Rising Misallocation and Declining Business Dynamism*

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Abstract

Declining business dynamism has become a salient feature of many advanced economies. We apply a recent growth-accounting framework to Swedish microdata and provide new evidence linking rising input misallocation to declining business dynamism and a smaller contribution of input reallocation to productivity growth. Startup and exit rates have fallen, high-growth young firms have become less common, and employer-to-employer mobility has weakened over the past two decades. Over the same period, dispersion in firm-level distortions increased. Our most novel evidence is at the sector level: sectors with larger increases in distortion dispersion experienced sharper declines in business dynamism. The most distorted firms are more productive, pay higher wages, employ more skilled workers, are more export-oriented, and are more concentrated in dense cities, yet they are no larger in employment than the least distorted firms, suggesting that distortions increasingly constrain the expansion of productive firms. A growth-accounting exercise indicates that the contribution of input reallocation to productivity growth has diminished over time. The evidence from manufacturing is consistent with a greater role for product market power, but this mechanism alone cannot explain the broader rise in measured distortions.

Keywords: business dynamism, misallocation, productivity growth, allocative efficiency
JEL codes: D24, L11, O47, L16

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1 Introduction

Productivity growth in many advanced economies has been weak for much of the last two decades. In Europe, concerns about the region's declining competitiveness have moved to the center of the policy debate (Draghi, 2024). While the sources of Europe's growth slowdown are likely multifaceted, a natural place to look is the efficiency with which labor and capital are reallocated across firms. A large literature, going back to Schumpeterian notions of creative destruction, emphasizes that aggregate productivity growth depends not only on within-firm improvements, but also on the entry and expansion of high-performing firms and the contraction and exit of low-performing ones (Aghion and Howitt, 1992; Foster, Haltiwanger, and Krizan, 2001). A related literature shows that distortions that impede this reallocation can have large aggregate consequences by generating misallocation of factor inputs across firms (Restuccia and Rogerson, 2008; Hsieh and Klenow, 2009; Baqaee and Farhi, 2020). An important open question is whether the decline in business dynamism observed in many advanced economies reflects rising misallocation, and if so, what this implies for productivity growth.

Sweden provides a useful setting for studying this question. Recent work by Persson, Edmark, Norbäck, and Prawitz (2024) argues that Swedish productivity growth in the 1990s was closely tied to creative destruction, with productive entrants expanding and less productive firms contracting or exiting. By contrast, since the Great Recession, productivity growth appears to have relied more heavily on within-firm improvements than on the reallocation of resources across firms. This shift makes Sweden a particularly informative setting for our question.

Using Swedish microdata, we document a broad decline in business dynamism over the past two decades. Startup and exit rates have both fallen substantially, the share of high-growth young firms among startups has declined, and employer-to-employer worker transitions have become less common. These patterns echo evidence for the United States and other advanced economies documenting a secular decline in business dynamism (Decker, Haltiwanger, Jarmin, and Miranda, 2016). They are also potentially important for aggregate productivity growth, since a small set of young high-growth firms accounts for a disproportionate share of job creation (Sterk, Sedlacek, and Pugsley, 2021).

To study whether declining business dynamism reflects rising misallocation of factor inputs across firms, we use the framework of Baqaee and Farhi (2020) to measure firm-level distortions, trace how their dispersion has evolved over time, and quantify the contribution of input reallocation to productivity growth. This framework allows

us to connect changes in business dynamism, misallocation, and productivity growth within a unified empirical setting. Following the terminology in Baqaee and Farhi (2020), we use "misallocation" to refer to the cross-sectional dispersion of measured distortions across firms, and "contribution of allocative efficiency" to refer to the component of productivity growth accounted for by the reallocation of inputs across firms over time.

We find that measured distortions have become more dispersed over time, consistent with rising misallocation across firms. This rise is also systematically associated with sectoral declines in business dynamism: sectors that experienced a larger rise in the dispersion of firm-level distortions also experienced a sharper decline in measures of business dynamism, including the share of high-growth young firms among startups. To our knowledge, this sectoral relationship has not been previously documented.

In addition, a growth-accounting exercise based on the same framework indicates that the contribution of allocative efficiency to productivity growth has diminished substantially over time, falling from about 2.5 percentage points of annual productivity growth in the early 2000s to about 1.5 percentage points by the late 2010s. In other words, the reallocation of inputs toward more distorted firms—firms that are too small relative to their efficient scale—has contributed less to aggregate productivity growth over time.

The incidence of these distortions is also informative. Firms with higher measured distortions tend to have higher sales per worker, pay higher wages, employ more skilled workers, export more, and are more concentrated in Stockholm. Yet these firms are not, on average, larger in employment. This pattern suggests that distortions increasingly constrain the expansion of productive, skill-intensive firms.

Finally, the pattern in manufacturing is consistent with an increased role for product market power. In manufacturing, rising distortions coincided with increases in both sectoral sales concentration, as measured by the Herfindahl-Hirschman index, and profit rates. The same interpretation fits non-manufacturing sectors less well, especially business services, where business dynamism also declined and profit rates among the largest firms moved in the same downward trajectory.

Our paper contributes to two related literatures. First, it speaks to work on business dynamism, creative destruction, and productivity growth, which emphasizes the importance of entry, exit, and reallocation for aggregate performance (Aghion and Howitt, 1992; Foster et al., 2001; Bartelsman, Haltiwanger, and Scarpetta, 2013; Decker et al., 2016; Decker, Haltiwanger, Jarmin, and Miranda, 2017). Second, it relates to the

literature on misallocation, which studies how firm-level distortions reduce aggregate productivity by impeding the efficient allocation of factors across firms (Restuccia and Rogerson, 2008; Hsieh and Klenow, 2009; Baqaee and Farhi, 2020). It is also related to recent work that seeks to explain declining business dynamism through specific underlying forces, such as demographic change and slower population growth (Karahan, Pugsley, and Şahin, 2024), or ICT adoption and the rise of scale economies (de Ridder, 2024; Hsieh and Rossi-Hansberg, 2023; Rubinton, 2025). Our main contribution is to provide new evidence linking declining business dynamism to rising misallocation, and to use a recent growth-accounting framework to connect these developments to slower productivity growth. We show that rising dispersion in measured firm-level distortions coincided with declining business dynamism, and that the contribution of input reallocation to productivity growth has diminished over time. Our most novel evidence is at the sector level: sectors with larger increases in distortion dispersion also saw sharper declines in business dynamism, including in the share of high-growth young firms among startups.

The rest of the paper proceeds as follows. Section 2 documents the decline in Swedish business dynamism. Section 3 outlines the framework and measurement of firm-level distortions. Section 4 presents the evidence on rising distortion dispersion, its relationship to declining startup dynamism, and the role of allocative efficiency in productivity growth. Section 5 describes the characteristics of the firms most affected by these distortions and what these patterns may reflect. Section 6 concludes.

2 Swedish business dynamism in the past two decades

This section documents a broad decline in Swedish business dynamism over the past two and a half decades. We begin by showing which sectors have been most important for aggregate productivity growth, with particular attention to manufacturing and business services. We then document that these sectors have historically been among the most dynamic, with higher rates of firm turnover and worker reallocation, but that both have experienced a marked decline in dynamism over time. These facts motivate the analysis in the next section, which asks whether the decline in dynamism coincided with worsening allocative efficiency across firms.

2.1 Data

We use Swedish administrative microdata from Statistics Sweden covering the years 1997–2021. Our main firm-level source is *Företagsdatabasen*, which is based on firms' tax declarations and contains roughly 22.5 million firm-year observations. Because many firms are very small, some parts of the analysis focus on firms with at least five employees, leaving about 1.5 million firm-year observations. Among these firms, there are approximately 243,000 firm-year observations in business services, 241,000 in manufacturing, and 103,000 in hotels and restaurants. We combine these data with matched employer-employee records covering all worker-year observations linked to Swedish firms, for a total of around 68 million worker-year observations. To measure firms' international exposure, we also use customs data from Swedish Customs containing information on firms' exports and imports.

2.2 Sectoral composition and productivity growth

Like many advanced economies, Sweden has undergone a structural shift away from manufacturing and toward services. The left panel of Figure A.1 shows that manufacturing accounted for about one-third of total value added in 2002, but less than one-quarter by 2019. Over the same period, the value-added share of business services rose from about 15% to more than 20%.

Despite this shift in economic activity, productivity growth has remained stronger in manufacturing than in most service sectors. The right panel of Figure A.1 shows that value added per worker was similar in manufacturing and business services in 2002, but had become substantially higher in manufacturing by 2019. Within services, ICT is the main exception: value added per worker grew by 84% between 2002 and 2019, close to the 94% growth observed in manufacturing. However, ICT still accounts for a relatively small share of aggregate value added, rising only from 4% to 6% over the same period.

These patterns imply that manufacturing remains central to Swedish productivity growth, even as business services account for an increasingly large share of economic activity. They also suggest that understanding productivity growth in Sweden requires paying attention to both sectors: manufacturing because of its high productivity growth, and business services because of its growing value added share.

2.3 Sectors with faster productivity growth are more dynamic

Which sectors experienced faster productivity growth over this period, and how do they differ from slower-growing sectors? Figure A.2 shows that sectors in the top quintile of value-added-per-worker growth between 2002 and 2019 were also more dynamic along several dimensions. They exhibited higher firm entry rates, higher firm exit rates, a higher share of gazelles, higher profitability, and a more rapid increase in concentration.

Taken together, these patterns suggest that faster-growing sectors are characterized by more active firm turnover and reallocation. At the same time, the rise in concentration indicates that successful firms in these sectors expanded more rapidly relative to others. In the next subsection, however, we show that these markers of dynamism declined broadly over time, including in manufacturing and business services.

2.4 Declining business dynamism

The preceding evidence suggests that faster productivity growth is associated with more active firm turnover and worker reallocation. We now show that these markers of business dynamism have declined broadly in Sweden over the past two decades. In particular, entry and exit rates have fallen, the share of high-growth young firms has declined, and employer-to-employer worker mobility has weakened. Taken together, these patterns are consistent with a reduced role for creative destruction and a slower reallocation of resources across firms.

Declining firm entry and exit. Panel (a) of Figure 1 shows that the share of young firms—defined as firms no more than two years old—declined steadily between 2000 and 2020, roughly halving over the period. This pattern is visible across broad sector groups. Panel (b) shows that the exit rate, defined as the share of firms that leave the economy within three years of year t, also declined over the sample period. The joint decline in entry and exit points to a broad reduction in firm turnover.

Fewer high-growth young firms. Panel (c) of Figure 1 shows that the share of "gazelles" among young firms—firms whose employment grows by at least 20% per year during their first five years of operation—declined in most major sectors, with the main exceptions being communication and hotels and restaurants. Panel (d) shows a similar decline in the share of young firms among the largest firms in the economy. Here, we define "unicorns" as firms that are no more than five years old and belong to the top 1% of the sales distribution in a given year. Figure A.3 shows that the same pattern

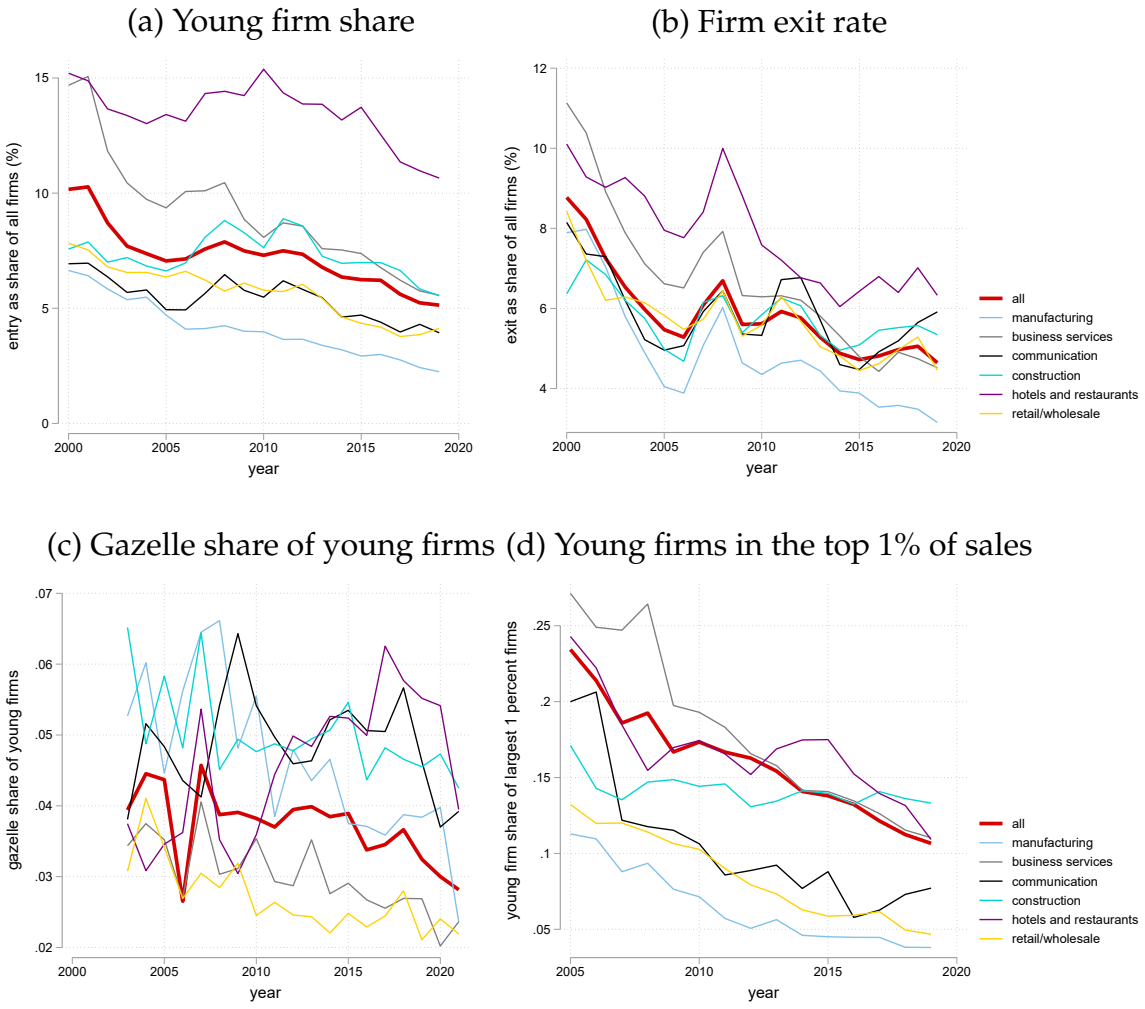


Figure 1: Business dynamism and high-growth young firms by sector.

Notes: Panel (a) shows the share of young firms by sector between 2000 and 2019, where young firms are defined as firms no more than two years old. Panel (b) shows the exit rate by sector, defined as the share of firms that exit within the following three years. Panel (c) shows the share of gazelles among young firms by sector between 2000 and 2019. Gazelles are firms whose employment grows by at least 20% per year during their first five years of operation. Panel (d) shows the share of young firms among the top 1% of the sales distribution in each year.

holds under broader definitions based on the top 5% and top 10% of the sales distribution. These trends are especially concerning because young high-growth firms account for a disproportionate share of job creation (Decker et al., 2016; Sterk et al., 2021).

Lower employer-to-employer mobility. A more direct measure of reallocation is the employer-to-employer (EE) transition rate, defined as the share of workers who switch employers within a year. This measure mainly captures employer-to-employer moves without an intervening spell of unemployment, and therefore reflects one important margin of labor reallocation across firms.

Figure 2: Rate of employer-to-employer transitions by sector.

Notes: These figures only include within-sector employer-to-employer transitions. The left-hand side panel shows the share of workers without a college degree who switch employers in a given year. The right-hand side panel shows the equivalent for college-educated workers.

Figure 2 shows that EE mobility has weakened most clearly in manufacturing. Among workers without a college degree, within-sector employer-to-employer mobility is lowest in manufacturing and declines noticeably over time, while remaining broadly stable in most other sectors. Among college-educated workers, EE transition rates also fall in manufacturing and communication, while remaining relatively stable or rising slightly elsewhere. These patterns suggest that labor reallocation across firms has slowed, particularly in sectors central to aggregate productivity growth.

3 Framework for distortion measurement and growth accounting

To quantify the role of misallocation, we adapt the framework of Baqaee and Farhi (2020), which provides a tractable way to measure firm-level distortions and to decompose aggregate productivity growth into technical-efficiency and allocative-efficiency components. Since our contribution is empirical rather than theoretical, we keep the discussion brief and focus only on the objects needed for the analysis.

Consider an economy with heterogeneous firms indexed by $i \in \mathcal{I}$. Firm i produces output using labor and capital under a constant-returns-to-scale technology,

$$Y_i = A_i F(K_i, L_i),$$

where A_i denotes firm productivity. Following Baqaee and Farhi (2020), we allow firms to face firm-specific distortions to growth, denoted by τ_i, which drive a wedge

between the private and social value of expanding production. Firms with higher τ_i face stronger barriers to growth than firms with a lower τ_i.

A key implication of the framework is that aggregate productivity growth can be decomposed into a technical-efficiency component and an allocative-efficiency component:

$$d\log TFP \equiv \underbrace{d\log Y - \sum_{f\in\mathcal{F}} \tilde{\Lambda}_f\, d\log L_f}_{\%\Delta\text{TFP}} = \underbrace{\sum_{i\in\mathcal{I}} \lambda_i\, d\log A_i}_{\text{Technical efficiency}} \underbrace{- \sum_{f\in\mathcal{F}} \tilde{\Lambda}_f\, d\log \Lambda_f + \sum_{i\in\mathcal{I}} \lambda_i\, d\log \tau_i}_{\text{Allocative efficiency}}. \tag{1}$$

Here, λ_i denotes firm i's share of aggregate value added, Λ_f denotes factor f's share of aggregate value added, and $\tilde{\Lambda}_f$ denotes factor f's share of total costs. The first term on the right-hand side captures the contribution of firm-level productivity growth. The second component, "allocative efficiency," captures the contribution of reallocating factor inputs across firms. Intuitively, this term is positive when labor and capital shift toward firms where, given existing distortions, additional inputs have relatively high marginal value, and negative when reallocation goes in the opposite direction. Our focus is on this latter component, i.e. on input reallocation, and it is this component that we measure using Swedish data.

Implementing equation (1) requires a measure of firm-level distortions, τ_i. A standard challenge in the misallocation literature is to distinguish differences in distortions across firms from differences in technology. Our baseline measure of distortions follows the cost-share approach common in macroeconomics (De Loecker and Syverson, 2021). This approach relies on two assumptions: (i) firms' production technologies share the same returns to scale[1], though technologies may otherwise differ across firms, and (ii) input markets are frictionless. Importantly, these assumptions still allow firms to differ in their output elasticities with respect to any input. Distortions are instead modeled as an "output tax" that captures the bundle of forces limiting firm growth.

Under these assumptions, dispersion in input-specific wedges, such as monopsony power or capital market frictions, is absorbed into differences in technology rather than into measured distortions. Our measured dispersion in distortions should therefore be interpreted as conservative. Specifically, the distortion term is proportional to

[1] A stronger condition—constant returns to scale—is needed if one wishes to identify the level of τ_i, rather than just its dispersion.

the ratio of firm revenue to variable input expenditure:

$$\tau_i \propto \frac{\text{revenue}_i}{\text{wage bill}_i + \text{capital cost}_i}. \tag{2}$$

This is closely related to the logic in Hsieh and Klenow (2009). Intuitively, firms with unusually high revenue relative to observed input expenditure appear too small given their observed performance and therefore have high measured distortions. Conversely, firms with low measured distortions appear relatively unconstrained. Because we are mainly interested in differences in τ_i across firms rather than its average level, we normalize measured distortions to have mean one.

As a robustness check, we complement our baseline measure with an alternative approach that imposes stronger restrictions on production technologies but fewer restrictions on distortions. Specifically, we assume that firms within a two-digit sector share common output elasticities with respect to labor and capital, while allowing these elasticities to differ across sectors. Under this assumption, firm-level labor and capital distortions (within sectors) can be measured as

$$\tau_i^l \propto \frac{\text{revenue}_i}{\text{wage bill}_i} \quad , \quad \tau_i^k \propto \frac{\text{revenue}_i}{\text{capital cost}_i}, \tag{3}$$

where τ_i^l and τ_i^k denote labor- and capital-specific distortions. This approach closely follows Hsieh and Klenow (2009). Relative to our baseline measure, it is more liberal in attributing variation in factor shares to distortions: by construction, any within-sector variation in labor or capital shares is interpreted as reflecting input-specific wedges rather than firm-specific technology differences. Its advantage, however, is that it allows us to distinguish distortions affecting labor from those affecting capital. A well-known example of a labor-specific distortion is size-dependent employment regulation (Garicano, Van Reenen, and Lelarge, 2016); a natural example of a capital-specific distortion is firm-level financial frictions that raise the cost of external finance or limit access to capital (Midrigan and Xu, 2014; Gilchrist, Sim, and Zakrajšek, 2013).

In the data, revenue and wage bills are directly observed. Measuring capital costs is more challenging, since firm balance-sheet data typically report the stock of capital but not its user cost. Following the standard approach in the literature, we construct capital costs using a user-cost formula based on the risk-free interest rate, depreciation, and a risk premium (Hall and Jorgensen, 1967).

4 Misallocation and productivity growth

Section 2 documented broad declines in business dynamism in the Swedish economy over the past two decades: entry and exit rates declined, high-growth young firms became less common, and employer-to-employer mobility weakened, particularly in sectors central to aggregate productivity growth. These patterns are consistent with a reduced role for reallocation across firms, but they do not by themselves reveal whether reallocation across firms contributed to past productivity growth or whether that contribution has diminished over time. In what follows, "misallocation" refers to the dispersion of measured distortions across firms, while the "contribution of allocative efficiency" refers to productivity growth accounted for by the reallocation of inputs over time.

In this section, we use the framework of Baqaee and Farhi (2020) to quantify the contribution of allocative efficiency—that is, input reallocation—to Swedish productivity growth. We make three related points. First, the contribution of allocative efficiency to aggregate productivity growth has declined substantially over time. Second, this decline is concentrated in sectors that have historically been central to Swedish productivity growth, especially manufacturing and business services. Third, sectors that experienced larger increases in the dispersion of distortions also saw sharper declines in business dynamism.

4.1 Allocative efficiency and the productivity slowdown

Figure 3 plots the contribution of allocative efficiency to annual TFP growth in Sweden. The figure shows a clear downward trend. In the late 1990s and early 2000s, improvements in allocative efficiency contributed roughly 2 to 3 percentage points to annual TFP growth. By the late 2010s, this contribution had fallen to around 1 to 1.5 percentage points. In other words, part of Sweden's productivity slowdown reflects not only weaker firm-level productivity growth, but also a diminished contribution of input reallocation to aggregate productivity growth.

This decline is economically meaningful. A fall from roughly 2.5 percentage points in the early 2000s to around 1.5 percentage points by the late 2010s implies that the contribution of allocative efficiency to Swedish productivity growth fell by about two-fifths over this period. The slowdown in productivity growth therefore appears to reflect not only slower technological progress within firms, but also a reduced role for input reallocation across firms.

Figure A.4 shows that this pattern is not uniform across sectors. The decline in al-

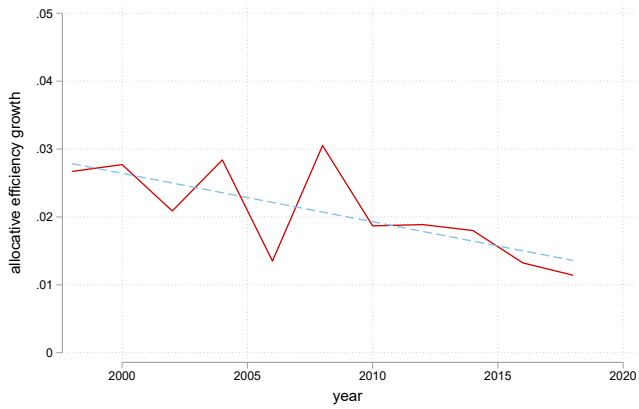


Figure 3: Contribution of allocative efficiency to aggregate TFP growth.

Notes: The figure plots the contribution of allocative efficiency to annual aggregate TFP growth using the decomposition of Baqaee and Farhi (2020). A value of 0.01 corresponds to a contribution of 1 percentage point to annual TFP growth. The dotted line shows a linear trend.

locative efficiency is most pronounced in manufacturing and business services, where improvements in resource allocation contributed substantially to TFP growth early in the sample but much less so by the end. In sectors such as construction and hotels and restaurants, by contrast, the allocative-efficiency component is smaller and comparatively stable over time.

This sectoral pattern is important for two reasons. First, manufacturing and business services are the sectors most central to aggregate productivity growth in Sweden. Second, these are also the sectors in which the earlier section documented the most pronounced declines in business dynamism. Taken together, the evidence suggests that the weakening contribution of input reallocation has been concentrated precisely where it matters most for aggregate growth.

4.2 Rising dispersion in distortions and declining business dynamism

A declining contribution of input reallocation to productivity growth suggests that distortions affecting firm growth have become more severe or more dispersed over time. We therefore turn directly to the evolution of measured firm-level distortions.

Figure 4 plots the dispersion of firm-level distortions over time. Two patterns stand out. First, distortion dispersion rises over the sample period, indicating that the allocation of factor inputs across firms has become increasingly uneven. Second, the increase is gradual and persistent rather than driven by a short-lived episode. This pattern is consistent with the growth-accounting results above: as distortions become more dispersed, the contribution of input reallocation to aggregate productivity growth declines.

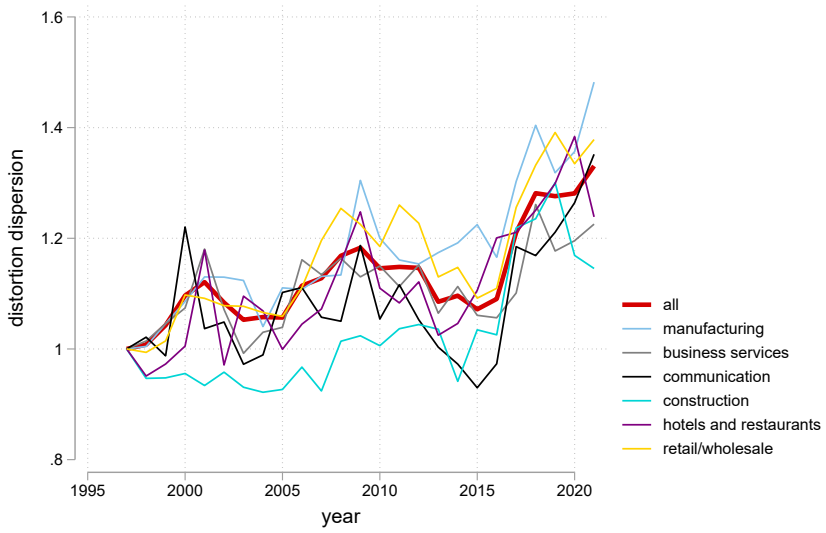


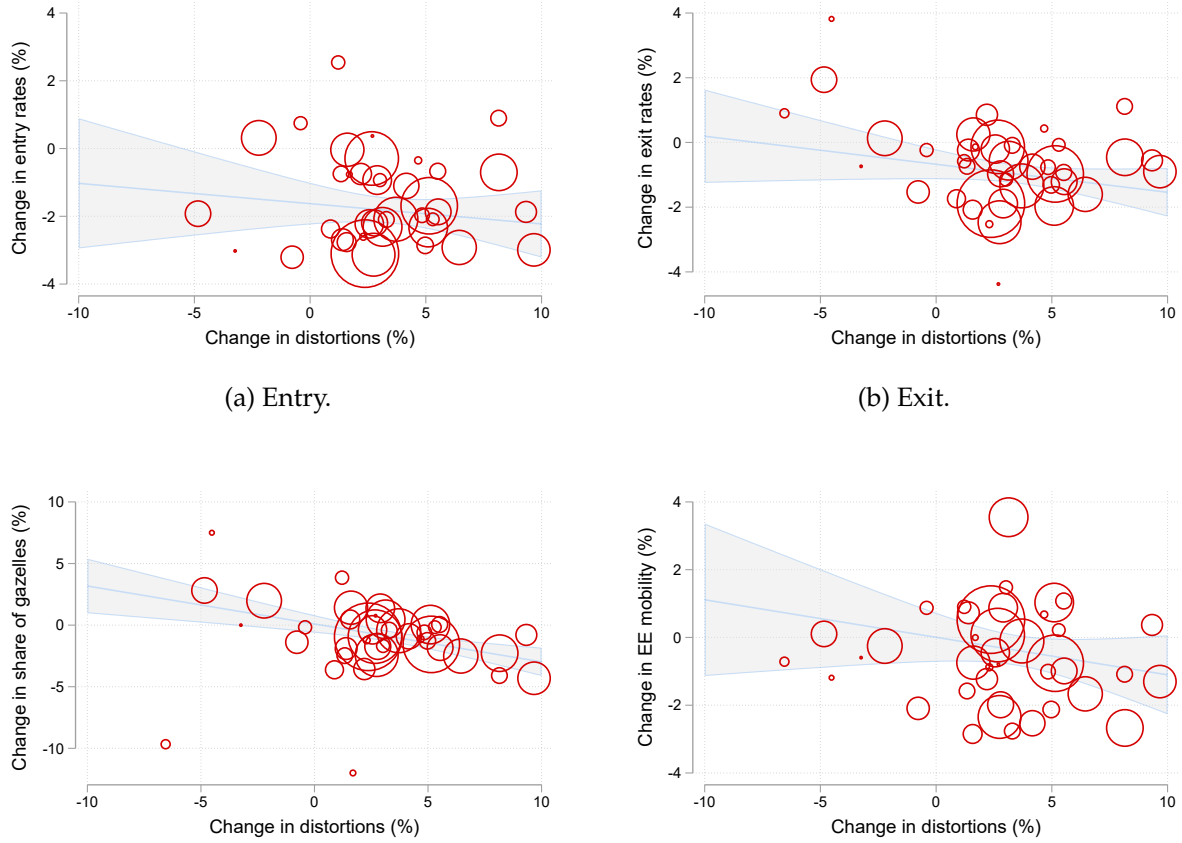
Figure 4: Dispersion in firm-level distortions over time.

Notes: The figure plots the dispersion of measured firm-level distortions over time. Dispersion is measured as standard deviation, normalized to 1 in the year 1997. Higher dispersion indicates greater dispersion in the wedges affecting firms' expansion and is interpreted as evidence of rising misallocation.

This rise in distortion dispersion also coincides closely with the decline in business dynamism. Figure 5 shows that sectors that experienced larger increases in the dispersion of firm-level distortions also experienced sharper declines in firm entry and exit rates, the share of high-growth young firms among startups, and employer-to-employer mobility. To our knowledge, this sectoral relationship has not been documented before. While descriptive, it is consistent with worsening misallocation being linked to declining business dynamism.

Our alternative measures of distortion dispersion, which separately capture labor and capital distortions as described in Section 3, exhibit upward trends similar to the one shown in Figure 4 (see Figures A.5 and A.6). Their sector-level correlations with measures of business dynamism also display similar overall patterns, but with some notable differences between capital and labor distortions. Figure A.7 shows that sectors with larger increases in the dispersion of capital distortions experienced sharper declines in firm entry and exit rates. By contrast, Figure A.8 shows that sectors with larger increases in the dispersion of labor distortions experienced sharper declines in the share of high-growth startups and in employer-to-employer mobility. These patterns suggest that capital distortions may matter more for firm churning, whereas labor distortions may play a larger role in the decline of high-growth entrepreneurship and worker mobility.

Taken together, the evidence in this section points to a common conclusion. Firm-



(a) Entry.

(b) Exit.

(c) High-growth startups.

(d) EE mobility.

Figure 5: Distortion dispersion and the decline in business dynamism across sectors.

Notes: Each point represents a two-digit sector. The horizontal axis shows the change in the dispersion of measured firm-level distortions; the vertical axis shows the change in business dynamism measured as the entry and exit rate of firms (Panels a and b), the share of gazelles among startups (Panel c), and the rate of employer-to-employer mobility (Panel d). Gazelles are firms whose employment grows by at least 20% per year during their first five years of operation. Fitted linear regressions with 95% confidence intervals are included.

level distortions have become more dispersed in Sweden over time, and this increase coincided with both a smaller contribution of input reallocation to productivity growth and a decline in business dynamism, especially in manufacturing and business services. In the next section, we turn to the incidence of these distortions and ask which types of firms appear most affected.

5 The incidence of firm-level distortions

The previous section showed that measured misallocation has worsened over time in Sweden and that the contribution of allocative efficiency to productivity growth has diminished. We now turn to the incidence of these distortions: which firms appear

most affected by barriers to growth, and what might these distortions reflect?

5.1 Which firms appear most constrained?

To characterize the incidence of distortions, we compare firm characteristics across quintiles of measured distortions. Figure A.9 presents the results.

Three patterns stand out. First, firms with higher measured distortions are not, on average, larger in employment. Second, they appear more productive, as measured by value added per worker. Third, they pay higher wages, employ more skilled workers, are more likely to export, and are more concentrated in Stockholm.

These patterns suggest that the firms facing the strongest barriers to growth are not low-performing firms that should shrink, but rather productive, high-wage, skill-intensive firms whose expansion appears constrained. In this sense, worsening misallocation in Sweden does not seem to reflect resources being trapped primarily in inefficient firms. Instead, it appears to reflect increasing barriers to the expansion of productive firms.

This interpretation is consistent with the sectoral evidence presented earlier. Figure 5 showed that sectors experiencing larger increases in distortion dispersion also experienced sharper declines in the share of high-growth young firms among startups. Taken together, the evidence points to a common pattern: productive firms appear increasingly constrained, and the sectors in which such constraints worsened most also experienced the largest declines in startup dynamism.

5.2 What might rising measured distortions reflect?

What might rising measured distortions reflect? One possibility is a decline in product market competition, which would allow incumbent firms to increase markups (De Loecker, Eeckhout, and Unger, 2020; De Loecker, Eeckhout, and Mongey, 2021). We assess this interpretation by examining changes in sales concentration and profit rates, documented in Figures A.10 and A.11.

Two results emerge. In manufacturing, concentration increased over time, and profit rates among the largest firms also rose relative to other firms in the same sector. This pattern is consistent with a growing role for product market power. In non-manufacturing sectors, by contrast, concentration decreased while profit rates among the largest firms declined, which is harder to reconcile with declining product market competition. In business services in particular, this interpretation fits less well, even

though business dynamism in that sector also declined and the contribution of input reallocation to productivity growth diminished.

These contrasting patterns suggest that while rising product market power may help explain rising measured distortions and declining business dynamism in manufacturing, it is less persuasive as an explanation for the broader economy. The rise in measured distortions therefore likely reflects a broader bundle of barriers to firm growth rather than a uniform decline in competition.

Overall, the incidence evidence suggests that the firms most affected by rising distortions are productive, skill-intensive, high-wage firms, many of them located in Stockholm and active in export markets. The discussion in this section further suggests that no single explanation is likely to account for the rise in measured distortions across all sectors. Still, the manufacturing evidence indicates that increased market power may be one relevant part of the story.

6 Conclusion

This paper studies whether declining business dynamism is linked to rising misallocation of production factors across firms, using Sweden as an informative setting. Startup and exit rates have fallen, high-growth young firms have become less common, and employer-to-employer mobility has weakened over the past two decades. Using Swedish microdata and the framework of Baqaee and Farhi (2020), we show that the dispersion of measured firm-level distortions has increased over time, while the contribution of input reallocation to productivity growth has declined substantially. Our most novel evidence is at the sector level: sectors with larger increases in distortion dispersion also saw sharper declines in business dynamism. While descriptive, this relationship provides new evidence consistent with rising misallocation being linked to declining business dynamism.

Our incidence results suggest that the firms most affected by these distortions are not low-performing firms that survive inefficiently, but rather productive, high-wage, skill-intensive, and export-oriented firms that do not appear to reach their efficient size as implied by the model. This pattern suggests that barriers to firm growth increasingly constrain the expansion of productive firms. The evidence from manufacturing is consistent with a greater role for product market power, but this mechanism alone cannot explain the broader rise in measured distortions across sectors. Understanding why productive firms have become increasingly constrained is therefore central to understanding weaker productivity growth and declining business dynamism.

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A Online Appendix

A.1 Additional figures

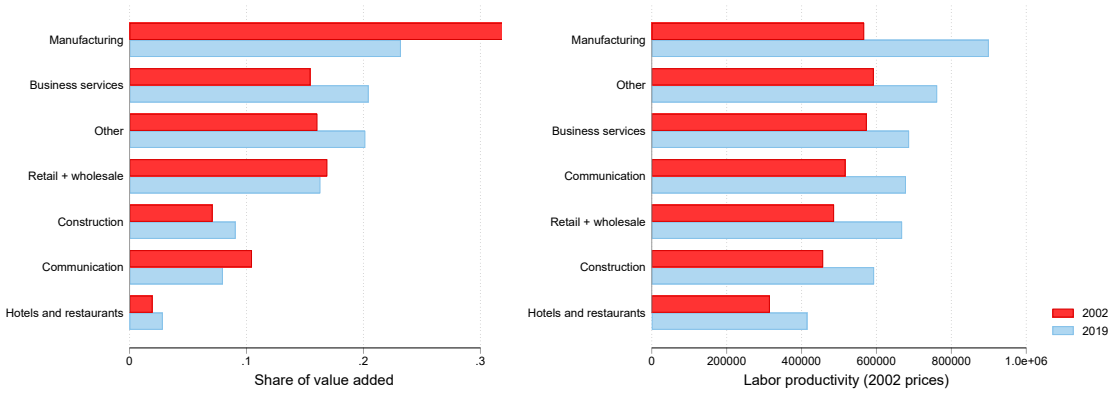


Figure A.1: Sectoral composition of productivity growth.

Notes: The left panel shows each sector's share of total value added in 2002 and 2019. The right panel shows value added per worker by sector in 2002 and 2019.

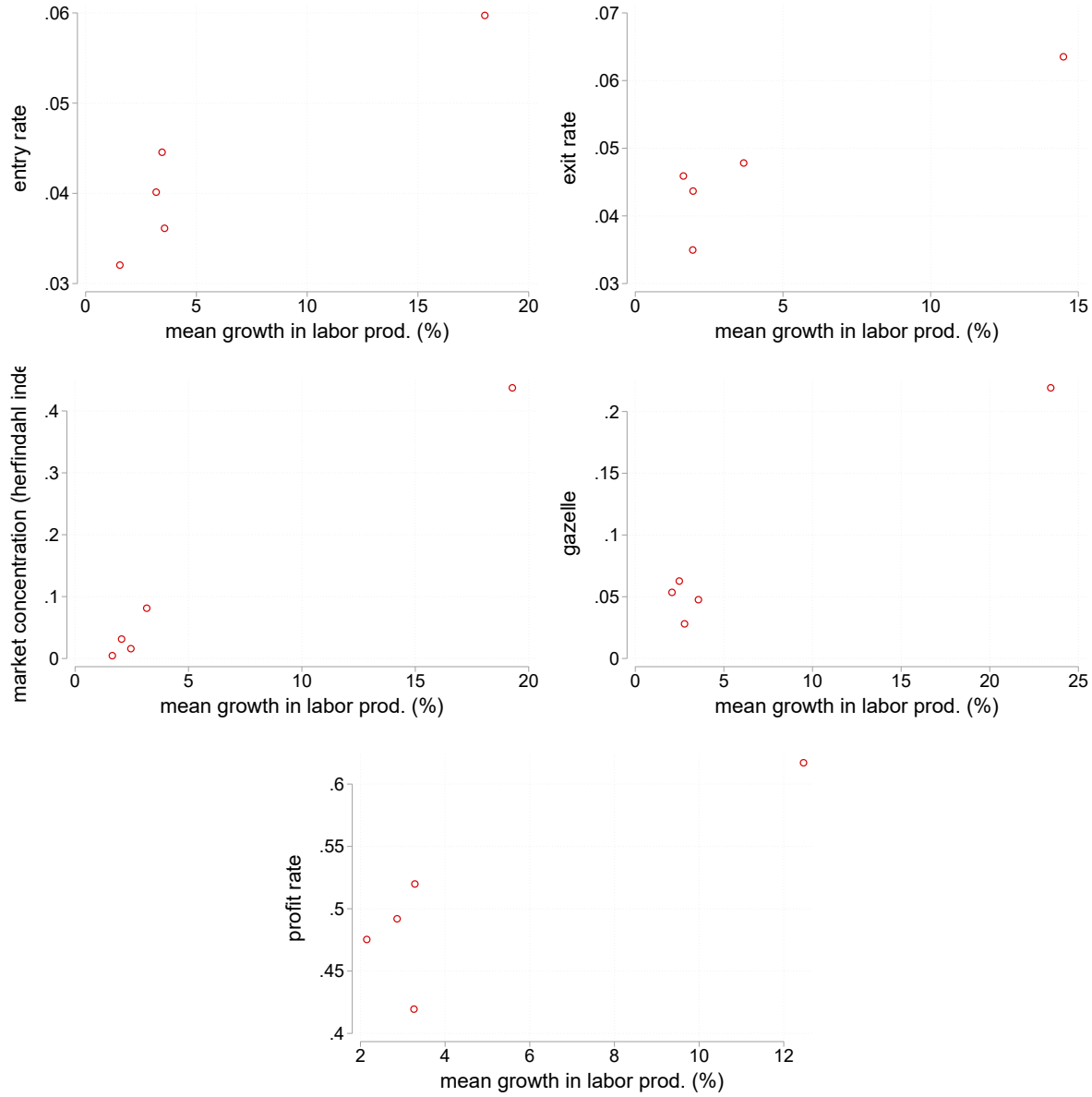


Figure A.2: Characteristics of comparatively high-growth sectors.

Notes: Each point represents a quantile of value-added-per-worker growth across two-digit industries. Entry rates denote the share of firms that entered within the previous two years, and exit rates the share of firms that exit within the following three years. The Herfindahl-Hirschman index is the sum of squared firm sales shares within an industry. Gazelles are firms whose employment grows by at least 20% per year during their first five years of operation.

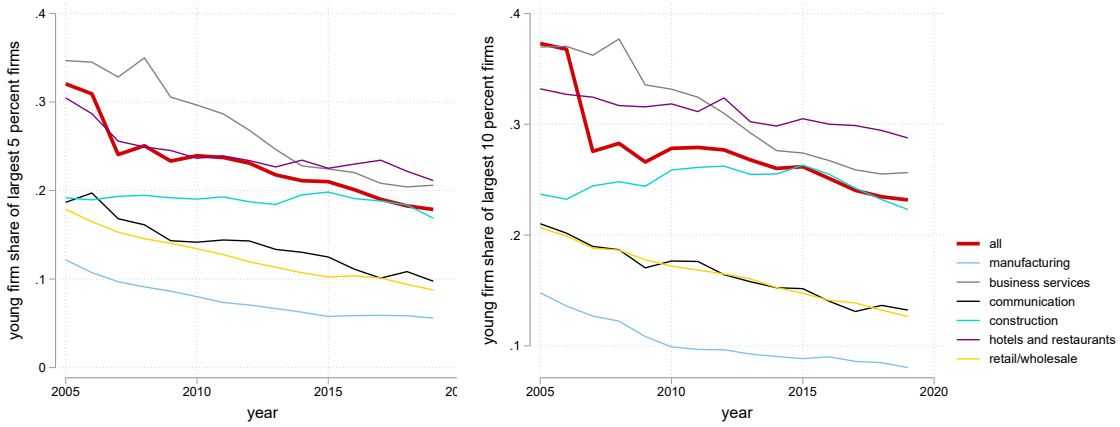


Figure A.3: Share of unicorns among young firms by sector.

Notes: Both panels shows the share of "unicorns" among large firms by sector between 2000 and 2019. We define unicorns as large firms that have been in operation for no more than 5 years. On the left-hand side panel, large firms are defined as firms in the top 5% of sales in a given year. On the right-hand side, large firms are those in the top 10% of sales.

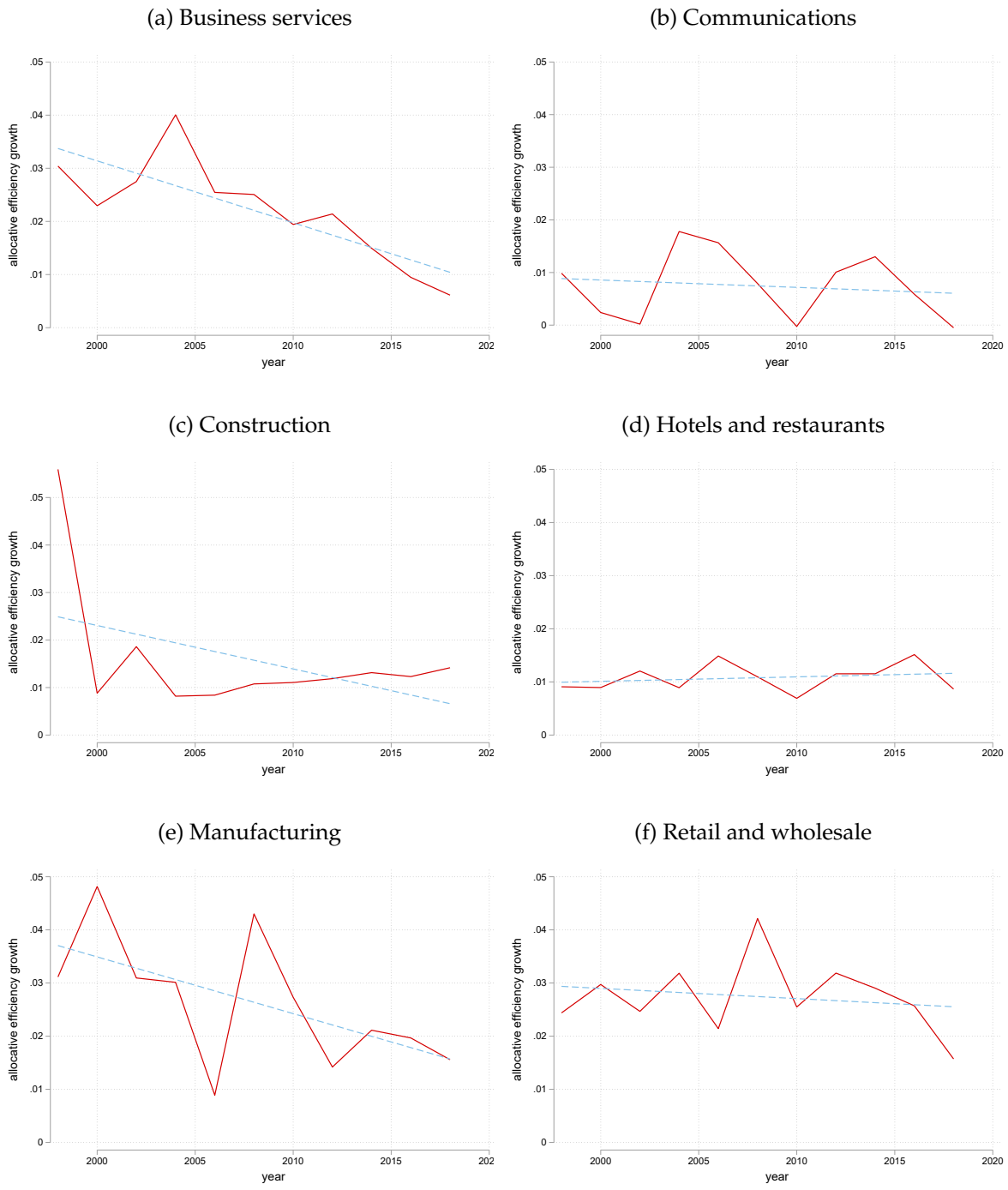


Figure A.4: Allocative efficiency and TFP growth by sector.

Notes: The figure plots the contribution of allocative efficiency to annual sectoral TFP growth using the decomposition of Baqaee and Farhi (2020). A value of 0.01 corresponds to a contribution of 1 percentage point to annual TFP growth. The dotted lines show linear trends.

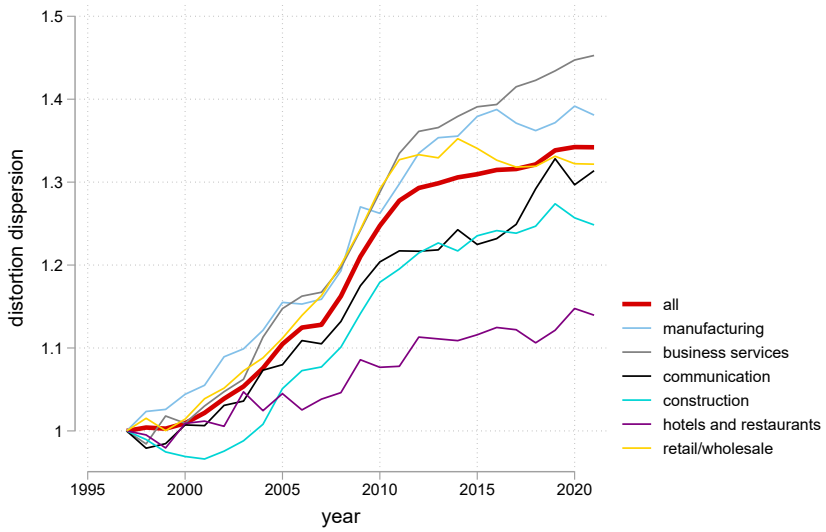
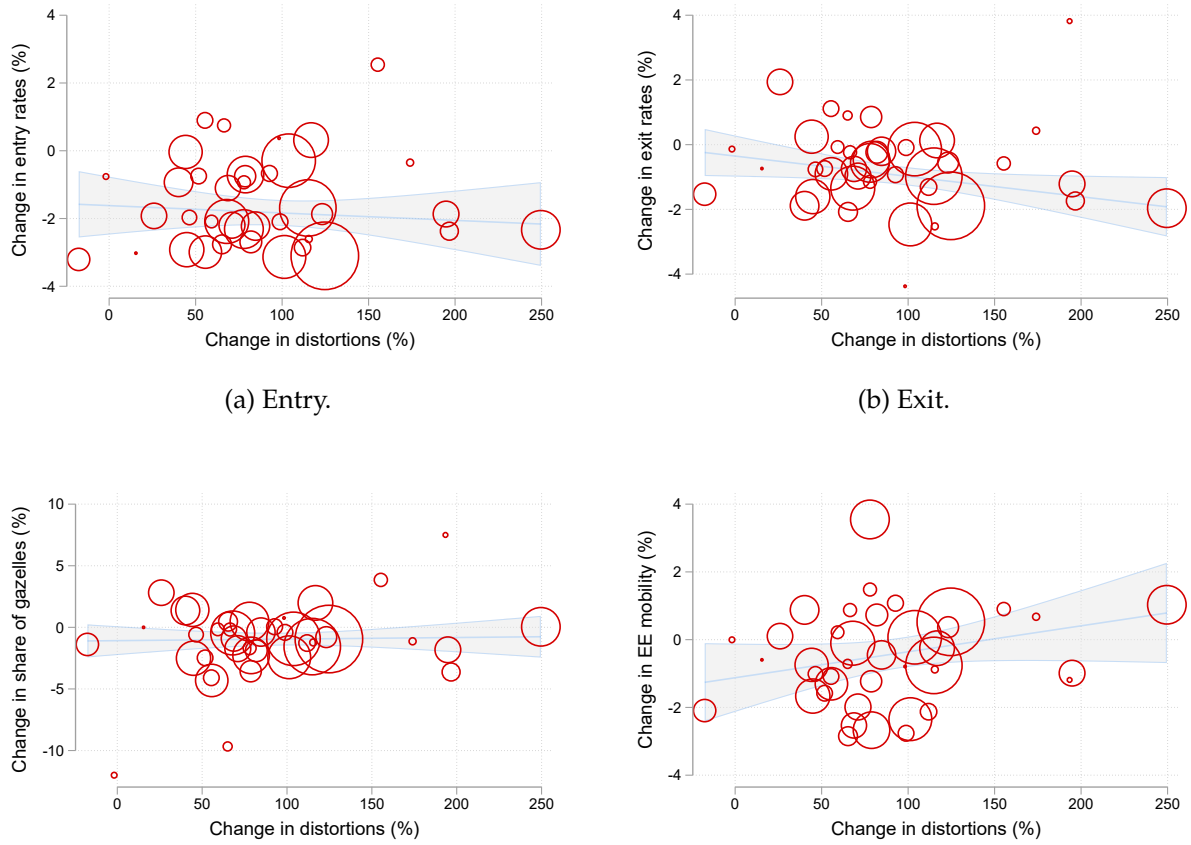


Figure A.5: Dispersion in firm-level *capital-based* distortions over time.

Notes: The figure plots the dispersion of measured firm-level distortions, based on log inverse capital shares (residualised by two-digit sectors) over time. Dispersion is measured as standard deviation, normalized to 1 in the year 1997. Higher dispersion indicates greater dispersion in the wedges affecting firms' expansion and is interpreted as evidence of rising misallocation.

Figure A.6: Dispersion in firm-level *labor-based* distortions over time.

Notes: The figure plots the dispersion of measured firm-level distortions, based on log inverse labor shares (residualised by two-digit sectors) over time. Dispersion is measured as standard deviation, normalized to 1 in the year 1997. Higher dispersion indicates greater dispersion in the wedges affecting firms' expansion and is interpreted as evidence of rising misallocation.



(a) Entry.

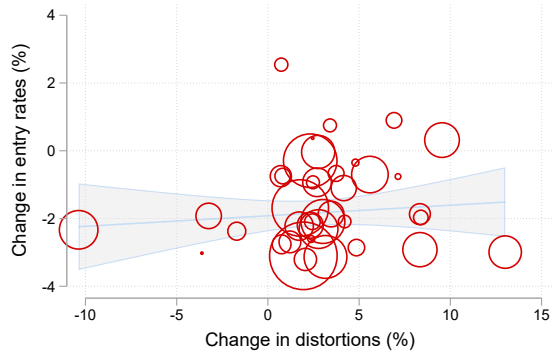
(b) Exit.

(c) High-growth startups.

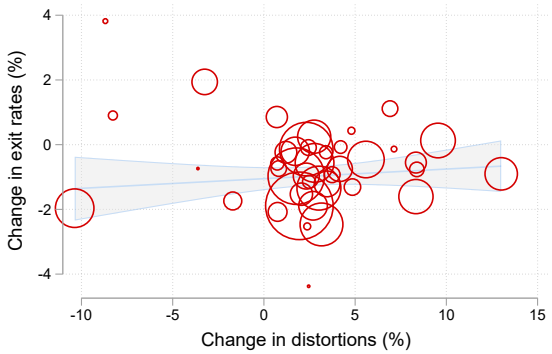
(d) EE mobility.

Figure A.7: *Capital-based* distortion dispersion and the decline in business dynamism across sectors.

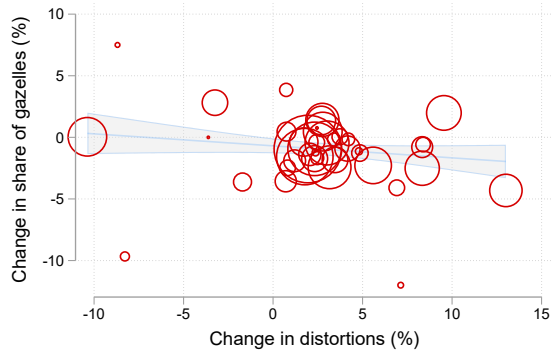
Notes: Each point represents a two-digit sector. The horizontal axis shows the change in the dispersion of measured firm-level distortions (as measured by the standard deviation of log inverse capital shares residualised by two-digit sectors); the vertical axis shows the change in business dynamism measured as the entry and exit rate of firms (Panels a and b), the share of gazelles among startups (Panel c), and the rate of employer-to-employer mobility (Panel d). Gazelles are firms whose employment grows by at least 20% per year during their first five years of operation. Fitted linear regressions with 95% confidence intervals are included.



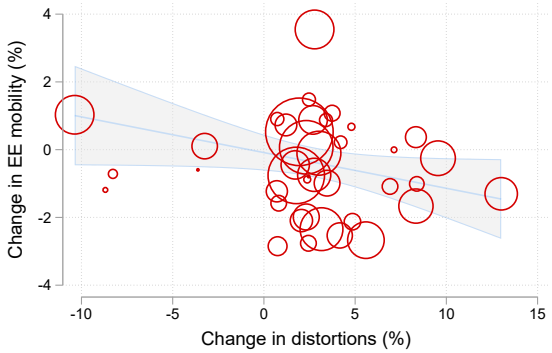
(a) Entry.



(b) Exit.



(c) High-growth startups.



(d) EE mobility.

Figure A.8: *Labor-based* distortion dispersion and the decline in business dynamism across sectors.

Notes: Each point represents a two-digit sector. The horizontal axis shows the change in the dispersion of measured firm-level distortions (as measured by the standard deviation of log inverse labor shares residualised by two-digit sectors); the vertical axis shows the change in business dynamism measured as the entry and exit rate of firms (Panels a and b), the share of gazelles among startups (Panel c), and the rate of employer-to-employer mobility (Panel d). Gazelles are firms whose employment grows by at least 20% per year during their first five years of operation. Fitted linear regressions with 95% confidence intervals are included.

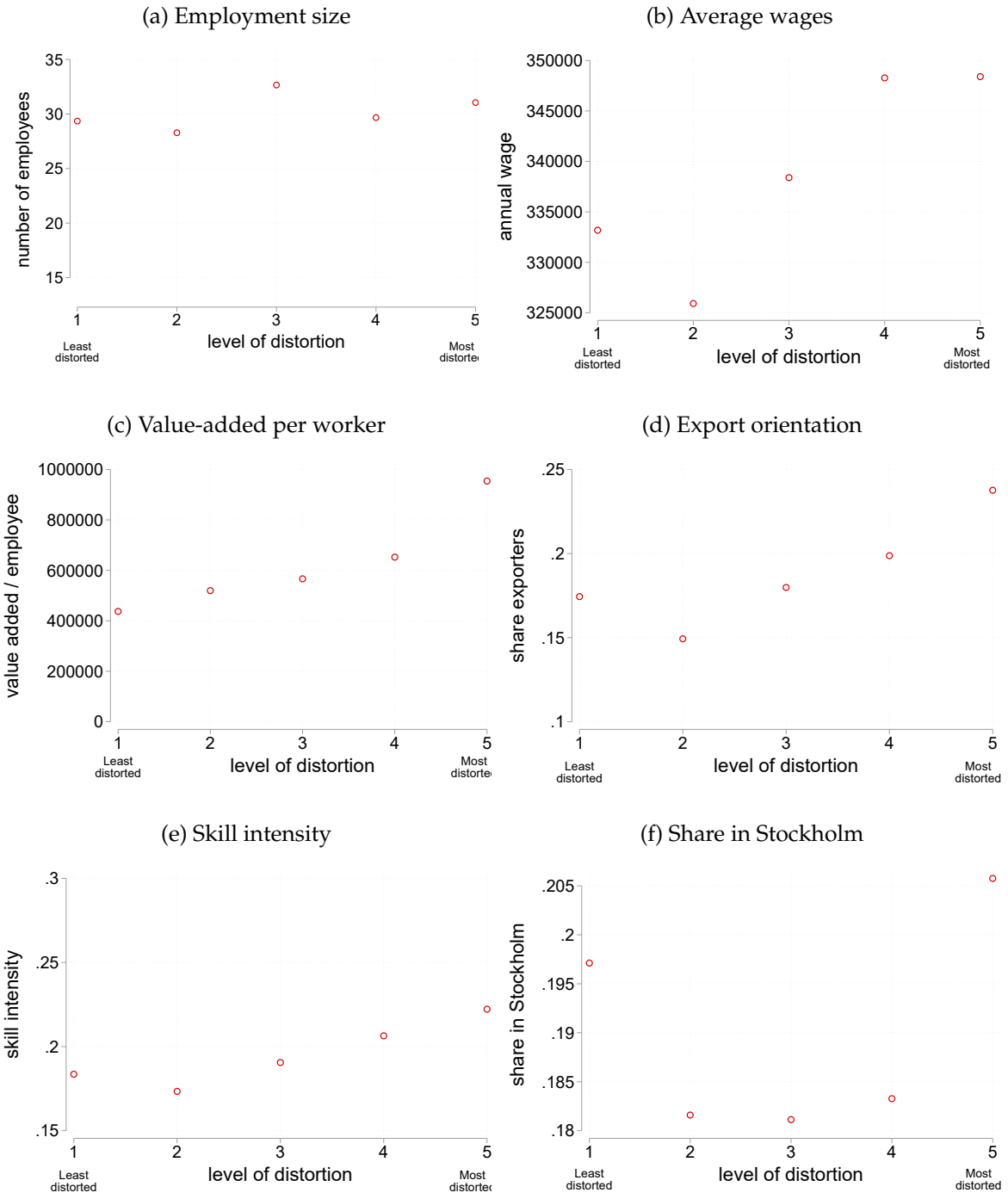


Figure A.9: Firm characteristics by quintile of measured distortions.

Notes: Higher quintiles correspond to firms facing greater measured distortions. Skill intensity is measured using the share of workers with a college degree.

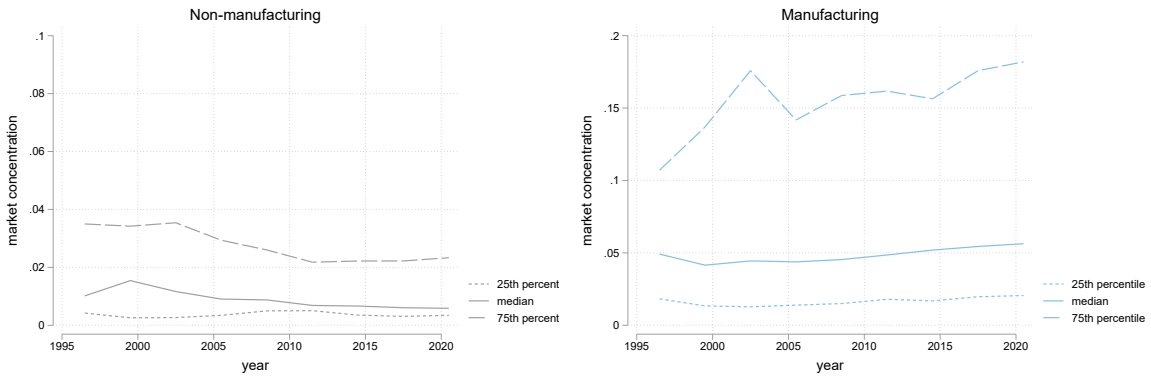


Figure A.10: Sectoral concentration over time.

Notes: The figures show Herfindahl-Hirschman indices (HHI) based on sales shares. We measure HHI at the two-digit sector level. The percentiles correspond to the 25th, 50th, and 75th percentiles of the sectoral concentration distribution in each year.

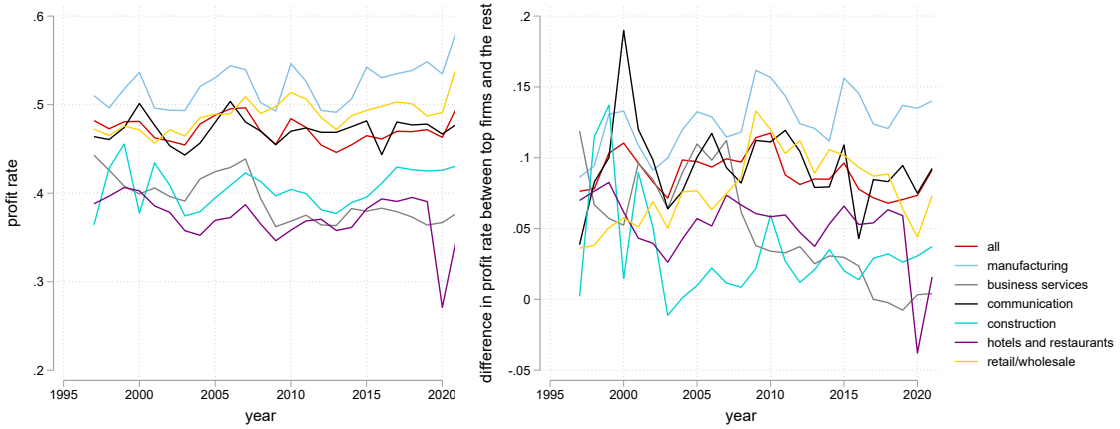


Figure A.11: Profit rates over time.

Notes: Profit rates are defined as operating profits divided by variable costs, where operating profits equal revenue minus variable costs, and variable costs include wage bills, materials, and capital costs. In the right panel, top firms are those in the top 1% of the sales distribution in a given year.