The Persistence of Gender Inequality: Evidence from Labor Market Reactions to Bank Deregulation*

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PRELIMINARY

Abstract

Do gender pay gaps transform into more covert forms of gender inequity in the labor market? Exploiting divergent industrial responses to U.S. bank deregulation, we document how industrial differences in credit access propel this transformation. This is because in less equitable industries (where we show new entry is limited and incumbents increase R&D investments), credit increases rents, which disproportionately benefit male workers. In response, equitable industries (where we show credit increases competition) shift labor demand towards women. These divergent industrial responses in net reduce the gap, but also exacerbate sorting across industries, accentuate workplace gender bias, and make female wages vulnerable to credit contractions. Gender inequities, thus, transform rather than disappear.

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I. Introduction

Gender inequities in the labor market are still large and persistent. Women still earn, on average, 20 percent less than men – a $4.2 million difference over a 40-year career (Equitable Growth, 2018); and while pay for men and women converged significantly during the 1980s, progress slowed afterwards (Blau & Kahn, 2017). There is also a pronounced gender gap in the work women and men do. About 50% of the pay gap is explained by occupational and industrial composition (Blau & Kahn, 2017). Not only are women underrepresented in high paying industries (Bureau of Labor Statistics, 2017), but they also tend to sort into lower paying firms over their life cycle (Barth et al., 2017). Why are gender inequities this persistent?

In this paper, we propose gender inequities are persistent because they *transform*, rather than fully disappear. We show that gender inequities in the labor market transition from being overt disparities – i.e., pay gap – into covert manifestations of gender inequity in the form of increased gender sorting across industries, accentuated workplace gender bias, and higher income vulnerability for women. The gender pay gap closed faster at the bottom of the skill distribution while rising inequality slowed convergence at the top (Blau & Kahn 1997), and we argue this is the main catalyst driving this transformation: (gendered) incentives to sort into different industries had suddenly changed and so, in turn, perceptions about women and men.

The main challenge in tracing the transformation of gender inequities is finding an experimental setting: we need plausibly exogenous variation during the 1970s and 1980s that simultaneously increases rents for workers in high skill industries and demand for workers in low skill industries – i.e. variation that matches the trends documented in Blau & Kahn (1997). We find that variation in the several waves of U.S. bank deregulation. Deregulation had two effects that match our desired experiment: (i) it increased entry of firms in industries where borrowing against collateral was easy (e.g., assets like plant and equipment); and (ii) it increased R&D investments in industries where borrowing against collateral was hard (e.g., assets like human capital and other intangibles which are difficult to pledge). As we now explain below, industries experiencing new entry have lower skill workers and have a lower pay gap, while industries increasing R&D investments have higher skill workers and a higher pay gap.

The reason for this is that, while increased access to credit relaxes financial constraints in general, differences in the ability to post assets as collateral, i.e. *pledgeability* of assets, make those constraints more or less binding. Where asset pledgeability is low, access to credit will increase

investments in financially constrained firms (Aghion et al. 2012), but entry will not be sufficiently easier for new firms because entrants can't borrow against intangible assets they don't yet have (i.e. human capital, brand name, investments in advertising in the presence of high information costs) which provides an edge to incumbents.[1] But more importantly, as we will discuss throughout the paper, asset pledgeability and skill intensity go hand in hand because human capital and other intangibles are difficult to pledge. In short: bank deregulation increases firm entry in industries with high asset pledgeability/low skill workforce and increases incumbents' investments in industries with low asset pledgeability/high skill workforce. In close analogue to Blau & Kahn (1997), we argue this increased competition at the bottom of the skill distribution benefited women, while rents increased at the top disproportionately benefited men.

Our analysis proceeds in three steps. It begins by, first, empirically documenting the industry-level relationship between gender pay gaps, access to credit/asset pledgeability, and workers skills. As noted before, pay for men and women converged significantly during the 1980s but progress slowed afterwards (Blau & Kahn, 2017). Thus, as our starting point, we fix industrial pay gap levels prior to 1980 and then categorize industries by their rank in preexisting pay gap levels into high, medium, and low pay gap industries. We then document that industries in the lower tier (henceforth low pay gap industries) are more reliant on external financing, are more capital intensive, and their assets are more pledgeable than high pay gap industries. Prior literature (Bertrand et al. 2007), thus, suggests that low pay gap industries should exhibit increases in firm competition following bank deregulation; and increases in within-industry competition have been shown to erode gender pay differentials (Black & Strahan 2001).[2] Their workforce is also different: low pay gap industries are more reliant on hourly paid workers performing nonroutine manual tasks, while high pay gap industries rely more on nonroutine cognitive tasks, which are pivotal for R&D. There are no differences between low and high pay gap industry in their reliance on routine tasks for either manual or cognitive tasks; which is important, as routine tasks were more vulnerable to substitution by computer capital (Autor, Levy, & Murane 2003).

Second, we then show that the divergent responses to bank deregulation we hypothesized were

1. In addition, in industries with low asset pledgeability an incumbent can use the additional financial flexibility to increase investments that curb out competitors – which would also increase rents. That incumbents may attempt to curb entry by committing to investments that lower profitability for new entrants finds support in a long line of theoretical and empirical papers (Spence 1977, 1979; Dixit 1980; Aghion et al. 2005a; Aghion et al. 2005b; Aghion et al. 2018).

2. See, also, Becker (1957) and Ashenfelter & Hannan (1986).

actually present, and that these took place along preexisting pay gap conditions. High pay gap industries (whose intangible assets are harder to pledge), exhibited increased R&D expenditures, wages, and per employee revenues for incumbents; but these were accompanied by declines in new entry by firms and reduced levels of employment. In contrast, low pay gap industries (whose tangible assets are easier to pledge) showed higher levels of firm entry and employment, but lower wages, and declines in the per employee revenues for incumbents.

Third, we then document that bank deregulation produced a restructuring of the labor market that directly altered its dynamics of gender through the interplay of two main forces: One, low pay gap industries, despite being more equitable, are on average low paying, while high pay gap industries exhibit overall high pay.[3] Two, deregulation generated surpluses that mainly benefit workers in high pay gap industries. Owing to low female representation in these industries, these rents disproportionately accrue to male workers. Moreover, the increase in rents make men relatively more likely to transition into high pay gap industries. In contrast, low pay gap industries compete for workers with low risk of transitioning out into higher paying industries. This competition induces low paying industries to increase relative pay for women, which leads to high women participation in them as a byproduct.

Increases in the relative pay on lower paying (but more equitable) jobs combined with low female representation in high paying jobs alters the opportunity cost for women relative to men. This creates incentives for women to select into more equitable but low paying industries, or, conversely, abstain from participating in less equitable but higher paying ones. Consistent with this, we document that following bank deregulation, women are more likely to stay in low pay gap industries and more likely to exit the better paying high pay gap ones. Importantly, this sorting is independent of hours worked. This sorting behavior leads to persistence of the gender pay gap by perpetuating gender differences in industrial composition. Furthermore, participating in less profitable industries makes women more vulnerable during downturns since, we show, during credit-contractions, surpluses in low paying industries disappear faster than in high paying industries, disproportionately reducing women's wages.

In the long run, these differences in sorting may cement gender roles. Potential workers, both male and female, may interpret these differences in sorting and resulting industrial composition

3. This is consistent with recently documented empirical facts in the literature. See, Card, Cardoso, and Kline 2016 and Barth, Kerr, and Olivetti 2017. It is also consistent with the empirical findings documenting a positive relationship between innovative investments and rent sharing with workers (Van Reenen 1996) and that rents can be disproportionately shared with male workers (Black & Strahan 2001; Kline et al. 2018).

through gendered lens and conclude that women are less suitable for some jobs, that it is less important for women to pursue a career, or that staying at home is a comparative advantage for women. We directly test for changes in gender norms of this sort by testing how bank deregulation, through a composite of high and low pay gap industries, affects sexism measures derived from GSS data. We find that, indeed, following bank deregulation, attitudes against women in the workplace accentuate. These effects are stronger for men than for women and, also, stronger for individuals with children.

In net, gains in the relative pay for women in lower paying industries offset any losses at the extensive margin arising from gender sorting (i.e., women sorting into lower paying industries), leading to an overall reduction. Nevertheless, the overall gender pay gap reduction comes at the cost of increased polarization in the cross-industry gender composition of workers, and changes in gender norms that reflect that polarization. This transformation in gender inequities – rather than an unqualified decline in the pay gap – may have been a contributing factor to the slow progress in pay convergence between women and men after the 1980s.

II. Contribution to the Literature

This paper furthers understanding of the behavior of gender inequities and, in particular, the role of credit-induced changes in industrial composition on the transformation of gender inequities in the labor market. As such this paper contributes to several lines of research in labor economics and finance. First, we contribute to research on what factors affect the persistent gap in pay between genders. Previous studies in this area emphasize one of several general hypotheses regarding the persistence of the gender pay gap: lack of temporal flexibility in the structure of jobs in the labor market (Goldin 2014), cultural differences that translate into differences in choices (Goldin, 2006), and gender differences in bargaining power (Babcock and Laschever, 2003). We propose an alternative channel that complements these mechanisms and highlight how gender inequities can transition across dimensions of the labor market.

Second, while previous literature has documented the differences in earnings between women and men over the life cycle (Barth Et Al. 2017; Goldin Et Al. 2017), the determinants that explain the relationship between gender sorting into particular firms, occupations, or industries, and lower pay are less understood. One approach to assess this relationship is to evaluate whether external conditions force women to sort into lower paying firms (e.g. flexible hours, Goldin 2014; home production, Albanesi and Olivetti 2009). Nevertheless, evidence also finds that job pay decreases

with increased women participation (Levanon et al. 2009). This finding suggests that approaching the relationship between pay and gender sorting from the perspective of the employer may be informative: why female-dominated firms become lower paying? Our contribution advances this question by showing how credit conditions can exacerbate differences in pay across industries, and then how, along with other determinants like flexible hours, those differences in pay lead to sorting across gender lines and the accentuation of gender norms.

Third, we contribute to work on rent-sharing between firms and workers by documenting the long-reaching consequences of gender-differences in the capture of rents. A long empirical literature has attempted to measure the pass through of rents from firms to workers as opposed to the notion that firms are price takers when bargaining wages.[4] Most recently, in the context of technological innovation, Kline et al. (2018) show that following patent-induced shocks to labor productivity, high earning workers in the firm capture a portion of the rents. Those workers are disproportionately male. However, to the extent of our knowledge, no other paper has documented the large dynamics in gender pay differences that arise because rent-sharing generates spillovers across firms and industries. We contribute to this literature by showing that these general patterns in rent-capture do not only affect the incumbent industry, but that they reverberate through other industries to generate complex redistributional dynamics.

Fourth, we contribute to the literature on the real effects of financial liberalization by showing (i) how deregulation can trigger industrial responses (as a result of the threat of competition) that are different from (and presumably preventive of) direct entrepreneurship; and (ii) how financial liberalization can trigger labor market restructuring through divergent industrial responses to credit-induced competition.[5] Expansion of credit supply can affect the behavior of firms by affecting investment decisions (Lemmon and Roberts 2010), and spurring entrepreneurship and technological innovation (Black and Strahan 2002; Strahan 2003; Amore, Schneider, and Zaldokas, 2013). In turn, investment and innovation generate value for the firm, which can be shared with workers especially when the replacement cost of a worker is high (Kline et al. 2018). When beneficiaries of rent-sharing are disproportionately male, credit liberalization propels realignment of gender pay

4. E.g., Christofides and Oswald 1992; Blanchflower, Oswald, and Sanfey 1996; Van Reenen 1996; Hildreth 1998; Abowd, Kramarz, and Margolis 1999; Guiso, Pistaferri, and Schivardi 2005; Card, Devicienti, and Maida 2014; Friedrich et al. 2014; Card, Cardoso, and Kline 2016; Carlsson, Messina, and Skans 2016; Lamadon 2016; Mogstad et al. 2017.

5. King and Levine 1993, Demirgüc-Kunt and Maksimovic 1998, Rajan and Zingales 1998, Beck and Levine (2004), Jayaratne and Strahan 1996, Cetorelli and Strahan (2006), and Beck, Levine, and Levkov 2010.

gap across industries in a way that can influence industry gender composition and gender norms.

Fifth, we contribute to the growing literature on equitable finance that attempts to dissect the financial mechanisms that lead to economic redistribution.

III. Stylized Facts & Conceptual Framework

Our task in this section is to provide some previously undocumented stylized facts, a short review of the literature on financial liberalization, and a conceptual framework to connect credit expansions with cross-industry labor dynamics. The key takeaway is that the *pledgeability* of assets differs substantially between industries with high pay gaps and industries with low pay gaps. This means that credit expansions will have different effects in both types of industries – which then spill over to the labor market.

III.1 Unequal Industries' Assets are Intangible; Equitable Industries are Capital Intensive

Not all assets sustain the same debt capacity. Williamson (1988) and Shleifer and Vishny (1992) stressed the importance of *redeployability*, i.e. potential for alternative uses, for debt capacity. This is because in case default happens, the asset can be seized by creditors and redeployed, increasing the value available to creditors. This reasoning is especially true for tangible assets. Tangible assets sustain more external financing by increasing the value available to creditors in those instances when default occurs (Almeida & Campello 2007). And while intangible assets (some in the form of R&D or brand name) can provide the firm with a competitive edge (Lev 2001), they have limited ability to be pledged as collateral.

We classify industries by pay gap levels prior to 1980.[6] There are substantial differences in asset compositions under this classification. We plot these differences in Figure 1. Low pay gap industries are more capital intensive than high pay gap industries; they have higher total assets on a per worker basis, and more physical assets. In addition asset tangibility is higher for low pay gap industries, both in a per worker basis (Figure 1.C) and as a share of total assets (Table 1.B). Conversely, high pay gap industries exhibit a larger share of intangible assets.

Why does this matter? Differences in asset tangibility directly affect industrial responses to credit expansions. Intangible assets are harder to finance, and there is a significant gap between internal financing of R&D and external financing; in other words, for R&D investments to take

6. We use CPS data between 1976 and 1980. More on this in Section IV.2.

place, the firm most already be profitable (Hall & Lerner 2010). This benefits incumbents; who do increase productivity after relaxation of financial constraints[7] but at the exclusion of more-efficient new entrants (Aghion et al. 2018).[8] Intangible capital does not only benefit incumbents through the wedge between internal and external financing, but also through other barriers to entry like the value of brand name and investments in advertising in the presence of high information costs (Demsetz 1982). Put in a different way, credit expansions lower the fixed costs of entry when potential entrants need to finance tangible assets, but do little to decrease those fixed costs when potential entrants need to afford intangible capital.

These differential industrial responses to credit expansion will have direct effects on the quantity and type of worker demanded within each types of industry through heterogeneity in new firm entry and hiring, but also because rent sharing with workers is higher for firms with high levels of intangible assets (Ballot et al. 2006; relatedly, see Kline et al. 2018).

III.2 Unequal Industries' Worker Skills are Mostly Nonroutine Cognitive; Equitable Industries' Worker Skills are Mostly Nonroutine Manual

In terms of employment composition, high and low pay gap industries differ mostly along their nonroutine skills. High pay gap industries employ a labor force with high levels of nonroutine cognitive skills while low pay gap industries employ mostly nonroutine manual skill workers (Figure 3). This is consistent with high pay gap industries' high levels of intangible assets and, also, with the low levels of external financing (Hart & Moore 1994). In terms of routine skills, routine cognitive and routine manual skills were largely concentrated on high pay gap industries at the start of the decade, but through out the 80s, 90s, and 00s they steadily converged to a low share of routine workers similar to that of low pay gap industries. High and low pay gap industries differ mostly along their nonroutine skills.

Mellor and Haugen (1986) document that in 1984 nonhourly paid workers work more hours than hourly paid workers, with women overrepresented in hourly paid positions. In our distinction between high and low pay gap industries, we document similar findings. Men are only slightly more likely to work in high pay gap industries than women are, but those differences accentuate when we focus on type of work. Women are disproportionately overrepresented in hourly paid work (Figure

7. Other work documenting the relationship between R&D and financial constraints includes Aghion et al. (2012), and Duval et al. (2017).

8. Aghion et al. 2018 document the existence of an inverted-U relationship between access to credit and productivity growth led by financial constraints at one extreme of the inverted-U relationship and inefficient productivity increases by incumbents (at the expense of more efficient new entrants) at the other.

2). These differences are consistent with the findings of Goldin (2014) emphasizing the role of long working hours and temporal flexibility in explaining the gender pay gap.

The nature of skills can affect sorting of workers across different industries and through those cross-industry dynamics directly affect the compensation for workers and the relative differences between groups of workers. We will explore these dynamics in detail now in the following subsection. But a word of caution is warranted first, differences in skills are sufficient to drive and amplify cross-industry labor dynamics, but they are not necessary. So while we document there are skill differences by gender in these industries, we must acknowledge that other factors such as taste discrimination, differences in referral networks, or even hiring procedures or algorithms might, on their own or in addition, be a source of cross-industry labor dynamics. Furthermore, taste or networks can lead to differences in skills, and vice versa. With that disclaimer in mind, we can proceed to discuss the nature of cross-industry labor dynamics.

III.3 Cross-Industry Labor Dynamics

We now explore what occurs to labor markets when credit expansions differentially opens up the availability of new positive NPV projects or ventures.

Consider two industries $i \in \{L, H\}$ and j. Every period, each industries engages in routine ventures and new ventures. New ventures require extra capital but generate monopolistic profits π_i per worker. Firms hire workers for both routine and new ventures. Workers in routine ventures are paid at a competitive spot wage w^T. Workers for new venture roles must be trained for a time t before working. A subset of workers of size K also are trainable in nonroutine tasks. Cross-industry competition for workers occurs only through the trainability dimension and not through other aptitudes. New ventures can only hire trainable workers, and try to hire $M < \frac{K}{2}$ trainable workers.

The cost associated with training a worker, $t\pi_i$, is akin to a replacement cost and generates a quasi-rent that must be bargained between the worker and the firm in a bilateral monopoly.[9] Bargaining is governed by a Nash protocol where workers have bargaining power β.

Industry H is less competitive than industry L, and thus generates higher profits from the new

9. The replacement cost assumption of our analysis is consistent with recent empirical evidence (Kline et al., 2018) showing that firms disproportionately share rents with workers with high replacement costs. More on this below.

ventures than industry L, i.e. $\pi_H > \pi_L$.[10] The wage for a trainable worker in industry H is:

$$w_H^I = w^T + \beta t \pi_H$$

This is, the worker is more productive in a new venture and captures part of that productivity in the form of higher wages, which is consistent with the findings of Van Reenen (1996) documenting a large rent-sharing elasticity in innovative firms.

Group membership $g \in \{a, b\}$ need not be correlated with the productivity of workers. Without loss of generality assume group membership is orthogonal to worker productivity,[11] and that the owners of the means of production in industry H do not have any monetary incentive to preferentially hire from any group, but neither do they prevent preferential hiring by group. For idiosyncratic reasons, during the hiring process in industry H, workers of group a are weakly preferred to workers of group b, with a positive probability that group a is strictly prefer to group b.[12] New ventures in industry H hire λM workers of group a and $(1-\lambda)M$ workers of group b.

New ventures in industry L pay wages that are above the traditional market wage, but that are strictly below wages at new ventures in industry H. Workers can be poached. As a consequence, they are not indifferent to hiring decisions in industry H. In particular, industry L sets wages such that they are indifferent between hiring a worker of group a or b. This implies that:

$$w_{L,b}^I = w^T + \beta t \pi_L \Big(1 - \frac{M}{K}(1-\lambda)\Big)$$

$$w_{L,a}^I = w^T + \beta t \pi_L \Big(1 - \frac{M}{K}\lambda\Big)$$

and therefore:

$$w_{L,b}^I - w_{L,a}^I = \beta t \pi_L \frac{M}{K}\Big(2\lambda - 1\Big) > 0.$$

We summarize as follows:

Pay Gaps In High and Low Surplus Industries. When an industry with high surplus disproportionately shares rent with workers of group a, industries with low surplus will find optimal to

10. This is due to pledgeability differences explained in subsection III.1.

11. Skills correlated with group membership amplify this problem. For example, highly educated workers may be deemed overqualified relative to workers with similar experience in a task with low complexity, especially when the replacement cost is high (Bewley 1995).

12. We assume this without loss of generality since the problem is symmetric for members of group a or b.

disproportionately hire or pay more to workers of group b.

The replacement cost assumption finds support in recent empirical evidence. Kline et al. (2018) find that firms disproportionately share rents with workers with high replacement costs, and that these workers are mostly men. Since the group disproportionately benefited is men, according to our framework, women will benefit in industries with lower surpluses. We will test this throughout the paper.

It is important to remark that the cross-industry dynamics not only apply to when group refers to gender; it extends to multiple other dimensions documented to matter in the labor market. For example, our framework predicts a set of findings in Beck et al. (2010), in which that the value of other noneducation characteristics, e.g. experience, for low pay jobs should increase if demand for another proxy for skill, e.g. education, increases in high paid jobs. In that finding, group a refers to workers with high education, and group b are workers with low education (but other noneducation traits). Beck et al. (2010) overall finding is that following deregulation inequality decreases, converging from the bottom of the education distribution. The findings of this paper connect the findings of Beck et al. (2010) with those of Blau & Kahn (1997) by showing that deregulation generates bottom-up convergence in the gender pay gap.

IV. Data & Methodological Approach

In this section, we explain the details of our empirical approach. Our goal is to evaluate whether changes in credit conditions alter the cross-industry dynamics of the gender pay gap. We exploit the temporal and spatial variation in the expansion of credit (bank deregulation) and credit contractions (national mergers) to test for these dynamics.

IV.1 Intrastate and Interstate Banking Deregulation

The effects of bank deregulation have been well documented starting with Jayaratne and Strahan 1996. As others have documented,[13] there are two main broad deregulation events regarding the banking industry. The first one was the drop of restrictions on branching within states which largely happened between 1970 and 1994. In line with the literature, we refer to this as intrastate bank deregulation or simply branch deregulation.

13. See, for example, Jayaratne and Strahan (1997).

The other broad deregulation event was the removal of restrictions on cross-state ownership of banks.[14] Following the lead of Maine, states started allowing entry of out-of-state bank holding companies with legislative changes taking place from 1978 to 1992 for all states but Hawaii. As is standard in the literature, we henceforth refer to these changes as interstate bank deregulation.

IV.2 Data

Our main data comes from the Current Population Survey (CPS) for years 1976–2014. We restrict our sample to working-age full-time full-year workers in the private sector. To prevent our estimates from being driven by industrial organization changes within the finance industry (Black & Strahan 2001), we exclude individuals working on Finance, Insurance, and Real Estate (FIRE) industries. Our primary variable of interest is an individual's hourly wage.[15] The CPS also contains individual information on demographic variables such as individual race, gender, and age. Moreover, CPS also has additional individual and household-level information that allows us to explore other outcomes and potential mechanisms. These include type of employer (public vs. private), occupation and industry, previous year occupation and industry, county/state of work, and educational attainment. CPS contains probability sampling weights for each individual that indicate their representativeness in the population. We use these sampling weights in all our specifications.

We supplement CPS data with Compustat data to evaluate the effects of bank deregulation on R&D spending and per employee measures of profitability (to assess efficient use of labor). We also use FDIC call reports to obtain information about mergers and evaluate vulnerability of women to contractions in credit, and GSS data to evaluate changes in gender norms. We will further discuss use of FDIC call reports in section VIII. From the GSS, we construct indexes of sexism following Charles, Guryan, and Pan 2018. We describe our empirical approach to gender norms further in section IX.

IV.3 Industry Categorization and Pre-Deregulation Pay Gaps

To trace the evolution of the pay gap, we first categorize industries by their rank in preexisting pay gap levels into high, medium, and low pay gap industries. We use the first five years of CPS data, from 1976 to 1980, to measure the pre-deregulation pay gaps. The choice is driven by data

14. The Douglass Amendment to the 1956 Bank Holding Company Act effectively prohibited bank holding companies from acquiring banks outside the state where their headquarters resided. This prohibition operated unless states actively allowed those acquisitions.

15. We use the log transformation of this outcome as our dependent variable.

restrictions but also by the importance of the 1980s decade for understanding the evolution of the pay gap (Blau & Kahn, 2017). The estimation sample spans the years 1981 to 2014. High pay gap industries are defined as the industries in the top quartile, respectively, of preperiod pay gap distribution using the 1990 Census Industry Codes (CIC). Low pay gap industries are those in the bottom quartile and medium industries are those in between. We discuss the stability of this categorization in next subsection. We are mainly interested in dynamics between low and high pay gap industries and therefore focus on differences between these two industries.

IV.3.1 Categorization Stability

All legislative changes leading to interstate deregulation took place after our categorization period (1976–1980), except for Maine which took place in 1978. However, about a third of intrastate deregulation changes happened before our categorization period. This raises the possibility that our industry categorization is contaminated by deregulation, specifically by branch deregulation. In other words, our analysis has the identifying assumption that the *ranking* of industries by gender pay gap is stable prior to 1980. In Appendix A, we perform four tests to show that our choice of industry categorization is stable and not a result of our treatment. First, we repeat our interstate deregulation analysis excluding Maine; second, we show that our categorization is not sensitive to dropping the seventeen states (Amel 1993) with intrastate (branch) deregulation prior to 1980; third, we show that a categorization using Decennial Census in 1960 and 1980 is stable; and fourth, throughout all tables we present results using both interstate and intrastate bank deregulation and show that the estimates are virtually identical.

IV.4 Summary Statistics

Employment Summary Statistics: In table 1 Panel A, we present summary statistics on characteristics of workers for men and women in low and high pay gap industries, and overall. Female participation is visibly larger in low pay gap industries at 41.9%, although high pay gap industries have a larger female participation rate (38.3%) than the average for the full sample (34.9%). The differences in participation across industry are steady over time (Figure 2.A). Hourly wages are \$5.43 lower for women than for men in high pay gap industries, but only \$0.99 lower in low pay gap industries. This translates into a percentage difference of -33 and -8.5%, respectively. Overall, women earn \$3 dollars (22%) less than men for each hour of work. Years of education for women are similar across industry categories – around 13.4 years of schooling in both high and low pay gap

industries. For men, workers in high pay gap industries have an additional 1.4 years of schooling. Age of workers is similar across industries and across genders, ranging from 39.7 to 40.9 years of age. Experience is higher for men than for women by between 0.6 and 0.7 years.

Low pay gap industries employed higher fraction of hourly-paid positions while the share constantly decreased in high pay gap industries. During our main analysis period, low pay gap industries employed on average 61% of their employees while the share continuously declined from 50% to 40% in high pay gap industries. Moreover, hourly-paid positions are mostly held by women in both industries, and a decline in hourly-paid positions in high pay gap industries is driven by men as shown in Figure 2.B.

They also exhibit different employment needs. Low pay gap industries employ higher share of workers performing nonroutine manual tasks while high pay gap industries exhibit steeply rising reliance on workers performing nonroutine cognitive tasks. Using the occupational task measure developed by Autor, Levy, and Murnane 2003 from the *Dictionary of Occupational Titles* (DOT), we classify an occupation as routine, or nonroutine and cognitive, or manual job according to its DOT means following Autor, Levy, and Murnane 2003's definition. In figure 3 Panel A, high pay gap industries rely more on workers performing nonroutine cognitive tasks and their reliance increase steeply over time. In contrast, low pay gap industries employ larger fraction of workers who perform nonroutine manual tasks while high pay gap industries employ smaller share over time, which drops to near 10%. Lastly, there are no differences between low and high pay gap industry in their reliance on routine jobs for either manual or cognitive tasks as shown in panel B. Both industries show decline in share of routine task jobs over time with more dramatic decrease in high pay gap industries. This is important as routine tasks were more vulnerable to substitution by computer capital (Autor, Levy, and Murnane 2003).

Firm Summary Statistics: We present summary statistics on characteristics of public firms in high and low pay gap industries in table 1 Panel B. Firms in low pay gap industries have slightly larger assets than high pay gap firms (a statistically insignificant difference of 3%), more workers, and higher revenues and income by worker. High pay gap industries have lower book leverage (48 v.s 54%), higher Tobin's Q (1.09 vs. 0.92), and lower levels of tangibility (0.22 vs. 0.55) than low pay gap industries. Lower external finance and lower tangibility, or higher proportion of intangible assets, are characteristics consistent with incumbents' ability to exclude new participants in an industry because of the different nature of investments. The higher Tobin's Q in high pay

gap industries suggests that the replacement cost of assets is high, making it harder for future participants to enter the market, and suggests incumbents already enjoyed rents (Smirlock et al. 1984).

We find that low pay gap industries are more reliant on external financing and more capital intense than high pay gap industries. We compute Debt-to-Asset ratios and leverage by industries in Table 2. Low pay gap industries are consistently more reliant on debt than high pay gap industries regardless of debt instrument. Low pay gap industries are twice as likely to use secured debt, debt notes, and long-term debt than high pay gap industries are, and their leverage is 7.4% higher. Furthermore, low pay gap industries are more capital intense than high pay gap industries throughout our estimation period. In Figure 1, we plot total assets, total plant and equipment, and total tangibility per employee by industries. Regardless of instruments, low pay gap always exhibit higher capital intensity throughout the entire period than high pay gap industries.

The difference in reliance on external financing and capital as well as employment needs across industries serve as an important ground for divergent industrial response following bank deregulation, which eventually leads to restructuring of labor market.

IV.4.1 Frontier Industries and the Pay Gap

In Figure 6 Panel A, we can see that following deregulation, there is a displacement of workers from high pay gap industries to low pay gap industries. The change is of about 5%, and it is larger for women than for men (more on this later). However, in Table 3 Panel B, the industries that exhibit the very highest levels of growth in employment from the 1980s through 2000 are high pay gap industries. From the top 10 fastest growing industries, seven of them had high pay gap levels, while only one was closer to achieving equitable pay. Those industries with high growth and high pay gaps included Computer and Data Processing Systems and Management and Public Relations Services. Only job opportunities in Agricultural Chemicals provided fast growth and equitable pay. In contrast, slowest growing industries exhibit no clear pay gap level: four industries exhibit low pay gap while three exhibit high pay gap levels.

Overall, service oriented industries exhibit high pay gap (Table 3 Panel A). That includes Legal services, Advertising, Accounting services, Physicians, and Dentists. Agricultural and Care industries exhibit more equitable pay. Pay gaps in Physicians and Dentists offices are mostly driven by high levels of occupational segregation, where women dominate care taking activities like nursing.

It is also the case that high pay gap industries typically pay more than low pay gap industries throughout the entire sample period (Figure 4). Average pay is around 21% higher for high pay gap relative to low pay gap industries. Furthermore, that difference is driven almost exclusively by higher wages for men, indicating that women benefited less from industry growth. High pay gap industries, thus, seem to be in the growing end in both employment and pay during the sample period.

In addition, firms high pay gap industries have more variation in profits (on a per employee basis) and size (Table 1 Panel B). This is consistent both with higher wages for those industries, high growth, and also with empirical evidence showing that women's employment cyclicality was lower than men's before the 90s (see Albanesi 2019).

IV.5 Empirical Specification

We employ a generalized differences-in-differences design, comparing changes in the outcomes between treated localities, either through bank deregulation or national mergers, before and after the treatment took effect. In addition, because we predict differential effects for women across different types of industries, we analyze the labor market outcomes of female workers relative to male workers across industries with high and low preperiod gender pay gaps. In other words, we estimate the causal effect of changes in credit conditions on the cross-industry dynamics of the gender pay gap. The preperiod for measuring the gender pay gap is the first five years of CPS data (1976-1980). The estimation sample spans the years 1981 to 2014. Our main specifications include data for states where bank deregulation was adopted before our estimation sample period. In the appendix, we perform robustness tests where we exclude these states.

Let $\Omega = \{High, Medium, Low\}$ denote the classifications of industries into low, medium, and high preperiod pay gap industries, and I_j^k is a dummy indicating whether industry j falls into classification $k \in \Omega$. High and low pay gap industries are defined as the top and bottom 25% industries, respectively, in terms of 1976-1980 pay gap using the Census Industry Codes (CIC) as defined in 1990. Our primary empirical specification takes the following form:

$$\begin{aligned} Y_{ijst} &= \alpha + \sum_{k\in\Omega} \beta_k D_{st} \times I_j^k + \sum_{k\in\Omega} \gamma_k D_{st} \times I_j^k \times F_i + \sum_{k\in\Omega} \delta_k I_j^k \times F_i \\ &\quad + \sum_{k\in\Omega} \zeta_k I_j^k + \pi X_{ijst} + \tau_{t,female} + \mu_{s,female} + \epsilon_{ijst} \end{aligned} \tag{1}$$

where D_{ist} is a dummy denoting whether deregulation or merger treatment has taken place in a

state s an individual i lives in year t, F_i indicates whether individual i is female, X_{ijst} is a vector of demographic controls,[16] and $\tau_{t,female}$ and $\mu_{s,female}$ are time-gender and state-gender fixed effects, respectively. Single order F_i term is absorbed by fixed effects.

IV.6 Balance & Pre-Trends

We provide corroborating evidence that our research strategy approximates an "apples-to-apples" comparison in which we should be less concerned about unobservable institutional differences confounding our estimation. Figure B.1 presents differences in average state characteristics for states with bank deregulation just before it passed against states where deregulation has not passed and will not pass within the following year. Panel A provides estimates for intrastate deregulation while Panel B does the same for interstate deregulation. These differences in average state characteristics provide evidence regarding the use of our design. Most average characteristics are not different at the five percent level and are economically small in magnitude and precise.

The characteristic that varies the most in our sample is the percentage of the workforce that is black. States deregulating intrastate branching have on average 0.6% more black workers (the average total is 6%), while states deregulating intrastate branching have 0.006% fewer black workers (the average total is 7.5%). Both estimates are highly imprecise. Percentage of nonroutine manual workers is the most different between deregulating and nonderegulating states with a difference of 1.5% for intrastate deregulation (average total is 26.5%) and 2.1% for interstate deregulation (average total is 26.4%).

We can indirectly assess the parallel-trends identifying assumption in a few ways. First, we can examine preperiod trend differences. Figure B.2 provides such first piece of evidence in support of our assumption of parallel trends. The figure presents differences in average state yearly trends for states with bank deregulation just before it passed against states where deregulation has not passed and will not pass within the following year, across a wide range of characteristics. As before, Panel A provides estimates for intrastate deregulation while Panel B does the same for interstate deregulation. All average trends are not different at the five percent level and are economically small in magnitude and precise, including percentage of black workers and percentage of nonroutine manual workers.

An alternative way to provide supporting evidence in favor of the parallel-trends assumption

16. Potential set of controls can include education, race, and marital status.

is by observing the behavior of outcomes of interest around deregulation years in an event study. To this end, figure 6 provides four panels of event studies: one plotting raw averages over time and three derived from an event study version of Equation (1). Panel A plots the raw likelihood of working in high and low pay gap industries by gender between 10 years prior and 10 years after intrastate deregulation. The likelihood is computed by assigning -1 to workers in low pay gap industry, 1 to workers in high pay gap industry, and 0 otherwise, and taking the average of the indicators by gender in each period using CPS data. Panel B plots the same hiring pattern between male and female worker across high and low pay gap industries but in regression form. The dependent variable is based on the hiring differences between men and women, and refers to the differences in fraction of workers of each gender employed in high pay positions vs. low paying positions, computed as $(\%\, of\, male\, with\, top\, 25\%\, wage - \%\, of\, male\, with\, bottom\, 25\%\, wage) - (\%\, of\, female\, with\, top\, 25\%\, wage - \%\, of\, female\, with\, bottom\, 25\%\, wage)$ in a given industry. The dependent variable is the difference in the hiring gap between high and low pay gap industries, which then is regressed in an event study on years since deregulation dummies with state fixed effects and year fixed effects. Panel C uses an event study version of Equation (1) with (log) wage as the dependent variable and presents coefficients for the interaction of female $\times$ Low Pay Gap Industry $\times$ dummies for years since deregulation. Panel D uses an event study version on years since deregulation with (log) revenues per worker as the dependent variable and presents coefficients for the interaction of High Pay Gap Industry $\times$ dummies for years since deregulation. All panels, albeit with different levels of precision, show sharp changes occurring after the passage of deregulation with no leading trends.

V. Labor Dynamics: Divergent Industrial Responses

We first show that, indeed, following bank deregulation, there were divergent industrial responses. Under our conceptual framework, following financial liberalization, industries with predominantly intangible assets face a lower threat from new entrants, and if financially constrained, can increase their R&D investments (Aghion et al. 2012; Duval et al. 2017; Aghion et al. 2018),[17] implying a negative relationship between R&D investment and entry of new firms. Consequently, these industries would enjoy more rents following credit expansion and these could then be shared with

17. In addition, the additional financing can help them commit to investments with the purpose of erecting barriers to entry to avoid competition. See Appendix A for an overview.

workers. In this section, focusing on low and high pay gap industries, we want to test whether, deregulation (i) led some industries to increase investments in R&D; (ii) led some industries to exhibit increases in firm entry; and (iii) that industries increasing R&D exhibit lower firm entry, and, conversely, that industries increasing firm entry exhibit lower R&D changes. We then focus on whether or not revenues per employee increased in those industries that made R&D investments. Lastly, we evaluate if, as a result, wages increased for workers in industries where labor efficiency went up, and vice versa.

V.1 Deregulation on Net Flow of Firms and R&D Investment

Deregulation should have two distinct effects on the within-industry behavior of firms. On one hand, increased credit availability can increase entry of firms into the market by lowering barriers of entry, thereby increasing competition amongst firms. This effect is particularly important when potential new entrants can benefit from credit liberalization, and is relevant to us due to the differences in asset pledgeability we previously documented. In Table 4, we document the effect of deregulation on firm entry. Columns (1)–(3) show the impact of deregulation on flow of firms. Since firm survival rates vary widely over period since starting date, we show changes in firm flow over 1, 2, and 5 years. Following deregulation, when measured in year-by-year basis flow of firms increases by 2 log points, the 2-years rate of change increases by 5 log points, and the 5-year rate of change increases by 3 log points. This effect is driven mostly by low and medium pay gap industries, which is expected due to their higher asset tangibility relative to high pay gap industries. In contrast, for high pay gap industries there is a one year reduction of 1 log point, a 2-year rate increase of 3 log points, and a 5-year rate of change that stays stable.

In columns (4)–(6), we show its impact on employment change. Employment due to flow of firms increases by 7 log points in a year-by-year basis, 8 log points for the 2-year growth-rate, and 2 log points for the 5-year growth-rate. In contrast, employment in high pay gap industries sharply decreases, exhibiting increasing changes over time, with no change on a year-by-year basis, a drop of 8 log points in the 2-year growth rate, and a drop of 11 log points in the 5-year growth-rate. In summary, following deregulation, firm entry increases significantly in low and medium pay gap industries, but stays relatively stable for high pay gap industries; employment growth increases also in low and medium pay gap industries, but decreases sharply for high pay gap industries.

On the other hand, credit availability that benefits incumbents over new entrants can prevent competition. This is because: (i) deregulation allows financially constrained incumbents to take on

positive NPV projects they could not undertake before, while not lowering other costs of entry (e.g. intangibles) for potential new entrants and (ii) because financially constrained incumbents may now commit to investments that create more barriers to entry.[18] In other words, we should see a negative relationship between R&D investment and the entry of new firms. This channel is relevant in light of the differences in asset pledgeability between high and low pay gap industries. We already saw that firm entry did not increase for high pay gap industries; we should thus expect their R&D expenditures to be higher following deregulation. We also saw that employment growth goes down for these industries, which would be consistent with displacement of old processes provided that labor efficiency and wages go up as a result of new processes (we'll evaluate this in the following subsection). For now, we document changes in R&D spending, which we do in Table 5 columns (1)–(3). Following deregulation, we find that the difference in R&D spending between high pay gap and other industries increases by about 31 log points. This effect seems to be driven, at least in part, by a reduction in R&D spending by industries other than high pay gap industries.[19] These effects are robust to the inclusion of state × year fixed effects and the inclusion of firm controls.

These results are consistent with Bertrand et al. (2007) findings that bank dependence prederegulation is associated with increases in firm entry and job growth. Expansion of credit supply can induce entry of firms if access to credit is a major barrier of entry to the industry. In other words, industries that are more bank dependent should exhibit more entry of firms following credit expansion since they are more likely to disproportionately experience lowering of barriers of entry. Consistent with this, in Table 2, we can observe that low pay gap industries are more bank dependent than high pay gap industries.

V.2 Effects on Firm Performance By Worker and Wages

Now we examine the wage-setting implications of the divergent industrial responses documented above. There are two components of interest when analyzing the wage: (1) the industry-type specific wage effect; and (2) the overall wage effect. With respect to industry-type specific wage effects, we most analyze the trade-off between monopoly rents and competition. Increased competition should reduce rents for firms and consequently reduce rents shared with workers. Absent competition, however, development of new processes would increase the rents for the firm. Those rents would

18. Again, in appendix A, we give a short overview of the literature on investments as a deterrent of competition.
19. The reduction is consistent with the findings of Chava et al. (2013) that document a decrease in innovation following intrastate deregulation.

be shared by workers contributing to the new processes (the creation component), increasing their wages (e.g., Kline et al. 2018 find that rents from patents are indeed shared with workers).[20] Yet, the development of new processes will displace workers associated with the old processes (the destruction component), putting downward pressure on overall wages.

With respect to the overall wage effect, as we have documented, following deregulation there is a positive relationship between new entry of firms and increased hiring in the labor market. The effect of deregulation on overall wages, however, is ambiguous. If new entry is driving increased demand for workers, wages should go up. In contrast, if a particular set of industries are displacing workers at a faster rate than they are hiring (e.g., because of technological change), thus increasing the labor supply in the nondisplacing industries, that should propel both lowering overall wages and increased entry of new firms by reducing the cost of labor.

In Table (6), we document that, following deregulation, wages increased in high pay gap industries while overall wages went down. Our analysis controls for county and year fixed effects as well as for Mincerian traits. Following deregulation, wages for workers in high pay gap industries increased by 8% relative to other industries. However, the average effect across all industries was negative – a decline of 4%. In net, workers in high pay gap industries experienced a 4% increase in wages following credit liberalization. This effect is robust to the inclusion of controls including age, race, and marital status. In sum, we find a wage increase coupled with a decline in employment growth in high pay gap industries combined with an overall decline in wages.

Changes in wages map directly to changes in revenues, on a per employee basis, experienced by firms following deregulation. Using Compustat data, Table (5), columns (4)–(6) show these changes in revenues. Following deregulation, revenue per employee decreases for most industries by about 5% but increases by 4% in high pay gap industries relative to medium pay gap industries. This implies a relative increase in revenue per employee of about 9% for high pay gap industries. This 4% increase was rapid rather than gradual, with most of the effect taking place a year after deregulation (Figure 6 Panel D). In contrast, low pay gap industries exhibit a relative decline of around 12% following deregulation for a total decline of 17%. Most of the relative decline disappears with the inclusion of standard corporate finance controls (firm size, Tobin's Q, book leverage at year $t-1$, and tangibility), which implies low pay gap industries would experience a decline in revenues per employee of at least 5%. In columns (7)–(9) we look at revenues net of interest, taxes,

20. Theoretically, Aghion & Howitt (1992) document the relationship between innovation, the creation of monopoly rents, and rent-sharing with workers.

depreciation, and amortization, and find very similar results.

We can also look at whether these changes in revenue were transmitted to workers by looking at net income per employee (columns 10–12). Since net income excludes wages, whereas columns (7)–(9) do not, we can imperfectly estimate the change in surplus that is being absorbed by workers by comparing both subsets of results. The relative increase in revenues absorbed by workers in high pay gap industries is around 4%, while the net relative loss for low pay gap industries is around −4%, in line with our wage estimates.

VI. Labor Dynamics: Emergence of Gender Inequities

As it happens, high pay gap industries are also the highest paying industries. Throughout the entire period between 1980–2000, workers in high pay gap industries have wages that are 3% higher than the median pay gap industries. In contrast, low pay gap industries pay workers wages that are lower than the average wage by 18%. This implies that credit-induced surpluses are accruing to industries that are already the highest paying, thereby increasing income inequality between industries. Since these industries also carry the highest pay gaps, this between-industry inequality does not affect men and women the same, and consequently the development of new processes also has distributional implications.

As we described in section III, differences in hiring patterns within the highest surplus industry will induce lower surplus industries to optimally change their hiring patterns in search for bargains, i.e. workers that are undervalued by high surplus industries but that, for low surplus industries, are indistinguishable from any other worker. In our empirical analysis, we have shown that high surplus industries correspond to high pay gap industries, and that low surplus industries are low pay gap industries. With high pay gap industries hiring patterns differentially benefiting men,[21] low pay gap industries should differentially compete for female workers more than male workers if they assign equal value to their labor. These dynamics are independent of the motives driving hiring decisions in the the high pay gap industries (e.g. statistical vs. taste discrimination). We test for the differential effects of bank deregulation on gendered labor outcomes in this section.

21. Differences in hiring patterns persist – and modestly increase – after deregulation (Figure 6 Panel B).

VI.1 Heterogeneous Effects of Deregulation by Gender

Consistent with this argument, following deregulation, relative wages for women should increase in low pay gap industries but no difference should be observed in high pay gap industries. Table (6) shows that decreases in wages in low pay gap industries accrued mostly to men, which results in a relative increase in women pay. Wages on average declined by about 4%, but, in low pay gap industries, female relative wages increased by about 5%. This relative increase took place immediately after deregulation (Figure 6 Panel C). This is in contrast with high pay gap industries, where female workers experienced no relative increase in their pay.

The increase in high pay gap industries wages coupled with the decline in overall wages (common drop for all industries) documented in the previous section suggests that changes in the workforce taking place on high pay gap industries might be a contributing factor fueling the increase in entry of new firms for all other industries by increasing their labor supply and lowering overall cost of labor. To zoom in on this point we evaluate the changes in relative wages for women by level of education (Figure 7). In low pay gap industries, women relative wages increase for more educated women (Panel A), as expected if high pay gap industries are competing for workers with more cognitive skills. In contrast, for low education women, where high pay gap industries are seeing a reduction in wages (Panel B), there is no relative wage increase. We can perform a more informative analysis if we focus at the occupation level, which we do in the next subsection.

These differential effects in pay by gender accrue to already existing differentials prevailing in low and high pay gap industries. Let us take a look again to Table (6). For men, average pay in high pay gap industries, controlling for education and experience, is 21% higher than in low pay gap industries. That difference for women is just 7%. A similar stylized fact can be observed in Figure (4). When we incorporate the effects of bank deregulation that difference amplifies to 29% for men and 11% for women.

These pay dynamics have important consequences for hiring choices across industries, as we conceptually put forward earlier in Section III. From the worker's perspective, a choice between industries is very different for male and women. Women forgo substantially less in terms of pay when choosing to work in low pay gap (and also lower paying) industries than men do, and potentially receive utility gains from working in a more equitable work environment.[22] These different workers'

22. Utility gains from equitable pay are documented by Clark and Oswald (1996), Card et al. (2012), among others. See Brown et al. (2015) for a review.

choice incentives are apparent from the perspective of a firm belonging to a low pay gap industry, which would in turn lead to a relative higher demand for women in low pay gap industries. As a consequence of these differences in incentives, these dynamics should cause differences in gender sorting between high and low pay gap industries, which we now turn to.

VI.2 Gender Pay Gaps and Worker Mobility Across Industries

Part of the argument we put forward in Section III is that more equitable pay in low pay gap industries stems from the need to minimize workers transitioning out to higher paying industries. When high pay gap industries have different hiring patterns that on average benefit men, it induces low pay gap industries to compete for talent in the pool of female workers thereby increasing their relative wage. Section V shows that expansion of credit induced surpluses that mostly accrued to high pay gap industries. We also documented in the previous subsection that the effects of deregulation on wages are heterogeneous by gender, which presumably lends different incentives to sort across industries for men and women. Consistently with these results, our conceptual framework produces two testable implications: First, that following deregulation, men should be more likely to transition out of low pay gap and into high pay gap industries (or be more likely to remain in high pay gap industries), and, conversely, women should be more likely to transition into low pay gap industries. Second, the relative increase in women wages should stem from occupations where workers are more likely to transition into high pay gap industries.

To test the first implication, we estimate the effects of bank deregulation on the probability of transitioning industry for individuals in either low pay gap or high pay gap industries. The results are shown in the first three columns in Table (8). We define industry transition as those who, during the previous year, moved from low to high pay gap industries or vice versa. The results lends support to the first implication. High pay gap industries are more likely to retain workers by about 11 percentage points following deregulation, while low pay gap industries are more likely to lose workers by about 7 percentage points. In contrast, relative to men, women are more likely to remain in low pay gap industries by about 6 percentage points and more likely to leave high pay gap industries by about 10 percentage points, following deregulation. Furthermore, in columns (4) through (6) we evaluate how much compensation it takes to lure workers away across industries. Following deregulation, it takes an additional 5 to 6% increase in wages to lure a male worker from a high pay gap industry into a low pay gap. For women, it takes only about 1–2%. In total, luring a male worker from a high to a low pay gap industry would require an increase of between 10 to

12% while for women it is only 1 to 3%.

To test the second implication, we separately estimate Equation (1) for workers whose occupations were at the low or high risk of transitioning out of their industries. We define risk of transition by looking at the rate at which workers switch from low pay into high pay gap industries and vice versa. Occupations whose switching rate is less than median are categorized as having low transition risk, while we refer as having high transition risk to those occupations whose switching rate is above median. We show our results in Table (9). Columns (1)–(2) show the effects of deregulation for workers in occupations with low risk of transitioning. Likewise, columns (3)–(4) show estimates for workers in occupations with high risk of transitioning. Women receive a relative increase in compensation of about 1 to 2% when in occupations with low transition risk. This increase is not statistically significant. However, for women that hold occupations with high transition risk, relative wages increase by a statistically significant 4–5%. These results are in support of the claim that pay increases in high pay gap industries produce spillover effects that push low pay gap industries into increasing differential pay for women.

In the last two sections we have focused on how deregulation has catalyzed industrial changes that alter the labor market and propel the creation of gendered labor dynamics. In the next two sections we focus on the far reaching consequences gendered labor dynamics have for women.

VII. Additional Robustness & Limitations

In this section we show four main sets of robustness and discuss how they might affect the interpretation of our main results. We evaluate the following: (i) potential alternative mechanisms; (ii) alternative ways of categorizing industries, i.e. by asset tangibility or workforce skills instead of by pay gap; (iii) whether occupations contribute to our analysis through the underlying set of skills for the task or, alternatively, from a changing occupational composition (i.e. occupations pay the same but more workers are now in different occupations); and (iv) additional robustness tests at the industry level.

VII.1 Alternative Mechanisms

Potential confounding mechanisms may arise if the credit expansion directly affects the pool of workers. Presumably, bank deregulation may change household lending. If so, are banks dispro-

portionately lending to male *vis-à-vis* female borrowers and thus generating differences in the labor participation patterns of these two groups?

Lending can directly affect labor market participation through by making (i) transportation (commuting to a job), (ii) residential choices (moving into opportunity), or (iii) self-employment easier. In Tables D.3 and D.4 we evaluate the first two channels for intrastate and interstate deregulation, respectively, using both CPS and Census data. In columns (1)–(3) we evaluate the effect of deregulation on dwelling measures, specifically, ownership of dwelling, moving into a different residence, and holding a mortgage. Panels A, B, and C report results for workers in all industries, low pay gap industries, and high pay gap industries, respectively. The coefficient of interest is $Deregulation \times Female$. In all three columns and all three panels estimates are economically small and statistically indistinguishable from zero. In columns (4)–(5) we conduct a similar analysis focusing on car ownership and transportation time to work (in minutes). For all panels, results are economically small and statistically insignificant. This suggests that transportation and residential choices were not affected in a gendered way by deregulation, and thus are not likely to drive our main results.

In Table D.5 we show the effects of deregulation on self-employment incorporated rates, self-employment unincoporated rates, and incorporation rates conditional on self-employment. Panel A reports estimates using intrastate deregulation, while Panel B shows results using interstate deregulation. The coefficient of interest is $Deregulation \times Female$. In Panel A, we can see that the effects of intrastate bank deregulation on self-employment measures by gender are not statistically significant or economically meaningful for any of the measures. However, in Panel B we see that the effects of interstate bank deregulation are statistically significant and larger for workers in low pay gap industries (around 1% increase). Nevertheless, we don't believe the effects of interstate deregulation on self-employed incorporated rates by gender contribute to our main results in Table (6) for two reasons: (i) the estimates in Table (6) are nearly identical for intrastate and interstate deregulation, while the effects on self-employment incorporated meaningfully differ and are close to zero for intrastate deregulation; and (ii) the estimates of interstate bank deregulation on self-employment incorporated by gender are only slightly higher in low pay gap industries than in high pay gap industries (by around 0.2%).

A limitation of our analysis is that we cannot observe whether lending helped individuals to invest in their skills in a gendered way, which would then affect differences across genders in industrial-occupational choice in a way that does not require divergent industrial responses. There

is, however, two pieces of indirect evidence that suggest this is not the case. First, the initial changes in hiring patterns and relative wages in low pay gap industries were sharp (Figure 6), which would be inconsistent with finance propelling gendered differences in investments in skill being the main explanation for our results. This, of course, does not preclude the possibility that finance-propelled gendered investments in skills is a complementary mechanism to the main mechanism put forward in this paper. Second, we will show in the next subsection that repeating the analysis of Table (6) by worker skills yields similar results, suggesting that the results stem from changes in wage premia for specific tasks rather than occupational upgrading or downgrading due to gendered changes in skill.

VII.2 Alternative Categorizations

In section III, we presented evidence that there is a close relationship between gender pay equitability, industries' asset tangibility, and industries' worker skills. Since this is a study of the transformation of gender inequities, conceptually, we have decided to focus on divergent industrial responses to deregulation along their preexisting gender pay gap levels. But according to the evidence of section III, we should expect our results to be robust to categorizing industries by asset tangibility or by worker skills. In this subsection, we show that our main results do not meaningfully change if we follow an alternative categorization procedure.

VII.2.1 Categorization by Industries' Asset Tangibility

Table (F.7) shows estimates from Equation (1) categorizing industries by low and high levels of asset tangibility instead of by preexisting gender pay gap levels. We document that, following deregulation, wages increased in low tangibility industries (analogous to high pay gap industries) while wages at high tangibility industries (analogous to low pay gap industries) and overall wages went down. Our analysis controls for county and year fixed effects as well as for Mincerian traits. Following deregulation, wages for workers in low tangibility industries increased by around 5–7% relative to other industries. This wage increase in low tangibility industries is of similar magnitude to the estimates documented using our preferred categorization by preexisting pay gap levels. Changes in relative wages for women using this categorization also yields estimates similar to the ones documented in the main results. In high tangibility industries (analogous to low pay gap industries), female relative wages increased by around 3–5%.

VII.2.2 Categorization by Industries' Worker Skills

Table (F.8) shows estimates from Equation (1) categorizing industries by nonroutine manual and nonroutine cognitive occupations (with routine occupations the omitted category) instead of by preexisting gender pay gap levels. Following deregulation, wages for workers in nonroutine cognitive occupations (over-represented in high pay gap industries) increased by around 11–16% relative to other occupations. This wage increase for nonroutine cognitive occupations is of the same direction but higher magnitude to the estimates documented using our preferred categorization by preexisting pay gap levels. Relative wages for women in nonroutine manual occupations (over-represented in low pay gap industries) increase by around 5-9%, which is of same direction and similar magnitude to the results obtained by using our preferred categorization by preexisting pay gap levels.

VII.3 Skills or Composition of Skill Categories?

We validated that our results are robust to categorizing workers by type of occupational skill. Nevertheless, it does not follow from that robustness that deregulation is affecting the wage premium of those skills rather than changing the occupational composition (by gender) of what it constitutes to a nonroutine cognitive or nonroutine manual occupation. To that end, to the analysis on Table (F.8) we add Occupation $\times$ Gender fixed effects. Results are shown in Table (F.9). Inclusion of fixed effects does not change the results, ruling out that there are composition changes within the occupational skill categories.

VII.4 Other Industry-Level Robustness

Alternatively, we could think that fixed industrial characteristics differentially affect men and women in a way that is not triggered by deregulation. In particular, we might think that the riskiness of an industry (proxied by earnings volatility or leverage) or the availability of growth opportunities (proxied by Tobins' q) might explain the relative changes in wages for men and women. In Table (E.6) we show that the inclusion of these industry level characteristics (duly interacted with a female dummy indicator) does not change our main results.

VIII. Reversal of Fortune: Vulnerability to Credit Contractions

We have shown that credit liberalization increase relative wage for women in low paying-low pay gap industries. These increases do not stem from higher revenues in these industries but from the response of low pay gap industries to higher revenues in already high paying industries. A natural

question to ask is whether these gains are permanent, or if they disappear when the risk of workers transitioning into higher paying industries, male workers in particular, dissipates. In other words, if changes in access to credit reduce the pay gap for women in some industries, it is important to know if economic reversals in the form of credit contractions have the opposite effect: women's wages becoming vulnerable to credit contractions.

Vulnerability of women's wages goes hand in hand with changes in the cyclicality of women's employment. Since the 1991 recession, female employment cyclicality has started to resemble that of male's (Albanesi 2019). Moreover, female labor participation has been associated with increases in total factor productivity, while reduced female participation growth (which would follow declines in female wages) is connected with jobless recoveries, affecting overall economic performance (Albanesi 2019).

VIII.1 Methodology

VIII.1.1 Additional Data Sources

For our analysis on credit contractions, we use bank mergers that led to branch closings as our treatment. We use two alternative methods to pinpoint mergers that work as credit supply shocks. For both methods we restrict to mergers occurring during the 2000s but prior to the Great Recession, in order to avoid capturing many of the mergers that occurred *because* of the recession. We use the FDIC Call Reports and Summary of Deposits to identify business combinations and branch closings.

In our first method, we select mergers with the largest transfer of branches. This is important since the credit shock should be strong enough to affect labor markets – which are typically larger than census tract. For that reason, we restrict to mergers with more than 1000 branches acquired. This leaves us with two specific mergers: the merger of Firstar Corporation with U.S. Bancorp in 2001, and the merger of Bank of America and FleetBoston Financial in 2004.

Alternatively, as a form of robustness, we run our analysis using mergers that exactly conform to Nguyen (2018). As she does, we choose mergers where both Buyer and Target held at least $10 billion in premerger assets, and the branch network of each bank overlaps in at least one Census tract.

VIII.1.2 Empirical Specification

Nguyen (2018) shows that post-merger branch consolidation reduces local small business lending. In contrast to bank deregulation which occurred at state level, bank mergers led to credit contraction at county levels mostly by limiting access to local branches. Since the effects stemming from bank mergers are more localized, we focus on the effects of credit contractions at the county rather than state level.

We can assess whether a reduction in credit increases the gender pay gap in low pay gap industries. In order to do so, again define $\Omega = \{High, Medium, Low\}$ to be the classifications of industries into low, medium, and high preperiod pay gap industries, and I_j^k is a dummy indicating whether industry j falls into classification $k \in \Omega$. We now have the following specification:

$$\begin{aligned} Y_{ijct} &= \alpha + \sum_{k\in\Omega} \beta_k D_{ct} \times I_j^k + \sum_{k\in\Omega} \gamma_k D_{ct} \times I_j^k \times F_i + \sum_{k\in\Omega} \delta_k I_j^k \times F_i \\ &\quad + \sum_{k\in\Omega} \zeta_k I_j^k + \pi X_{ijst} + \tau_{t,female} + \mu_{s,female} + \epsilon_{ijst} \end{aligned} \tag{2}$$

for

$$D_{ct} = Post_{mt} \times Close_{cm}$$

where i denotes individual, c denotes county, m denotes merger deal and t denotes time. $Post_{mt}$ equals 1 if merger m precedes year t, $Close_{cm}$ is a dummy equal to 1 if a branch has closed in county c after merger m.

VIII.2 Effects of Bank Mergers on Gender Pay Gaps

We intend to test whether, following weakened credit conditions and absent better job prospects for workers at high paying-high pay gap industries, credit-induced relative wage gains for women in low pay gap industries disappears, i.e. relative wages for women would decline. We find that is the case. Table 7 reports effects of bank mergers on wages. While high and median pay gap industries are largely unaffected by bank mergers, low pay gap industries show a reduction in the wages of women of about 3 to 4%, while wages for men increase by about 2%. All in all, the pay gap increases by about 6%. Importantly, workers in high pay gap industries are unaffected. The results are robust to the inclusion of controls including age, race, and marital status.

Jointly, our results so far show that credit expansions alter workers' calculus of industry choice in a gendered way. However, our bank merger analysis highlights that this effect is not permanent.

Credit contractions can make disappear the gains female workers had obtained in low pay gap industries while not affecting the gains male workers enjoyed in high pay gap industries. Consequently, the emergence of labor dynamics leave women more vulnerable to deterioration of economic conditions.

IX. Downstream Effects: Shaping Gender Norms

Gender norms lower women's wages and their labor market participation (Charles, Guryan, and Pan 2018), and they also affect women's career choices (Crawford and MacLeod 1990; Ceci, Williams, and Barnett 2009; Bottia et al. 2015). Conversely, differences in sorting and opportunity cost, real and perceived, can create ripe conditions for the creation and reinforcement of gender norms. We have documented so far that gendered labor market dynamics induced by credit expansions lead to gender differences in pay and in sorting across industries. Workers, spouses, and observers may interpret these differences through gendered lens and assume biased views, or validate previously formed ones, on women and their role in the workplace. As a result of gendered labor dynamics women can be regarded as less suitable for some jobs, as having a comparative advantage for staying at home, or that their career should be subordinated to that of her husband's. These changes in views are testable using data from the General Social Survey (GSS).

IX.1 Measurement

To estimate the effects of credit liberalization on gender norms in the workplace, we first need to construct measures of: (i) sexism in the workplace; (ii) industrial spread, i.e. the degree of polarization of the available industrial choices for a worker; and (iii) a measure of deregulation changes adapted for the geographic design of the GSS.

IX.1.1 Measure of Workplace Sexism

To evaluate changes in gender norms in the workplace, we adopt a sexism measure following the work of Charles, Guryan, and Pan 2018. The General Social Survey (GSS) asks its respondents about their attitudes on women's role in the workplace, family, and society. Charles, Guryan, and Pan 2018 use the eight most commonly asked questions to construct a sexism measure. From those eight questions, three pertain to beliefs about the role of women in the workplace ("Should women work?", "Wife should help husbands career first.", "Better for man to work, women tend home.") while others evaluate perceptions about women's general capacities ("Would you vote a female for

President?", "Are men better suited emotionally for politics than are most women?"), and the role of women in the family ("A child suffers when mother works"). Respondents either approve/agree or disapprove/disagree with a given statement. For each question, we assign a value of one when the response reflects biased views against women and zero otherwise. For each question, following Charles, Guryan, and Pan 2018, we then subtract the average response of entire population in 1977, a pre-treatment period, from the individual response and divide it by the standard deviation of the initial response of the entire population in 1977. This gives us a standardized measure of sexism in the workplace. The measure reflects where each individual belief stands in the spectrum of workplace sexism relative to the pre-treatment average.

IX.1.2 Measure of Industrial Spreading

We hypothesize that credit affects gender norms through the gendered labor market dynamics we have documented and its resulting gender sorting across high and low pay gap industries. Through this mechanism, the public's views on gender roles should be more intensely affected in areas where gendered industrial composition is more pronounced and sorting is most likely to occur. When industrial composition in an area is characterized by a fifty-fifty split between jobs in low pay gap *vis-à-vis* jobs in high pay gap industries, the differential opportunity cost of choosing an industry over another for men and women is at its starkest contrast. By comparison, when areas are dominated by a single type of industry the differential opportunity cost must, trivially, be zero, as there is no de facto choice to be made. In short, more industrial spread accentuates the dynamics of sorting, and less industrial spread mitigates them. We proceed to formalize this notion in a measure that quantifies the degree of industrial spread within a geographic area.

To measure the spread of industries in terms of pay gap, we classify each industry by its magnitude of pay gap around the median pay gap industry. If it belongs to the top 25th percentile in terms of pay gap, i.e. high pay gap industries, it is given a value of 1. If it belongs to the bottom 25th percentile, it is given a value of -1. Industries between the 25th and 75th percentiles, median industries, are given a value of 0. The discrete values in each category represent the distance to the middle so that we can express the spread between industries as a composite of distances between any two industries. For any two industries, the largest distance possible is 2. The spread is the expected value over pairwise combinations of workers. By taking the expected value, the largest possible spread is normalized to be 1. How spread out industries are in a given region is given by how large this average distance between industries is. We formalize as follows. For every worker

in a region, the overall industrial spread is the average pairwise distance between the industries of every two workers in a given region g.

$$Spread_g = \frac{1}{N^2} * \sum_{\forall i,j \in g}^{n} |x_i - x_j|$$

where N is the number of workers in region g.

The larger the spread is, the more margin for gendered dynamics to occur, which would lead to an environment more susceptible to the creation and reinforcement of gender norms.

IX.1.3 Deregulation Penetration

GSS public data reports geographic affiliation of interviewee only at the region level. It divides nation into nine different regions. Since bank deregulation changes happen at the state-level, we construct a penetration measure for each region-year that captures the proportion of the population under the new regulatory framework. This is, penetration refers to the proportion of individuals living in region r being affected by bank deregulation for each year t. Deregulation Penetration (DP) is defined as follows:

$$DP_{rt} = \sum_{s \in r} D_{st} * \frac{pop_{st}}{pop_{rt}}$$

where $pop_{s,t}$ is number of population living in state s in year t and pop_{rt} is total population living in region r in year t, and, as before, D_{st} is a dummy variable indicating that deregulation had taken place before time t. We use this measure as our treatment variable for our following empirical specification.

IX.2 Effects of Deregulation on Gender Norms

To test our hypothesis of the effect of deregulation on gender norms, we estimate the following specification using the three measures described above:

$$Sexism_{irt} = \alpha + \beta_1 Spread_r \times DP_{rt} + \beta_2 DP_{rt} + \delta_r + \gamma_t + \varepsilon_{irt} \tag{3}$$

with year and region fixed effects, δ_r and γ_t, respectively. The coefficient of interest is β_1.

We report results in Table (10). Consistent with our previous results, we find that, following credit liberalization, gender bias increases in areas with higher industrial polarization between high and low pay gap industries, and this increase is driven mostly by men and households with children.

In column (1), we see that our index of workplace sexism increases by a statistically significant 2.71 standard deviations. We interpret this to mean that, following deregulation, a fully polarized geographical area (industrial spread of 1) shows changes in gender norms two standard deviations above an area with no polarization (industrial spread of 0). The average industrial spread in our sample is 0.75. This effect is greater for households with children (column 2). Both estimates are large and statistically significant. One explanation for finding stronger effects among people with children can involve differential opportunity costs. As we previously document, the cross-industry difference in earnings are larger for men than for women and increase following deregulation. This means that the opportunity cost of staying at home also increases for men in places with the most polarization, making households with children more likely to support gendered views about the workplace.

We also run our analysis separately for men and women in columns (3)–(6) and (7)–(10), respectively, and also zoom in on each of the individual questions of the survey. First, we find that men are driving the main overall effect. Men are more likely to hold views supporting that women should not work, should prioritize their husband's career, or should stay at home. For men, coefficients in each of the individual questions are large, statistically significant, and unvarying across questions. For women, views are more varied and hold a more complex picture about the role of women in the workplace. There are large deviations in the perceptions of women according to individual questions, and the overall index is statistically insignificant (albeit still positive). This indicates that gender norms about women in the workplace are mostly driven by males and accentuated among male workers following expansions of credit.

X. Bottom-Up Convergence in Pay?

Due to the compositional changes brought about by increased gender sorting in the labor market, it is unclear whether the convergence in pay observed in low pay gap industries lead to an unambiguous reduction in the gender pay gap. However, Blau & Kahn (1997) find that the gender pay gap converges despite rising labor market inequality. In Table (11) we confirm that is true also in our setting. We perform two simple Oaxaca-Blinder decompositions made one year before and five years after deregulation. In columns (1), (3), and (5) we can observe that after deregulation the contribution of participation in low pay gap industries moves from a reduction in the pay gap of around 0.013 log points to a reduction of 0.039 for a change of about -0.026 log points. During the same period, high pay gap industries decrease their contribution to the pay gap from $+0.034$ to

+0.022. The net effect is a reduction of 0.038 log points in the pay gap or about 34.4% of the total decline during that period. The effects are mostly bottom-up driven however. Out of that 34.4% contribution, 69% is driven by low pay gap industries. Moreover, after deregulation low pay gap industries explain −12.5% of the pay gap – that is a −9.4% change from pre-deregulation levels. In contrast, high pay gap industries after deregulation still contribute +7.0% to the pay gap.

These effects suggest that bank deregulation generates improvements leading to parity between men and women but mostly in lower paid jobs. But while bank deregulation does lead to increases in the relative pay for women (mostly driven by less profitable industries), this is at the expense of higher vulnerability to credit contractions, gender sorting in the labor market, and heightened gendered views about the role of women in the workplace.

XI. Conclusion

This paper documented how gender pay gaps transform into more covert forms of gender inequity in the labor market, and in doing so, we have presented a financial channel directly tied to the evolution of gender inequities. We have shown that liberalization of credit operates differently across industries because of industrial differences in the ability to borrow. This results in incumbents increasing R&D investment and per worker efficiency in high pay gap industries, and competition and relative wages for women increasing in low pay gap ones. This work highlights that these dichotomous responses, triggered by bank deregulation, directly affect gender gaps by decreasing the gap in low pay gap industries and increasing absolute wages for industries with high pay gaps and high male participation. These different labor market responses alter the incentives both women and men face when making labor market choices, leading to gendered sorting across industries. Although, in net, changes in industrial composition fostered by bank deregulation lead to more equitable gender pay, they also lead to more gendered job segregation and accentuated gendered cultural norms. Crucially, this work shows that reductions in the gender pay gap can transform into other forms of gendered dynamics in the labor market, allowing gender norms to persist for longer, making progress towards convergence decisively less linear. By documenting how gender inequities transform, this work shows that overreliance on the gender pay gap misses some of the ways through which gender inequities persist in the labor market.

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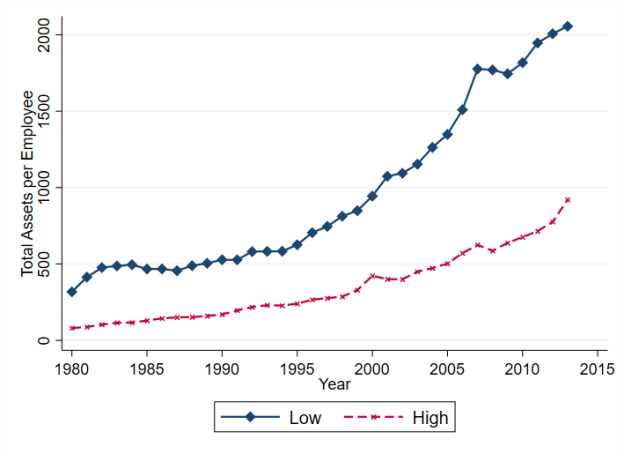
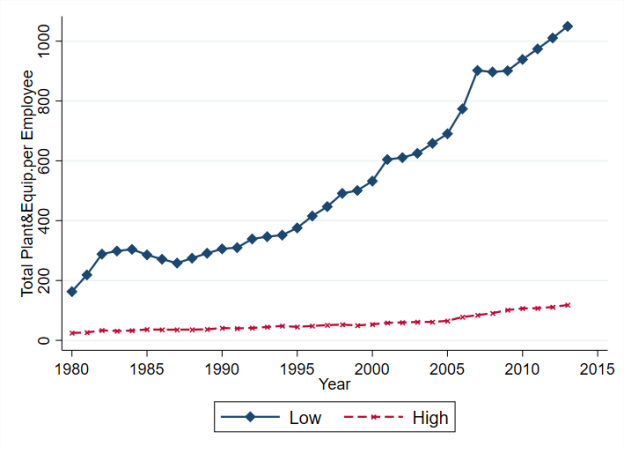
Figure 1: Capital Intensity of Low and High Pay Gap Industries

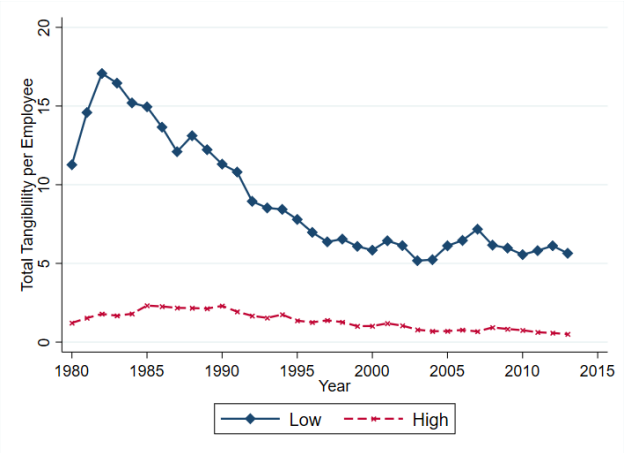
Panel A: Total Assets per Employee



Panel B: Total Plant and Equipment per Employee



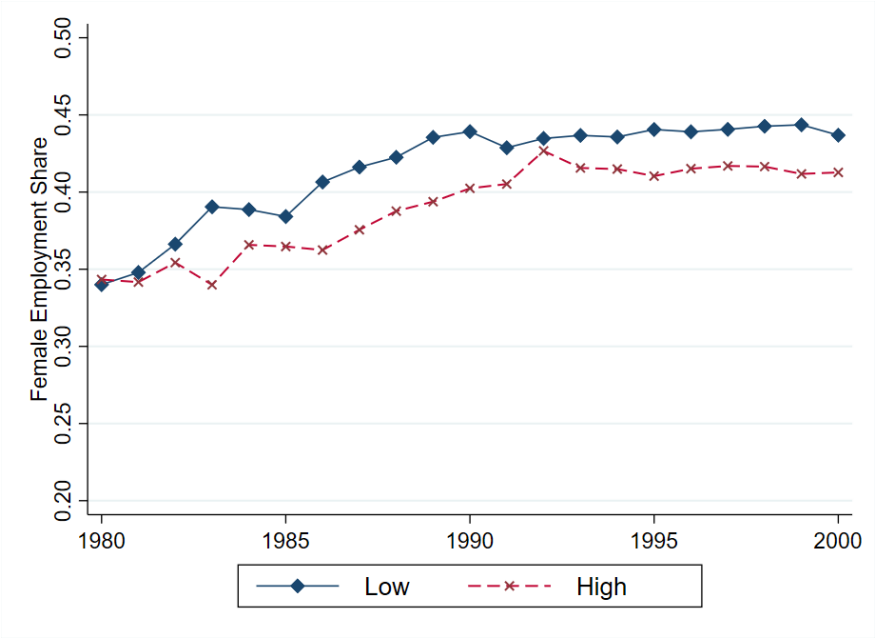
Panel C: Total Tangibility per Employee



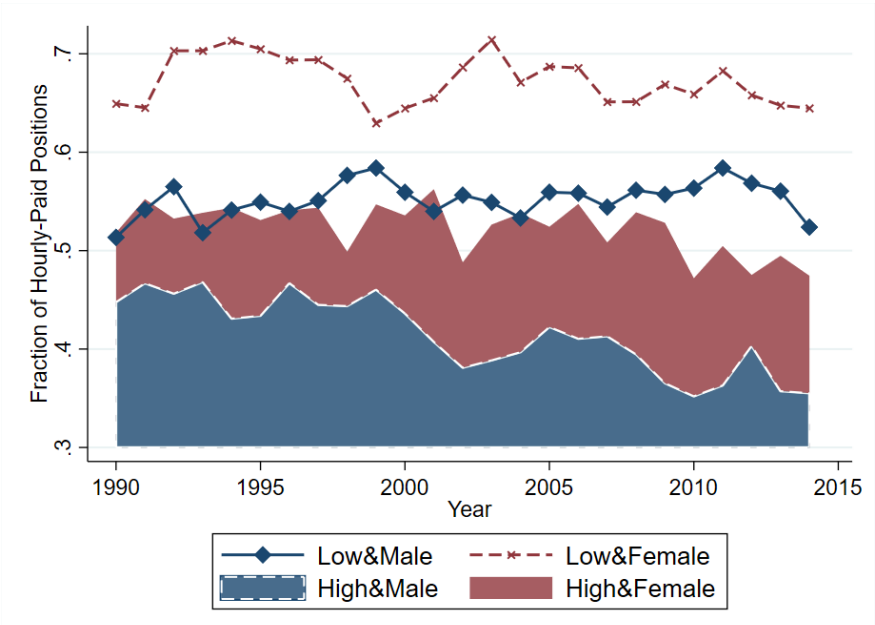
NOTES: This figure plots different measures of capital intensity by industries between 1980 and 2014 using the Compustat data from 1976-2014. It plots total assets divided by total employment in panel A, total plant and equipment divided by total employment in panel B, and total tangibility divided by total employment in panel C.

Figure 2: Employment Composition of Low and High Pay Gap Industries

Panel A: Share Female in Low and High Pay Gap Industries



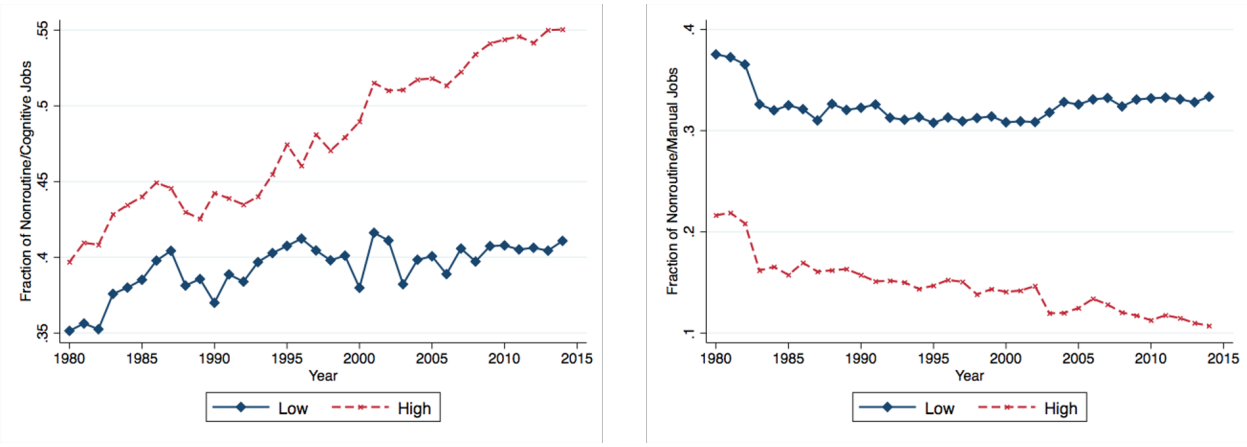
Panel B: Share of Male and Female in Hourly-Paid positions by Industries



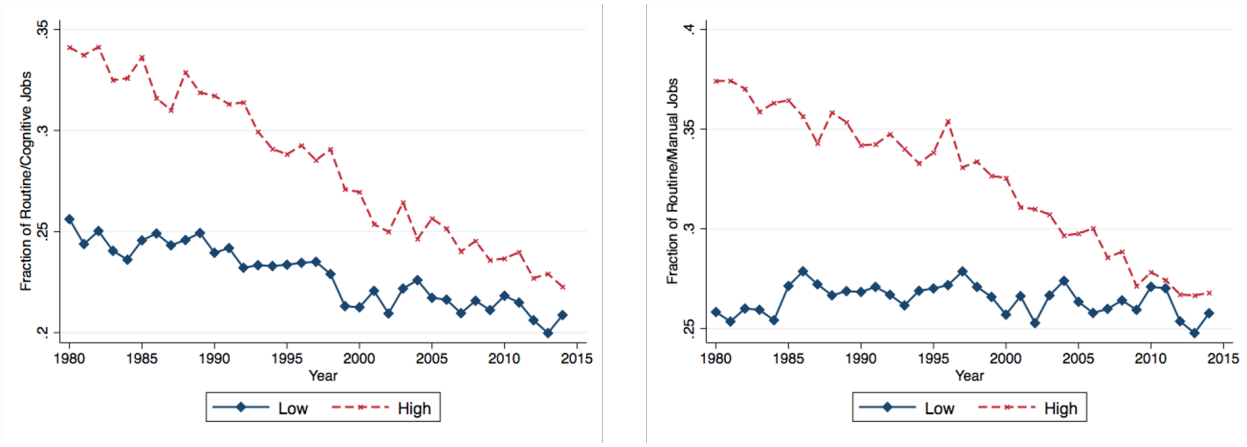
NOTES: This figure plots fraction of hourly-paid positions employed by industries between 1990 and 2014 using the CPS data from 1976-2014. The sample includes full time working-age adults. The sample excludes individuals working on Finance, Insurance and Real Estate (FIRE) industries. A pay gap is computed by taking the difference between the mean log wage of male and female employees by industry during 1976-1980. The high pay gap industries refer to industries that belong to the top 25% of pay gap distribution and the low pay gap industries refer to those in the bottom 25% industries. For details, see Section IV.4.

Figure 3: Share of Nonroutine/routine and Cognitive/Manual Task by Industries

Panel A: Nonroutine Cognitive/Manual Task



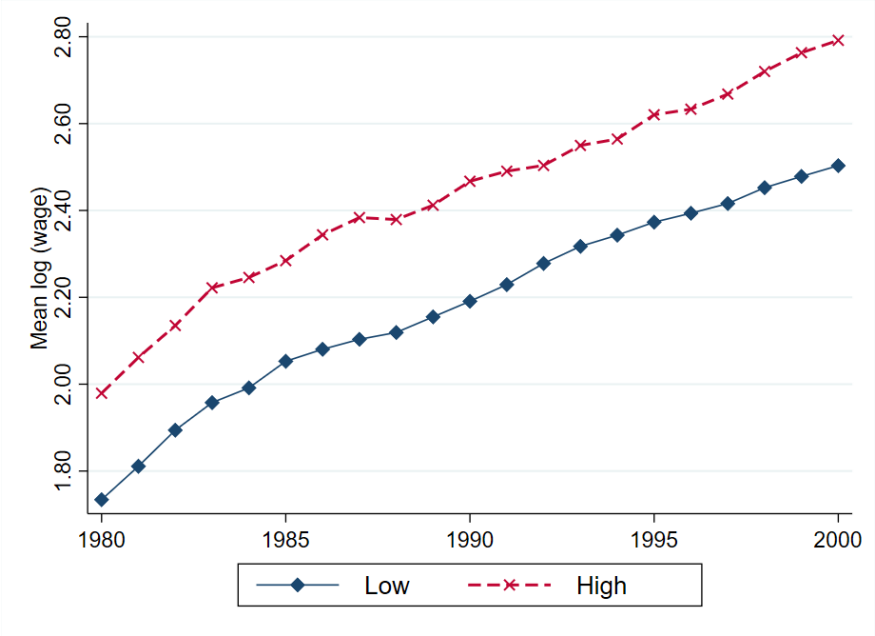
Panel B: Routine Cognitive/Manual Task



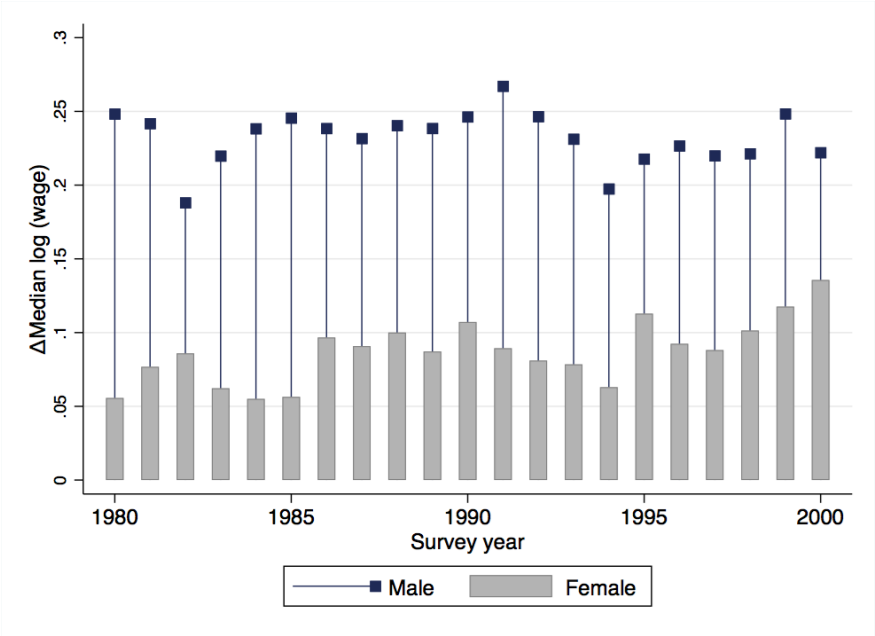
NOTES: This figure plots share of workers performing nonroutine/routine and cognitive/manual tasks computed using the DOT measures developed and defined by Autor, Levy, and Murnane 2003 using the CPS data from 1976-2014. The sample includes full time working-age adults. The sample excludes individuals working on Finance, Insurance and Real Estate (FIRE) industries. A pay gap is computed by taking the difference between the mean log wage of male and female employees by industry during 1976-1980. The high pay gap industries refer to industries that belong to the top 25% of pay gap distribution and the low pay gap industries refer to those in the bottom 25% industries. For details, see Section IV.4.

Figure 4: Average Industry Wage for Low and High Pay Gap Industries

Panel A: Average Industry Wage for Low and High Pay Gap Industries



Panel B: Differences in Median Wage between High and Low Pay Gap Industries

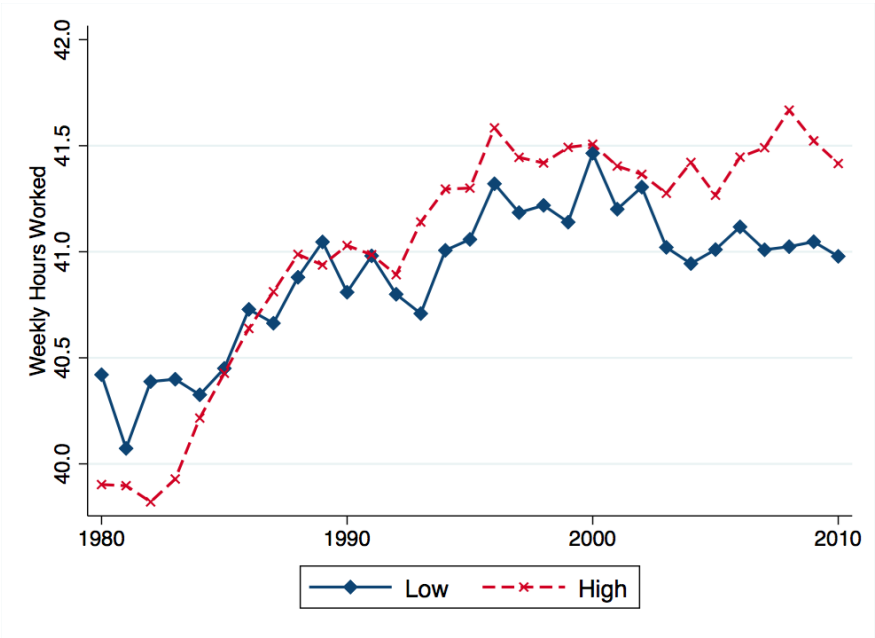


Notes: This figure compares log wages for men and women by industries categorized between 1976–1980 and observed after 1980 and 2014 using the CPS data. The sample includes full time working-age adults and excludes individuals working on Finance, Insurance and Real Estate (FIRE) industries. Categorization is done by ranking the difference between the mean log wage of male and female employees by industry during 1976-1980. The high pay gap industries refer to industries that belong to the top 25% of pay gap distribution and the low pay gap industries refer to those in the bottom 25% industries. In the Panel A, we plot the average industry wage for high, medium, and low pay gap industries. In Panel B, we plot the difference in median log wage between high pay gap and low pay gap industries by gender. The difference in median log wage is computed by subtracting the median log wage of each gender working in low pay gap industries from the median log wage of those in high pay gap industries.

Figure 5: Working Hours by Gender

Panel A: Average Working Hours by Male Workers

Panel B: Average Working Hours by Female Workers



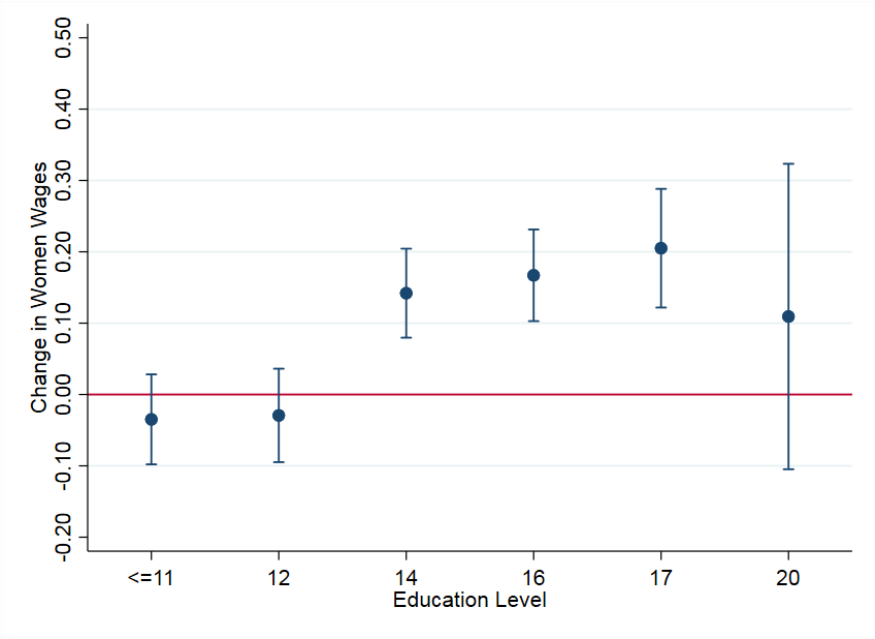
NOTES: This figure plots average weekly hours worked by each gender by industries during 1980-2010 using the CPS data. Top panel plots the average weekly hours worked for full time working-age male employees in industries excluding Finance, Insurance, and Real Estate (FIRE) industries. Bottom panel plots the average weekly hours worked for female employees. The high pay gap industries refer to industries that belong to the top 25% of pay gap distribution and the low pay gap industries refer to those in the bottom 25% industries. The pay gap is computed by taking the difference between the mean log wage of male and female employees by industry during 1976-1980.

Figure 6: Main Changes in Cross-Industry Labor Dynamics

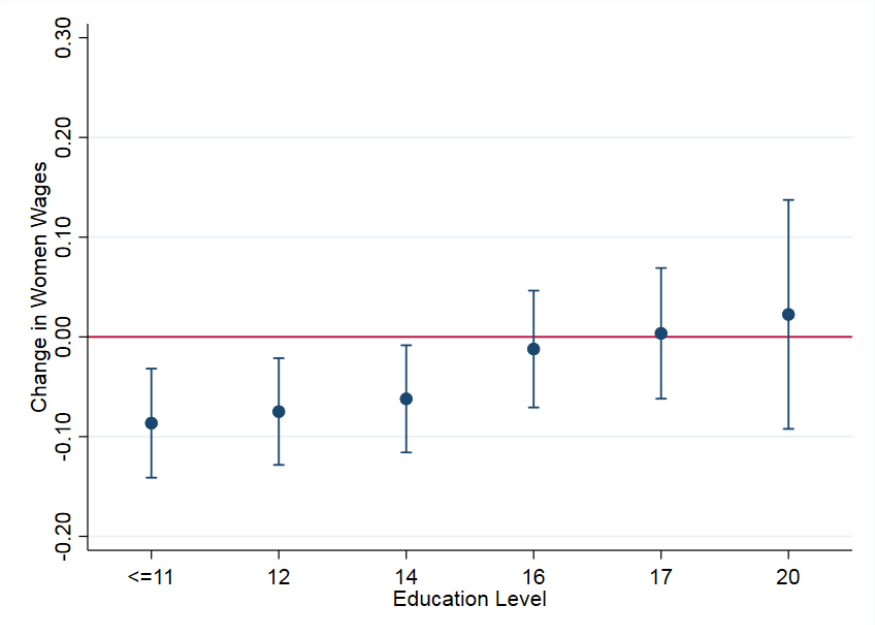
Notes: This figure shows event studies of some of the results in Tables (4),(5), and (6). Panel A plots the raw likelihood of working in high and low pay gap industries by gender between 10 years prior and 10 years after intrastate deregulation. The likelihood is computed by assigning -1 to workers in low pay gap industry, 1 to workers in high pay gap industry, and 0 otherwise, and taking the average of the indicators by gender in each period using CPS data. Panel B plots the same hiring pattern between male and female worker across high and low pay gap industries but in regression form. The dependent variable is based on the hiring differences between men and women, and refers to the differences in fraction of workers of each gender employed in high pay positions vs. low paying positions, computed as $(\%\, of\, male\, with\, top\, 25\%\, wage - \%\, of\, male\, with\, bottom\, 25\%\, wage) - (\%\, of\, female\, with\, top\, 25\%\, wage - \%\, of\, female\, with\, bottom\, 25\%\, wage)$ in a given industry. The dependent variable is the difference in the hiring gap between high and low pay gap industries, which then is regressed in an event study on years since deregulation dummies with state fixed effects and year fixed effects. Panel C uses an event study version of Equation (1) with (log) wage as the dependent variable and presents coefficients for the interaction of female × Low Pay Gap Industry × dummies for years since deregulation, and uses state fixed effects, year fixed effects, and Mincerian controls. Panel D uses an event study version on years since deregulation with (log) revenues per worker as the dependent variable and presents coefficients for the interaction of High Pay Gap Industry × dummies for years since deregulation, and uses state fixed effects, year fixed effects, firm fixed effects, and firm controls. Standard errors clustered at state level.

Figure 7: Effects of Branch Deregulation by Education in Low and High Pay Gap Industries

Panel A: 1976-1980 Low Pay Gap Industries



Panel B: 1976-1980 High Pay Gap Industries



NOTES: This figure plots coefficients on Female×Deregulation×Education level variables from a regression in which the dependent variable is residual wages obtained from regressing hourly log wage on *education, experience and experience*^{2}. Deregulation equals one if bank deregulation is adopted in the state an individual lives. This specification includes state, year, and age fixed effects. Standard errors are clustered at state level. The sample includes working-age full time employees in industries excluding FIRE industries during 1980-2014 from the CPS. The high pay gap industries refer to industries that belong to the top 25% of pay gap distribution and the low pay gap industries refer to those in the bottom 25% industries. A pay gap is computed by taking the difference between the mean log wage of male and female employees by industry during 1976-1980.

Table 1: Summary Statistics

Panel A: Summary Statistics for Individuals (CPS)

	All		Low		High	
	Men	Women	Men	Women	Men	Women
Wage (hourly)	$13.65	$10.65	$11.61	$10.62	$16.54	$11.11
	($1.97)	($1.97)	($1.98)	($1.96)	($2.54)	($2.04)
Education (years)	13.1	13.3	12.6	13.4	14.0	13.4
	(2.9)	(2.6)	(3.2)	(2.5)	(2.7)	(2.6)
– HS Grad &Equiv(%)	21.7	22.4	22.6	22.6	15.1	20.0
	(41.3)	(41.7)	(41.8)	(41.8)	(35.8)	(40.0)
– College(%)	16.6	18.2	13.7	18.0	24.8	19.4
	(37.2)	(38.6)	(34.4)	(38.5)	(43.2)	(39.5)
– Post-College(%)	4.5	5.0	4.2	4.6	7.0	4.4
	(20.7)	(21.8)	(20.1)	(21.0)	(25.5)	(20.5)
Age	40.7	40.2	40.1	40.2	40.9	39.7
	(10.3)	(10.2)	(10.4)	(10.3)	(10.2)	(10.1)
Experience	27.6	26.9	27.4	26.8	26.9	26.3
	(10.8)	(10.8)	(11.0)	(10.8)	(10.6)	(10.8)
Participation(%)	65.1	34.9	58.1	41.9	61.7	38.3

Panel B: Summary Statistics for Public Firms

	All	Low	High
Revenue per Employee($)	242.4	418.3	224.8
	(1,055.8)	(1,666.7)	(852.4)
Net Income per Employee($)	-31.7	-14.0	-45.7
	(873.8)	(652.7)	(925.5)
Net Income + Operating	195.7	278.3	194.3
Expense per Employee($)	(910.0)	(1,344.4)	(737.2)
Employees	6.0	5.5	4.5
	(20.2)	(15.0)	(17.9)
Total Assets($)	1,325.8	1,367.3	1,326.4
	(10,427.3)	(6,376.7)	(12,935.6)
Tobin's Q	1.02	0.92	1.09
	(0.45)	(0.37)	(0.49)
Book Leverage	0.51	0.55	0.47
	(0.68)	(1.43)	(0.30)
Tangibility	0.29	0.55	0.20
	(0.24)	(0.26)	(0.17)
Firms	10,089	1,612	5,981

NOTES: This table reports summary statistics for the main analysis sample using Current Population Survey (CPS) and Compustat data from 1976–2014. The CPS main sample restricts to working-age full-time full-year workers in the private sector excluding FIRE industries. Hourly wages are derived from annual wage income, usual weekly hours worked, and number of weeks worked. Compustat ratios are defined as follows: Tobin's is the ratio of total assets + shares outstanding × share price − common equity to total assets; Book Leverage is the ratio of short-term debt + long-term debt to short-term debt + long-term debt + stockholders equity; Tangibility is the ratio of Property, Plant, and Equipment to total assets. For additional details, see Section IV.2.

Table 2: Reliance on External Financing by Industries

	All		Low		High	
	Mean	sd	Mean	sd	Mean	sd
	Panel A: All					
Debt-to-Asset – Secured	0.085	0.144	0.125	0.174	0.061	0.119
Debt-to-Asset – Notes	0.066	0.120	0.106	0.152	0.045	0.096
Debt-to-Asset – Long-term	0.163	0.192	0.236	0.211	0.123	0.171
Leverage	0.496	0.270	0.533	0.266	0.459	0.270
	Panel B: Pre-Deregulation					
Debt-to-Asset – Secured	0.106	0.152	0.128	0.174	0.085	0.127
Debt-to-Asset – Notes	0.085	0.127	0.105	0.148	0.065	0.105
Debt-to-Asset – Long-term	0.179	0.179	0.206	0.201	0.147	0.155
Leverage	0.507	0.252	0.510	0.282	0.482	0.238
	Panel C: Post-Deregulation					
Debt-to-Asset – Secured	0.082	0.143	0.124	0.174	0.059	0.118
Debt-to-Asset – Notes	0.064	0.119	0.106	0.153	0.043	0.095
Debt-to-Asset – Long-term	0.161	0.193	0.242	0.213	0.122	0.172
Leverage	0.495	0.272	0.538	0.263	0.457	0.273

NOTES: This table reports summary statistics of Debt-to-Asset ratios and leverage by industries using Compustat data. In Panel A, it reports the computed average and standard deviation for the entire period from 1976 to 2014; in Panel B, for periods before deregulation; and in Panel C, for periods after deregulation. For details, see Section IV.2.

Table 3: Industry Descriptions

Panel A: Highest and Lowest Pay Gap Industries

Top 10 Industries	Bottom 10 Industries
Offices and Clinics of Dentists	Agricultural Production, Crops
Offices and Clinics of Physicians	Gasoline Service Stations
Legal Services	Grain Mill Products
Drug Stores	Religious Organizations
Computer and Data Processing Services	Nursing and Personal Care Facilities
Advertising	Social Services
Miscellaneous Fabricated Textile Products	Household Appliance Stores
Management and Public Relations Services	Beverage Industries
Miscellaneous Professional and Related Services	Oil and Gas Extraction
Accounting, Auditing, and Bookkeeping Services	Residential Care Facilities, without nursing

Panel B: Fastest and Slowest Growing Industries

Top 10 Industries	Pay Gap Level	Bottom 10 Industries	Pay Gap Level
Computer and data processing services	High	Private households	Med
Agricultural chemicals	Low	Agricultural production, crops	Low
Research, development, and testing services	Med	Apparel and accessories, except knit	High
Management and public relations services	High	Variety stores	High
Drugs	High	Footwear	Low
Electric light and power	High	Retail florists	Med
Engineering, architectural, and surveying services	High	Knitting mills	Med
Computers and related equipment	High	Beauty shops	Low
Petroleum refining	High	Eating and drinking places	Low
Electric and gas, and other combinations	Med	Laundry, cleaning, and garment services	High

NOTES: Panel A lists out top 10 and bottom 10 industries in a pay gap distribution. Panel B lists out top 10 and bottom 10 industries in a pay gap distribution. A pay gap is computed by taking the difference between the mean log wage of male and female employees by industry during 5 years before and after Bank Deregulation using CPS. The sample includes only the industries hired at least 100 female and 100 male employees during the time period. This takes total 105 industries out of 189 industries in CPS 1990 industry classification codes. For details, see Section IV.2.

Table 4: Flow of Firms and Employment Growth

	Δ number of firms			Δ number of Employees		
	lag=1	lag=2	lag=5	lag=1	lag=2	lag=5
	(1)	(2)	(3)	(4)	(5)	(6)
Intrastate	.02***	.05***	.03*	.07***	.08**	.02
	(.01)	(.02)	(.02)	(.02)	(.04)	(.03)
Intrastate – Low PG Industry	.00	.01	.00	-.02	-.00	-.05
	(.00)	(.01)	(.02)	(.01)	(.02)	(.06)
Intrastate – High PG Industry	-.03***	-.08**	-.03	-.07***	-.16***	-.13***
	(.01)	(.03)	(.03)	(.02)	(.05)	(.04)
Low PG Industry	-.01	-.02**	-.01	.01	-.00	.03
	(.00)	(.01)	(.01)	(.01)	(.02)	(.06)
High PG Industry	.07***	.17***	.18***	.14***	.28***	.33***
	(.01)	(.03)	(.03)	(.02)	(.05)	(.04)
N	1,683	1,530	1,071	1,683	1,530	1,071
Interstate	.03***	.06***	.12***	.04	.14***	.28***
	(.01)	(.01)	(.04)	(.03)	(.04)	(.10)
Interstate – Low WG Industry	.01**	.03**	.02	-.02	-.04	-.10
	(.01)	(.01)	(.04)	(.02)	(.03)	(.09)
Interstate – High WG Industry	-.04**	-.09**	-.07	-.07*	-.15*	-.09
	(.01)	(.04)	(.07)	(.04)	(.08)	(.19)
Low WG Industry	-.01**	-.03**	-.02	.02	.03	.08
	(.00)	(.01)	(.04)	(.02)	(.03)	(.08)
High WG Industry	.08***	.18***	.22***	.14***	.28***	.29
	(.01)	(.04)	(.07)	(.04)	(.08)	(.18)
N	1,683	1,530	1,071	1,683	1,530	1,071
State	Yes	Yes	Yes	Yes	Yes	Yes
Year	Yes	Yes	Yes	Yes	Yes	Yes

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

NOTES: This table reports estimates of the impact of bank deregulation on flow of firms and changes in employment at state level. In columns (1) - (3), the dependent variable is the difference in log(number of firms) in a given state for 1, 2, and 5 years lag. In columns (4) - (6), the dependent variable is the difference in log(number of employees) in a given state for 1, 2, and 5 years lag. All specifications includes state fixed effects and year fixed effects. Deregulation equals one if intrastate branching is deregulated and zero otherwise. Low PG Industry equals one if an industry belongs to the bottom 25 % in a pay gap distribution and High PG Industry equals one if an industry belongs to the top 25 % in a pay gap distribution. For details, see Section IV.5. Errors clustered at the state level and reported in parentheses. *,**, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

Table 5: Effects of Deregulation Revenue Per Employee

	Research & Development			Revenue Per Employee			Net Income+Operating Expense Per Employee			Net Income Per Employee		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Intrastate – High PG Industry	.31***	.32***	.32***	.09***	.09**	.13***	.09***	.09***	.13***	.07	.05	.09**
	(.06)	(.05)	(.03)	(.03)	(.04)	(.03)	(.03)	(.03)	(.03)	(.04)	(.05)	(.04)
Intrastate – Low PG Industry	-.09	.01	.09	-.12***	-.12***	.00	-.13***	-.13***	.00	-.11	-.08	.04
	(.08)	(.09)	(.07)	(.03)	(.03)	(.03)	(.03)	(.03)	(.02)	(.07)	(.06)	(.05)
Intrastate	-.29***	.00	.00	-.05*			-.03			-.01		
	(.06)	(.)	(.)	(.02)			(.02)			(.04)		
Total Assets			.49***			.48***			.46***			.30***
			(.03)			(.02)			(.02)			(.02)
Tobin's Q			.09***			.03**			.02			.78***
			(.02)			(.01)			(.01)			(.05)
Book Leverage			-.03**			.17***			.21***			-.08**
			(.01)			(.03)			(.03)			(.04)
Tangibility			.29**			.08			-.26***			-.97***
			(.12)			(.05)			(.06)			(.07)
N	41535	41387	36541	70748	70690	62515	69576	69517	61586	52453	52369	46562
Interstate – High WG Industry	.35***	.33***	.29***	.13***	.12***	.12***	.12***	.11***	.11***	.05**	.04	.07*
	(.05)	(.04)	(.03)	(.02)	(.03)	(.03)	(.02)	(.03)	(.03)	(.02)	(.03)	(.03)
Interstate – Low WG Industry	-.12*	-.07	.01	-.13***	-.11***	-.01	-.16***	-.14**	-.03	-.15**	-.11	.02
	(.07)	(.08)	(.06)	(.04)	(.04)	(.04)	(.05)	(.05)	(.04)	(.06)	(.07)	(.06)
Interstate	-.22***	.00	.00	-.04*			-.01			.03		
	(.04)	(.)	(.)	(.02)			(.03)			(.03)		
Total Assets			.49***			.48***			.46***			.30***
			(.03)			(.02)			(.02)			(.02)
Tobin's Q			.09***			.03**			.02			.78***
			(.02)			(.01)			(.01)			(.05)
Book Leverage			-.03***			.17***			.21***			-.08**
			(.01)			(.03)			(.03)			(.04)
Tangibility			.30**			.08			-.26***			-.97***
			(.12)			(.05)			(.06)			(.07)
N	41535	41387	36541	70748	70690	62515	69576	69517	61586	52453	52369	46562
Firm FX	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FX	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
State FX	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
State × Year FX	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

NOTES: This table reports estimates of the impact of bank deregulation on R&D decision, revenues per employee, and net income per employee by industry at state level. The dependent variable is log(R&D expenditure) in columns (1)–(3), log(revenue / number of employees) in columns (4)–(6), log([net income + operating expense] / number of employees) in columns (7)–(9), and log(net income / number of employees) in columns (7)–(9). All specifications control for firms, state, and year fixed effects. Columns (2), (5), (8), and (11) additionally control for state×year fixed effects. Deregulation equals one if intrastate branching is deregulated and zero otherwise. Low PG Industry equals one if an industry belongs to the bottom 25 % in a pay gap distribution and High PG Industry equals one if an industry belongs to the top 25 % in a pay gap distribution. For details, see Section IV.5. Errors clustered at the state level and reported in parentheses. *,**, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

Table 6: Effects of Bank Deregulation on Gender Pay Gap

	Intrastate Deregulation				Interstate Deregulation			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Deregulation × Female	-.02	-.02	-.02	-.02	-.02**	-.02**	-.02*	-.02**
	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)
Deregulation × Female – Low PG Industry	.05***	.05***	.05***	.05***	.05***	.05***	.04***	.04***
	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)
Deregulation × Female – High PG Industry	.01	.01	.01	.01	.01	.01	.01	.01
	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)
Deregulation	-.04***	-.04***	-.04***	-.04***	-.05***	-.05***	-.05***	-.05***
	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)
Deregulation – Low PG Industry	-.00	-.00	.00	.00	.01*	.01*	.01**	.01*
	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)
Deregulation – High PG Industry	.08***	.08***	.08***	.08***	.10***	.10***	.10***	.10***
	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)
Female – Low PG Industry	.12***	.12***	.12***	.13***	.13***	.13***	.12***	.13***
	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)
Female – High PG Industry	-.02*	-.02*	-.03**	-.02**	-.03***	-.03***	-.03***	-.03***
	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)
Low PG Industry	-.18***	-.18***	-.18***	-.18***	-.19***	-.19***	-.19***	-.19***
	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)
High PG Industry	.03***	.03***	.03***	.02***	.02**	.02**	.02***	.02**
	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)
Black				-.14***				-.14***
				(.01)				(.01)
Married			.16***				.16***	
			(.00)				(.00)	
N	815627	815627	815627	815627	815627	815627	815627	815627
State × Gender	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year × Gender	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Age × Gender	No	Yes	Yes	Yes	No	Yes	Yes	Yes

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

NOTES: This table reports differences-in-differences estimates of the impact of bank deregulation on gender pay gap regressing log(hourly wage) on a set of indicators and controls specified in Equation (1). Columns (1)–(4) reports the impact of intrastate deregulation as a treatment, and columns(5)–(8) reports the impact of interstate deregulation as a treatment. All specifications control for Mincerian traits×gender, and state×gender and year×gender fixed effects. Columns (2)–(4) and (6)–(8) additionally control for age×gender fixed effects. For details, see Section IV.5. Errors clustered at the state level and reported in parentheses. *,**, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

Table 7: Effects of Bank Mergers on Gender Pay Gap

	(1)	(2)	(3)	(4)
Merger × Female	.02	.02	.02	.02
	(.01)	(.01)	(.01)	(.01)
Merger × Female – Low PG Industry	-.06***	-.06***	-.06***	-.05***
	(.01)	(.01)	(.01)	(.01)
Merger × Female – High PG Industry	.01	.01	.01	.01
	(.01)	(.01)	(.01)	(.01)
Merger	-.01	-.01	-.01	-.01
	(.01)	(.01)	(.01)	(.01)
Merger – Low PG Industry	.02***	.02***	.02***	.02**
	(.01)	(.01)	(.01)	(.01)
Merger – High PG Industry	.01	.01	.01	.01
	(.01)	(.01)	(.01)	(.01)
Female – Low PG Industry	.12***	.12***	.12***	.12***
	(.00)	(.00)	(.00)	(.00)
Female – High PG Industry	-.03***	-.03***	-.02***	-.03***
	(.01)	(.01)	(.01)	(.01)
Low PG Industry	-.02***	-.02***	-.02***	-.02***
	(.00)	(.00)	(.00)	(.00)
High PG Industry	.13***	.12***	.12***	.12***
	(.00)	(.00)	(.00)	(.00)
Black				-.18***
				(.01)
married			.17***	
			(.00)	
N	477550	477550	477550	477550
County × Gender	Yes	Yes	Yes	Yes
Year × Gender	Yes	Yes	Yes	Yes
Age × Gender	No	Yes	Yes	Yes

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

NOTES: This table reports differences-in-differences estimates of the impact of bank merger on gender pay gap regressing log(hourly wage) on a set of indicators and controls specified in Equation (2). All specifications control for Mincerian traits×gender, and county×gender and year×gender fixed effects. Columns (2)–(4) and (6)–(8) additionally control for age×gender fixed effects. For details, see Section VIII.1.2. Errors clustered at the county level and reported in parentheses. *,**, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

Table 8: Effects of Deregulation on Transitions

	Intrastate				Interstate			
	Industry Transition		Δ Wage		Industry Transition		Δ Wage	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Deregulation × Female – Low WG Industry	-.06***	-.06***	.00	.00	-.05***	-.05***	-.02	-.03
	(.01)	(.01)	(.04)	(.04)	(.01)	(.01)	(.05)	(.05)
Deregulation × Female – High WG Industry	.04***	.04***	-.04	-.04	.04***	.04***	-.07	-.08
	(.00)	(.00)	(.03)	(.04)	(.00)	(.00)	(.05)	(.05)
Deregulation – Low WG Industry	.07***	.07***	-.02	-.02	.06***	.06***	-.02	-.02
	(.01)	(.01)	(.02)	(.02)	(.01)	(.01)	(.02)	(.02)
Deregulation – High WG Industry	-.05***	-.05***	.04*	.03*	-.04***	-.04***	.03	.03
	(.01)	(.01)	(.02)	(.02)	(.00)	(.00)	(.02)	(.02)
Female – High WG Industry	-.09***	-.09***	-.05**	-.05**	-.08***	-.08***	-.05***	-.05***
	(.01)	(.01)	(.02)	(.02)	(.01)	(.01)	(.02)	(.02)
High WG Industry	.14***	.14***	.06***	.05***	.12***	.12***	.06***	.05***
	(.01)	(.01)	(.02)	(.02)	(.01)	(.01)	(.02)	(.02)
N	509956	509956	20511	20511	509956	509956	20511	20511
County × Gender	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year × Gender	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Controls	No	Yes	No	Yes	No	Yes	No	Yes

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

NOTES: This table reports differences-in-differences estimates of the impact of bank deregulation on workers mobility using the same set of controls and indicators in Equation (1). The dependent variable is an indicator equals one for those who make transition form low to high pay gap industries and vice versa in columns (1)–(2) and (5)–(6). Columns (3)–(4) and (7)–(8) reports change in log(wage) for those who made transition across high and low pay gap industries. Deregulation equals one if intrastate branching is deregulated in a given state in a given year. All specifications control for Mincerian traits×gender, and state×gender and year×gender fixed effects. Even-numbered columns add marriage and race controls. For details, see Section VI.2. Errors clustered at the state level and reported in parentheses. *,**, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

Table 9: Effects of Deregulation on Gender Pay Gap By Risk of Transition

	Intrastate				Interstate			
	Low Risk		High Risk		Low Risk		High Risk	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Deregulation × Female	-.01	-.01	-.02	-.02	-.01	-.01	-.03	-.02
	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.02)	(.02)
Deregulation × Female – Low PG Industry	.02	.01	.05***	.04***	.01	.01	.03**	.03*
	(.01)	(.01)	(.02)	(.01)	(.01)	(.01)	(.01)	(.01)
Deregulation × Female – High PG Industry	.01	.01	.02	.01	.02*	.02*	-.00	.00
	(.02)	(.02)	(.01)	(.01)	(.01)	(.01)	(.02)	(.02)
Deregulation	-.03**	-.03**	-.04***	-.04***	-.06***	-.06***	-.05***	-.05***
	(.01)	(.01)	(.01)	(.01)				
Deregulation – Low PG Industry	.01	.01	.01	.02	.02*	.02*	.04***	.04***
	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)
Deregulation – High PG Industry	.05***	.05***	.09***	.09***	.08***	.08***	.13***	.13***
	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)
Female – Low PG Industry	.05***	.05***	.16***	.15***	.05***	.05***	.15***	.14***
	(.01)	(.01)	(.02)	(.01)	(.01)	(.01)	(.01)	(.01)
Female – High PG Industry	-.02*	-.03**	-.08***	-.08***	-.02**	-.02**	-.09***	-.10***
	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)
Low PG Industry	-.11***	-.11***	-.25***	-.24***	-.12***	-.12***	-.26***	-.25***
	(.01)	(.01)	(.02)	(.01)	(.01)	(.01)	(.01)	(.01)
High PG Industry	.01	.01	.06***	.06***	.01	.01	.05***	.05***
	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)
Black		-.10***		-.12***		-.11***		-.12***
		(.01)		(.01)		(.01)		(.01)
Married		.14***		.16***		.15***		.15***
		(.00)		(.01)		(.00)		(.00)
N	405392	405392	391373	391373	402088	402088	400529	400529
State × Gender	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year × Gender	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Age × Gender	No	Yes	Yes	Yes	No	Yes	Yes	Yes

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

NOTES: This table reports differences-in-differences estimates of Equation (1) separately for workers whose occupations are at low or high risk of transitioning out of their industries. Columns (1)–(3) reports the estimates for workers whose occupations belong to low transition risk group. Columns (4)–(6) reports the estimates for workers whose occupations belong to high transition risk group. All specifications control for Mincerian traits×gender, and state×gender and year×gender fixed effects. Columns (2) and (4) additionally control for age×gender fixed effects. For details, see Section VI.2. Errors clustered at the state level and reported in parentheses. *,**, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

Table 10: Effects of Deregulation on Gender Norms

	All	With Children	Men				Women			
	Workplace Sexism	Workplace Sexism	Workplace Sexism	Women Should Not Work	Husband Career First	Women Stay Home	Workplace Sexism	Women Should Not Work	Husband Career First	Women Stay Home
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Panel A: Intrastate Deregulation										
Intrastate × Industrial Spread	2.71***	3.27***	4.36***	4.75**	4.78**	4.45*	1.52	3.25***	-.16	-2.72
	(.91)	(.90)	(1.63)	(2.18)	(1.83)	(2.37)	(1.13)	(1.22)	(2.05)	(2.04)
Intrastate Penetration	-.12***	-.08**	-.12**	-.09	-.10	-.12*	-.12***	-.13***	-.11*	-.20***
	(.03)	(.03)	(.05)	(.06)	(.07)	(.06)	(.04)	(.05)	(.07)	(.06)
N	33786	24484	14745	8574	6604	12495	19041	11339	8707	16035
Panel B: Interstate Deregulation										
Interstate × Industrial Spreading	2.73**	2.92***	3.72**	3.19*	5.58***	6.10**	2.02**	2.28*	1.22	1.04
	(1.09)	(.99)	(1.61)	(1.80)	(1.81)	(2.63)	(.98)	(1.19)	(2.68)	(2.71)
Interstate Penetration	-.06	-.01	-.05	-.17**	-.07	-.10	-.07	-.16**	-.13	-.05
	(.04)	(.05)	(.05)	(.08)	(.09)	(.07)	(.05)	(.07)	(.08)	(.10)
N	33786	24484	14745	8574	6604	12495	19041	11339	8707	16035
Year FX	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Region FX	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

NOTES: This table reports estimates of the impact of bank deregulation on gender norms at regional level using GSS survey data. For detailed description of how each dependent variable, industrial spread, and deregulation penetration are constructed, see Section IX.1. All specifications control for year fixed effects and region fixed effects. Bootstrapped errors reported in parentheses. *,**, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

Table 11: Oaxaca Blinder Decomposition Pre and Post Deregulation

	Year Pre-Deregulation		Five Years Post-Deregulation		Difference	
	Log Points	Percentage	Log Points	Percentage	Log Points	Percentage
	(1)	(2)	(3)	(4)	(5)	(6)
Total Pay Gap	0.423	100.0%	0.312	100%	-0.111	100%
High Pay Gap Industry	0.034	8.0	0.022	7.0	-0.012	0.107
Low Pay Gap Industry	-0.013	-3.1	-0.039	-12.5	-0.026	0.237

NOTES: This table reports Oaxaca-Blinder estimates of industry participation on the pay gap for full time full year workers in industries excluding Finance, Insurance, and Real Estate (FIRE) industries, classified in High and Low pay gap industries as defined in section IV.5. Columns (1)–(2) show estimates calculated the year immediately preceding deregulation in the state. Columns (3)–(4) show estimates calculated five years following deregulation. Columns (5)–(6) show the difference. Wages in the wage regressions are the residual of a regression of log wages on Mincerian traits (education, experience, and experience squared) by year, and year and state fixed effects.

Appendix

A. Complementary View on Divergent Responses to Credit Expansions From the Creative Destruction Literature

Credit as a catalyzing force for competition has been readily studied through the lens of creative destruction (King & Levine 1993). Creative destruction produces monopoly rents that persist until new waves of technology arrive (Aghion & Howitt 1992). Implementation of new technologies can potentially foster entry of new firms (e.g., Black and Strahan 2002; Guiso et al. 2004; Cetorelli and Strahan 2006; Zarutskie 2006; Bertrand et al. 2007; Kerr and Nanda 2009) which may catalyze the general entrepreneurial process. This process promotes innovation *ex post* by allowing for many business attempts with some of them rendering success (Kerr and Nanda 2009).

Alternatively, incumbents can erect barriers to entry by *ex-ante* commiting to make investments that lower the profitability for new entrants (Spence 1977, 1979; Dixit 1980). These investments need not be desirable for the incumbent firm before the threat of new entrants (Spence 1979), but might become optimal after such threat. This divergent response should lead to a negative relationship between firm entry and monopolisitic rents.[23] Theoretical work predicts these divergent responses (Aghion et al. 2005a), which also finds empirical support in the context of eroding barriers to entry through industrial delicensing (Aghion et al. 2005b) and in the relationship between access to credit and productivity growth (Aghion et al. 2018). In our context, barriers to entry are differentially eroded through differences in the pledgeability of assets (i.e. industries with more tangible assets have higher debt capacity due to the higher pledgeability of tangible assets), a point we elaborated on in subsection III.1.

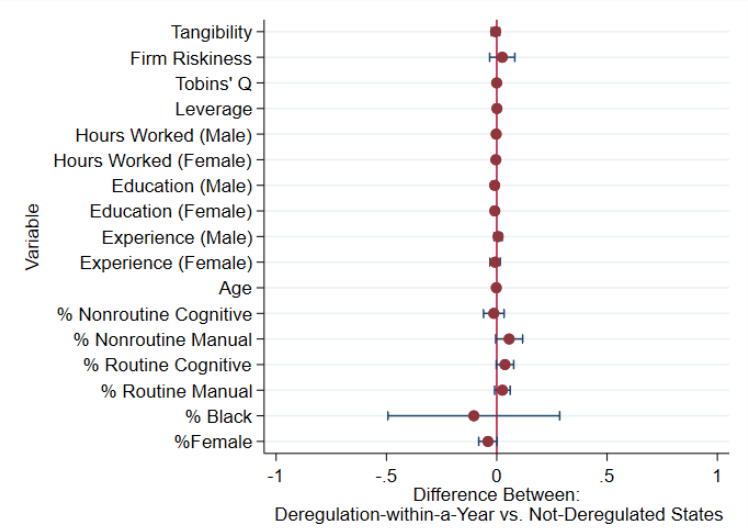
This source of heterogeneity in the emergence of technological process can cause significant changes in the labor force industrial composition as it will increase demand for skilled workers in industries with higher monopoly rents – causing those rents to not be fully absorbed by firms (Aghion & Howitt 1992) – while inducing substitution away from those workers in low monopoly rent industries. This should increase absolute wages in the high surplus industries, increase relative wages for the substitute class of workers in low surplus industries, and have an undeterminate effect on the absolute wages in low surplus industries depending on the size of displaced workers in all industries.

23. The channels through which financial liberalization foster creative-destruction include fostering improvements in the allocation of investment and management of risk (Bencivenga and Smith 1991; Greenwood and Jovanovic 1990; King and Levine 1993), entry and exit of firms (e.g., Black and Strahan 2002; Guiso et al. 2004; Cetorelli and Strahan 2006; Zarutskie 2006; Bertrand et al. 2007; Kerr and Nanda 2009), and innovation (Amore et al. 2013; Chava et al. 2013).

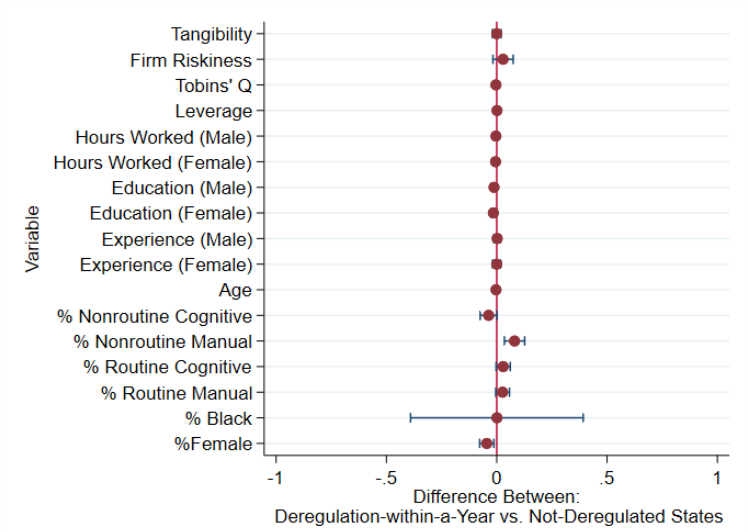
B. Balance

Figure B.1 Balance in Covariates between Nonderegulated and Deregulated (within a year) States

Panel A: Intrastate Deregulation



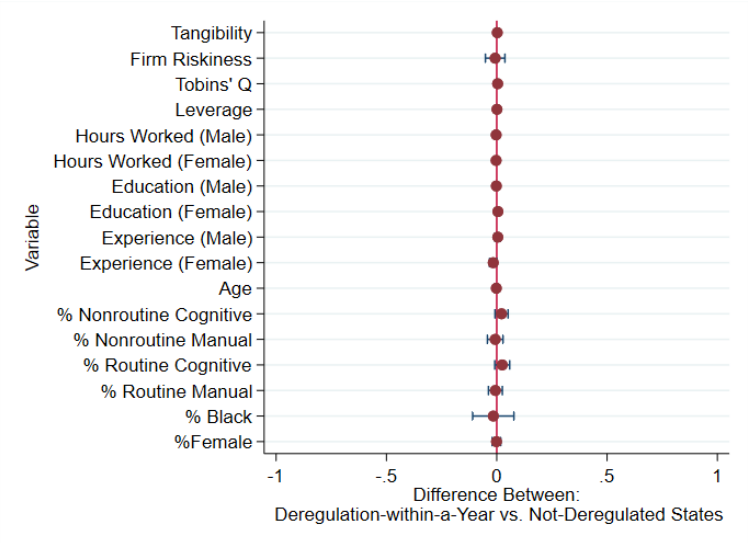
Panel B: Interstate Deregulation



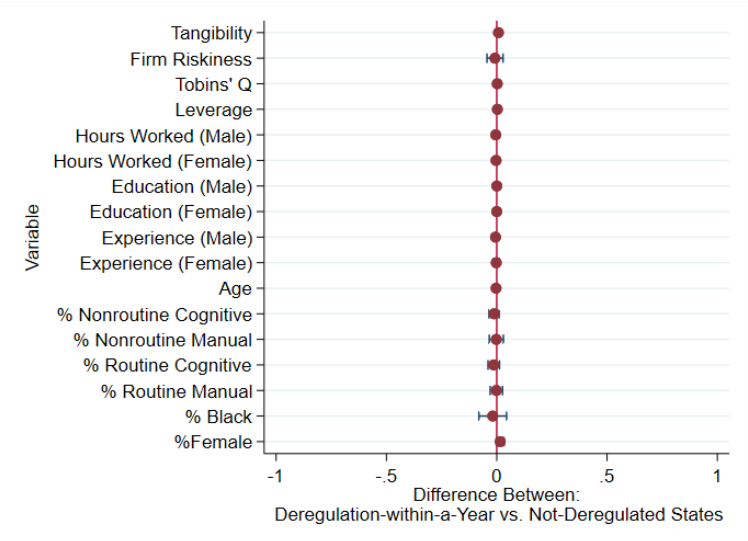
NOTES: This figure shows balance in covariates between states that have deregulated (just before deregulation is passed) and states that have not deregulated. Normalized differences are computed by subtracting the average of each characteristic by deregulation status and then normalizing by the combined average. Tangibility, firm riskiness (volatility of firm earnings), tobins' q, and leverage are obtained from Compustat at the industry level and are averaged by worker – thus should be interpreted as workers' exposure to those industry characteristics. Data on usual hours worked, education, age, experience (proxied), % black, and % female come from CPS. Occupation classifications by routine/nonroutine and cognitive/manual come from O*NET. Data for years 1976–2014.

Figure B.2 Balance in Covariates' Trends between Nonderegulated and Deregulated (within a year) States

Panel A: Intrastate Deregulation



Panel B: Interstate Deregulation



NOTES: This figure shows balance in covariates between states that have deregulated (just before deregulation is passed) and states that have not deregulated. Normalized differences are computed by subtracting the average of each characteristic by deregulation status and then normalizing by the combined average. Tangibility, firm riskiness (volatility of firm earnings), tobins' q, and leverage are obtained from Compustat at the industry level and are averaged by worker – thus should be interpreted as workers' exposure to those industry characteristics. Data on usual hours worked, education, age, experience (proxied), % black, and % female come from CPS. Occupation classifications by routine/nonroutine and cognitive/manual come from O*NET. Data for years 1976–2014.

C. Categorization Robustness

Table C.1: Comparison of Industry Categorization Excluding Intrastate Bank Deregulation Always Treated States

# Industries in Subsample Original Categorization (1)	# Industries Unchanged After Recategorization Excluding Always Treated (3)	Match Rate(%) (3)
Panel A: All Industries		
189	187	99%
Panel B: Low Pay Gap Industries		
46	45	98%
Panel C: High Pay Gap Industries		
51	51	100%

NOTES: The table reports the number industries that belong to low and high pay gap industries within the subsample excluding states having deregulated prior to 1980. Column (1) shows the number of industries using the full sample to categorize industries into low, medium, and high pay gap industries. Column (2) shows the number of industries whose categories remained unchanged after recategorizing industries into low, medium, and high pay gap industries using the subsample. The sub-sample excludes all 17 states which deregulated intrastate branch laws prior to 1980. Column (3) reports the match rate between the main and sub-sample for each categorization. Two industries changed categories after recategorization: *Electric light and power* (CPS ind1990 = 450) moved from medium pay gap to high pay gap, while *Lumber and building material retailing* (CPS ind1990 = 580) moved from low pay gap to medium pay gap.

Table C.2: Effects of Interstate Bank Deregulation on Gender Pay Gap - Excluding Maine

	(1)	(2)	(3)	(4)
Deregulation × Female	-.02**	-.02**	-.02**	-.02**
	(.01)	(.01)	(.01)	(.01)
Deregulation × Female – Low PG Industry	.05***	.05***	.04***	.04***
	(.01)	(.01)	(.01)	(.01)
Deregulation × Female – High PG Industry	.01	.01	.01	.01
	(.01)	(.01)	(.01)	(.01)
Deregulation	-.05***	-.05***	-.05***	-.05***
	(.01)	(.01)	(.01)	(.01)
Deregulation – Low PG Industry	.01*	.01*	.02**	.01*
	(.01)	(.01)	(.01)	(.01)
Deregulation – High PG Industry	.10***	.10***	.10***	.10***
	(.01)	(.01)	(.01)	(.01)
Female – Low PG Industry	.13***	.13***	.13***	.13***
	(.01)	(.01)	(.01)	(.01)
Female – High PG Industry	-.03***	-.03***	-.03***	-.03***
	(.01)	(.01)	(.01)	(.01)
Low PG Industry	-.19***	-.19***	-.19***	-.19***
	(.01)	(.01)	(.01)	(.01)
High PG Industry	.02**	.02**	.02***	.02**
	(.01)	(.01)	(.01)	(.01)
Black				-.14***
				(.01)
Married			.16***	
			(.00)	
N	804878	804878	804878	804878
State × Gender	Yes	Yes	Yes	Yes
Year × Gender	Yes	Yes	Yes	Yes
Age × Gender	No	Yes	Yes	Yes

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

NOTES: This table reports differences-in-differences estimates of the impact of bank deregulation on gender pay gap regressing log(hourly wage) on a set of indicators and controls specified in Equation (1) excluding states that deregulated prior to 1980. Columns (1)–(4) reports the impact of intrastate deregulation as a treatment excluding 17 states compared to Table 6, and columns(5)–(8) reports the impact of interstate deregulation as a treatment excluding Maine compared to Table 6. All specifications control for Mincerian traits×gender, and state×gender and year×gender fixed effects. Columns (2)–(4) and (6)–(8) additionally control for age×gender fixed effects. For details, see Section IV.5. Errors clustered at the state level and reported in parentheses. *,**, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

D. Effects on Direct Lending to Worker

Table D.3: Effects of Intrastate Bank Deregulation on Gender Differences in Housing and Transportation

	Owns House	Moved House	Mortgage	Owns Car	Transportation Time
	(1)	(2)	(3)	(4)	(5)
Panel A: All Industries					
Deregulation × Female	-.0024	-.0006	-.0014	-.0015	.0069
	(.0068)	(.0051)	(.0024)	(.0032)	(.0063)
Deregulation	.0171*	-.0035	-.0102	.0153**	-.0032
	(.0092)	(.0065)	(.0082)	(.0067)	(.0147)
N	815650	688547	5345055	8806388	6144008
Panel B: Low Pay Gap Industries					
Deregulation × Female	-.0088	.0015	-.0036	-.0064	.0072
	(.0097)	(.0093)	(.0029)	(.0042)	(.0078)
Deregulation	.0181**	-.0052	-.0085	.0150**	-.0063
	(.0090)	(.0085)	(.0072)	(.0064)	(.0119)
N	207486	179480	1139255	1972398	1412705
Panel C: High Pay Gap Industries					
Deregulation × Female	.0051	.0041	-.0000	-.0003	-.0015
	(.0100)	(.0107)	(.0046)	(.0027)	(.0076)
Deregulation	.0063	-.0052	-.0060	.0152**	.0099
	(.0107)	(.0084)	(.0092)	(.0063)	(.0148)
N	205400	172006	1279888	2058252	1421266
County × Gender	Yes	Yes	Yes	Yes	Yes
Year × Gender	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes
Data	CPS	CPS	Census	Census	Census

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

NOTES: This table reports differences-in-differences estimates of the impact of intrastate bank deregulation on gender differences in housing and transportation measures using Current Population Survey (CPS) from 1976–2014 and Census data from 1980-2000. Both samples restrict to working-age full-time full-year workers in the private sector excluding FIRE industries. The dependent variable for column (1) is ownership of dwelling; for column (2) is moving to a different house; for column (3) is holding a mortgage; for column (4) is car ownership; and for column (5) is transportation time. All specifications control for Mincerian traits×gender, and state×gender and year×gender fixed effects. For additional details, see Section IV.5. Errors clustered at the state level and reported in parentheses. *,**, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

Table D.4: Effects of Interstate Bank Deregulation on Gender Differences in Housing and Transportation

	Owns House	Moved House	Mortgage	Owns Car	Transportation Time
	(1)	(2)	(3)	(4)	(5)
Panel A: All Industries					
Deregulation × Female	-.0014	-.0000	-.0118	-.0053	.0053
	(.0025)	(.0030)	(.0117)	(.0072)	(.0075)
Deregulation	-.0014	.0014	-.0135	.0114*	-.0022
	(.0067)	(.0055)	(.0139)	(.0062)	(.0048)
N	5345055	8806388	6144008	815650	688547
Panel B: Low Pay Gap Industries					
Deregulation × Female	-.0074	-.0034	-.0064	-.0187	-.0053
	(.0097)	(.0049)	(.0189)	(.0180)	(.0114)
Deregulation	-.0079	-.0011	-.0070	.0238**	-.0071
	(.0078)	(.0072)	(.0160)	(.0093)	(.0118)
N	1139255	1972398	1412705	207486	179480
Panel C: High Pay Gap Industries					
Deregulation × Female	-.0015	-.0029	-.0155	-.0169	.0093
	(.0041)	(.0034)	(.0112)	(.0128)	(.0146)
Deregulation	.0012	.0013	-.0206***	.0119	-.0084
	(.0083)	(.0035)	(.0040)	(.0073)	(.0063)
N	1279888	2058252	1421266	205400	172006
County × Gender	Yes	Yes	Yes	Yes	Yes
Year × Gender	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes
Data	CPS	CPS	Census	Census	Census

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

NOTES: This table reports differences-in-differences estimates of the impact of interstate bank deregulation on gender differences in housing and transportation measures following Equation (1) using Current Population Survey (CPS) from 1976–2014 and Census data from 1980-2000. Both samples restrict to working-age full-time full-year workers in the private sector excluding FIRE industries. The dependent variable for column (1) is ownership of dwelling; for column (2) is moving to a different house; for column (3) is holding a mortgage; for column (4) is car ownership; and for column (5) is transportation time. All specifications control for Mincerian traits×gender, and state×gender and year×gender fixed effects. For additional details, see Section IV.5. Errors clustered at the state level and reported in parentheses. *,**, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

Table D.5: Effects of Intrastate Bank Deregulation on Gender Differences in Self-Employment

	Self-Employed Incorporated			Self-Employed Unincorporated			Incorporated|Self-Employed		
	All	Low Pay Gap	High Pay Gap	All	Low Pay Gap	High Pay Gap	All	Low Pay Gap	High Pay Gap
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Panel A: Intrastate Deregulation									
Deregulation × Female	.0034	.0029	.0065	.0001	.0005	.0004	.0009	.0091	-.0096
	(.0029)	(.0035)	(.0039)	(.0006)	(.0011)	(.0012)	(.0288)	(.0443)	(.0391)
Deregulation	-.0012	-.0005	-.0027	-.0002	-.0003	-.0014	-.0041	-.0033	-.0052
	(.0043)	(.0042)	(.0055)	(.0009)	(.0009)	(.0018)	(.0183)	(.0223)	(.0186)
N	1214036	290286	270618	1214036	290286	270618	51643	11219	17367
Panel B: Interstate Deregulation									
Deregulation × Female	.0069***	.0104***	.0081**	.0004	.0027**	-.0004	.0019	-.0366	.0315
	(.0016)	(.0025)	(.0031)	(.0004)	(.0012)	(.0010)	(.0210)	(.0501)	(.0574)
Deregulation	-.0068***	-.0101***	-.0056	.0005	-.0011	.0012	-.0226*	-.0302	-.0146
	(.0024)	(.0028)	(.0044)	(.0005)	(.0012)	(.0011)	(.0125)	(.0407)	(.0161)
N	1214036	290286	270618	1214036	290286	270618	51643	11219	17367
County × Gender	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year × Gender	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

NOTES: This table reports differences-in-differences estimates of the impact of bank deregulation on the gender differences in self-employment following Equation (1) using Current Population Survey (CPS) from 1976–2014. We restrict to working-age full-time full-year workers and self-employed individuals in the private sector excluding FIRE industries. The dependent variable for columns (1)–(3) is an indicator variable for self-employed incorporated status; for columns (4)–(6) is an indicator variable for self-employed unincorporated status; and for columns (7)–(9) is an indicator variable for self-employed incorporated status conditional on self-employment. All specifications control for Mincerian traits×gender, and state×gender and year×gender fixed effects. For additional details, see Section IV.5. Errors clustered at the state level and reported in parentheses. *,**, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

E. Industry-Level Controls

Table E.6: Effects of Bank Deregulation on Gender Pay Gap
Additional Industry-Level Controls

	Intrastate Deregulation				Interstate Deregulation			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Deregulation × Female	-.01	-.01	-.02*	-.01	-.02*	-.01	-.02*	-.02*
	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)
Deregulation × Female – Low WG Industry	.05***	.05***	.06***	.05***	.04***	.04***	.05***	.04***
	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)
Deregulation × Female – High WG Industry	-.01	-.01	-.00	-.01	-.00	-.00	.00	.00
	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)
Deregulation	-.04***	-.04***	-.04***	-.04***	-.05***	-.05***	-.05***	-.05***
	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)
Deregulation – Low WG Industry	.02	.01	.01	.01	.04***	.03***	.03***	.03***
	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)
Deregulation – High WG Industry	.08***	.08***	.08***	.08***	.10***	.10***	.10***	.10***
	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)
Female – Low WG Industry	.09***	.03**	.10***	.03**	.10***	.04***	.11***	.03***
	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)
Female – High WG Industry	-.04***	-.05***	-.04***	-.06***	-.05***	-.06***	-.04***	-.07***
	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)
Low WG Industry	-.19***	-.17***	-.18***	-.18***	-.20***	-.18***	-.19***	-.20***
	(.01)	(.02)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)
High WG Industry	.01	.02*	.01	.00	.00	.01	.00	-.01
	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)
Female × Tobins' Q			-.05**	.08***			-.04**	.08***
			(.02)	(.02)			(.02)	(.02)
Female × Leverage		.24***		.23***		.24***		.23***
		(.03)		(.03)		(.03)		(.03)
Female × Earnings Volatility	.00***			.00***	.00***			.00***
	(.00)			(.00)	(.00)			(.00)
Tobins' Q			.10***	.11***			.10***	.11***
			(.02)	(.02)			(.02)	(.02)
Leverage		.17***		.23***		.17***		.23***
		(.02)		(.03)		(.02)		(.03)
Earnings Volatility	.00***			.00***	.00***			.00***
	(.00)			(.00)	(.00)			(.00)
N	711241	711241	711241	711241	711241	711241	711241	711241
County × Gender	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year × Gender	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Age × Gender	Yes	Yes	Yes	No	No	Yes	Yes	Yes

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

NOTES: This table reports differences-in-differences estimates of the impact of bank deregulation on gender pay gap regressing log(hourly wage) on a set of indicators and controls specified in Equation (1) but including industry level controls. Columns (1)–(4) reports the impact of intrastate deregulation as a treatment, and columns(5)–(8) reports the impact of interstate deregulation as a treatment. All specifications control for Mincerian traits×gender, and state×gender and year×gender fixed effects. For additional details, see Section IV.5. Errors clustered at the state level and reported in parentheses. *,**, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

F. Alternative Categorizations

In this appendix section, we repeat the main estimates of this paper (Table 6) using alternative ways of categorizing workers that are consistent with the stylized facts documented in Section III. In particular, we categorize industries by asset tangibility or occupations by worker skills. We show that our main results do not meaningfully change if we follow an alternative categorization procedure. Further analysis on this robustness exercise is contained in Subsection VII.2.

F.1 Analysis with Categorization by Asset Tangibility

Table F.7: Effects of Bank Deregulation on Gender Pay Gap by Asset Tangibility

	Intrastate Deregulation				Interstate Deregulation			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Deregulation × Female	-.00	-.00	-.00	-.00	-.00	-.00	-.00	-.00
	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)
Deregulation × Female – High Tangibility	.07***	.07***	.07***	.07***	.03*	.03*	.03*	.03*
	(.02)	(.02)	(.02)	(.02)	(.02)	(.02)	(.02)	(.02)
Deregulation × Female – Low Tangibility	.00	.00	.00	.00	.01	.01	.01	.02
	(.02)	(.02)	(.02)	(.02)	(.01)	(.01)	(.01)	(.01)
Deregulation	-.01	-.01	-.02	-.02	-.02*	-.02*	-.02**	-.02**
	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)
Deregulation – High Tangibility Industry	-.05***	-.05***	-.05**	-.06***	-.04***	-.04***	-.03**	-.04***
	(.02)	(.02)	(.02)	(.02)	(.01)	(.01)	(.01)	(.01)
Deregulation – Low Tangibility Industry	.07***	.07***	.07***	.06***	.05***	.05***	.05***	.05***
	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)
Female – High Tangibility Industry	-.09***	-.09***	-.09***	-.08***	-.05**	-.05**	-.05**	-.05**
	(.02)	(.02)	(.02)	(.02)	(.02)	(.02)	(.02)	(.02)
Female – Low Tangibility Industry	.02	.02	.01	.01	.00	.00	.00	-.00
	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)
High Tangibility Industry	-.14***	-.14***	-.14***	-.14***	-.16***	-.16***	-.15***	-.16***
	(.02)	(.02)	(.02)	(.02)	(.02)	(.02)	(.02)	(.02)
Low Tangibility Industry	-.10***	-.10***	-.09***	-.09***	-.08***	-.08***	-.08***	-.08***
	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)
Black				-.14***				-.14***
				(.01)				(.01)
Married			.16***				.16***	
			(.00)				(.00)	
N	867993	867993	867993	867993	867993	867993	867993	867993
County × Gender	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year × Gender	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Age × Gender	No	Yes	Yes	Yes	No	Yes	Yes	Yes

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

NOTES: This table reports differences-in-differences estimates of the impact of bank deregulation on gender pay gap regressing log(hourly wage) on a set of indicators and controls specified in Equation (1) but categorizing industries by their level of asset tangibility. Columns (1)–(4) reports the impact of intrastate deregulation as a treatment, and columns(5)–(8) reports the impact of interstate deregulation as a treatment. All specifications control for Mincerian traits×gender, and state×gender and year×gender fixed effects. Columns (2)–(4) and (6)–(8) additionally control for age×gender fixed effects. For details, see Section IV.5. Errors clustered at the state level and reported in parentheses. *,**, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

F.2 Analysis with Occupational Categorization into Nonroutine Cognitive or Nonroutine Manual Task

Table F.8: Effects of Bank Deregulation on Gender Pay Gap by Worker Skill

	Intrastate Deregulation				Interstate Deregulation			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Deregulation × Female	-.01	-.00	-.00	-.00	-.01	-.01	-.01	-.01
	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)
Deregulation × Female – NR Manual Occupation	.05***	.05***	.05***	.05***	.08***	.08***	.08***	.09***
	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)
Deregulation × Female – NR Cognitive Occupation	.01	.01	.01	.01	.01	.01	.01	.01
	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)
Deregulation	-.05***	-.06***	-.06***	-.06***	-.07***	-.07***	-.07***	-.07***
	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)
Deregulation – NR Manual Occupation	-.03***	-.02***	-.03***	-.03***	-.04***	-.04***	-.04***	-.04***
	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)
Deregulation – NR Cognitive Occupation	.11***	.15***	.14***	.15***	.16***	.16***	.15***	.16***
	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)
Female – NR Manual Occupation	-.02	-.07***	-.06***	-.06***	-.09***	-.09***	-.09***	-.09***
	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)
Female – NR Cognitive Occupation	.00	.00	.01	.01	-.01	-.01	-.00	-.01
	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)
NR Manual Occupation	.00	.03***	.03***	.03***	.04***	.04***	.04***	.04***
	(.)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)
NR Cognitive Occupation	.00	.14***	.14***	.14***	.14***	.14***	.14***	.14***
	(.)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)
Black				-.12***				-.12***
				(.01)				(.01)
Married			.15***				.15***	
			(.00)				(.00)	
N	812716	812716	812716	812716	812716	812716	812716	812716
County × Gender	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year × Gender	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Age × Gender	No	Yes	Yes	Yes	No	Yes	Yes	Yes

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

NOTES: This table reports differences-in-differences estimates of the impact of bank deregulation on gender pay gap regressing log(hourly wage) on a set of indicators and controls specified in Equation (1) but categorizing workers by nonroutine cognitive, nonroutine manual, and all routine occupations. Columns (1)–(4) reports the impact of intrastate deregulation as a treatment, and columns(5)–(8) reports the impact of interstate deregulation as a treatment. All specifications control for Mincerian traits×gender, and state×gender and year×gender fixed effects. Columns (2), (4), (6) and (8) additionally control for occupation×gender fixed effects, while columns (3)–(4) and (7)–(8) control for industry×gender fixed effects. For additional details, see Section IV.5. Errors clustered at the state level and reported in parentheses. *,**, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

Table F.9: Effects of Bank Deregulation on Gender Pay Gap
by Worker Skill Including Industry-Occupation FX

	Intrastate Deregulation				Interstate Deregulation			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Deregulation × Female	-.00	-.01	-.01	-.01	-.01	-.01	-.01	-.01
	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)
Deregulation × Female – NR Manual Occupation	.05***	.05***	.05***	.04***	.08***	.08***	.08***	.07***
	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)
Deregulation × Female – NR Cognitive Occupation	.01	.01	.01	.01	.01	-.00	.00	-.00
	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)
Deregulation	-.06***	-.05***	-.05***	-.05***	-.07***	-.06***	-.05***	-.05***
	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)
Deregulation – NR Manual Occupation	-.02***	-.03***	-.03***	-.03***	-.04***	-.04***	-.04***	-.04***
	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)
Deregulation – NR Cognitive Occupation	.15***	.11***	.11***	.09***	.16***	.14***	.13***	.11***
	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)
Female – NR Manual Occupation	-.07***		.00		-.09***		-.02*	
	(.01)		(.01)		(.01)		(.01)	
Female – NR Cognitive Occupation	.00		.01		-.01		.01	
	(.01)		(.01)		(.01)		(.01)	
NR Manual Occupation	.03***		.01		.04***		.02**	
	(.01)		(.01)		(.01)		(.01)	
NR Cognitive Occupation	.14***		.15***		.14***		.14***	
	(.01)		(.01)		(.01)		(.00)	
N	812716	812707	812715	812706	812716	812707	812715	812706
County × Gender	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year × Gender	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Occupation × Gender	No	Yes	No	Yes	No	Yes	No	Yes
Industry × Gender	No	No	Yes	Yes	No	No	Yes	Yes

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

NOTES: This table reports differences-in-differences estimates of the impact of bank deregulation on gender pay gap regressing log(hourly wage) on a set of indicators and controls specified in Equation (1) but categorizing workers by nonroutine cognitive, nonroutine manual, and all routine occupations. Columns (1)–(4) reports the impact of intrastate deregulation as a treatment, and columns(5)–(8) reports the impact of interstate deregulation as a treatment. All specifications control for Mincerian traits×gender, and state×gender and year×gender fixed effects. Columns (2)–(4) and (6)–(8) additionally control for age×gender fixed effects. For details, see Section IV.5. Errors clustered at the state level and reported in parentheses. *,**, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.