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Analysis of the Use of Financial Services by Companies in Mexico: What does the 2009 Economic Census tell us?[♦]

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Overview

In this article, we present a descriptive analysis of the results of the 2009 Economic Census regarding the use of bank credit and accounts by productive entities (companies). To this end, INEGI was requested to prepare a set of statistics regarding various company characteristics that are relevant to the decisions made by institutions offering banking services. Upon request, this information was grouped according to the different business segments we defined based on their access to credit and/or use of banking services, in order to determine the size of the market for financial services like credit or bank accounts (checking, savings or investment). Also upon request, the information was provided in segments according to the stratum of employed personnel to establish 4 company sizes: Micro (0 to 10 employees), Small (11 to 50 employees), Medium (51 to 250 employees) and Large (251 or more employees). The information above enabled the size of the market for credit and attracting customers to be established in 2008 Mexico and to identify the materiality of the phenomena of "voluntary rationing" and "involuntary rationing" (Stiglitz and Weiss, 1981). As a result of involuntary rationing, in that year, a potential credit market of approximately 1.5 million companies and a potential market for bank accounts of 1.1 million were established. Involuntary rationing is a phenomenon that mostly impacts smaller companies and is more pronounced in the context of the use of bank accounts than in that of credit.

JEL Classification: G21, O16, O17

Key words: Mexico; bank credit to firms; use of bank accounts among firms; micro small and medium enterprises; voluntary and involuntary rationing in financial markets.

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Analysis of the Use of Financial Services by Companies in Mexico: What does the 2009 Economic Census tell us?

1. Introduction

The principal channel through which credit influences economic growth is funding for private investment projects. For that reason, in Mexico, the authorities, banks and business groups in recent years have sought to fuel their expansion through the implementation of various measures and the proposal of multiple initiatives, particularly focused on granting credit to Micro, Small and Medium Enterprises (MSMEs). Recent measures to stimulate credit to MSMEs include the relaxing of requirements, such as eliminating the presentation of the Fiscal Identification Number in the credit application and the easing of documentation required based on the amount of the credit requested. Regarding the latter, the use of Bank Account Statements, instead of projected cash flows, is permitted for loans under 2 million UDIS and Audited Financial Statements can be presented for loans under 4 million UDIS[1]. Another support measure consisted in the increase of public funds allocated to grant initial loss guarantees.[2] The products designed by private banks to increase the credit supply to MSMEs include, for example, the BBVA Bancomer Tarjeta MicroNegocios (Micro-business card), with the support of the Nacional Financiera Guarantee Program, and the Banamex Club Emprendedor (Entrepreneur Club), which were both launched in August 2011.

Against this background, the 2009 Economic Census (Census) included, for the first time, several questions to help understand the decisions made by Mexican companies regarding accessing credit and the use of bank accounts. The analysis of the census information regarding access to and use of credit complements the information gathered through other official sources regarding bank credit to companies. These sources include the Credit Market Evaluation Survey (ECMC) conducted on a quarterly basis by the Bank of Mexico (Banxico) since 1998 and the National Survey on Micro-Businesses (ENAMIN) conducted by INEGI (the National Statistics and Geography Institute) over several years (the most recent being in 2008). Moreover, the analysis of the Census information permits the identification and quantification of several aspects of private sector and state-owned companies that obtained bank credit versus those that did not. This information is useful for establishing the size of the credit market for Mexican companies. This is important, firstly, for steering the banks' and authorities' decisions towards boosting the growth of credit to companies, and, secondly, for defining mechanisms to stimulate Mexico's economic growth in the long term.

[1] For more details, see Werner (2010).
[2] 1 UDI was 4.755 Mexican pesos, which is equivalent to slightly more than 9.5 million Mexican pesos or slightly or slightly more than 732 thousand US dollars considering 12.99 MxP per US dollar)

As regards the use of bank accounts by companies, to the best of our knowledge, there are no other official sources of information in Mexico. Thus, the Census data offers an initial introduction to this topic. The census data regarding the use of bank accounts illustrates features of the economic units that employ deposit instruments, which potentially facilitate access to other services banks or other financial institutions can offer (credit, insurance, etc.), and thus constitute an initial link between the company and the banking system. In addition, these accounts can be used as a vehicle for bringing banking services to other users; for example, companies can issue electronic payments to their vendors or payroll to their employees to the extent that they manage a bank account through which the funds can be dispersed.

It should also be noted that in recent years, the Mexican financial authorities have also implemented measures designed to promote the use of electronic payment means, which, in many cases, are associated with various deposit, savings or investment bank accounts. One example of this type of measure was the creation of the FIMPE (Electronic Payment Means Infrastructure Fund) by the SHCP (Ministry of Finance and Public Credit). FIMPE was a private, non-profit fund created by financial institutions rendering payment acceptance services through bank cards with the objective of promoting and extending access to the electronic payment network between small commercial establishments, as well as to increase use among consumers. Another example of this type of measures is the creation of Basic Payroll Accounts for the General Public through the announcement of the regulations for their design by Banxico in 2007. In this regard, the stimulation for electronic payments made by companies can be registered within the modernization schemes in the use of payment means, in addition to being a tool that could help increase the degree of banking penetration in the country.

Since INEGI has still not made a microdatabase for the 2009 Economic Census available to investigators and academics, in order to perform this analysis, we asked the Institute to prepare a set of specific tables regarding various company characteristics that are relevant to the decisions regarding the supply of banking services (ownership type, years in operation, revenues, value of fixed assets, employment, payment of taxes, etc.). This information was provided grouped according to different business segments we defined based on whether or not they obtained credit and/or managed a bank account. This was done in order to establish the size of the market for credit and for attracting new customers, as well as to measure the differences between the characteristics of the companies in each group. These differences between companies that use banking services and those that do not should be analyzed in great detail, since they reflect, in large part, why companies do not use certain banking services. Also upon request, the information was provided in segments according to the stratum of employed personnel to establish 4 company sizes: Micro (0 to 10 employees), Small (11 to 50 employees), Medium (51 to 250 employees) and Large (251 or more employees).[3]

[3] This classification of size by stratum of employed personnel is practical because it is in line with the classification used by INEGI in several basic tables. However, please note that in the practice of the business, if there are no clear criteria to distinguish the companies, the banks

The rest of this paper is divided into three sections. Section 2 focuses on the analysis of the information regarding the use of credit among companies.[4] Section 3 focuses on the analysis of the information regarding the use of bank accounts. Finally, the conclusions are presented in Section 4.

2. Use of bank credit

2.1 Descriptive statistics

According to the Census, in 2008, a total of 4,724,892 economic units (companies) were in operation in Mexico. Of them, 3,437,645 (73%) belonged to the Private and State-Owned Sectors.[5] In that year, little more than 959 thousand productive entities obtained bank funding or funding from other non-banking sources (Table 1). [6] In the group of companies that did obtain funding, the principal source of funds was internal, which is made up by the contributions of funds from owners, partners, relatives and friends. The second most important player in company funding were banks, followed by popular savings banks (or *cajas*) and private lenders, vendors, government and other sources

Notwithstanding the above, the analysis of the sources of funding by company size, defined as the number of employees, suggests some differences in the relative importance of each one of the sources of funds worth mentioning. The pattern in which the primary source of funding is the owners and partners appears in companies with fewer than 10 employees (micro-businesses) and in those that employee 11 to 50 people (small enterprises). These productive entities account for approximately 99% of the companies in the private and state-owned sector in Mexico.

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give greater importance to the value of annual sales or to the complexity of the services demanded by the clients than to the number of employees.

[4] A comparison between companies that obtained bank credit and companies that obtained non-bank funding was published in the November 2011 BBVA Research Banking Outlook Mexico journal.

[5] These figures include economic units not involved in the generation, transmission or distribution of electrical power, supply of water or gas through pipelines to the end consumer, financial companies, Public Sector companies, religious organizations and homes with economic activity instead of shared use. To respond to questions from the Credit and Bank Account Questionnaire, INEGI only includes information on parent companies and singular establishments. For operational purposes, INEGI divides all economic units into "SMEs" for small establishments and "SEG" for large establishments and corporations. "SEG" includes singular establishments (do not share the company name with any other establishment) and corporations (more than one establishment under a single company name). Source: INEGI.

[6] The economic units reported all of the sources used in one period; therefore, the sum is over 100%.

Table 1. Economic units in the private and state-owned sector in operation during 2008 that obtained credit, loans or funding.

Stratum of employed personnel	Economic units that obtained credit, loans or financing	Distribution by source of funds											
		Owners, partners, relatives and friends		Banks		Popular savings banks and private lenders		Suppliers		Government		Other sources	
		Absolute	%	Absolute	%	Absolute	%	Absolute	%	Absolute	%	Absolute	%
Total	**959,628**	**739,681**	**77**	**167,359**	**17**	**110,837**	**12**	**80,321**	**8**	**24,183**	**3**	**19,289**	**2**
0 to 10 employees	893,651	699,818	78	136,103	15	107,149	12	68,007	8	22,520	3	15,728	2
11 to 50 employees	51,834	32,998	64	23,165	45	2,918	6	8,153	16	1,306	3	1,907	4
51 to 250 employees	11,407	5,702	50	6,588	58	696	6	3,310	29	287	3	1,102	10
251 and more employees	2,736	1,225	45	1,479	54	81	3	874	32	69	3	498	18

Note: Each economic unit reports all sources from which funding was obtained; therefore, the sum of the distribution by source is over 100%. One example of this is the case of companies with between 11 and 50 employees.

Source: BBVA Research with 2009 Economic Census data.

For companies with more than 51 and up to 250 employees (medium), and with 251 or more employees (large), banks are the primary source of funding. However, as can also be observed in Table 1, it is interesting that the most numerous group of companies that received bank credit in 2008 was that of productive entities of up to 10 employees, as 81.3% of the companies that received bank credit that year pertain to that segment (that is, 136,103 of the 167,359 economic units that reported banks as a source of funding). The above goes against the statement commonly heard that "banks don't serve small companies".

2.2 More than half of the companies did not apply for credit because they did not need it.

The census data indicates that, with respect to the causes for which companies did not obtain credit, loans or funding in 2008, more than half of them responded that they did not need it (Table 2). In order of importance, the following reasons were presented: i) bank interest rates are high; ii) belief that they did not meet the requirements; iii) distrust of banks; iv) not knowing the procedure for requesting it; v) distant location of the institutions; vi) they applied for it but it was not granted; and vii) other reasons.

According to the Census, the percentage of companies that indicated that they thought interest rates were high was significantly higher in companies with 10 or fewer employees than in all other companies. Furthermore, it is interesting that the Census data indicates that the percentage of productive entities that reported not having obtained credit because it was not granted to them was very low in all company size segments.

To evaluate the responses presented in Table 2, it is important to consider the economic events occurring during 2008, the year the Census was taken. According to the Bank of Mexico Financial System Report, for example, during that year, there was a strong contraction of economic activity in addition to great international financial market instability. These factors adversely impacted supply, and could have also significantly influenced the demand for credit.

Table 2. Economic units in the private and state-owned sector that did not obtain credit or funding.

Stratum of employed personnel	Economic units that did not obtained credit, loans or financing	Causes for which companies did not obtain credit, loans or funding (%)							
		They did not need it	Bank interest rates are high	Belife that they did not meet the requirements	Distrust of banks	Not knowing the procedure for requesting it	Distant location of the institutions	They applied for it buy it was not granted	Other reasons
Total	**3,270,287**	**54**	**41**	**13**	**3**	**3**	**2**	**1**	**2**
0 to 10 employees	3,150,920	53	41	13	3	3	2	1	2
11 to 50 employees	101,001	67	27	6	2	1	1	3	5
51 to 250 employees	14,860	67	20	5	1	1	0	4	7
251 and more employees	3,506	69	9	3	1	0	0	2	11

Note: Each economic unit reports all reasons for which funding was not obtained; therefore, the sum of the distribution by source is over 100%.

Source: BBVA Researh with 2009 Economic Census data.

2.3 Potential market for bank credit for companies

To analyze the size of the potential market for bank credit for companies, we have grouped the companies together based on having obtained credit into one of the four groups indicated below and illustrated in Table 3:

- **Group A.** Those that obtained bank credit;
- **Group B.** Those that obtained non-bank funding: owners, partners, relatives or friends, popular savings banks (*cajas*), and private lenders, vendors, government, debt issuance and other sources;
- **Group C.** Those that did not obtain funding because: the interest rates are high; did not believe they met the requirements; were unaware of the procedure for requesting it; the banks were located far from them; they applied for it but it was not granted; and other reasons (**Involuntary rationing**); and
- **Group D.** Those that did not obtain funding because they presented a lack of interest in doing so or distrusted banks (**Voluntary rationing**).

Groups C and D, which refer to companies that did not obtain credit, distinguish the productive entities that did not obtain credit for reasons related to characteristics of the products or of the suppliers that lead to, first, "involuntary rationing" (Group C) from those that, second, were related to a "voluntary rationing" on the demand side (Group D) (Stiglitz and Weiss, 1981).

The segmentation above enables the evaluation of companies that obtained funding from sources other than banks (Group B) and those that did not obtain it because the supply conditions were unattractive or inconvenient (Group C) as potential demanders of bank credit. Therefore, for 2008, the overall number of companies that could have used bank credit was slightly over 1.5 million; that is, 792 thousand companies from Group B plus 763 thousand from Group C (Table 3).

Table 3. Economic units in the private and state-owned sector based on having obtained credit or funding.

Stratum of employed personnel	Total		A. Those who obtained bank credit		B. Those that obtained non-bank funding		C. Those that did not obtain funding because of other reasons		D. Those that did not obtain funding because lack of interest or distrust in banks	
	Absolute	%	Absolute	%	Absolute	%	Absolute	%	Absolute	%
Total	**3,437,645**	**100**	**167,358**	**5**	**792,270**	**23**	**762,966**	**22**	**1,715,051**	**50**
0 to 10 employees	3,287,048	100	136,128	4	757,523	23	755,391	23	1,638,006	50
11 to 50 employees	124,165	100	23,164	19	28,670	23	7,248	6	65,083	52
51 to 250 employees	21,447	100	6,587	31	4,820	22	427	2	9,613	45
251 and more employees	5,085	100	1,479	29	1,257	25	0	0	2,349	46

Source: BBVA Research with 2009 Economic Census data.

Of the companies that were potential credit demanders, the percentage of entities that experienced "involuntary rationing" (Group C) in the category of those with 11 or more employees is under 10% (null among countries with 251 or more employees). However, among companies with 10 or fewer employees it is at 23%; that is, nearly 1 in 4. We should add that this piece of data reinforces the challenge for banks in designing more attractive credit products for smaller companies. In contrast, of the 1.7 million companies that did not demand credit due to lack of interest or distrust of banks (Group D), the differences in the percentages by segment suggest a greater lack of interest or trust among smaller companies, but the differences are less unbalanced over the different segments.

2.4. How do the companies differ based on obtaining credit or funding?

To better understand the characteristics of the companies that used credit and had clearer parameters regarding how much credit to companies could grow, below are a series of tables and charts about certain characteristics relevant to the decisions for supplying financial services. These characteristics are:

i) Ownership type;
ii) Years in operation;
iii) Revenues and fixed assets;
iv) Employment, compensation and productivity;
v) Formality.

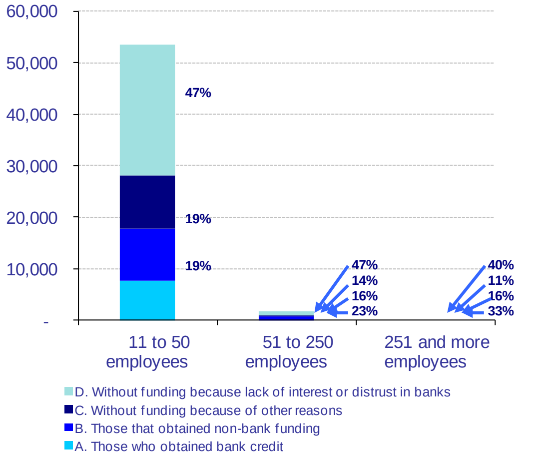
Data regarding interest payments for the funding obtained was also analyzed.

2.4.1 Ownership: Trading corporations tend to resort to bank credit more than to non-bank credit

Companies constituted as trading corporations are more likely to request external funding, particularly of the banking type, regardless of the stratum of employed personnel. The total companies that obtained bank credit or non-bank funding generally represent a greater proportion of the total among the trading corporations than among natural persons. The only exception is observed in the large companies segment, where this percentage is practically the same in both types of ownership and reaches nearly 50% (Charts 1 and 2).

In terms of voluntary and involuntary rationing, there does not appear to be a significant difference associated to the type of ownership. For example, among small companies (11 to 50 employees), those that did not obtain credit due to lack of interest and that are constituted as trading corporations represented 45% of the total, and for the same segment, this percentage stood at 47% among companies constituted by natural persons (Charts 1 and 2).

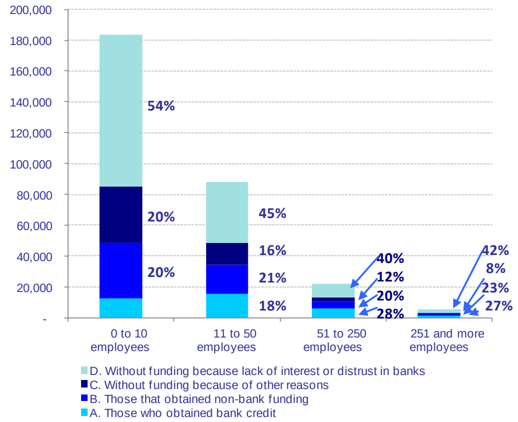
Chart 1. Natural persons based on having obtained funding and segment of employed personnel.



Note: The group of companies with 10 or fewer employees is excluded due to scale problems. The corresponding percentages are 3% for companies that obtained bank credit, 20% for companies that obtained non-bank funding, 33% for companies that did not obtain funding for other reasons and 43% for companies that did not obtain funding due to lack of interest or trust.

Source: BBVA Research with 2009 Economic Census data.

Chart 2. Trading corporations based on having obtained funding and segment of employed personnel.



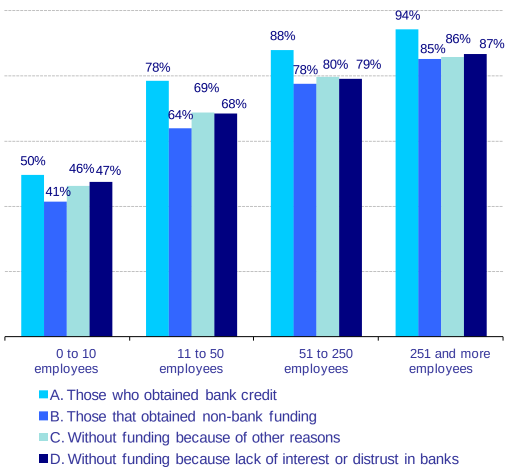
Source: In-house preparation with 2009 Economic Census data.

2.4.2 Years in operation: Companies with more time in operation in the market tend to obtain more bank credit

In general, of all the companies that obtained bank credit, the companies with 11 or more employees had more years in operation in the market than those with 10 or fewer employees. Moreover, the Census data indicates that, for all company sizes, there is a greater percentage of companies with more than 5 years in operation among those that obtained bank credit than those that resorted to non-bank funding or did not obtain funding, for whatever reason (Chart 3).

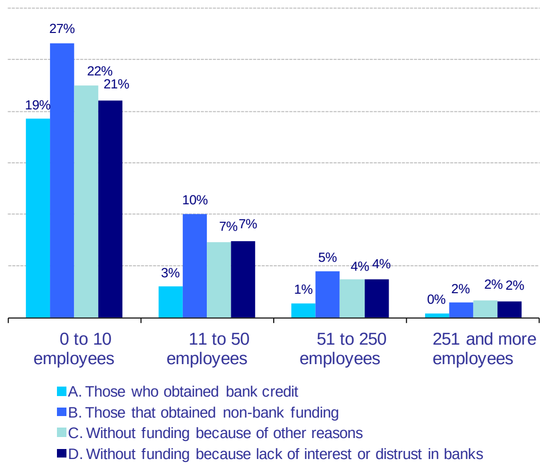
Likewise, the Census information also indicates that there is a slightly lower percentage of companies that started operations prior to 2004 in the group that obtained non-bank funding than in the two groups that did not obtain funding, which also have a very similar percentage between them, independently of the size of the economic unit.

Chart 3. Percentage of companies that started operations prior to 2004.



Source: BBVA Research with 2009 Economic Census data.

Chart 4. Percentage of companies that started operations in 2008.



Source: BBVA Research with 2009 Economic Census data.

Moreover, of the companies that started operations in 2008, the percentage of companies that obtained funding from the bank is lower than that of companies that obtained funding from other sources or that of companies that did not obtain it for any reason (Chart 4). It can also be observed that the percentage of companies starting operations in 2008 or after is greater among the group that obtained non-bank funding than that of the two groups that did not obtain funding. The pattern is more pronounced among companies with 50 or more employees.

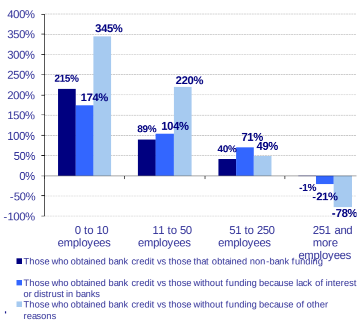
One explanation for this pattern consists in that the probability that a company continuing operating over several years may qualify to receive a bank loan tends to increase because it becomes an accredited productive entity, with a certain degree of operative efficiency that has allowed it to subsist, in addition to these companies understanding their market better than other similar companies that did not last. For these reasons, it could be easier for companies with more years in service to access bank credit.

2.4.3 Revenues, profit margin and the value of fixed assets tend to be greater among the companies that obtained bank credit

As expected, the Census data indicates that the companies that obtained bank credit had greater revenues as compared to those that obtained loans from non-bank sources (Chart 5). Nevertheless, those companies that obtained bank credit also had greater revenues with respect to those that did not obtain funding, especially with respect to the group that did not obtain funding for reasons other than lack of interest or trust that we identified as being subject to involuntary rationing.

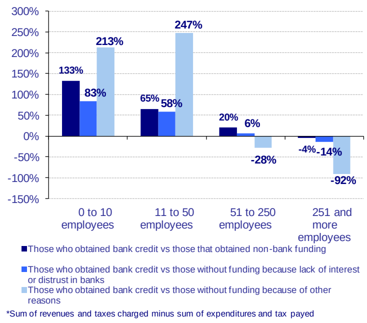
The degree of magnitude of the difference in revenues between companies that obtained bank credit with respect to the rest of the productive entities is substantial, particularly between micro and small enterprises. For example, in the case of companies with 10 or fewer employees that obtained bank credit in 2008, the annual revenues from the supply of goods and services by economic unit reached nearly 1.2 million pesos[7] on average. The difference in revenues between companies of that size with bank credit (Chart 5) is 215% with respect to those that had non-bank funding (that is, 0.8 million pesos less); 174% with respect to those that did not obtain funding due to lack of interest or trust (that is, 0.7 million pesos less); and 345% with respect to those that did not obtain funding for reasons other than those above (0.9 million pesos less). Meanwhile, among the small companies, the differences in revenues between companies with bank credit (whose annual revenues per economic unit were 18.7 million pesos on average) and the other groups, respectively, were 90%, 104% and 220% (that is, 8.8, 9.5 and 12.8 million pesos less, respectively).

Chart 5. Difference in revenues per economic unit of companies that obtained bank credit with respect to the other groups of companies, %



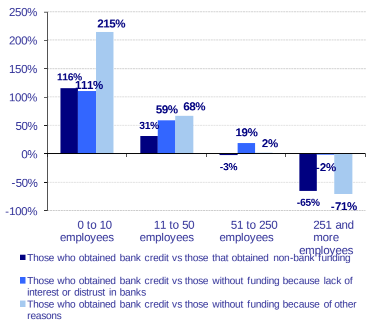
Source: BBVA Research with 2009 Economic Census data.

Chart 6. Difference in profit margin per economic unit of companies that obtained bank credit with respect to the other groups of companies, %



Source: BBVA Research with 2009 Economic Census data.

Chart 7. Difference in the value of fixed assets per economic unit of companies that obtained bank credit with respect to the other groups of companies, %



Source: BBVA Research with 2009 Economic Census data.

In general, the two patterns described above for revenues are repeated in the case of the profit margin (calculated as the sum of revenues and taxes charged minus the total expenses and taxes paid, Chart 6) and of the fixed assets (Chart 7), since the latter yields the possibility of being used as collateral for some credit, which could occur particularly in the case of smaller companies.[8] These differences in profit margins and asset value of the companies that obtained

[7] Equivalent to approximately USD 91,600, considering the May 2, 2012 exchange rate: 12.99 MXP = 1 USD (Source: Bank of Mexico).

[8] Of the companies with 10 or fewer employees that obtained bank credit in 2008, the profit margin per economic unit reached 226 thousand pesos on average, and the value of fixed assets per economic unit reached 396 thousand pesos on average. The differences in the profit margin and the value of fixed assets per economic unit in this Group with respect to the others are illustrated in Charts 6 and 7.

bank credit with respect to the others are again greater among companies with 10 or fewer employees.

The data above indicates that, regardless of the size of the company, the greater the revenues or profit margins they generate, the more likely it is that they could access bank credit. Essentially, this situation would be reflecting that these companies have payment capacity. This situation also occurs in a similar way with greater assets of the companies, which would be reflecting that the productive entities in this case have a guarantee.

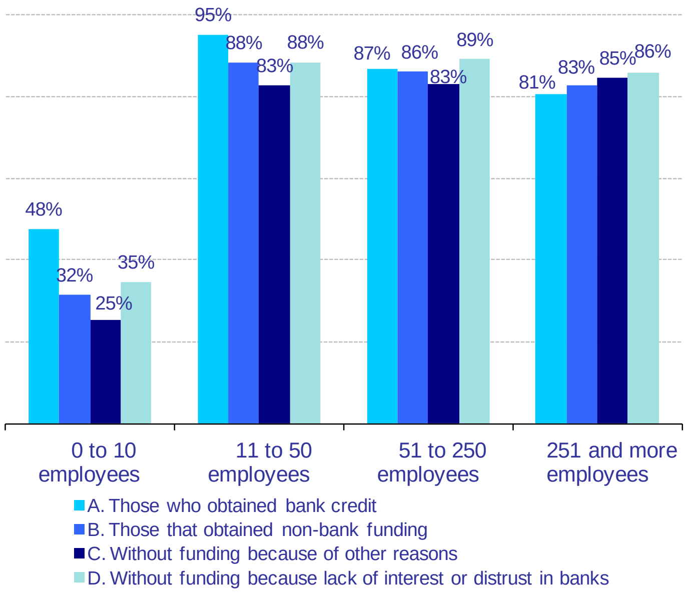
2.4.4 Companies that obtained bank credit also employed more workers, paid higher compensation and were more productive

The information from the companies that obtained bank credit, observed from the perspective of the compensation they pay and the number of employees indicates that of the companies with 10 or fewer employees, the percentage of employees remunerated with fixed salaries and wages is under 50% (Chart 8).[9] Moreover, in this case, there is a gap of various percentage points between those that obtained bank credit and those that obtained non-bank funding or did not obtain funding for any reason. Of the economic units with 11 or more employees, the percentage of entities that reported employing workers with fixed salaries or wages is over 80%, and there are only slight differences between the four groups of interest. In contrast, among companies with fewer than 250 employees, the group of economic units that did not obtain funding for reasons other than lack of interest or trust, is the group with the fewest employees with fixed salaries and wages.

Another difference among the groups of companies analyzed is given by the value of the salaries paid and profits distributed to the personnel per economic unit. On average, these were 2.6 times greater among the economic units that obtained bank credit than among companies that obtained non-bank funding (Table 4). This comparison of salaries and profits distributed to the personnel per economic unit among companies that obtained bank credit is still marked with respect to the two groups of companies that did not obtain funding; they are nearly 3 times with respect to the companies that did not obtain funding due to lack of interest (Group C) and 4.7 times with respect to those that did not obtain funding for other reasons (Group D).

[9] When referring to the number of workers paid with salaries and wages, an indirect hypothesis is made that a company that presents a greater percentage of this type of workers is a productive entity that presents more traits of formality than one with a reduced percentage of workers paid with salaries and wages.

Chart 8. Percentage of economic units with employees with fixed salaries and wages.



Source: BBVA Research with 2009 Economic Census data.

Table 4. Salaries paid and profits distributed (2008 pesos per economic unit). Average/Pesos

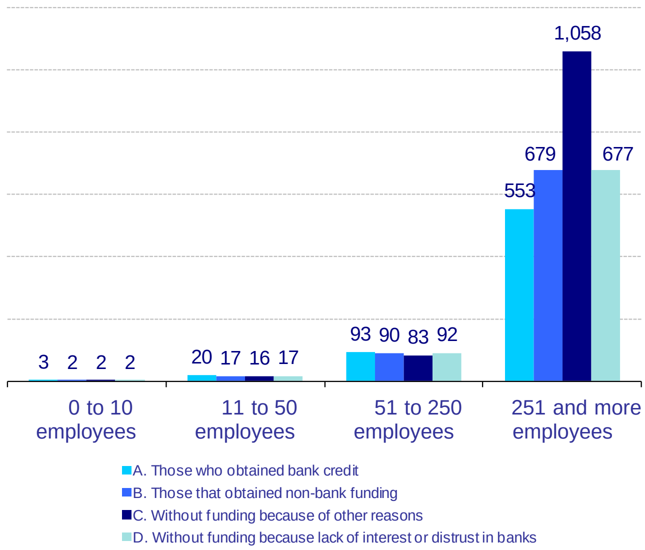
Stratum of employed personnel	A. Those who obtained bank credit	B. Those that obtained non-bank funding	C. Those that did not obtain funding because of other reasons	D. Those that did not obtain funding because lack of interest or distrust in banks
Total	**1,465,421**	**554,068**	**314,378**	**483,294**
0 to 10 employees	139,279	84,248	75,893	94,244
11 to 50 employees	1,117,779	859,667	800,500	921,096
51 to 250 employees	6,526,080	6,624,651	5,713,783	7,367,762
251 and more employees	55,698,465	76,690,167	125,072,215	68,560,331

Source: BBVA Research with 2009 Economic Census data.

Furthermore, the Census data indicates that a greater percentage of companies with less than 50 employees that obtained bank credit also reported having more employees working with a fixed salary, and these entities tend to employ more people and pay them slightly higher salaries than the productive units that obtained non-bank funding (Chart 9 and Table 5). However, the pattern is less clear in larger companies.

For medium-sized companies, the percentage of employees with fixed salaries and wages is very similar among the four groups, and the payment per employee is greater in the group that did not obtain funding due to lack of interest. In turn, of the large companies, the group of companies with bank credit reported the lowest percentage of employees with fixed salaries and wages and lowest pay per person.

Chart 9. Average number of paid workers with fixed salaries and wages per economic unit.



Source: BBVA Research with 2009 Economic Census data.

Table 5. Salaries paid and profits distributed per employee (2008 pesos per person).

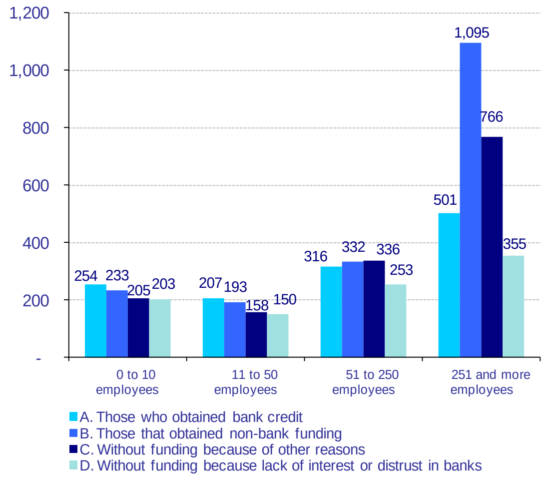
Stratum of employed personnel	A. Those who obtained bank credit	B. Those that obtained non-bank funding	C. Those that did not obtain funding because of other reasons	D. Those that did not obtain funding because lack of interest or distrust in banks
Total	**75,243**	**72,147**	**63,651**	**67,911**
0 to 10 employees	44,719	36,111	34,840	38,848
11 to 50 employees	57,119	50,689	49,468	52,783
51 to 250 employees	69,903	73,428	68,452	80,482
251 and more employees	100,752	112,884	118,170	101,210

Source: BBVA Research with 2009 Economic Census data.

The findings regarding the salaries paid by company size suggest the limitations of this type of descriptive analysis and the need to examine more deeply the companies making up each group and to determine the extent to which the averages are impacted by a small number of extreme observations (for example, the large state-owned companies that do not regularly resort to bank loans to cover their funding needs).

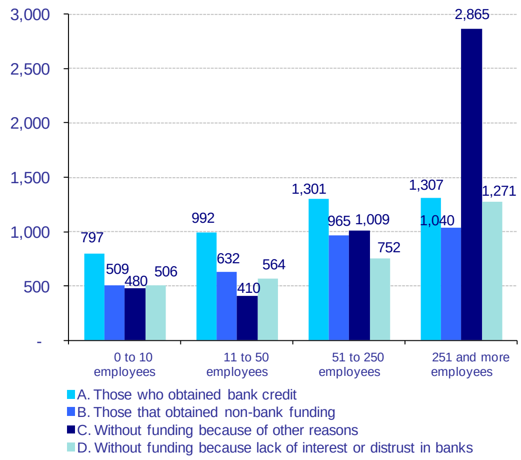
Finally, the ratios of fixed assets and income per person for the companies that obtained bank credit versus the rest of the productive entities suggest that the salary differences between the categories of companies are associated with a greater productivity of the employment base. This is particularly true in the cases of companies from the group of economic units that obtained bank credit of smaller size (Charts 10 and 11).

Chart 10. Total value of fixed assets per worker paid with fixed salaries and wages, (thousand pesos)



Source: BBVA Research with 2009 Economic Census data.

Chart 11. Revenues per worker paid with fixed salaries and wages, (thousand pesos)



Source: BBVA Research with 2009 Economic Census data.

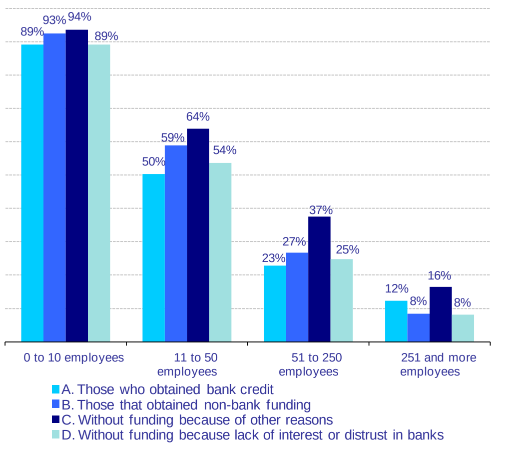
2.4.5 The companies that obtained bank credit exhibit more features that suggest formality: They employ fewer unpaid workers or commission-only paid workers and pay more taxes

To infer the formality of the companies, the Census offers data on the employment of unpaid individuals or commission-only paid workers and on the payment of taxes and contributions. The employment of unpaid personnel, an aspect that can be strongly linked to a state of informality, is greater among economic units with 10 or fewer employees. However, this also occurs in the larger units. This phenomenon is slightly greater among companies that obtained non-bank funding or did not obtain funding for reasons other than lack of interest or trust (Group C) than in the rest of the groups (except among large companies, Charts 12 and 13).

The employment of personnel on commission with no base salary, which does not require payments for social security or other social benefits, is a less frequent modality than the employment of unpaid personnel. This is observed more often in small, medium and large companies than in micro-businesses, which is possibly associated with commercial companies whose sales force is hired under these terms.

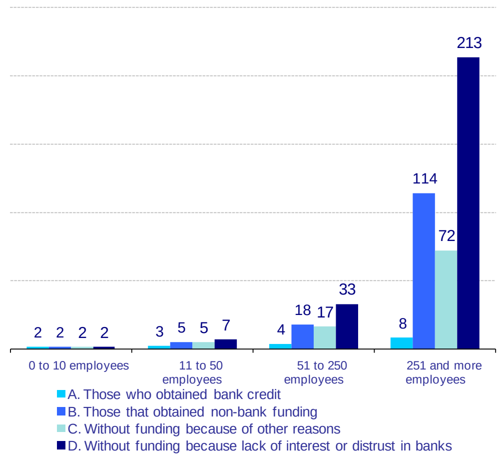
The percentage of companies that employed personnel of this type is greater among those with bank credit than among those with non-bank funding or those that did not have funding for any reason (except among small companies, Chart 14). However, the number of people employed in this modality per economic unit is lower in the first group that in the others (except in micro-business, Chart 15).

Chart 12. Percentage of economic units with unpaid employees.



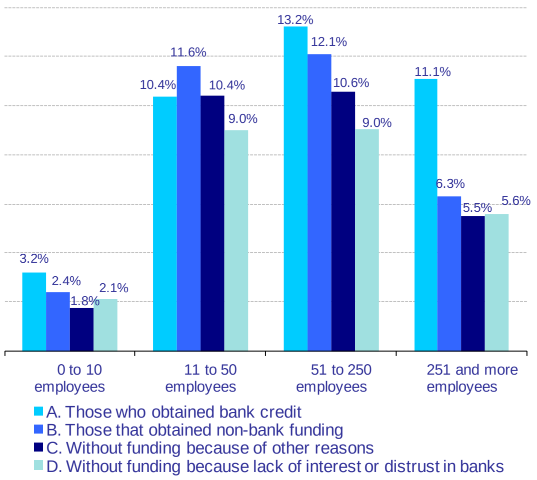
Source: BBVA Research with 2009 Economic Census data.

Chart 13. Unpaid employees per economic unit.



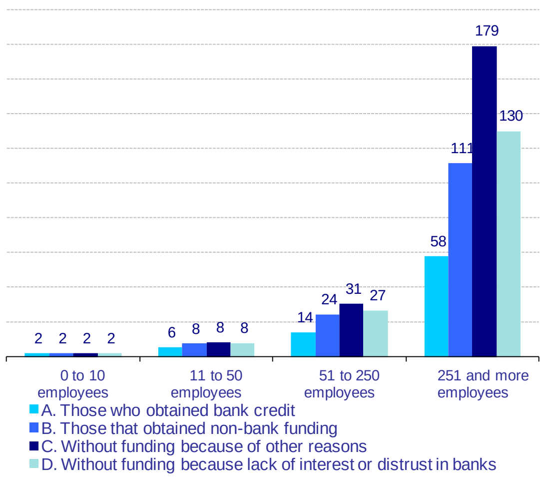
Source: BBVA Research with 2009 Economic Census data.

Chart 14. Percentage of economic units with employees paid on commission with no base salary.



Source: BBVA Research with 2009 Economic Census data

Chart 15. Employees on commission with no base salary per economic unit.



Source: BBVA Research with 2009 Economic Census data

In terms of payment of taxes and contributions to social security, as a result of the employment patterns described above, it can also be observed that the companies that obtained bank credit in 2008 paid more contributions to social security and other social benefits than companies from the other groups analyzed. Thus, in 2008, for the case of companies with bank credit, the average expenditure per company for social security and other social benefits reached 396,930 pesos. This figure was greater than the 256,244 pesos paid for this same item among companies that received non-bank funding. The companies that did not obtain credit because they were not interested or did not trust banking institutions (Group D) had social security expenditures of 210,390 pesos on average. Finally, the companies that did not have funding for other reasons (Group C) had expenditures of 138,585 pesos on average in social security.

Other census data regarding the payment of other taxes also reveal that companies that resorted to non-bank funding tended to be more informal. For example, a greater percentage of companies that obtained bank credit paid (and retained) VAT. Moreover, the VAT payment per economic unit among the companies that obtained bank credit, on average, is greater than that of entities that obtained non-bank financing, and this expenditure represents a greater percentage of the total income for the supply of goods and services. This pattern is more accentuated among micro-business than among companies of a larger size (Table 6).

Table 6. VAT payment.

Average / Pesos

A. Companies that obtained bank credit

Stratum of employed personnel	Economic units as % of total	Payment per economic unit	VAT payed / Revenue from goods and services
Total	**9%**	**9,552,470.03**	**6%**
0 to 10 employees	2%	1,556,823.75	2%
11 to 50 employees	27%	3,377,519.94	5%
51 to 250 employees	67%	13,292,960.78	8%
251 and more employees	83%	43,705,159.48	6%

B. Companies that obtained non-bank funding

Stratum of employed personnel	Economic units as % of total	Payment per economic unit	VAT payed / Revenue from goods and services
Total	**2%**	**6,110,314.14**	**5%**
0 to 10 employees	1%	472,830.01	1%
11 to 50 employees	19%	2,317,815.79	5%
51 to 250 employees	58%	10,238,332.37	8%
251 and more employees	74%	46,377,469.02	6%

C. Companies that did not obtain funding for other reasons

Stratum of employed personnel	Economic units as % of total	Payment per economic unit	VAT payed / Revenue from goods and services
Total	**1%**	**5,366,869.10**	**3%**
0 to 10 employees	0%	151,682.15	0%
11 to 50 employees	12%	1,860,792.39	4%
51 to 250 employees	40%	8,913,048.99	5%
251 and more employees	64%	112,655,288.08	3%

D. Companies that did not obtain funding due to lack of interest or trust

Stratum of employed personnel	Economic units as % of total	Payment per economic unit	VAT payed / Revenue from goods and services
Total	**1%**	**4,241,665.42**	**3%**
0 to 10 persons	1%	327,274.97	0%
11 to 50 persons	13%	2,134,715.01	3%
51 to 250 persons	46%	6,634,395.12	5%
251 persons and more	72%	30,235,376.78	3%

Source: BBVA Research with 2009 Economic Census data

The patterns described with respect to VAT payment are also observed with respect to other taxes paid by the economic units. In this way, for entities that obtained bank credit, there is a greater percentage of these companies that pay taxes; the payment per economic unit is slightly higher; and, on average, these expenditures represent a smaller percentage of the revenues of this group of economic units (Table 7).

Table 7. Tax payment, excluding VAT.

A. Companies that obtained bank credit

Stratum of employed personnel	Economic units as % of total	Payment by economic unit	Payed taxes (except VAT) / Revenue from goods and services
Total	**6%**	**2,197,039.08**	**1%**
0 to 10 employees	1%	103,603.93	0%
11 to 50 employees	20%	464,199.10	1%
51 to 250 employees	51%	1,476,570.23	1%
251 and more employees	62%	17,157,417.76	2%

B. Companies that obtained non-bank funding

Stratum of employed personnel	Economic units as % of total	Payment per economic unit	Payed taxes (except VAT) / Revenue from goods and services
Total	**1%**	**1,252,677.64**	**1%**
0 to 10 employees	0%	63,088.25	0%
11 to 50 employees	14%	344,085.11	1%
51 to 250 employees	44%	1,126,509.00	1%
251 and more employees	59%	11,322,508.70	1%

C. Companies that did not obtain funding for other reasons

Stratum of employed personnel	Economic units as % of total	Payment per economic unit	Payed taxes (except VAT) / Revenue from goods and services
Total	**1%**	**461,920.58**	**0.2%**
0 to 10 employees	0%	38,024.74	0.0%
11 to 50 employees	9%	297,152.70	0.5%
51 to 250 employees	32%	836,926.00	0.4%
251 and more employees	53%	5,391,529.88	0.1%

D. Companies that did not obtain funding due to lack of interest or trust

Stratum of employed personnel	Economic units as % of total	Payment per economic unit	Payed taxes (except VAT) / Revenue from goods and services
Total	**1%**	**1,608,016.09**	**0.7%**
0 to 10 employees	0%	289,984.67	0.2%
11 to 50 employees	9%	402,605.54	0.4%
51 to 250 employees	34%	1,592,463.91	0.9%
251 and more employees	57%	12,492,440.48	1.0%

Source: BBVA Research with 2009 Economic Census data

2.5 What is the least expensive source of funding?

A small proportion of companies that obtained bank credit or non-bank funding reported having made interest payments. This information can reflect certain limitations of the Census (Table 8), since, in general, only 8% of the entities that obtained bank credit, 1% of companies that obtained non-bank funding, and practically none of the companies that did not obtain funding in 2008 reported this type of expenditure (though the latter may report interest payments from loans taken out previously).

Notwithstanding the above, as is expected, when comparing the first two groups, the amount of interest payments per economic unit are observed to be lower among companies that received bank credit, except among the micro and small enterprises, with respect to companies that obtained non-bank funding. Though the census information does not allow us to know if this is due to the fact that behind this expenditure is a greater loan amount or a greater interest rate, the study by Hernández, Pagán and Paxton (2005) provides some evidence that, in effect, at least among micro-businesses, the average size of the bank loans is almost 17 times the size of the average contribution from personal loans and loans from friends and relatives. Moreover, Cotler (2008) presents the relatively large loan totals as a possible limiting factor to access to bank credit for micro-businesses.

Among the groups that did not obtain funding, the number of economic units and the total interest paid is greater among companies that did not obtain funding due to lack of interest (Group C, Table 8) or trust than in the other group (Group D, Table 8). This is consistent with the voluntary and involuntary rationing interpretations we have assigned to each group. However, the payments per economic unit are greater in the second group than in the first.

Table 8. Interest payments on loans and credit received. Average/Pesos

A. Companies that obtained bank credit

Stratum of employed personnel	Economic Units	Economic units as % of total	Interest payments (thousand pesos)	Interest payments per economic unit (pesos)
Total	**13,518**	**8%**	**25,196,447**	**1,863,918**
0 to 10 employees	2,050	2%	599,307	292,345
11 to 50 employees	5,920	26%	3,146,123	531,440
51 to 250 employees	4,341	66%	8,150,171	1,877,487
251 and more employees	1,207	82%	13,300,846	11,019,756

B. Companies that obtained non-bank funding

Stratum of employed personnel	Economic Units	Economic units as % of total	Interest payments (thousand pesos)	Interest payments per economic unit (pesos)
TOTAL	**4,906**	**1%**	**60,835,044**	**12,400,131**
0 to 10 employees	1,234	0%	238,559	193,322
11 to 50 employees	1,837	6%	804,621	438,008
51 to 250 employees	1,324	27%	2,660,768	2,009,644
251 and more employees	511	41%	57,131,096	111,802,536

C. Companies that did not obtain funding for other reasons

Stratum of employed personnel	Economic Units	Economic units as % of total	Interest payments (thousand pesos)	Interest payments per economic unit (pesos)
TOTAL	**1,411**	**0%**	**2,812,363**	**1,993,170**
0 to 10 employees	346	0%	30,652	88,590
11 to 50 employees	552	2%	825,695	1,495,824
51 to 250 employees	406	14%	1,165,874	2,871,611
251 and more employees	107	23%	790,142	7,384,505

D. Companies that did not obtain funding due to lack of interest or trust

Stratum of employed personnel	Economic Units	Economic units as % of total	Interest payments (thousand pesos)	Interest payments per economic unit (pesos)
TOTAL	**2,611**	**0%**	**4,709,284**	**1,803,632**
0 to 10 employees	455	0%	109,812	241,345
11 to 50 employees	964	1%	367,246	380,961
51 to 250 employees	822	9%	1,371,069	1,667,967
251 and more employees	370	16%	2,861,157	7,732,857

Source: BBVA Research with 2009 Economic Census data

2.6 How is the funding obtained being used?

Regarding the use of the funding obtained by the companies, the census data suggests that the percentage of economic units that report allocating the funding to categories relating to "investment" (creation or opening of the business, equipment or extension of the business, purchase of a storefront or vehicle), is lower than the percentage who report allocating it to categories of working capital and other current expense headings (payment of debts, acquisition of supplies, payment of salaries and other uses, Table 9). However, the percentage of companies that reported allocating the funding to investment, with respect to the total, is greater among companies that obtained bank credit than among those that obtained non-bank funding.

Moreover, it should be noted that the analysis of the uses of the funding also suggests that the average amount of the loans of the companies that resorted to banks tends to be greater than that received by companies that resorted to non-bank sources. Regardless of the size, the units that obtained bank credit reported a greater number of uses for the credit obtained, such that the sum of them exceeds the number of uses given by the category of companies that obtained non-bank funding.

Table 9. Use of loans and credit received.

A. Companies that obtained bank credit

Ocuppied personnel stratum	Total	Investment (creation or opening of the business, equipment or extensión of the business, purchase of a store front or vehicule)	Working capital (payments of debts, acquisition of supplies, payment of salaries and other uses)	Investment / Total
Total	**167,358**	**96,037**	**111,472**	**57%**
0 to 10 employees	136,128	79,999	78,770	59%
11 to 50 employees	23,164	11,395	22,195	49%
51 to 250 employees	6,587	3,708	8,420	56%
251 and more employees	1,479	935	2,087	63%

B. Companies that obtained non-bank funding

Ocuppied personnel stratum	Total	Investment (creation or opening of the business, equipment or extensión of the business, purchase of a store front or vehicule)	Working capital (payments of debts, acquisition of supplies, payment of salaries and other uses)	Investment / Total
Total	**792,270**	**169,985**	**180,346**	**21%**
0 to 10 employees	757,523	163,879	168,024	22%
11 to 50 employees	28,670	4,856	8,750	17%
51 to 250 employees	4,820	967	2,593	20%
251 and more employees	1,257	283	979	23%

Note: Each economic unit reports all of the uses it made of the funding; therefore, the sum of the uses differs from the total economic units.

Source: BBVA Research with 2009 Economic Census data.

2.7 Other relevant aspects of the credit to companies related to the Census information

The Census clearly shows that micro-businesses, due to their preponderance in the Mexican economy, constitute the majority of the banks' customers. However, within this numerous group of companies, there is a large percentage of productive entities that experience involuntary rationing of bank credit associated with varying conditions of the credit supply that are not attractive to them, just as they believe the interest rates are high or that they do not meet the requirements (Group C). The above may occur despite the fact that, according to ABM (the Mexican Bank Association), the bank credit granted to micro, small and medium enterprises (MSMEs) grew from January 2006 to January 2010 from 61 thousand firms to more than 153 thousand.[10]

It is important to note that, even though the 2009 Economic Census provides a more comprehensive view than the other official sources that reported the evolution of bank credit to companies, which are based on data samples, the Census does not accurately measure the number of companies with funding, bank or non-bank, in 2008. The reason is that in the Census questionnaire, an affirmative or negative response is requested to the question if the economic unit obtained credit or funding in 2008. And to the question regarding the reasons for not having obtained credit, several companies answered that the reason was that they already had some type of loan that had been granted previously.[11] From this perspective, the Census information could be indicating the minimum number of companies in the private and state-owned sector with funding from sources outside the company in that year. The true quantity could be slightly higher.

Regarding what other official sources indicate with respect to credit to companies in Mexico, it is essential to highlight the sample design of the ECMC that Banxico publishes quarterly and the ENAMIN taken by INEGI in other years as a possible source of discrepancies between the indicators reported here and those that may be obtained in those surveys.[12] The ECMC is performed on a sample of companies nationwide drawn from the 2004 Census. In each quarterly survey, at least 450 companies are sought from the sample to voluntarily and confidentially respond. It should also be noted that the ECMC, which indicates greater access to credit than that indicated in the Census, defines company size in terms of annual sales. Both the number of years in operation and the value of sales, as indicated in this document, influence the probability of a company accessing credit, regardless of the number of employees.

[10] These figures only include companies that obtained credit from the nine banking institutions that voluntarily provided statistics to that association. Therefore, though these figures are not exact, they are indicative of the rapid spread of credit to MSMEs in those years.

[11] Among the large companies, other reasons for not having obtained credit in 2008 include being in a loss or suspension of payments situation, being foreign capital companies and/or having credit from the parent company abroad, being assembly plants, having funds from the United States and/or being public agencies. Source: INEGI.

[12] A more detailed comparison of the indicators for company access to credit obtained from the Economic Census, the ECMC and ENAMIN is presented in Salazar and Ríos (2012).

In turn, the ENAMIN, which indicates less access to credit among micro-businesses than that indicated in the Census, takes a sample that focuses on companies that meet the INEGI definition of micro-businesses. That definition of micro-businesses does not only use a smaller number of employees than the Census to define the micro-business segment; but it also takes into account, in addition to the companies that operate in a commercial storefront or establishment, those economic units that do not have a commercial storefront and that operate in the owner's home (self-employed worker or landlord) or in the domicile of their clients or other sites. In this regard, the ENAMIN does not only consider micro-businesses (or establishments that employ up to 10 people), but also natural persons who are self-employed and lack an establishment. This accounts for a significant portion of the differences between the Census data and the ENAMIN that contribute to the lower percentage of companies with access to credit in the latter source.

Banks and authorities have acknowledged the need to stimulate credit to MSMEs. Thus, during 2010 and 2011, these entities continued working together to modify various regulations to promote the granting of bank credit to this segment. This has been carried out by requesting fewer requirements and increasing the volume of official aid for the constitution of initial loss guarantees for credits granted to smaller companies.

The conditions and requirements for granting credit that have been relaxed include: the removal of the requirement to present the Fiscal Identification Number in the credit application and the easing of required documentation required in accordance with the amount of the credit. For the latter, the use of Bank Account Statements, instead of projected cash flows, is permitted for loans under 2 million UDIS and Audited Financial Statements for loans under 4 million UDIS. Another support measure consisted in the increase of public funds allocated to grant initial loss guarantees.[13]

Furthermore, we believe there are other measures that can boost credit to companies and help reduce credit risk. Some of these are universalizing the credit bureau and the improvement of the guarantee records. Universalizing the credit bureau is a fundamental element for risk monitoring to be extended to more companies and sectors, and, in addition, would allowing the bureau itself to remain efficient.[14]

To incorporate more companies, especially those of a smaller size, to the databases of credit information associations, data could be added regarding the government's payments for its purchases from various providers of goods and services and for subsidies or aid programs, as well as that regarding the contributions of companies to the benefit of their workers for social security and to public institutions on housing. In turn, since the most recent indicators of the Doing Business Report (World Bank) indicate that time, costs and processes for registering property in Mexico are high with respect to other emerging countries, the improvement of these institutional aspects stands out as an important factor

[13] For more details, see Werner (2010).
[14] In the ***March 2011 Banking Outlook Mexico*** three proposals are presented for improving the quality and quantity of information from the Credit Information Associations in Mexico.

so that more micro-businesses, which normally have shorter credit histories because of their shorter time of operation in the market, can use their fixed movable and real estate assets as collateral to request bank credit. These reforms would also reduce the current need to allocate public funds to grant credit guarantees and would also allow those funds to be allocated to companies or investment projects in infrastructure or in the agriculture sector.

Despite the fact that the study of the causal relationship between credit and informality does not fall under the objectives of this analysis, the marked relationship is appreciated in the data between access to credit, on the one hand, and certain patterns in the hiring of employees with no fixed salaries and with low levels of payment of various tax contributions, on the other, is worthy of attention. The lack of funding is a possible cause for why companies do not grow and/or are not formalized; but there are also many other institutional reasons that could be contributing to this phenomenon, like the excessive regulation or ease of tax evasion. Therefore, in addition to the design of more appropriate credit products for micro and small enterprises, deepening government efforts to simplify the steps to opening a business would also be positive.

One recent study (Bruhn, 2012) has found encouraging, though modest, results for reducing business informality associated with the implementation of the SARE (the Rapid Business Opening System).[15] On the one hand, more informal business owners with personal characteristics in common with owners of formal micro-businesses tend to formalize through the SARE once this platform is available in their city. And on the other, the owners of informal businesses with personal characteristics in common with those of the salaried employees, though they tend less to become formal micro-businesses, do tend more to become salaried workers once the employment opportunities are created, including those arising from the formalization of micro-businesses through the SARE. Since the opening of a company is only one of the many requirements for operating a business in Mexico, more efforts should be made to further develop the agenda for the simplification of processes to carry out the steps in the three levels of government.

2.8 Conclusions

Based on the Census information, very significant differences were identified between companies that received bank credit and those that obtained funding from non-bank sources. These differences also take on a large magnitude with companies that did not obtain credit or funding because they experienced involuntary rationing (Group C) or voluntary rationing (Group D).

The differences are particularly pronounced in terms of years the company has been in operation, its revenues, fixed assets and employment per economic unit, in addition to other relevant financial and economic indicators. From the above, it can be inferred that companies that had a recognized payment

[15] For more information about SARE, see the website of the Comisión Federal de Mejora Regulatorio (COFEMER): www.cofemertramites.gob.mx

capacity, as measured through various characteristics such as having high productivity rates, obtaining high revenues, having guarantees and creating jobs, are those that involve less credit risk, and, therefore, can access bank credit more easily.

The data reviewed indicates that these advantages or strengths as a whole are a factor that facilitates companies' access to bank credit. Furthermore, this information suggests that, ex ante, there is an appropriate monitoring of the risks in the granting of commercial credit.[16] In this way, all of the elements that enable the quantification and limitation of the risk of granting credit to companies will be allowing the economic units to have funding in the long-term to support the expansion of their production facilities and, therefore, to the country's economic growth process.[17] The challenge for banks lies in designing the products and services, based on an infrastructure for monitoring risks and the proper administration of loans that could satisfy the funding needs of more companies, which, on average, are going to have a less capacity to pay and/or to offer collateral than the companies that are already customers of the banks.

To quantify the impact that bank credit could have on economic growth and the advances in the measures for increasing credit for MSMEs, it would be advisable to have an official survey in place that is conducted more frequently than the Economic Census (as the next Census will not be taken until 2014). In 2011, the CNBV, Banxico and IADB financial authorities, with the support of INEGI, conducted the ENAFIN (National Survey on Financing for Companies).[18] Its results will be published in the near future. If the ENAFIN yields data that is comparable to that of the Economic Census, it will be possible to measure if access to bank funding in the country has improved between 2008 and 2011. In this way, there will be an opportune instrument in place to make better decisions regarding financial inclusion for both companies and their employees.

[16] This result coincides with the findings of evidence of effective monitoring or risk ex ante in the granting of credit to micro-businesses in Hernández-Trillo, Pagán and Paxton (2005).
[17] It is important to remember that the data examined, which is cross-cutting, is not appropriate for establishing the sense of causality between funding and characteristics of the companies; therefore, these findings may also be interpreted as indicators of the positive impact of bank credit on economic growth.
[18] Salazar and Ríos (2012) present a brief description of the ENAFIN with some preliminary results, as well as a comparison of the statistics on the access to bank credit with those obtained from the other sources of information for Mexico.

3. What does the 2009 Economic Census tell us about the management of bank accounts among Mexican companies?

3.1 Descriptive statistics regarding companies' use of bank accounts

Of the 3,437,645 economic units in the private and state-owned sector reported by the Census, only 668,574 (19.4% of the total) managed a bank account for checks, savings or investment (Table 10). Thus, the percentage of companies that held bank accounts in 2008 is 4 times greater than the percentage of companies with bank credit in that year. The use of this instrument varies considerably in accordance with the size of the companies, measured by their employees. Of the smallest companies (with 0 to 10 employees), only 16.7% of the total (550,296 economic units) had a bank account.

The Census data indicates that as company size increases, the percentage of units with a bank account also increases; the figure reaches over 90% for companies with 50 or more employees. It should also be noted that companies with 10 or fewer employees are the largest group within the total of economic units, as well as under the total managing a bank account, as they account for 82% of all companies with a bank account.

Table 10.
Economic units in operation in 2008 that used a bank account
Number of units and %

Stratum of employed personnel	Economic units in the private and state-owned sector			Percentaje per occupied personnel estratum		Those that used a bank account as % or total economic units
	Total	Those that used a bank account	Those that did not use a bank account	Those that used a bank account	Those that did not use a bank account	
Total	**3,437,645**	**668,574**	**2,769,071**	**19.4%**	**80.6%**	**100.0%**
0 to 10 employees	3,287,048	550,296	2,736,752	16.7%	83.3%	82.3%
11 to 50 employees	124,165	94,037	30,128	75.7%	24.3%	14.1%
51 to 250 employees	21,447	19,488	1,959	90.9%	9.1%	2.9%
251 and more employees	4,985	4,753	232	95.3%	4.7%	0.7%

*It refers to information regarding parent companies and singular establishments, does not include branches.
Source: BBVA Research with 2009 Economic Census data.

Of the total 668,574 economic units that held a bank account, 14% of them had bank credit, 25% had non-bank funding and the rest (61%) did not report credit or funding (Chart 16). In line with the idea that if a company has a bank account, it is more likely to have other bank products, 39% of all companies with a bank account obtained some type of funding (14% bank and 25% non-bank), which is over the 25% (3% bank and 22% non-bank) of companies that obtained some type of funding despite not holding a bank account (Chart 16).

On the other hand, of the economic units that obtained bank credit (167,358 in 2008), 55% held a bank account (Chart 17). This percentage is higher than that of companies that had non-bank funding or that did not obtain funding. This information again indicates the positive relationship between having a bank account and having bank credit. Moreover, the fact that the Census figures indicate that a high percentage of companies that obtained bank credit did not report having a bank account for deposits (45%) suggests limitations of the Census itself to the extent that, in general, the banks deposit the funds they grant as credit into a bank account. It is also possible that this deposit has been made into the company owner's personal bank account and not into that of the productive entity.

Chart 16.
Access to funding according to the use of a bank account, % of economic units.

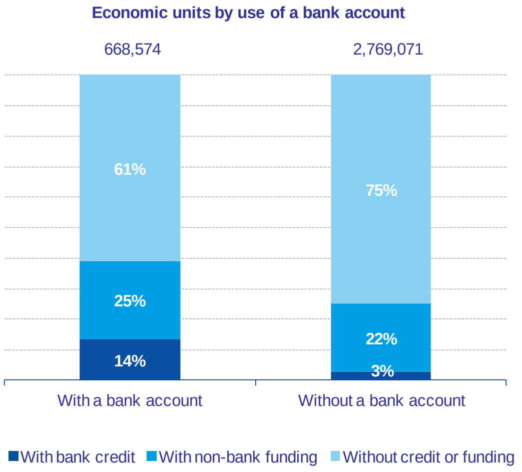
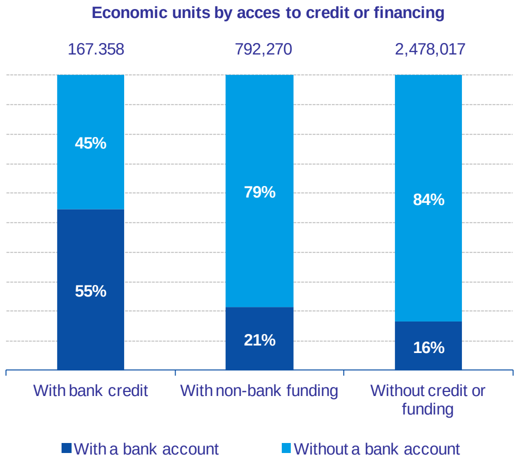


Chart 17
Use of a bank account according to funding access, % of economic units



Source: BBVA Research with 2009 Economic Census data.

In addition, the comparison of Charts 16 and 17 reveals that the number of units without a bank account (2,769,071) is 12% higher than the number of economic units that do not have credit or funding (2,478,017).

3.2 What are the reasons for not managing a bank account?

With respect to the reasons for which bank accounts are not held, of the 2,769,071 economic units that do not manage a bank account, 60.3% (1,669,429) stated it was because they did not need one. This is the most common response even among companies with a greater number of employees (Table 11). The second most common reason for not holding a bank account is that the fees or minimums are high, followed by lack of understanding of how to open one and other reasons.

Furthermore, Table 11 demonstrates that the level of fees and minimums and the lack of understanding of the procedure for opening a bank account are indicated with greater frequency by micro-businesses (those with 0 to 10 employees) than among the other companies.

Table 11.
Reasons for not having a bank account.
Number of units and %

Stratum of employed personnel	Total without a bank account		Lack of interest		High fees or comissions are high		Not knowing the procedure for requesting it		Other reasons	
	Number of economic units	% of total without a bank account	Number of economic units	% of total without a bank account	Number of economic units	% of total without a bank account	Number of economic units	% of total without a bank account	Number of economic units	% of total without a bank account
Total	**2,769,071**	**100.0%**	**1,669,459**	**60.3%**	**935,360**	**33.8%**	**330,333**	**11.9%**	**71,532**	**2.6%**
0 to 10 employees	2,736,752	100.0%	1,647,279	60.2%	927,503	33.9%	327,952	12.0%	69,831	2.6%
11 to 50 employees	30,128	100.0%	20,735	68.8%	7,399	24.6%	2,221	7.4%	1,491	4.9%
51 to 250 employees	1,959	100.0%	1,290	65.8%	422	21.5%	145	7.4%	175	8.9%
251 and more employees	232	100.0%	155	66.8%	36	15.5%	15	6.5%	35	15.1%

Source: BBVA Research with 2009 Economic Census data. In the case of reasons for not holding a bank account, the sum of percentages per stratum of employed personnel may be higher than 100% since the economic unit could indicate one or more of the reasons presented.

3.3 Voluntary versus involuntary rationing

The reported reasons for not having a bank account are useful for classifying the economic units since the cause or reason for the lack of use of a product or service could arise from: i) the users' preferences, which the supplying party is less likely to modify, or ii) the inherent characteristics of the product or service, which the supplier can modify to make it more attractive or to incentivize its use. For the subsequent analysis, the companies are classified according to the following groups:

- **Group E:** Economic units with a bank account
- **Group F:** Economic units without a bank account due to lack of interest, as this group stated they did not need one. This case is considered voluntary rationing of deposit services.
- **Group G:** Economic units without a bank account for other reasons, which is considered involuntary rationing of deposit services. This situation corresponds to the units that recorded as their reason for not having an account that the fees were high, not knowing the procedure for opening one and other reasons.

Thus, when compared against the case of obtaining credit or funding reviewed in the previous section, "involuntary rationing" (Group G) is a much more significant phenomenon for the use of bank accounts: while 32% of the economic units stated that they lack a bank account for reasons other than lack of interest[19], only 22% of the total reported not having credit or funding for reasons other than the lack of interest[20] (Table 12). Moreover, as reported regarding credit in Section 2, involuntary rationing impacts smaller companies to a greater extent.

On the other hand, voluntary rationing for credit is mentioned with a more uniform frequency among companies with different stratum of employed

[19] For the management of a bank account, these reasons include: high fees and minimums, lack of understanding of the procedure for requesting it and others.
[20] For obtaining credit or funding, these reasons include: high interest rates, lack of understanding of the procedure for requesting them, the institutions were located far from them, they applied but were not granted credit and others.

personnel (between 44.8% and 52.4%). In the case of voluntary rationing of bank accounts, the frequency is much higher in smaller companies (50.1% compared to 16.7%, 6.0% and 3.1% in the rest of the strata of employed personnel). This suggests that this type of companies is further from formality since all of their transactions are made in cash. This has major implications in terms of the declarations of taxable income for the payment of taxes like VAT and Income Tax, as will be seen later on in this paper.

Table 12.
Obtaining credit or funding using a bank account by willingness and reasons
% of total by stratum of employed personnel

Stratum of employed personnel	Access to credit or funding				Use of a bank account		
	A. Those who obtained bank credit	B. Those that obtained non-bank funding	C. Those that did not obtain funding because of other reasons	D. Those that did not obtain funding because lack of interest or distrust in banks	E. Those who use a bank account	G. Those without a bank account because of lack of interest	G. Those without a bank account because of other reasons
Total	**4.9%**	**23.0%**	**22.2%**	**49.9%**	**19.4%**	**48.6%**	**32.0%**
0 to 10 employees	4.1%	23.0%	23.0%	49.8%	16.7%	50.1%	33.1%
11 to 50 employees	18.7%	23.1%	5.8%	52.4%	75.7%	16.7%	7.6%
51 to 250 employees	30.7%	22.5%	2.0%	44.8%	90.9%	6.0%	3.1%
251 and more employees	29.1%	24.7%	0.0%	46.2%	95.3%	3.1%	1.5%

↑ Voluntary Rationing ↑

↑ Involuntary rationing ↑

Source: BBVA Research with 2009 Economic Census data.

In the Census survey questions, two shared reasons for not having funding or a bank account can be identified. The first is associated with the cost of each one of the services. In the case of credit, this reason is that interest rates are high, and in the case of bank accounts, because the minimums or fees are high.

Thus, overall, 40.7% of the economic units that did not have credit or funding reported that it was due to the interest rates being high, while 33.8% mentioned that they did not have a bank account because the fees or minimums were high (Chart 18).

The importance of both types of costs varies as the size of the economic unit increases. For smaller companies, the most-commonly indicated reason for not having bank credit were the high interest rates, while for the larger companies, the high fees and minimums are mentioned more frequently as a reason for not having a bank account.

The other common reason for not having credit or holding a bank account is the lack of understanding of the procedure for requesting them. In this case, said lack of knowledge is mentioned more commonly as a reason for not having a bank account than for not having credit or funding. Moreover, the pattern between the importance of this reason and the size of the company is less accentuated than when comparing the cost motive (Chart 19).

Chart 18.
Percentage of economic units without credit or bank account for reasons associated with the cost of the services

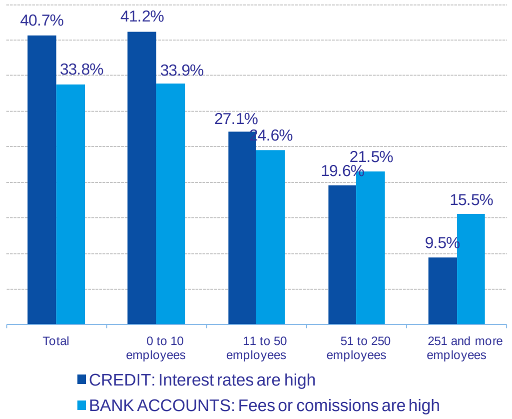
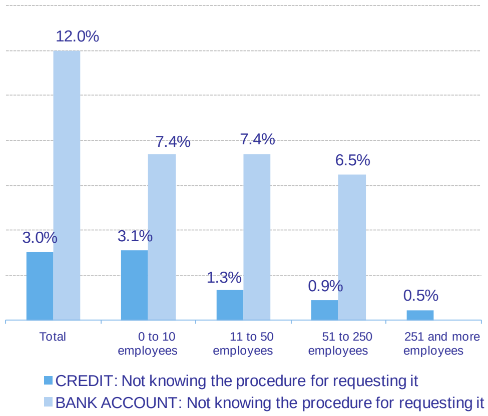


Chart 19.
Percentage of economic units without credit or bank Account due to not knowing the procedure for requesting them



Source: BBVA Research with 2009 Economic Census data.

3.4 The economic units with a bank account are more commonly constituted as trading corporations and record a greater number of years in operation

As mentioned in the section above, the Census provides information regarding the type of ownership of the economic units. Since the private sector is of greater interest for this analysis, below, only the distribution between the self-employed and trading corporation is considered.

The majority of economic units are made up by the self-employed (Chart 20); however, a considerably higher percentage of companies that hold a bank account are constituted as trading corporations (28%), as compared to companies that do not have an account for any reason (3% and 2%, Chart 21), regardless of the stratum of employed personnel.

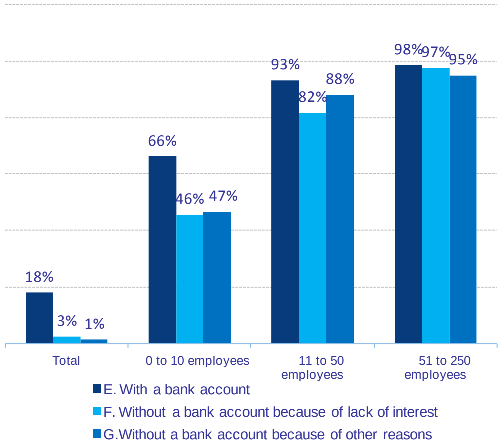
The more pronounced differences regarding the type of ownership are observed in the smaller units. For example, in 2008, 18% of companies that had up to 10 employees and a bank account stated they were constituted as trading corporations. This is compared to the only 3% of companies constituted as trading corporations that did not hold a bank account due to lack of interest and 1% for those that did not have a bank account for other reasons (Chart 21).

Chart 20.
Ownership type of economic units according to their use of a bank account. (Thousands of economic units, % of total)

Note: The sum of the percentages is less than 100% in Group E since the Chart does not include the economic units performing government business or any international organizations.

Source: BBVA Research with 2009 Economic Census data.

Chart 21.
Economic units by use of a bank account constituted as trading corporations (% per Stratum of Employed personnel)



In terms of years in operation, a greater percentage of the economic units with a bank account reported being in operation prior to 2004, for all company sizes (Chart 22). This difference is more noticeable among the units with fewer than 11 employees (54% versus 45%), but less marked as the economic unit size increases.

Chart 22.
Economic units that started operations prior to 2004 (% per stratum of employed personnel)

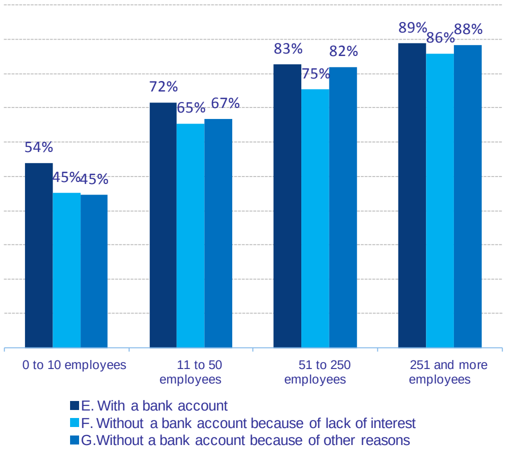
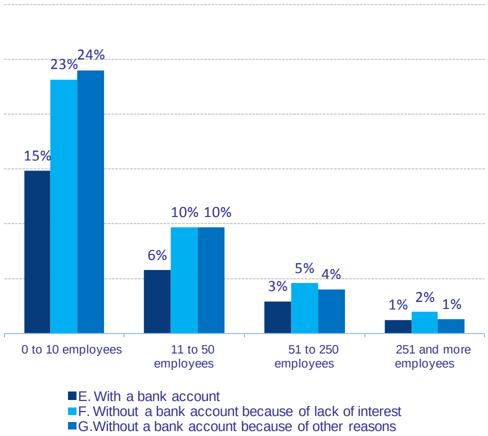


Chart 23.
Economic units that started operations in 2008 (% per stratum of employed personnel)



Source: BBVA Research with 2009 Economic Census data.

Among the younger companies, or those starting business in 2008, having a bank account is less common. However, in stark contrast to this pattern, the use of this instrument is more common in the smaller economic units than in the larger ones. That is, while 15% of the young economic units with up to 10 employees hold a bank account, only 6%, 3% and 1% of the larger units also have this product (Chart 23). This pattern could be due to the fact that the smaller companies are constituted as natural persons; therefore, they would be using the bank account of the owner and not managing a separate account for business transactions. This point could be a limiting factor of the Census information to the extent that no distinction is made of the applicable case: use of a personal account or use of a company account.

3.5 Cash flows tend to be greater among companies that manage a bank account

As the flows of income and expenses generated through a company's business activity increase, the availability of a bank account becomes more attractive due to its advantages as an important instrument of administrative control and as a payment channel, since the bank account increases convenience, opportunities and security of the transactions and reduces their cost and uncertainty. In addition, the generation of a record of income, expenses and, as a result, the construction of information on flows and the confirmation of profit margins could facilitate the process of obtaining credit.

According to the information gathered by the Census, the economic units that manage a bank account obtain greater income than those that do not have this financial instrument, regardless of the size of the company (Graph 24). As a percentage of the income obtained, the units with a bank account obtain considerably higher income than those that experience involuntary rationing of this financial service (Group G. Do not have a bank account for reasons other than lack of interest, Chart 25).

Chart 24.
Difference in revenues for the supply of goods and services*
(Average million pesos per economic unit)

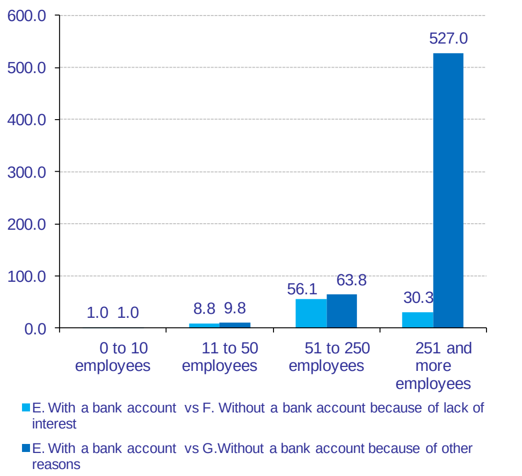


Chart 25.
Difference in revenues for the supply of goods and services*
(%)

* This refers to the difference calculated of the average revenues of the units with a bank account (Group E) minus the average revenues of the units without a bank account (Group F or G, as applicable). The percent difference is calculated as: (Revenues per economic unit with a bank account - Revenues per economic unit without a bank account) / Revenues per economic unit without a bank account.
Source: BBVA Research with 2009 Economic Census data.

However, economic units with a bank account record higher expenses for the purchase of goods and services (Charts 26 and 27). This pattern could be explained as a result of tax obligations since, in accordance with the Income Tax Act, in order to make payments of over $2,000 deductible, they must be made with a check, credit, debit or service card, or through authorized electronic payment channels. This thus requires the taxpayer to have a bank account. Indirectly, this result could be an indicator of formality, since, in order to comply with certain tax and social security obligations, a bank account is required to either make the respective payments or to exercise rights under fiscal regulations.

Chart 26.
Difference in expenses for the purchase of goods and services*
(Average million pesos per economic unit)

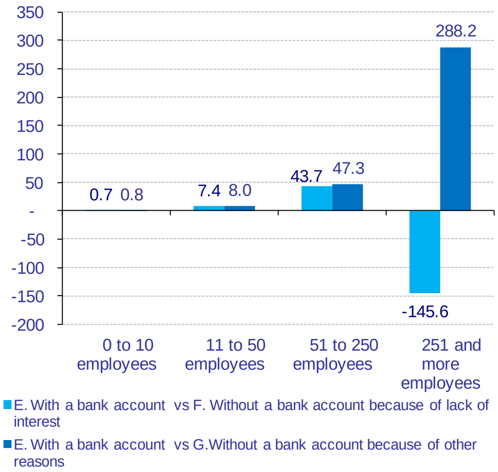
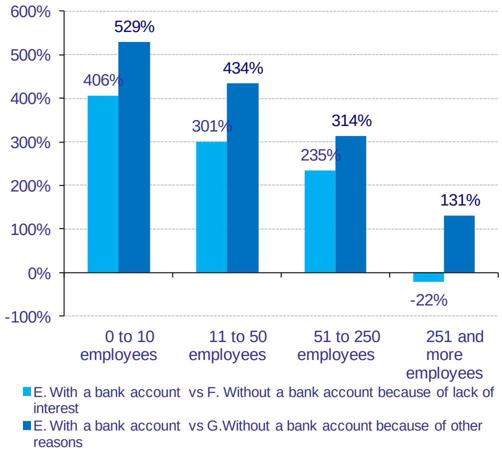


Chart 27.
Difference in expenses for the purchase of goods and services*
(%)



* This refers to the difference calculated of the average expenses of the units with a bank account (Group E) minus the average expenses of the units without a bank account (Group F or G, as applicable). The percent difference is calculated as: (Expenses per economic unit with a bank account - Expenses per economic unit without a bank account) / Expense per economic unit without a bank account.
Source: BBVA Research with 2009 Economic Census data.

With regard to the profit margin, the economic units with a bank account recorded greater profits, both in absolute and relative terms, as compared to companies without a bank account, regardless of the reason for which they lack this financial instrument (Charts 28 and 29). The difference in the profit margin is more pronounced when compared against companies with some type of involuntary rationing (Group G). In the case of smaller units, this difference is 458% and remains above 150% for the rest of the company sizes per stratum of employed personnel.

Chart 28.
Difference in the profit margin
(Average million pesos per economic unit)

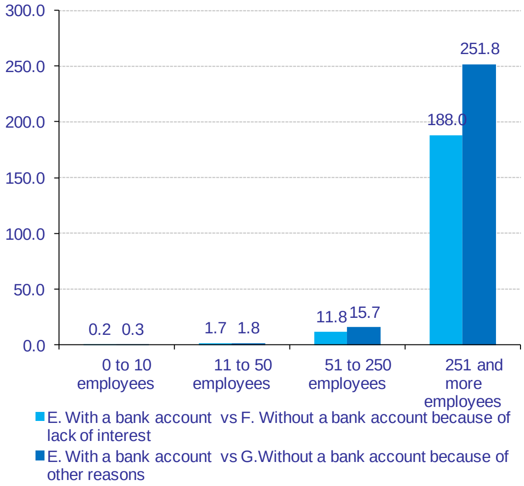
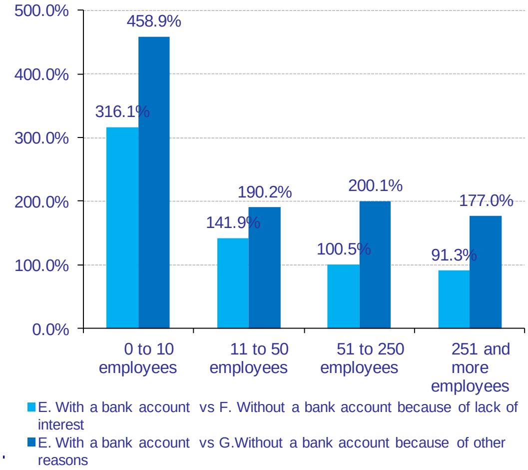


Chart 29.
Difference in the Profit Margin
(%)



Source; BBVA Research with 2009 Economic Census data.

3.6 The economic units with banking services recorded, in general: more salaried workers, higher compensation pay and better productivity indicators

The economic units with a bank account have a greater percentage of workers with wages and salaries for all strata of employed personnel. The more pronounced differences in this indicator are recorded in companies with fewer than 51 employees (Chart 30). In the case of smaller units (up to 10 employees), those who have a bank account report that 65% of their personnel is salaried, such that for companies of the same size with no bank account, this percentage is significantly lower: 27% in those without a bank account due to lack of interest (Group F) and 21% in those who experience involuntary rationing (Group G).

In addition, for economic units with up to 250 employees, the average number of salaried workers is greater in companies that managed a bank account (Chart 31). In the case of the economic units with more than 250 employees and with involuntary rationing (Group G), they only reported having 77% of their personnel salaried; however, the average salaried employees (715) was greater than for companies with a bank account (691) or those that did not have an account due to lack of interest (568). The data above suggests an area of opportunity to offer bank products to smaller economic units that experience involuntary rationing, not only for their operations as a business, but also due to the number of users of payroll accounts that could support the country's banking penetration process.

Chart 30.
Percentage of economic units with workers paid with fixed salaries and wages
(%)

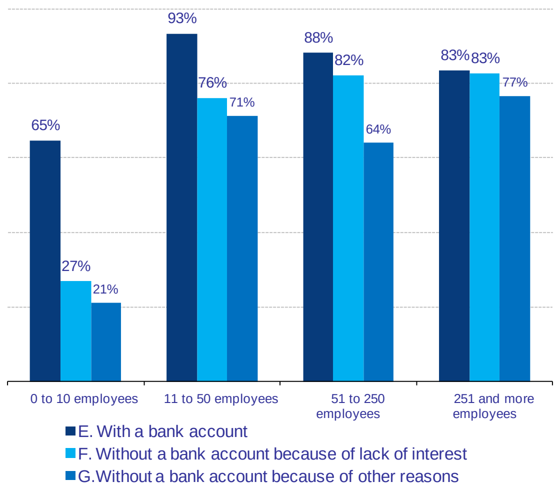
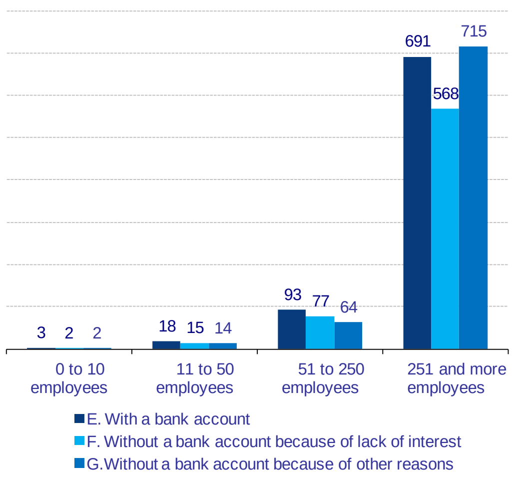


Chart 31.
Workers paid with fixed salaries and wages
(Average per economic unit)



Source: BBVA Research with 2009 Economic Census data.

These two characteristics (percentage of salaried personnel and average salaried workers) illustrate the potential that the economic units that already participate in the financial sector could have to facilitate other users to be incorporated into the banking system. In this case, companies with a bank account can use them as a vehicle to pay their vendors or payrolls through a bank deposit to the worker's account. In turn, the workers can have the funds available through debit card, which can be used to withdraw cash and make purchases. The payroll account also works as confirmation of the workers' income, which can be extremely useful if they would like to apply for credit. The benefit for companies is to be able to make their various payments and expenditures in an efficient, transparent way.

Furthermore, the compensation to workers illustrates the monetary flows associated with the payment of salaried employees. As can be expected, companies with a bank account pay, on average, greater compensation than the units without a bank account. In this case, the differences are more pronounced among medium and large companies (with over 50 employees, Chart 32).

When reviewing the ratio between the total expenses on goods and services and expenses for the payment of salaries and wages, for any stratum of employed personnel, companies that manage a bank account allocate a percentage similar to the payment of compensation to salaried personnel, which lies between 10% and 12% (Chart 33).

Chart 32.
Salaries, wages and profits distributed, (Average million pesos per economic unit)

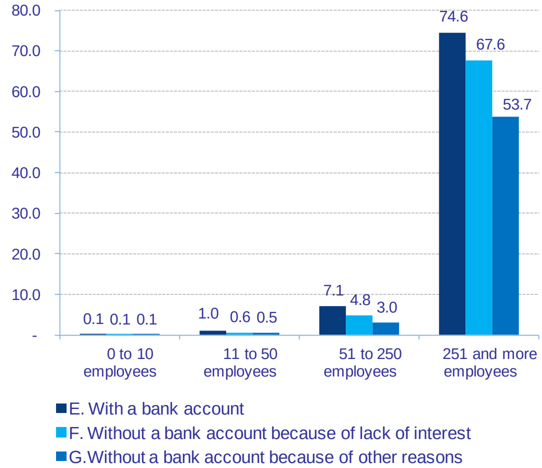
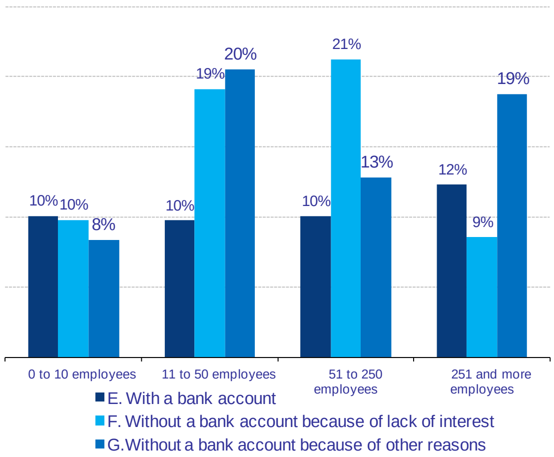


Chart 33.
Salaries, wages and profits distributed, as percentage of total expenditure (%)



Source: BBVA Research with 2009 Economic Census data.

The variations of salaries paid by size or stratum of employed personnel are more pronounced in companies that do not have a bank account, regardless of the reason for which they lack a bank account. In the companies that experience involuntary rationing (Group G) (without considering other reasons) the percentage of the expenses allocated to the payment of compensation for units with over 10 employees exceeds the 10% observed in the companies that manage a bank account (20%, 13% and 19% for the respective company sizes). The above again suggests that there is potential in this type of company to introduce services that facilitate the administration of its payrolls.

The patterns observed in the compensation paid by the economic units could be associated with differences with average productivity of labor and total assets held, which, in general are more pronounced as company size increases. For example, the total value of the assets per salaried worker is greater in the economic units with a bank account, and this difference is more pronounced for medium and large companies (with more than 50 employees, Chart 34). In the case of smaller companies (with up to 10 employees) it is interesting to note that the difference in assets per worker is not significant between companies with a bank account and those that do not have one due to lack of interest, and that those that do not have one for other reasons recorded a greater value of assets per worker. This may be due to the fact that companies without bank accounts have more assets, but rather because they have a smaller number of salaried workers, which gives this indicator an upward bias.

In addition, for economic units with fewer than 250 employees, the average revenues generated per paid employee is greater for companies that manage a bank account (Chart 35). For the economic units with over 250 employees, those that have the highest revenues per worker are those that do not have a bank account due to lack of interest. Again, the result is not generated by greater productivity, but (as Chart 31 shows) because this group of companies records nearly 18% fewer salaried workers than companies with a bank account.

Chart 34.
Total value of fixed assets per worker paid with fixed salaries and wages
(Average thousand pesos per economic unit)

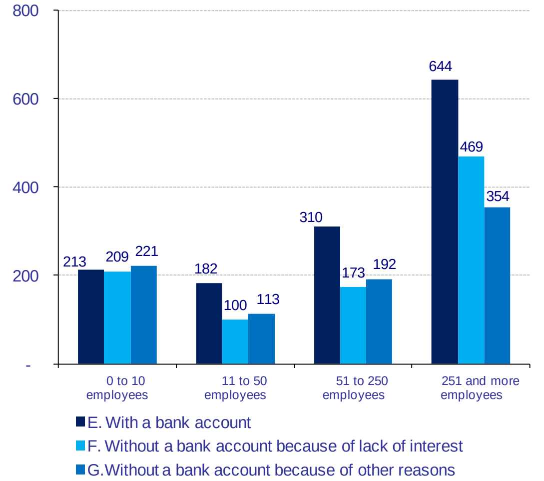
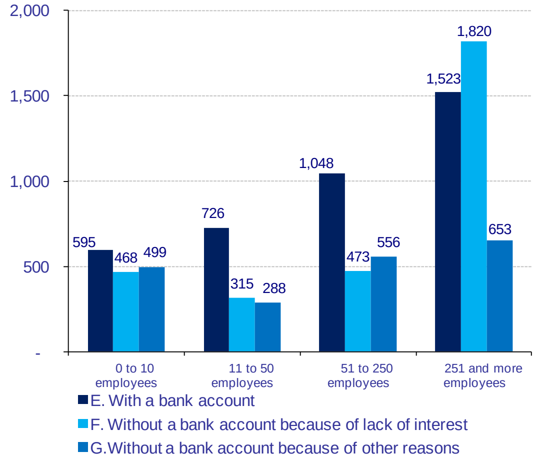


Chart 35.
Revenues per worker paid with fixed salaries and wages
(Average thousand pesos per economic unit



Source: BBVA Research with 2009 Economic Census data.

3.7 The economic units with a bank account record greater traits of formality, including compliance with tax and social security obligations

The type of labor relations between the economic unit and the personnel it employs, together with the reported patterns of compliance with tax and social security obligations, may be indicators of the formality of the activities of each economic unit. In particular, in addition to facilitating the management and control of revenues and payments to employees and vendors, the presence of a bank account is also useful for complying with payments associated to the fiscal burden and social security obligations of the company. In this regard, it is to be expected that the economic units that manage a bank account report greater traits of formality.

In the case of the type of relationship with employees, a smaller percentage of economic units with a bank account report having unpaid personnel (owners, family members, etcetera). For example, in the units with fewer than 11 employees, 79% of those that hold a bank account reported unpaid personnel versus 95% recorded in the units that did not have an account for reasons other than lack of interest (Chart 36). Moreover, there are fewer unpaid employees, on average, in the units with a bank account. The difference in this average rises with the increased size of the economic unit (Chart 37).

Chart 36.
Percentage of economic units with unpaid personnel
(% by stratum of employed personnel)

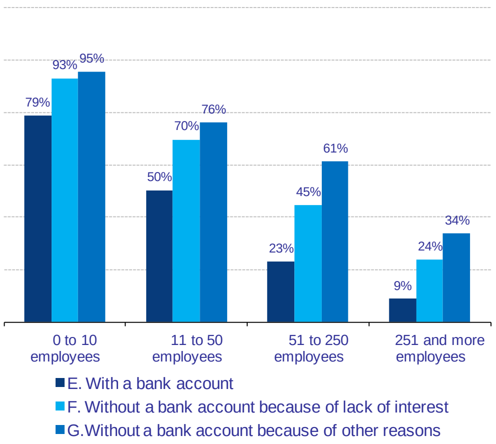
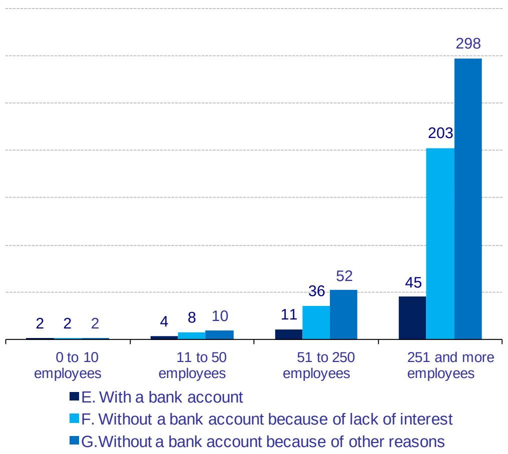


Chart 37.
Average unpaid personnel per economic unit
(Number of individuals)



Source: BBVA Research with 2009 Economic Census data.

A third type of relationship with employees (other than salaried and unpaid, reviewed above) is through the payment of commissions without a base salary. In this case, for units with more than 10 employees, the percentage of personnel paid on commission and the average of people employed in this modality is lower in units with a bank account (Charts 38 and 39).

Chart 38.
Percent of economic units with personnel paid on commission with no base salary
(%by Stratum of employed personnel)

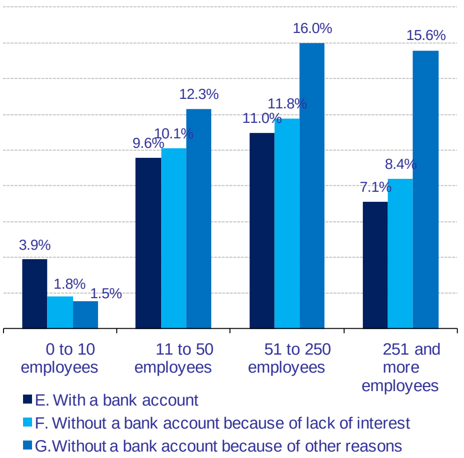
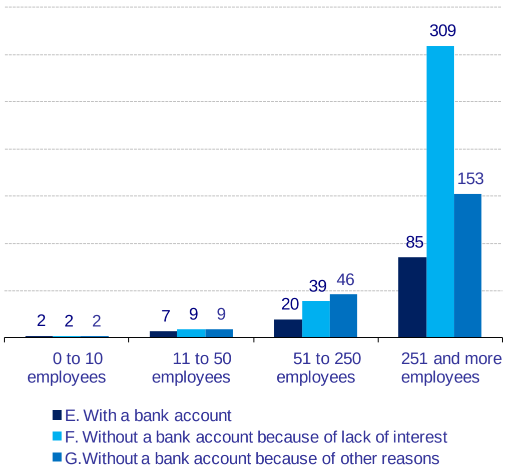


Chart 39.
Personnel paid on commission with no base salary per economic unit
(Average number of individuals)



Source: BBVA Research with 2009 Economic Census data.

Another trait that could suggest greater formality is that associated with the payment of social security contributions. In this case, a greater percentage of companies with a bank account make social security contributions, regardless of the stratum of the employed personnel. The difference with respect to the companies that do not have a bank account for any reason is extremely large for micro, small and medium enterprises (Chart 40). In this case the size of the difference may imply a clear sign of formality for firms that have a bank account.

Chart 40.
Percent of economic units with employers' contributions to social security Regimens (% by stratum of employed personnel)

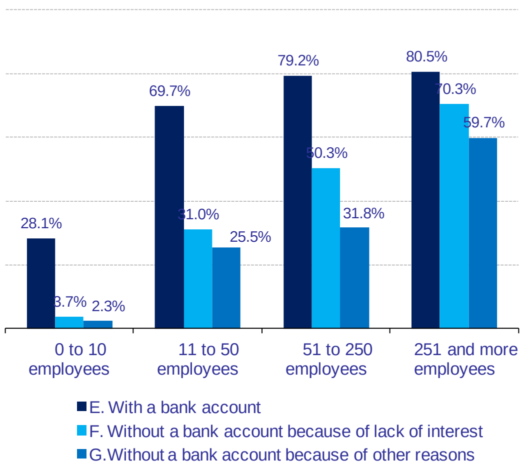
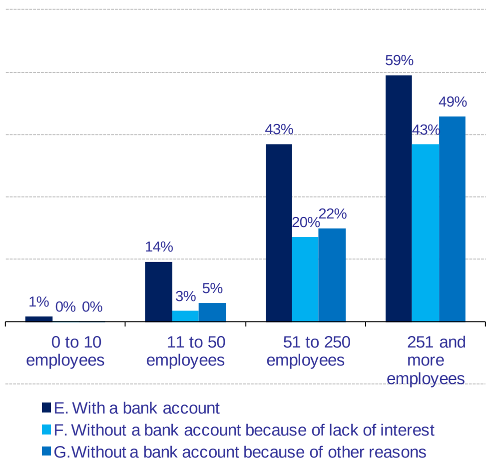


Chart 41.
Percentage of economic units that paid taxes (excluding VAT) (% by stratum of employed personnel)



Source: BBVA Research with 2009 Economic Census data.

In terms of the payment of taxes other than VAT, a larger percentage of economic units that held bank accounts reported having paid taxes (Chart 41). This percentage increases with economic unit size and is over 1% in those with under 11 employees and reached up to 59% in those with over 250 employees.

As regards compliance with the payment and charging of VAT, a much larger percentage of economic units with a bank account made these payments, regardless of the stratum of Employed personnel (Charts 42 and 43). This difference is more pronounced when compared against economic units from Group G (those that experience involuntary rationing).

Chart 42.
Percentage of economic units with VAT paid
(% by stratum of employed personnel)

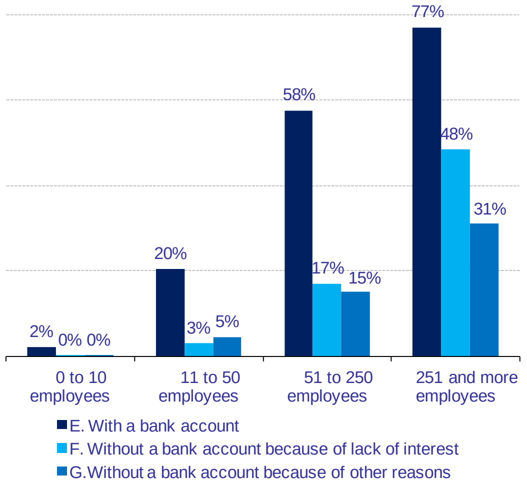
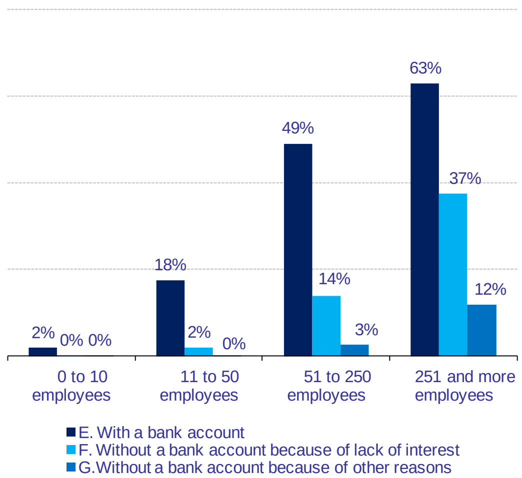


Chart 43.
Percentage of economic units with VAT charged
(% by stratum of employed personnel)



Source: BBVA Research with 2009 Economic Census data.

3.8 Conclusions on the use of bank accounts.

The 2009 Economic Census gives a first look at the characteristics of the economic units that use deposit banking services. The evidence indicates that companies that have a bank account display significant attributes associated with efficiency and formality.

According to the Census information, regardless of the stratum of employed personnel, the economic units that have a bank account are more commonly constituted as trading corporations and have more years in operation.

In terms of the generation of monetary flows, important differences are also recorded between units that hold a bank account and those that do not. The more pronounced differences are reported when comparing against companies that experience involuntary rationing, which, for any stratum of employed personnel, obtain lower revenues and profit margins.

When analyzing the variables related to employment, compensation and productivity, important variations are observed when considering the holding of a bank account. In most cases, companies with this instrument report more salaried workers, pay greater compensation and record better indicators of productivity as measured through assets or revenues.

Furthermore, when considering the various traits of formality, companies with an account report better indicators, for example, less unpaid personnel or personnel paid on commission and better payments for social security and taxes.

When compared with the representative indicators for obtaining bank credit, what stands out is the fact that for both credit and the holding of bank accounts, there is voluntary rationing, which implies an absence of demand for these financial products, since lack of interest or need is presented. This type of rationing is greater and is more wide-spread in the case of credit, where it exceeds 44% of all economic units. In the case of holding a bank account, voluntary rationing is more prevalent, around 50%, among smaller companies. Given the traits detected in terms of relationship with the employees and payment of tax and social security contributions, this data (greater voluntary rationing in the holding of bank accounts) could be related with the intent to not generate evidence of revenues obtained in order to remain informal.

In the case of involuntary rationing, the bank product that is most affected are bank accounts. The high fees reason points, once again, to be the important challenge for financial institutions to create more appropriate products and services, especially taking into consideration that Basic Accounts for the General Public appear to have not garnered significant acceptance among the self-employed. The other cause mentioned was lack of understanding of the requirements or procedures for opening a bank account. To attenuate its importance, the dissemination of the benefits of the use of the bank account, how to open one and the development of products more in line with the specific needs of companies, especially those of a smaller size, could contribute to their extended use. In this case, the benefit of financial inclusion could be multiplied, since once the economic unit holds a bank account, it will be able to make its payroll and vendor payments, as well as to receive payments from its customers through electronic channels; this could then become a channel for introducing financial services to still more parties. It is also worth adding that spreading awareness of the benefits of the use of bank accounts could also positively contribute to improving their acceptance among companies that have opted not to use them because they do not need them.

Finally, it is important to note that the differences found between companies with and without bank accounts are very much in line with those that differentiate between companies that have bank credit and those that do not (see Summary Charts in the Appendix, where all of the groups are compared in terms of access to banking services). Another important idea is that despite the fact that bank accounts do not require proof of payment capacity, many of the variables for inferring it (revenues, assets, etc.) are relevant for their adoption. This does not necessarily have to be the case, and there is an important challenge in informing companies of the benefits of management bank accounts for the management of their own cash flows.

4. Conclusions about the use of financial services by companies.

The analysis of the Census information provides an important channel for understanding the use of financial services among the productive units throughout the country (Charts 44, 45 and 46 presented at the end of this chapter). The data indicates that the use of the financial services provided by the banks occurs in companies of all sizes that can be categorized as the "best risks" in each segment since they have more years in service, generate more income, have more valuable fixed assets, pay more taxes, employ more salaried workers, etc. This information is useful not only from the perspective of developing new banking products, but also from a public policy design standpoint. Some ideas and relevant points arising from the analysis of the Census information are as follows:

With respect to the topic of access to bank credit, the division of companies into four groups based on whether or not they obtained funding allows some questions to be posed whose response may help quantify the credit potential of the economic units and the effect it could have on the growth of the country's productive entities.

One relevant example is given by the fact that a high percentage of companies said they did not need bank credit (and possibly do not need non-bank funding either). Does this response imply that companies:

i. Do not have plans for expansion?
ii. Have their own funds to cover all of their funding needs?
iii. Respond in this way because they do not have payment capacity?

Furthermore, in the case of involuntary rationing, some companies mentioned that they did not apply for bank credit because the interest rates they would have to pay are high, so:

i. What interest rate or what monthly amount of expenditures can companies pay based on their size?
ii. Is the company aware of the true level of risk it has or does it believe that its risk level is lower and, therefore, should be granted lower interest rates even though it is a high risk?

In the case of the companies that believe that they do not meet the requirements to obtain bank credit:

i. Do they have funds available so that in the near future they could meet the requirements?
ii. Do the companies have the means and incentives to work to become more efficient, control their expenses, improve their products and do anything necessary to increase their cash flows and raise their payment capacity?
iii. To what extent are companies inefficient because that do not have bank credit or, in contrast, do companies not have bank credit because they are inefficient? The Census data suggests that the companies that possess certain important characteristics of efficiency are those with greater probabilities of accessing bank credit because these favorable characteristics reduce their credit risk.

iv. How important is the use of tools like credit scores or ratings for increasing access to credit? One example of the above is provided by Infonavit, as this institution requires affiliated workers to have a minimum score of 116 to be granted credit. The credit scores could be established by company size or by sales, and the information from the different company segments that already have credit could be used to construct the index or to develop the respective statistical tool.

The topic of years in operation was relevant for both access to credit and the management of a bank account. It should be mentioned that one very useful concept consists in being able to determine the reasons why new companies survive and the reasons that generate their greater failure. This analysis could enable us to discover factors that can help mitigate the credit risk of companies and, therefore, facilitate their access to credit.

In the case of the management of bank accounts, it is interesting that the authorities have designed a product for attracting customers with no fees or commissions (basic accounts) for natural persons, which the self-employed could have, in theory. This fact draws attention to the need to build greater awareness of the benefits that the use of bank accounts could have for companies. Alternatively, this concept also highlights the absence of a similar low-cost product for companies that is more appropriate for satisfying their needs.

The questions above illustrate the need for further investigation of the factors affecting companies' decisions to acquire financial products. It is very likely that the results of the first issue of the ENAFIN survey, when they are made available, provide additional information about these factors and offer a more comprehensive view. On the other hand, it would also be useful for the ENAMIN, the INEGI survey currently focused on researching the characteristics of the most predominant companies in Mexico, to be taken on a more regular basis.

Finally, we believe it is important to highlight the need to review, in greater depth and preferably with a representative sample of the population, the results we have presented and other information about the companies reporting in the Census. With a microdatabase, we would be able to calculate multivariate models to quantify the relative importance of the different factors analyzed regarding access to credit and bank accounts. Moreover, it would be important to add several factors that were not taken into consideration in this analysis to our list, such as the sector of economic activity and geographical location. Furthermore, the large percentage of companies that opt out of demanding banking services illustrates the need to analyze the causes of this phenomenon in greater detail.

Chart 44.
Characteristics of the companies based on obtaining credit or funding.

A With bank credti
B With non-bakk funding
C Without funding because of other reasons
D Without funding because lack of interest or distrust in banks

1 Ownership type								
1.1 Trading corporations	Max	21.3%	A	D	B	C	4.3%	Min
2 Years in operation								
2.1 Operation started prior to 2004	Max	55.5%	A	D	C	B	42.4%	Min
2.2 Operations started in 2008	Min	16.1%	A	D	C	B	25.8%	Max
3 Cash flows and assets								
3.1 Average revenue per economic unit	Max	12.9 mdp	A	D	B	C	1.5 mdp	Min
3.2 Average expenditure per economic unit	Max	9.8 mdp	A	B	D	C	0.6 mdp	Min
3.3 Average profit margin per economic unit	Max	3.1 mdp	A	C	D	B	0.6 mdp	Min
3.4 Average assets' value per economic unit	Max	4.0 mdp	A	B	D	C	0.5 mdp	Min
4 Salaried employees and their remunerations								
4.1 Economit units with employees with fixed salaries and wages	Max	56.1%	A	D	B	C	27.6%	Min
4.2 Expenditure in salaries and wages as % of total expenditure	Min	8.4%	A	D	B	C	14.0%	Max
4.3 Average payments to employees per economic unit	Max	1.5 mdp	A	B	D	C	0.3 mdp	Min
4.4 Average salaried employees per economic unit	Max	19	A	B	D	C	5	Min
4.5 Anual payments per salaried employee	Max	0.08 mdp	A	B	C	D	0.06 mdp	Max
5 Productivity								
5.1 Average assets per salaried employee	Max	0.5 mdp	B	C	A	D	0.2 mdp	Min
5.2 Average revenue per salaried employee	Max	1.2 mdp	A	C	B	D	0.8 mdp	Min
6 Formality								
6.1 % of economit units with unpaid personnel	Min	80%	A	D	B	C	93%	Max
6.2 % of economic units with employees paid on commission	Max	4.7%	A	B	D	C	3.1%	Min
6.3 % of economic units that paid social security contributions	Max	31%	A	D	B	C	5.8%	Min
6.4 % of economic units that paid taxes (excluding VAT)	Max	6.2%	A	B	D	C	0.5%	Min
6.5 % economic units that paid VAT	Max	8.6%	A	B	D	C	0.8%	Min
6.6 % economic units that charged VAT	Max	7.5%	A	B	D	C	0.2%	Min
7 Subisidies								
7.1 % of economi units that received subsidies	Max	0.26%	A	B	C	D	0.04%	Min

Source: BBVA Research with 2009 Economic Census data.

Chart 45.
Characteristics of the companies based on the use of a bank account.

- E With a bank account
- F Without a bank account because of lack of interest
- G Without a bank account because of other reasons

1 Ownership type							
1.1 Trading corporations	Max	27.5%	E	F	G	1.9%	Min
2 Years in operation							
2.1 Operation started prior to 2004	Max	57.4%	E	F	G	24.0%	Min
2.2 Operations started in 2008	Min	13.1%	E	G	F	23.0%	Max
3 Cash flows and assets							
3.1 Average revenue per economic unit	Max	11.8 mdp	E	F	G	0.3 mdp	Min
3.2 Average expenditure per economic unit	Max	7.6 mdp	E	F	G	0.2 mdp	Min
3.3 Average profit margin per economic unit	Max	4.1 mdp	E	F	G	0.1 mdp	Min
3.4 Average assets' value per economic unit	Max	4.5 mdp	E	F	G	0.1 mdp	Min
4 Salaried employees and their remunerations							
4.1 Economit units with employees with fixed salaries and wages	Max	69.5%	E	F	G	21.6%	Min
4.2 Expenditure in salaries and wages as % of total expenditure	Min	10.5%	G	E	F	11.1%	Max
4.3 Average payments to employees per economic unit	Max	1.5 mdp	E	F	G	0.1 mdp	Min
4.4 Average salaried employees per economic unit	Max	15.0	E	F	G	3.0	Min
4.5 Anual payments per salaried employee	Max	0.08 mdp	E	F	G	0.04 mdp	Min
5 Productivity							
5.1 Average assets per salaried employee	Max	0.4 mdp	E	G	F	0.2 mdp	Min
5.2 Average revenue per salaried employee	Max	1.1 mdp	E	F	G	0.5 mdp	Min
6 Formality							
6.1 % of economit units with unpaid personnel	Min	72.6%	E	F	G	95.3%	Max
6.2 % of economic units with employees paid on commission	Max	4.9%	E	F	G	1.6%	Min
6.3 % of economic units that paid social security contributions	Max	35.8%	E	F	G	2.5%	Min
6.4 % of economic units that paid taxes (excluding VAT)	Max	6.2%	E	F	G	0.2%	Min
6.5 % economic units that paid VAT	Max	6.9%	E	F	G	0.3%	Min
6.6 % economic units that charged VAT	Max	5.9%	E	F	G	0.2%	Min
7 Subisidies							
7.1 % of economi units that received subsidies	Max	0.23%	E	G	F	0.02%	Min

Source. BBVA Research with 2009 Economic Census data.

Chart 46.
Characteristics of the companies based on use of financial services.

Características de las empresas por condición de uso de servicios financieros

Acces to credit or funding		**Use of a bank account**	
A	With bank credti	E	With a bank account
B	With non-bakk funding	F	Without a bank account because of lack of interest
C	C. Without funding because of other reasons	G	Without a bank account because of other reasons
D	D. Without funding because lack of interest or distrust in banks		

1 Ownership type											
1.1 Trading corporations	Max	27.5%	E	A	D	B	C	F	G	1.9%	Min
2 Years in operation											
2.1 Operation started prior to 2004	Max	57.4%	E	A	D	C	F	B	G	24.0%	Min
2.2 Operations started in 2008	Min	13.1%	E	A	D	G	C	F	B	25.8%	Max
3 Cash flows and assets											
3.1 Average revenue per economic unit	Max	12.9 mdp	A	E	D	B	C	F	G	0.3 mdp	Min
3.2 Average expenditure per economic unit	Max	9.8 mdp	A	E	B	D	C	F	G	0.2 mdp	Min
3.3 Average profit margin per economic unit	Max	4.1 mdp	E	A	C	D	B	F	G	0.1 mdp	Min
3.4 Average assets' value per economic unit	Max	4.5 mdp	E	A	B	D	C	F	G	0.1 mdp	Min
4 Salaried employees and their remunerations											
4.1 Economit units with employees with fixed salaries and wages	Max	69.5%	E	A	D	B	F	C	G	21.6%	Min
4.2 Expenditure in salaries and wages as % of total expenditure	Min	8.4%	A	G	E	F	D	B	C	14.0%	Max
4.3 Average payments to employees per economic unit	Max	1.5 mdp	A	E	B	D	C	F	G	0.1 mdp	Min
4.4 Average salaried employees per economic unit	Max	19	A	E	B	D	C	F	G	3	Min
4.5 Anual payments per salaried employee	Max	0.08 mdp	E	A	B	C	D	F	G	0.04 mdp	Min
5 Productivity											
5.1 Average assets per salaried employee	Max	0.5 mdp	B	E	C	A	D	G	F	0.2 mdp	Min
5.2 Average revenue per salaried employee	Max	1.2 mdp	A	C	E	B	D	F	G	0.5 mdp	Min
6 Formality											
6.1 % of economit units with unpaid personnel	Min	72.6%	E	A	D	B	F	C	G	95.3%	Max
6.2 % of economic units with employees paid on commission	Max	4.9%	E	A	B	D	C	F	G	1.6%	Min
6.3 % of economic units that paid social security contributions	Max	35.8%	E	A	D	B	C	F	G	2.5%	Min
6.4 % of economic units that paid taxes (excluding VAT)	Max	6.2%	A	E	B	D	C	F	G	0.2%	Min
6.5 % economic units that paid VAT	Max	8.6%	A	E	B	D	C	F	G	0.3%	Min
6.6 % economic units that charged VAT	Max	7.5%	A	E	B	D	F	G	C	0.2%	Min
7 Subisidies											
7.1 % of economi units that received subsidies	Max	0.26%	A	E	B	C	G	D	F	0.02%	Min

Source. BBVA Research with 2009 Economic Census data.

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APPENDIX

Chart A1.
Percentage of economic units constituted as trading corporations (% of total)

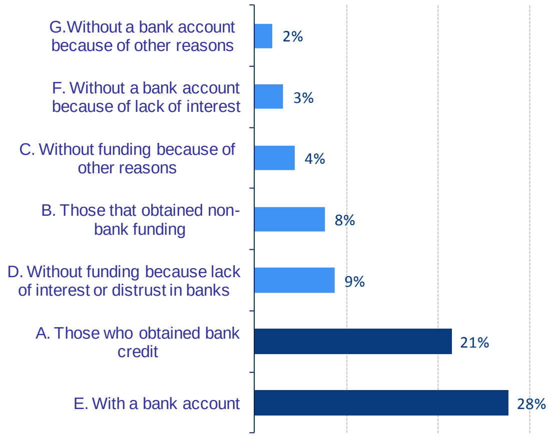
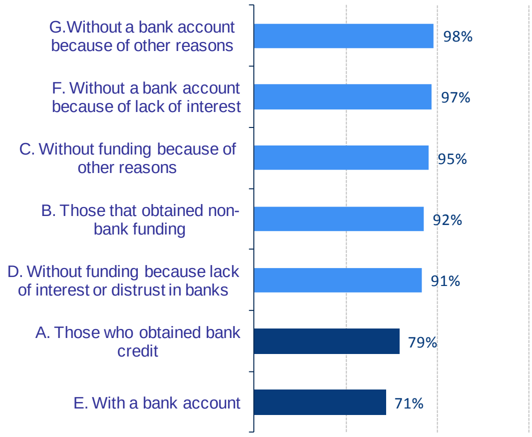


Chart A2.
Percentage of economic units constituted as natural persons (% of total)



Source: BBVA Research with 2009 Economic Census data.

Chart A3.
Percentage of economic units that started operations prior to 2004 (% of total)

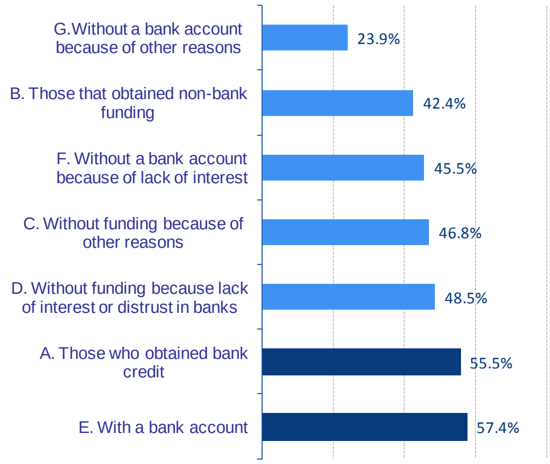
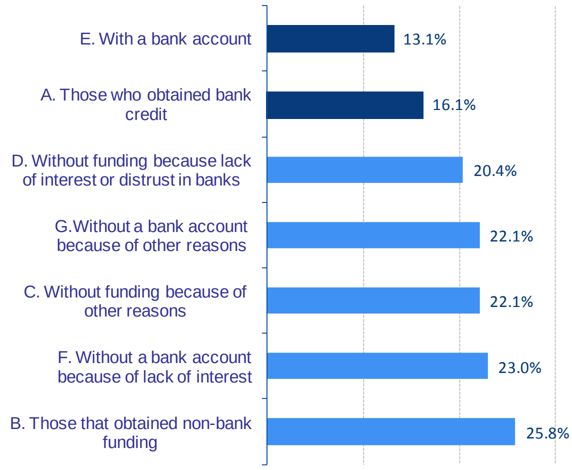


Chart A4.
Percentage of economic units that started operations in 2008 (% of total)



Source: BBVA Research with 2009 Economic Census data.

Chart A5.
Annual revenues, average per economic unit
(Million pesos)

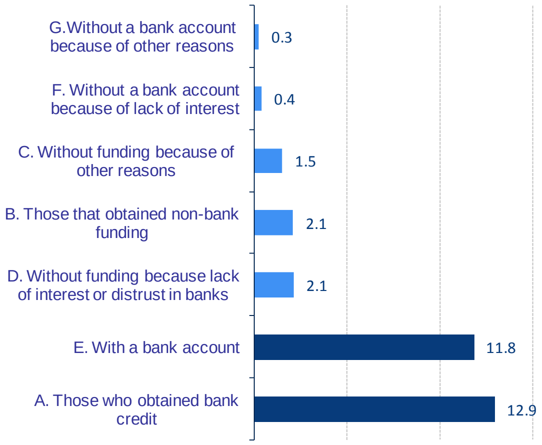
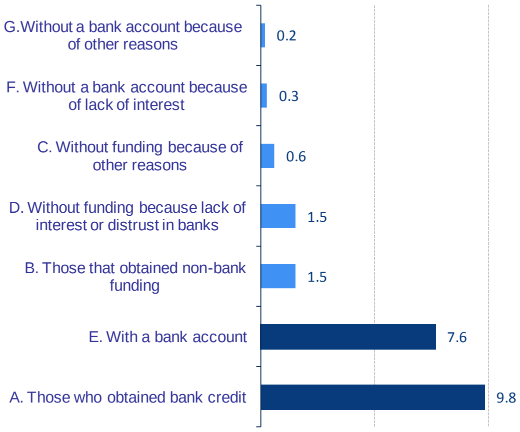


Chart A6.
Annual expenditures, average per economic unit
(Million pesos)



Source: BBVA Research with 2009 Economic Census data..

Chart A7.
Annual profit margin, average per economic unit
(Million pesos)

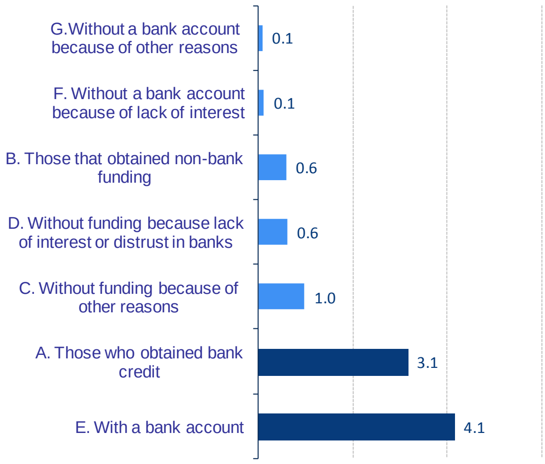
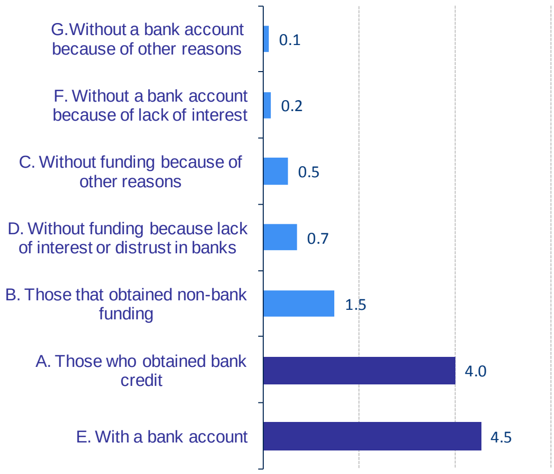


Chart A8.
Value of fixed assets, average per economic unit
(Million pesos)



Source: BBVA Research with 2009 Economic Census data.

Chart A9.
Percentage of economic units with employees with fixed salaries and wages (% of total)

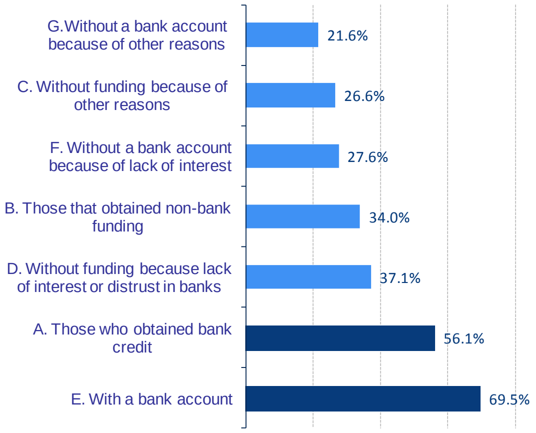
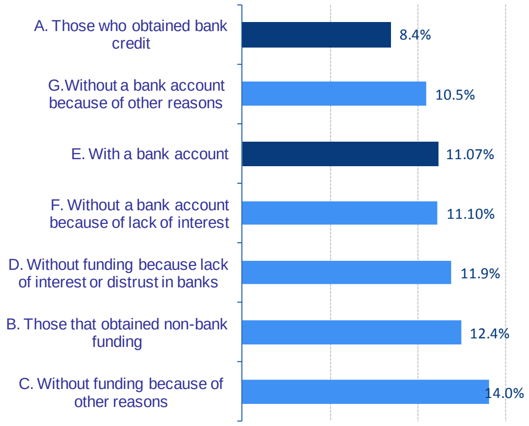


Chart A10.
Expenditures on salaries, wages and distributed profits (% total expenditure)



Source: BBVA Research with 2009 Economic Census data.

Chart A11.
Expenditures on salaries, wages and distributed profits (Average million pesos per economic unit)

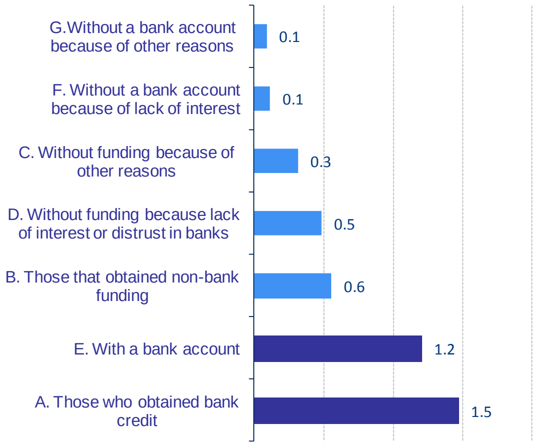
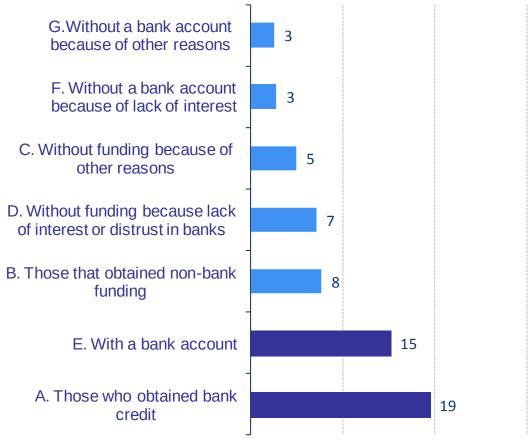


Chart A12.
Personnel paid with fixed salaries and wages, average per economic unit (Number of workers)



Source: BBVA Research with 2009 Economic Census data.

Chart A13.
Value of fixed assets per salaried worker, (Average million pesos per economic unit)

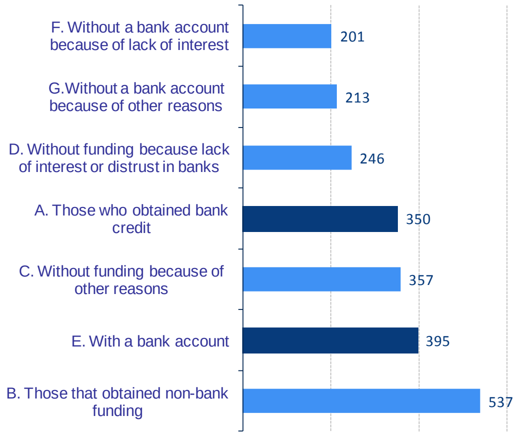
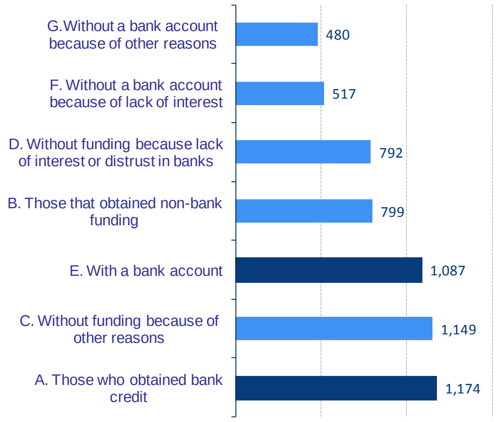


Chart A14.
Revenues per salaried worker, (Average million pesos per economic unit)



Source: BBVA Research with 2009 Economic Census data.

Chart A15.
Percentage of economic units with unpaid personnel (% of total)

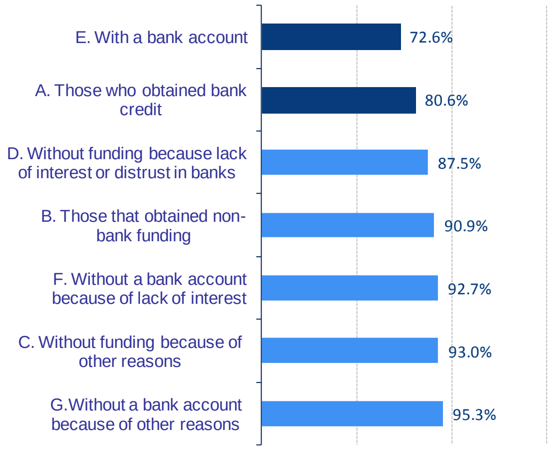
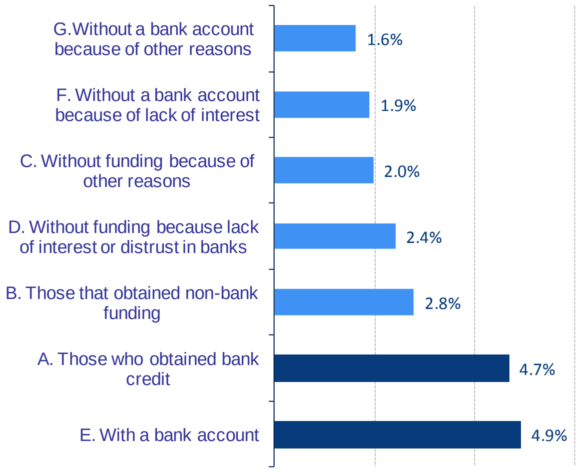


Chart A16.
Percentage of economic units with employees paid on commission (% of total)



Source: BBVA Research with 2009 Economic Census data.

Chart A17.
Percentage of economic units that paid social security contributions (% of total)

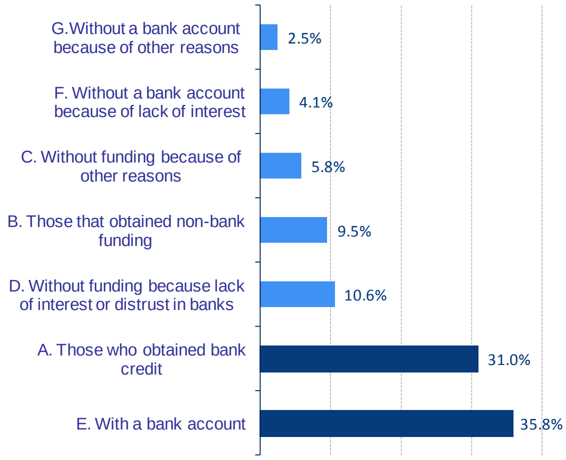
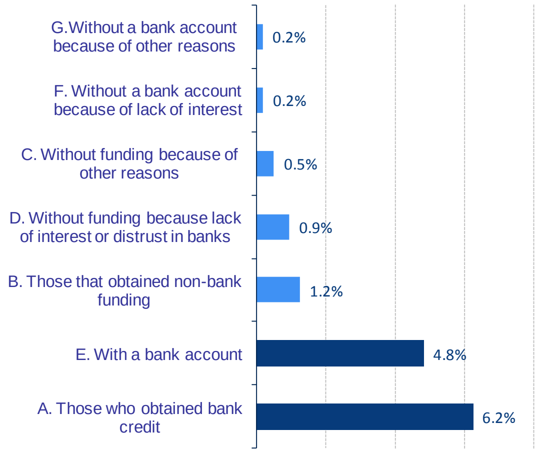


Chart A18.
Percentage of economic units that paid taxes (excluding VAT) (% of total)



Source: BBVA Research with 2009 Economic Census data.

Chart A19.
Percentage of economic units that paid VAT (% of total)

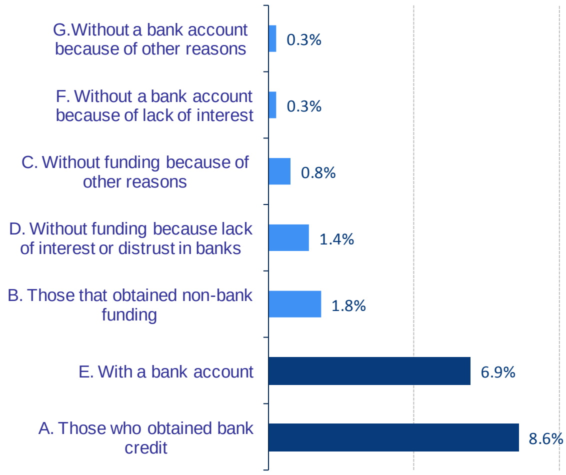
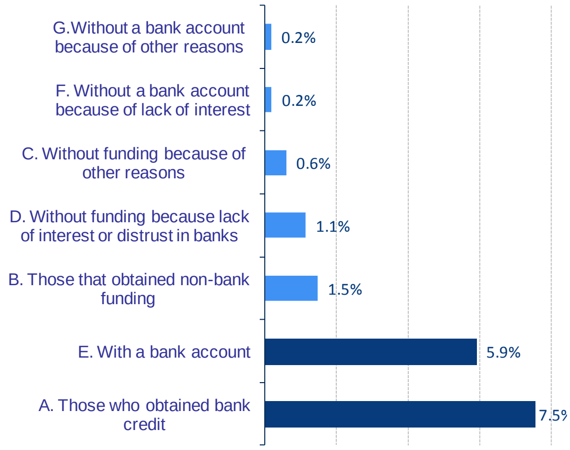


Chart A20.
Percentage of economic units that charged VAT (% of total)



Source: BBVA Research with 2009 Economic Census data.

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