

Income and Vulnerability

In recent decades, income per capita has increased sharply across the world (Maddison, 2001), and global poverty has fallen substantially (Dollar, 2005). Brazil has similarly experienced impressive income gains and poverty reduction, though these achievements are at times clouded by lackluster economic growth. As discussed in Chapter 1, many scholars view such economic development to be a catalyst for the decline of clientelism. Rising incomes are commonly understood to tarnish the allure of clientelist rewards, not least because a citizen who escapes poverty may be less willing to exchange his or her political preferences for a small payoff. This chapter examines various sources of income gains in Brazil and provides evidence that campaign handouts do indeed become less attractive as livelihoods improve. Unlike the challenges examined in Part I, which predominantly undercut electoral clientelism, rising incomes undermine *both* electoral and relational clientelism.

Despite rising incomes, many voters across the world have a powerful motivation to fortify their long-term clientelist relationships: elites often help their clients cope with vulnerability. In many countries, the state fails to protect residents from various sources of risk, either because social programs are nonexistent, exclude major groups from coverage, or are poorly implemented (ILO, 2015, 73). In the case of Brazil, much of its population remains vulnerable to a multitude of adverse shocks. Although the state has taken considerable strides to address such risks, yawning gaps in public services and social insurance remain. Many families suffer from catastrophic health expenditures, nine of ten Brazilians who lose their jobs receive no unemployment benefits, and many citizens' economic and even physical livelihood is imperiled by recurring droughts. The present chapter documents the insecurity facing many citizens in these three spheres – health care, unemployment and water – to illustrate the broader phenomenon of vulnerability in Brazil. Moreover, it examines why this vulnerability motivates many Brazilians to help sustain

relational clientelism: local politicians often have resources and discretion to help their clients smooth shocks through the provision of selective benefits. After exploring this vulnerability, subsequent chapters in Part II investigate two mechanisms – declared support and requesting benefits – by which citizens enhance the survival of clientelist relationships with politicians who mitigate their exposure to various risks.

4.1 RISING INCOMES

Before turning to vulnerability in Brazil, it is important to consider the nation's significant income gains and related consequences for clientelism. Notwithstanding Brazil's severe economic crisis in 2015–2016, broader trends show that its overall population, and especially poor Brazilians, experienced substantial income growth over the past few decades. According to the World Bank, Brazil exhibited faster growth in median income than any other Latin American country between 1990 and 2009 (Ferreira et al., 2013, 101). Most of this growth occurred after Brazil's 2003 recession; incomes did not rise considerably from 1995 to 2003 and even declined in several of those years (IPEA, 2010a, 46). Between 2004 and 2013, the average monthly income of Brazil's economically active population grew from R\$846 to R\$1,205, even after adjusting for inflation.¹ This 42 percent cumulative increase in real incomes in just nine years corresponds to an annual growth rate of over 4 percent.² Brazil experienced uneven growth during this period, with incomes in the relatively poor Northeast region expanding over 57 percent (over 5.1 percent annual growth). In addition, income growth has been especially pronounced for poor Brazilians, the subset of the population most predisposed to accept clientelist offers (as shown later). The average real incomes of the poorest decile of Brazilians far outstripped that of the richest decile, growing at nearly five times the rate and more than doubling between 2001 and 2012.³ In the words of prominent economist Ricardo Paes de Barros, incomes of the poorest decile of Brazilians grew at a rate rivaling China's, whereas incomes of the richest decile grew at a rate rivaling Germany's.⁴ Faster income growth of the poor coincided with falling income inequality: although Brazil remains one of the most unequal countries in the world, its income inequality fell continuously since 1998 to reach a record national low of 0.501 in 2013.⁵

¹ In constant 2013 terms, when R\$1 = \$2.05. PNAD Síntese de Indicadores 2013 (IBGE).

² PNAD Síntese de Indicadores 2013 (IBGE).

³ According to household surveys, the bottom decile grew 120.2 percent, while the top decile grew 26.4 percent. Presentation by Marcelo Neri, Fábio Vaz and Pedro Souza, "O Bolsa Família e a Economia," IPEA, 2013.

⁴ "Sobre a Evolução Recente da Pobreza e da Desigualdade," IPEA Presentation, September 2009. Based on PNAD data from 2001–2008.

⁵ Lustig et al. (2013, 134–135) and 2013 PNAD, IBGE, Table 7.1.7.

Rising incomes facilitated a dramatic decrease in Brazilian poverty. Brazil has been one of Latin America's leaders in poverty reduction (Barros et al., 2010, 4–5), with an estimated twenty-five million Brazilians exiting moderate or extreme poverty in 1990–2009 (Cord et al., 2015, 77). The nation achieved the key target of the first Millennium Development Goal – halving the extreme poverty rate – nearly a decade early (Barros et al., 2010, 1). According to international poverty lines, moderate poverty fell from 43.0 to 20.8 percent between 1999 and 2012, while extreme poverty fell from 26.0 to 9.6 percent (Cord et al., 2015, 79).⁶ While Brazil does not have official poverty lines, measures employed by the government's *Brasil Sem Miséria* (Brazil without Extreme Poverty) program suggest comparable trends and even lower poverty rates – 9 percent in moderate poverty and 3.6 percent in extreme poverty in 2012 (Cord et al., 2015, 81, 85).⁷ Poverty levels had been relatively stagnant for eight years up to Brazil's 2003 recession and then fell sharply thereafter (IPEA, 2010a, 50). Poverty declines continued even during the 2009 global economic crisis (Neri, 2010, 12), though a slight uptick was observed in 2012–2013 (IPEA, 2015, 59). As with income growth, poverty reduction was also uneven. Poverty fell substantially more in the relatively less-developed North and Northeast regions than elsewhere in Brazil (Cord et al., 2015, 80), and urban citizens were up to 50 percent more likely to exit poverty than their rural counterparts (Ferreira et al., 2013, 110).

Much of the world has experienced a tremendous expansion of the middle class in recent years (Ferreira et al., 2013, 145; Ravallion, 2010, 452), and Brazil is no exception. Rising income has catapulted many Brazilians into the middle class, which has the potential to play an important role in curbing clientelism (Fukuyama, 2013, 30; Weitz-Shapiro, 2012). Whereas only about 15 percent of Brazilians were in the middle class in the early 1980s (Ferreira et al., 2013, 144), some prominent analysts contend it now contains the majority of Brazilians. Marcelo Neri estimates that 42.2 million Brazilians entered the “new middle class” between 2003 and 2012, such that its share of the overall population increased from 37.5 to 55.3 percent during this period (Neri, 2014, 29).⁸ The middle class is far larger in the South and Southeast regions: three-quarters of citizens there are in the middle class or above, compared to significantly less than half of residents in some North and Northeast states (Neri, 2014, 16). Just as they are more likely to exit poverty, urban residents are also substantially more likely to enter the middle class than those in rural Brazil

⁶ This ECLAC study employs a common international metric of \$4 a day for moderate poverty and \$2.50 for extreme poverty (2005 US dollars adjusted for purchasing power parity).

⁷ The program established an extreme poverty line of R\$70 per month (equal to PPP-adjusted \$1.25 per day) and a moderate poverty line of R\$140 per month (\$2.50 per day) in 2011, with subsequent inflation adjustments.

⁸ This class corresponds to “Class C,” which had between R\$1,126 and R\$4,854 from all sources in constant 2010 reais (Neri, 2010, 32, 37). Neri (2014) extends his expansive 2010 analysis through extrapolation of 2003–2009 data.

(Ferreira et al., 2013, 110). All in all, Brazil's middle class is typically viewed as having expanded dramatically in recent years amidst rising incomes.⁹

Overall growth of the economy offers a partial explanation for rising incomes. Although Brazil's economic growth is in many years deemed to be lackluster – often earning the diminutive nickname “*PIBinho*,” or “little GDP” – it actually expanded relatively quickly at the start of the twenty-first century. From 2000 to 2014, Brazil's real GDP per capita grew at an annual rate of 2.2 percent, compared to just 0.1 percent growth in the 1980s and 0.8 percent growth in the 1990s (World Development Indicators, 2017).¹⁰ When the 2009 global economic crisis battered much of the world, Brazil emerged relatively unscathed and economic output did not contract for the overall year (Neri, 2010, 15). But in 2015–2016, the nation suffered a severe recession – potentially its worst in over a century.¹¹ Notwithstanding the recent crisis, Brazil's economic growth over the longer term has contributed to rising incomes. But it by no means provides a complete explanation: as Marcelo Neri emphasizes, household surveys reveal a “complete dissonance” between GDP growth and the income growth experienced by citizens in Brazil.¹² For example, whereas real GDP per capita grew 2.7 percent annually between 2003 and 2012, real income per capita for the median household grew 6.6 percent annually during the same period (Neri, 2014, 19). While household income stems from various sources, examining three of its components – labor income, pensions, and conditional cash transfers – sheds substantial light on why many Brazilians' incomes have risen significantly. As discussed later, these income gains pose an important challenge for all forms of clientelism, but persistent vulnerability motivates many citizens to help sustain long-term clientelist relationships with politicians.

4.1.1 Labor Income

Labor income plays a central role in the sharp income growth experienced by many Brazilians in recent years. Indeed, it grew just as quickly as – and accounted for 76 percent of – household income: whereas income growth was 4.7 percent annually between 2003 and 2009, labor income growth was 4.6 percent (Neri, 2010, 18). Rising employment provides one explanation. For example, the number of formal workers increased from 23.8 million in 1995 to 47.6 in 2012, roughly doubling in seventeen years and representing an annual growth rate of 4.2 percent (Amitrano, 2015, 29). After 2004, the

⁹ Fukuyama (2013, 28) notes Brazil's middle class expansion is less impressive with an educational definition: only 2 percent of the population is university-educated. For various income definitions of the middle class, see Ferreira et al. (2013, 32).

¹⁰ Compounded annual growth rate based on constant 2010 dollars.

¹¹ “Para Meirelles, Brasil terá pior recessão desde 1901,” *O Globo*, August 3, 2016.

¹² “PNAD Mostra que Brasil Cresceu em Ritmo Chinês, Diz Ministro de Assuntos Estratégicos,” *Agência Brasil*, September 27, 2013.

rate of formal job creation approximately doubled its prior rate (Neri, 2010, 16). More broadly, the unemployment rate in metropolitan areas fell to 4.8 percent in 2014, before rising to 6.9 percent in 2015.¹³ These rates marked a strong improvement: unemployment had risen in the late 1990s and early 2000s, reaching 13 percent in 2003.¹⁴

In addition to growing employment, minimum wage increases substantially boosted incomes, especially but not exclusively of the poor. Minimum wage hikes have widespread effects in Brazil because the incomes of 46.7 million Brazilians are directly tied to its level (DIEESE, 2015, 5). Across the nation, 28.6 percent of workers receive the minimum wage or less, a figure ranging from 16.9 percent in the South to 54.4 percent in the Northeast (DIEESE, 2015, 8). For many years, Brazil's minimum wage had failed to keep up with inflation; for example, its real monthly value fell from R\$361 to below R\$131 between July 1982 and August 1991 (IPEA, 2009, 54).¹⁵ But under legislation introduced during Luiz Inácio Lula da Silva's presidencies, the minimum wage now increases automatically each year to adjust for inflation as well as GDP growth. As a consequence, the minimum wage has since increased substantially more than inflation in recent years, heightening income growth. Between 2002 and 2015, the nominal minimum wage nearly quadrupled from R\$200 to R\$788 per month, which represents a cumulative increase of 76.5 percent when adjusting for inflation (DIEESE, 2015, 2–3). In fact, Brazil's Central Bank reported that the purchasing power of the minimum wage in 2015 – R\$788 per month – exceeded that of any time since 1965.¹⁶ All in all, both minimum wage hikes and higher employment boosted labor income, which in turn propelled overall income growth.

While labor income comprises over three-quarters of household income, government transfers are also important, as approximately 45 percent of Brazilians live in households with transfer income (Barros et al., 2010, 16). Two types of transfers that played an especially important role in income growth are now considered: pensions and conditional cash transfers.

4.1.2 Pensions

Along with labor income, pensions have also been an important source of rising income in Brazil, with increased benefits as well as expanded coverage. A first key point is that minimum wage increases did not just raise the floor on wages for unskilled labor – they also ratcheted up pensions for many

¹³ Pesquisa Mensal de Emprego (IBGE), June 2015. All unemployment figures for June and reflect six major cities.

¹⁴ Pesquisa Mensal de Emprego (IBGE), June 2015; “Taxa de Desemprego Cai para 5.4% na Média de 2013, Menor da História,” *Estado de São Paulo*, January 30, 2014.

¹⁵ Values in constant 2008 reais. Brazil's minimum wage is defined in terms of a monthly salary.

¹⁶ “Poder de Compra do Salário Mínimo é o Maior Desde 1965, Diz Banco Central,” *O Globo*, February 2, 2015.

Brazilians (Barros et al., 2010, 33). As enshrined in the 1988 Constitution, nearly all public pension benefits meet or exceed the minimum wage; by means of comparison, two-thirds of pension benefits fell below the minimum wage in 1987 (IPEA, 2009, 74). When the minimum wage rose from R\$724 to R\$788 in January 2015, the incomes of nearly twenty-two million pension beneficiaries grew in lockstep (DIEESE, 2015, 5). And the impact of such increases often extends beyond the elderly, because many Brazilians live in multigenerational households. Amongst the poorest quintile of Brazilians, 85 percent of citizens aged 60 years or older live with family members other than a spouse (OECD, 2014, 24). Given the prevalence of multigenerational households, 31 percent of all Brazilians live in families with pension income (Medeiros and de Souza, 2013, 14).

Not just increased benefits, but also expanding coverage of pensions contributed to rising income in Brazil. In recent years, social pensions – for which benefits are not conditional on making contributions – have proliferated in Latin America and elsewhere, and Brazil is no exception (OECD, 2014, 28). As with most countries in the region, Brazil's pensions and other forms of social insurance had long followed a Bismarckian approach, privileging formal-sector employees while providing relatively scant coverage to informal and rural workers (Haggard and Kaufman, 2008, 4; Weyland, 1996, 131–136). The 1988 Constitution ameliorated this problem by universalizing pension benefits, as well as undertaking actions such as doubling rural pensions, ensuring pensions would not fall below the minimum wage, and indexing pensions to inflation (Matijascic and Kay, 2008, 286). Later reforms also helped to lower inequities (Brooks, 2009, 144). Brazil now has amongst the widest coverage and most generous benefits of social pensions in Latin America (OECD, 2014, 10, 31). As a result, poverty rates of the elderly are only a fraction of those for other Brazilians (OECD, 2014, 25–26). The non-contributory nature of social pensions is particularly important for universalizing coverage – and thereby increasing incomes of the poor – because many Brazilians cannot afford to make consistent contributions (Weyland, 1996, 136). Recent surveys show that 68 percent of informal workers contribute to neither public nor private pension plans, and the top reason provided is by far insufficient income to pay contributions (SIPS, 2011d, 24–25).

The key component of social pensions in Brazil is *Benefício de Prestação Continuada* (BPC, or Continued Payment Benefits), which provides a monthly cash benefit equivalent to the minimum wage. Brazilians at least sixty-five years old, as well as disabled citizens of any age, are eligible to receive BPC if their monthly household income per capita is less than one-fourth the minimum wage. As of June 2015, BPC provided R\$786 each month to 4.2 million citizens, of which 1.9 million were elderly and 2.3 million were disabled.¹⁷

¹⁷ Data from Ministério do Desenvolvimento Social: <http://mds.gov.br/assuntos/assistencia-social/beneficios-assistenciais/bpc>.

This coverage is far less than that of Bolsa Família, a program discussed next, but BPC's benefits are substantially more generous: among recipient households, the per capita value of BPC payments was R\$107 in 2007, over six times the per capita value of Bolsa Família payments (Barros et al., 2010, 17). The income provided by BPC, as well as contributory rural pensions, play a key role in reducing poverty (Matijascic, 2015, 16). Overall, the primary takeaway is that the expanded scope and increased benefits of pensions have contributed significantly to rising income in Brazil, which as discussed later presents a challenge for clientelism.

4.1.3 Conditional Cash Transfers

Bolsa Família, Brazil's conditional cash transfer (CCT) program, has also substantially increased incomes of the poor. In the mid-1990s, Brazil and Mexico pioneered CCTs, which distribute money to poor families that undertake designated actions such as sending their children to school and medical appointments. By 2014, sixty-four nations across the globe had implemented CCT programs, including nearly every nation in Latin America (World Bank, 2015, 10).¹⁸ Bolsa Família is currently the second-largest CCT in the world, trailing only India in terms of beneficiaries (World Bank, 2015, 12). As of May 2015, Bolsa Família provided benefits to about a quarter of Brazil's population: 13.7 million families, or about 47.7 million citizens.¹⁹ The program was formed in October 2003 during Lula's first presidency, integrating four existing cash transfer programs: Bolsa Escola (a CCT for education), Bolsa Alimentação (a CCT for health and nutrition), Cartão Alimentação (a CCT for food consumption), and Auxílio Gás (compensation for removed cooking gas subsidies).

Bolsa Família provides a modest but important source of income for many lower-income citizens. It provides a monthly base stipend of R\$77 – regardless of whether they have children – to extremely poor families (i.e., those with monthly incomes up to R\$77 per capita). In addition, Bolsa Família provides variable benefits to families in both moderate and extreme poverty (i.e., those with monthly incomes up to R\$154 per capita). Within specified limits, families receive R\$35 monthly for each child fifteen years or younger, an extra R\$35 monthly for pregnant mothers and infants, and R\$42 monthly for each child sixteen or seventeen years old.²⁰ When considering all of these benefits, the average monthly Bolsa Família benefit per recipient household was R\$168 in May 2015, just over one-fifth of the minimum wage. In addition to this

¹⁸ See also a map of CCTs at devex.com.

¹⁹ Calculations based on World Bank (2015, 14), using the average household size of 3.47 and population estimates from IBGE. See also "Bolsa Família tem Menor Número de Beneficiários dos Últimos Dois Anos," *Veja*, June 2, 2015.

²⁰ In part to avoid stimulating increased fertility, families can receive only up to five of these R\$35 variable benefits and two of these R\$42 variable benefits.

payment, the Brasil Carinhoso program has delivered supplementary funds to extremely poor families since 2012. This program supplements Bolsa Família to ensure that the overall per capita income of beneficiaries exceeds the extreme poverty line. As of December 2014, 5.3 million families received an average supplement of R\$89 to their Bolsa Família benefit.

Benefit payments in the Bolsa Família program are directed towards women, who comprise 93 percent of account holders (Campello and Neri, 2013, 18). Families must comply with education and health conditionalities to continue receiving payments. With regards to education, children aged six to fifteen must achieve at least 85 percent school attendance, while sixteen- and seventeen-year-olds must achieve 75 percent attendance. With regards to health, for example, children up to age six must receive vaccinations and checkups, while mothers must receive pre- and post-natal medical attention. Fiszbein and Schady (2009) indicate that although Bolsa Família has relatively frequent monitoring, its noncompliance penalties are “light” when compared to other countries with CCTs.

Careful design of the Bolsa Família program enables it to boost incomes of poor Brazilians with relative insulation from clientelist influence. Safeguards restricting municipal discretion are integral to the design. The Ministry of Social Development and the Fight against Hunger (Ministério do Desenvolvimento Social e Combate à Fome, or MDS) – a federal agency – established quotas for the maximum number of families per municipality that could receive benefits, using poverty estimates from household survey data. Municipalities interview potential beneficiaries and input data into a national registry (Cadastro Único), which the MDS uses to calculate self-declared income and select eligible households. Although beneficiary selection thus occurs at the federal level, some analysts contend local registration involves the largest influence over who obtains program benefits (cf. Barrientos, 2013, 139).²¹ Evidence occasionally surfaces about clientelist manipulation of the Bolsa Família program, but such abuse is not systematic.²² A survey by Sugiyama and Hunter (2013, 50) finds that only 14.9 percent of respondents believe Bolsa Família is used for vote buying.²³ During my interviews in Bahia, some politicians and citizens provided examples of how local officials could manipulate the program, such as intentionally neglecting to input opposition voters’ data into the Cadastro

²¹ As an example of this influence, Frey (2017) suggests that mayors eligible for reelection are more likely to allow the poor to underreport their income so as to be eligible for the program.

²² Examples include a *Folha de São Paulo* investigation into its use for vote buying during the 2008 municipal elections (Sugiyama and Hunter, 2013, 47), and a 2015 investigation by the Federal Police into a federal deputy and a state deputy who allegedly used Bolsa Família and other benefits for vote buying. See “PF Pede a Procurador Investigação de Crime Eleitoral Contra Deputados,” *Hoje em Dia*, April 2, 2015.

²³ The survey of 1,100 respondents in three municipalities in Northeast Brazil was not representative of the overall population, as it employed quota sampling to ensure 80 percent of respondents were Bolsa Família recipients.

Único, or pressuring teachers and health officials to avoid reporting supporters' noncompliance with conditionalities. Nevertheless, compared to other programs in which municipal officials have far greater discretion, Bolsa Família is relatively robust against clientelism. More broadly, most analysts agree with Borges's (2007, 133) conclusion that the program "cannot be considered an instance of clientelism, for the selection of beneficiaries is based on universalistic criteria."

Bolsa Família is globally recognized as improving the standard of living of many Brazilians. For instance, the International Social Security Association granted Brazil its 2013 ISSA Award for Outstanding Achievement in Social Security, given every three years.²⁴ Bolsa Família is one of the better targeted CCTs in the world, with 55 percent of benefits received by the poorest quintile of Brazilians (World Bank, 2015, 50). Although the program accounted for less than a percent of household income across the overall population, it comprised 60.9 percent of household income of the extreme poor in 2011, as well as 17.6 percent of household income of the poor (de Souza and Osorio, 2013, 145). Extreme poverty would be substantially greater in Brazil without Bolsa Família: over a quarter of the nation's reduction in extreme poverty between 2008 and 2012 can be attributed to the program.²⁵ Moreover, it was responsible for approximately 15 percent of Brazil's substantial decline in income inequality between 1999 and 2009 (Soares et al., 2010b, 49).

More broadly, labor income, pensions and conditional cash transfers have all contributed substantially to the impressive income growth experienced by poor Brazilians. As the next section examines, higher income reduces citizens' propensity to exchange their vote choices for clientelist payoffs. Despite rising incomes, however, the remainder of this chapter argues that many Brazilians continue to be highly vulnerable to risks such as illness, unemployment, and drought. This vulnerability motivates many citizens to sustain ongoing patterns of relational clientelism as a risk-coping mechanism.

4.2 INCOME AND CLIENTELISM

What is the impact of rising incomes on clientelism in Brazil? The link between income and clientelism has captivated the attention of generations of researchers. As discussed in Chapter 1, poor citizens are often viewed as more responsive to contingent benefits, and many scholars view economic development as a catalyst for the decline of clientelism. One reason is that the diminishing marginal utility of income suggests poor citizens place relatively greater value on material benefits than ideological preferences (Dixit and Londregan, 1996, 1114; Stokes, 2005, 315). In addition, risk aversion and time preferences

²⁴ See www.issa.int/-/issa-award-presented-to-brazil-during-world-forum.

²⁵ Marcelo Neri, Fabio Vaz and Pedro de Souza, "O Bolsa Família e a Economia," IPEA Presentation, 2013.

are other frequently cited reasons why poor citizens may be most prone to clientelism.²⁶ To what extent has income growth in Brazil diminished citizens' willingness to accept rewards in exchange for their vote choices? Although a direct test is unavailable, this section gains purchase on this question in two ways: (1) examining attitudes and behaviors across income levels; and (2) analyzing how rainfall shocks – an exogenous source of variation in agricultural income – affect rural citizens' willingness to exchange votes for rewards.

Consistent with theoretical predictions and empirical evidence from many other countries, poor Brazilians are more willing accept clientelist handouts in exchange for vote choices than their wealthier counterparts. This pattern is observed in citizens' answers about hypothetical scenarios as well as responses about actual clientelist experiences. First, consider two national surveys that inquired about vote buying. Both the 2002 Brazilian Electoral Study (ESEB) and the 2007 LAPOP AmericasBarometer survey included identical questions involving hypothetical citizens with unmet needs who received offers of various material benefits from a candidate.²⁷ To gain insight on respondents' willingness to exchange votes for handouts, of particular interest are their beliefs about what the hypothetical citizens "should do" when offered benefits.²⁸ The survey provided respondents just two answer choices: (1) the citizen should accept the benefit and vote for the candidate, or (2) the citizen should reject the benefit and vote for another candidate.²⁹ Such hypothetical questions are advantageous because they can be asked of everyone rather than just citizens receiving offers, but they raise important concerns about whether answers correspond to how respondents would act if faced with similar situations. Notwithstanding this caveat, insights can be drawn from the systematic variation in answers across income levels of respondents. As shown in Figure 4.1, poorer respondents are disproportionately likely to answer that the citizen should accept the benefit and vote for the candidate who offered it. This difference is observed in both years and in scenarios involving urgent needs – such as a medical treatment for a sick child – as well as with all other benefits offered such as bricks or a child's bicycle.³⁰ Moreover, the percentage of respondents sharing this view

²⁶ As mentioned in Chapter 1, for a discussion about the role of risk aversion, see Desposato (2007, 104) and Stokes et al. (2013, 163–164). For poor citizens' preference for immediate benefits, see Scott (1969, 1150) and Kitschelt and Wilkinson (2007, 3).

²⁷ The LAPOP survey included 1,214 urban and rural respondents. It used a national probability design, stratified by region with 122 sampling units.

²⁸ The survey also asked separate questions about what respondents thought hypothetical citizens "would do," but this formulation is suboptimal to test respondents' propensity for clientelism. With that question, similar patterns across income are observed, but findings are less robust.

²⁹ The survey did not allow respondents to take the benefit and vote for another candidate; citizens who insisted on such answers would be coded as "no response" (NR). Among questions analyzed here, the highest non-response rate was 6 percent.

³⁰ The wording of each scenario varied, but most mentioned that the offer recipient was poor or otherwise needed the benefit. Such framing in part explains the relatively high affirmative responses across all income categories.

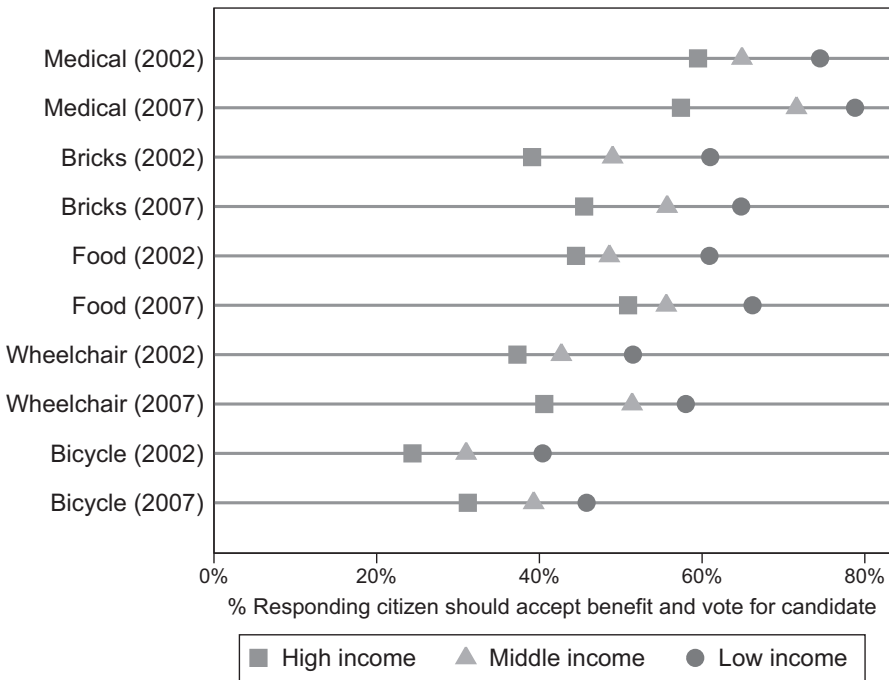


FIGURE 4.1 Acceptability of hypothetical clientelist offers (2002 and 2007)

Note: Respondents asked what a hypothetical citizen “should do” when offered the benefits listed on the vertical axis, providing two options: (1) accept the benefit and vote for the candidate, or (2) reject the benefit and vote for another candidate. Number of observations is 2,178 in 2002 and 1,134 in 2007. Income based on ordinal ranges of total household income provided in 2007 survey, categorized as follows: “Low Income” is up to R\$520, “Middle Income” is R\$520.01–R\$1,300, and “High Income” is R\$1,300.01 and above. Identical ranges are applied to 2002 survey, deflating for inflation using IPCA index. Findings are robust to alternative income specifications.

Source: Author’s analysis using data from the 2002 Brazilian Electoral Study (ESEB) and 2007 LAPOP AmericasBarometer survey.

declines monotonically as income rises. Although we must be careful not to assume that all citizens will act as their hypothetical responses suggest, these systematic differences seem to indicate that poor Brazilians are less resistant to delivering vote choices in exchange for material benefits. Unlike the longer-term decline in electoral clientelism documented in Chapter 2, Figure 4.1 does not indicate a decline in the perceived acceptability of clientelist offers between 2002 and 2007. However, more recent hypothetical scenarios in the 2014 Brazilian Electoral Panel Study provide some evidence of a reduction in perceived acceptability, in addition to similar heterogeneity across income.³¹

³¹ The 2014 survey includes two hypothetical questions worded identically to the earlier surveys, but an extra answer choice limits comparability. Overall responses for medical/bricks: should

In order to examine actual behavior, consider nationally representative data from the 2010 Brazilian Electoral Panel Study (Ames et al., 2013). Citizens who reported receiving vote-buying offers during recent elections were asked whether their latest offer increased or decreased their inclination to vote for the politician or party who offered the benefit. Clientelist offers were apparently not very effective: only 18 percent indicated they were more inclined to vote for the politician, whereas 44 percent indicated they were less inclined and 38 percent remained the same. One might suspect that this question evokes social desirability bias, but unless the extent of such bias differs systematically and substantially across income levels, it is nevertheless informative to investigate whether poor citizens responded differently than others. And indeed they did. The poorest Brazilians, whose families earned no more than one minimum salary per month, were nearly twice as likely as other respondents to report an increased inclination to vote for the reward offerer (29 versus 15 percent).³² By contrast, the poorest respondents were also far less likely than others to report a disinclination to vote for the candidate or party that offered the benefit (31 versus 48 percent). This association between income and reported responsiveness to rewards is statistically significant (at the 5 percent level) when controlling for various political and socioeconomic characteristics and state-level fixed effects.³³ Overall, this nationally representative survey suggests that the poor are indeed more responsive to vote-buying offers in Brazil.

Although such evidence suggests that poor Brazilians are more responsive to vote-buying offers, how do *changes* in their incomes affect this responsiveness? In my joint work with Gustavo Bobonis, Paul Gertler, and Marco Gonzalez-Navarro (2018), we tackle this question by investigating the impact of rainfall shocks on rural citizens' willingness to accept vote-buying offers. Rainfall is frequently used as a source of exogenous variation in income in rural or agricultural settings (e.g., Miguel et al., 2004; Paxson, 1992), including in my prior work on rural Brazil (Hidalgo et al., 2010). In the present analysis, the Rural Clientelism Survey and rainfall data are used to compare responses from citizens in municipalities with above- versus below-median rainfall during

accept and vote for the candidate (27.7/22.8 percent); reject and vote for another candidate (41.8/53.6 percent); should accept and vote for another candidate (30.5/23.6 percent).

³² The inclination question was answered by 374 citizens in the sample who received offers; of these, 90 had household income below one minimum salary, which corresponded to R\$510 per month in 2010. A dichotomous scale is used here due to the small sample size of offer recipients. Similar patterns are observed when examining the data more granularly.

³³ Analysis of offer recipients employs an ordered logit regression controlling for income, education, age, gender, rural location, party preference (PT, PMDB, PSDB, and DEM dummy variables), and prior turnout (not shown). Dependent variable coded as 0 if disinclined, 1 if no effect, and 2 if inclined. Coefficient on income (an 11-point scale) is negative with a *p*-value of 0.035. Results also hold using separate logit analyses, with or without the inclusion of state fixed effects. With the dependent variable coded as 1 if inclined (0 otherwise), income is negative with a *p*-value of 0.011. With the dependent variable coded as 1 if disinclined (0 otherwise), income is positive with a *p*-value of 0.095.

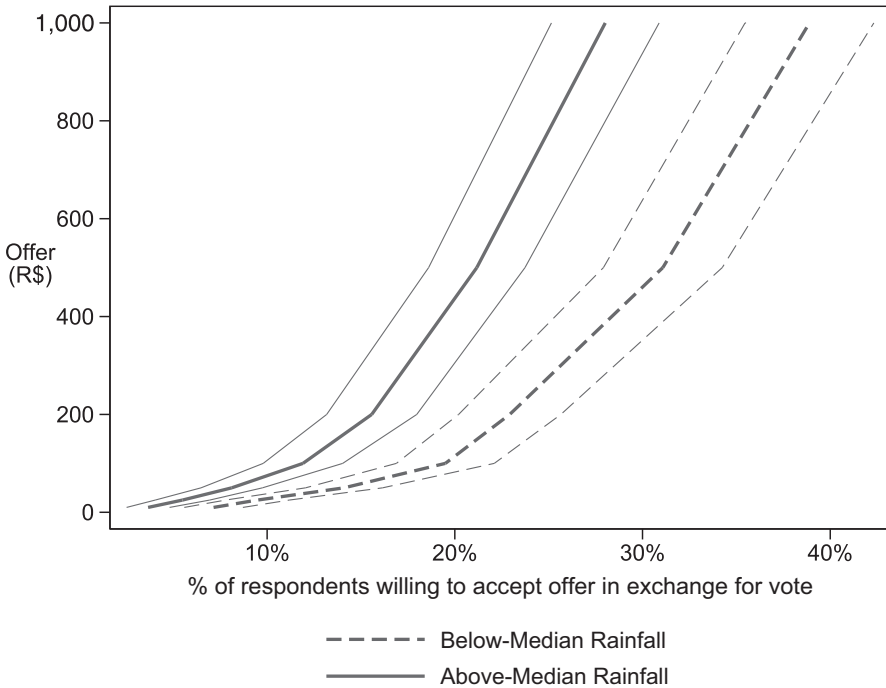


FIGURE 4.2 Effect of rainfall on willingness to accept clientelist offers (2012)

Note: Figure shows percentage of respondents willing to accept hypothetical offers of specific amounts in exchange for their votes, comparing municipalities with below- versus above-median standardized rainfall during the 2012 campaign. Respondents were asked after the 2012 campaign if they would accept offers of increasing amounts until answering affirmatively, or reaching the maximum offer of R\$1,000. The center dashed (solid) line shows results for citizens in municipalities with below-median (above-median) standardized rainfall during campaign. The outer dashed (solid) lines represent 95 percent confidence intervals. For each municipality, standardized rainfall for 2012 campaign sums the standardized rainfall for July, August and September 2012. Each month's 2012 rainfall was de-meanned and then divided by the historical standard deviation of rainfall for that month in 1986–2011.

Source: Analysis by Bobonis, Gertler, Gonzalez-Navarro and Nichter (2018). Data from the Rural Clientelism Survey and the Climate Hazards Group Infrared Precipitation with Station (CHIRPS) database.

the 2012 municipal campaign. Given climactic variation in Brazil, it is inappropriate to compare municipalities using raw rainfall levels. Instead, as is common in the literature, comparisons use a standardized measure that adjusts for the average and standard deviation of rainfall in the municipality over the last quarter century (1986–2011).³⁴ Figure 4.2 shows that citizens in the twenty municipalities experiencing above-median standardized rainfall

³⁴ Caption for Figure 4.2 provides details about standardization.

were less willing to accept vote-buying offers than citizens in the twenty municipalities with below-median standardized rainfall (significant at the 1 percent level). These supply curves of citizens willing to accept offers are based on questions in the Rural Clientelism Survey. Respondents were presented numerous hypothetical reward amounts and asked in each instance if they would accept the vote-buying offer from a fictitious candidate. We began with an offer of R\$10 and progressively increased the amount up to R\$1,000, stopping whenever the citizen indicated acceptance of an offer. Across all respondents, 5.4 percent would accept an offer of R\$10, 11.2 percent would accept R\$50 or below, 15.7 percent would accept R\$100 or below, 26.2 percent would accept R\$500 or below, and 33.1 percent would accept R\$1,000 or below.³⁵ In addition, a fifth of respondents indicated there was an unspecified higher amount they would accept, while nearly two-fifths insisted their votes could not be bought for any price.

The differences in citizens' willingness to accept vote-buying offers across rainfall level – shown in Figure 4.2 – are particularly important because they help to corroborate the standard argument in the literature that income growth reduces citizens' propensity towards clientelism. In municipalities with above-median standardized rainfall, only 3.7 percent of citizens would accept the R\$10 offer (versus 7.1 percent in below-median municipalities), 11.9 percent would accept R\$100 or below (versus 19.5 percent in below-median municipalities), and 21.2 percent would accept R\$500 or below (versus 31.1 percent in below-median municipalities).³⁶ These differences are statistically significant (at the 1 percent level), but a few caveats are in order. First, rainfall shocks involve transitory income, so effects may differ from income growth perceived to be more permanent. Second, there may be a channel other than income by which increased rainfall decreases citizens' willingness to accept vote-buying offers. Third, questions refer to vote buying, so income effects could differ when examining other forms of clientelism. And fourth, these findings only examine citizens' acceptance of *hypothetical* offers, rather than actual experiences with clientelism. But this last point also confers an advantage, because examining actual experiences would make it harder to disentangle the impact of income growth on citizens' acceptance of offers from its impact on politicians' provision of offers.

Stepping back, while the evidence presented thus far is by no means dispositive, it suggests that rising incomes in Brazil are likely to have undermined citizens' willingness to accept payoffs in exchange for their votes. Brazilians with higher incomes are less likely to view clientelist exchanges as acceptable and less frequently vote for candidates who offered them benefits. Moreover,

³⁵ As of January 2014, currency conversions were: R\$10 (\$4); R\$50 (\$21); R\$100 (\$42); R\$500 (\$212); and R\$1,000 (\$424). Figure 4.2 also shows data for additional offers of R\$25 and R\$200.

³⁶ Differences between municipalities with above- and below-median standardized rainfall are statistically significant at the 1 percent level for these and all other offer amounts.

the rainfall analysis suggests that positive income shocks reduced citizens' willingness to accept vote-buying offers. Taken together, these findings suggest that a familiar argument from the clientelism literature applies to Brazil: rising incomes pose a challenge for clientelism.

4.3 VULNERABILITY

Given these effects of rising incomes – as well as the monumental institutional and legal challenges faced by electoral clientelism in Part I – one might be tempted to conclude that Brazil is an unpropitious environment for all forms of clientelism. But another crucial factor spurs many citizens to undertake purposive actions to help sustain ongoing exchange relationships. Despite rising incomes, many citizens remain highly vulnerable to risks such as unemployment, illness, and drought. Notwithstanding state efforts to improve the nation's inadequate social safety net, many Brazilians experience profound insecurity in their lives. Although self-insurance remains unaffordable to most of the population, evidence in this book suggests that many local politicians have discretionary control over resources that can be used in a contingent manner to help clients cope with adverse shocks. Vulnerability thus provides a key motivation for citizens to undertake actions to help sustain clientelist relationships with politicians through mechanisms elaborated in Chapter 3. To be precise, the present book conceptualizes vulnerability as encompassing *both* poverty and risk, because both low average income and high uncertainty can reduce a citizen's welfare (Ligon and Schechter, 2003).³⁷ Even though the first component of vulnerability (poverty) has declined markedly in Brazil, this section shows that the second component of vulnerability (risk) continues to afflict much of the nation's population.

To explore vulnerability in Brazil, one of the nation's leading government research institutions – the Institute for Applied Economic Research (Instituto de Pesquisa Econômica Aplicada, or IPEA) – launched an “Index of Social Vulnerability” in 2015.³⁸ It suggests that vulnerability persists across much of the country, despite improvements since 2000. And vulnerability is “very high” in much of the North and Northeast regions, particularly in the states of Acre, Alagoas, Amapá, Amazonas, Maranhão, Pará, Pernambuco, Rondônia, and parts of Bahia (IPEA, 2015, 24). Brazil's problem of continued vulnerability in spite of poverty reduction is mirrored across much of the world (Birdsall et al.,

³⁷ For a more extensive definition and formal analyses of vulnerability, see Ligon and Schechter (2003). Alternative conceptualizations of vulnerability abound; for example, see Alwang et al. (2001), De León (2006), Miller et al. (2010), and Tesliuc and Lindert (2002).

³⁸ According to IPEA (2015, 13–16), it is calculated at the municipal level, based on sixteen indicators in three subcategories: urban infrastructure (e.g., water and sanitation), human capital (e.g., mortality and education), and income and work (e.g., insufficient income and unemployment).

2014; Ravallion, 2010, 452), leading the *Financial Times* to call 40 percent of world's population "The Fragile Middle."³⁹ Similarly, the World Bank estimates that 38 percent of Latin Americans are part of the "vulnerable class," earning between \$4 and \$10 per person a day (Ferreira et al., 2013, xi–3, 37). And although approximately 40 percent of Latin American households advanced in terms of socioeconomic class between 1995 and 2010, most of the poor in Brazil and in the overall region entered the vulnerable class, not the middle class (Ferreira et al., 2013, xi, 5; Vakis et al., 2015, 7).⁴⁰

One key dimension of vulnerability is the probability that a household will reenter poverty in a given time period (e.g., Ferreira et al., 2013, 2; Barrientos, 2013, 13), though the problem encompasses far more than income swings. Even with this restrictive measure, the vulnerability of many Brazilians is striking: Soares et al. (2010c, 12) report that 46 percent of Brazilians who exited poverty reentered it the very next month. This dynamic nature of poverty is a major reason why Bolsa Família fails to reach 20 percent of Brazilians in extreme poverty (Campello and Neri, 2013, 173); many citizens are ineligible during beneficiary selection but fall into poverty before subsequent surveys (Soares et al., 2010c, 11). In addition, citizens already mired in poverty tend to be vulnerable to a wide range of shocks. While poverty rates have fallen in Brazil, they remain stubbornly high in certain pockets of the country. For example, 40 percent of citizens in the Northeast state of Ceará have been poor their entire lives, compared to just 5 percent of citizens in the southern state of Santa Catarina (Vakis et al., 2015, 13). As further evidence of this concentration of poverty, consider that 64.9 percent of all Brazilians in extreme poverty – and 50.7 percent of all Brazilians in moderate poverty – live in small municipalities in the North and Northeast regions, even though just one-fifth of Brazilians live in such municipalities (de Souza and Osorio, 2013, 144).

While the problem of vulnerability is widely recognized in Brazil, efforts to tackle its sources have typically fallen short. Despite impressive efforts by Brazil's government to expand social insurance programs, including those described in the present chapter, many citizens remain exposed to significant uninsured risk. And even when targeted programs alleviate risks borne by the poor, the modestly higher income level of the "vulnerable class" often renders its members ineligible for assistance (Ferreira et al., 2013, 12–13). In Brazil, members of the vulnerable class (i.e., with daily income of \$4–\$10 per capita) receive less government transfers than their counterparts who are poor or in the middle class (Ferreira et al., 2013, 173).⁴¹ Exacerbating this vulnerability, the majority of Brazilians lack the financial wherewithal to self-insure.

³⁹ "The Fragile Middle: Millions Face Poverty as Emerging Economies Slow," *Financial Times*, April 13, 2014.

⁴⁰ Middle class is defined as earning above \$10 and up to \$50 per person a day (2005 US\$ PPP).

⁴¹ Poor is defined as earning below \$4 per person a day; middle class as above \$10 but no more than \$50 per person a day (2005 US\$ PPP).

To shed light on the substantial vulnerability confronting many Brazilians, I now turn to three specific spheres of insecurity: health care, employment, and water. In the Rural Clientelism Survey in Northeast Brazil, these three issues were identified as the most pressing issues; in nationally representative surveys, health care and employment (but not water) are also amongst the top issues mentioned.⁴² Evidence suggests that despite considerable efforts to improve Brazil's public services with regards to each issue, many citizens continue to face debilitating risks to their livelihood. Moreover, municipalities have considerable resources and discretion to address each issue, providing local politicians the opportunity to mitigate some citizens' vulnerability through relational clientelism.

4.3.1 Health Care

Over the past few decades, Brazil achieved remarkable progress in expanding access to health care. Until the 1980s, many Brazilians suffered from exclusion because the public health care system focused on a narrow share of the population: formal urban workers making social security contributions (IPEA, 2009, 60). Progressive medical reformers, members of what is known as the "sanitary movement," worked fervently to ensure the 1988 Constitution universalized the public health care system, thereby expanding medical care for broad swathes of the population including informal workers and the rural poor (Weyland, 1996, chap. 7). Wider coverage contributed to marked improvement in various indicators; for example, infant mortality fell sharply from 77.2 to 13.5 deaths per thousand births between 1980 and 2016.⁴³ Meanwhile, the Brazilian government's expenditure on health care increased markedly, growing roughly fivefold from \$107 to \$512 per capita between 2000 and 2012.⁴⁴

Notwithstanding this considerable progress, inadequate health care continues to contribute to the vulnerability of many Brazilians. Even after this fivefold increase, public health care expenditures still lagged the world average (\$615 per capita) and reached only a fifth of the developed-country average (\$2,800 per capita).⁴⁵ In a nationally representative survey in 2013, respondents by far mentioned health care the most when asked to choose three pressing problems at the municipal level.⁴⁶ Health care was similarly chosen as the top issue

⁴² In the 2012 wave of the Rural Clientelism Survey, 43 percent identified water, 31 percent health care, and 11 percent employment. In 2013, health care was more important than water. In the nationally representative 2010 Brazil Electoral Panel Study, health care and unemployment were mentioned second- and third-most often as "the most serious problem the country is facing" (behind violence); water was mentioned far less often (Ames et al., 2013).

⁴³ "World Development Indicators," World Bank, 2017.

⁴⁴ "Gasto Público do Brasil com Saúde é Inferior à Média Mundial," *Estado de São Paulo*, May 13, 2015.

⁴⁵ "Gasto Público do Brasil com Saúde é Inferior à Média Mundial," *Estado de São Paulo*, May 13, 2015. All figures are for 2012.

⁴⁶ Survey of 7,686 individuals in 434 municipalities by Confederação Nacional da Indústria and IBOPE. Respondents chose three from nineteen options. Top responses were health care

at the state and federal level, and 87 percent of the survey's respondents rated the quality of health clinics and hospitals as "low" or "very low." Although the 1988 Constitution guarantees comprehensive health care, reality falls quite short of this objective. According to surveys of users of Brazil's public health system (commonly known as SUS for Sistema Único de Saúde, or Unified Health System), crucial areas for improvement include adding doctors, providing specialized consultations more quickly, increasing the types of medicines distributed freely, and ensuring availability of free medicines (SIPS, 2011, 88–93).

Such problems help explain why even with ostensibly universal and comprehensive public health care, 52.5 percent of Brazil's health expenditures are private (i.e., either from private insurers or out of pocket).⁴⁷ Underscoring the extent of vulnerability, the poorest quintile of Brazilians is over seven times as likely to experience catastrophic health spending as the richest quintile (Barros et al., 2011, 257). Whereas poor Brazilians spend the majority of their health care expenditures on medicine, wealthier citizens devote most of their health care expenditures to paying for private health plans, which enable them to complement or circumvent the inadequate public system (Garcia et al., 2013, 118–123). A quarter of all Brazilians enroll in private health plans (TCU, 2014, 103), even though the public health system is free. Citizens' use of this mechanism to mitigate vulnerability is geographically uneven: 38 percent of the population in the wealthier Southeast region enrolls in private health plans, versus just 12 percent in the poorer Northeast region (TCU, 2014, 44). Surveys suggest the top reason for using private health plans is the ability to get medical consultations and exams more quickly (SIPS, 2011, 96), and data show that medical staffing is much greater in the private sector (TCU, 2014, 38). A recent study draws a stark contrast between public and private health care in Brazil when evaluating the per capita availability of computerized tomography (CT) and magnetic resonance imaging (MRI) machines in twenty-nine countries. Brazil's private health plans exhibited more availability of this technology than Germany, the United States, and all other countries except Japan and Australia. By contrast, Brazil's public health care system had worse availability than all countries except Mexico.⁴⁸

Some citizens are particularly underserved by public health care in Brazil, heightening their vulnerability to illness. The country exhibits stark regional inequalities in both health care outcomes and services. While some states' health indicators compare favorably to much of the developed world, other

(59 percent), public security (43 percent) and education (32 percent). As mentioned, respondents of the 2010 Brazilian Electoral Panel Study chose health care as the second-most important problem facing the country.

47 "Gasto Público do Brasil com Saúde é Inferior à Média Mundial," *Estado de São Paulo*, May 13, 2015.

48 "Exames de Alta Complexidade são para Poucos no Brasil," *Veja*, November 19, 2010. See also Matijascic (2015, 19).

states' indicators are more comparable to Africa (TCU, 2014, 15). A child born in the relatively poor Northeast states of Bahia or Piauí is nearly twice as likely to perish as one born in the wealthier southern states of Rio Grande do Sul or Santa Catarina.⁴⁹ Similar contrasts emerge when considering the number of doctors per capita, which tripled across Brazil between 1970 and 2010, but continues to be about double in wealthier regions than in poorer regions (CFM, 2013, 35–36).⁵⁰ Partly as a consequence, whereas the average Brazilian received 4.0 medical consultations in 2010, the average resident of the North and Northeast regions obtained access to only 2.5 and 2.7 consultations, respectively (TCU, 2014, 31).

Gaps in health care, and thus vulnerability to illness, also tend to be worse in the countryside. In 2009, 7.7 percent of Brazilian municipalities lacked even a single doctor in residence providing public health care (Matijascic, 2015, 16). For every thousand citizens, state capitals have on average 4.6 doctors, compared to just 1.1 doctors for all other municipalities (TCU, 2014, 37). The same metric is even more disturbing outside state capitals in several Northeast states: only 0.06 in Piauí, 0.09 in Sergipe, and 0.10 in Alagoas. This dire lack of medical personnel spawned a major government initiative to improve access, Programa Mais Médicos, in 2013. As an example of how these health care gaps affect services, consider that a quarter of Brazilian women at least forty-five years of age have never had a clinical breast exam (not to mention a mammogram); this figure reaches two-thirds in the rural Northeast.⁵¹ And even though Brazil has more dentists than any other country (and one-fifth of the world's dentists), over a quarter of citizens in the rural Northeast – and 12 percent of all Brazilians – have never consulted a dentist in their lives.⁵²

Further insights about citizens' vulnerability to illness are provided by the 2011 localization wave of the Rural Clientelism Survey, which reached over 4,000 rural households across nine states in Northeast Brazil. Many respondents diverted a large share of their incomes to pay for medicine and treatments. A quarter of households had spent 10.3 percent of their total expenditures over the past thirty days on health care expenses; this figure reached 19.6 percent for a tenth of households.⁵³ Even more alarming, health care accounted for 28.2 percent of total expenditures in the past month for 5 percent of households – and it accounted for *over half* of all expenditures

⁴⁹ In 2011, infant mortality in these states was 20.1, 20.8, 11.1, and 10.8 per 1,000 live births, respectively. Data from SUS Indicadores e Dados Básicos, IDB, 2012.

⁵⁰ In this period, Brazil's doctors increased over sixfold (from 58,994 to 388,015) as population doubled. The Southeast, South, and Center-West regions have 2.7, 2.1 and 2.1 doctors per 1,000 citizens. The poorer North and Northeast regions have only 1.0 and 1.2, respectively.

⁵¹ Author's analysis of 2008 Datasus/PNAD data.

⁵² Author's analysis of 2008 Datasus/PNAD data.

⁵³ For the median household, health care expenditures were R\$3, comprising less than 1 percent of overall expenditures in the last month. Over a tenth of respondents had spent R\$100 or more.

for one percent of households. As an example of such health care expenditures, 44.8 percent of respondents in the 2012 wave of the Rural Clientelism Survey reported a previous instance in which they needed medicine unavailable in the public pharmacy. The broader point is that Brazil's public health care system does not protect all citizens from vulnerability to illness.

As shown in the next two chapters, many Brazilians cope with their vulnerability to health shocks through relational clientelism – that is, through ongoing exchange relationships with politicians who provide contingent benefits that extend beyond campaigns. Two features enhance the capability of local politicians to mitigate this source of vulnerability through clientelism: municipalities have considerable health care resources as well as discretion about expenditures. With respect to resources, municipalities' health care coffers increased as public health care expenditures grew and decentralized. Brazil's 1988 Constitution, which declared the right to universal, comprehensive health care, placed duties on all levels of government. As overall public health care expenditures rose, the federal government increasingly transferred funds to municipalities. Such transfers to municipalities now account for the largest share of public health care expenditures: 47.5 percent in 2013 (TCU, 2014). With respect to discretion, many important health services (such as primary care) are implemented at the municipal level (IPEA, 2010a, 73). Brazil's federal audit court reports that municipal officials have substantial levels of autonomy when providing some aspects of healthcare, often with little oversight or guidance at the state level (TCU, 2011).⁵⁴ Although municipal health councils involve civil society and therefore could potentially limit such discretion, in practice these councils have limited autonomy – especially in smaller municipalities – and typically rely on municipal governments for operational resources (Moreira and Escorel, 2009, 798, 801–803).

To illustrate this point about health care resources and discretion at the municipal level, consider the case of pharmacy benefits. At least on paper, Brazil provides free access to a wide variety of medicine, such as through Programa Farmácia Popular do Brasil (Brazil's Popular Pharmacy Program). Municipalities receive substantial funds to provide free medicine, and are supposed to base decisions about what types and quantity of drugs to purchase on federal and state guidelines.⁵⁵ But according to audits by Brazil's federal accountability office (Tribunal de Contas da União, or TCU), in practice many municipalities stray far from these guidelines. Reasons include mismanagement and political malfeasance, and higher-level officials frequently neglect to monitor municipal actions with regards to pharmaceuticals

⁵⁴ See especially Sections 252–258 of the TCU report.

⁵⁵ For the broader role of municipalities, see the National Medicine Policy (Portaria No. 3.196, October 30, 1998). The most prominent guidelines are the Ministry of Health's *Relação Nacional de Medicamentos Essenciais* (RENAME).

(TCU, 2011).⁵⁶ Furthermore, the inflow and outflow of drugs from medical facilities is poorly monitored, providing scant control over how publicly procured medicine is distributed (TCU, 2011). Such findings not only suggest considerable local autonomy about some health care expenditures, but also reveal one reason why medicine may be unavailable to citizens who become ill, exacerbating vulnerability to health shocks.⁵⁷ This problem is acute: Bertoldi et al. (2012, 1) cite evidence suggesting that “on average, 40 percent of the medicines prescribed in public primary health care were not available when needed.”⁵⁸

More broadly, many Brazilians continue to face substantial vulnerability to health risks, despite major efforts to improve Brazil’s social safety net. Local politicians have the opportunity to help clients cope with these risks through ongoing exchange relationships, given municipalities’ significant resources and discretion surrounding health care.

4.3.2 Employment

Employment is another arena of vulnerability for many Brazilians. At the outset, it is important to recognize Brazil’s advances over the past quarter century in tackling labor market insecurity – in the formal sector – through the provision of unemployment insurance. While the 1946 Constitution had called for unemployment insurance, implementation struggles ensued, and it did not materialize until 1986 (IPEA, 2010a, 79; ILO, 2013, 1). By some measures, the federal unemployment insurance program (Seguro-Desemprego) is now sizable, as its expenditures are 2.5 percent of the total eligible payroll – over triple the level in the United States (Gerard and Gonzaga, 2014, 6). The number of recipients in Brazil expanded rapidly from 734,000 in 1987 to 4.2 million in 2000 and 8.2 million in 2014 (MTE, 2015). This rapid increase is partially explained by sharp growth in the formal labor market, which exhibits high levels of turnover (DIEESE, 2014a, 12). Unemployment insurance compensates registered workers who involuntarily lost their jobs, for three to five months, with the specific duration based on time worked and number of prior requests for benefits. The monthly benefit depends on the salary earned during the last three months of employment, and averaged R\$941 in 2014 (MTE, 2015).

⁵⁶ A 2011 TCU audit in 30 municipalities across 10 states found that many municipalities’ health plans ignore or inadequately cover pharmaceuticals, and states often neglect to monitor municipalities (see sections 55 and 57). Although some interviewees blame politicians for the lack of medicine, Barreto and do Carmo Lessa Guimarães (2010, 1212) found in Bahia essential medicine was missing largely because no pharmacist managed programming.

⁵⁷ Despite the supposed availability of free medicine, the poorest fifth of Brazilians spend 58 percent of their health care expenditures on medicine (Garcia et al., 2013, 122–123). The issue led Senator Vanessa Grazziotin to call the lack of medicine in the Amazon region “unsustainable” on the floor of the national legislature in 2013.

⁵⁸ The authors’ analyses show that even in the relatively wealthy South region, public sector medicines are inadequate to meet demand.

Even though unemployment insurance has thus expanded substantially in Brazil, most of the country's population remains entirely unprotected from job loss. Social protection is focused primarily on the formal labor market, leaving many Brazilians in a state of vulnerability. For example, unemployment insurance for unregistered salaried employees and temporary workers is "practically inexistent," because such citizens typically cannot afford to obtain optional coverage through independent contributions (IPEA, 2010a, 283).⁵⁹ Although the Brazilian workforce has increasingly formalized since 2003 (Campos, 2015, 14), over half of workers are in the informal sector (cf. Gerard and Gonzaga, 2014, 1). Higher informality in rural areas and small municipalities leaves even more workers in a precarious situation. In rural areas, 59.4 percent of all employees are unregistered, a figure that reaches 77.1 percent in the North and Northeast regions (DIEESE, 2014a, 12). And only 28 percent of formal employees live in municipalities with populations of 100,000 and below, even though such municipalities are home to 45 percent of Brazilians (IBGE, 2010; DIEESE, 2011, 76). Particularly distressing is the fact workers who are unprotected by unemployment insurance often face relatively greater risks than those who are covered. Their incomes tend to be lower and less stable, and they are typically uninsured during times of sickness and accidents (IPEA, 2010a, 295).

Among formal sector workers, many are still vulnerable to unemployment. Eligibility requirements became even more stringent in 2015: for example, first-time applicants must now have worked eighteen of the past twenty-four months to receive any benefits at all.⁶⁰ High turnover in the labor market makes it challenging for many workers to stay employed for such durations, and more generally results in reduced coverage (IPEA, 2010a, 298–299). For instance, in the formal sector in 2012, the number of separations as a share of total employment was 42.3 percent, and even reached 87.4 percent in construction and 65.9 percent in agriculture (DIEESE, 2014b, 12).⁶¹ Due to such factors – and because much of the unemployed population works informally or has never worked at all – the ILO (2013, 1–2) estimates that only 7 percent of Brazil's unemployed workers actually procure benefits from unemployment insurance. And beneficiaries end up struggling to find another job. An analysis of employees terminated between 1995 and 2009 found that almost all recipients exhausted their unemployment benefits, and half continued to be unemployed twelve months after their layoffs (Gerard and Gonzaga, 2014, 14–15).

This inadequacy of Brazil's social safety net is especially pernicious because so many citizens are vulnerable to the risk of unemployment. Although the

⁵⁹ However, Brazil expanded unemployment insurance to domestic workers in 2015. See "Empregados Domésticos Passam a ter Direito ao Seguro-Desemprego," *O Globo*, August 28, 2015.

⁶⁰ "Nova Regra do Seguro-Desemprego Vale para Demitidos a Partir de Sábado," *Globo*, February 27, 2015.

⁶¹ Separations exclude four types of departures ineligible for unemployment insurance: death, retirement, transfer, and by worker request.

country demonstrated substantial job creation and relatively low unemployment rates in some (though not all) recent years, aggregate figures mask just how challenging it is for many citizens to obtain and stay in work. Unemployment is uneven in Brazil: the Northeast region had nearly double the unemployment rate as the South in early 2015 (9.6 versus 5.1 percent) and ranged from 3.9 percent in Santa Catarina to 11.5 percent in Rio Grande do Norte.⁶² The extreme poor in particular have much higher unemployment rates, reaching 25.4 percent in 2011, with only 3.6 percent of this subgroup working in the formal sector (Dedecca, 2015, 21–22). Moreover, unemployment rates capture neither the 39 percent of Brazilians of legal working age who have not actively sought paid work over the past month (IBGE, 2014, 8), nor the many citizens who are underemployed. According to a recent survey, most Brazilians believe that unemployment is the top reason for poverty in Brazil (SIPS, 2011b, 8–9).⁶³

As with health care, the next two chapters show how many Brazilians facing vulnerability to unemployment turn to relational clientelism as a risk-coping mechanism. Two features enhance the ability of local politicians to alleviate this source of vulnerability through clientelism: municipalities hire many employees and have considerable discretion in their selection. With respect to employment, the number of citizens working directly for municipalities increased sharply over the last decade, from 3.9 million workers in 2002 to 6 million in 2012.⁶⁴ This growth was feasible despite the Fiscal Responsibility Law of 2000, which capped each municipality's personnel expenditures at 60 percent of its net current revenues, because municipal revenues expanded rapidly.⁶⁵ Growth in municipal employees was especially rapid in municipalities with 10,000 to 500,000 residents – twice as fast as in larger cities.⁶⁶ As one councilor suggests, many citizens in small towns are “dependent” on local politicians “because the primary job creator is the municipal administration.”⁶⁷ As of 2012, municipal workers constituted 3.2 percent of Brazil's population (IBGE, 2012b, 19), a share that decreases monotonically with municipality size. For example, municipalities employ 6.8 percent of the population in the 1,298 municipalities with up to 5,000 residents, versus just 1.7 percent of the population in the 38 municipalities with over 500,000 residents. And such

⁶² “Desemprego Ficou em 7.9% no Primeiro Trimestre de 2015, Diz IBGE,” *Globo*, May 7, 2015.

⁶³ Poor Brazilians are nearly four times more likely to provide that explanation than the next most frequently cited reason, low education.

⁶⁴ Reflects personnel working in direct municipal administration; data from the 2002 and 2012 *Perfil dos Municípios Brasileiros* (IBGE).

⁶⁵ As municipalities' share of public expenditures increased, their current revenues grew nearly 5 percent from 2000 to 2011, slightly faster than employee growth (IPEA data adjusted for inflation using IGP-DI index).

⁶⁶ Data reflect growth in municipal employees from 2005–2012 (IBGE, 2012b, 20).

⁶⁷ Author's interview of a councilor in a Bahian municipality with 30,000 citizens, December 3, 2008.

employment influences a greater share of the population, as a single stable job may sustain numerous individuals in many poor households. Municipalities have more public employees than state and federal governments combined (4.4 million versus 3.2 million and 0.7 million, respectively, in 2008),⁶⁸ and the number of public workers they employ has also grown at a much faster rate than other levels of government (Barone, 2010, 12).

Local politicians also have considerable discretion when hiring this expanding number of municipal workers. To be sure, Brazil has made impressive strides against such discretion with regards to permanent employees: it was the first country in Latin America to institute a formal civil service (Grindle, 2012, 16) and continually strengthened this bureaucracy through important measures including competitive exams for permanent positions (*concursos públicos*). But while mayors and councilors are relatively constrained from offering permanent positions for clientelist purposes, they can skirt many regulations through temporary employment. Unlike permanent positions, temporary jobs do not require competitive exams and allow considerably more discretion while hiring.⁶⁹ Across Brazil, 17.1 percent of direct municipal employees are in temporary positions (IBGE, 2012b, 194). And moreover, this figure is even higher in the poorer North and Northeast regions (26.6 and 23.3 percent, respectively), even reaching 41.1 percent in Roraima state (IBGE, 2012b, 195). Temporary positions are also subject to restrictions; for instance, they are included in the cap on total personnel expenditures imposed by the Fiscal Responsibility Law of 2000, and they can only be filled for limited durations if there exists an “exceptional public interest.”⁷⁰ However, local politicians have various ways to circumvent these restrictions. One technique is indirect hiring through civil society organizations that conduct work for the municipality – they can be pressured to misclassify expenditures in order to contract more employees than is officially reported.⁷¹ Hiring contracted workers in education is no longer as easy as it once was given legal restrictions, while public works and sanitation are considered “easier” places for such activity. But even in education, a quarter of all public teachers in Brazil – and as many as two-thirds in some contexts – are temporary workers, providing ample opportunity for political appointments.⁷²

Overall, vulnerability to unemployment remains a major problem for many Brazilians, given that unemployment insurance still covers just a minority of the

⁶⁸ IPEA, 2010b, 15.

⁶⁹ For a case study of the use of temporary employment in Maranhão, see Sousa (2014).

⁷⁰ For example, see TCE-MT (2013).

⁷¹ Author’s interview of a councilor in a Bahian municipality with 10,000 citizens, November 24, 2008.

⁷² For overall statistics, see “Brasil Gasta Demais com Funcionários Públicos,” *Época*, October 2, 2014. In addition, the share of secondary-school teachers in temporary contracts is 66.6 percent in Espírito Santo, 64.8 percent in Mato Grosso, and 59.9 percent in Ceará (TCU, 2014, 27).

population. Local politicians have the capacity to help their clients cope with such shocks through ongoing exchange relationships, as municipal employment is growing and considerable discretion exists when hiring temporary workers.

4.3.3 Water

Water shortages are yet another source of vulnerability for many Brazilians, especially in rural areas and in the Northeast region. Before documenting this vulnerability, Brazil's considerable efforts to improve drinking water access deserve mention. Whereas the country's 1877 drought killed as many as 500,000 people (Coelho, 1985, 27), and frequent droughts continued to kill many citizens until the mid-twentieth century, fatalities are now relatively uncommon due largely to government actions (Nelson and Finan, 2009). Infrastructure investments play a key role, as the share of households with water piped from the public system rose from 32.8 to 83.0 percent between 1970 and 2010.⁷³ Moreover, Brazil launched the *Água para Todos* (Water for All) program in 2011, which installed over 911,000 cisterns for storing and collecting water through January 2016.⁷⁴ Emergency responses to droughts have also been highly beneficial. Most prominently, *Operação Carro-Pipa* (Operation Water Truck) contracts trucks to deliver water directly to citizens in municipalities facing a "state of emergency." During a drought in May 2015, for example, the program dispatched 6,754 water trucks to help 3.8 million citizens in 793 municipalities across the Northeast region.⁷⁵

Notwithstanding such government efforts, water shortages continue to pose a threat. Although Brazil has over 13 percent of the world's available fresh water (ANA, 2014), drought frequently afflicts much of the country. Only a fifth of this water is located outside the sparsely populated Amazon, leaving much of the country parched for long periods. The Northeast region – which has just 3 percent of Brazil's water – faced its worst drought in fifty years in 2013, and large portions of Brazil (especially São Paulo) remained in severe drought in 2014 (WMO, 2014, 2015). Particularly susceptible to drought is the semi-arid zone of the Northeast region, which has twenty-eight million residents and as much land area as France and Germany combined.⁷⁶ The area is often parched because its rainfall is temporally concentrated and evaporates quickly, given high winds and excessive temperatures (Febreban, 2007, 2008).

Droughts exacerbate the vulnerability of many Brazilians. In the words of a fifty-three-year old woman in Ceará: "If it wasn't for the [water] truck, we would die of thirst" (Instituto Agropolos de Ceará, 2012, 20). Vulnerability is

⁷³ Data from IBGE (1977) and IBGE (2010).

⁷⁴ "Água para Todos Entregou 159 Mil Tecnologias Sociais de Apoio à Produção desde 2011," *Portal Brasil*, February 18, 2016.

⁷⁵ Comando de Operações Terrestres do Exército Brasileiro, May 2015.

⁷⁶ Part of Minas Gerais state is also in the semi-arid region.

high in many rural areas of the country, where 30.7 percent of citizens lacked access to piped water in 2010, and an additional 42 percent relied on sources of piped water unconnected to the public system (primarily using wells and springs, which can be less reliable).⁷⁷ Many citizens throughout Northeast Brazil are especially vulnerable. In 2013, an elite survey of municipalities in that region estimated that over 55,000 citizens seek out water each day from officials (CNM, 2013, 14). And in the 2012 wave of the Rural Clientelism Survey conducted across Northeast Brazil, 40.9 percent of respondents indicated that they had at some point faced an emergency in which they lacked water. Droughts threaten not only citizens' ability to procure drinking water, but also their economic livelihood through effects on animal husbandry and crop production. In 2012, Northeast Brazil lost four million animals, largely due to drought. Approximately 1.3 million head of cattle perished, including a quarter of all cattle in Paraíba and Pernambuco.⁷⁸ In states such as Ceará, many municipalities faced catastrophic crop losses, with as much as 90 percent of harvests decimated (Gutiérrez et al., 2014). In short, droughts are a source of vulnerability for many Brazilians.

As with employment and health care, the next two chapters explore how many Brazilians facing vulnerability to droughts turn to relational clientelism as a risk-coping mechanism. Clientelist water provision most frequently involves deliveries by water truck.⁷⁹ Two conditions facilitate local politicians' clientelist use of water trucks to address vulnerability: municipalities have resources to provide water-truck deliveries and discretion to select recipients. Trucks typically draw water from existing public sources (such as reservoirs, ponds, rivers, or groundwater), so the additional resources needed are trucks and funds for operating them. Water trucks are often available at the local level: some municipalities possess one or more trucks, and some mayors and councilors own personal water trucks or have close ties to local truck owners.⁸⁰ In addition, funds for fuel and other operating costs can be budgeted as a municipal water program, diverted from other programs, or paid for from politicians' salaries or illicit sources. Resources for water deliveries multiply when drought strikes. Municipalities can obtain substantially more water-truck deliveries through the aforementioned Operação Carro-Pipa (Operation Water Truck) by declaring a "state of emergency," a formal process requiring federal approval. The program, which is a partnership between the Ministry of National Integration, the National Guard and the Army, involves multiple levels of government. Through this program in 2014, the federal government dispatched 6,541 water trucks to 785 municipalities, while

⁷⁷ IBGE (2012a). By contrast, figures for urban residents were 6.8 and 11.9 percent, respectively.

⁷⁸ "Seca Fez Nordeste Perder 4 Milhões de Animais em 2012, Diz IBGE," *UOL*, October 15, 2013.

⁷⁹ Other less common modalities for clientelism include boring wells and building cisterns.

⁸⁰ See Eiró and Lindoso (2015, 68) and "Parlamentar Denuncia Indústria da Seca no CE," *Diário do Nordeste*, August 18, 2015.

state governments dispatched 1,453 water trucks to 307 municipalities.⁸¹ All in all, resources are available at the local level to provide water-truck deliveries.

Moreover, local politicians often have discretion when selecting recipients of these deliveries. Politicians with access to private water trucks have substantial latitude about how to dispatch them. For instance, a federal deputy complained about how mayors with their own private water trucks engage in clientelism in the interior of his state (Ceará) by exchanging votes “for a guaranteed supply of water.”⁸² Local politicians can also often influence who receives deliveries from municipal water trucks. As Santana et al. (2011, 7, 9) argue, water truck deliveries typically involve clientelist relationships between citizens and politicians rather than institutionalized channels. In a recent news article, residents of a small municipality in Piauí complained that its water trucks deliver only “to those houses that the mayor wants,” while community agents elsewhere in the state reported that only the mayor’s supporters receive water from a water truck contracted by the municipality.⁸³ Local politicians have relatively less discretion with trucks from Operação Carro-Pipa because of direct Army involvement. In order to receive payment from the Army, truck drivers must submit official vouchers that they receive from beneficiaries at the time of water deliveries. As then-President Dilma Rousseff explained in 2013: “This water-truck operation is seen as a traditional operation in the Northeast. Only this time, the federal government placed 5,700 water trucks and employed the Brazilian Army to coordinate the operation to prevent any use of the operation for actions in the past called clientelist.”⁸⁴ As explored in Chapter 5, although the program strives to reduce discretion, it is by no means foolproof, so opportunities for clientelism exist. First, the municipality is involved in preparing the water distribution plan that identifies specific locations to which trucks are dispatched. More specifically, municipal employees have a substantial role in the National Guard coordinating committee (COMDEC) in each municipality that is tasked with writing the plan (Calheiros et al., 2007, 6), and are directly responsible for the plan when such a committee does not yet exist in the municipality (CGU, 2014, 7–9).⁸⁵ In addition, an audit of Operação Carro-Pipa found “high variability” of internal monitoring across Army subunits and incomplete compliance with required documentation about contracts, receipts and plans (CGU, 2014, 1, 60–63), and media outlets have reported on potential corruption in some

⁸¹ “Informativo sobre a Estiagem no Nordeste, No. 77,” Ministério da Agricultura, Pecuária e Abastecimento, February 15, 2015.

⁸² “Parlamentar Denuncia Indústria da Seca no CE,” *Diário do Nordeste*, August 18, 2015.

⁸³ “Água em troca de votos,” *Correio Braziliense*, July 1, 2012.

⁸⁴ “Discurso da Presidenta da República, Dilma Rousseff, durante Cerimônia de Assinatura de Termos de Compromisso do Programa Água para Todos com Municípios do Semiárido Brasileiro,” Brasília, Palácio do Planalto, September 10, 2013.

⁸⁵ Locations typically include clusters of homes, not individual homes, but can be granular.

aspects of the water-truck program.⁸⁶ More broadly, local politicians often have discretion with regards to water deliveries, though their ease of influencing beneficiary selection may depend on who owns or funds the trucks involved.

The upshot of this discussion of water shortages closely parallels that of health care and unemployment. Once again, many Brazilians continue to face substantial vulnerability, despite major efforts by the state to improve the social safety net. And similar to the other two domains, local politicians are often able to reduce citizens' exposure to risk in a clientelist manner, due to their considerable access to water trucks and discretion in selecting recipients.

4.4 SUMMARY

This chapter has examined why vulnerability provides a pressing motivation for many Brazilians to help sustain long-term clientelist relationships. While most studies emphasize the role of poverty in clientelism, it is also crucial to consider vulnerability – a broader concept that encompasses both poverty and risk – because both low average income and uncertainty are detrimental to a citizen's welfare (Ligon and Schechter, 2003). Vulnerability continues to afflict much of the world's population, even as the incomes of the poor have risen across the globe (Birdsall et al., 2014; Ravallion 2010, 452). With respect to Brazil, this chapter has shown that although one component of vulnerability has declined markedly (poverty), another component of vulnerability continues to threaten the lives of many Brazilians (risk).

On the one hand, rising incomes present a challenge for all forms of clientelism in Brazil. Notwithstanding a recent economic downturn, the nation has experienced substantial income growth over much of the last quarter century. This growth has been especially pronounced for poor Brazilians, with considerable gains fueled by labor income, pensions, and conditional cash transfers. Evidence from Brazil corroborates the conventional wisdom that higher incomes blunt the appeal of clientelist rewards. Surveys show that higher-income Brazilians tend to view clientelist exchanges as less acceptable – and are less likely to vote for candidates who offered them benefits – than their poorer counterparts. In addition, positive rainfall shocks during the 2012 municipal campaign reduced rural citizens' willingness to accept hypothetical vote-buying offers. More broadly, income growth compounds the numerous threats to electoral clientelism described in Part I, and also strains ongoing patterns of relational clientelism.

Despite rising incomes, many Brazilians continue to face substantial vulnerability, which often spurs citizens to fortify long-term clientelist relationships as a risk-coping mechanism. State efforts to expand Brazil's social safety net

⁸⁶ For example, the first page of this CGU audit explains it was prodded by corruption allegations on *Rede Globo's* prominent television show *Fantástico*. See also “*Fantástico Aponta Irregularidades no Programa de Combate a Seca em AL*,” *Gazetaweb.com*, December 1, 2013.

have failed to shield much of the population from a wide range of risks. In particular, this chapter demonstrated that many citizens remain highly vulnerable to illness, unemployment, and drought. Most Brazilians cannot afford private health insurance, and inadequacies in the public health care system often contribute to catastrophic out-of-pocket expenditures. Less than a tenth of Brazilians who lose their jobs receive unemployment insurance, which is focused on formal employees and imposes stringent requirements. And recurring droughts create severe water shortages, leaving over 40 percent of survey respondents in rural Northeast Brazil in an emergency situation at some point in their lives. This chapter also demonstrated why local politicians are often able to assist clients in exchange for political support: at the municipal level, there are considerable resources and discretion in the spheres of health care, employment, and water. As shown in the remainder of Part II, many politicians do indeed provide clients with favored assistance in such domains. Overall, vulnerability provides many citizens a powerful motivation to buttress the stability of their ongoing exchange relationships. Given this motivation, how can citizens enhance the survival of these relationships? Building on the theoretical logic elaborated in Chapter 3, the next two chapters investigate two key mechanisms that citizens often employ to reinforce relational clientelism – declared support and requesting benefits.