15. Froyen, R. T. (2012), *Macroeconomics: Theories and policies*, Pearson Series in Economics, 10th Ed.
16. Gartner, M. (2016), *Macroeconomics*, Trans-Atlantic Publications, Inc. 5th Edition.
17. Gordon, R. J. (2011), *Macroeconomics*, Pearson Series in Economics 12th Edition
18. Gottfries, N., (2013), *Macroeconomic*, Red Globe Press 2013 Edition
19. Gwartney, J. D., Stroup, R.L., Sobel, R.S. & Macpherson, D.A. (2017), *Macroeconomics: Private and Public Choice*, Cengage Learning. 16th Edition.
20. Hall, Robert E. & Taylor, J. B. (1997), *Macroeconomics*, W W Norton & Co Inc. 5th Edition.
21. Handa, J. (2010), *Macroeconomics (With Study Guide Cd-rom)*, World Scientific Publishing Company
22. Hubbard, G. & O'Brien, P. (2018), *Macroeconomics*, Pearson 7th Edition
23. James, E., Wellman, S. & Aberra, W. (2011), *Macroeconomics*, Pearson Education Canada.

2nd Edition

24. Jones, C. I. (2017), *Macroeconomics*, W. W. Norton & Company. 4th Edition
25. Karlan, D. & Morduch, J. (2017), *Macroeconomics*, McGraw-Hill Education. 2nd Edition.
26. Kennedy, P. E. & Prag, J. (2017), *Macroeconomic essentials: Understanding economics in the news*, MIT Press
27. Krugman, P. & Wells, R. (2015), *Macroeconomics*, Worth Publisher 4th Edition
28. Lindauer, J.L. (2012), *Macroeconomics*, iUniverse. 4th Edition.
29. Mankiw, N. G. (2018), *Macroeconomics*, Worth Publishers
30. McConnell, C., Brue, S. & Flynn, S. (2014), *Macroeconomics: Principles, Problems, & Policies*, McGraw-Hill Education. 20th Edition
31. McEachern, W. A. (2016). *Macroeconomics: A contemporary introduction*. Cengage Learning.
32. Mishkin, F. S. (2014), *Macroeconomics: Policy and practice*, Pearson Education
33. O'Sullivan, A., Sheffrin, S. & Perez, S. (2016), *Macroeconomics: principles, applications, and tools*, Pearson Higher Ed. 9th Edition
34. Parkin, M. (2015), *Macroeconomics*, Pearson Series in Economics 12th Edition
35. Popescu, G. H. (2013), *Macroeconomics*, Addleton Academic Publishers. 1st Edition. Kindle Version
36. Richards, D. and Rashid, M. & Antonioni, P. (2015), *Macroeconomics For Dummies*, John Wiley & Sons
37. Rossana, R. J. (2011), *Macroeconomics*, Routledge. 1st Edition
38. Sachs, J. D. & Larrain, B. F. (1993), *Macroeconomics in the global economy*, Prentice Hall
39. Samuelson, P. & Nordhaus, W. (2009), *Macroeconomics*, McGraw-Hill/Irwin. 19th Edition
40. Slavin, S. (2013), *Macroeconomics*, McGraw-Hill Series Economics 11th Edition
41. Williamson, S.D (2018), *Macroeconomics*, Pearson 6th Edition

Graduate teaching

1. Acemoglu, D. (2009), *An Introduction to Modern Economic Growth*, Princeton University Press
2. Adda, J. & Cooper, R. (2003), *Dynamic economics: quantitative methods and applications*, MIT press
3. Alogoskoufis, G. (2019), *Dynamic Macroeconomics*, MIT Press
4. Azariadis, C. (1993), *Intertemporal macroeconomics*, Blackwell Publishing Company
5. Barro, R. & Sala-i-Martin, X. (1998), *Economic Growth*, MIT Press
6. Blanchard, O. J. & Fischer, S. (1989), *Lectures on macroeconomics*, MIT Press
7. Cooley, T. F. (1995), *Frontiers of business cycle research*, Princeton University Press
8. Galí, J. (2015), *Monetary policy, inflation, and the business cycle: an introduction to the new Keynesian framework and its applications*, Princeton University Press
9. Ljungqvist, L. & Sargent, T. J. (2018), *Recursive macroeconomic theory*, MIT press
10. McCandless, G. (2008), *The ABCs of RBCs: An Introduction to Dynamic Macroeconomic Models*, Harvard University Press
11. Obstfeld, M. & Rogoff, K. (1996), *Foundations of international macroeconomics*, MIT press
12. Romer, D. (2012), *Advanced macroeconomics*, McGraw-Hill
13. Stokey, N., Lucas, R. & Prescott, E. (1989), *Recursive methods in economic dynamics*, Harvard University Press
14. Walsh, C. E. (2017), *Monetary theory and policy*, MIT press
15. Wickens, M. (2012), *Macroeconomic theory: a dynamic general equilibrium approach*, Princeton University Press
16. Woodford, M. (2011), *Interest and prices: Foundations of a theory of monetary policy*, Princeton University Press

Appendix B Discussion of Specific Textbooks

In this Section we present and discuss some textbooks that we deemed interesting and relevant given our taxonomy and/or they unique approach to the subject.

Froyen – Froyen adopts a historical perspective covering the evolution of macroeconomics from the time of Keynes to the present. Classical economics and the Keynesian revolution, the monetarist counterrevolution, new classical macroeconomics, RBC and New Keynesian macroeconomics are its main topics of study. The AS/AD model is discussed in the chapter on monetarism and DGE modeling in the last chapters of the book. With such an organization, asking whether Froyen’s textbook belongs to the AS/AD or the DGE research line makes little sense. Hence, its classification as “others”. It must hardly be taken as derogatory. On the contrary, we find that Froyen’s approach has much going for it. A first reason is that it is pedagogical. Moreover, it conveys the view that twists and turns are normal in a field as special as macroeconomics. A third reason relates directly to our query in this paper: the discrepancy experience otherwise undergone by students is absent from Froyen’s book.

Blanchard – Blanchard’s textbook occupies a top position in our ranking of undergraduate textbooks. However, this does not make him the perfectly representative AS-AD textbooks. Indeed, it differs from most others in an important aspect: the treatment of wages and employment. Foregoing supply and demand framework, Blanchard tackles this issue with a distinct trade technology embodied in a model called WS/PS, where WS means wage-setting and PS price-setting. Robert Rowthorn introduced it in a 1977 paper entitled “Conflict, Inflation and Money” ([Rowthorn 1977](#)). One decade later, three UK labor economists, R. Layard, S. Nickell and R. Jackman took over his insight in a 1991 book “Unemployment: Macroeconomic Performance and the Labor Market”, which received a larger echo than Rowthorn’s paper ([Layard et al. 1991](#)).

Rowthorn’s paper mixes insights from Marx (class struggle), Marshall (equilibrium a center

of gravity) and Friedman (workers hold adaptive expectations). Advanced capitalist economies are regarded as an arena where two main forces compete for the distribution of income, workers acting through representatives like unions, and capitalist firms. Both aim at increasing their share in total income. Equilibrium is defined as the level of unemployment making these aspirations compatible. It comes along with a stable inflation rate. The WS/PS model was present in the first edition of Blanchard's book (1996) and has remained so over all the subsequent ones though in a less politicized form than in Rowthorn's work.

In his 'medium-run' analysis, corresponding to Marshall's short-period time framework, Blanchard assumes that perfect competition no longer prevails in the good and the labor market. Real wages are formed in a two-stage sequence. In the first, workers unilaterally set the nominal wages as a function of the unemployment rate and a few structural variables, basing themselves on their expectations of the price level. In the second stage, firms set the price of output by imposing a fix markup on the nominal wage, the only cost they face in the medium run.

Abel and Bernanke¹ – We classify Abel and Bernanke's textbook as belonging to the AS-AD cluster. It might be objected that it should rather be classified in the 'others' group – or, more precisely, as a textbook spanning the AS-AD and the DGE research lines.²

Abel and Bernanke's attempt to build a common framework between the two core models reminds of Dornbusch and Fischer's pioneering textbook, which aim was to construct a framework in which the Keynesian and the monetarist analyses would be two variants of a broader model.³

¹We use the 'Abel and Bernanke' authorship, omitting Crushore participation, because the basic standpoint taken by their book has not changed since the first edition.

²Indeed, this is how they introduce it: "Macroeconomics is full of controversies, many of which arise from the split between classicals and Keynesians (of the old, new, and neo-varieties). Sometimes the controversies overshadow the broad common ground shared by the two schools. We emphasize that common ground. First, we pay general attention to long-run issues (over which classicals and Keynesians disagree less. Second, we develop the classical and Keynesian analyses of short-run fluctuations within a single overall framework. (...) This balanced approach gives the student the benefit of hearing all the best ideas in modern macroeconomics (Abel and Bernanke 1995)."

³This similarity is hardly accidental, since Abel and Bernanke are both M.I.T. alumni: Dornbusch supervised Abel's thesis in 1978, Fischer Bernanke's in 1979.

There is, however, a problem with such an extrapolation. The contrast drawn by Dornbusch and Fischer makes sense because the two models they compare belong to the same framework, IS-LM/AS-AD modeling. Both Keynesian and monetarist theories build up on the state of rest equilibrium notion with the connotation that adjustment is a time-taking process, explicit microfoundations and adaptive expectations modeling choices. The only difference between them is the speed of adjustment. The classical standpoint, associated with monetarism, consists of declaring that adjustment is quick to the effect that demand activation is unnecessary. The Keynesian standpoint asserts that adjustment is slow, which justifies demand activation at speeding us adjustment.

When it comes to the ‘modern’ situation, things are less simple. First, there are three waves in DGE modeling. A labor market is absent in the first two, Lucas’s model and RBC models. When present in new Keynesian models, it features market clearing. Second, in RBC models adjustment is not fast, as they write, it is instantaneous; hence no disequilibrium is present. Third, the fact that new Keynesian models can be recast using the IS-LM language does not make them abide by the modeling choices proper to the IS-LM/AS-AD, as developed in Section II. Therefore, Abel and Bernanke’s claim that DGE macroeconomics is a subset of AS-AD macroeconomics, to effect that a synthesis between ‘old’ and ‘new’ macroeconomics could be built, does not stand up to scrutiny. Their project of introducing students to both ‘old’ and ‘new’ macroeconomics is laudable and marks the originality of their textbook. Nonetheless, for what concerns our classification, its place is in the AS-AD category.

Carlin and Soskice – The case of Carlin and Soskice’s textbook is also particular. First, it became more sophisticated over its three installments (Carlin and Soskice 1990, 2006 and 2015): “This is two books in one. It is first a textbook and second the result of our ongoing research” (Carlin and Soskice 2015: IX). As they themselves acknowledge, it spans undergraduate and graduate teaching.⁴ Second, their book is different in coverage and depth from the others in the

⁴ Among the main components of Carlin and Soskice’s program, we find (a) an imperfectly competitive approach

sample. Whereas the other authors adopt the bifurcations proper to AS/AD without justification, in Carlin and Soskice's case, it comes as the result of a methodological reflection. Also, and more important, the aim they pursue is more ambitious as it amounts to nothing less than constructing an alternative to the DGE program, both in method ("building small scale but realistic and comprehensible models of the macroeconomy" (Carlin and Soskice 2015: IX)) and in policy-conclusion. All these factors plead toward regarding Carlin and Soskice's book as strongly different from the others. However, as far as its classification in our terminology is concerned, it must be classified with the AS/AD tradition.

Jones – As shown in our empirical investigation, Jones's textbook has been quite successful, given both the nice style and content.⁵ The originality of Jones' textbook is threefold. The first one relates to the importance given to the 2008 Global Financial Crisis. To him, the understanding of great recessions must be a central object of study of macroeconomics.⁶ The fourth edition (2018) has three chapters on the great recession, respectively entitled "The Great Recession. A first Look", "The Great Recession and the Short-run Model", and "DGE Models: The Frontier of Business Cycles Research". But his novelty is not just on the number of chapters dedicated to the Great Recession. Jones' second originality is one of substance: his message in the second of these chapters is that the AS-AD model, in its AS/IS-MP variant, is perfectly apt to explain the 2008 recession. Lucas disparaged the possibility that models based on the center-of-gravity equilibrium concept could tackle the study of ordinary business fluctuations. Now, instead, we have an economist defending that they are appropriate for understanding great recessions. The

of the labor market with unions fixing wages and employment, borrowed from [Layard & Nickell \(1986\)](#); (b) an original reframing of the three-equation model, (c) the zero lower bound; (d) a model of the banking system with private banking having an incentive to take on excessive risk.

⁵From our personal judgment, it is also more enthralling than the average textbook. Not many textbook authors end with the words, "I hope that this book leads you to some of your own "aha" moments" (2021: 601).

⁶The first edition of the textbook was published in 2008, the year of the economic crisis. The latter prompted Jones to publish an update of it in 2010 with two new chapters on the global financial crisis, adding the following preface: "'The macroeconomic events of the last several years are truly breathtaking — a once-in-a-lifetime (we hope) occurrence. While the basics of how economists understand the macroeconomy remain solid, the global financial crisis and the Great Recession take us into waters that, if not uncharted, at least haven't been visited in recent decades" (2010: XIX)."

third originality consists of asserting that the relationship between AS/AD and DGE modeling is seamless, the AS/AD being a “simplified setup that captures many of the insights of DSGE models” (Jones 2021:428). Except for Abel and Bernanke, most of the other textbook authors more or less implicitly accepted the view that there exists a deep discontinuity between IS-LM/AS-AD and DGE modeling. Jones takes the opposite standpoint. To him, the differences pertain to technical tractability rather than to basic modeling choice.

Appendix C Additional Tables

Table C-1: University Sample

Respondent	1 st Dec. (8/8)	2 nd Dec. (4/8)	3 rd Dec. (7/8)	4 th Dec. (8/8)	5 th Dec. (5/8)
1	London School of Economics	University of New South Wales	Hebrew University of Jerusalem	University of Hamburg	University of Georgia
2	University of Munich	University of Bologna	Georgia State University	Florida State University	North Carolina State University
3	Texas A&M University	Michigan State University	University of Technology Sydney	University of Innsbruck	University of Arkansas
4	MIT	University of Vienna	Humboldt University of Berlin	Vienna University of Econ&Buss.	University of Wisconsin
5	University of Toronto		University of St. Gallen	University of Montreal	University of Rome, Tor Vergata
6	Boston University		Uppsala University	University of Konstanz	
7	Stanford University		University of Bristol	Lund University	
8	Tilburg University			University of Leicester	
Respondent	6 th Dec. (8/8)	7 th Dec. (7/8)	8 th Dec. (6/8)	9 th Dec. (5/8)	10 th Dec. (7/8)
1	Free University of Berlin	Ryerson University	Kansas State University	University of Augsburg	University of Canterbury
2	York University	Montana State University	University of Paris II	University of Lugano	Radboud University Nijmegen
3	University of Kent	Bielefeld University	University of Namur	Newcastle University	Umea University
4	University of Tennessee, Knoxville	University of Fribourg	Catholic University of Rio de Janeiro	Norwegian Business School	University of Modena
5	University of Padua	University of Lyon	University of Naples Federico II	University of Rennes I	University of Delaware
6	University of Adelaide	Sabanci University	Pablo Olavide University		Catholic University of Portugal
7	The New Economic School	Concordia University			University of Potsdam
8	University of Guelph				

Note: The table shows the random sample of universities considered by decile of Tilburg Ranking. In the parenthesis we report the number of departments that answer to our query with respect to the total number of departments in each decile (8).

Table C-2: Ranking of recent textbooks based on the growth rate in absolute availability

(1) Author(s) (1 st Ed.)	(2) Ranking (Gr_{AA_b})	(3) Gr_{AA_b} (%)	(4) AA_b (2021)	(5) AA_b (2019)
Jones C. (2008)	1	366.9	537	115
Rossana R. J. (2011)	2	257.6	633	177
Karlan D.S. & Morduch J. (2014)	3	53.1	49	32
Acemoglu D. <i>et al.</i> (2014)	4	44.4	156	108
Chugh S. (2015)	5	22.3	104	85
Chakraborty S. (2009)	6	16.7	323	277
Richards D. <i>et al.</i> (2016)	7	14.4	222	194
Gottfries N. (2012)	8	13.4	110	97
Mishkin F. (2011)	9	10.4	244	221
Carlin W. & Soskice D. (2014)	10	8.1	187	173
Handa J. (2010)	11	5.2	61	58

Note: The list above is related to a WorldCat extraction made in January 2019 and March 2021, and it shows the results for textbooks whose first edition dates from 2008 onwards. Column (1) presents the name(s) of the author(s) and the year of the first edition. Column (2) shows the ranking of the textbook, based on the growth rate (in percentage points) of the number of libraries that hold the textbook between 2019 and 2021, which is presented in column (3). The number of libraries that hold a textbook is available in column (4) (March 2021 extraction) and column (5) (January 2019 extraction)

Table C-3: Geographical distribution of the use of intermediate textbooks

<i>US-Canada</i>			<i>Europe (EHEA)</i>			<i>Rest of the World</i>		
(1) Author(s)	(2) # of citations	(3) Weighted use	(4) Author(s)	(5) # of citations	(6) Weighted use	(7) Author(s)	(8) # of citations	(9) Weighted use
Mankiw G.	10	5.93	Blanchard O.	22	18.83	Dornbusch D. <i>et al.</i>	2	1.5
Williamson S.D.	8	4.5	Burda M. & Wyplosz C.	7	6.33	Mankiw G.	2	1
Blanchard O.	6	3.23	Mankiw G.	8	4.33	Jones C.	1	1
Jones C.	4	3	Williamson S.D.	4	2	Sachs J. & Larrain F.	1	1
Abel A. & Bernanke B.	2	1	Carlin S. & Soskice D.	3	1.5	Blanchard O.	2	0.75
Hubbard G.R. & O'Brien A.P.	2	0.83	Abel A. & Bernanke B.	2	1.5	Mishkin F.	1	0.5
Mishkin F.	1	0.5	Flaschel <i>et al.</i>	1	1	Williamson S.D.	1	0.25
			Gaertner M.	1	1			
			Gottfries N.	1	1			
No reference textbook	1	1	No reference textbook	2	1.5			
Total	34	20		51	39		10	6

Note: The table shows the sample of textbooks used in the economics departments considered in the academic year 2020-2021 by broad geographical area. Columns (1), (2) and (3) respectively present the name(s) of the author(s) of the textbook, the number of U.S. and Canadian departments using the textbook in an intermediate course, and the weighted use of the textbook. Columns (4), (5) and (6) reproduce the same exercise for economics department in the European Higher Education Area (EHEA), while columns (7), (8) and (9) reproduce it for departments that are located outside the US or Canada and do not belong to the EHEA.

Table C-4: Distribution of intermediate textbooks across top- and lower ranked departments in the Tilburg ranking

<i>Top decile</i>			<i>Other deciles</i>		
(1) Author(s)	(2) # of citations	(3) Weighted use	(4) Author(s)	(5) # of citations	(6) Weighted use
Mankiw G.	6	3.1	Blanchard O.	25	19.91
Blanchard O.	5	2.9	Mankiw G.	14	8.16
Jones C.	2	1	Williamson S.D.	13	6.75
Gaertner M.	1	1	Burda M. & Wyplosz C.	7	6.33
			Jones C.	3	3
			Abel A. & Bernanke B.	4	2.5
			Carlin W. & Soskice D.	3	1.5
			Dornbusch R. <i>et al.</i>	2	1.5
			Mishkin F.	2	1
			Flaschel <i>et al.</i>	1	1
			Gottfries N.	1	1
			Sachs J. & Larrain B.	1	1
			Hubbard G.R. & O'Brien P.	2	0.83
			No reference textbook	3	2.5
Total	14	8		81	57

Note: The table shows the sample of textbooks used in the departments considered according to their rank in the Tilburg Ranking. Columns (1) and (4) display the names of the authors. Column (2) shows the number of institutions belonging to the first decile of the Tilburg Ranking (top-ranked departments) that use the textbook in their intermediate macroeconomics courses. Column (3) weights textbooks according at their actual use in these universities. Columns (5) and (6) reproduce columns (2) and (3), respectively, but only considering lower ranked departments.

Table C-5: Ranking of undergraduate textbooks according to their use in introductory and intermediate courses

Introductory classes				Intermediate classes			
(1) Author(s)	(2) Title	(3) # citations	(4) Weighted use	(5) Author(s)	(6) Title	(7) # citations	(8) Weighted use
Mankiw G.	Principles of Macroeconomics	4	2.25	Mankiw G.	Macroeconomics	8	5.83
Fregert K. & Jonung L.	Makroekonomi	2	2	Blanchard O.	Macroeconomics	7	4.58
Krugman P. & Wells R.	Macroeconomics	3	1.75	Williamson S.D.	Macroeconomics	8	3.75
Parkin M.	Macroeconomics	3	1.75	Jones C.	Macroeconomics	4	3.5
Hubbard G. R. & O'Brian A. P.	Macroeconomics	3	1.5	Burda M. & Wyplosz C.	Macroeconomics: a European text	3	3
Asarta C. & Butters R.	Principles of Economics	2	1.5	Abel A.B. <i>et al.</i>	Macroeconomics	3	1.5
Mankiw G.	Macroeconomics	3	1.08	Dornbusch R. <i>et al.</i>	Macroeconomics	2	1.5
Baumol W. & Blinder A.	Macroeconomics: Principles and Policy	1	1	Carlin W. & Soskice D.W.	Macroeconomics: Institutions, instability and the financial system	2	1
Bernanke B. <i>et al.</i>	Principles of Macroeconomics	1	1	Gaertner M.	Macroeconomics	1	1
Blanchard O.	Macroeconomics	1	1	Gottfries N.	Macroeconomics	1	1
Burda M. & Wyplosz C.	Macroeconomics	1	1	Sachs J.D. & Larrain B.F.	Macroeconomics	1	1
Curtis D. & Irvine I.	Principles of Macroeconomics	1	1	Hubbard G. & O'Brien P.	Macroeconomics	2	0.83
Dobrescu I. & Motta A.	Playconomics: Principles of Economics	1	1	Mishkin F.S.	Macroeconomics	1	0.5
Gwartney J. <i>et al.</i>	Macroeconomics: Private and Public Choice	1	1				
Mayshar J.	The Macroeconomics of Israel	1	1				
Otto G.	Introduction to Macroeconomics	1	1				
Steigum E.	Moderne makroekonomi	1	1				
Chiang E.	Economics Principles for a Changing World	2	0.58				
Hickson S.	The New Zealand macroeconomy : what we measure and what it means	1	0.5				
Karlan D. & Morduch J.	Macroeconomics	1	0.5				
Krugman P. & Obstfeld M.	International Macroeconomics	1	0.5				
McConnel C. <i>et al.</i>	Macroeconomics	1	0.5				
Acemoglu D. <i>et al.</i>	Macroeconomics	1	0.33				
Feijo C.A. & Ramos R. O.	Contabilidade Social: A nova referência das contas nacionais do Brasil	1	0.33				
Paulani L. & Braga M.	A Nova Contabilidade Social: uma introdução à macroeconomia	1	0.33				
Tucker I.	Survey of Economics	1	0.33				
Coppock L. & Mateer D.	Principles of Macroeconomics	1	0.25				
CORE-ECON		1	1				
No reference textbook		3	3	No reference textbook		2	2
Total		46	31	Total		45	31

Note: We only consider departments offering a sequence of courses in macroeconomics starting with an introductory course to macroeconomics. Columns (1) (2) (3) and (4) provide the names of the author(s) of each textbook, its title, the number of departments using the textbook in the 2020-2021 academic year, as well as its weighted use. Columns (5) to (8) provide the same information for intermediate courses.

Table C-6: Ranking of graduate textbooks according to the number of citations

(1) Author(s)	(2) Title	(3) Overall	(4) <i>Professional</i> Master's	(5) PhD & <i>Research</i> Master's
Romer D.	Advanced Macroeconomics	32	23	9
Ljungqvist L. & Sargent T.	Recursive Macroeconomic Theory	21	1	20
Stokey N. Lucas R. & Prescott E.	Recursive Methods in Economic Dynamics	12	1	11
Gali J.	Monetary Policy, Inflation and the Business Cycle	10	/	10
Acemoglu D.	Introduction to Modern Economic Growth	7	1	6
Blanchard O. & Fischer S.	Lectures on Macroeconomics	5	2	3
Barro R. & Sala-i-Martin X.	Economic Growth	5	2	3
Walsh C.	Monetary Theory and Policy	5	1	4
Woodford M.	Interest and Prices: Foundations of a Theory of Monetary Policy	4	/	4
Cooley T.	Frontiers of Business Cycle Research	4	1	3
Wickens M.	Macroeconomic Theory. A Dynamic General Equilibrium Approach	4	2	2
Obstfeld M. & Rogoff K.	Foundations of International Macroeconomics	3	2	1
Adda J. & Cooper R.	Dynamic Economics: Quantitative Methods and Applications	2	1	1
Alogoskoufis G.	Dynamic Macroeconomics	2	2	/
Azariadis C.	Intertemporal Macroeconomics	2	1	1
McCandless G.	The ABCs of RBCs: An Introduction to Dynamic Macroeconomic Models	2	1	1
Agenor P.-R. & Montiel P.	Development Macroeconomics	1	1	/
Aghion P. & Howitt P.	The economics of growth	1	/	1
Athreya K.	Big Ideas in Macroeconomics: A Nontechnical View	1	1	/
Bagliano F. & Bertola G.	Models for Dynamic Macroeconomics	1	1	/
Bertocchi G.	Strutture Finanziarie Dinamiche	1	/	1
Champ B. <i>et al.</i>	Modeling monetary economics	1	1	/
Chiang A. & Wainwright K.	Fundamental Methods of Mathematical Economics	1	/	1
Chugh S.	Modern Macroeconomics	1	1	/
de la Croix D. & Michel P.	A theory of economic growth : Dynamics and policy in Overlapping generations	1	1	/
Enders W.	Applied Econometric Time Series	1	/	1
Froyen R. & Guender A.	Optimal Monetary Policy under Uncertainty	1	1	/
Galor O.	Discrete Dynamical Systems	1	/	1
Heijdra B.	Foundations of Modern Macroeconomics	1	/	1
Jappelli T. & Pistaferri L.	The economics of consumption	1	/	1
Kurlat P.	A Course in Modern Macroeconomics	1	1	/
Mankiw G.	Macroeconomics	1	1	/
Miao J.	Economic Dynamics in Discrete Time	1	/	1
Mishkin F.	The economics of money, banking, and financial markets	1	1	/
Niepelt D.	Macroeconomic Analysis	1	/	1
Pissarides C.	Equilibrium unemployment theory	1	/	1
Sargent T.	Rational Expectations and Inflation	1	1	/
Weil D.	Economic Growth	2	1	1
Williamson S. D.	Macroeconomics	1	1	/
No reference textbook		10	2	8

Notes The table shows the sample of textbooks used in the 2020-2021 academic year in graduate macroeconomics courses in the economics departments considered. Column (1) presents the names of the author(s), while column (2) shows the title of the textbooks. Column (3) shows the number of institutions using the textbook either as a reference text or as a recommended readings, columns (4) and (5) make the distinction between (i) *professional* master's and (ii) *research* master's/PhD courses. Only textbooks that are used in at least two universities appear in the table.

Table C-7: Distribution of graduate textbooks used in research masters or PhD programs across top- and lower ranked departments in the Tilburg ranking

<i>Top-2 deciles</i>		<i>Other deciles</i>	
(1)	(2)	(3)	(4)
Author(s)	# of citations	Author(s)	# of citations
Ljungqvist L. & Sargent T.	5	Ljungqvist L. & Sargent T.	16
Stokey N. Lucas R. & Prescott E.	4	Stokey N. Lucas R. & Prescott E.	8
Acemoglu D.	2	Romer D.	8
Gali J.	2	Gali J.	7
Cooley T.	2	Acemoglu D.	3
Woodford M.	2	Barro R. & Sala-i-Martin .	3
Adda J & Cooper R.	1	Blanchard O. & Fischer S.	3
Obstfeld M & Rogoff K.	1	Walsh	3
Walsh C.	1	Wickens	2
		Woodford M.	2
		Aghion P. & Howitt P.	1
		Azariadis C.	1
		Bertocchi G.	1
		Chiang A. & Wainwright K.	1
		Cooley C.	1
		Enders W.	1
		Galor O.	1
		Heijdra B.	1
		Jappelli T. & Pistaferri L.	1
		McCandless G.	1
		Miao J.	1
		Niepel D.	1
		Pissarides C.	1
		Weil D.	1
No reference textbook	2	No reference textbook	7

Notes: The table shows the sample of textbooks used in the 2020-2021 academic year in graduate macroeconomics courses in the economics departments considered. Only textbooks used in a research master's or a PhD course are considered. Column (1) and (3) display the names of the author(s). Columns (2) and (4) shows the number of institutions using the textbook either as a reference text or as a recommended reading in top-ranked universities (2) and other universities (4). Top-ranked universities are the ones that belong to the first decile of the Tilburg Ranking.

Table C-8: Ranking of macroeconomics textbooks indexed in the WorldCat (2019)

Absolute Availability			Relative Availability		
(1) Author(s)	(2) Ranking (AA_b)	(3) AA_b	(4) Author(s)	(5) Ranking (RA_b)	(6) RA_b
Dornbusch R.	1	3598	Krugman P. & Wells R.	1	143,5
Barro R. J.	2	2759	Kennedy P.	2	102,9
Mankiw G.	3	2737	Blanchard O.	3	98,4
Blanchard O.	4	2263	Mankiw G.	4	97,8
Gordon R. J.	5	2025	Dornbusch R.	5	87,8
Kennedy P.	6	1955	Barro R. J.	6	78,8
Krugman P. & Wells R.	7	1866	Richards D. <i>et al.</i>	7	64,7
Abel A. & Bernanke B.	8	1723	Abel A. & Bernanke B.	8	61,5
Colander D.	9	1435	Popescu G.	9	54,5
Burda M. & Wyplosz C.	10	1290	Burda M. & Wyplosz C.	10	49,6
Froyen R. T.	11	1258	Williamson S. D.	11	46,4
Parkin M.	12	1119	Hubbard G. R. & O'Brian A. P.	12	44,0
Campbell R. McConnell <i>et al.</i>	13	1075	Colander D.	13	43,5
Hall R.E. & Taylor J.B.	14	1011	Gordon R. J.	14	42,2
McEachern W.	15	950	Campbell R. McConnell <i>et al.</i>	15	37,1
Brooman H.D. & Jacoby F. D.	16	874	Froyen R. T.	16	34,9
Lindauer J.	17	827	Carlin S. & Soskice D.	17	34,6
Williamson S. D.	18	789	Parkin M.	18	32,0
Gwartney J. D.	19	787	McEachern W.	19	30,6
Popescu G.	20	708	Hall R.E. & Taylor J.B.	20	30,6
Hubbard G. R. & O'Brian A. P.	21	572	Chakraborty S.	21	27,7
Gartner M.	22	509	Mishkin F.	22	27,6
Samuelson P. A. & Nordhaus W. D.	23	480	Gartner M.	23	23,1
Bradford DeLong J. & Olney M.	24	378	Rossana R. J.	24	22,1
Boyes W. & Melvin M.	25	320	Acemoglu D. <i>et al.</i>	25	21,6
Slavin S.	26	320	Chugh S.	26	21,3
Chakraborty S.	27	277	Bradford DeLong J. & Olney M.	27	21,0
O' Sullivan A., Perez S. & Sheffrin S.M.	28	230	O' Sullivan A., Perez S. & Sheffrin S.M.	28	19,2
Mishkin F.	29	221	Gwartney J. D.	29	18,3
Richards D. <i>et al.</i>	30	194	Lindauer J.	30	16,2
Rossana R. J.	31	177	Samuelson P. A. & Nordhaus W. D.	31	15,5
Carlin and Soskice	32	173	Brooman H.D. & Jacoby F. D.	32	15,3
Jones C.	33	115	Gottfries N.	33	13,9
Acemoglu D. <i>et al.</i>	34	108	Slavin S.	34	12,8
Gottfries N.	35	97	Boyes W. & Melvin M.	35	11,4
Chugh S.	36	85	Jones C.	36	10,5
Handa J.	37	58	Handa J.	37	6,4
James E. M.	38	33	Karlan D.S. <i>et al.</i>	38	6,4
Karlan D.S. <i>et al.</i>	39	32	James E. M.	39	3,0

Notes: The list above is related to a WorldCat exploration made on March 2019. Columns (1) and (4) present the name of the author(s), the year of the first edition and last edition of the textbook. Columns (2) and (5) show the ranking of the textbook, based on a measure of absolute availability, which captures the number of libraries that hold a copy of the book (AA_b), and relative availability, number of libraries that hold a copy divided by the number of years on the market (RA_b), presented respectively in columns (3) and (6).

Table C-9: Universities Sample - Undergraduates - Full Table 2020-2021

Author(s) (1)	Textbook (2)	WorldCat (3)	Total				Weighted			
			Total (4)	Introductory (5)	Intermediate (6)	Advanced (7)	Total (8)	Introductory (9)	Intermediate (10)	Advanced (11)
Abel A. & Bernanke B.	Macroeconomics	✓	5	0	5	0	3	0	3	0
Blanchard O.	Macroeconomics	✓	37	7	29	1	28,81	6,5	21,81	0,5
Blanchard O. & Fischer S.	Lectures in Macroeconomics		2	0	0	2	0,75	0	0	0,75
Burda M. & Wyplosz C.	Macroeconomics: A European Perspective	✓	9	1	7	1	8,33	1	6,33	1
Carlin W. & Soskice D.	Macroeconomics: Institutions, Instability, and the Financial System	✓	6	0	3	2			1,5	0,5
Chiang E.	Macroeconomics: Principles for a Changing World		2	2	0	0	0,58	0,58	0	0
Dornbusch R. <i>et al.</i>	Macroeconomics	✓	2	0	2	0	1,5	0	1,5	0
Fregert, K. & Jonung L.	Makroekonomi: teori, politik och institutioner		0	2	2	0	2	2	0	0
Hubbard G.R. & O'Brien A.P.	Macroeconomics	✓	7	4	2	1	3,08	1,75	0,83	0,5
Jones C.	Macroeconomics	✓	6	0	6	0	4,5	0	4,5	0
Jones C.	Introduction to Economic Growth		3	0	0	3	3	0	0	3
Krugman P. <i>et al.</i>	International Economics: Theory and Policy		2	1	0	1	1,5	0,5	0	1
Krugman P. & Wells R.	Macroeconomics	✓	4	4	0	0	2	2	0	0
Mankiw G.	Macroeconomics	✓	27	9	18	0	13,84	4,58	9,26	0
Mishkin F.	The Economics of Money, Banking and Financial Markets		4	0	2	2	2,5	0	1	1,5
Parkin M.	Macroeconomics	✓	4	4	0	0	2	2	0	0
Romer D.	Advanced Macroeconomics		3	0	1	2	1,75	0	0,5	1,25
Weil D.N.	Economic Growth		3	1	0	2	2,5	1	0	2
Williamson S.D.	Macroeconomics	✓	16	0	14	2	8,75	0	7,25	1,5
CORE-ECON			2	1	1	0	1,5	1	0,5	0
Other textbooks			32	19	6	7				
Multiple textbooks			2	1	1	0				
No reference textbook			7	0	2	5				
Observations			187	56	100	31				

Notes: The table shows the sample of textbooks used in the inquired universities for the academic year 2020-2021. Column (1) presents the name of the authors. Column (2) shows the title of the textbooks., while column (3) shows whether the textbook is present in the sample of WorldCat textbooks. From columns (4) to (7) report the number of universities that use each textbook by level of courses. In order to account for the fact that in some universities more than one book is used as reference, we constructed additional indicators that give a greater weight to textbooks that are the unique reference text for the intermediate course. Specifically, by university and for each textbook used, we assign it a weight that corresponds to its probability to be used. For instance, if only one textbook is used as reference in a university, it receives a weight equal to one. If two textbooks are used, we assign to each of them a weight of 0.5. Columns (8) to (11) provide the sum of these weights for each textbook. Only textbooks that are used at least by two universities are mentioned, complete results are available upon requests.

Table C-10: Universities Sample - Undergraduates - Full Table 2018-2019

Author(s) (1)	Textbook (2)	WorldCat (3)	Total				Weighted			
			Total (4)	Introductory (5)	Intermediate (6)	Advanced (7)	Total (8)	Introductory (9)	Intermediate (10)	Advanced (11)
Acemoglu D. <i>et al.</i>	Macroeconomics	✓	4	3	1	0	1,83	1,33	0,5	0
Abel A. & Bernanke B.	Macroeconomics	✓	6	0	6	0	3,16	0	3,16	0
Barro R. J.	Macroeconomics	✓	2	0	1	1	0,83	0	0,33	0,5
Blanchard O.	Macroeconomics	✓	34	4	28	2	22,96	3,33	18,8	0,83
Blanchard O. & Fisher S.	Lectures in Macroeconomics		2	0	0	2	0,83	0	0	0,83
Burda M. & Wyplosz C.	Macroeconomics	✓	7	0	6	1	5,33	0	4,33	1
Carlin W. Soskice D.	Macroeconomics		5	0	4	1	2,83	0	2,33	0,5
Dornbusch R. <i>et al.</i>	Macroeconomics	✓	4	0	4	0	1,06	0	1,06	0
Fregert K. & Jonung L.	Makroekonomi		2	2	0	0	2	2	0	0
Hubbard G. R. & O'Brian A. P.	Macroeconomics	✓	7	4	1	2	4,75	2,75	0,5	1,5
Jones C.	Macroeconomics	✓	7	1	6	0	4,16	0,5	3,66	0
Krugman P. & Wells R.	Macroeconomics	✓	6	4	2	0	2,08	1,08	1	0
Krugman P. & Obstfeld M.	International Economics		2	1	0	1	1	0,5	0	0,5
Mankiw G.	Macroeconomics	✓	25	8	17	0	16,23	4,49	11,74	0
Mankiw G.	Principle of Macroeconomics		6	6	0	0	3,75	3,75	0	0
Mishkin F.	The Economics of Money		6	0	2	4	4,33	0	1,33	3
Romer D.	Advanced Macroeconomics		6	0	0	6	4,33	0	0	4,33
Weil D. N.	Economic Growth		4	0	0	4	2,5	0	0	2,5
Williamson S.D.	Macroeconomics	✓	17	0	15	2	9,27	0	7,44	0,83
CORE-ECON			3	2	1	0	1,66	1,33	0,33	0
Other Textbooks			37	21	5	11				
No info			3	0	0	3				
Multiple Textbooks			2	0	1	1				
No Textbooks			7	0	3	4				
Observations			204	56	103	45				

Notes: The table shows the sample of textbooks used in the inquired universities for the academic year 2018-2019. Column (1) presents the name of the authors. Column (2) shows the title of the textbooks., while column (3) shows whether the textbook is present in the sample of WorldCat textbooks. From columns (4) to (7) report the number of universities that use each textbook for all levels of undergraduate macroeconomic courses. In order to account for the fact that in some universities more than one book is used as reference, we constructed additional indicators that give a greater weight to textbooks that are the unique reference text for the intermediate course. Specifically, by university and for each textbook used, we assign it a weight that corresponds to its probability to be used. For instance, if only one textbook is used as reference in a university, it receives a weight equal to one. If two textbooks are used, we assign to each of them a weight of 0.5. Columns (8) to (11) provide the sum of these weights for each textbook. Only textbooks that are used at least by two universities are mentioned, complete results are available upon requests.

Table C-11: Ranking of undergraduate textbooks by level of courses according to their use in economics departments
Subsample with more than one macroeconomics course (V2)

<i>Introductory classes</i>			<i>Intermediate classes</i>			<i>Advanced classes</i>		
(1) Author(s)	(2) # citations	(3) Weighted use	(4) Author(s)	(5) # citations	(6) Weighted use	(7) Author(s)	(8) # citations	(9) Weighted use
Mankiw G.	4	2,25	Mankiw G.	8	5,83	Williamson S.D.	3	2,5
Fregert K. & Jonung L.	2	2	Blanchard O.	7	4,58	Jones C. & Vollrath D.	3	3
Krugman P. & Wells R.	3	1,75	Williamson S.D.	8	3,75	Weil D.	1	1
Parkin M.	3	1,75	Jones C.	4	3,5	Sorensen P.B. & Whitta-Jacobsen H.J.	1	1
Hubbard G. R. & O'Brian A. P	3	1,5	Burda M. & Wyplosz C.	3	3	Barro R. & Sala-i-Martin X.	1	0,5
Asarta C. & Butters R.	2	1,5	Abel A.B. <i>et al.</i>	3	1,5	Blanchard O.	1	0,5
Mankiw G.	3	1,08	Dornbusch R. <i>et al.</i>	2	1,5	Carlin W. & Soskice D.W.	1	0,5
Baumol W. & Blinder A.	1	1	Carlin W. & Soskice D.W.	2	1	Gali J.	1	0,5
Bernanke/Frank/Olekalns	1	1	Gaertner M.	1	1	Hubbard G. & O'Brien P.	1	0,5
Blanchard O.	1	1	Gottfries N.	1	1	Krueger D.	1	0,5
Burda M. & Wyplosz C.	1	1	Sachs J.D. & Larrain B.F.	1	1	Mishkin F.S.	1	0,5
Curtis D. & Irvine I.	1	1	Hubbard G. & O'Brien P.	2	0,83			
Dobrescu I. & Motta A.	1	1	Mishkin F.S.	1	0,5			
Gwartney J. <i>et al.</i>	1	1						
Mayshar J.	1	1						
Otto G.	1	1						
Steigum E.	1	1						
Chiang E.	2	0,58						
Hickson S.	1	0,5						
Karlan D. & Morduch J.	1	0,5						
Krugman P. & Obstfeld M.	1	0,5						
McConnel C. <i>et al.</i>	1	0,5						
Acemoglu D. <i>et al.</i>	1	0,33						
Feijo C.A. & Ramos R. O.	1	0,33						
Paulani L. & Braga M.	1	0,33						
Tucker I.	1	0,33						
Coppock L. & Mateer D.	1	0,25						
CORE-ECON	1	1						
No reference textbook	3	3	No reference textbook	2	2	No reference textbook	2	2
Total	46	30,98		45	30,99		18	13

Notes: We only consider departments offering a sequence of courses in macroeconomics. Columns (1) (2) and (3) provide the names of the authors of each textbooks, the number of departments using the textbook in the academic year 2020-2021 and the weighted use of the textbook. Columns (4) to (6) and columns (7) to (9) provide the same information for intermediate and advanced courses, respectively.

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Rowthorn, R. E. (1977), 'Conflict, inflation and money', *Cambridge Journal of Economics* **1**(3), 215–239.