## Financial Development and Occupational Choice

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#### **Abstract**

Theory suggests that access to finance facilitates entrepreneurship. But what are the effects of increasing access to finance in developing countries, where self-employed individuals account for a significant proportion of economic activity? Evidence from a survey of over 1 million randomly selected Indian households suggests that opposite effects may be observed. Identifying access to finance using bank branch location determined by government policy, we find that individuals living in a district with more bank branches are significantly less likely to be self-employed, and more likely to be employed in formal sector firms, with larger effects for more educated individuals. While this occupational shift is greater for men, we also find significant effects for women and discriminated social groups. Additionally, using a survey of over 400,000 randomly selected firms in the service sector, which experienced unanticipated high growth in the last two decades, we find that firms located in districts with more bank branches are more productive, employ more workers, and pay higher wages. While the micro-finance literature has argued that lending to poor individuals is the main way in which the poor may benefit from access to finance, our results suggest that easing access to credit through formal lending institutions may in fact benefit the poor by moving workers into productive wage employment.

Keywords: Financial development; Occupational Choice; Informal sector; Entrepreneurship

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#### 1. Introduction

Schumpeter (1942) emphasized the important role played by entrepreneurs in facilitating economic growth, and contended that well-functioning banks spur technological innovation by identifying those entrepreneurs with the best chances of successfully implementing innovative products and production processes. Knight (1921) argues that the ability of entrepreneurs to start up a business depends on their liquidity constraints, and that capital markets are unable to finance all entrepreneurs due to moral hazard and adverse selection problems. A number of studies, conducted mainly in developed countries, find a positive relationship between access to finance and entrepreneurship (see for example, Evans and Jovanovic, 1989, Black and Strahan, 2002, Guiso, Sapienza, and Zingales, 2004, Adelino, Schoar, and Severino, 2013, among others). But what are the effects of easing financial constraints in countries where the bulk of the self-employed are engaged in informal, microenterprises? Does access to finance lead to an increase in micro-entrepreneurship?

Micro-enterprises in the informal sector account for a large proportion of economic activity, employing more than 50% of the labor force on average in developing economies (La Porta and Shleifer, 2008). The conventional view is that these firms are potential sources of high income growth that are inhibited by a lack of access to finance and infrastructure (De Soto, 1989, 2000). In line with this view, a growing literature has argued that targeted credit to micro-enterprises is a key policy instrument for facilitating economic growth and easing poverty (see for example, Bruhn and Love, 2014, and Burgess and Pande, 2005).

An alternative view claims that micro-entrepreneurs in developing economies are primarily engaged in unproductive activities that provide subsistence income in the absence of wage employment opportunities (Rauch, 1991, Schoar, 2009). For example, La Porta and

Shleifer (2008) show that informal firms on average add just 20% of the value added per worker of formal firms in developing countries, and that economic growth comes from the formal, and not the informal sector (La Porta and Shleifer, 2014). The literature has also shown that informal firms rarely transition into the formal sector (de Mel et al., 2013, Schoar, 2009), and have lower employment growth on average (Karlan and Zinman, 2011).

We consider the effect of access to credit in an emerging market where both formal and informal sector firms are likely to be credit constrained, on the choice of individuals to remain self-employed in the informal sector versus seeking wage employment in the formal sector.<sup>2</sup> To examine this question, we use data from two rounds of the Employment-Unemployment Survey (1999 and 2004) conducted by the National Sample Survey (NSS) Organization, which surveys over 1.2 million randomly selected and nationally representative Indian households.<sup>3</sup> The average household firm in our data employs 1.4 workers, and just 0.6% of households employed in these micro-enterprises report wages. We supplement the occupational choice data with two nationally representative surveys of

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<sup>&</sup>lt;sup>1</sup> Consistent with this view, Duflo, et al. (2014) argue that a plausible interpretation of the finding that microcredit lending does not change the likelihood of starting a new business nor increase the profitability of self-employment (Banerjee et al., 2013), is that these informal sector activities have low marginal productivity.

<sup>&</sup>lt;sup>2</sup> The Government of India defines informal sector firms as "units engaged in the production of goods and services with the primary objective of generating employment and incomes to the persons concerned." (NSSO, 2000). The formal sector refers to registered entities for which statistics are available regularly from budget documents and reports. Note that activities in the informal sector are not necessarily performed with the intention of evading taxes, and hence are distinct from the underground economy. La Porta and Shleifer (2014) note that informal firms are simply too small to pay taxes or undertake the costs of registration.

<sup>&</sup>lt;sup>3</sup> Examples of informal sector activities include landless laborers, small farmers, traditional artisans, animal husbandry, fishermen, workers in brick-kilns, construction, beedi-making (tobacco product), incense sticks, workers in local transport, shops, domestic servants, community services like street cleaning, street vendors, garbage collectors, garment workers, artisans or craft producers, and, domestic workers.

over 400,000 service sector firms also conducted by the NSS to examine the relationship between firm-level employment, productivity, wages, and access to finance.

To capture access to finance, we use the number of government bank branches and credit extended by government banks at the district level in India from 1991. We use a three-pronged identification strategy relying on (1) Government policy governing bank branch location, (2) Historical location of government-owned bank branches, and, (3) Unanticipated growth of the service sector.

Prior to the economic reforms of 1991, Indian banks were required to obtain a license from the central bank, the Reserve Bank of India, before opening a new branch (Burgess and Pande, 2005). Our identification strategy relies on this licensing policy, which required that banks could open a specific ratio of branches in unbanked versus areas with existing bank presence, and further set population targets to determine branch location. In particular, between 1977 and 1990, a bank could obtain a license to open a branch in an already banked location if it also opened branches in four unbanked locations, commonly referred to as the 1:4 rule (Burgess and Pande, 2005, Panagariya, 2006). In 1979, to encourage banks to open branches in unbanked locations, the Reserve Bank of India additionally set population targets for branch location to about one branch per 17,000 persons (Panagariya, 2006, Kochar, 2011). In 1990, this policy was discontinued, and the new policy stated that bank branch location would be based on the business potential of the location (Government of India, 1991).

<sup>&</sup>lt;sup>4</sup> The 1:4 bank branch location rule was used by Burgess and Pande (2005) to identify the effect of branch expansion on rural poverty.

To further address the possible endogeneity of bank branch location to individual and firm level characteristics in a district, we use government bank branch location at the district level in 1991 instead of contemporaneous location, or privately-owned bank branch location. Contemporaneous branch location is more likely to be driven by observable and unobservable district level characteristics that may be correlated with the occupational choices of individuals, and government-owned banks are more likely to be influenced by government policy, while privately-owned banks may be more likely to choose locations based on growth opportunities. Note also that government-owned banks in India account for over 70% of loans and deposits on average.

While the 1:4 rule based on population targets does not rule out that banks could locate in areas based on regional growth characteristics before liberalization, it helps our identification strategy in two critical ways. First, the policy reduces the number of branches that could be opened based on regional growth. Second, since our dependent variables are from 1999 and 2004, using data from 1991 reduces the possibility that bank location is correlated with the income and growth prospects of districts more than a decade later.

To further investigate the validity of our identification strategy, we examine the correlation between district-level wage growth and employment growth between 1989 and 1999, and between 1999 and 2004. The results show that past wage growth is uncorrelated with future within-district growth, while past employment growth is negatively correlated with future employment growth. Thus, even if in the early 1990s,

<sup>&</sup>lt;sup>5</sup> The identification strategy is based on the argument that while historical access is correlated to current branch location, it is less endogenous than the contemporaneous location of bank branches, which may be correlated with district level growth. An equivalent approach would be to use the historical bank branch location as an instrument for contemporaneous branch location.

banks selected to locate in districts that were high growth at that time, these districts did not on average experience high growth in the 2000s, which is when our employment and service sector surveys are from.

The results from the household data suggest that an increase in the number of bank branches in a district is associated with a significant decrease in the probability of being an employer in a household enterprise in the informal sector. For example, the mean number of government-owned bank branches in a district is associated with a 2% decrease in the probability of being a household employer in that district, relative to the underlying mean of an 18% probability of being an employer in a household enterprise. We also find that in districts with more bank branches, the probability of being self-employed or an employer of a household enterprise is significantly lower for more educated individuals. The results also show that the likelihood of being the employer of an enterprise employing 6 or more workers is significantly lower in districts with more bank branches. The regressions control for individual characteristics, including age and gender, district level population, and industry and state fixed effects.

These findings are consistent with the canonical dual economy model, which predicts that the informal sector will disappear as the economy develops (Lewis, 1954). According to this theory, the informal economy survives when labor force growth is high, but economic growth comes from the more productive formal sector (Pagano and Pica, 2012, La Porta and Shleifer, 2008, 2014).<sup>6</sup> The results are also consistent with the theory that, when capital markets are imperfect, wealth affects the choice between self-employment and wage

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<sup>&</sup>lt;sup>6</sup> For example, in Pagano and Pica's (2012) two-sector model, financial development allows more profitable firms to attract more workers by bidding up wages, inducing labor reallocation from the weaker to the stronger sector.

employment (Greenwood and Jovanovic, 1990, Banerjee and Newman, 1993, Buera et al., 2011). Instead of wealth, we observe variation in access to credit based on location.

In a developing country such as India, household enterprises offer subsistence employment in the absence of formal employment opportunities. For example, only 0.6% of the self-employed and employees of household firms receive regular wages. Our results are consistent with the view that even formal sector firms are credit constrained, and access to finance creates employment opportunities in the formal sector, shifting workers out of irregular employment in the informal sector into salaried positions. Consistent with this hypothesis, we find that an increase in the number of government bank branches in a district is associated with a significant decline in the likelihood of being employed in a household enterprise, and an increase in the likelihood of employment in the formal sector. For example, the mean number of government-owned bank branches in a district is associated with over a 7% decrease in the probability of being employed in a household firm in that district, relative to the underlying mean of 12.4%.

Examining if there is a corresponding pattern for wages, the results show that, on average, wages are higher for workers employed in formal sector firms located in districts with more access to finance. For example, the mean number of government-owned bank branches in a district is associated with an average increase in wages of about 4% in that district, where average annual wages are about INR 30,000 or about \$685 at 1999 exchange rates. For the small fraction of household firms reporting wages, there appears to be a slight increase in wages paid to workers, but not entrepreneurs.

We also examine the probability of being unemployed, or being a student enrolled in an educational institution, based on access to finance in that district. While the likelihood of being unemployed is not significantly different, the likelihood of being a student increases significantly, in more financially developed districts. The mean number of government-owned bank branches in a district is associated with a 12% increase in the likelihood of being a student in that district, relative to the underlying mean of 18%. The latter result suggests that access to finance may increase investments in human capital because of either an increase in disposable income for households, or more job opportunities for educated workers.

The micro-credit literature has noted that women and minorities are less able to gain access to credit through formal lending institutions, and hence are unlikely to benefit from an expansion of credit through these channels. We find some evidence corroborating this view. In particular, our results show that men and forward castes are less likely to be self-employed in household enterprises in districts with greater access to credit. However, we also find that women are significantly more likely to be enrolled as students, less likely to be employed in a household enterprise, earn higher wages, and more likely to be employed in the formal sector in districts with greater access to credit. Similarly, individuals belonging to discriminated social groups (scheduled castes and other backward castes) earn higher wages, are less likely to be employed in a household firm, and more likely to be employed in the formal sector in districts with more bank branches. Hence, while the effects are larger for men and forward castes, they are still present for women and minorities.

We supplement the analysis by examining firm-level loans, employment, productivity, and wages using survey data of firms in the service sector in India. These data cover 440,000 firms that operate in a broad range of service activities. Since the service sector is one of the fastest growing sectors in India, it offers a unique opportunity to examine

the role of financial development in facilitating growth. Another critical advantage of focusing on service sector firms is that the rapid growth in this sector was unanticipated prior to the economic reforms, reducing the potential for endogenous location of bank branches to the future characteristics of service sector firms in that region.

The firm-level data on the service sector provide an in-depth view of the role of finance in firm employment decisions. The results suggest that firms borrow more in districts with more government bank branches, indicating that financial development eases financial constraints. We also find that larger firms and those located in urban areas borrow more, which may be because these firms are more credit worthy, have access to better information, or face better growth opportunities. Greater access to finance in a district is also associated with significant increases in employment, wages, and value added per worker in firms located in those districts. These effects appear to be larger for firms that employ more workers, and firms located in urban areas.

Our study is related to the large literature on the effects of bank branch deregulation and access to credit. A recent paper by Chodorow-Reich (2014) examines the effect of bank lending frictions on employment outcomes exploiting the pre-crisis relationship of firms with banks, and, using the Lehman collapse as an exogenous shock to the financial health of lenders. The study finds that firms that had pre-crisis relationships with less healthy banks reduced employment more compared to clients of healthier lenders. Evidence also suggests that bank entry may affect firms' access to credit (Petersen and Rajan, 1995; Beck, Demirguc-Kunt, and Maksimovic, 2004), economic growth (Jayaratne and Strahan, 1996; Cetorelli and

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<sup>&</sup>lt;sup>7</sup> Financial constraints should affect employment since firms rely on working capital to finance labor costs; there are adjustment costs to hiring and firing workers; and, due to capital labor complementarities in the production function (Benmelech, Bergman, and Seru, 2011).

Gambera, 2001), and, entrepreneurship (Black and Strahan, 2002). Our study suggests that access to credit as captured by bank branches, is also associated with a shift in the occupational choice of individuals in the labor market, which has potentially important implications for both economic growth, and the labor market decisions of firms and workers.

Our paper also contributes to the literature on financial development and growth. A now widely accepted argument, proposed by Goldsmith (1969), McKinnon (1973), and Shaw (1973), and supported by a growing empirical literature on this topic suggests a first-order relationship between financial market development and economic growth (see for example, Rajan and Zingales (1998) and Gupta and Yuan (2009) for industry-level evidence, and, Bekaert, Harvey, and Lundblad (2005) for country-level evidence). Although the preponderance of the macroeconomic evidence suggests that financial market development promotes economic growth, the channels by which growth occurs remains a matter of considerable debate. Our results contribute to this debate by suggesting a mechanism by which improved access to credit may facilitate growth: allowing formal sector firms to expand employment, become more productive, and, pay higher wages, moving workers out of less productive subsistence employment into wage employment in the formal sector.

A related strand of literature examines the relationship between access to credit and poverty. Examining the effect of bank branch expansion on rural poverty, Burgess and Pande (2005) show that poverty declined significantly in areas where there was bank branch expansion. Bruhn and Love (2014) consider the effects of expanding lending to a targeted group of underserved, low-income individuals, through bank branch expansion, and find that this credit expansion is associated with an increase in the number of informal businesses, but no change in the number of formal businesses. While they examine the effects of

expanding lending to a targeted group of low-income individuals, our results focus on overall access to credit, not targeted towards a specific group. Our results suggest that an overall expansion in credit through financial institutions may facilitate growth in the formal sector, but not necessarily in the informal sector.

Our results do not imply that all microenterprises are unproductive. For example, de Mel, Mckenzie and Woodruff (2008) examine the effect of randomized grants to a set of Sri Lankan microenterprises, and show that average real return to capital in these enterprises is between 4.6% and 5.3% per month, and, Mckenzie and Woodruff (2008) examine returns to capital amongst the smallest urban microenterprises in Mexico and estimate returns to capital of about 15% per month. Since we consider an expansion in formal credit and not targeted lending as in these other studies, our results suggest that increased access to credit for formal sector firms may shift workers away from the less productive micro-enterprises that provide subsistence incomes to those without alternative employment opportunities.

The remainder of the paper is organized as follows: Section 2 describes bank branch policies, , Section 3, the data, Section 4 describes the main results from the Employment-Unemployment surveys; Section 5 describes the results from the Service sector surveys; and, Section 6 concludes.

## 2. India's bank branch location policy

In 1962, India's central bank, the Reserve Bank of India (RBI), recognizing the urgent need to extend banking services to areas not served by commercial banks, began to require that Indian commercial banks observe a ratio of 2:1 of bank branches opened in locations without any bank coverage relative to regions with access to commercial bank services (Panagariya, 2006). This policy was modified subsequently in 1968 from 2:1 to 1:1, and in

1970 to 1:2 between banked and unbanked centers in the case of banks that had more than 60% of their offices in rural and semi-urban centers, and in the case of other banks the ratio was set at 1:3. In 1971, the rule was modified slightly to accommodate branch location in metropolitan port towns. Finally, on January 1, 1977, the RBI adopted the rule whereby a bank had to open 4 offices in unbanked rural centers to get an entitlement to open one office in a metropolitan / port town and one office in a banked center.

To address the problem with the above licensing policy that banks may respond by stopping all expansion in order to avoid having to open branches in rural areas, in 1979 the RBI introduced the Bank Licensing Program (BLP), which in addition to the 4:1 rule, set a population target per branch in each district. From January 1979 to December 1981, the population target per branch was set at 20,000, and from 1982-1990, this target was lowered to 17,000 people per bank branch (Panagariya, 2006). In 1990, the 1:4 rule and population targets were overturned, and banks were allowed to open up branches based on the "need, business potential, and financial viability of the location" (Government of India, 1991), a clear departure from the pre-liberalization period.

Our identification strategy relies on the RBI's licensing policies prior to 1991, which required Indian commercial banks to obtain a license before opening a bank branch, imposed a rule such that banks could open a specified ratio of branches in unbanked versus banked areas, and set population targets per branch to determine which districts were in most need of banking services. While the 1:4 branching policy does not rule out the fact that banks could locate in areas based on profit motives before 1991, it reduces the number of branches that could be opened up based on regional growth prospects, and also minimizes the

possibility that bank branch location in 1991 is correlated with the income and growth prospects of districts in the early 2000s, which is around when we observe employment data.

We observe that the correlation in bank branch location between 1991 and 1992 is equal to 0.99, between 1991 and 1999 (the first year of the employment survey) is equal to 0.88, and between 1999 and 2004 is 0.84. This indicates that (1) banks did not rush to open branches in new locations immediately after liberalization based on district characteristics and (2) bank branch location in 1991 is a good proxy for bank location in the early 2000s. Thus, with the 1991 data we capture that part of access to credit that was determined by the 1:4 policy rather than by economic growth within districts in the early 2000s.

# 3. Data sets and data description

# 3.1 Employment-unemployment surveys

The National Sample Survey Organization (NSSO), a division of the Ministry of Statistics and Program Implementation of the Government of India, conducts national surveys on the employment and unemployment status of a large sample of households every five years. Given the timing of our data on banking and credit activities, we use rounds 55 and 61 of these surveys, conducted in 1999 and 2004 respectively. The 1999 survey was the first nation-wide survey of the informal sector. These surveys of households covers household enterprises in agriculture and related activities, mining and quarrying, manufacturing, construction, trading and repair services, hotels & restaurants, transport, storage and communications, financial intermediation, real estate, renting and business activities, education, health and social work and other community, social & personal service sectors. Appendix Table A1 describes the industry breakdown of household firms in the

Employment-unemployment survey. For further details on how the survey is conducted see NSSO (2000).

The NSSO describes the informal sector as follows: "The informal sector may be broadly characterized as consisting of units engaged in the production of goods and services with the primary objective of generating employment and incomes to the persons concerned. These units typically operate at a low level of organization, with little or no division between labor and capital as factors of production and on a small scale," (NSSO, 2000). Household enterprises are further defined as "units engaged in the production of goods or services, which are not constituted as separate legal entities independently of the households or household members that own them, and for which no complete sets of accounts are available which would permit a clear distinction of the production activities of the enterprises from the other activities of their owners (NSSO, 2000). We note that activities performed by household enterprises in the informal sector are not necessarily performed with the intention of evading taxes, and hence are distinct from the underground economy. In contrast, the formal sector is characterized as firms that are registered entities, and for which statistics are available regularly from budget documents and reports. Formal sector firms include government-owned firms and private firms.

The set of questions we examine regarding work status pertain to those in the agricultural and non-agricultural sectors. The survey records their usual work status during the reference period of the preceding year. These divide into workers working within household enterprises (either as the sole worker, as an employer, or as a paid or unpaid employee), as wage or regular salaried workers (hence outside the household – either in private enterprises or public entities), or as casual or unpaid workers (again, in private firms

or public entities). We code those who normally work in one of the previous activities but are not doing so at the time of the survey due to sickness as belonging to their usual category.

We define an individual as a Household enterprise employer (*Household Enterprise Employer*) if the individual is recorded as the owner of an Own Account Enterprise (An own account enterprise is an undertaking run by household labor, usually without any hired worker employed on a "fairly regular basis"), or as an employer in a Household enterprise. From the summary statistics described in Table 1 we note that about 15% of our sample reports being a household firm employer (about 189,000 individuals). *Household enterprise worker* is an individual who is an employee in a household enterprise. About 139,000 workers are household employees, or 11% of the sample. *Formal employee* is a worker employed in a formal sector firm. *Formal casual employee* refers to part-time workers in the formal sector. The distribution of activities shows that around one quarter of workers are in household enterprises, either as the sole worker or as employees, and only 8 percent of workers represent having a formal sector job.

We identify those who are not working but looking for work as *Unemployed*, and those who are currently attending educational institutions, defined as *Student*. Unemployment is low, at 2.4 percent, but then lacking employment, the poor often work either in household production (26% of the sample) or as casual workers (10% of the sample). More than one quarter of the sample report they are attending educational institutions rather than working.

We restrict our sample to individuals between age 10 and 70 (the lower bound of 10 allows for child labor if prevalent). The average age of workers is 27, and with an almost even split between men and women. The survey codes education as a categorical variable, including from illiterate, literate without formal school, and various degrees of formal

schooling up to post-secondary degree. Education ranges from illiteracy for 31 percent of the population, some degree of primary for 28 percent of the population, to middle school or more advanced degree for 41 percent of the population. In terms of geographical location, workers are identified by district and by urban or rural.

The surveys also record *Wages*, which are defined as weekly wages or salary, which we normalize to an annualize wage. For round 51, we deflate nominal values to 1999 values using the consumer price index. Annual wages are INR 30,837, or approximately USD 685 at 1999 exchange rates. This is somewhat below 2 dollars a day on average.

### 3.2 Service Sector Surveys

We also use data from two nationally representative repeated cross-sections of service sector firms: round 57 (2001-02) and round 63 (2006-2007) conducted by the NSS Organization. The surveys cover a broad range of service activities including hotels and restaurants; transport, storage, and communications; real estate, renting, and business activities; education; health and social work; and other community, social, and personal activities. The 63rd round includes financial intermediation as well, but since these services are not included in the 57th round, we exclude them from our analysis. Also excluded from both rounds of surveys are: the wholesale and retail sector; public administration and defense; production activities of private households; and extraterritorial organizations. Furthermore, no public sector enterprises are covered by the two surveys.

Table 2 presents summary statistics for our key variables. There are over 440,000 firms surveyed over the two rounds. The average service sector firm has 1.8 employees, with a single owner-proprietor being the modal size. Gross value added at the firm level is defined as total receipts less total operating expenses. Annual gross value added is approximately

INR 74,000 or approximately USD 1600, consistent with the fact that the average service firm is small. At the same time, both variables also are highly skewed with the largest firm employing over 75,000 workers and an annual gross value added of over USD 1 billion. The survey also reports that 11.6 percent of firms currently have an outstanding loan. The average loan size is approximately Rs. 700,000 or USD 15,000. Wages are defined as total salary, wages, allowances, and other individual benefits (cash & kind including bonus, retirement benefits etc. apportioned for the month), in addition to the imputed value of group benefits for the month (including employer's contribution towards canteen, sports, insurance, etc.). We scale wages to an annual reference. We deflate round 63 to 1999 values.

## 3.3 Banking Data

In India, banks are required to obtain a license from the central bank, the Reserve Bank of India (RBI), before opening a new branch. In 1977, the RBI introduced a new licensing policy to target unbanked rural locations. According to this act, a bank could only obtain a license to open a branch in an already banked location if it also opened branches in four unbanked locations (Burgess and Pande, 2005), what is commonly referred to as the 1:4 licensing policy. The goal of this policy was to open bank branches in the most populated regions that were not serviced by banks. As noted by Burgess and Pande (2005), between 1969 and 1990, bank branches were opened in about 30,000 rural unbanked locations, and bank borrowing as a share of total rural household debt increased from 0.3 percent to 29 percent. This policy was discontinued in 1990, and the new policy stated that bank branch location would be based on the "need, business potential, and financial viability of the location" (Government of India, 1991).

We use data on government bank branches in 1991, the year prior to the economic reforms, when bank branch location was still governed by the 1:4 rule, when location was mainly determined by population and existing access of a region to formal financial institutions. We merge the district identifier from the four NSS surveys with the identifiers from our banking data. From 588 total districts in our banking data, we are able to merge 364 districts into the services data and 465 districts into the employment-unemployment surveys. The number of districts is different when matching the unemployment-employment surveys and service firm surveys because of changes in the names (as listed in the data) or geographic extent of districts. Table 3 describes the banking data. On average, based on the employment-unemployment survey, there are about 34 government-owned bank branches per district (26 in service sector firm survey).

### 4. Occupational choice and access to finance

### 4.1 Self-employment in a Household Enterprise

We start by examining the probability of being an employer in a Household enterprise using data from the Employment unemployment survey described in the previous section. Specifically, we estimate the following logit specification with state fixed effects using individual level data:

 $Pr(Household\ Enterprise\ Employer_{it})$ 

= 
$$\beta_1 Log(Government \ Bank \ Branches_{1991,d}) + \beta_2 Age_{it} + \beta_3 \ Male_{it}$$

$$+ \beta_4 Population_{dt} + \alpha_{State}$$
,

where *i* refers to individual, *t* refers to the round of the survey (1999 or 2004), and *d* refers to district. The dependent variable is equal to one if the individual is either self-employed in

an Own Account Enterprise (OAE), which has no employees, or is the boss of a household enterprise with at least one employee. The specification controls for individual characteristics including age and gender, district and regional characteristics, including population at the district level and state fixed effects. We consider sub-samples based on industry category, hence we do not include industry fixed effects.

To address potential endogeneity in the financial development variable, we use the number of government-owned bank branches in a district in 1991. In 1991, government bank branch location was based primarily on population and the prior existence of formal lending institutions, rather than profit-seeking location choices. Furthermore, 1991 is sufficiently prior to the period that we examine that it is unlikely that the post-reform, service-driven growth of the early 2000s could have been anticipated by banks in their location choice. We also use credit provided by government-owned banks in 1991 at the district level as an alternative measure of access to finance. Our main assumption is that 1991 government bank branch location is correlated with bank location in 1999 and 2004, but is not selected to anticipate the growth opportunities of the economy in the 2000s (after controlling for state fixed effects). We also estimate this specification for different subsamples, based on sector and individual characteristics, to capture how financial development affects occupational choice based on these characteristics.

In order to empirically investigate the plausibility of our identification assumption, we turn to the 1987 NSS Employment-Unemployment Survey to construct a district-level series of wages and employment spanning 1987 to 2004. We then examine the correlation between district-level wage and employment growth from 1987 to 1999 and from 1999 to 2004. The results are presented in Figures 1 and 2. Figure 1 shows that wage growth from

1987 to 1999 is not a statistically significant predictor of wage growth between 1999 and 2004. In contrast, in Figure 2, we find a negative correlation between employment growth in these two periods. The results suggest that, if anything, growth opportunities prior to 1999 are negatively correlated with growth opportunities in the period we examine. As such, if the number of government-owned bank branches is endogenously based on profit-seeking location choice (which we believe is unlikely in 1991 given the institutional context), then it is likely to be negatively selected, with additional branches located in districts which had poor growth opportunities in the period we study. This would bias our results away from finding a positive impact of financial development on wages and occupation choice between 1999 and 2004.

The results are reported in Table 4, Panels A and B. Panel A, column (1) reports the results from estimating specification (1) for the entire sample, columns (2) and (3) consider household enterprise is in the manufacturing and service sector respectively, columns (4)-(6) considers different subsamples based on the education level of the household enterprise employer, and columns (7) and (8) considers two subsamples based on whether the enterprise employs less than 6 workers or more. The remaining tables adopt a similar structure.

The results reported in column (1) suggest that an increase in the number of bank branches in a district is associated with a significant decrease in the probability of being an employer in a household enterprise. From column (1) we note that the mean number of government-owned bank branches in a district is associated with a 2% decrease in the probability of being a household employer in that district, relative to the underlying mean of an 18% probability of being an employer in a household enterprise. While we do not find

any distinction between enterprises in manufacturing relative to services, the results appear to vary based on the educational level of the individual. In particular, while improved access to finance does not appear to be significantly correlated with the occupational choices of illiterate employers, the probability of self-employment for more educated individuals is significantly negatively correlated with access to finance. For example, the mean number of government-owned bank branches in a district is associated with nearly a 4% decrease in the probability of being a household employer for individuals with middle school or higher education in that district, compared to no significant difference for illiterate individuals.

We also find that the likelihood of being the employer of a larger enterprise employing 6 or more workers is significantly lower in districts with more bank branches. The mean number of government-owned bank branches in a district is associated with a 3.1% decrease in the probability of being a household employer of a firm with 6 or more workers in that district, compared to no significant change for smaller firms.

We observe similar effects in Panel B using an alternative measure of financial development, credit provided by government-owned banks at the district level in 1991. The main difference is that the decline in self-employment in household enterprises is significantly greater in manufacturing firms located in districts where government banks provide more credit.

Increased access to finance is associated with a shift in the occupational choice of individuals. One explanation for the negative correlation between entrepreneurship and access to finance may lie in the nature of the household firm. In many developing countries such as India, household enterprises offer subsistence employment in the absence of other formal employment opportunities.

# 4.2 Employment in a Household Enterprise

We next examine the relationship between financial development and employment in household enterprises using individual level data from the employment unemployment survey. Specifically, we estimate the following logit specification:

 $Pr(Household\ Enterprise\ Worker_{it}) = \beta_1 Log(Government\ Bank\ Branches_{1991,d}) + \\ \beta_2 Age_{it} + \beta_3\ Male_{it} + \beta_4 Population_{dt} + \alpha_{Industry} + \alpha_{State},$ 

where an individual is characterized as being a *Household Enterprise Worker* if s/he is employed in a household enterprise, and/or, is not working at the time of the survey, is sick. The results reported in Table 5, Panel A, suggest that the likelihood of being employed as a household firm worker is significantly negatively associated with financial development. For example, the mean number of government-owned bank branches in a district is associated with a decrease of about 5.7% in the likelihood of being employed in a household firm in that district, relative to the underlying mean of 12.4%.

An increase in the number of government bank branches is associated with a significant decline in the likelihood of working as a HH enterprise worker in both manufacturing and service sector firms. Similarly, individuals are less likely to be employed as a worker in the informal household sector irrespective of education status or the size of the HH enterprise. The results are similar when we use credit provided by government owned banks in a district (Panel B). Thus, it appears that financial development in a district is associated with a shift in the occupational choice of workers as well as employers away from micro household enterprises in the informal sector.

# 4.3 Employment in Formal Sector

To further investigate this result, we examine employment in the formal sector. The dependent variable is a categorical variable that is equal to one if the individual is employed in the formal sector, or is not working at the moment. The results are reported in Table 6. From Panel A, column (1) we note that for the full sample of individuals, the likelihood of being employed in the formal sector is significantly higher for individuals in districts with more bank branches. The mean number of government-owned bank branches in a district is associated with an increase of about 2.6% in the likelihood of being a formal sector firm employee in that district, relative to the underlying mean of 9.6%.

Considering sub-samples of the data based on industry, individual, and firm characteristics, we find that this effect is stronger for firms in manufacturing. The results also suggest that the likelihood of being employed in the formal sector is higher for workers with all levels of education in districts with more government bank branches, although the odds are highest for more educated workers. Lastly, from columns (7) and (8) we note that the likelihood of being a formal sector employee appears to be higher for individuals working in larger firms. The results are similar in Panel B, where we use government bank credit in a district.

While the previous results considered full time workers, we also observe casual or part-time workers in the formal sector, and find similar, albeit less statistically significant effects. Casual or part-time employment in the formal sector is significantly higher for service sector firms in districts with more bank branches, and in smaller firms that employ fewer than 6 workers. We do not observe a significant change in part-time employment in the formal sector for the full sample. These results are reported in Table 7.

#### 4.4 Wages

So far the results indicate that financial development is associated with a shift in occupational choice from micro-entrepreneurship and employment in micro-enterprises to regular employment in the formal sector. Next, we examine the relationship between wages and financial development. Specifically, if access to finance has allowed firms in the organized sector to increase their employment, thereby reducing employment in household enterprises that do not pay regular salaries, we may observe a similar pattern for wages. We estimate the following linear specification, using wage data from the employment unemployment survey:

$$Log(Wages_{it}) = \beta_1 Log(Government\ Bank\ Branches_{1991,d}) + \beta_2\ Age_{it} + \beta_3\ Male_{it} + \beta_3\ Male_{it} + \beta_4\ Population_{dt} + \varepsilon_{idt}$$

The results reported in Table 8, Panel A, suggest that on average, in districts with more bank branches, wages are higher for the full sample of individuals. Specifically, the mean number of government-owned bank branches in a district is associated with an increase in wages of about 4.3% on average for households in that district. Considering subsamples of the data based on industry characteristics, we find that wages increase for both manufacturing and service sector firms, although manufacturing firms appear to have slightly higher wages on average. Individual characteristics also matter, since more educated workers appear to be paid more on average in districts with more government bank branches. Wages are higher in small and larger firms, although the latter appear to experience a slightly higher increase in wages in districts with more bank branches. The last 4 columns examine the results for household enterprises and formal sector firms. Since most household enterprises do not pay regular wages, the sample size for reported wages is very

small. For those household firms reporting wages, there appears to be a slight increase in wages paid to workers of these enterprises, but not for entrepreneurs. In contrast, the last two columns show that in districts with more bank penetration, wages are higher for formal sector full-time and part-time employees. The results in Panel B, using government bank credit rather than branches, are similar.

The wage results corroborate the occupational choice results. In districts with greater access to credit, captured by government-owned bank branches and credit, there is a shift in individuals' employment away from micro-entrepreneurship in household firms that do not pay regular wages, to full time employment in the organized sector. The intuitive interpretation of these results is that in more financially developed districts, formal sector firms are able to expand employment and pay higher wages, thereby moving workers out of subsistence employment in household firms into regular salaried jobs.

Considering different sub-samples also provide insight into individual and firm characteristics that appear to benefit from increased access to finance. In particular, more educated workers, who may be more attractive to firms or may be better informed about employment opportunities, appear to benefit more from improved access to finance. Workers earn higher wages on average, and are more likely to be employed in larger firms that hire six or more workers, in districts that have greater access to credit. While it may still be the case that bank branch location is endogenous to district-level characteristics that also affect the occupational choice and wages of individuals, the 8 year gap between the year of the banking data and the year of our sample reduces the possibility of reverse causality driving the results.

### 4.5 Education and unemployment

We also examine the relationship between access to credit and the probability of being unemployed and/or being a student enrolled in an educational institution. The results reported in Table 9 suggest that the likelihood of being unemployed is not significantly different in districts with more bank branches, however, the likelihood of being a student increases significantly in more financially developed districts. For example, the mean number of government-owned bank branches in a district is associated with an increase in the probability of being a student by 12% in that district, relative to an underlying mean of 18%. The latter result suggests that access to finance may increase investment in human capital because of either an increase in disposable income for households, or more job opportunities for educated workers.

#### 4.6 Women and minorities

The micro-credit literature has noted that women and minorities are unlikely to benefit from an expansion of credit through formal lending institutions because of historic discrimination and/or lack of information. In Table 10, we examine the effects for individuals belonging to social groups that have faced historic discrimination (Scheduled Tribes, Scheduled Castes, Other Backward Castes), and women. We find some evidence corroborating this view, since on average, it appears that men and forward castes (Other) are less likely to be self-employed in districts with greater access to credit, whereas the results are not significant for women and minority groups. However, women earn higher wages, are significantly more likely to be enrolled as students, less likely to be employed in a household enterprise, and, more likely to be employed in the formal sector, in districts with greater access to credit. Similarly, individuals belonging to discriminated social groups (Scheduled Castes and Other Backward

Castes) earn higher wages, are less likely to be employed in a household firm, and more likely to be employed in the formal sector in districts with more bank branches. Hence, while access to formal credit appears to benefit men and forward castes more, the effects are still present for women and minorities. Expansion in the employment and wages of formal sector firms in districts with more bank branches is associated with a change in labor market outcomes across social groups and gender.

# 5. Results from Service Sector Survey

The NSS survey of service sector firms allows us to examine the relationship between access to finance and firm-level productivity, employment, and wages. As described in the data section, the data is from two rounds of surveys conducted in 2001 and 2006, and, cover 440,000 firms operating in a broad range of service activities. Since the service sector is one of the fastest growing sectors in India, it offers a unique opportunity to examine the role of financial development in facilitating growth. Another advantage of focusing on service sector firms is that the rapid growth in this sector was unanticipated prior to the economic reforms, reducing the potential for endogenous location of bank branches to the future characteristics of service sector firms in that region.

We start by examining the relationship between firm-level loans and financial development in that district, and report the results in Table 11. We estimate the following linear specification using firm-level data, and controlling for 2 digit industry and state-fixed effects:

$$\label{eq:log} Log(Firm\ characteristic)_{i,d,t} = \beta_1 Log\ \big(Government\ Bank\ Branches_{1991,d}\big) + \\ \beta_2 Labor\_Post + \beta_3 District\ Population + \ \varepsilon_{idt},$$

where *Firm characteristic* includes firm-level loans, employment, productivity, and, wages, *Labor\_Post* is the interaction between labor regulations at the state-level and a time dummy. The labor regulations measure is from Besley and Burgess (2002), and captures state specific text amendments to the Industrial Disputes Act of 1947, which may be pro-employer, anti-employer, or may not affect the bargaining power of either workers or employers. The remaining variables are as defined earlier.

From Table 11 Panel A, we observe that in the full sample, on average, firms located in more financially developed districts borrow more. For instance, the mean number of government-owned bank branches in a district is associated with a 0.2% increase in loans for firms located in that district, on average. Considering sub-samples of the data based on firm characteristics, we observe that larger firms that employ more workers, and firms located in urban areas have higher loans on average in districts that have more government bank branches. Panel B reports result using government bank credit as an alternative measure of financial development, and the results are similar. It appears that access to credit is associated with an increase in loans.

We next examine whether the employment decisions of service sector firms vary based on access to finance. From the results reported in Table 12, we observe that firms located in districts with greater access to finance hire more workers on average, for the full sample of firms. A one percent increase in the number of government-owned bank branches in a district is associated with a 0.001 worker increase in employment on average in service sector firms located in that district. However, considering sub-samples, the results suggest that the absolute effect is 50 percent larger for urban firms (0.0016 additional workers) and

10 times larger for large firms (0.1 additional workers). In percentage terms, the effect ranges from 0.5 percent to 1 percent at the mean.

In Table 13, we examine productivity (log gross value added per worker), and find a similar pattern. On average, productivity is higher for firms located in more financially developed districts. The increase in productivity is concentrated in larger firms, and firms located in urban areas. The results are similar when we use government bank credit at the district level.

Lastly, in Table 14, we consider wages in service sector firms, and show that on average, service sector firms pay higher wages in districts that are more financially developed. For example, the mean number of government-owned bank branches in a district is associated with a 0.2% increase in the average wages of service sector firms in that district. These effects appear to be concentrated in larger firms and those located in urban areas, which may reflect the growth opportunities and credit worthiness of these firms.

The service sector firm-level data provide an in-depth view of the role of finance in firm employment decisions. Firms borrow more in more financially developed districts, suggesting that financial development eases financial constraints. The results indicate that larger firms, and those located in urban areas are less financially constrained, which may be because they are more credit worthy, have access to better information, or face better growth opportunities. Reduced financial constraints due to greater access to finance in turn appear to be associated with an increase in employment, wages, and worker productivity.

#### 6. Conclusion

Using survey data on over one million households, we show that access to finance may affect the occupational choices of individuals. In a departure from the extant literature on the topic,

we observe that greater access to credit through formal lending channels is associated with a decrease in self-employment in micro-enterprises. Instead, individuals in districts with more bank branches are more likely to be engaged in wage employment in formal sector firms.

Increasing access to finance through banking sector deregulation and formal lending channels may have a positive impact on firms in the formal sector that have access to credit through these channels. For example, using data on service sector firms, which experienced significant growth during this period, we observe that firms located in districts with greater access to credit borrow more, and have higher wages, productivity, and employment.

While the recent literature on this topic has focused on the benefits of micro-lending to household firms, in many developing countries micro-enterprises provide shadow employment to workers without access to formal sector jobs. Indeed in our data, only a tiny fraction of individuals engaged in micro-enterprises receive regular wages. Our results suggest that greater access to finance to formal firms through traditional lending channels is associated with a decrease in micro-enterprise employment, increase in formal sector employment, higher wages, and an increased likelihood of being enrolled in an educational institution. Moreover, these effects are also present for women and minority groups. Our results highlight an overlooked fact: increasing access to finance facilitates the movement of individuals engaged in unproductive micro-enterprises to wage employment in more productive firms.

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Figure 1: Correlation Between Wage Growth in 1987-1999 and 1999-2004

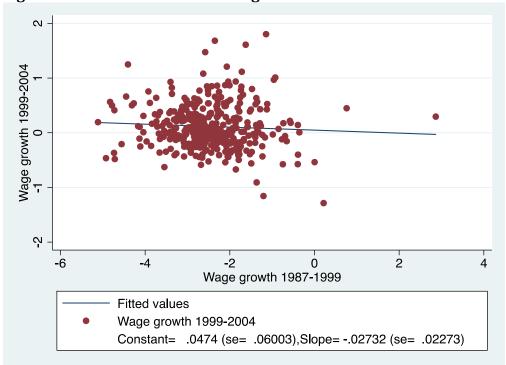


Figure 2: Correlation between Employment Growth in 1987-1999 and 1999-2004

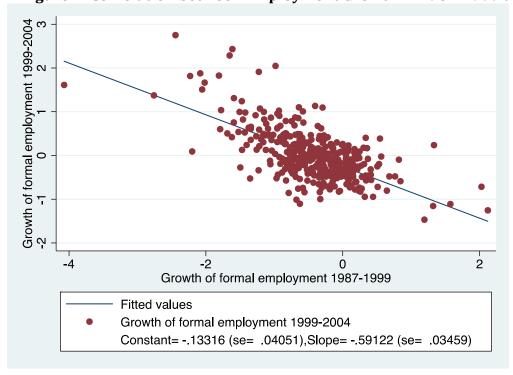


Table 1: Summary Statistics from NSS Rounds 55 and 61 of the Employment-Unemployment Survey

Using data from Rounds 55 and 61 of the NSS Employment Survey, we present summary statistics of our sample.

			Standard			
	Mean	Min	Max	Dev	Observations	
Log annual wages	9.86	5.05	16.60	1.07	194,349	
Works in household enterprise as						
sole employee or employer	0.16	0	1	0.36	1,260,113	
Employer in household enterprise	0.15	0	1	0.36	1,260,113	
Works in household enterprise as						
employee	0.11	0	1	0.31	1,260,113	
Formal sector employee	0.08	0	1	0.28	1,260,113	
Formal sector part-time employee	0.10	0	1	0.30	1,260,113	
Unemployed	0.02	0	1	0.15	1,260,113	
Engaged in household production	0.26	0	1	0.44	1,260,113	
Student	0.25	0	1	0.43	1,260,113	
Age (in decades)	2.75	0	11.5	1.86	1,383,432	
Male	1.48	1	2	0.50	1,383,941	
Illiterate	0.31	0	1	0.46	1,606,913	
Literate: primary or less	0.28	0	1	0.45	1,606,913	
Educated: middle school +	0.41	0	1	0.49	1,606,913	

Table 2: Summary Statistics from NSS Rounds 57 and 63 of the Service Firm Surveys

Using data from Rounds 57 and 63 of the NSS Service Firm Surveys, we present summary statistics of our sample.

	Mean	Min	Max	Standard Dev	Observations
Annual GVA	74424.3	-30128382	59008385024	24117383.6	446,426
Log annual GVA	10.02	2.998	24.8	1.117	442,659
Total workers	1.836	1	75052	27.16	446,877
Annual wages per worker	8094.6	7.355	9244473	22420.8	142,926
Log annual wages per worker	8.092	1.995	16.04	1.554	142,926
ln GVA per worker	9.677	1.378	18.47	0.977	442,659
Have an outstanding loan	0.116	0	1	0.32	446,883
Value of outstanding loans	701019	0	2.5037E+11	210364749	55,684
Log value of outstanding loans >0	9.171	1.619	26.25	2.505	55,676
Loan amount relative to state mean	0.237	0	4923.8	7.986	55,684
Loan amount in hundred thousand US	0.14	0	50074.1	42.07	55,684

**Table 3: Summary Statistics of Banking Data** 

We merge banking data by district to the NSS Employment-Unemployment Surveys and Service Firm Surveys.

Panel A: Districts merged to Employment-Unemployment Survey											
				Standard							
	Mean	Min	Max	Dev	Observations						
Total government branches by district 1991	34.19	0	268.00	34.66	461						
Log gov't branches by district 1991	3.19	0	5.60	0.92	461						
Total government bank credit by district 1991	178.20	0	6048.20	660.40	461						
Log total government bank credit by district 1991	3.77	0	8.71	1.47	461						
Total branches by district 1991	169.80	3	1177.00	159.50	461						
Log branches by district 1991	4.77	1.10	7.07	0.98	461						
Total bank credit by district 1991	567.20	0.06	26168.50	2285.50	461						
Log total bank credit by district1991	4.83	-2.81	10.17	1.63	461						

Panel B: District	s merged to	Service Firm	Surveys		
				Standard	
	Mean	Min	Max	Dev	Observations
Total branches by district 1991	140.1	9	1177	90.65	364
Log branches by district 1991	4.794	2.197	7.071	0.528	364
Total bank credit by district 1991	254.1	1.94	26168.5	841.7	364
Log total bank credit by district1991	4.723	0.663	10.17	1.022	364
Total government branches by district 1991	26.42	3	175	21.8	364
Log gov't branches by district 1991	3.081	1.386	5.17	0.662	364
Total government bank credit by district 1991	83.62	1.11	5218	238.8	364
Log total government bank credit by district 1991	3.623	0.747	8.56	1.074	364

## Table 4: Access to Credit and Likelihood of being a Household Firm Employer

Using data from the Employment-Unemployment Survey, this table provides results from a logit specification where the dependent variable is equal to one if the individual is either self-employed in an Own Account Enterprise (OAE), which has no employees, or is the boss of a household enterprise with at least one employee. In Panel A, *Log* (*Government Bank Branches in 1991*) is the number of government-owned bank branches in a district in 1991; *Age* is the age of the individual in decades; *Male* is the gender; and *District Population* is the population at the district level from 2001. The specification controls for state and industry effects, and standard errors are robust. In Panel B, we use Log (*Government Bank Credit*) which is the total credit given by government-owned bank branches in that district in 1991. \*\*\*indicates significance at the 1% level; \*\* indicates significance at the 5% level, and \* indicates significance at the 10% level.

170 level, indicates significance at the 370 level				Pan	el A			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
		Sector		Er	nployer educa	tion	Firm	size
			_		Less than	_		
				Illiterate	primary	Middle school	Employs <= 6	Employs > 6
Variables	All sectors	Manufacturing	Services	individual	schooling	and above	workers	workers
Log (Government Bank Branches in 1991 +1)	-0.0065*	-0.0288	-0.0024	-0.0013	-0.0107**	-0.0115***	-0.0011	-0.0097**
	[0.004]	[0.022]	[0.010]	[0.006]	[0.004]	[0.004]	[0.012]	[0.004]
Age (in decades)	0.0537***	0.0792***	0.0553***	0.0353***	0.0616***	0.0631***	0.1123***	0.0391***
	[0.001]	[0.006]	[0.003]	[0.001]	[0.002]	[0.002]	[0.004]	[0.001]
Male	0.1896***	0.1382***	0.1932***	0.2413***	0.1326***	0.1711***	0.1517***	0.1459***
	[0.004]	[0.020]	[0.009]	[0.006]	[0.004]	[0.004]	[0.018]	[0.004]
District population (millions)	-0.0032*	-0.0215**	-0.0029	0.0009	-0.0040	-0.0061***	0.0011	-0.0072***
	[0.002]	[0.009]	[0.004]	[0.003]	[0.002]	[0.002]	[0.005]	[0.002]
State FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	No	No	Yes	Yes	Yes	Yes	Yes
Number of observations	946,381	20,716	148,639	307,253	288,322	350,806	75,582	870,799
Mean LHS	0.178	0.277	0.362	0.186	0.172	0.176	0.463	0.153
Mean Log gov't bank branches +1 in 1991	3.200	3.452	3.342	3.162	3.144	3.278	3.411	3.181
% effect at mean of branches on mean of LHS	-0.02	-0.10	-0.01	0.00	-0.03	-0.04	0.00	-0.03
% effect at sd of branches on sd of LHS	-0.01	-0.03	0.00	0.00	-0.01	-0.01	0.00	-0.01
				Pan	el B			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
		Sector			nployer educa		Firm	
					Less than			
				Illiterate	primary	Middle school	Employs <= 6	Employs > 6
Variables	All sectors	Manufacturing	Services	individual	schooling	and above	workers	workers
Log (Government Bank Credit in 1991 +1)	-0.0081***	-0.0289**	-0.0047	-0.0068	-0.0113***	-0.0095***	-0.0023	-0.0126***
	[0.002]	[0.013]	[0.006]	[0.005]	[0.003]	[0.002]	[800.0]	[0.003]
Age (in decades)	0.0537***	0.0796***	0.0553***	0.0353***	0.0617***	0.0632***	0.1123***	0.0391***
	[0.001]	[0.006]	[0.003]	[0.001]	[0.002]	[0.002]	[0.004]	[0.001]
Male	0.1893***	0.1388***	0.1930***	0.2413***	0.1321***	0.1708***	0.1518***	0.1451***
	[0.004]	[0.020]	[0.009]	[0.006]	[0.004]	[0.004]	[0.018]	[0.004]
District population (millions)	-0.0010	-0.0145	-0.0014	0.0038	-0.0014	-0.0043**	0.0019	-0.0035
-	[0.002]	[0.009]	[0.005]	[0.004]	[0.003]	[0.002]	[0.006]	[0.003]
State FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	No	No	Yes	Yes	Yes	Yes	Yes
Number of observations	946,381	20,716	148,639	307,253	288,322	350,806	75,582	870,799
Mean LHS	0.178	0.277	0.362	0.186	0.172	0.176	0.463	0.153
Mean Log gov't bank credit +1 in 1991	3.792	4.338	4.117	3.671	3.676	3.992	4.224	3.754
0/ 00	0.00	0.40	0.00	0.00	0.04	0.04	0.04	0.05

-0.02

-0.02

-0.04

-0.04

-0.01

-0.05

-0.13

-0.03

% effect at mean of credit on mean of LHS

# Table 5: Access to Credit and Likelihood of being a Household Firm Worker

Using data from the Employment-Unemployment Survey, this table provides results from a logit specification where the dependent variable is equal to one if the individual is an employee in a household firm. In Panel A, Log (Government Bank Branches in 1991) is the number of government-owned bank branches in a district in 1991; *Age* is the age of the individual in decades; *Male* is the gender; and *District Population* is the population at the district level from 2001. The specification controls for state and industry effects, and standard errors are robust. In Panel B, we use Log (Government Bank Credit) which is the total credit given by government-owned bank branches in that district in 1991. \*\*\*indicates significance at the 1% level; \*\* indicates significance at the 5% level, and \* indicates significance at the 10% level.

bank branches in that district in 1991. Indie	<u> </u>	ce at the 170 leve		Pan				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
		Sector		Em	iployee educat	ion	Firm	size
					Less than	Middle		
				Illiterate	primary	school and	Employs <= 6	Employs > 6
Variables	All sectors	Manufacturing	Services	individual	schooling	above	workers	workers
Log (Government Bank Branches in 1991 +1)	-0.0179***	-0.0194**	-0.0171***	-0.0115	-0.0157***	-0.0253***	-0.0237***	-0.0171***
Log (Government bank branches in 1991 +1)	(0.006)	(0.010)	(0.004)	(0.008)	(0.005)	(0.005)	(0.007)	(0.006)
Aga (in dacadas)	-0.0090***	-0.0303***	-0.0372***	-0.0160***	0.0051***	-0.0214***	-0.0486***	-0.0060***
Age (in decades)	(0.001)	(0.004)	(0.002)	(0.001)	(0.0031)	(0.001)	(0.003)	(0.001)
Male	-0.0304***	-0.2813***	-0.0941***	-0.0965***	-0.0178***	0.0436***	-0.2062***	-0.0227***
Male	(0.004)	(0.026)	(0.010)	(0.006)	(0.004)	(0.004)	(0.013)	(0.004)
District population (millions)	-0.0137***	-0.0131**	-0.0021	-0.0133***	-0.0100***	-0.0136***	-0.0015	-0.0169***
District population (millions)	(0.003)	(0.005)	(0.0021)	(0.005)	(0.003)	(0.003)	(0.003)	(0.004)
State FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	No	No	Yes	Yes	Yes	Yes	Yes
Number of observations	946,381	20,716	148,639	307,253	288,322	350,806	75,582	870,799
Mean LHS	0.124	0.161	0.117	0.154	0.113	0.106	0.148	0.121
	3.792	4.338	4.117	3.671	3.676	3.992	4.224	3.754
Mean Log gov't bank branches +1 in 1991 % effect at mean of branches on mean of LHS	-0.06	-0.07	-0.06	-0.04	-0.05	-0.08	-0.08	-0.05
70 choose de lineam of branches on mean of 200	0.00	0.07	0.00	0.01	0.00	0.00	0.00	0.05
	(1)	(2)	(2)	Pan		(()	(7)	(0)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
		Sector		En	ployee educat	Middle	Firm	size
				Illitomato	Less than		Emmlores 4- (	Employes (
Variables	All goatons	Manufacturing	Compiana	Illiterate	primary	school and	Employs <= 6	Employs > 6
Variables	All sectors	Manufacturing	Services	individual	schooling	above	workers	workers
Log (Government Bank Credit in 1991 +1)	-0.0196***	-0.0249***	-0.0072***	-0.0220***	-0.0148***	-0.0190***	-0.0148***	-0.0205***
	(0.003)	(0.006)	(0.002)	(0.006)	(0.003)	(0.003)	(0.003)	(0.004)
Age (in decades)				(0.000)	(0.000)	(		
rigo (iii docados)	-0.0088***	-0.0296***	-0.0373***	-0.0158***	0.0052***	-0.0211***	-0.0485***	-0.0058***
Tigo (in accaacs)	-0.0088*** (0.001)	, ,	-0.0373*** (0.002)		• •		-0.0485*** (0.003)	-0.0058*** (0.001)
Male		-0.0296***		-0.0158***	0.0052***	-0.0211***		
	(0.001)	-0.0296*** (0.004)	(0.002)	-0.0158*** (0.001)	0.0052*** (0.001)	-0.0211*** (0.001)	(0.003)	(0.001)
	(0.001) -0.0305***	-0.0296*** (0.004) -0.2779***	(0.002) -0.0938***	-0.0158*** (0.001) -0.0963***	0.0052*** (0.001) -0.0181***	-0.0211*** (0.001) 0.0432***	(0.003) -0.2051***	(0.001) -0.0231***
Male	(0.001) -0.0305*** (0.004)	-0.0296*** (0.004) -0.2779*** (0.026)	(0.002) -0.0938*** (0.010)	-0.0158*** (0.001) -0.0963*** (0.006)	0.0052*** (0.001) -0.0181*** (0.004)	-0.0211*** (0.001) 0.0432*** (0.004)	(0.003) -0.2051*** (0.013)	(0.001) -0.0231*** (0.004)
Male	(0.001) -0.0305*** (0.004) -0.0084**	-0.0296*** (0.004) -0.2779*** (0.026) -0.0054	(0.002) -0.0938*** (0.010) -0.0024	-0.0158*** (0.001) -0.0963*** (0.006) -0.0050	0.0052*** (0.001) -0.0181*** (0.004) -0.0068**	-0.0211*** (0.001) 0.0432*** (0.004) -0.0102***	(0.003) -0.2051*** (0.013) 0.0001	(0.001) -0.0231*** (0.004) -0.0109***
Male  District population (millions)	(0.001) -0.0305*** (0.004) -0.0084** (0.004)	-0.0296*** (0.004) -0.2779*** (0.026) -0.0054 (0.006)	(0.002) -0.0938*** (0.010) -0.0024 (0.002)	-0.0158*** (0.001) -0.0963*** (0.006) -0.0050 (0.005)	0.0052*** (0.001) -0.0181*** (0.004) -0.0068** (0.003)	-0.0211*** (0.001) 0.0432*** (0.004) -0.0102*** (0.003)	(0.003) -0.2051*** (0.013) 0.0001 (0.003)	(0.001) -0.0231*** (0.004) -0.0109*** (0.004)
Male  District population (millions)  State FE	(0.001) -0.0305*** (0.004) -0.0084** (0.004) Yes	-0.0296*** (0.004) -0.2779*** (0.026) -0.0054 (0.006) Yes	(0.002) -0.0938*** (0.010) -0.0024 (0.002) Yes	-0.0158*** (0.001) -0.0963*** (0.006) -0.0050 (0.005) Yes	0.0052*** (0.001) -0.0181*** (0.004) -0.0068** (0.003) Yes	-0.0211*** (0.001) 0.0432*** (0.004) -0.0102*** (0.003) Yes	(0.003) -0.2051*** (0.013) 0.0001 (0.003) Yes	(0.001) -0.0231*** (0.004) -0.0109*** (0.004) Yes
Male  District population (millions)  State FE Industry FE	(0.001) -0.0305*** (0.004) -0.0084** (0.004) Yes Yes	-0.0296*** (0.004) -0.2779*** (0.026) -0.0054 (0.006) Yes No	(0.002) -0.0938*** (0.010) -0.0024 (0.002) Yes No	-0.0158*** (0.001) -0.0963*** (0.006) -0.0050 (0.005) Yes Yes	0.0052*** (0.001) -0.0181*** (0.004) -0.0068** (0.003) Yes Yes	-0.0211*** (0.001) 0.0432*** (0.004) -0.0102*** (0.003) Yes Yes	(0.003) -0.2051*** (0.013) 0.0001 (0.003) Yes Yes	(0.001) -0.0231*** (0.004) -0.0109*** (0.004) Yes Yes
Male  District population (millions)  State FE Industry FE Number of observations	(0.001) -0.0305*** (0.004) -0.0084** (0.004) Yes Yes 0.124	-0.0296*** (0.004) -0.2779*** (0.026) -0.0054 (0.006) Yes No 0.161	(0.002) -0.0938*** (0.010) -0.0024 (0.002) Yes No 0.117	-0.0158*** (0.001) -0.0963*** (0.006) -0.0050 (0.005) Yes Yes 0.154	0.0052*** (0.001) -0.0181*** (0.004) -0.0068** (0.003) Yes Yes 0.113	-0.0211*** (0.001) 0.0432*** (0.004) -0.0102*** (0.003) Yes Yes 0.106	(0.003) -0.2051*** (0.013) 0.0001 (0.003) Yes Yes 0.148	(0.001) -0.0231*** (0.004) -0.0109*** (0.004) Yes Yes 0.121

# Table 6: Access to Credit and Likelihood of being a Formal Sector Firm Employee

Using data from the Employment-Unemployment Survey, this table provides results from a logit specification where the dependent variable is equal to one if the individual is an employee in a formal sector firm. In Panel A, *Log (Government Bank Branches in 1991)* is the number of government-owned bank branches in a district in 1991; *Age* is the age of the individual in decades; *Male* is the gender; and *District Population* is the population at the district level from 2001. The specification controls for state and industry effects, and standard errors are robust. In Panel B, we use Log (*Government Bank Credit*) which is the total credit given by government-owned bank branches in that district in 1991. \*\*\*indicates significance at the 1% level; \*\* indicates significance at the 5% level, and \* indicates significance at the 10% level.

				Pane	el A			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	(-)	Sector	(-)		iployee educa		Firm	
					<u> </u>			
					Less than			
				Illiterate	primary	Middle school	Employs <= 6	Employs > 6
Variables	All sectors	Manufacturing	Services	individual	schooling	and above	workers	workers
Log (Government Bank Branches in 1991 +1)	0.0083**	0.0794*	0.0087	0.0091**	0.0088*	0.0203***	-0.0055	0.0073***
	(0.003)	(0.041)	(0.015)	(0.004)	(0.005)	(800.0)	(0.013)	(0.003)
Age (in decades)	0.0115***	0.0044	0.0335***	-0.0013***	0.0091***	0.0566***	-0.0093**	0.0093***
	(0.001)	(0.010)	(0.005)	0.000	(0.001)	(0.002)	(0.004)	(0.001)
Male	0.0550***	0.1627***	-0.1315***	0.0248***	0.0442***	0.1327***	-0.0355***	0.0448***
	(0.004)	(0.022)	(0.013)	(0.002)	(0.003)	(0.006)	(0.010)	(0.004)
District population (millions)	0.0073***	0.0390*	0.0167**	0.0026	0.0079***	0.0210***	0.0144*	0.0050***
	(0.002)	(0.023)	(800.0)	(0.002)	(0.003)	(0.004)	(0.008)	(0.002)
State FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	No	No	Yes	Yes	Yes	Yes	Yes
Number of observations	946,381	20,716	148,639	307,253	288,322	350,806	75,582	870,799
Mean LHS	0.0962	0.360	0.430	0.0458	0.0672	0.164	0.207	0.0866
Mean Log gov't bank branches +1 in 1991	3.200	3.452	3.342	3.162	3.143	3.279	3.411	3.181
% effect at mean of branches on mean of LHS	0.03	0.27	0.03	0.03	0.03	0.07	-0.02	0.02
				Pan	el B			
	(1)	(2)	(3)	Pano (4)	el B (5)	(6)	(7)	(8)
	(1)	(2) Sector	(3)	(4)			(7) Firm	
	(1)		(3)	(4)	(5) iployee educa			
	(1)		(3)	(4) Em	(5) aployee educa Less than	tion	Firm	ı size
		Sector		(4) Em	(5) aployee educa Less than primary	tion  Middle school	Firm  Employs <= 6	Employs > 6
Variables	(1) All sectors		(3) Services	(4) Em	(5) aployee educa Less than	tion	Firm	ı size
		Sector		(4) Em	(5) aployee educa Less than primary	tion  Middle school	Firm  Employs <= 6	Employs > 6
Variables	All sectors	Sector  Manufacturing  0.0660***	Services	(4) Em Illiterate individual	(5) uployee educa  Less than primary schooling	Middle school and above	Employs <= 6 workers	Employs > 6 workers 0.0059***
Variables  Log (Government Bank Credit in 1991 +1)	All sectors 0.0073***	Sector Manufacturing	Services 0.0092	(4) Em  Illiterate individual  0.0072***	(5) uployee educa  Less than primary schooling  0.0088***	Middle school and above 0.0175***	Employs <= 6 workers  0.0028	Employs > 6 workers
Variables	All sectors 0.0073*** (0.002)	Sector  Manufacturing  0.0660*** (0.020)	Services 0.0092 (0.008)	Illiterate individual  0.0072*** (0.002)	(5) Exployee educa Less than primary schooling  0.0088*** (0.002)	Middle school and above  0.0175*** (0.004)	Employs <= 6 workers  0.0028 (0.008)	Employs > 6 workers 0.0059*** (0.001) 0.0092***
Variables  Log (Government Bank Credit in 1991 +1)	All sectors  0.0073*** (0.002) 0.0114***	Sector  Manufacturing  0.0660*** (0.020) 0.0033	Services  0.0092 (0.008) 0.0335***	(4) Em  Illiterate individual  0.0072*** (0.002) -0.0014***	(5) aployee educa Less than primary schooling  0.0088*** (0.002) 0.0089***	Middle school and above  0.0175*** (0.004) 0.0563***	Employs <= 6 workers  0.0028 (0.008) -0.0094**	Employs > 6 workers 0.0059*** (0.001)
Variables  Log (Government Bank Credit in 1991 +1)  Age (in decades)	All sectors  0.0073*** (0.002) 0.0114*** (0.001)	Sector  Manufacturing  0.0660*** (0.020) 0.0033 (0.010)	0.0092 (0.008) 0.0335*** (0.005)	(4) Em  Illiterate individual  0.0072*** (0.002) -0.0014*** 0.000	(5) Inployee educa  Less than primary schooling  0.0088*** (0.002) 0.0089*** (0.001)	Middle school and above  0.0175*** (0.004) 0.0563*** (0.002)	Employs <= 6 workers  0.0028 (0.008) -0.0094** (0.004)	Employs > 6 workers 0.0059*** (0.001) 0.0092*** (0.001)
Variables  Log (Government Bank Credit in 1991 +1)  Age (in decades)	0.0073*** (0.002) 0.0114*** (0.001) 0.0551***	Sector  Manufacturing  0.0660*** (0.020) 0.0033 (0.010) 0.1634***	Services  0.0092 (0.008) 0.0335*** (0.005) -0.1313***	(4) Em  Illiterate individual  0.0072*** (0.002) -0.0014*** 0.000 0.0247***	(5) hployee educa  Less than primary schooling  0.0088*** (0.002) 0.0089*** (0.001) 0.0440***	Middle school and above  0.0175*** (0.004) 0.0563*** (0.002) 0.1330***	Employs <= 6 workers  0.0028 (0.008) -0.0094** (0.004) -0.0354***	Employs > 6 workers 0.0059*** (0.001) 0.0092*** (0.001) 0.0450***
Variables  Log (Government Bank Credit in 1991 +1)  Age (in decades)  Male	0.0073*** (0.002) 0.0114*** (0.001) 0.0551*** (0.004)	Sector  Manufacturing  0.0660*** (0.020) 0.0033 (0.010) 0.1634*** (0.023)	0.0092 (0.008) 0.0335*** (0.005) -0.1313*** (0.013)	(4) Em  Illiterate individual  0.0072*** (0.002) -0.0014*** 0.000 0.0247*** (0.002)	(5) Inployee educa  Less than primary schooling  0.0088*** (0.002) 0.0089*** (0.001) 0.0440*** (0.003)	Middle school and above  0.0175*** (0.004) 0.0563*** (0.002) 0.1330*** (0.006)	Employs <= 6 workers  0.0028 (0.008) -0.0094** (0.004) -0.0354*** (0.010)	Employs > 6 workers 0.0059*** (0.001) 0.0092*** (0.001) 0.0450*** (0.003)
Variables  Log (Government Bank Credit in 1991 +1)  Age (in decades)  Male	0.0073*** (0.002) 0.0114*** (0.001) 0.0551*** (0.004) 0.0057**	Sector  Manufacturing  0.0660*** (0.020) 0.0033 (0.010) 0.1634*** (0.023) 0.0255	0.0092 (0.008) 0.0335*** (0.005) -0.1313*** (0.013) 0.0144*	(4) Em  Illiterate individual  0.0072*** (0.002) -0.0014*** 0.000 0.0247*** (0.002) 0.0012	(5) Inployee educa Less than primary schooling  0.0088*** (0.002) 0.0089*** (0.001) 0.0440*** (0.003) 0.0057**	Middle school and above  0.0175*** (0.004) 0.0563*** (0.002) 0.1330*** (0.006) 0.0172***	Employs <= 6 workers  0.0028 (0.008) -0.0094** (0.004) -0.0354*** (0.010) 0.012	Employs > 6 workers 0.0059*** (0.001) 0.0092*** (0.001) 0.0450*** (0.003) 0.0038***
Variables  Log (Government Bank Credit in 1991 +1)  Age (in decades)  Male  District population (millions)	0.0073*** (0.002) 0.0114*** (0.001) 0.0551*** (0.004) 0.0057** -0.002	Sector  Manufacturing  0.0660*** (0.020) 0.0033 (0.010) 0.1634*** (0.023) 0.0255 -0.022	Services  0.0092 (0.008) 0.0335*** (0.005) -0.1313*** (0.013) 0.0144* -0.008	(4) Em  Illiterate individual  0.0072*** (0.002) -0.0014*** 0.000 0.0247*** (0.002) 0.0012 -0.002	(5) Inployee educa  Less than primary schooling  0.0088*** (0.002) 0.0089*** (0.001) 0.0440*** (0.003) 0.0057** -0.003	Middle school and above  0.0175*** (0.004) 0.0563*** (0.002) 0.1330*** (0.006) 0.0172*** -0.004	Employs <= 6 workers  0.0028 (0.008) -0.0094** (0.004) -0.0354*** (0.010) 0.012 -0.008	Employs > 6 workers 0.0059*** (0.001) 0.0092*** (0.001) 0.0450*** (0.003) 0.0038*** -0.001
Variables  Log (Government Bank Credit in 1991 +1)  Age (in decades)  Male  District population (millions)  State FE	0.0073*** (0.002) 0.0114*** (0.001) 0.0551*** (0.004) 0.0057** -0.002 Yes	Sector  Manufacturing  0.0660*** (0.020) 0.0033 (0.010) 0.1634*** (0.023) 0.0255 -0.022 Yes	0.0092 (0.008) 0.0335*** (0.005) -0.1313*** (0.013) 0.0144* -0.008 Yes	(4) Em  Illiterate individual  0.0072*** (0.002) -0.0014*** 0.000 0.0247*** (0.002) 0.0012 -0.002 Yes	(5) Inployee educa  Less than primary schooling  0.0088*** (0.002) 0.0089*** (0.001) 0.0440*** (0.003) 0.0057** -0.003 Yes	Middle school and above  0.0175*** (0.004) 0.0563*** (0.002) 0.1330*** (0.006) 0.0172*** -0.004 Yes	Employs <= 6 workers  0.0028 (0.008) -0.0094** (0.004) -0.0354*** (0.010) 0.012 -0.008 Yes	Employs > 6 workers  0.0059*** (0.001) 0.0092*** (0.001) 0.0450*** (0.003) 0.0038*** -0.001 Yes
Variables  Log (Government Bank Credit in 1991 +1)  Age (in decades)  Male  District population (millions)  State FE Industry FE	0.0073*** (0.002) 0.0114*** (0.001) 0.0551*** (0.004) 0.0057** -0.002 Yes Yes	Sector  Manufacturing  0.0660*** (0.020) 0.0033 (0.010) 0.1634*** (0.023) 0.0255 -0.022 Yes No	0.0092 (0.008) 0.0335*** (0.005) -0.1313*** (0.013) 0.0144* -0.008 Yes No	(4) Em  Illiterate individual  0.0072*** (0.002) -0.0014*** 0.000 0.0247*** (0.002) 0.0012 -0.002 Yes Yes	(5) Inployee educa Less than primary schooling  0.0088*** (0.002) 0.0089*** (0.001) 0.0440*** (0.003) 0.0057** -0.003 Yes Yes	Middle school and above  0.0175*** (0.004) 0.0563*** (0.002) 0.1330*** (0.006) 0.0172*** -0.004 Yes Yes	Employs <= 6 workers  0.0028 (0.008) -0.0094** (0.004) -0.0354*** (0.010) 0.012 -0.008 Yes Yes	Employs > 6 workers 0.0059*** (0.001) 0.0092*** (0.001) 0.0450*** (0.003) 0.0038*** -0.001 Yes Yes
Variables  Log (Government Bank Credit in 1991 +1)  Age (in decades)  Male  District population (millions)  State FE Industry FE Number of observations	All sectors  0.0073*** (0.002) 0.0114*** (0.001) 0.0551*** (0.004) 0.0057** -0.002 Yes Yes 946,381	Sector  Manufacturing  0.0660*** (0.020) 0.0033 (0.010) 0.1634*** (0.023) 0.0255 -0.022 Yes No 20,716	Services  0.0092 (0.008) 0.0335*** (0.005) -0.1313*** (0.013) 0.0144* -0.008 Yes No 148,639	(4) Em  Illiterate individual  0.0072*** (0.002) -0.0014*** 0.000 0.0247*** (0.002) 0.0012 -0.002 Yes Yes Yes 307,253	(5) Inployee educa  Less than primary schooling  0.0088*** (0.002) 0.0089*** (0.001) 0.0440*** (0.003) 0.0057** -0.003 Yes Yes 288,322	Middle school and above  0.0175*** (0.004) 0.0563*** (0.002) 0.1330*** (0.006) 0.0172*** -0.004 Yes Yes Yes 350,806	Employs <= 6 workers  0.0028 (0.008) -0.0094** (0.004) -0.0354*** (0.010) 0.012 -0.008 Yes Yes 75,582	Employs > 6 workers  0.0059*** (0.001) 0.0092*** (0.001) 0.0450*** (0.003) 0.0038*** -0.001 Yes Yes 870,799

## Table 7: Access to credit and likelihood of being a formal sector firm part-time employee

Using data from the Employment-Unemployment Survey, this table provides results from a logit specification where the dependent variable is equal to one if the individual is an employee in a formal sector firm. In Panel A, *Log (Government Bank Branches in 1991)* is the number of government-owned bank branches in a district in 1991; *Age* is the age of the individual in decades; *Male* is the gender; and *District Population* is the population at the district level from 2001. The specification controls for state and industry effects, and standard errors are robust. In Panel B, we use Log (*Government Bank Credit*) which is the total credit given by government-owned bank branches in that district in 1991. \*\*\*indicates significance at the 1% level; \*\* indicates significance at the 5% level, and \* indicates significance at the 10% level.

icvei.				Par	nel A			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
		Sector			mployee educa			n size
					Less than	Middle		
				Illiterate	primary	school and	Employs <= 6	Employs > 6
Variables	All sectors	Manufacturing	Services	individual	schooling	above	workers	workers
variables	All sectors	Manufacturing	Scrvices	murriduai	Schooling	above	WOLKETS	WOLKETS
Log (Government Bank Branches in 1991 +1)	0.0078	0.0169	0.0137***	0.0105	0.0074	0.0019	0.0353***	0.0039
,	(800.0)	(0.021)	(0.005)	(0.013)	(0.010)	(0.005)	(0.009)	(0.008)
Age (in decades)	-0.0039***	-0.0449***	-0.0223***	-0.0239***	0.0184***	-0.0087***	-0.0407***	-0.0007
	(0.001)	(0.006)	(0.002)	(0.002)	(0.001)	(0.001)	(0.003)	(0.001)
Male	0.1330***	0.0453***	0.0113**	0.2045***	0.1252***	0.0837***	0.0811***	0.1364***
	(0.005)	(0.013)	(0.004)	(0.009)	(0.006)	(0.004)	(0.007)	(0.006)
District population (millions)	-0.0115*	-0.0104	-0.0068**	-0.0149*	-0.0098	-0.0099***	-0.0145**	-0.0100*
	(0.006)	(0.011)	(0.003)	(0.008)	(0.007)	(0.004)	(0.006)	(0.006)
State FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	No	No	Yes	Yes	Yes	Yes	Yes
Number of observations	946,381	20,716	148,639	307,253	288,322	350,806	75,582	870,799
Mean LHS	0.111	0.192	0.0850	0.181	0.105	0.0537	0.167	0.106
Mean Log gov't bank branches +1 in 1991	3.200	3.452	3.342	3.162	3.143	3.279	3.411	3.181
% effect at mean of branches on mean of LHS	0.0248	0.0585	0.0457	0.0332	0.0232	0.00612	0.120	0.0123
				Pa	nel B			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
		Sector			mployee educa			n size
					Less than	Middle		
				Illiterate	primary	school and	Employs <= 6	Employs > 6
Variables	All sectors	Manufacturing	Services	individual	schooling	above	workers	workers
Log (Government Bank Credit in 1991 +1)	0.0022	0.0087	0.0042*	0.0037	0.0028	-0.0022	0.0159***	0.0005
	(0.005)	(0.012)	(0.002)	(0.009)	(0.006)	(0.003)	(0.005)	(0.006)
Age (in decades)	-0.0039***	-0.0449***	-0.0223***	-0.0239***	0.0184***	-0.0086***	-0.0407***	-0.0007
	(0.001)	(0.006)	(0.002)	(0.002)	(0.001)	(0.001)	(0.003)	(0.001)
Male	0.1330***	0.0452***	0.0111**	0.2046***	0.1252***	0.0836***	0.0808***	0.1363***
	-0.005	-0.013	-0.004	-0.009	-0.006	-0.004	-0.007	-0.006
District population (millions)	-0.0109*	-0.0108	-0.0059**	-0.0142*	-0.0095	-0.0085**	-0.0142**	-0.0094
	(0.006)	(0.012)	(0.003)	(800.0)	(0.007)	(0.004)	(0.007)	(0.006)
State FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	No	No	Yes	Yes	Yes	Yes	Yes
Number of observations	946,381	20,716	148,639	307,253	288,322	350,806	75,582	870,799
Mean LHS	0.111	0.192	0.0850	0.181	0.105	0.0537	0.167	0.106
Mean Log gov't bank credit +1 in 1991	3.792	4.338	4.117	3.671	3.676	3.992	4.224	3.754
% effect at mean of credit on mean of LHS	0.00824	0.0378	0.0172	0.0136	0.0103	-0.00863	0.0670	0.00197

# Table 8: Wages and access to credit

Using data from the Employment-Unemployment Survey, this table provides results from an OLS specification where the dependent variable is the log of Wages, or annual compensation. In Panel A, Log (Government Bank Branches in 1991) is the number of government-owned bank branches in a district in 1991; Age is the age of the individual in decades; Male is the gender; and District Population is the population at the district level from 2001. The specification controls for state and industry effects, and standard errors are robust. In Panel B, we use Log (Government Bank Credit) which is the total credit given by government-owned bank branches in that district in 1991. \*\*\*indicates significance at the 1% level; \*\* indicates significance at the 5% level, and \* indicates significance at the 10% level.

						Panel	A					
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
		Sector		Eı	mployee educat	ion	Firm	ı size	HH ent	erprise	Formal	sector
					less than	_						_
				Illiterate	primary	Middle school	Employs <= 6	Employs > 6			Full time	Casual
Variables	All sectors	Manufacturing	Services	individual	schooling	and above	workers	workers	Employer	Employee	employee	employee
Log (Government Bank Branches in 1991 +1)	0.1252***	0.1210***	0.1057***	0.0857***	0.1182***	0.1608***	0.0877***	0.1281***	0.0600	0.1218**	0.1560***	0.0730***
Log (Government bank branches in 1991 +1)												
	(0.025)	(0.041)	(0.032)	(0.030)	(0.034)	(0.032)	(0.030)	(0.028)	(0.052)	(0.061)	(0.036)	(0.028)
Age (in decades)	0.1320***	0.1858***	0.2673***	0.0188***	0.1194***	0.3938***	0.1704***	0.1207***	0.0100	0.0301*	0.3021***	0.0150***
	(0.006)	(0.017)	(800.0)	(0.005)	(800.0)	(0.011)	(800.0)	(0.007)	(0.019)	(0.016)	(0.009)	(0.004)
Male	0.4024***	0.3760***	0.3886***	0.4190***	0.4334***	0.2047***	0.5187***	0.3714***	0.3052***	0.4030***	0.3833***	0.4545***
	(0.013)	(0.057)	(0.029)	(0.015)	(0.035)	(0.028)	(0.034)	(0.014)	(0.060)	(0.051)	(0.043)	(0.015)
District population (millions)	0.0228***	-0.0116	0.0001	0.0350**	0.0413***	0.0205**	0.0005	0.0270***	0.0599***	0.0448	0.0002	0.0301**
	(800.0)	(0.012)	(0.009)	(0.016)	(0.010)	(0.009)	(0.010)	(800.0)	(0.020)	(0.032)	(0.012)	(0.015)
Constant	9.2406***	8.5370***	8.6759***	9.9021***	9.5469***	9.0282***	8.4404***	9.2513***	9.1966***	7.4890***	9.0300***	9.8574***
	(0.104)	(0.194)	(0.117)	(0.106)	(0.134)	(0.120)	(0.050)	(0.109)	(0.113)	(0.120)	(0.118)	(0.097)
State FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Number of observations	167,902	10,307	70,790	56,692	42,562	68,648	22,842	145,060	1,285	838	85,070	80,709
Mean LHS	9.782	9.920	10.28	9.292	9.632	10.28	9.775	9.783	8.510	8.265	10.30	9.276
Mean Log gov't bank branches +1 in 1991	3.357	3.549	3.352	3.318	3.307	3.420	3.419	3.347	3.160	3.223	3.395	3.322
% effect at mean of branches on mean of LHS	0.0430	0.0433	0.0345	0.0306	0.0406	0.0535	0.0307	0.0438	0.0223	0.0475	0.0514	0.0261
% effect at sd of branches on sd of LHS	0.108	0.119	0.101	0.0827	0.118	0.147	0.0846	0.109	0.0734	0.155	0.145	0.0842

Table 8 Panel B

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	(1)	Sector	(3)		iployee education		Firm		HH ente		Formal s	
		300001			Literate with					, prioc	1 01 11101 0	
					less than							
				Illiterate	primary	Middle school	Employs <= 6	Employs > 6			Full time	Casual
Variables	All sectors	Manufacturing	Services	individual	schooling	and above	workers	workers	Employer	Employee	employee	employee
Log (Government Bank Credit in 1991 +1)	0.0812***	0.0555**	0.0532***	0.0776***	0.0843***	0.0916***	0.0402**	0.0899***	0.0757***	0.0352	0.0757***	0.0699***
208 (0010111110110 201111 01 00110 111 127 1 1 1 )	(0.018)	(0.025)	(0.019)	(0.019)	(0.021)	(0.020)	(0.017)	(0.021)	(0.027)	(0.029)	(0.022)	(0.019)
Age (in decades)	0.1313***	0.1867***	0.2673***	0.0181***	0.1186***	0.3934***	0.1707***	0.1196***	0.0102	0.0299*	0.3024***	0.0149***
	(0.006)	(0.017)	(0.008)	(0.005)	(0.008)	(0.011)	(0.008)	(0.007)	(0.019)	(0.017)	(0.009)	(0.004)
Male	0.4032***	0.3757***	0.3892***	0.4195***	0.4351***	0.2068***	0.5186***	0.3726***	0.3121***	0.4015***	0.3837***	0.4535***
	(0.013)	(0.057)	(0.029)	(0.015)	(0.035)	(0.029)	(0.033)	(0.014)	(0.060)	(0.051)	(0.043)	(0.015)
District population (millions)	0.0122	-0.014	-0.0035	0.0187	0.0288**	0.0104	-0.0003	0.0137	0.0415**	0.0592**	-0.0046	0.0148
	(0.010)	(0.014)	(0.011)	(0.016)	(0.012)	(0.012)	(0.011)	(0.011)	(0.020)	(0.028)	(0.016)	(0.016)
Constant	9.3242***	8.6615***	8.7747***	9.9183***	9.6031***	9.1442***	8.4399***	9.3244***	9.2011***	7.5886***	9.1790***	9.8627***
	(0.100)	(0.185)	(0.104)	(0.094)	(0.123)	(0.112)	(0.050)	(0.106)	(0.105)	(0.096)	(0.105)	(0.090)
State FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Number of observations	167,902	10,307	70,790	56,692	42,562	68,648	22,842	145,060	1,285	838	85,070	80,709
Mean LHS	9.782	9.92	10.28	9.292	9.632	10.28	9.775	9.783	8.51	8.265	10.3	9.276
Mean Log gov't bank branches +1 in 1991	4.104	4.634	4.181	3.927	4.003	4.313	4.282	4.076	3.595	3.706	4.3	3.91
% effect at mean of credit on mean of LHS	0.0341	0.0259	0.0216	0.0328	0.035	0.0384	0.0176	0.0375	0.032	0.0158	0.0316	0.0295
% effect at sd of credit on sd of LHS	0.119	0.0939	0.0881	0.122	0.14	0.145	0.0682	0.129	0.135	0.0659	0.124	0.126

Table 9: Access to credit and likelihood of being unemployed or being a student

Using data from the Employment-Unemployment Survey, this table provides results from a logit specification where the dependent variables in columns (1) and (2) is equal to one if the individual is unemployed, and in columns (3) and (4) the dependent variable is equal to one if the individual is enrolled in an educational institution. *Log (Government Bank Branches in 1991)* is the number of government-owned bank branches in a district in 1991;I Log (*Government Bank Credit*) is the total credit given by government-owned bank branches in that district in 1991. *Age* is the age of the individual in decades; *Male* is the gender; and *District Population* is the population at the district level from 2001. The specification controls for state and industry effects, and standard errors are robust. \*\*\*indicates significance at the 1% level; \*\* indicates significance at the 5% level, and \* indicates significance at the 10% level.

	(1)	(2)	(3)	(4)
	Unem	oloyed	0.0070** (0.003) 3 (*** -0.0996*** (0.002) (*** 0.0026 (1) (0.002) (0.001) (0.	ent
Log (Government Bank Branches in 1991 +1)	0.0011 (0.001)			
Log (Government Bank Credit in 1991 +1)	(****-)	0.0003	(0.000)	0.0057***
		0.000		(0.002)
Age (in decades)	-0.0036***	-0.0036***	-0.0996***	-0.0996***
	0.000	0.000	(0.002)	(0.002)
Male	0.0082***	0.0082***	0.0026	0.0027
	(0.001)	(0.001)	(0.002)	(0.002)
District population (millions)	-0.0004	-0.0003	-0.0009	-0.0020
	(0.001)	0.000	(0.001)	(0.001)
State FE	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes
Number of observations	946,381	946,381	946380	946380
Mean LHS	0.0279	0.0279	0.181	0.181
Mean Log gov't bank branches +1 in 1991	3.200	3.792	3.200	3.792
% effect at mean of RHS on mean of LHS	0.00346	0.00112	0.123	0.119
% effect at sd of RHS on sd of LHS	0.000998	0.000438	0.0167	0.0221

<sup>\*\*\*</sup> p<0.01, \*\* p<0.05, \* p<0.10

#### **Table 10: Access to Credit for Women and Minorities**

Using data from the Employment-Unemployment Survey, Panel A provides results from a logit specification where the dependent variables in columns (1-6) is equal to one if the individual is self-employed or an employer in a household firm and in columns (7-12) is equal to one if the individual is employed in a household firm; Panel B provides results from a logit specification in columns (1-6) where the dependent variable is equal to one if the individual is employed in the formal sector; and a a linear specification in columns (7-12) where the dependent variable is log (wages), Panel D provides results from a logit specification where the dependent variable in columns (1-6) is equal to one if the individual is enrolled in an educational institution and in columns (7-12) is equal to one if the individual is unemployed. Scheduled Tribes, Scheduled Caste, and Other Backward Caste capture population sub-groups that belong to lower castes, Other captures individuals belonging to upper castes. Log (Government Bank Branches in 1991) is the number of government-owned bank branches in a district in 1991;I Log (Government Bank Credit) is the total credit given by government-owned bank branches in that district in 1991. Age is the age of the individual in decades; Male is the gender; and District Population at the district level from 2001. The specification controls for state and industry effects, and standard errors are robust. \*\*\*indicates significance at the 1% level; \*\* indicates significance at the 5% level, and \* indicates significance at the 10% level.

				Panel	A							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
		]	Household Ei	nterprise Bos	SS			Н	ousehold Ent	erprise Worl	ker	
			Other						Other			
	Scheduled	Scheduled	Backward				Scheduled	Scheduled	Backward	Forward		
	Tribe	Caste	Caste	Other	Women	Men	Tribe	Caste	Caste	Caste	Women	Men
Log (Government Bank Branches in 1991 +1)	0.0144	-0.0029	-0.0056	-0.0158***	-0.0017	-0.0125**	-0.0065	-0.0172***	-0.0228***	-0.0177***	-0.0175*	-0.0195***
	(0.012)	(0.005)	(0.005)	(0.005)	(0.005)	(0.006)	(0.012)	(0.006)	(0.008)	(0.007)	(0.009)	(0.004)
Age (in decades)	0.0545***	0.0362***	0.0593***	0.0561***	0.0152***	0.1013***	-0.0139***	-0.0043***	-0.0077***	-0.0118***	0.0130***	-0.0222***
	(0.002)	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)	(0.002)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Male	0.1954***	0.1153***	0.2087***	0.2159***			-0.1116***	-0.0377***	-0.0376***	0.0021		
	(0.009)	(0.006)	(0.006)	(0.006)			(0.009)	(0.005)	(0.006)	(0.005)		
District population (millions)	-0.0065	-0.0009	-0.0028	-0.0035	-0.0001	-0.0067**	-0.0230***	-0.0029	-0.0104**	-0.0161***	-0.0209***	-0.0083***
	(0.007)	(0.003)	(0.004)	(0.002)	(0.002)	(0.003)	(0.007)	(0.003)	(0.005)	(0.003)	(0.005)	(0.002)
State FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Number of observations	109,801	150,661	332,675	352,936	449,048	497,333	109,801	150,661	332,675	352,936	449,048	497,333
Mean LHS	0.198	0.138	0.183	0.184	0.122	0.229	0.172	0.0883	0.136	0.112	0.131	0.117
Mean Log gov't bank branches +1 in 1991	2.538	3.327	3.206	3.345	3.197	3.202	2.538	3.327	3.206	3.345	3.197	3.202
% effect at mean of RHS on mean of LHS	0.0364	-0.00959	-0.0178	-0.0529	-0.00532	-0.04	-0.0165	-0.0572	-0.0732	-0.0592	-0.056	-0.0626

Table 10 Panel B

				rable 1	lu Panei B							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
			Formal sector	or employee					Wa	iges		
			Other						Other			
	Scheduled	Scheduled	Backward				Scheduled	Scheduled	Backward	Forward		
	Tribe	Caste	Caste	Other	Women	Men	Tribe	Caste	Caste	Caste	Women	Men
Log (Government Bank Branches in 1991 +1)	0.0003	0.0111**	0.0064*	0.0108**	0.0074**	0.0325***	0.0055	0.1348***	0.1138***	0.1616***	0.0922*	0.2077***
	[0.004]	[0.005]	[0.003]	[0.006]	[0.003]	[0.010]	[0.063]	[0.032]	[0.035]	[0.029]	[0.048]	[0.032]
Age (in decades)	0.0097***	0.0109***	0.0094***	0.0151***	0.0026***	0.0222***	0.0772***	0.0861***	0.1233***	0.1923***	0.0554***	0.1708***
	[0.001]	[0.001]	[0.001]	[0.001]	[0.000]	[0.001]	[0.011]	[0.007]	[0.007]	[0.009]	[0.007]	[0.007]
Male	0.0197***	0.0335***	0.0410***	0.0925***			0.2905***	0.3861***	0.4580***	0.4065***		
	[0.004]	[0.003]	[0.003]	[0.007]			[0.034]	[0.018]	[0.018]	[0.021]		
District population (millions)	0.0031**	0.0051	0.0076***	0.0100***	0.0042***	0.0212***	0.0158	0.0217	0.0254*	0.0171**	0.0915***	0.0411***
	[0.001]	[0.003]	[0.002]	[0.003]	[0.002]	[0.006]	[0.019]	[0.014]	[0.014]	[0.009]	[0.022]	[0.010]
State FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Number of observations	109,801	150,661	332,675	352,936	449,048	497,333	19,112	36,790	55,236	56,728	57,291	110,611
Mean LHS	0.0779	0.0837	0.0816	0.121	0.0616	0.127	9.721	9.494	9.635	10.13	9.609	9.871
Mean Log gov't bank branches +1 in 1991	2.538	3.327	3.206	3.345	3.197	3.202	2.781	3.428	3.368	3.495	3.349	3.361
% effect at mean of RHS on mean of LHS	0.000642	0.037	0.0206	0.0362	0.0235	0.104	0.00157	0.0487	0.0398	0.0557	0.0321	0.0707

Table 10 Panel C

	(1)	(2)	(3)	(4)	(5)	(6)
_			Student			
			Other			
		Scheduled	Backward			
	Scheduled Tribe	Caste	Caste	Other	Women	Men
Log (Government Bank Branche	0.0022	-0.001	0.002	0.0147***	0.0118***	0.0084*
zog (dovernment zami zranene	(0.007)	(0.005)	(0.004)	(0.005)	(0.004)	(0.005)
Age (in decades)	-0.0756***	-0.0802***	-0.0946***	-0.1215***	,	-0.1302***
	(0.003)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Male	0.0031	-0.0035	0.0048	0.0070**		
	(0.004)	(0.003)	(0.003)	(0.003)		
District population (millions)	-0.0011	-0.0025	-0.0005	-0.0004	0.0038**	-0.0011
	(0.003)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
State FE	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Number of observations	109,801	150,661	332,675	352,936	449,048	497,333
Mean LHS	0.184	0.161	0.173	0.198	0.174	0.188
Mean Log gov't bank branches	2.538	3.327	3.206	3.345	3.197	3.202
% effect at mean of RHS on mea	0.0305	-0.0212	0.0371	0.248	0.217	0.144

**Table 11: Access to Credit and Firm loans** 

Using data from the Service Sector survey, this table provides results from a OLS specification where the dependent variable is the log of *Loans* at the firm level. In Panel A, Log (*Government Bank Branches in 1991*) is the number of government-owned bank branches in a district in 1991. The specification controls for the interaction of employer-friendly labor regulations and a time dummy, district popoluation, and time, state and industry effects; standard errors are clustered at the district level. In Panel B, we use Log (*Government Bank Credit*) which is the total credit given by government-owned bank branches in that district in 1991. \*\*\*indicates significance at the 1% level; \*\* indicates significance at the 5% level, and \* indicates significance at the 10% level.

marcaces significance at the 10 // leven			Panel A		
	(1)	(2)	(3)	(4)	(5)
		Firm size		Locat	tion
	All Firms	Firms with <	Firms with	Rural	Urban
		5 workers	>= 5 workers		
Variable					
Log (Government Bank Branches in 1991 +1)	0.260*	0.132	0.443***	0.094	0.324*
	(0.139)	(0.117)	(0.159)	(0.163)	(0.175)
Industry FE	Yes	Yes	Yes	Yes	Yes
State FE	Yes	Yes	Yes	Yes	Yes
Number of observations	40,098	32,502	7,596	18,447	21,651
Mean LHS	9.83	9.32	12	9.5	10.1
Mean Log gov't bank branches +1 in 1991	0.074	0.06	0.13	0.045	0.098
% effect at mean of branches on mean of LHS	0.002	0.00086	0.0049	0.00045	0.0031
% effect at sd of branches on sd of LHS	0.028	0.014	0.065	0.0087	0.037
			Panel B		
	(1)	(2)	(3)	(4)	(5)
		Firm size		Locat	
	All Firms	Firms with <	Firms with	Rural	Urban
		5 workers	>= 5 workers		
Variable					
Log (Government Bank Credit in 1991 +1)	0.081	-0.024	0.247***	-0.021	0.116
	(0.106)	(0.089)	(0.081)	(0.124)	(0.103)
Industry FE	Yes	Yes	Yes	Yes	Yes
State FE	Yes	Yes	Yes	Yes	Yes
Number of observations	40,098	32,502	7,596	18,447	21,651
Mean LHS	9.83	9.32	12	9.5	10.1
Mean Log gov't bank credit +1 in 1991	0.074	0.06	0.13	0.045	0.098
% effect at mean of credit on mean of LHS	0.00061	-0.00016	0.0027	-0.000099	0.0011
% effect at sd of credit on sd of LHS	0.0086	-0.0026	0.036	-0.0019	0.013

# **Table 12: Access to Credit and Employment**

Using data from the Service Sector surveys, this table provides results from a OLS specification where the dependent variable is *Total Workers* at the firm level. In Panel A, Log (*Government Bank Branches in 1991*) is the number of government-owned bank branches in a district in 1991. The specification controls for the interaction of employer-friendly labor regulations and a time dummy, district popoluation, and time, state and industry effects; standard errors are clustered at the district level. In Panel B, we use Log (*Government Bank Credit*) which is the total credit given by government-owned bank branches in that district in 1991. \*\*\*indicates significance at the 1% level; \*\* indicates significance at the 5% level, and \* indicates significance at the 10% level.

			Panel A		
	(1)	(2)	(3)	(4)	(5)
		Firm Size			ntion
	All Firms		Firms with >=	Rural	Urban
		5 workers	5 workers		
Variable	-				
Log (Government Bank Branches in 1991 +1)	0.108**	0.023*	1.186***	-0.045	0.163***
	[0.051]	[0.012]	[0.308]	[0.058]	[0.051]
Industry FE	yes	yes	yes	yes	yes
State FE	yes	yes	yes	yes	yes
Number of observations	296,684	268,558	28,126	114,261	182,423
Mean LHS	2.62	1.58	12.6	2.01	3.01
Mean Log gov't bank branches +1 in 1991	0.11	0.11	0.099	0.12	0.11
% effect at mean of branches on mean of LHS	0.0045	0.0016	0.0093	-0.0026	0.0057
% effect at sd of branches on sd of LHS	0.0028	0.0086	0.0092	-0.0025	0.0034
			Panel B		
	(1)	(2)	(3)	(4)	(5)
		Firm Size			ition
	All Firms		Firms with >=	Rural	Urban
		5 workers	5 workers		
Variable					
Log (Government Bank Credit in 1991 +1)	0.095***	0.017***	0.738***	0.015	0.090***
	[0.022]	[0.005]	[0.179]	[0.024]	[0.024]
Industry FE	yes	yes	yes	yes	yes
State FE	yes	yes	yes	yes	yes
Number of observations	296,684	268,558	28,126	114,261	182,423
Mean LHS	2.62	1.58	12.6	2.01	3.01
Mean Log gov't bank branches +1 in 1991	0.11	0.11	0.099	0.12	0.11
% effect at mean of branches on mean of LHS	0.0040	0.0012	0.0058	0.00086	0.0031
% effect at sd of credit on sd of LHS	0.0024	0.0066	0.0057	0.00083	0.0018

**Table 13: Access to Credit and Firm Productivity** 

Using data from the Service Sector survey, this table provides results from a OLS specification where the dependent variable is  $\ln(Value\ Added\ per\ worker)$  at the firm level. In Panel A, Log (Government Bank Branches in 1991) is the number of government-owned bank branches in a district in 1991. The specification controls for the interaction of employer-friendly labor regulations and a time dummy, district popoluation, and time, state and industry effects; standard errors are clustered at the district level. In Panel B, we use Log (Government Bank Credit) which is the total credit given by government-owned bank branches in that district in 1991. \*\*\*indicates significance at the 1% level; \*\* indicates significance at the 5% level, and \* indicates significance at the 10% level.

,			Panel A		
	(1)	(2)	(3)	(4)	(5)
		Firm Size			ition
	All Firms		Firms with >=	Rural	Urban
Variable		5 workers	5 workers		
Variable					
Log (Government Bank Branches in 1991 +1)	0.069**	0.056	0.202***	-0.058	0.106***
,	(0.034)	(0.034)	(0.042)	(0.045)	(0.027)
Constant	10.821***	10.053***	9.934***	10.921***	10.810***
	(0.114)	(0.155)	(0.196)	(0.154)	(0.104)
Industry FE	Yes	Yes	Yes	Yes	Yes
State FE	Yes	Yes	Yes	Yes	Yes
Number of observations	293,853	265,931	27,922	113,053	180,800
Mean LHS	9.94	9.90	10.3	9.78	10.0
Mean Log gov't bank branches +1 in 1991	0.11	0.11	0.098	0.12	0.11
% effect at mean of branches on mean of LHS	0.00076	0.00062	0.0019	-0.00069	0.0011
% effect at sd of branches on sd of LHS	0.024	0.020	0.063	-0.021	0.036
			_ ,_		
	(4)	(0)	Panel B	(4)	( <b>=</b> )
	(1)	(2)	(3)	(4)	(5)
	All E:	Firm Size	Cione a sociale s		ition
	All Firms	5 workers	Firms with >= 5 workers	Rural	Urban
		3 WOLKELS	5 WOLKELS		
Log gov't bank credit +1 in 1991	0.055***	0.046***	0.147***	-0.024	0.050***
	(0.016)	(0.015)	(0.021)	(0.020)	(0.014)
Constant	10.822***	10.087***	10.108***	10.840***	10.932***
	(0.084)	(0.117)	(0.145)	(0.111)	(0.086)
Industry FE	Yes	Yes	Yes	Yes	Yes
State FE	Yes	Yes	Yes	Yes	Yes
Number of observations	293,853	265,931	27,922	113,053	180,800
Mean LHS	9.94	9.90	10.3	9.78	10.0
Mean Log gov't bank credit +1 in 1991	0.11	0.11	0.098	0.12	0.11
% effect at mean of branches on mean of LHS	0.00061	0.00051	0.0014	-0.00029	0.00052
% effect at sd of credit on sd of LHS	0.019	0.016	0.046	-0.0089	0.017

## **Table 14: Access to Credit and Firm Wages**

Using data from the Service Sector survey, this table provides results from a OLS specification where the dependent variable is Log (*Wages*) at the firm level. In Panel A, Log (*Government Bank Branches in 1991*) is the number of government-owned bank branches in a district in 1991. The specification controls for the interaction of employer-friendly labor regulations and a time dummy, district popoluation, and time, state and industry effects; standard errors are clustered at the district level. In Panel B, we use Log (*Government Bank Credit*) which is the total credit given by government-owned bank branches in that district in 1991. \*\*\*indicates significance at the 1% level; \*\* indicates significance at the 5% level, and \* indicates significance at the 10% level.

			Panel A		
	(1)	(2)	(3)	(4)	(5)
		Firm Size		Location	
	All Firms	Firms with <	Firms with >=	Rural	Urban
		5 workers	5 workers		
Variable					_
Log (Government Bank Branches in 1991 +1)	0.147**	0.079	0.153***	-0.115*	0.182***
	[0.073]	[0.069]	[0.048]	[0.066]	[0.066]
Industry FE	Yes	Yes	Yes	Yes	Yes
State FE	Yes	Yes	Yes	Yes	Yes
Number of observations	101,300	73,803	27,497	32,875	68,425
Mean LHS	8.70	8.40	9.51	8.41	8.84
Mean Log gov't bank branches +1 in 1991	0.12	0.13	0.099	0.090	0.14
Mean mag	0.0021	0.0012	0.0016	-0.0012	0.0029
Sd mag	0.039	0.022	0.053	-0.025	0.054

			Panel B			
	(1)	(2)	(3)	(4)	(5)	
	Firm Size			Location		
	All Firms	Firms with <	Firms with >=	Rural	Urban	
		5 workers	5 workers			
Variable						
Log (Government Bank Credit in 1991+1)	0.139***	0.101**	0.116***	-0.034	0.129***	
	[0.048]	[0.047]	[0.021]	[0.051]	[0.038]	
Industry FE	Yes	Yes	Yes	Yes	Yes	
State FE	Yes	Yes	Yes	Yes	Yes	
Number of observations	101,300	73,803	27,497	32,875	68,425	
Mean LHS	8.70	8.40	9.51	8.41	8.84	
Mean Log gov't bank credit +1 in 1991	0.12	0.13	0.099	0.090	0.14	
Mean mag	0.0020	0.0016	0.0012	-0.00036	0.0020	
Sd mag	0.037	0.028	0.040	-0.0075	0.038	

**Table A1: Distribution of Industries for Household Enterprises** 

Using data from the Employment-Unemployment Survey, this table provides results the distribution of industry activities for individuals reporting working for or running a household enterprise

Agriculture, hunting, forestry & fishing	65.5%	418,380	65.53	65.53
Mining and quarrying	3.2%	20,464	3.21	68.73
Manufacturing	5.3%	34,013	5.33	74.06
Electricity, gas and water	1.8%	11,279	1.77	75.83
Construction	1.0%	6,494	1.02	76.85
Wholesale and retail trade, restaurants	9.7%	61,856	9.69	86.53
Transport, storage & communication	8.0%	51,390	8.05	94.58
Financing, insurance, real estate and b	1.3%	8,602	1.35	95.93
Services community, social & personal services	0.9%	6,054	0.95	96.88
Community, social & personal services	3.1%	19,929	3.12	100