Globalization of Banking and Local Access to Financial Resources:
A Case Study from Southeastern Mexico

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ABSTRACT

Since 1999 foreign financial institutions have acquired six of Mexico's eight largest banks as part of a process of wholesale financial liberalization and economic integration. To date, however, no empirical research has been carried out to assess the implications of the transformation of Mexico's financial system on access to credit among low and moderate-income households. The primary objective of this study is to assess how the processes of globalization and economic liberalization have affected access to formal and informal financial resources in Mexico. A case study approach, based on a household survey in Valladolid, Mexico, is presented to determine how low and moderate-income households gain access to financial resources. In addition, the study quantifies the distribution of formal and informal credit and identifies the relative importance of formal and informal financial institutions.

Keywords: Globalization, banking, financial exclusion, informal economy

INTRODUCTION

In May 2001, the parent company of Citibank acquired *Banamex*, Mexico's flagship banking institution, completing a process of liberalization begun more than a decade earlier. The transformation of the financial system was aimed at "expanding, diversifying and modernizing financial services to…foster greater participation in the global economy" (Federal Reserve Bank of Atlanta 2001). To date, however, no empirical research has been carried out to assess the consequences of globalization and liberalization on access to credit among low and moderate-income households in Mexico. Consequently, the primary goal of this study is to assess how the processes of globalization and economic liberalization have affected access to formal and informal financial resources in southeastern Mexico.

The case study presented below provides a concrete example of how global processes bring about profound local consequences. Furthermore, since many other nations in Latin America have recently opened their financial systems to foreign intervention, this study offers some insights into the potential ramifications of such a strategy for the poor households that comprise the vast majority of the region's population.

The section that follows provides a brief overview of recent research on globalization of finance. Subsequently, the role of financial systems and the transformation of the Mexican banking sector are discussed.

The next section identifies the formal and informal institutions that have emerged to meet the credit needs of low and moderate-income households in Mexico. The case study of formal and informal financial systems in Valladolid, Mexico is then presented. The final section assesses the implications of the case study and identifies opportunities for future research.

GLOBALIZATION OF FINANCE

Globalization, defined as the increasing liberalization and integration of economies in terms of trade and investment, has transformed financial and capital markets during the past two decades (Hausler 2002). Globalization of finance is associated with deregulation of banking activities within particular countries and consolidation of institutions and bank mergers that cross national borders (Baliño and Ubide 2000). These trends have emerged from the belief that liberalization leads to greater profitability, more efficient allocation of resources and diversification of risk. Banks, like other sectors of the economy, must compete with each other globally as part of a broader process of political and economic integration (Leyson and Pollard 2000).

The liberalization of banking and financial services has also been justified as a means of addressing financial repression. According to Gruben and McComb (1997), financial repression stems from government control of interest rates, reserve requirements, and lending priorities. With high levels of financial repression people choose to invest in other assets and the banking system captures a relatively small share of savings.

During the past decade, much of the research on globalization of finance has focused on financial exclusion – biases in the allocation of financing as a consequence of credit rationing or discriminatory practices (Christopherson and Hovey 1996). Research on financial exclusion reveals that liberalized financial markets are not necessarily efficient and may increase inequalities in access to and distribution of financial resources (Leyshon 1995).

Substantial research has been carried out on financial exclusion in the United States. Graves (2003), for example, documents how deregulation has led to the emergence of a two-tiered financial system. In particular, he focuses on the proliferation of payday lenders that serve poor, urban areas of the U.S. Caskey (1994) also suggests that elimination of regulatory barriers is associated with expansion of “fringe” banking, reflecting increasing disparities in economic well-being. He concludes that households without financial assets must pay more for financial services than other households.

Research on financial exclusion has been somewhat limited in developing countries. In the case of Fiji, Sharma and Reddy (2002) conclude that institutional forces are the primary determinants of financial exclusion in rural areas (where two-thirds of households do not have access to financial services). Christopherson and Hovey (1996) also describe a “bimodal” financial system in Mexico, comprised of large financial and industrial groups integrated with global financial markets and local and regional finance (provided by domestic banks), which serves small and medium businesses and households. They conclude that access to financial resources is highly uneven, exacerbating inequalities in economic opportunity among Mexican states.

TRANSFORMATION OF MEXICO'S FINANCIAL SYSTEM

From a purely economic perspective, financial systems exist to reduce transaction costs and offset asymmetries in information among economic agents (Ayala 2003). As such, the primary role of a financial system is to allocate resources efficiently under conditions of uncertainty and risk. In order to allocate resources efficiently, banks collect the surplus (savings) of economic agents by offering a return on investment (interest). Concomitantly, resources are channeled to borrowers through lending activities, which include interest rates reflecting the return paid to investors, the costs of intermediation (and profit), and the risk involved in making the transaction (Allen and Gale 2004).

The operation of the financial system brings about a different, purportedly more efficient, allocation of resources than would otherwise occur (Hernández 2003). From a theoretical perspective, because financial institutions reduce risk, they promote greater savings, which in turn generates greater economic growth. Several authors, including King and Levine (1993), have found that level of financial development is positively associated with economic growth. In addition, Levine and Zervos (1998) have offered empirical evidence that well-developed financial systems are associated with greater levels of productivity and capital accumulation. Mexico's financial system, however, has been notorious for its inefficiency, spurring the reforms of the past two decades.

The transformation of Mexico's financial system may be divided into three stages: nationalization; liberalization and financial crisis; and foreign intervention. Each of these periods, as well as the consequences of globalization and liberalization on access to credit, is discussed below.

Nationalization (1982-1988)

In the wake of the 1982 debt crisis, the Mexican government nationalized private banks on the grounds that they had generated excessive profits, created monopolistic markets and facilitated capital flight (Unal and Navarro 1997). Expropriation was viewed as a means of regaining government control over the financial system and promoting economic development by channeling credit to small and medium firms (Maxfield 1992). Government controls remained in place on interest and exchange rates, reserve requirements and the distribution of credit. Although profits increased 19 percent annually between 1982 and 1989, bank penetration beyond Mexico City remained limited (Mansell-Carstens 1996a).

The period of state-owned banks led to important lags in training, innovation and regulation, and large capital investments were needed to modernize the financial system (Unal and Navarro 1997). In 1988, the Mexican government proposed reprivatization in order to create a more efficient financial system and increase competition (Peek and Rosengren 2000).

Liberalization and financial crisis (1988-1994)

During a 14-month period in 1988-89, the Mexican government deregulated interest rates, eliminated restrictions on bank deposits and minimum reserves, and opened the financial system to limited foreign intervention (Hernández 2003). The goals of liberalization were to increase domestic savings, improve the allocation of financial resources, and increase the supply of credit in order to promote greater economic growth and productivity (Ayala 2003). In the short run, the newly privatized financial system met expectations – financial penetration improved, more credit was made available to the private sector and the costs of credit were reduced (Mansell-Carstens 1996a).

The success of Mexico's reprivatized banking system, however, was short-lived. Privatization and deregulation led to concentration of resources among a handful of industrial and financial conglomerates. Consequently, many banks extended large amounts of credit without sufficient analysis and/or collateral. In addition, the interest rate spread[1] increased by more than 60 percent, decreasing relative returns on savings and making credit more costly (Calva 2000). Due to poor management, questionable lending practices and relatively high interest rates, many borrowers were increasingly unable to repay loans (Graf 1999).

In December 1994, the Mexican government responded to balance-of-payment problems by devaluing the peso by more than 100 percent. Devaluation resulted in a sharp decline in real income coupled with significant increases in interest rates and inflation. As a result, the share of non-performing loans exploded to more than 35 percent by 1997. At that point, the Mexican government was forced to intervene, absorbing almost $100 billion[2] in bad debts and taking over 12 banks that were responsible for about 20 percent of all outstanding loans (Graf 1999).

Foreign intervention (1994-present)

Starting in the mid-1990s, two policy reforms opened Mexico's financial system to greater foreign intervention. The North American Free Trade Agreement (NAFTA) gradually eased restrictions on foreign bank participation, initially limiting firms to small subsidiaries engaged in wholesale non-lending banking activities.

Table 1. *Ownership of Eight Largest Banks in Mexico*

Bank	Market Share	Majority Ownership
Bancomer	25.6%	BBVA (Spain)
Banamex	22.3%	Citigroup (USA)
Banorte	11.4%	Grumasa (Mexico)
Bital	9.3%	HSBC Holdings (UK)
Santander Mexicano	6.5%	Banco Santander (Spain)
Banca Serfin	6.4%	Banco Santander (Spain)
Scotiabank Inverlat	5.0%	Scotiabank (Canada)
Inbursa	3.3%	Grupo Carso (Mexico)

Source: *Comisión Nacional Bancaria y de Valores* (2003)

Faced with a desperate need to raise capital following the financial crisis and the failure of many privatized banks, the Mexican government further relaxed restrictions on foreign intervention. By 1995, foreign banks were allowed to hold a controlling stake in domestic institutions that accounted for less than six percent of Mexico's banking system. Ownership of the country's three largest banks, which controlled 60 percent of all loans, was limited to 20 percent (Peek and Rosengren 2000).

In 1999, all restrictions on foreign intervention were eliminated. At that time, international firms took control of two of Mexico's six largest banks and held minority stakes in three others (Dages et al. 2000). With the Citibank takeover of *Banamex* in 2001, the liberalization process was essentially complete – the Mexican financial system was comprised of 11 domestic and 19 foreign banks (Bubel and Skelton 2002). As shown in Table One above, foreign financial institutions currently control six of Mexico's eight largest banks, representing about 75 percent of all deposits and outstanding loans. Mexico is the largest economy in the world where foreign interests control such an overwhelming majority of bank assets (Bubel and Skelton 2002).

Consequences of liberalization and foreign intervention

The transformation of Mexico's financial system was aimed at creating a more efficient, competitive, decentralized and inclusive banking system (Mansell-Carstens 1996a). Participation of foreign financial institutions was the primary vehicle for effecting this transformation. Foreign banks would purportedly diversify sources of capital and credit, increase the amount of funding available, improve quality, costs and availability of financial services, modernize financial system infrastructure and increase transparency of the banking sector (Dages et al. 2000).

Although liberalization of Mexico's financial system may have achieved some of these objectives, reforms were undertaken first and foremost for macro-economic motives (generation of foreign exchange, reorganization of government finances, etc.) with little interest in impacts on local economic development (Ferraz and Hamaguchi 2002). Since foreign banks concentrate on serving corporate clients and providing consumer credit and currencies to domestic banks, rather than financing activities that expand local production capacities and employment, the financial sector risks becoming "detached" from the local economy with large-scale foreign intervention (Girón and Correa 1999). Simply put, foreign institutions may have no real commitment to domestic borrowers; consequently, they may not be responsive to domestic credit needs (Peek and Rosengren 2000). Detachment of the banking sector may result in financial exclusion.

Substantial evidence of financial exclusion exists in Mexico's banking system. Following the 1994 financial crisis and subsequent foreign intervention, banks did not renew their lending activities to the private sector. For example, between 1994 and 2000 bank lending fell from 74 percent to seven percent of GDP (Serrano 2001). According to a study by *Banamex*, reported in Serrano (2001), only 19 percent of small and medium businesses in Mexico had access to credit from the banking sector in 2000, seriously jeopardizing firms' ability to undertake new capital expenditures or expansion. Furthermore, the lending patterns of foreign-owned banks vary markedly from those of domestic institutions – only six percent of foreign-bank loans are made to households compared to about 18 percent among domestic banks (Dages et al. 2000).

These negative consequences have been confirmed by recent reports in both the Mexican and U.S. press. Several *New York Times* articles have documented the obstacles encountered by small businesses and individuals when soliciting credit through private banks (Thompson 2002; Malkin 2002). One Mexican newspaper confirmed that lack of financing from the formal banking sector had forced many low and moderate-income families to turn to informal sources of credit, such as pawnshops and moneylenders, in order to rebuild their homes and businesses following Hurricane Isidore in September 2002 (*Diario de Yucatán* 2002).

FORMAL AND INFORMAL RESPONSES TO LIBERALIZATION

As the *Diario de Yucatán* article attests, a host of organizations have emerged to fill the void created by Mexico's foreign-controlled banking system. The proliferation of these organizations indicates that the transformation of the financial system has failed to promote more complete participation in the formal economy.

Formal institutions

The institutions that have cropped up to meet the needs of low and middle-income families may be classified as formal or informal, depending on whether they are subject to government regulation. Formal institutions include *cajas populares*, *Monte de Piedad*, Mexico's national pawnshop, and *Banco Azteca*, the first bank chartered in Mexico since the 1994 financial crisis.

Cajas populares are member-owned cooperatives, whose basic premise is to promote savings and provide occasional financing. In general, members are required to make regular deposits, according to their household budgets. *Cajas* differ from banks in that the total amount of their lending activities generally does not exceed their deposits. As access to bank credit has waned, *cajas* have proliferated – more than 1.7 million Mexicans were *caja* members in 2002 (COMACREP 2002). In the Yucatán Peninsula, *Sistema Coopera*, with 120 offices serving 97,000 members, is the largest *caja popular* (A. Torres, personal communication, December 16, 2003).

Monte de Piedad is a non-profit institution that provides short-term loans, which are guaranteed by personal property, at relatively low interest rates. *Montepío*, as it is known, operates 80 offices throughout Mexico serving more than eight million people annually. In 2003, *Montepío* authorized more than $300 million in financing to eight million Mexicans. *Monte de Piedad* operates three offices in Mérida, the capital of Yucatán. Residents of rural areas of the state frequently travel to Mérida to seek financial assistance from *Montepío*.

Banco Azteca is a subsidiary of *Grupo Elektra*, a large Mexican retail conglomerate. With more than 900 branches located in *Elektra* stores throughout the country, the bank began operations in October 2002. By December 2002, more than 250,000 accounts had been opened. *Banco Azteca* also manages installment plans of more than 800,000 *Elektra* costumers (Conger 2002). *Banco*

Azteca has 15 offices in Yucatán, serving about 18,000 accountholders. Only three branches, however, are found in rural areas of the state.

Informal Institutions

The informal credit sector exists because it resolves problems the formal sector fails to address. According to Hernández (2003), the informal sector offers a wide array of services with a high degree of flexibility, promotes savings, and motivates a sense of responsibility and reciprocity among participants. In addition, the informal sector allows lenders to obtain a relatively high return on savings and permits borrowers to access credit, though at interest rates higher than those in the formal sector.

The informal sector accounts for between one-third and three-quarters of all credit in developing countries (Montiel, Agenor and Ul Haque 1993). Although interest rates are higher than in the formal economy, debts are usually not guaranteed by physical collateral; other mechanisms, such as social capital, are employed to minimize risk. Montiel, Agenor and Ul Haque (1993) have grouped informal financial institutions into four categories: 1) occasional lending; 2) regular moneylending; 3) tied credit; and 4) group lending.

Occasional lending takes place directly among family and friends when one party has surplus funds; interest is usually not charged. Regular moneylending is performed on an ongoing basis by institutions (pawnshops, for example) or persons who make their living from such activities. In Mexico, these individuals are known as *agiotistas*; interest rates are relatively high and loans are usually secured by jewelry or real estate, making them institutions of last resort. Tied credit involves financing linked to transactions outside the financial sector. This form of credit is commonly encountered in corner stores in Mexico. Suppliers allow store owners to purchase merchandise on credit; in turn, shop-owners sell goods to local residents on credit (called *fiado* in Mexico). Interest, in the case of both the supplier and the storeowner, is included in the price of goods. At least two-thirds of micro-enterprises in Mexico obtain credit by this means (Heino and Pagán 2001).

Lending groups include cooperative efforts to generate resources to satisfy credit needs. Grameen Bank and *Banco Sol* are perhaps the best-known examples. Lending groups also include rotating savings and credit associations (ROSCAs), known in Mexico as *tandas* or *mutualistas*. *Tandas* are usually formed by a small group of people who know each other through their work or residence. Members deposit money regularly, which is distributed to participants following a cyclical schedule. This form of credit is particularly effective in that it creates not only liquidity, but also reciprocity (Hernández 2003). Because *tandas* are an efficient form of financial mediation that distributes risk and economizes on transaction costs, they are found at all socio-economic levels in Mexico (Mansell-Carstens 1996b). *Mutualista* financing is similar to the *tanda* system. However, the *mutualista* administrator, frequently a professional moneylender, charges a commission for managing the group.

CASE STUDY

The *municipio*[3] of Valladolid is located halfway between Mérida and Cancún, two of the major cities in the Yucatán Peninsula (Figure 1).

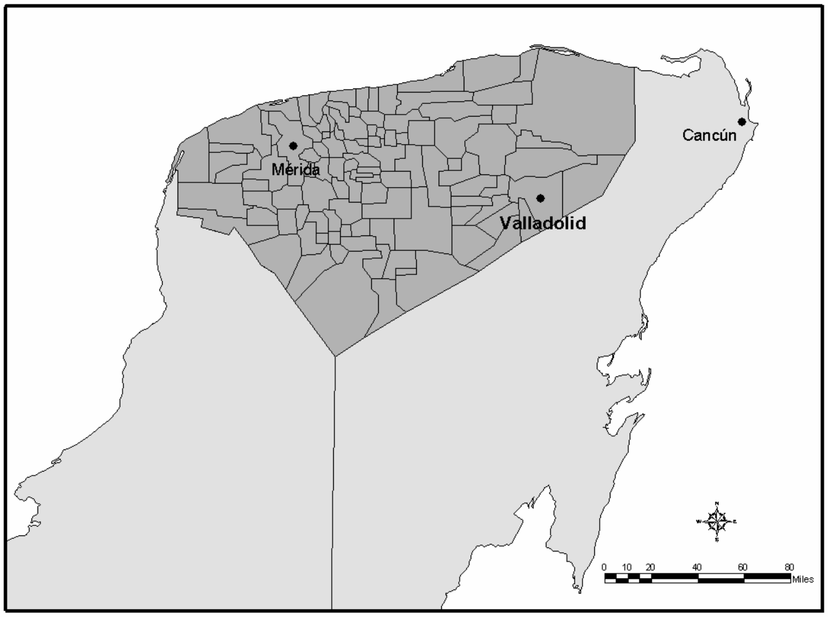

Figure 1. *Location of study area*

According to recent census data, the population of the *municipio* is 56,776, with two-thirds of residents living in the city proper (INEGI 2000). Relative to other locations outside the state capital, Valladolid is relatively prosperous, with an average annual household income of about $3500.

Due to its population and relative location, Valladolid's economy is fairly well-developed and autonomous. In fact, based average income and economic structure, the city is fairly representative of state and national populations. As shown in Table 2 below, agriculture comprises about 20 percent of the local economy, whereas the service sector accounts for more than half. Although *Banco Azteca*, *Sistema Coopera*, and several foreign-owned banks operate offices in Valladolid, only 0.2 percent of the workforce was employed in financial services in 2000. Census data also reveal that about 46 percent of employment is concentrated in the informal economy. Almost 30 percent of workers are self-employed and 73 percent of employees earn less than $2800 annually (INEGI 2000).

Household survey

During December 2003, a detailed survey was conducted of 101 households in Valladolid. In general, adult members of households residing in the city were contacted in person and asked to respond to 15 detailed questions regarding their families' access to and use of financial services during the previous 12 months. Respondents were chosen randomly in several areas of the city. Questions included personal information; access to and use of formal financial services; and access to and use of informal sources of credit. The sample size (n=101), though relatively small, allows inferences to be drawn about access to financial resources among households in Valladolid with a reasonable degree of accuracy.[4]

Because access to financial resources in less developed regions is closely associated with income (Aportela 2001), the survey was stratified according to household earnings.[5] Local representatives of *Banco Azteca* and *Sistema Coopera* were also contacted to gain a better understanding of their role in meeting financial needs. The primary objective of the case study was to understand differences in access to formal and informal financial resources, including bank loans, credit cards, *cajas populares*, credit from family and friends, and a variety of other informal sources (pawnshops, *tandas*, *mutualistas*, *agiotistas*, etc.). In addition, the survey sought to quantify the distribution of formal and informal credit and identify the relative importance of formal and informal financial institutions in the study area.

Access to formal financial resources

Several foreign-owned banks operate branches in Valladolid. In addition, *Banco Azteca* opened an office in 2002, which now serves about 4600 clients. However, only 500 *Banco Azteca* clients in Valladolid are savings accountholders, with an average balance of between $500 and $600. The office also services 440 local loan recipients, with an average debt of about $500 (C. Cupul Majay, personal communication, December 18, 2003).

Notwithstanding the recent advances of *Banco Azteca*, bank penetration in Valladolid is quite limited. Survey results indicate that only 38 percent of households have bank accounts. Furthermore, only 21 percent of households had obtained bank financing in the past (11 percent had current bank loans) and about 10 percent of respondents had access to a credit card. The survey also indicated that access to banking services has become more difficult – 39 percent of households had closed a bank account at some point in the past. Respondents generally indicated that the high cost of maintaining banking services (minimum deposits, fees, etc.) was the main reason for closing their accounts.

Among formal institutions, *Sistema Coopera* also plays a prominent role in providing financial resources. *Sistema Coopera* serves about 950 clients in Valladolid. The average *caja* member has an account balance between $200 and $500. In general, *caja* members seek financing once or twice a year; the majority of loans are between $500 and $2,500 and interest rates average between 1.5 and two percent monthly (A. Rodríguez, personal communication, December 19, 2003).

Caja officials rely on social capital in order to ensure timely repayment of loans. A prospective borrower must procure signatures from two other *caja* members (typically family or friends) in order to quality for credit. If a *caja* member falls behind in repaying a loan, the cosigners are contacted and asked to remind the borrower of his/her obligations. If the borrower defaults on the loan, the cosigners must repay the debt. As a consequence, less than three percent of borrowers default on loans from *Sistema Coopera*.

According to survey results, about 24 percent of households in Valladolid are members of *cajas populares*. Seventy six percent of respondents using *caja* services had accounts in *Sistema Coopera*; other households were members of a local church cooperative (*Caja San Bernadino*) and *Compartamos*, a *caja* based in Mexico City that provides financing to women who operate micro-enterprises. The majority of *caja* members (68 percent) had

Table 2. *Economic structure of Valladolid, Yucatán and Mexico*

Sector	Valladolid	Yucatán	Mexico
Agriculture and mining	19.9	17.4	16.1
Manufacturing	19.6	18.6	19.0
Construction	10.4	8.9	7.9
Public utilities	1.9	0.5	0.4
Transportation and communications	3.3	4.3	4.7
Wholesale and retail trade	15.9	15.9	16.7
Hotels and restaurants	4.3	4.6	4.5
Financial services	0.2	0.7	1.3
Other services	20.3	25.0	25.2
Public administration	4.3	4.1	4.2

Source: *XII Censo General de Población y Vivienda* (2000)

obtained financing during the past year; at the time of the survey, 36 percent of *caja* members had loans averaging slightly more than $750.

Access to informal financial resources

According to the survey, informal credit comprised more than two-thirds of the total financial resources distributed among the 101 households surveyed in Valladolid. The vast majority of households (82 percent) had made use of informal institutions to access financing during the past year. Fifty-nine percent of respondents indicated that they had borrowed money from family and/or friends; one-third of households had family debts at the time of the survey. The average family debt was about $900.

As mentioned above, occasional lending among family and friends is viewed as a means of promoting reciprocity. Forty-seven percent of respondents indicated that they had lent an average of $300 to family and/or friends during the previous 12 months. Chi-square analysis indicates that a significant relationship exists between the incidence of occasional borrowing and lending among family members ($?^2 = 7.866$). Family and friends that borrow from each other are indeed more likely to lend to each other.

Thirty-five percent of respondents revealed that they had used the services of a moneylender during the previous year. Almost 75 percent of households borrowing from moneylenders had obtained financing from a *tanda* or *mutualista*; 31 percent had received a loan from a pawnshop (*casa de empeño*); and about 11 percent had borrowed money from a professional moneylender (*agiotista*). The average amount borrowed from these informal sources was about $600. Interest rates were high, averaging between five and ten percent monthly

Distribution of financial resources

Between the formal and informal sectors, 95 percent of the population has access to some form of credit. Results indicate that 51 percent of all households were carrying some debt at the time of the survey. The average level of debt was about $1250. As shown in Figure 2 below, informal sources accounted for about 68 percent of the total credit accessed by survey respondents.

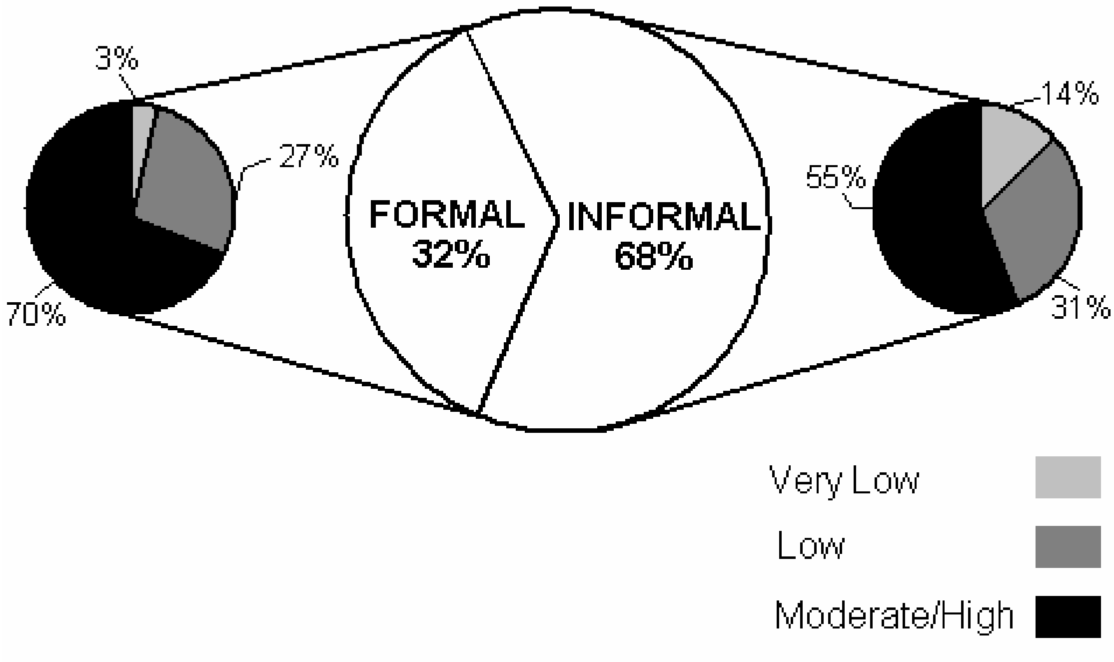

Figure 2. *Distribution of financial resources according to sector and level of income*

When the distribution of credit is analyzed according to income level, access is highly uneven. Very low and low-income households comprise about 70 percent of survey respondents. However, as Figure 2 reveals, the moderate to high-income group received 70 percent of all formal credit distributed among survey respondents. Surprisingly, wealthier households also accounted for more than half of total informal credit obtained by all households. Overall, more than 60 percent of all financial resources were concentrated among the wealthiest households in Valladolid.

Table 3 below displays additional information regarding access to financial resources by level of income. Among the poorest households, the informal sector comprises virtually the only source of credit (89 percent). Low-income households also acquire the vast majority (71 percent) of their financial resources informally. Again, moderate to high-income respondents display a surprising reliance on informal credit, using family and friends and moneylenders for more than half of their financial resources.

The distribution of financial resources by income level may be used to estimate an informal-to-formal credit ratio, which reveals relative dependence on the informal financial system. As shown in Table 3, the differences between low and moderate to high-income households are relatively small. For every peso obtained from formal institutions, these households accessed about two pesos of credit from informal sources. Among the poorest households, however, reliance on informal sources of credit is striking; they obtained more than eight pesos from family and friends and moneylenders for every peso borrowed from the formal financial sector.

Statistical analysis provides additional insights into the relationship between the

Table 3. *Distribution of financial resources by income level in Valladolid, Mexico*

Income Level	Bank Credit	Cajas Populares	Family/ Friends	Money Lenders	I/F credit ratio
Very Low	0%	11%	83%	6%	8.5
Low	5%	24%	50%	21%	2.4
Mod/High	34%	4%	27%	35%	1.6

distribution of formal and informal financial resources and income level.

Table 4 below reveals a comparable incidence of debt among households in the study area regardless of income. Although the wealthiest households display a higher level of indebtedness, substantial variation exists within income groups and differences are not statistically significant. Not surprisingly, access to bank accounts, bank financing, and credit cards does vary significantly according to income. Membership in *cajas*, however, is similar among income groups. Although reliance on financing from moneylenders appears to increase with level of income, differences are not statistically significant. Finally, notwithstanding some variability, reliance on informal credit from family and friends is comparable within all three groups.

CONCLUSIONS

An efficient, inclusive financial system is a necessary condition for economic growth. Although the transformation of Mexico's financial system may have promoted greater efficiency, it has failed to promote greater equity (accessibility). The case study from southeastern Mexico, where the majority of households lack access to the formal banking system, corroborates this assertion.

Though the formal sector fails to meet the needs of low-income clients, informal financial institutions serve 82 percent of the households in the study area. Unfortunately, the informal sector is usually able to provide only limited, short-term financing. In addition, informal institutions are relatively inefficient in that they charge interest rates far above those of the formal economy.

From another perspective, the transformation of Mexico's financial sector may be construed as a concerted effort to replace informal institutions, based on social capital, with formal institutions that operate on an arms-length basis. Unfortunately, economic reforms aimed at promoting greater participation in the formal economy have actually restricted access to credit and impelled low-income households and small businesses to seek financing from informal sources.

The case of Mexico's *cajas populares*, however, which provide credit at below market rates with low levels of default, demonstrates that social capital may be employed successfully by formal institutions to improve access to financial resources.

Finally, it is somewhat naive to classify formal and informal financial sectors as separate entities. Consumers may not

Table 4. *Use of formal and informal resources in Valladolid, Mexico*

Income Level	Pct Debt	Ave Debt	Bank Use	Bank Loan	Credit Card	Caja Popular	Money Lender	Family/ Friends
Very Low	59%	$625	0%	0%	0%	29%	24%	65%
Low	51%	$850	38%	8%	2%	20%	33%	51%
Mod/High	45%	$2450	55%	41%	28%	27%	45%	72%
X^2 statistic	0.651	4.340	14.190*	9.071*	14.181*	0.893	2.275	4.520

* *indicates statistical significance at a confidence level of 95 percent*

distinguish between institutions operating within or outside the formal economy.

Furthermore, direct and indirect linkages exist between both sectors and some agents operate in formal and informal financial systems simultaneously. Consequently, additional research is needed to describe the operations of regional financial systems in Valladolid more completely and to identify linkages between formal and informal sectors. Ultimately, the goal of such research is to promote economic development by improving the operation of the regional financial system and expanding access to credit within formal financial institutions.

ENDNOTES

1. The interest rate spread refers to the difference in interest rates charged to borrowers and paid to investors.

2. All monetary values that appear in this article are in U.S. dollars.

3. A *municipio* is roughly equivalent to a U.S. county in terms of size.

4. A sample size of 101 permits inferences to be made with a margin of error of +/- eight percent at a 90 percent confidence level.

5. Three income levels were used: very low (less than $1500 pesos monthly); low ($1500 to $5000 pesos); and moderate to high (more than $5000 pesos).

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