World Development 173 (2024) 106246

Contents lists available at ScienceDirect

World Development

journal homepage: www.elsevier.com/locate/worlddev

Crouching beliefs, hidden biases: The rise and fall of growth narratives

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ARTICLE INFO

Article history:
Accepted 19 March 2023
Available online 19 October 2023

JEL classification:
O25
O0
N1

Keywords:
Narratives
Industrial policy
Growth
Manufacturing
Services
Washington consensus
Structural reforms

ABSTRACT

The debate among economists about an optimal growth recipe has been the subject of competing "narratives." We identify-four major growth narratives using the text analytics of IMF country reports over 1978–2019. The narrative "Economic Structure"—services, manufacturing, and agriculture—has been on a secular decline overshadowed by the "Structural Reforms"—competitiveness, transparency, and governance. We observe the rise and fall of the "Washington Consensus"—privatization and liberalization—and the rise to dominance of the "Washington Constellation," a collection of many disparate terms such as productivity, tourism, and inequality. We interpret these changes through the lens of a nexus of the changing pool of economic ideas, the power structure within organizations, and the shocks that trigger a shift of narratives and their translation into policies.

1. Introduction

Our world is shaped by ideas, and the ideas of economists are particularly influential. But why are some ideas more influential than others? Beyond empirical evidence and coherent theories, ideas shape narratives, which affect our worldview and influence our decisions. Shiller (2019) in his *Narrative Economics* emphasizes the importance of narratives or popular stories and their impact on economic outcomes such as the severity of a downturn or technological unemployment. In the same fashion, the formation of a consensus among economists is closely related to the success of a certain narrative. But it is also plausible that power dynamics could also be at play.

In this paper, we attempt to identify the main narratives related to economic growth in an international organization and how their relative influence evolved through time, and we suggest a theoretical framework to interpret these changes. In other words, we consider narratives among economists and policymakers from an epistemological point of view.

Understanding the wealth of nations and the determinants of economic growth is one of the central questions in economics. However, there are several competing theories and different ways to interpret empirical evidence as to what truly causes growth.[1] Since the list of growth factors or ingredients in the growth recipe is long, policymakers need to come up with a limited set of easily expressed explanations or "growth narratives" as to what causes growth.

We propose to uncover the composition of growth recipes in the world using the text analytics of the International Monetary Fund (IMF) country reports over 1978–2019, which are largely available online. The IMF produces a multitude of reports, in particular country reports—Article IV Staff Reports—which cover practically the whole world on a regular basis (a country report is issued every-one to two years on average for every member country) and reflect recent developments in the economy, a discussion of the policies pursued, and the views of the authorities and IMF

[1] For instance, economic studies emphasize human capital (Lucas, 1988), capital accumulation (Solow, 1957), financial development (Greenwood & Jovanovic, 1990), institutions (Acemoglu & James, 2012), ideas and innovation to produce new goods (Romer, 1990), and Schumpeterian creative destruction or quality ladders (Aghion & Howitt, 1992); older literature focused on production structure (Leontief, 1966) or the role of large firms, advanced technology, and planning (Galbraith, 1967).

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https://doi.org/10.1016/j.worlddev.2023.106246
0305-750X/

staff on macroeconomic policies. These reports are a good reflection of the consensus, or the "orthodoxy" as some would call it, on economic issues among professional economists in academia and policy circles.[2] As these reports are intended for a relatively wide audience, they are likely to distill sophisticated ideas in the form of narratives or stories (Mamaysky, 2020; Shiller, 2017, 2019) for effective communication.[3]

Using hierarchical clustering, we have identified and examined four key growth narratives that make up the prevalent growth recipe and how these narratives have changed through time.[4] We also identify a set of significant turning points in the relative influence of these narratives and find that they correspond to major political and economic events. The four clusters—"Economic Structure," "Structural Reforms," "Washington Consensus," and "Washington Constellation"—reflect the key growth terms that identify each cluster.[5]

We interpret changes in the narratives we identify through a lens of a nexus of the changing pool of economic ideas, the power structure within organizations or policymaking circles, and the shocks that trigger a shift of narratives and their translation into policies. We suggest a theory explaining the mechanism, drawing parallels with D'Alisa and Kallis (2016). They argue that Gramscian concepts can form a theoretical basis for the imposition of certain policies without coercion in the context of maladaptation after a natural disaster.

In this proposed power-idea-shock nexus, although new ideas may be floated or even adopted by a bloc within an organization, the major shifts would take place following an economic or political crisis or a shock like a natural disaster or a major event like a change in government, which would provide justification or give an impetus to a change. Washington Consensus policies (Williamson, 1990) were only adopted in the wake of the debt crises of the early 1980s. In the same vein, the Asian crisis of the late 1990s and the 2008 financial crisis precipitated a decline of the Washington Consensus as many of its propositions were questioned. A crisis offers a justification and a chance to mobilize forces to accelerate the shift in policies within institutions, which otherwise may take a very long time to change.

The tenants of the growth paradigm itself, which appeared after the second World War (Schmelzer, 2017), have been questioned by other narratives, which we can detect to varying degrees in our analysis. First, we find that the term "industrial policy," describing policies calling for state intervention to achieve high and sustained growth, disappeared in the 1980s only to reemerge in the 2010s. Second, the influence of research on how to better measure welfare "beyond Gross Domestic Product" (GDP), can be indirectly observed in the rise of the Washington Constellation narrative. Third, there has been a rapidly expanding literature criticizing the growth paradigm from different perspectives and offering alternatives (e.g., degrowth and post-development). These narratives are not yet "visible" in our analysis, but we give a brief overview as they are plausible candidates to reach a hegemonic position in the public discourse in the next decades as the world faces multiple crises such as pandemics, climate change, and social upheavals.

The remaining of the paper is as follows. Section 2 provides a theoretical framework. Section 3 describes the data and methodology, and Section 4 summarizes the main findings and interpretation of results. Section 5 discusses the alternative narratives while Section 6 concludes.

2. Theoretical framework: the nexus of power, ideas, and shocks

A variety of political and social processes have played a role in the birth and spread of ideas and narratives, which in turn spur actions. Social interactions and exchange could result in the epidemic spread of ideas and cascade effects (Shiller, 2017) while policy imitation and desire to be competitive affect economic narratives and policies (Kentikelenis & Babb, 2019). New narratives could also be translated into policies when led by powerful actors, or blocs, within national and international organizations via coercion, a Gramscian hegemonic bloc (Kentikelenis & Babb, 2019), or a plain leadership in the provision of global public goods to avoid the "Kindleberger Trap."[6] The evolution of policy norms via complex interactions of state and non-state actors, could act as another mechanism in the diffusion of narratives (Park & Vetterlein, 2010; Wade, 2011). This approach to change goes beyond the principal-agent or the hegemonic view of the power structure, by considering changes in social norms within the organization and their agency to translate into policy action. Narratives in turn affect actions and policies as they help understand the environment, focus attention, and motivate action (Akerlof & Snower, 2016).

In the context of international institutions and economics profession at large, to understand how economic narratives rise and fall, in turn affecting policies, we propose a novel power-idea-shock nexus—the interaction of the power structure with the pool of ideas triggered by significant events or shocks. The workings of either the power structure alone or the epidemic spread of ideas are not necessarily sufficient for the change in narratives and especially policies. Rather, it is the combination of the power and ideas that potentially create this change. And this change tends to be triggered by external events like financial crises or political turnover.

Ideas in economics gain popularity, not necessarily always based on the strength of the empirical or theoretical evidence, but also as a result of a viral spread (Shiller, 2017) or power relations. The rapid contagion depends on such aspects as how vivid and simple the narrative is, the charisma of its key proponents, and context. New narratives can contaminate the views of economists and policymakers, which are themselves actors in the power structure of international organizations. This pool of existing and emerging ideas on economic policies is essentially driven by professional and academic economists. Various ideas are born and die as economic circumstances change. John Maynard Keynes's ideas on aggregate demand management became prominent during the Great Depression of the 1930s as the narrative of the self-correcting nature of the market faded away. The free-market narrative started to make its way back into the economic discourse in the 1960s–1970s with Milton Friedman as its key proponent. The selection of ideas, to a large extent, is not random. As theories are devised and empirically tested, the professional consensus is formed. Yet even in this formation of ideas, the power-idea-shock nexus takes hold. Economists are not only guided by the empirical evidence but also their beliefs, social norms, and power relations, notwithstanding the feedback effects from politicians

[2] Since these growth clusters are composed of distinct words and phrases, without context, they may not be interpreted as IMF policy advice; rather, they reflect the key ideas and concepts discussed in the reports.

[3] Economists in International Financial Institutions are mostly holders of PhDs from major Western universities and are likely to share the consensus in the economics profession.

[4] We interpret these clusters as representative of "narratives" underpinned by ideas and concepts that shape them. These clusters capture a set of disparate concepts that rise and fall together, and their composition can convey the dominant story or narrative. Like in the principal component or factor analysis, we assign names to these clusters based on their composition.

[5] The final cluster is described as a "constellation" as it is a collection of many seemingly unrelated concepts (Shiller, 2019).

[6] The "Kindleberger Trap" is a failure to provide global public goods as one global power replaces another one.

and policymakers. These forces, marginalizing certain ideas, eventually produce a pool of widely accepted ideas, to be drawn from by economists, policymakers, and others.

In the power-idea-shock nexus, the power structure within organizations is essentially an interaction or bargaining between competing blocs, potentially influenced by different narratives, which could be explained by their different contexts. These blocs could be thought of as a hegemon vs the rest, core vs periphery, or a stronger bloc vs a weaker bloc. As these blocs of power interact or bargain over ideas and narratives, eventually the narratives make their way to policies and implementation. The bargaining power of the hegemon or the core is stronger, and it is not surprising that its narratives become dominant and have more sway in policy discussions while at the same time, hard to change. However, the hegemon's narratives change over time as well, and to a large extent could be driven by a powerful or prominent individual or a group of individuals, as the example of the spread of free market reforms illustrates (discussed in Section IV). The mechanisms, according to which narratives eventually become dominant, include consensus, coalition building, moral suasion, and persuasion with incentives (e.g., Bates, 1975, Wade, 2002, Saull, 2010, Wade, 2015, Kentikelenis & Babb, 2019). Thus, it is not just the ideas of the stronger bloc that matter but also the broad consent to those ideas by the weaker bloc (Bates, 1975).

The power relations can also be interpreted through the Gramscian lens of hegemony. In the Gramscian analysis of maladaptation in D'Alisa and Kallis (2016), the concepts of integral state and "common senses" explain how consent about policies serving a certain bloc was achieved and offer a theoretical lens for the power dynamics. Gramsci suggested the concept of the integral state as the ensemble of the political society and social or civil society. The former represents the space where different blocs or classes vie for the *coercive* power. The equivalent in our study would be the states in charge of conducting economic policies. The civil society in contrast is the space where actors struggle to impose ideas, translating into the growth narratives we are attempting to unveil. The arena, where such narratives are competing, includes economic journals, universities, and think tanks. Gramsci argues that the ruling bloc, although in control of the political society, can only sustain its rule by homogenizing the ideas (or narratives) prevalent in the civil society. In contrast, consent alone would not suffice, and instruments of power are needed to enforce the policies in question. In other words, the state has to be understood in its full or integral form (D'Alisa & Kallis, 2016).

Our study of growth narratives, reflecting various ideologies and ideas, relates more directly to the ideological homogenization of civil society. To understand how homogenization is achieved, Gramsci invokes the concept of "common senses." Rather than a natural or absolute truth, common senses are sets of beliefs that are often contradictory and accepted in an uncritical fashion. These common senses can be transformed and replaced leading to changes in policies and eventually to deep societal changes.

In the interplay of competing common senses and building of consent, certain common senses become more dominant than others. Our quantitative analysis is helpful in the sense that it uncovers the process of emergence of new common senses and how they replace another set of competing common senses. These prevailing common senses are the outcome or articulation of hegemony. Essentially, the hegemonic discourse creates order or hierarchy among the competing common senses such that these common senses are conducive to the interests of the ruling class. In some cases, the interests of the ruling class and the civil society could coalesce, giving rise to some common senses with less optimal outcomes, while others, potentially "good senses," are downplayed (D'Alisa & Kallis, 2016).

A central arena for the confrontation of ideas and competing common senses in economics evolves around the identification of policies to achieve economic growth as the growth paradigm has become dominant in policymaking. However, the idea of growth itself, as the main objective of policymaking, only emerged in the aftermath of the second World War as argued in the historical analyses of Philipsen (2015) and Schmelzer (2017). The measurement of GDP had shown to be useful during the Great Depression of the 1930s and the war effort, in contrast to earlier periods when policymakers flew without instruments. They show that the hegemonic growth paradigm that emerged subsequently hinged on four claims: GDP as an adequate statistical measure of welfare; GDP growth as an imperative of policy to respond to all sort of socio-economic challenges; growth as the universal yardstick to assess cross-country relative economic success; and finally, growth as an unlimited objective.

The tenants of this growth paradigm have been criticized, going back as early as John Stuart Mill and Keynes. Indeed, the statistical methods to measure economic activity and welfare through GDP ignore crucial aspects such as costs, spillovers, quality, and purpose. Moreover, GDP growth as a universal yardstick and unlimited objective does not reflect changing social priorities, sustainability, and more important, the implication on the quality of life. In other words, the obsession with GDP growth has led, for example, to more cars, congestion, and pollution, and ultimately undermining the real goal of policy, that is, to improve the standards of living. Ironically, as noted by Philipsen (2015), the cost of fighting diseases or the cost of accidents and natural disasters could increase GDP. But these criticisms have not prevented the formation of these common senses, and more important, they have been all but ignored from the dominant discourse until the late 2010s.

Yet despite criticisms, international organizations have promoted the growth paradigm. Schmelzer (2017) uncovers the role of international organizations such as the Organisation for Economic Co-operation and Development (OECD) in formalizing statistical standards to measure GDP,[7] which was meant to help the organization in its management of the Marshall Plan.[8] Philipsen (2015) and Schmelzer (2017) document the existence of serious misgivings about the GDP measure among economists since the beginning. Simon Kuznets, who was one of the architects of the national income accounts, was himself critical of the implicit assumptions and value judgement. The policy framework and norms of the growth paradigm subsequently morphed with the changing context of the Cold War, the debt crises in former colonies, major financial crises, climate change, and rising inequality. Our empirical study sheds light on this reshaping of the growth paradigm and the reorganization of the Gramscian common senses.

The Gramscian discourse of hegemony is particularly evident in the power dynamics between the corporate sector and the society as shown in the works of Mazzucato (2018, 2013). In examining how the economic value is created and shared, Mazzucato argues that corporates, in the name of maximizing shareholder value, are appropriating more than their fair share of the economic pie. In fact, she argues that the value extraction in modern capitalism is rewarded more than the value creation while the society in its huge support for science and innovation does not receive full benefits. Yet, the prevailing common sense is that corporations always create positive social value and financial profits give a faithful representation of the amount of value created. Mazzucato unearths another important common sense, in the Gramscian interpretation, that is, the belief that competence, efficiency, and innovation can

[7] The measure itself is the culmination of decades of research by many economists such as Simon Kuznets and James Meade.

[8] In its first incarnation as the Organization for European Economic Co-operation (OEEC) until it was transformed into the OECD in the early 1960s.

only be found in the private sector while the public sector is portrayed as old fashioned, inefficient, and incapable of innovation. She tackles the myth of Apple, as the archetype of the innovativeness of the private sector, and shows that almost every component of iPhone was the result of a government funded and directed research program.

In the context of our study, the spread of ideas among economists, advocating for free markets, shareholder value maximization, and minimal government intervention, has also swayed the public. This narrative is essentially represented by the clusters of terms we labelled as "Washington Consensus" and "Structural Reforms," which include concepts such as privatization, liberalization, governance, and institutions (see Section 4). Building consent for the prevailing common sense of the ruling class or corporates in the Gramscian discourse can happen with the support of the civil society. As D'Alisa and Kallis (2016) argue, in the wake of a natural disaster, resources were directed toward hard infrastructure, benefitting a certain group of actors, despite the evidence that softer interventions would have been preferable.

Lastly, the major shifts in the narratives are largely triggered by major external or internal shocks or events. The narratives, as they emerge from the power-idea-shock nexus, could drift for a while (e.g., herd behavior or groupthink, and established consensus) until a certain trigger changes the discourse in the power structure or gives an impetus to the dominant bloc to impose new policies and different narratives. It is akin to Dornbusch's Law on financial crises, by a MIT economist, that the crisis arrives much slower than one thinks and then it happens much faster than one would have thought (PBS, 1997). The trigger could in fact be a financial crisis, recession, political change, a strong social pressure, or regional or global upheaval. It could also be a natural disaster as illustrated by D'Alisa and Kallis (2016), applying the Gramscian theory to the community reconstruction after the mudslides in Sarno, Italy.

The power-idea-shock nexus suggests that narratives come to dominance from the pool of ideas through power asymmetries triggered or facilitated by significant events. A couple of examples to illustrate this nexus are the stealth institutional change in the IMF paving the way for the rise of the structural reform and the Washington Consensus narratives (Kentikelenis & Babb, 2019) and the World Bank's fight over narratives and policies to reduce poverty amid the U.S. hegemony (Wade, 2002). In both examples, the three key features that foster the change in narratives—the power structure, the pool of ideas, and significant events—play an important role (see Section IV for more details).

3. Data and methodology: sifting through forty years of IMF country reports

To study growth narratives as reflected by the average professional economist, we use the collection of the IMF Article IV Staff Reports over 1978–2019. The sample consists of 4620 reports with 110 reports per year on average (Fig. 1). The collection on average contains 26 reports in the advanced market group (AM), 50 reports in the emerging market group (EM), and 34 reports in the low-income country group (LIC). The coverage is representative across income groups.

Before running the text analytics, we first create the text data. The reports are transformed from pdf to xml format.[9] Each document is identified by its country code and the IMF's World Economic Outlook (WEO) group (AM, EM, or LIC) and is defined as a sequence of paragraphs (a string of characters). The standard cleaning of the text is done by deleting punctuation, tables, figures, stop words, etc.

To analyze the context of the documents, we use the input vocabulary of 123 terms pertaining to growth theory and policy. Abbreviated terms and synonyms are combined to give a total of 113 final terms (e.g., Foreign Direct Investment and FDI). The terms used are shown in Appendix Table 1. We use terms we believe are the main growth recipe ingredients. For instance, we use words related to the sectoral composition such as manufacturing and services, growth theory such as human capital, infrastructure, institutions, and productivity, and growth policy such as structural reforms, liberalization, and industrial policy. The list is also narrow enough to avoid terms that are too general such as "monetary policy" or "fiscal policy" or not directly related to growth. Moreover, many of these terms are relevant to issues other than economic growth, but ultimately, they are tied to growth whether explicitly or implicitly. For example, infrastructure could be mentioned in the context of fiscal policy but the effect of infrastructure on growth would be part of the tradeoff with fiscal sustainability.

Once the text data are prepared, we use the input vocabulary to compute the term frequencies in the collection of reports. The frequency of each term in the collection is defined as the ratio between the count of term i in all documents and the count of all terms in all documents. The frequencies are computed on an annual basis. More precisely, let V be the input vocabulary and D be the collection of reports. Let $t^i_{p,d}$ be the count of occurrences of term i in document d for period p. The frequency of term i for period p, f^i_p, is defined by:

$$f^i_p = \frac{\sum_{d \in D} t^i_{p,d}}{\sum_{k \in V} \sum_{d \in D} t^k_{p,d}} \text{ with } \sum_i f^i_p = 1 \tag{1}$$

We also compute the frequency of each term in the collection of income groups defined as the ratio between the count of term I in all documents of a given income group and the count of all terms in all documents in the same group. The frequency of term I for period P in income group G (A Collection of Countries, C), $\boldsymbol{f^i_{p,g}}$, is defined by:

$$f^i_{p,g} = \frac{\sum_{d \in g} t^i_{p,d}}{\sum_{k \in V} \sum_{d \in g} t^k_{p,d}} \quad g \subseteq C \tag{2}$$

All-in-all, we compute the total occurrences of each term in three pooled subgroups of reports: Low-Income Countries (LICs), Emerging Markets (EMs), and Advanced Markets (AMs). Then we obtain the frequency of each term relative to all the terms in the set, which would inform us on the "dosage" of each ingredient in the full growth recipe.

We also formally identify growth narratives—and their cycles—and use hierarchical clustering algorithm to cluster the data. Hierarchical clustering allows us to identify clusters without prespecifying the number of clusters in advance.[10] The terms in our vocabulary, for which we observe frequencies over the years, are classified into clusters based on a dissimilarity measure, and a linkage method is used to define clusters at each step of agglomerating observations. In particular, we use a standard dissimilarity measure, Euclidean distance, and apply Ward's minimum variance method to measure dissimilarities between clusters (Ward, 1963).[11] Ward's method starts with each observation as a cluster and at each itera-

[9] The conversion process is made by a software product PdfLib. The quality and precision of the conversion are sufficient for the purpose of this study.

[10] In addition, it creates a tree-based representation of the terms, a dendrogram, which indicates diagrammatically the arrangement and relative distance among clusters.

[11] We chose this method among others as it tends to produce relatively balanced clusters.

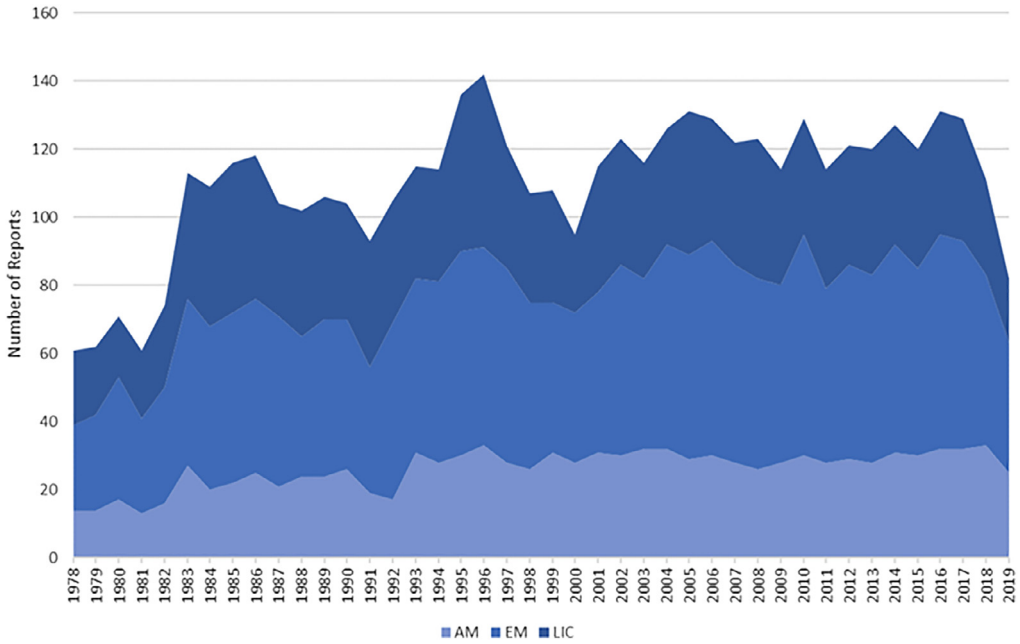


Fig. 1. Coverage of IMF Country Reports (1978–2019).

tion, it finds a pair of clusters to merge that minimizes the total within-cluster variance. We then compute the optimal number of clusters using the "Elbow" method that plots total within-cluster variance against the number of clusters with the bend in the plot indicating the appropriate number of clusters.[12]

To implement clustering analysis, we prepare the data and apply the algorithm. First, we delete a few terms that have extremely low frequencies, that is less than 0.001 percent or are in the lower 5 percent of the tail of the distribution, whichever is greater. For all economies, the terms are credit market regulation, cronyism, good institutions, invention, laissez faire, and robotization. Then, we standardize frequencies to a mean of zero and variance of one. Using standardized frequencies, we compute the dissimilarity matrix and apply Ward's method to classify the terms into different clusters. According to the Elbow method, we obtain 4 clusters.[13]

4. Growth narratives: crouching beliefs, hidden biases

4.1. Services or manufacturing fetishism?

Some observers believe that politicians and economists are obsessed with manufacturing.[14] In contrast, examining the pooled cross-section of all reports over the 1978–2019 period, we find that the term "services" accounts for the largest share of all the terms in our input vocabulary, ahead of other sectors such as industry, agriculture, or manufacturing. In fact, across all countries and years, the occurrence of this term comprises about 20 percent of the occurrence of all input terms. Across the income groups, the least occurrence is 14 percent in advanced economies and the most occurrence, 24 percent, is in low-income group. In emerging markets, it is similar to the total occurrence of about 19 percent. Even after controlling for "financial services," the occurrence of "services" is large. Although the "services" term captures some other uses beyond production, it largely relates to the services sector. More important, we have included other service sectors in our vocabulary as separate terms, for instance, tourism, which on its own has a sizable frequency.

These results suggest that despite manufacturing being an important driver of growth (e.g. Hausmann, Hwang, & Rodrik, 2007, Rodrik, 2013; Cherif and Hasanov, 2019, 2019b), most of the discussion has been focused around services in most countries most of the time. The focus on tourism than manufacturing in EMs is noteworthy. In contrast, in AMs, the appearance of manufacturing is much more prevalent although development theory would suggest that it should be more important for discussions in EMs and LICs.

4.2. One growth recipe for all?

The top 10 terms by average frequency indicate substantial similarities across income groups. Such terms as structural reforms, institutions, industry, and privatization appear in all income groups. Competitiveness appears in the top 10 terms in AMs and EMs, while education, infrastructure, and agricultural appear in EMs and LICs.[15]

Concepts associated with exogenous growth theory (e.g., Solow, 1957) feature far more often than those from endogenous growth theory (e.g., Romer, 1990). Key drivers of growth from endogenous growth theory such as "innovation" and "technology" and from development theory such as "industrialization" and "export-orien tation" or "export promotion" occur with relatively marginal frequencies across all income groups. Productivity is discussed less often in EMs and LICs than AMs, and terms associated with the role of the state in physical and human capital accumulation, such as

[12] The method helps identify the optimal number of clusters at which the marginal decrease in variance explained with each extra cluster becomes small, hence forming an elbow in the graph.

[13] The optimal number of clusters obtained using the Elbow method is between the numbers produced by two other approaches and seems easier to interpret. Using the silhouette approach, we get 2 optimal clusters, which is too few, while with the gap statistic method, we obtain 9 optimal clusters, which is too many.

[14] See, for example, John Kay's commentary (2012).

[15] Only a few distinct terms for each group remain such as tourism and FDI in EMs, governance, agriculture, and public investment in LICs, and productivity, manufacturing, industrial, competition, and regulation in AMs.

public investment, infrastructure, and education, occur substantially more often than private investment across all income groups.

4.3. Clusters as narratives

We identify 4 clusters of the terms, as discussed in Section III, and use heatmaps to illustrate these clusters. The first heatmap plots the standardized or relative frequencies and shows the evolution, or cycles, of terms through time (Fig. 2). The yellow cells indicate larger numbers or stronger relative occurrences or frequencies of the term. The four clusters shown have distinct patterns over time while displaying relatively similar pattern within each cluster, allowing us to interpret clusters as narratives.[16] The second heatmap plots the actual levels of frequencies, or how large the absolute occurrence or frequency is (Fig. 3). The darker blue cells display higher intensity of certain terms within each cluster. The heatmap indicates that a few terms comprise the bulk of the total frequency of each cluster—that is, they are occurring frequently—while most of the other terms are not mentioned much. This concentration within each cluster allows us to name the clusters.

The identified 4 clusters can be construed as narratives. The composition of each cluster and its dominant terms allow us to identify and name the "narrative." Similar to the interpretation of the results of the principal component analysis, the naming of the narratives is more an art than a science.

The cluster we associate with the "Economic Structure" narrative is mostly composed of terms associated with economic sectors such as "services", "industry", "manufacturing", "agriculture" and "construction" (Fig. 4). The frequencies of most of these terms have fallen consistently since the early 1980s (see also the bottom cluster of Figs. 2-3). This cluster reflects a narrative in which growth is studied through the prism of the real sector, or its major industrial sectors, in other words, production or economic structure (e.g. Leontief, 1966).

The next cluster is the most concentrated and consists mostly in terms associated with "privatization" and "liberalization" suggesting the "Washington Consensus" narrative. This is the narrative promoting the benefits of a free and unfettered market. The distribution of the cluster shows that "privatization," which dominated the cluster in terms of frequencies at its peak over the 1990s, was practically inexistent as a term until mid-1980s (Fig. 5).

In the early 1980s, the cluster consisting mostly in terms generally associated with the "Structural Reforms" started picking up. These terms have been basic instruments in the toolbox of most professional economists to think about growth policy for the last few decades (Fig. 6). This narrative reflects the importance of institutions in growth policy and outcomes, including such terms as "institutions", "governance", "regulation", and "transparency" (see Acemoglu & James, 2012). It also reflects the importance of "education" that emphasizes human capital as a key determinant of growth (see Lucas, 1988; Barro & Lee, 2013). The cluster also includes "structural reforms", "competition", "competitiveness" and "FDI" that are considered, according to a broad consensus of economists, as key determinants of growth (see Christiansen, Schindler, & Tressel, 2013).

The last cluster has grown to become the largest cluster by total frequency over the last years of the sample. Its rise in the 2000s is related to the appearance of a set of terms, which were not used before (Fig. 7). These include "inequality," "access to finance," "corruption," "doing business," and "business environment." Other terms such as "infrastructure" and "public investment" were used but started rising in the 2000s. We describe the narrative associated with this cluster as the "Washington Constellation." The idea that a set of seemingly unrelated concepts can be associated and made into a single narrative is not new (see Shiller, 2019). As observed by Shiller, the celestial constellations we see have no objective reason to be clustered together, but they form patterns and provide a meaning for the beholder. The "Washington Constellation" could reflect this type of narrative that has come to existence since the 2000s. According to this narrative, growth can be affected by many factors while the mechanism seems relatively obscure compared to other growth narratives. In other words, the associated growth policy may suggest checking off a wide array of boxes simultaneously such as achieving a good business environment, investing in infrastructure, promoting tourism, ensuring the rule of law and access to finance, and tackling inequality.

4.4. The rise and fall of growth narratives

There has been a stark tectonic shift in growth narratives since 1978. We track the changes in the total frequency of the four key clusters or narratives based on all the country reports available over 1978–2019. The total of relative frequencies of the four clusters is always 100 percent, and what we unveil is the change in the emphasis or relative influence of each narrative over time (Fig. 8).

The emphasis on the production structure—that is, the discussion about the real sectors of the economy—has been on the decline since the mid-1980s. The cluster entitled "Economic Structure" was the dominant one among the four clusters representing close to 80 percent of the total in the late 1970s to early 1980s. Around the mid-1980s, the total frequency of this cluster started falling reaching less than 20 percent in 2019, far below other narratives. In general, a relatively large share of this narrative is partially due to the terms that are used to describe economic performance and outlook, not only policies. Nonetheless, this narrative has been on a steep decline since the mid-1980s as the "Washington Consensus" and "Structural Reforms" narratives were taking hold.

The narrative associated with the "Washington Consensus" used to be negligible until the mid-1980s, rose to a sizable share throughout 1990s peaking around the Asian crisis of 1997–1998, and then fell out of fashion. The cluster entitled "Washington Consensus" represented a small share of the total, on average 4 percent, until around the mid-1980s. Around mid-1980s, it started rising rapidly, peaking in 1997 at 19 percent, which covers the period when many countries made their transition to market economies, especially in the Eastern Europe and the former Soviet Union, and when liberalization and privatization policies became influential in capitalist economies of the Western Europe. It then fell as rapidly, reaching about 2 percent by 2019.

The "Structural Reforms" growth narrative went from a minor narrative in the mid-1980s to a dominant one in the mid-2000s. It started at around 7 percent, increased steadily over 1978–2003, reaching about 40 percent in the mid-2000s, and then started declining albeit at a small rate. It includes such terms as "FDI", "education", "institutions", "competitiveness", "transparency" and "governance." Interestingly, "transparency" and "governance" only started appearing in the early 1990s. This narrative was the dominant one throughout the 2000s. Interestingly, the 1990s and 2000s was also a period marked by a thriving literature linking institutions to growth (see Acemoglu, Johnson, & Robinson, 2005 for an overview).

The narrative entitled the "Washington Constellation" emerged in parallel to the collapse of the "Washington Consensus" narrative around the Asian crisis. The "Washington Constellation" cluster is also more markedly dispersed than the others. In 2019, 23 terms represented about 90 percent of the total frequency of the cluster, while 10 terms represented the same proportion for the "Structural

[16] In other words, terms in each cluster tend to peak at around the same time and the peak is different for each group.

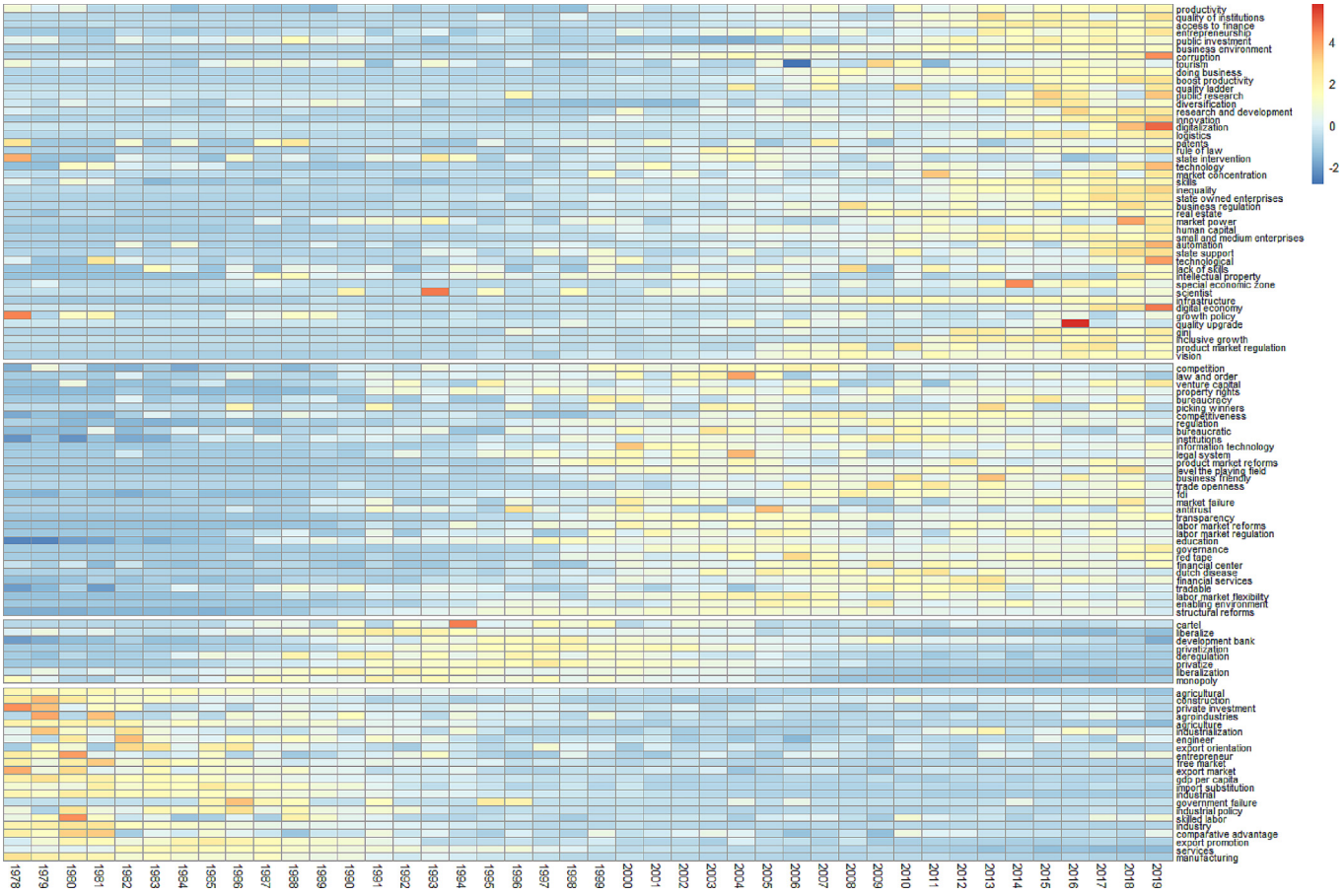


Fig. 2. Relative Heatmap and Clusters' Peaks (Terms by Standardized Frequency).

Reforms" and "Economic Structure" and 6 for the "Washington Consensus." A myriad of disparate terms such as "productivity", "infrastructure", "tourism," "inequality, "skills, "inclusive growth", "R&D", "access to finance", "state owned enterprises" and "business environment" were never or barely used until they emerged after 1998. This "Washington Constellation" became the dominant narrative by 2019, representing 40 percent of the total.

The "Structural Reforms" narrative, and to less extent the "Washington Constellation," seem to have risen at the expense of the "Economic Structure" narrative. The coefficients of correlation between the total frequencies of the associated clusters are close to −1 and −0.8, respectively (Table 1). In other words, these two narratives are "anti-narratives" of the old "Economic Structure" narrative.

We also detect major common turning points in the four narratives with the first turning point occurring in the mid-1980s. Using the procedure of Bai and Perron (2003) to detect endogenous structural breaks in the trends, we confirm the timing of turning points in the narratives discussed above.[17] According to this procedure, the period around the mid-1980s represents a stark structural break in both trends of "Economic Structure" and "Washington Consensus" narratives (Figs. 9-10).

The major crises years in the 1990s and 2000s seem to be important marks in the narrative cycles. The years 1997–98, corresponding to the Asian crisis, represent another major turning point detected by the Bai-Perron procedure for the "Washington Constellation" narrative (Fig. 11). These are also the years the "Washington Consensus" peaked before it started falling slowly until around 2001, when it started falling rapidly. The global financial crisis, 2008–09, or the boom years at the onset of the crisis, 2005–06, are also detected as structural breaks in multiple narratives. Yet they correspond mostly to inflection points rather than turning points except in the "Structural Reforms" narrative that starts losing its importance at the onset of the financial crisis (Fig. 12).

4.5. Growth narratives through the nexus of power, ideas, and shocks

The power-idea-shock nexus introduced in Section 2 suggests that narratives, emerging from the pool of ideas or common senses, become widespread, reflecting competing forces vying to dominate the social state. Often, these changes are triggered or facilitated by significant events or shocks, giving an opportunity to certain blocks to push for their own narrative. Not only could the spread and dynamics of ideas and narratives be affected by past economic theories and new evidence—the pool of ideas—but they also can be driven by social and political changes and economic crises, providing an opening for changes in power dynamics. In the following, we offer an interpretation of our quantitative results through the lens of the power-idea-shock nexus.

The mid-1980s, one of the key turning points, was already recognized by many observers as a period when the policy narrative shifted toward what became to be known as the Washington Consensus emphasizing low regulations, liberalization and privatization, free markets, and less state intervention (Williamson, 1990). The power relations in dealing with the debt crisis of the early 1980s and the rising influence of free-market ideas among economists laid the ground for the takeoff of the free-market reform

[17] The procedure detects multiple unknown structural breaks.

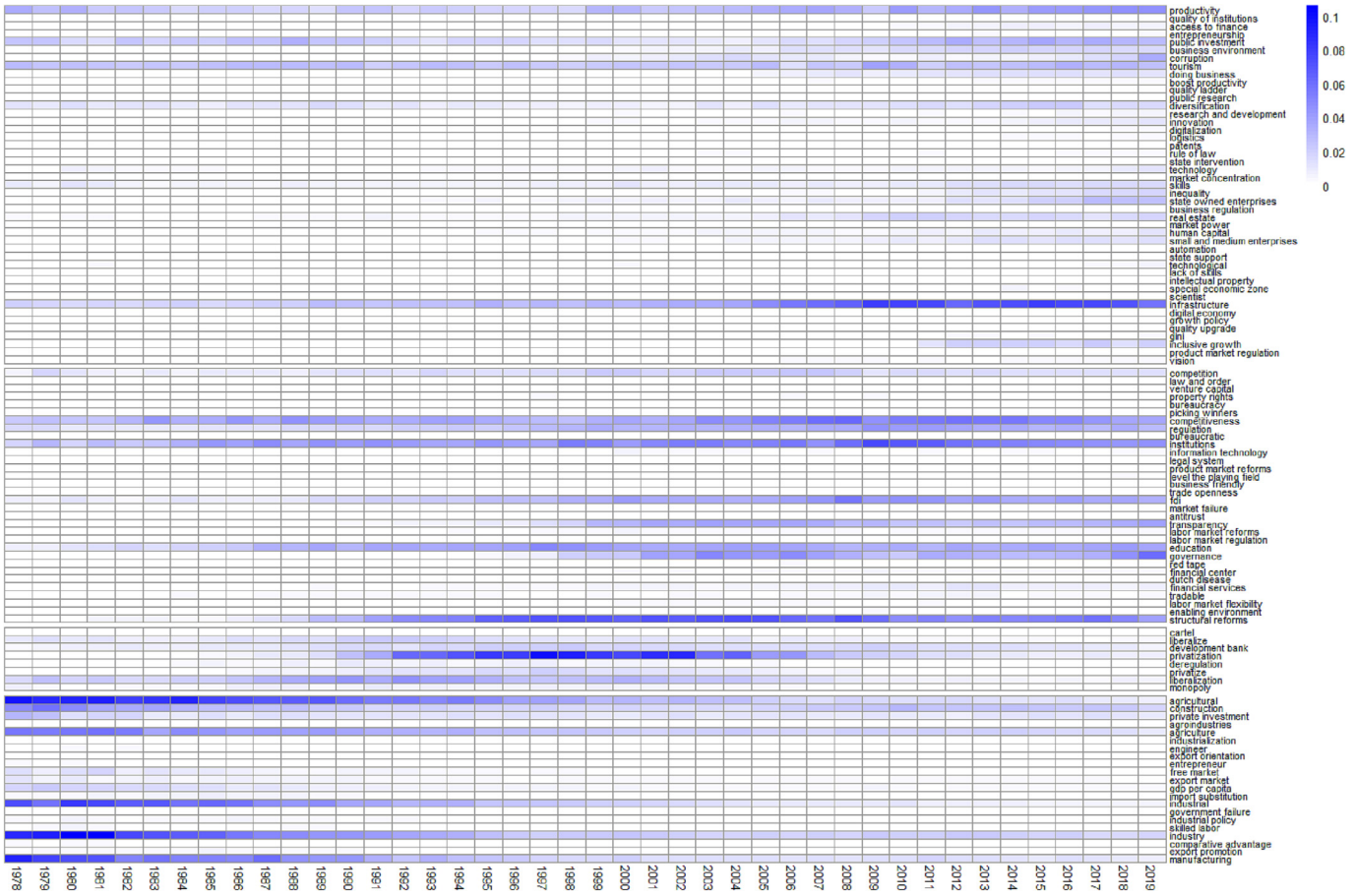


Fig. 3. Absolute Heatmap and Clusters' Concentration (Terms by Frequency, Excluding Services).

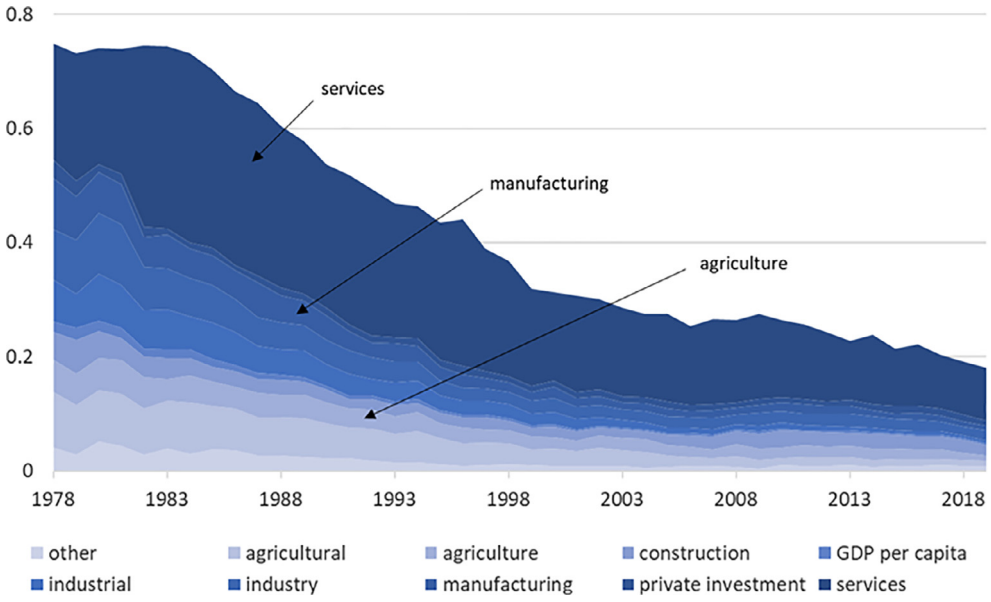


Fig. 4. The "Economic Structure" Narrative.

agenda after the second Reagan administration came to power in 1984. These free-market ideas started slowly spreading with an earlier shock, the stagflation era of the late 1970s, which was interpreted as showing the limits of Keynesianism. Indeed, the oil shock, which was a pure supply shock, was seized upon to advance a common sense that at the heart of the issue was the overreaching state and irresponsible monetary policy.

The rising narratives had sometimes assimilated key terms from the past narratives while exerting a direct effect on policies. For instance, the "privatization" term has started rising rapidly since

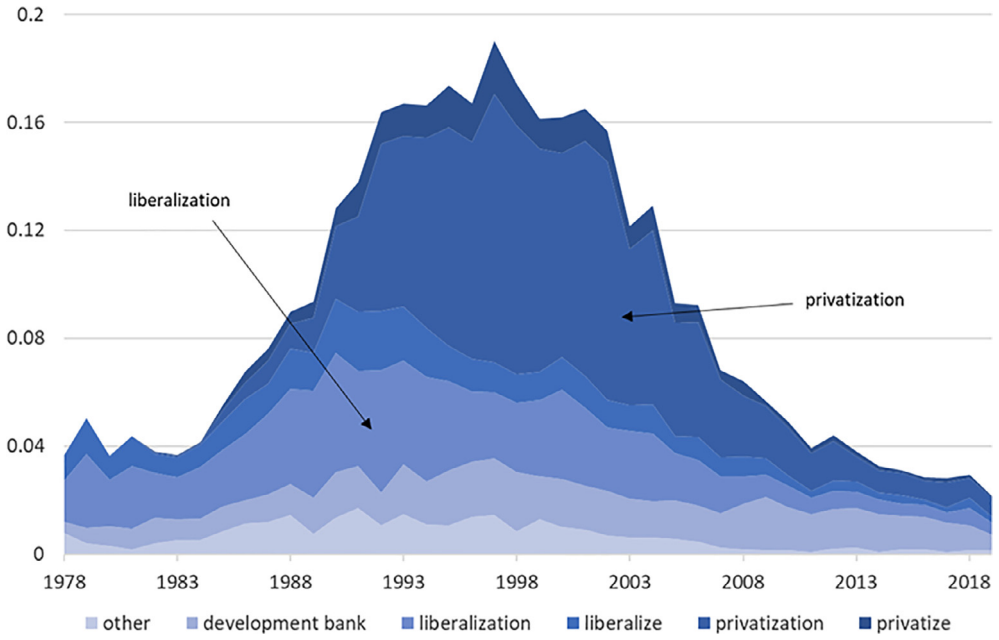


Fig. 5. The "Washington Consensus" Narrative.

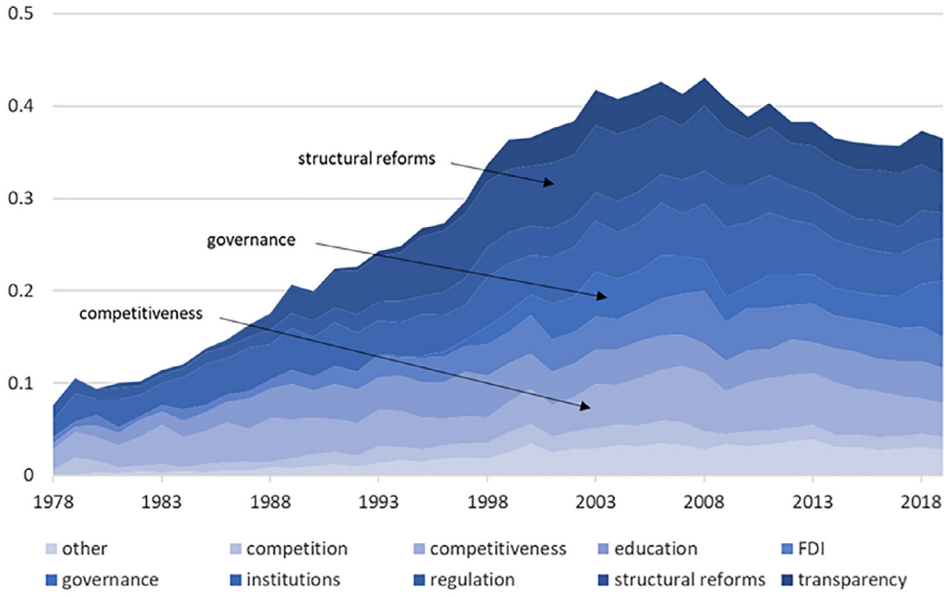


Fig. 6. The "Structural Reforms" Narrative.

1984 peaking in 1997 while worldwide privatization revenues were relatively stable in the mid-80s to early 90s. The IMF conditions on privatization in lending programs also started rising from 1985 (Kentikelenis & Babb, 2019). Revenues started picking up after the mid-90s until 2000 (Estrin & Pelletier, 2018). After the decline in the early 2000s, revenues started climbing again in the mid-2000s, eventually resulting in larger revenues in the 2000s and the 2010s than the 1990s. In contrast, the privatization frequency has been on a steady decline since 1997 and dropped precipitously since the early 2000s. This pattern suggests that the concept of privatization, part of the "Washington Consensus" narrative, may have become embedded in other concepts such as "structural reforms." Many of the free-market policies have been repackaged and relabeled under this term. In other words, common senses can be replaced by newer ones but essentially with the same meaning.

As liberalization and privatization are key elements of the "Washington Consensus" narrative, many of the policies of the Washington Consensus (Williamson, 1990) such as competition and regulation are also associated with the "Structural Reforms" narrative. These two narratives were rising to dominance in the 1980s-90s, reflecting a change in the structure of power, but the elements of the "Structural Reforms" narrative persisted throughout the 2000s while liberalization and privatization terms faded away. Other terms such as structural reforms, competitiveness, and governance essentially subsumed their meaning.

The power dynamics gave rise to the "Washington Consensus" and "Structural Reforms" narratives. In particular, in the IMF in

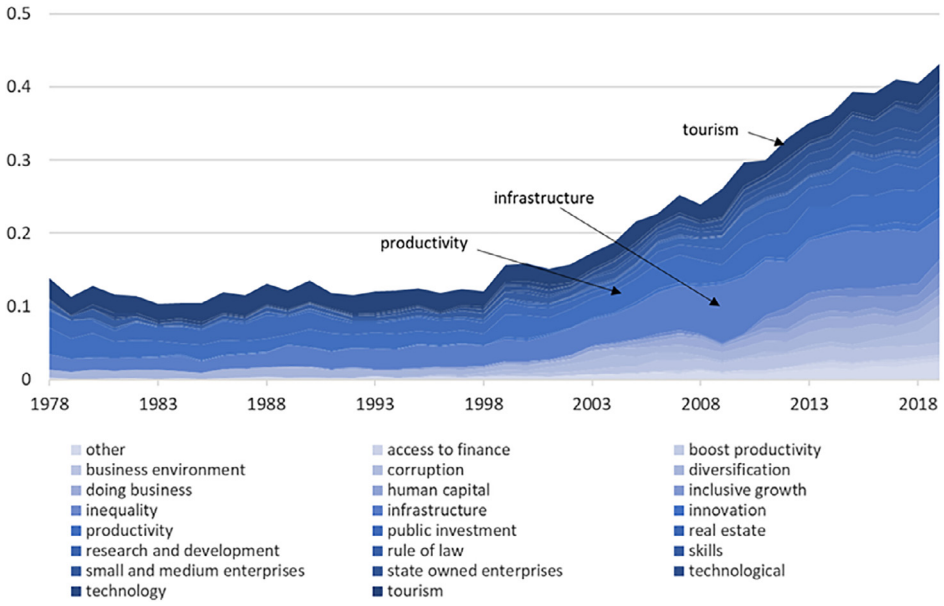


Fig. 7. The "Washington Constellation" Narrative.

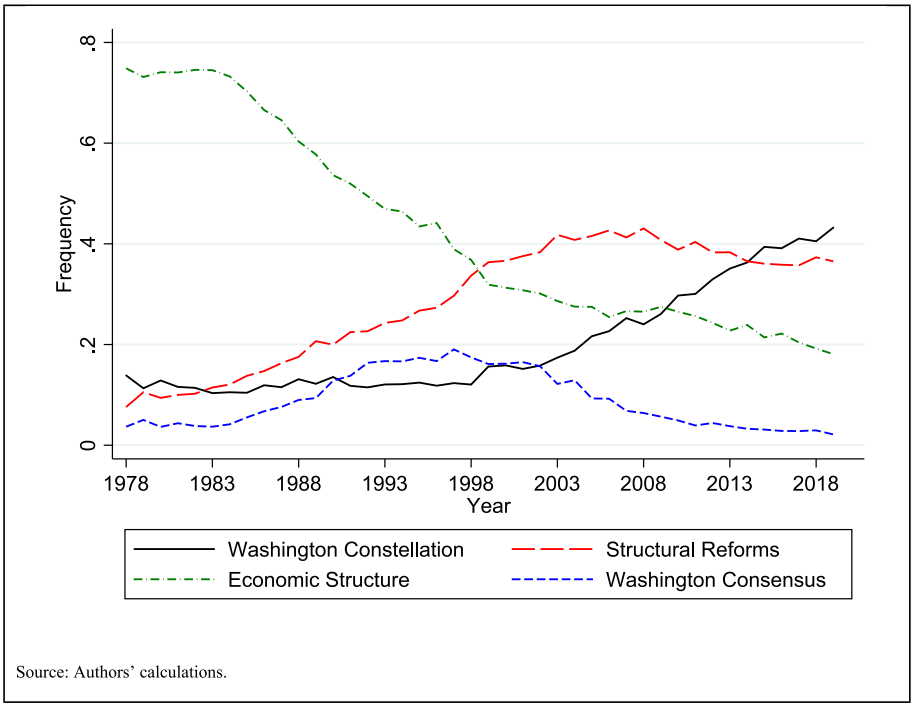
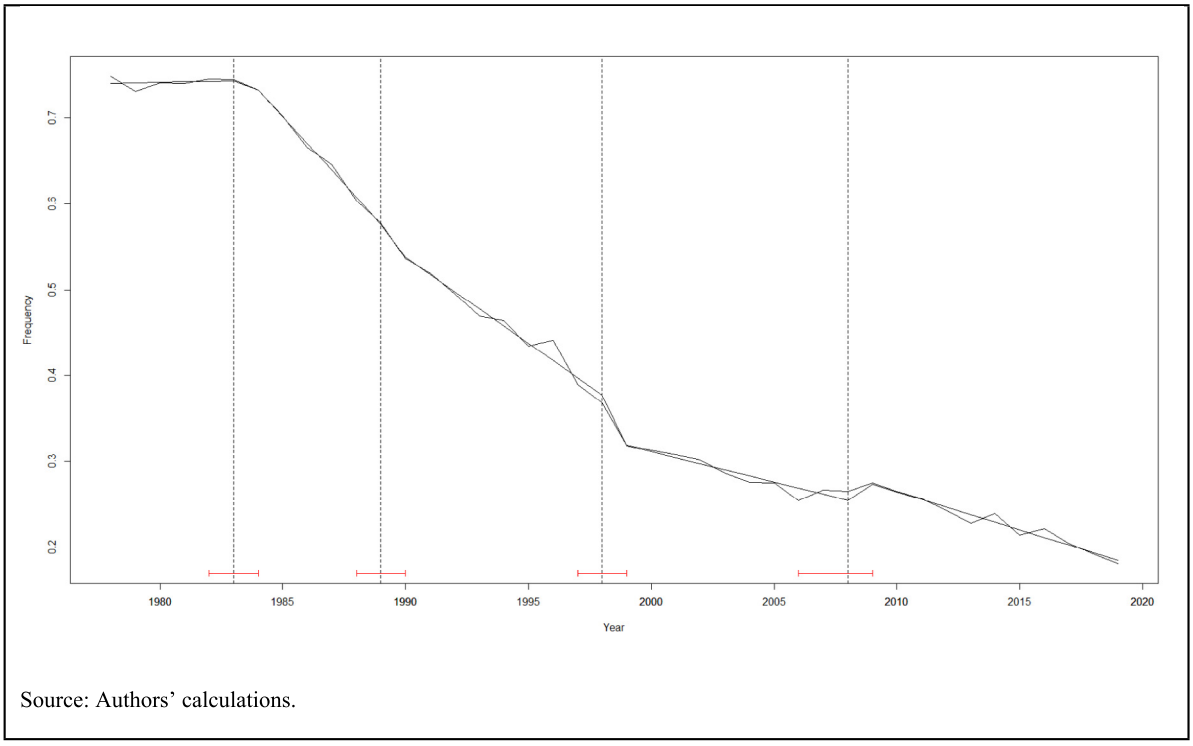


Fig. 8. Total Frequencies of Growth Narratives for All Economies.

Table 1
Correlation Matrix of Clusters.

	Washington Constellation	Structural Reforms	Economic Structure	Washington Consensus
Washington Constellation	1			
Structural Reforms	0.64	1		
Economic Structure	−0.76	−0.97	1	
Washington Consensus	−0.55	0.13	−0.07	1

the 1980s, it was driven by the U.S. and its allies through the process of alteration of everyday practices to suit the final goal (Kentikelenis & Babb, 2019). The adoption of free market policies for growth—the structural reforms—gained an extraordinarily fast pace after 1984 when the second Reagan administration has pushed the structural reform agenda on developing countries suf-



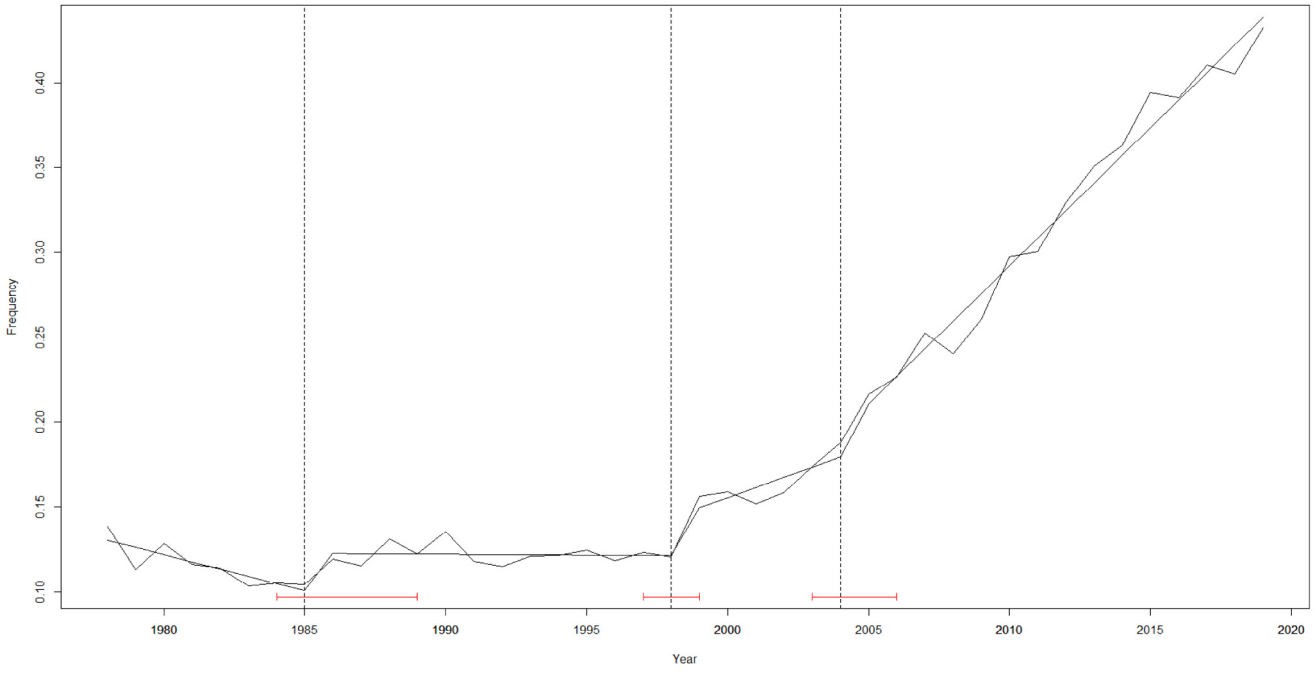
Source: Authors' calculations.

Fig. 9. Endogenous Structural Breaks in the Trends: "Economic Structure".

Source: Authors' calculations.

Fig. 10. Endogenous Structural Breaks in the Trends: "Washington Consensus".

fering from the debt crisis of the early 1980s (while the first administration was not much interested in the international institutions). That was the beginning of the implementation of the Washington Consensus policies. Kentikelenis and Babb (2019) claim that the IMF management and senior staff had already been sympathetic to many market-liberalizing reforms much earlier as



Source: Authors' calculations.

Fig. 11. Endogenous Structural Breaks in the Trends: "Washington Constellation".

many economists accepted many of these ideas—the pool of widely accepted ideas was full of free market policies such as privatization, liberalization, governance, and institutions. They also claim that the IMF management even unsuccessfully tried to change the policies in its lending programs. In other words, and using our theoretical framework, a certain set of common senses may have taken over the social state but had not translated yet into policies.

An opportunity arose when many developing countries, especially in Latin America, started experiencing debt crises. That was the external shock that galvanized the U.S. Treasury led by Secretary James Baker to mobilize allies and resources to push the structural reform agenda forward as a plan for growth to help countries in crises. The ideas that it was the only path out for a sustained growth was already in the minds of many economists—the narrative of structural reforms and the Washington Consensus has been gaining ground. Although there was opposition by some developing countries against the market-liberalization as a path out of the crisis toward growth and prosperity, the reform agenda started making its way to a standard operational toolkit (Kentikelenis & Babb, 2019). It is not surprising that the power structure worked against countries that opposed the change. The challenges to the Washington Consensus policies only started emerging in the late 1990s as the Asian Crisis of 1997–98, another key turning point, unfolded (Stiglitz, 2002).

Similarly, Wade (2002) argues that the power structure played a key role in the promotion of free market ideas at the World Bank. Prominent academic and professional economists in favor of free market reforms were taking leadership roles in the international institutions and governments, coupled with the process of the "cleaning the stables" in favor of free market economists in the institutions such as the World Bank (Wade, 2015). However, similar to the exposition by Kentikelenis and Babb (2019), the hegemon or core power had to work within the system of rules and procedures to promote certain narratives. For instance, it took much maneuvering from a dominant bloc to quell a "rebellion" against structural policies during the Asian Crisis of 1997–98 (Wade, 2002). However, the crisis probably started a partial shift away from the structural reform narrative in the late 90s-early 2000s. The shock of the Asian Crisis and its aftermath has started changing the pool of ideas, too, as economists attempted to understand what worked and what did not although it would take another crisis—the financial crisis of 2008 followed by the European debt crisis of 2012 with their economic and political consequences—to start delving deeper into the limitations of free markets and changing narratives.

In the recent past, following the crises, the evolving pool of ideas, and changing power structures, "Structural Reforms" narrative gave way to the "Washington Constellation" narrative. With the rise of China, populism in the West, and global movements for climate change and inclusive growth, power asymmetries were getting less pronounced. At the same time, old ideas of equality and environmental justice were becoming prominent again. Akin to the "Kindleberger Trap," with a weakening powerful bloc, a variety of ideas permeated the growth narratives, making them more diffused. Yet the tension between free market ideas and a stronger role for the state has not been fully resolved.

5. Forgotten, untold, and emerging narratives

Our analysis has revealed the successive waves of dominant or hegemonic growth narratives in standard or mainstream economics. Meanwhile, in the background, there have been three

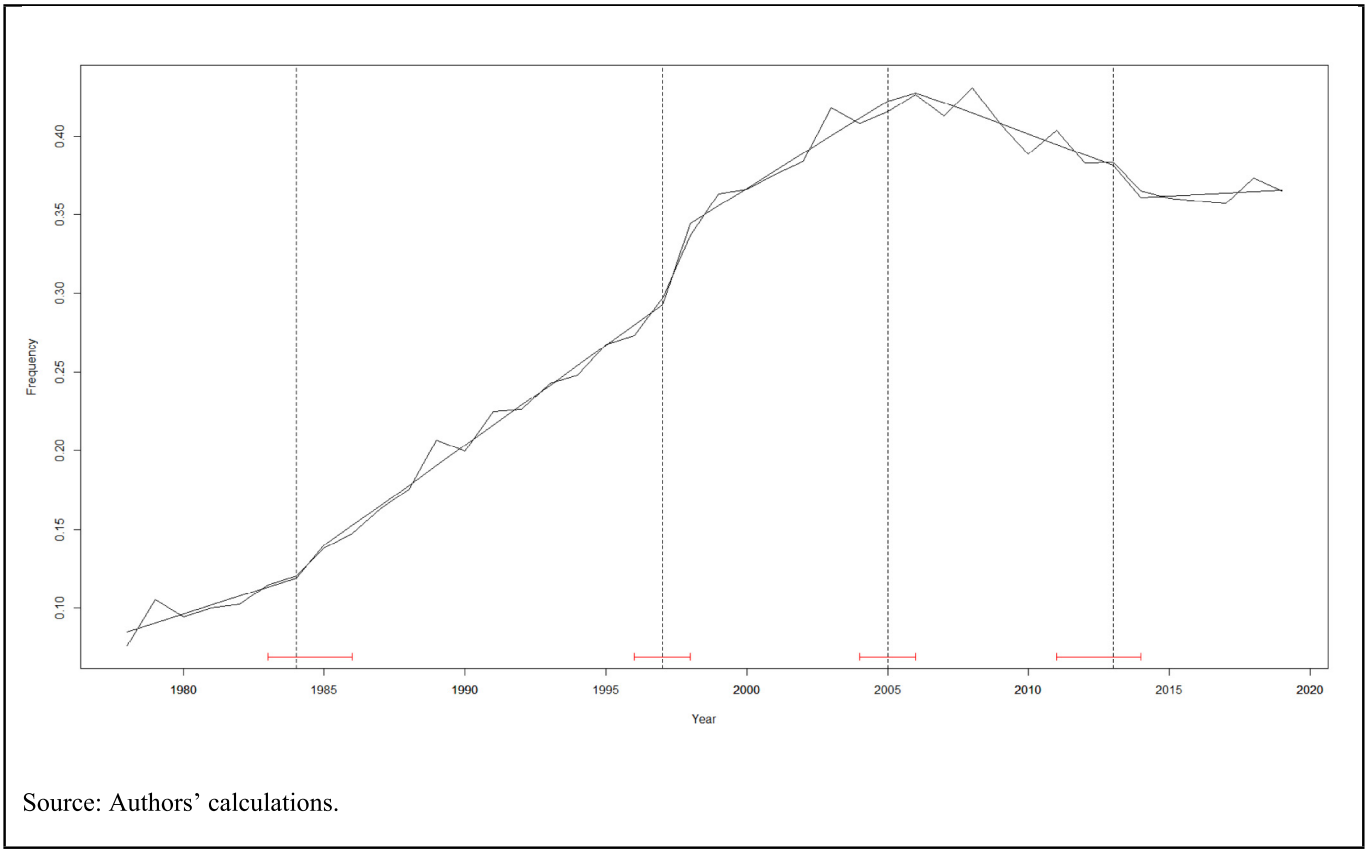


Fig. 12. Endogenous Structural Breaks in the Trends: "Structural Reforms".

key alternative narratives questioning fundamental assumptions of standard economics. These are captured in our analysis to varying degrees, from direct observation to indirect and ignored. First, the role of the state in achieving growth through the support of specific sectors, that is, industrial policy, became all but forgotten for decades and has made a comeback in the public discourse by the late 2010s.[18] The term "industrial policy" can be directly observed in our data showing how this narrative disappeared before coming back. Second, a discussion of the validity of GDP in the measurement of welfare has led to alternative measures, which can be described as "beyond GDP." Although we do not observe directly this narrative, the final narrative wave we observe, the "Washington Constellation," contains many relevant elements. Finally, there is a rich and diverse literature calling for the reappraisal of the growth idea itself, that is, the need to seek progress without growth, which can be broadly described as growth-critical perspectives. Largely absent from the mainstream discourse, it could appear in the next decades if the challenges of climate change, inequality, and conflict continue unchecked.

5.1. The return of the state and industrial policy

This tension between free markets and state intervention is clearly visible in one of the most controversial terms in growth economics—industrial policy. The extent to which the state should intervene in the conduct of growth policy represents a major source of controversy among economists. The accepted wisdom is that an interventionist approach, or "industrial policy," would be misguided or too risky.

As many economic narratives spring up and fade away, so does the narrative of industrial policy. The term occurs 405 times across all income groups over 1978–2019—112 times in AMs, 172 times in EMs, and 121 times in LICs. Considering that our data span more than 4,500 reports, this is a small number of occurrences, explaining why it did not appear among the major terms in our clusters. Moreover, it is not evenly distributed, as about half of the observations across all income groups occurred before 1989. The frequency of industrial policy reached its peak in the early to mid-1980s, reaching a one percent frequency rate in AMs and EMs and about one-half of a percent overall (Fig. 13). In the early 1990s, the narrative has fallen into oblivion—with the frequency falling close to zero throughout the 2000s—although the term has appeared a few times every year until 2010. Since 2012, the frequency has started picking up although it is still well below 0.2 percent.

We study qualitatively the context in which the term "industrial policy" occurred in the reports. The 1980s witnessed more occurrences and more neutral or positive perception of industrial policy across all income groups than during the following decades. Industrial policy was then mentioned in a context in which policymakers in EMs and LICs attempted to gear industrial policy toward supporting export industries while reducing trade protection although import substitution policies were still being pursued. The support of manufacturing and agricultural sectors was deemed important. In AMs, in addition to encouraging export orientation, especially for small and medium enterprises, policymakers discussed supporting research and innovation, new industries, and energy saving technologies, and transitioning from ailing industries or helping depressed regions. This is reminiscent of the discussion in policymaking and economic circles in AMs today,

[18] There has always been active research on the topic by pioneers in the field such as Ha-Joon Chang, K.S. Jomo, Jose Antonio Ocampo, Dani Rodrik, Joseph Stiglitz, and Robert Wade.

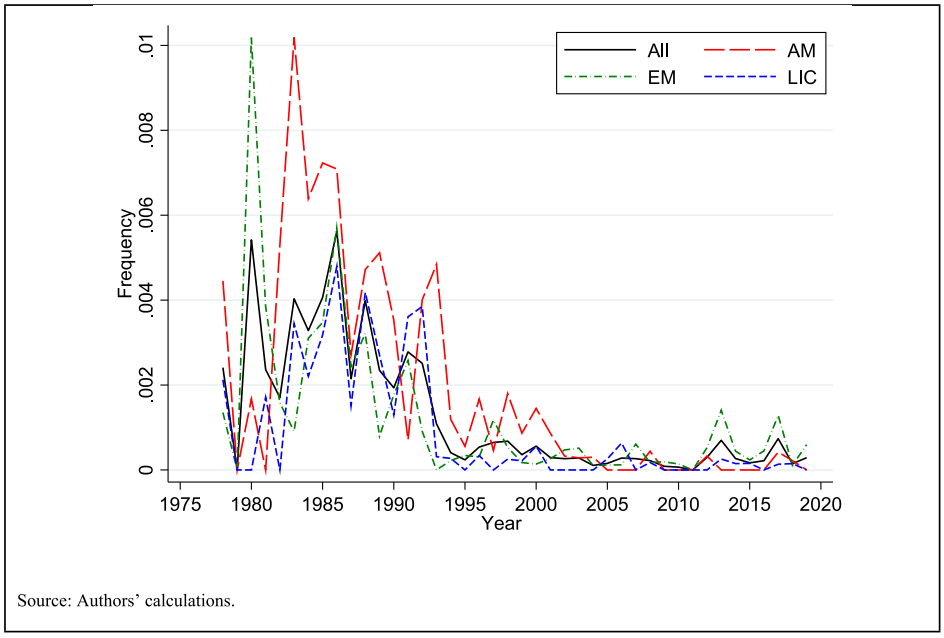


Fig. 13. "Industrial Policy" over Time.

more than thirty years later. The discussion in AMs also revolved around supporting homegrown domestic firms for supplying foreign-owned export industries with inputs or services. Policy tools used included export and investment incentives, preferential credit to firms, tax deductions, sharing of technical information, and export marketing support. In EMs and LICs, international financial institutions (IFIs) provided financial support to help improve trade regulations and promote export-oriented industries.

In the late 2010s, with rising inequality, climate change, pandemic, and productivity stagnation as the changing pool of ideas was changed by significant events, power dynamics has become more favorable to state intervention and industrial policy. In the Gramscian hegemonic discourse, the interests of the powerful bloc of advanced countries have become aligned with others, further facilitated by other blocs that have been gaining economic power.

5.2. Beyond GDP

Growth narratives identified mostly include terms that focus on standard growth theory and empirics although the "Washington Constellation" narrative, which started rising in the early 2000s, incorporates elements "beyond GDP." Such terms as "inequality," "human capital," "skills," and "rule of law" are part of this growth narrative. Yet most of these "beyond GDP" terms do not account for a large component of the narrative (Fig. 7). Ever since February 2008 when the French President Sarkozy commissioned a report on improving measures of social progress and wealth of nations usually measured by GDP or GDP per capita, the focus on other indicators of progress has become important (Stiglitz et al., 2009). The Stiglitz-Sen-Fitoussi commission report published in 2009 emphasized that GDP per capita did not capture a wide variety of indicators that was key for standards of living and welfare. For instance, the focus on average income growth misses the distribution component of income gains as many countries have been experiencing rising income inequality.

Instead of only GDP, the focus on the quality of life and sustainability, that is, whether welfare can be sustained over time, is important. This concept of the standards of living incorporates the provision and quality of various government services such as medical care and education, dynamics and distribution of household income, consumption, and wealth, non-market activities, and other dimensions of well-being such as security (physical and economic), environment (nature, work, etc.), political voice, and social connections. Measuring these indicators such as "stocks" of various wealth measures (human, nature, physical capital, etc.) and tracking their developments over time should shed light on welfare and sustainability.

As one of the co-authors of the report, Amartya Sen, has long argued that development should be about advancing freedoms individuals enjoy rather than solely focusing on metrics such as GDP per capita. In his *Development as Freedom*, Sen (1999) emphasizes the importance of political, economic, and social types of freedoms. These are political voice and government accountability, market opportunities to earn income and wealth, provision of healthcare and education, social trust, and safety nets to protect against misery. These freedoms are not only the goals of development but are also its means. Sen has argued that the promotion of one freedom leads to another as they are intertwined with each other. Taking into account individual freedoms suggests that distributional considerations like income inequality and poverty, rather than just averages like GDP per capita, are important for welfare. This multidimensional approach to welfare and development indicates that income is important as much as it provides opportunities, or capabilities as Sen calls them. More important, these capabilities depend on a variety of other factors such as health and education. In striving for higher welfare and more equality, it is this equitable provision of capabilities that is important.

The World Bank in its 2021 report "The Changing Wealth of Nations" addresses some of the issues brought up by the Stiglitz-Sen-Fitoussi commission, measuring the wealth of nations that incorporates natural capital, including mangroves and fisheries, and human capital for 146 countries for 1995–2018. In 2018, human capital (lifetime earnings) represented about 64 percent of global wealth. While renewable capital (forests, agricultural land, etc.) constituted about 23 percent of total wealth in low-income countries, it was a much smaller share of total wealth, less than 5 percent, in upper-middle- and high-income countries (World Bank, 2021).

The empirical measurement of welfare suggests that there are large differences with the GDP measurement, but in a cross-

country comparison, GDP per capita is a good approximation to welfare. Jones and Klenow (2016) incorporate consumption, leisure, mortality, and inequality as a summary statistic for economic well-being of people in a country. The statistic measures consumption-equivalent welfare of a person born in the U.S. that makes the person indifferent (in terms of expected utility) to living in another country. They find that welfare of Western European countries is much higher than that indicated by GDP per capita as leisure, inequality, and mortality statistics are better than in the U.S. This pattern is reversed in many low-income countries. Although welfare and income measures are highly positively correlated (with a correlation coefficient of 0.96), the mean absolute deviation of welfare to income ratio from unity is rather high, about 27 percent, suggesting that other factors should not be ignored when comparing welfare.

5.3. Growth-critical perspectives

Since the turn of the century, voices questioning the growth paradigm have become louder in the public discourse. Jackson (2009), with the resounding success it encountered, can be considered as a turning point in the formation of an economic, social, and political movement described as "degrowth." Its central idea is that unlimited growth is unsustainable (Kallis et al., 2018). As argued by the comprehensive overview of Schmelzer, Vetter, and Vansintjan (2022), the sources of sustainability stem from many perspectives (e.g. ecological, socio-economic, feminist, and south-north critiques). The ecological critique, for example, argues that an ever-growing economy will eventually reach physical limits and destroy the ecosystems it relies upon. Climate change and the diffusion of microplastics are evidence of the destructive effects of unfettered growth. The socio-economic critique rests on the observation that GDP growth, especially beyond as certain threshold, does not lead to improvements in well-being (Easterlin paradox).[19] Policies seeking unlimited growth ultimately harm social well-being, and there is a need to redraw the basis of what creates value in society in favor of activities strengthening social bonds, cohesion, and solidarity.

The degrowth movement does not stop at identifying critiques of the growth paradigm, but it also proposes a set of theoretical solutions or alternative visions of society and different means to attain change. This entails, among others, reforms of the institutions to steer away from the obsession with growth and the creation of subsistence economies by encouraging do-it-yourself initiatives and different types of solidarity toward "sufficiency." An operational response to the main critiques identified by the degrowth movement, especially the ecological and socio-economic ones, was articulated through the concept of "development within planetary boundaries." Well-being can be measured through a finite set of human basic needs, which are universal, satiable, and non-substitutable (see Max-Neef, 1991; Doyal & Gough, 1991; Gough, 2015). The aim of development should be to use resources to achieve the minimum basic needs of all societies without exceeding the planetary boundaries (Raworth, 2012). However, O'Neill et al. (2018), quantifying both the social and planetary boundaries, find that "the pursuit of universal human development, which is the ambition of the SDGs [Sustainable Development Goals], has the potential to undermine the Earth-system processes upon which development ultimately depends." They infer that there is a need to shift the global development agenda towards a more sustainable and equitable well-being instead of unlimited growth.

As the measurement of welfare beyond GDP acknowledges the importance of other factors affecting human well-being, the "post-growth" perspective goes a notch higher in acknowledging the limits to growth and proposing a policy solution based on values related to equity, social justice, environmental sustainability, and cooperation. Tim Jackson in his book *Post Growth* (2021) argues that the focus on relationship and meaning would change the nature of work to emphasize creativity and human connections. As Studs Terkel, an American writer, has argued that working is a "search for daily meaning as well as daily bread" (1974). In this post-growth economy, quality is more important than quantity. "Less is More" as Jason Hickel's (2020) book title suggests. Indeed, leisure, nature, and security echo Sen's (1999) capabilities and freedoms. These arguments and values fit well with the climate change movement, giving credence to policy proposals on energy transition such as Green Deal. Taking into account finite resources of the planet while taming the insatiable quest for more material possessions, post-growth economy with its focus on sustainability, good-paying jobs, and equity, is a bridge to the recent dominant growth narrative identified. The rise and dominance of the "Washington Constellation" narrative in the 2010s illustrate that growth alone is not enough for human well-being any longer.

6. Conclusion

We explore the competing narratives used by professional economists and policymakers to understand the evolution of economic thinking and economic policies on economic growth, which in turn have implications on actual growth. This does not necessarily help us explain the true sources of growth, rather illustrate the mechanisms of shifts in the narratives of growth policies. We identify-four main narratives and show that their relative influence has changed dramatically exhibiting different trends and cycles over time. We also find that technology, innovation, and industrial policy have featured much less than institutions, governance, and structural reforms. Lastly, key terms from growth theory such as technology and innovation and development theory such as industrialization and export-orientation have been ignored to a large extent.

The power-shock-idea nexus proposed allows us to interpret the rise and fall of narratives. Drawing on the pool of existing and new ideas, power dynamics among blocs in policymaking circles gives rise to certain narratives while eclipsing others. This evolution of narratives tends to be triggered by significant events or shocks, necessitating the inquiry of then-dominant ideas and narratives while giving an opportunity for power dynamics and a hegemonic discourse. The evolving pool of ideas could reflect learning from past experiences while significant events like financial crises trigger the reevaluation of the past (The Economist, 2020).

Economists should probably pay more attention to the effect of popular stories or narratives and how they are formed (Renken, 2020) to make sense of economic phenomena (Shiller, 2019). In the same vein, we suggest that economists and the public at large pay a greater attention to the formation and propagation, or contagion, of narratives among economists themselves and eventually policymakers, for they have powerful effects on societies. As Keynes in the preface to *The General Theory of Employment, Interest, and Money* wrote: "The difficulty lies, not in the new ideas, but in escaping from the old ones, which ramify, for those brought up as most of us have been, into every corner of our minds."

Data availability

The authors do not have permission to share data.

[19] See Easterlin, (1974).

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Acknowledgements

We much appreciate the comments and suggestions received from the Associate Editor Jason Hickel and two anonymous referees that helped substantially improve the paper. We are grateful to Jojo Zhao for an excellent research assistance and would like to thank Rahul Anand, Romain Duval, Yun Liu, Ippei Shibata, and Andrew Warner for helpful comments. We are also grateful to Talia Zulueta for formatting the paper. The views expressed here are those of the author(s) and do not necessarily represent the views of the IMF, its Executive Board, or IMF management. All errors are our own.

Appendix

Table A1
Input Vocabulary and Average Frequency (1978–2019).

Term	All	AM	EM	LIC
access to finance	0.0017	0.0009	0.0016	0.0022
agricultural	0.0426	0.0196	0.0364	0.0646
agriculture	0.0292	0.0124	0.0287	0.0396
agroindustries	0.0001	0.0000	0.0002	0.0001
antitrust	0.0001	0.0005	0.0001	0.0000
automation	0.0004	0.0006	0.0002	0.0006
boost productivity	0.0009	0.0021	0.0008	0.0003
bureaucracy	0.0003	0.0003	0.0005	0.0002
bureaucratic	0.0005	0.0005	0.0006	0.0003
business environment	0.0065	0.0036	0.0066	0.0077
business friendly	0.0001	0.0001	0.0001	0.0001
business regulation	0.0003	0.0002	0.0002	0.0003
cartel	0.0001	0.0006	0.0001	0.0000
comparative advantage	0.0012	0.0014	0.0013	0.0010
competition	0.0145	0.0322	0.0128	0.0075
competitiveness	0.0410	0.0747	0.0380	0.0266
construction	0.0246	0.0262	0.0293	0.0185
corruption	0.0052	0.0016	0.0048	0.0079
credit market regulation	0.0000	0.0000	0.0000	0.0000
cronyism	0.0000	0.0000	0.0000	0.0000
deregulation	0.0031	0.0076	0.0023	0.0017
development bank	0.0133	0.0013	0.0142	0.0184
digital economy	0.0001	0.0001	0.0000	0.0000
digitalization	0.0002	0.0005	0.0001	0.0000
diversification	0.0117	0.0053	0.0142	0.0121
doing business	0.0042	0.0013	0.0043	0.0056
dutch disease	0.0003	0.0004	0.0002	0.0002
education	0.0322	0.0200	0.0311	0.0396
enabling environment	0.0007	0.0001	0.0006	0.0011
engineer	0.0010	0.0016	0.0008	0.0009
entrepreneur	0.0010	0.0011	0.0011	0.0008
entrepreneurship	0.0007	0.0011	0.0008	0.0005
export market	0.0038	0.0093	0.0031	0.0015
export orientation	0.0003	0.0003	0.0003	0.0002
export promotion	0.0013	0.0006	0.0014	0.0017
fdi	0.0269	0.0188	0.0320	0.0250
financial center	0.0017	0.0048	0.0015	0.0004
financial services	0.0043	0.0059	0.0041	0.0037
free market	0.0035	0.0006	0.0049	0.0039
gdp per capita	0.0069	0.0035	0.0079	0.0081
gini	0.0006	0.0007	0.0007	0.0004
good institutions	0.0000	0.0000	0.0000	0.0000
governance	0.0190	0.0090	0.0152	0.0291
government failure	0.0000	0.0000	0.0000	0.0000
growth policy	0.0002	0.0002	0.0002	0.0002
human capital	0.0033	0.0033	0.0034	0.0032
import substitution	0.0017	0.0002	0.0021	0.0021
inclusive growth	0.0040	0.0009	0.0041	0.0055
industrial	0.0293	0.0479	0.0263	0.0220
industrialization	0.0005	0.0004	0.0004	0.0006
industrial policy	0.0013	0.0019	0.0013	0.0009
industry	0.0375	0.0508	0.0388	0.0283
inequality	0.0033	0.0038	0.0036	0.0025
information technology	0.0013	0.0023	0.0011	0.0009
infrastructure	0.0407	0.0200	0.0416	0.0503
innovation	0.0028	0.0085	0.0020	0.0007
institutions	0.0453	0.0466	0.0474	0.0426
intellectual property	0.0003	0.0007	0.0003	0.0001

Table A1 (*continued*)

Term	All	AM	EM	LIC
invention	0.0000	0.0000	0.0000	0.0000
labor market flexibility	0.0014	0.0039	0.0013	0.0001
labor market reforms	0.0019	0.0068	0.0014	0.0001
labor market regulation	0.0002	0.0005	0.0002	0.0001
lack of skills	0.0002	0.0001	0.0002	0.0002
laissez faire	0.0000	0.0000	0.0000	0.0000
law and order	0.0004	0.0001	0.0001	0.0008
legal system	0.0004	0.0005	0.0004	0.0005
level the playing field	0.0009	0.0012	0.0009	0.0007
liberalization	0.0210	0.0238	0.0219	0.0183
liberalize	0.0097	0.0090	0.0095	0.0101
logistics	0.0006	0.0004	0.0007	0.0006
manufacturing	0.0296	0.0515	0.0277	0.0196
market concentration	0.0000	0.0001	0.0000	0.0000
market failure	0.0001	0.0002	0.0001	0.0000
market power	0.0001	0.0003	0.0001	0.0000
monopoly	0.0036	0.0024	0.0034	0.0042
patents	0.0002	0.0003	0.0002	0.0001
picking winners	0.0000	0.0001	0.0000	0.0000
private investment	0.0127	0.0110	0.0151	0.0104
privatization	0.0326	0.0310	0.0367	0.0282
privatize	0.0059	0.0046	0.0060	0.0063
productivity	0.0280	0.0721	0.0213	0.0128
product market reforms	0.0006	0.0025	0.0002	0.0000
product market regulation	0.0002	0.0008	0.0001	0.0000
property rights	0.0011	0.0006	0.0011	0.0015
public investment	0.0210	0.0126	0.0193	0.0273
public research	0.0000	0.0001	0.0000	0.0000
quality ladder	0.0000	0.0001	0.0000	0.0000
quality of institutions	0.0001	0.0000	0.0001	0.0001
quality upgrade	0.0000	0.0001	0.0000	0.0000
real estate	0.0075	0.0153	0.0081	0.0028
red tape	0.0006	0.0008	0.0008	0.0004
regulation	0.0256	0.0304	0.0271	0.0217
research and development	0.0013	0.0054	0.0004	0.0001
robotization	0.0000	0.0000	0.0000	0.0000
rule of law	0.0009	0.0002	0.0010	0.0011
scientist	0.0000	0.0000	0.0000	0.0000
services	0.1962	0.1422	0.1857	0.2369
skilled labor	0.0013	0.0016	0.0017	0.0007
skills	0.0087	0.0138	0.0089	0.0059
small and medium enterprises	0.0040	0.0059	0.0041	0.0030
special economic zone	0.0006	0.0001	0.0007	0.0007
state intervention	0.0003	0.0003	0.0004	0.0002
state owned enterprises	0.0066	0.0015	0.0073	0.0082
state support	0.0001	0.0003	0.0001	0.0000
structural reforms	0.0435	0.0374	0.0444	0.0451
technological	0.0011	0.0028	0.0010	0.0003
technology	0.0039	0.0066	0.0040	0.0022
tourism	0.0257	0.0142	0.0402	0.0140
tradable	0.0025	0.0048	0.0023	0.0014
trade openness	0.0003	0.0005	0.0003	0.0002
transparency	0.0178	0.0189	0.0163	0.0190
venture capital	0.0003	0.0007	0.0003	0.0002
vision	0.0010	0.0004	0.0011	0.0013

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