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The Political Economy of Zambia's Recovery

Structural Change without Transformation?

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ABSTRACT

During the last decade, the resurgence in economic growth in Africa south of the Sahara has generated an interest in the drivers and consequences of structural change and transformation. Using the case of Zambia, this paper examines whether structural change translates into reduced poverty and improved social welfare through an empirical and systematic analysis of the country's growth trajectory during 1991–2010. We find that growth after 2002 was accompanied by positive structural change, but most new jobs were in the low-wage, insecure informal sector in urban areas. Due to the demands of an expanding middle class, construction and high-value services also generated additional jobs, but the share of employment growth from these sectors was small and skewed more toward higher-skilled Zambians. Consequently, for a majority of the population, large-scale social transformation did not follow from structural change. As a consequence, the government that oversaw Zambia's economic recovery was thrown out of office in 2011 in favor of an opposition party that promised to rectify perceived inequalities created by the country's resurgence. The case therefore holds economic, social, and political implications for many of the region's other fast growing democracies.

Keywords: Africa, economic transformation, employment, social inequality, populism, Zambia

1. INTRODUCTION

Long considered the archetype of economic decline in Africa, Zambia more recently has been heralded as an example of Africa's economic resurgence. Thanks to rapid growth during the 2000s, the country reclaimed its middle-income status, which had been lost after independence in 1964. This growth coincided with macroeconomic stability and a burgeoning consumer class, symbolized by the rising number of shopping malls in the capital city, Lusaka.

This rosy picture contrasts sharply with the message presented by veteran politician Michael Sata during Zambia's 2011 elections. Sata and his political party, the Patriotic Front (PF), argued that the country had experienced rising unemployment and inequality under the long-ruling Movement for Multiparty Democracy (MMD). Sata's ultimate victory over not only the MMD but also eight other opposition parties indicated that his message strongly resonated with a large share of the populace.

By examining the 1991–2010 period, this paper analyzes the puzzle of why Zambians voted out the party that oversaw unprecedented economic growth and, more specifically, whether there was empirical validity to Sata's message. On the one hand, we find that at least half of Zambia's economic growth during the 2000s was from *positive structural change*, defined as a shift in the share of employment toward more productive sectors. Some of this was due to the transition out of rural agriculture into more productive informal trade within cities and towns. This was a reversal of the de-urbanization of the 1990s, when structural adjustment policies forced many to pursue coping strategies in the countryside. Despite this move out of agriculture, most of the structural change in the 2000s resulted from relatively small increases in employment within construction and high-value services.

On the other hand, Zambia's rapid economic growth was not accompanied by substantial social transformation. Despite policies to support farmers, agriculture remained stagnant throughout the 2000s, contributing to high levels of rural poverty. Simultaneously, the expansion of informal trade failed to create decent, well-paying jobs and coincided with widening social disparities in major cities. This was particularly problematic for Zambia's youth, including the more educated. Many youth were either unemployed or were forced into informal trade due to a lack of formal-sector opportunities. By contrast, the growth in high-value services primarily benefited, and was largely driven by, higher-income groups and reflected rising inequality. Finally, the copper mining boom created few jobs and little tax revenue for the government.

The lackluster social impact of growth provided useful fodder for Sata (see Cheeseman and Hinfelaar 2010; Larmer and Fraser 2007; Resnick 2013). Over the course of three elections, he targeted his campaigns to Zambia's major cities, especially Lusaka, where rapid urbanization had contributed to the amassing of large numbers of voters. Through rallies in shanty compounds and informal markets, he mobilized the urban poor, highlighting their exclusion from the economic recovery. Furthermore, he heavily criticized the MMD's mining policy, particularly the low taxes paid by mining companies. He targeted disillusioned youth, many of whom were encouraged to register to vote for the first time and whose large participation contributed to his victory. However, in rural areas, he focused much less on articulating policies and instead relied on ethno-linguistic appeals in certain provinces.

Thus, we find that Zambia had recovered remarkably from its poor performance in the 1990s, and national welfare was much higher in 2010 than it was in 1991. Economic growth was also associated with positive structural change. However, at least over the short term, the characteristics of this structural change had not translated into significant social transformation. This was reflected in the country's shifting political landscape.

To elaborate on this argument, Section 2 examines Zambia's growth trajectory over the 1990s and 2000s. Particular attention is given to determining how much of the economic growth was associated with structural change, and how this related to broader demographic and labor market dynamics. In Section 3 we examine five key sectors of the Zambian economy—mining, manufacturing, agriculture, informal trade, and high-value services—to identify how they contributed to social outcomes. In Section 4, we trace how the PF capitalized on perceptions of widening social disparities in urban areas during

successive presidential campaigns even as the MMD attempted to mobilize rural voters and higher-income urbanites who had benefitted from the MMD's tenure. We conclude by discussing lessons from the Zambian experience and the long-term potential for social transformation given recent policy decisions.

2. ECONOMIC GROWTH AND STRUCTURAL CHANGE

Patterns of Growth

Zambia's transition to middle-income status was driven in large part by the country's level of per capita gross domestic product (GDP). This new designation represented a major shift from the 1990s, when Zambia experienced a period of economic decline. At that time, President Frederick Chiluba and his MMD-led government implemented major structural reforms in response to a severe macroeconomic crisis (Rakner 2003). Despite these reforms, the economy still expanded, with total GDP growing at a rate of 1.1 percent per year during 1991–2002. However, this was well below the population growth rate of 2.9 percent per year, causing GDP per capita to fall from \$1,065¹ in 1991 to US\$875 in 2002.²

Table 2.1 disaggregates Zambia's GDP and shows that the country's economic decline occurred in all sectors except trade and financial services. The most dramatic decline occurred in the mining sector, which accounted for one-fifth of total GDP in 1991 and generated, via copper exports, most of Zambia's foreign exchange earnings. Between 1991 and 2002, mining was responsible for almost three-quarters of the drop in GDP per capita. By the end of this period, mining's contribution to total GDP was less than half what it had been in 1991, and agriculture and trade had become Zambia's largest sectors, overtaking mining.

Table 2.1 GDP per capita in 1991, 2002, and 2010

Sector	GDP per capita (2002 US\$ PPP)		
	1991	2002	2010
All sectors	1,065	875	1,204
Agriculture	162	148	162
Mining	214	76	128
Manufacturing	114	104	119
Construction and utilities	125	86	183
Trade services	197	204	228
Transport and communication	65	59	128
Finance and business	104	123	145
Community services	84	74	111

Source: Authors' calculations using data from Zambia, CSO (1993, 2004, 2011c, 2012a) and IMF (1999).

Notes: GDP is gross domestic product or total value-added; PPP is purchasing power parity.

By contrast, the 2000s were a period of rapid economic recovery, overseen largely by Chiluba's two successors, Levy Mwanawasa, who entered office in 2001, and Rupiah Banda, who was elected president in 2008 in the wake of Mwanawasa's death. During the 2002–2010 period, total GDP grew at 6.4 percent per year and population growth slowed to 2.3 percent per year. As a result, GDP per capita increased by a third, to US\$1,204 in 2010, marking a return to pre-crisis levels and paving the way for a return to middle-income status.

Table 2.1 shows that all sectors expanded during the 2000s but underlines that Zambia had a very different economic structure in 2010 than it did in 1991. Manufacturing continued its relative decline, with modest gains in GDP per capita driven almost entirely by food processing. Although much attention has been given to the recovery of Zambia's copper exports, mining accounted for only a sixth of the increase in total GDP. Instead, it was construction, communications, and finance that dominated economic growth, together accounting for more than half of the GDP increase.

¹ Throughout the text, all dollars refer to US dollars.

² All GDP values reported in this paper are in constant 2002 prices and account for differences in purchasing power across countries. GDP and employment data are discussed in the appendix.

Productivity and Structural Change

To determine whether economic growth was associated with positive structural change, we decompose changes in national labor productivity (that is, value-added per worker) using the shift-share approach in McMillan and Rodrik (2011). Economywide labor productivity is separated into two components. The first component is the sum of sectoral productivity changes weighted by initial employment shares. It measures *within-sector* productivity changes, assuming that changes in national employment are distributed proportionally across sectors. The second component is *structural change*, which is the additional effect of reallocating labor across sectors after accounting for changes in sectoral productivity. When workers move, in aggregate, from low- to high-productivity sectors or when job creation is faster in higher-productivity sectors, then structural change is said to have contributed positively to national labor productivity.

Table 2.2 reports the results from the shift-share analysis, distinguishing between the structural adjustment period of 1991–2002 and the economic recovery period of 2002–2010.³ The first column shows the structural adjustment period and highlights that value-added per worker fell by US\$659 (or 2.0 percent per year) during that period, from US\$3,339 in 1991. This decline was almost entirely due to negative structural change, with workers moving out of industry and services and into low-productivity agriculture. The decline was exacerbated by falling productivity within agriculture and industry and only partly offset by rising productivity in services.

Table 2.2 Labor productivity decomposition, 2001–2010

Variable	Change in value-added per worker (2002 US\$ PPP)		
	1991–2002	2002–2010	1991–2010
Total productivity change	-659	864	205
Within-sector component	12	435	595
Agriculture	-96	52	-49
Industry	-189	364	286
Services	297	19	358
Structural change component	-671	430	-390
Agriculture	40	-28	16
Industry	-414	86	-439
Services	-297	372	33

Source: Authors' calculations using data from Zambia, CSO (1993, 2004, 2011c, 2012a).

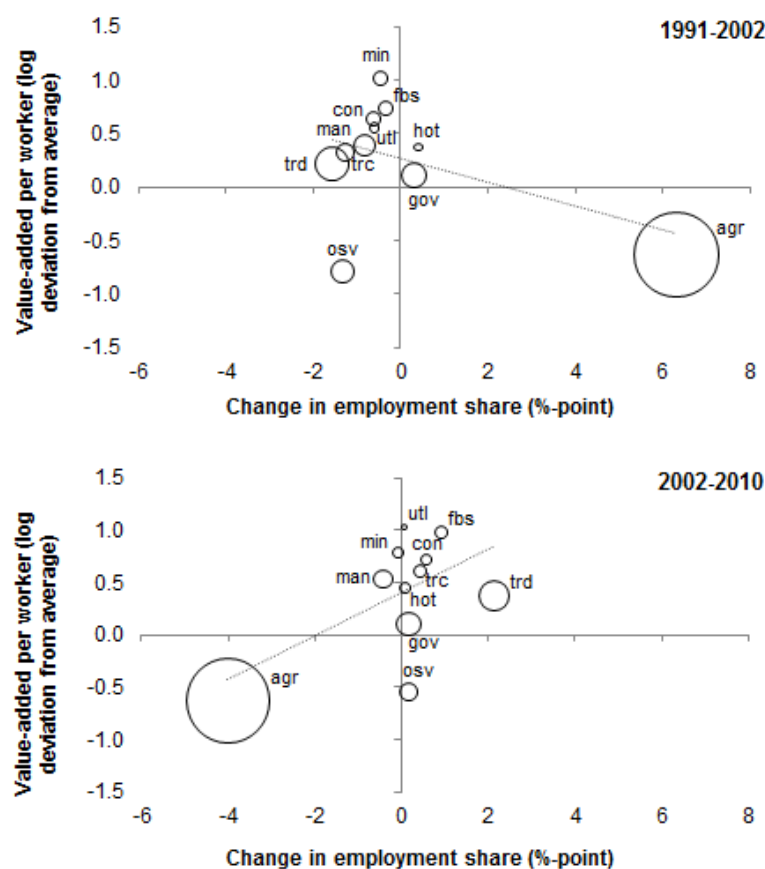
Notes: PPP is purchasing power parity.

In contrast, strong economic growth in 2002–2010 was associated with a large increase in labor productivity. Value-added per worker increased by US\$864 (or 3.6 percent per year) from US\$2,680 in 2002. About half of this increase was due to positive structural change driven by faster employment growth in services and a relative decline in farm employment, where value-added per worker was very low. Productivity improvements within sectors, particularly industry, accounted for the remaining half of the economywide productivity growth.

Figure 2.1 provides more detailed results. The vertical axis shows sectoral productivity relative to economywide productivity. A positive value means that a sector generated above-average value-added per worker. The horizontal axis shows the percentage point change in employment shares. A negative value means that a sector's share of total employment has fallen, even if it has grown in absolute terms. Finally, the size of the circles represents the sectors' initial contributions to total employment. Since at least two-thirds of Zambians are farmers, agriculture has the largest circle.

³ Shift-share analysis requires information on sectoral GDP and employment. Our data sources are discussed in the appendix, where Tables A.1 and A.2 contain the information needed to replicate our results.

Figure 2.1 Structural change, 1991–2010



Source: Authors' calculations using data from Zambia, CSO (1993, 2004, 2011a, 2012c) and IMF (1999).

Notes: AGR is agriculture; MIN is mining; MAN is manufacturing; UTL is utilities (electricity, gas, and water); CON is construction; TRD is trade services; HOT is hotels and catering; TRC is transport and communication; FBS is finance, business, and real estate; GOV is government (administration, health, and education); and CGS is community and government services.

The figure shows the pendulum effect that agriculture has had on the Zambian economy. Farm employment, especially in low-value subsistence agriculture, is so important for national employment that it dominates structural change. During the structural reforms of the 1990s, there was a shift into agricultural employment as the nonfarm economy contracted. This reduced national labor productivity because all nonfarm sectors generated more value-added per worker than agriculture. Nonfarm employment fell in less productive sectors such as trade and elementary services, as well as in high-productivity sectors such as mining and financial services. Only government services and hotels and catering (essentially tourism) recorded small increases in employment shares.

The pendulum swung back during the 2000s, with a decline in agricultural employment following the recovery of the nonfarm economy. The largest increase in employment share was in trade services. Since trade's productivity level is higher than agriculture's, the move from farming to trading represented positive structural change. Nevertheless, productivity is lower in the trade sector than in the rest of the nonfarm economy, and so the increase in trade employment accounted for only about a quarter of the total gain from structural change. Most of the gain came from small increases in employment shares in higher-value construction, finance, and communication. Finally, mining and manufacturing's contribution to national employment stagnated during the 2000s, even though GDP was rising in these sectors. This explains why, unlike growth in services, industrial growth during the 2000s was driven almost entirely by improvements in within-sector productivity rather than structural change (see Table 2.2).

The shift-share analysis suggests that half of the economic growth during the 2000s was due to positive structural change, whereas the economic decline of the 1990s was almost entirely due to negative structural change. The final column in Table 2.2 reports results for the full 1991–2010 period. There was a small net gain in GDP per worker, of US\$205. This was due to strong within-sector productivity gains in industry and services, with agricultural productivity declining. However, key negative structural changes of the 1990s were not reversed by the end of the 2000s. This was mainly due to the large decline in the importance of employment in mining and manufacturing, which were originally the sectors with the highest value-added per worker. In other words, while the Zambian economic recovery was underpinned by positive structural change, it was not driven by a replication of the pre-crisis-era economic structure.

Demographic and Labor Market Dynamics

The above growth and employment patterns need to be situated within Zambia's broader demographic and labor market dynamics. If the share of the population who are employed remains constant, then GDP per capita and GDP per worker move in unison. If employment rates change, then welfare and productivity measures diverge. This was the case in Zambia, where GDP per capita grew at a rate of 4.1 percent per year during 2002–2010, whereas GDP per worker grew by only 3.6 percent per year. This means that employment grew faster than the population during this period. Conversely, GDP per capita declined more slowly than GDP per worker during 1991–2002 due to falling employment rates. Demographic and labor market changes therefore influenced the relationship between national productivity and welfare.

Table 2.3 contains employment profiles for 1991, 2002, and 2010. Perhaps the most important demographic change in Zambia was the level of urbanization. The urban population share fell from 46 to 35 percent when the nonfarm economy contracted during 1991–2002, and this trend was most pronounced in Copperbelt Province, where most of Zambia's copper is mined (see Potts 2005). Although some migrants from urban areas became agricultural workers, adding to the declining share of nonfarm employment, there was also a sharp drop in rural participation rates, suggesting that many migrants opted out of the rural labor market. The decline in the urban unemployment rate also suggests that migrants were often those who were already unemployed in urban areas prior to the reforms. This would also explain why the drop in the urban employment share was smaller than the drop in the urban population share. Migrants appear to have treated family farms in rural areas as a safety net rather than an employment opportunity during the reform period. The large shift into agricultural employment reported earlier therefore hides an even larger de-urbanization process and the inability of the rural economy to absorb new migrants.

Zambia began urbanizing again in the course of the economic recovery during 2002–2010. Although the urban population in 2010 was still well below that of 1991, the urban employment share and the share of nonfarm jobs had both recouped about two-thirds of their previous losses. This was partly the result of a large increase in urban labor market participation, which unfortunately led to not only more urban job seekers but also higher urban unemployment rates. While the economic growth of the 2000s returned GDP per capita to pre-crisis levels, it did not imply a return to previous demographic structures. Many of the migrants who left urban areas during the reform period remained in rural areas in 2010, where unemployment rates had started to rise.

Table 2.3 Employment profiles, 1991, 2002, and 2010

Variable	1991	2002	2010
Population (1,000s)	7,896	10,785	12,913
Urban areas (%)	46.0	34.9	36.2
Adolescents, 12–17 years (%)	13.6	17.5	18.1
Youth, 18–34 years (%)	28.4	32.0	32.8
Participation rates (%)	60.5	48.4	53.4
Rural areas	71.6	50.8	55.8
Urban areas	47.9	44.2	49.4
Adolescents, 12–17 years	29.0	9.5	10.9
Youth, 18–34 years	62.2	56.8	63.9
Adults, 35+ years	78.4	65.1	71.2
Inactive adolescents in school (%)	57.4	81.9	94.7
Inactive youth in school (%)	16.4	36.3	61.1
Employed (1,000s)	2,362	3,520	4,385
Urban areas (%)	31.2	27.0	29.2
Nonfarm sectors (%)	31.6	28.3	32.3
Paid formal-sector workers (%)	21.6	12.2	15.6
Adolescents, 12–17 years (%)	7.1	3.8	4.0
Youth, 18–34 years (%)	43.9	47.9	48.7
Finished primary school (%)	33.8	36.4	42.7
Finished secondary school (%)	10.2	12.4	17.4
Unemployment rates (%)	21.8	9.4	15.0
Rural areas	14.5	2.0	7.1
Urban areas	34.1	24.9	29.5
Adolescents, 12–17 years	45.9	24.9	30.6
Youth, 18–34 years	25.7	13.9	21.1
Adults, 35+ years	11.9	2.9	5.6
Finished primary school	23.4	10.7	14.1
Finished secondary school	20.8	21.4	25.9
Share of total private consumption (%)	100	100	100
Poorest 50% of the population	6.9	15.4	9.1
Middle 40%	41.3	36.9	38.3
Richest 10%	51.7	47.7	52.6

Source: Authors' calculations using data from Zambia, CSO (1993, 2004, 2011a, 2012c).

Notes: "Inactive" excludes those who are working (employed) or looking for work (unemployed). Private consumption is based on the official basket of goods used to measure national poverty.

One of the population groups that benefitted the least during the reform and recovery periods was Zambia's youth—defined here as those aged 12 to 35 years.⁴ Youth participation rates fell during the reform period when adult participation rates were rising, and they did not increase by as much during the recovery. Part of this was a result of Zambia's free primary school program, which began in 2002 and greatly increased the share of youth who opted out of the labor market in favor of attending school. Nevertheless, youth unemployment rates remained very high and rose faster than unemployment rates for adults during the 2000s. Unemployment rates also increased for better-educated job seekers, suggesting that the economy had failed to create enough jobs to accommodate new school leavers, especially those with higher education. Clearly not all of the labor force participated in the economic recovery.

⁴ Zambia's own youth policy identifies 35 as the upper cut-off for this group.

3. SECTORAL DRIVERS OF SOCIAL CHANGE

Examining key developments within five major sectors of the economy elucidates why and how Zambia's pattern of growth and structural change led to growing social disparities among certain groups. The sectors below were chosen for a number of reasons. Mining, which is predominantly in the Copperbelt, continues to represent the main driver of Zambia's export revenues, while agriculture remains the sector from which a majority of the population derives their livelihoods. Manufacturing, which has been concentrated in Lusaka, collapsed during the reform period and contributed to large-scale unemployment. The sector's inability to fully recover during the 2000s is deserving of special attention. Finally, as noted above, trade, construction, and high-value services represented the main sources of positive structural change during the 2000s, and their expansion highlights a fundamental shift in the foundations of Zambia's economy.

Mining Remained an Enclave Sector

Zambia lost about a third of its mining jobs in the 1990s, prompting large-scale migration back to rural areas in the Copperbelt (Potts 2005). Despite the sector's impressive recovery in the 2000s, it failed to increase its share of total employment. While mining generated one-sixth of the increase in total GDP during 2002–2010, it accounted for only 1–2 percent of the new jobs that were created.⁵ Mining therefore remained an *enclave* sector, with weakening linkages to the broader economy. Mining was also one of the main sources of paid employment in 1991, and so its declining labor intensity constrained formal-sector job creation.

Zambia's state-owned mines were very inefficient at the start of the 1990s and were a large drain on the government budget (Thurlow and Wobst 2006). Although privatizing the mines was a cornerstone of the structural adjustment program, this reform did not start in earnest until after 2000. By this time, world copper prices were low and Zambian copper production had fallen from 430,000 tons in 1991 to 320,000 tons in 2002. This made it difficult to attract and retain foreign buyers until after 2003, when copper prices rose again. Privatization led to large inflows of foreign direct investment (FDI) that recapitalized the mines and allowed copper production to reach 690,000 tons in 2010—a level that surpassed the previous peak in the 1960s.

One reason mining growth did not produce many new jobs in the 2000s is that government subsidies in the 1980s created a form of protected overemployment. This artificially high labor intensity ended when the mines were privatized (Thurlow and Wobst 2006). Another reason for the low labor intensity of growth is that Zambia's mining unions prevented job creation in the 2000s by bargaining for higher wages for “insiders” rather than new jobs for “outsiders” (World Bank 2011). High labor costs partly explain why, despite privatization, Zambia has some of the world's least efficient copper mines. Both explanations are consistent with mining growth during the 2000s, which was driven by rising value-added per worker rather than employment.

Mining growth not only failed to create jobs but also did not generate much tax revenue for the government. To attract foreign investors when copper prices were low, Zambia had offered low tax rates and royalties as well as generous allowances for writing off investment costs (Otto et al. 2006). In 2010, when copper accounted for 85.9 percent of the value of exported goods, royalties accounted for only 2.6 percent of government revenues. In total, mining taxes were only 3–5 percent of export revenues in Zambia, compared to 25–40 percent in the rest of the world (World Bank 2011). The government was therefore missing out on revenues that might have been used to spread the benefits of mining growth to the broader economy.

⁵ Zambia's formal enterprise survey, the Quarterly Employment and Earnings Inquiry reports (see Zambia, CSO, 2010) that 21,000 paid mining jobs were created in 2002–2009, while the household surveys report only 9,000 new jobs in 2002–2010. Both surveys suggest that mining accounted for almost 60,000 jobs in total in 2010.

Finally, the main link between mining and the rest of the economy was not job creation or tax revenues, but rather the exchange rate. As world copper prices and mining exports increased during the 2000s, it caused the real exchange rate to appreciate. This made imported goods cheaper, especially for urban consumers, and constrained exports and job creation in agriculture and manufacturing.

Manufacturing Continued Its Decline

Zambia's manufacturing sector was one of the hardest hit during the reform period, and it struggled to recover afterward. Manufacturing accounted for 4.5 percent of the increase in national GDP per capita during 2002–2010, but only 1.3 percent of employment growth. This was still a major improvement over the 1990s, when most manufacturing contracted, particularly metals beneficiation. Although manufacturing GDP grew during the 2000s, it lagged far behind the rest of the economy, and its composition narrowed dramatically. By 2010, 70 percent of the sector's GDP was from food processing, up from 50 percent in 1991, while textiles and clothing had virtually collapsed.

Four factors explain much of manufacturing's poor performance. First, many state-owned enterprises could not compete after being privatized in the 1990s. Privatization affected a large share of manufacturing: almost a third of manufacturing jobs in 1991 were in state-owned enterprises, and this fell to 2 percent in 2010. Second, trade liberalization exposed domestic firms to foreign competition. Zambia's import tariff rates halved, from 19.7 to 9.7 percent, during 1991–2002 and again, to 4.4 percent, in 2010.⁶ Third, the large influx of FDI and foreign-owned firms into manufacturing did not generate productivity gains through horizontal spillovers, that is, technology transfers between firms, but rather through vertical linkages to sectors outside manufacturing, that is, through demand for raw inputs (Bwalya 2006). Even though foreign firms outcompeted local ones, they often strengthened manufacturing's linkages to other sectors. Finally, Zambia's real exchange rate appreciated in the mid-2000s due to rising copper prices. This lowered the cost of imports, particularly for manufactured goods.

The textiles and clothing sector provides a good example of how Zambian manufacturing evolved over two decades. In 1991, the sector was the largest employer within manufacturing and produced a range of products, including cotton, fabrics, and garments. Privatization and deregulation led to large inflows of FDI, and by 2010 multinational companies had come to dominate cotton growing and ginning in Zambia (Tschirley and Kabwe 2009). Although foreign companies displaced less-efficient local ones, their vertically linked outgrower schemes raised the productivity of smallholder cotton farmers and made Zambia one of Africa's larger and more competitive cotton producers. However, unlike in the 1980s, when cotton was supplied to local textile companies, most of Zambia's cotton was now exported. In fact, the local textiles industry had virtually ceased to exist by 2010, despite the government's efforts to establish export-processing zones (Eliassen 2012). This was largely the result of increased foreign competition. Some of Zambia's highest tariffs in 1991 were on textiles and clothing, but these had fallen by two-thirds by 2010. This led to a wave of cheap imports from Asia that local firms could not compete against. This was compounded by imported secondhand clothes donated to foreign charities and sold at low prices in Zambia (Hansen 2000). In the end, employment in the textiles sector fell from 25,000 in the 1980s to less than 2,500 in 2002 (Eliassen 2012). Declining employment and a move down the value chain meant that the textiles sector declined from 1.8 percent of Zambian GDP in 1991 to less than 0.3 percent in 2010.

In contrast, food processing was a success story for Zambia. For example, the country's largest meat processor, Zambeef, established a successful partnership with a foreign-owned supermarket chain, Shoprite, and is now itself expanding to other African countries (*Economist* 2013b). In this case, manufacturing was a beneficiary of the vertical linkages from upstream FDI. Wheat milling is another example of success. Wheat millers greatly increased their production of flour and bread, primarily for urban consumers (Mason et al. 2011). Behind wheat milling's initial success was trade liberalization,

⁶ Collection rates are import duties collected as a share of the value of imported goods. These are typically lower than statutory tariff rates due to collection inefficiencies and exemptions. Our trade and tariff estimates are calculated using Comtrade data for Zambia.

which lowered the price of imported wheat and reduced millers' production costs. However, this created tensions with local farmers, and the Zambia National Farming Union eventually convinced the MMD government to ban the import of wheat flour. These restrictions were subsequently removed and then reintroduced, reflecting the government's difficulty in balancing the interests of urban consumers, who represent a large share of votes, and commercial farmers. Nonetheless, by 2009 Zambia was self-sufficient throughout the wheat and bread supply chain. Unfortunately, however, these emergent food-processing firms were less labor intensive than either existing food processing or the declining textiles and clothing sector. Consequently, manufacturing as a whole contributed less to national job creation during the 2000s than it did to economic growth.

Agriculture Remained Stagnant

Agriculture is one of Zambia's most important sectors, not because of its contribution to national GDP, which was only 15.2 percent in 1991, but rather because at least two-thirds of Zambians live or work on farms. Most farmers are smallholders growing food crops and livestock for subsistence using traditional technologies (Thurlow et al. 2012). Agriculture's productivity was low in the 1990s and remained so even during the economic recovery. While agriculture accounted for half of job creation during 2002–2010, it accounted for only 4.2 percent of the increase in national GDP per capita.

A number of studies have considered the effect of structural adjustment policies on Zambian agriculture in the 1990s (see Resnick and Thurlow 2009). The main reform was the abolition of pan-territorial maize prices and urban food subsidies. Although this raised urban consumer prices, it also led to more appropriate crop land allocations, such as a switch from maize to cassava in the north of the country. This enhanced food security even though it did not raise agricultural productivity. Cotton farming was another success story, which, as mentioned above, benefitted from contract arrangements with foreign-owned cotton ginning firms. By the end of the 1990s, a quarter of a million smallholder farmers were growing cotton, and this reduced rural poverty, mainly in Eastern Province (Thurlow and Wobst 2006). Nevertheless, these pockets of success were unable to absorb the large influx of migrants as Zambia's population deurbanized. Overall, productivity remained low and rural poverty rates remained high and virtually unchanged during the 1990s and 2000s.

A number of factors explain agriculture's poor performance. First, most farming in Zambia is rainfed rather than irrigated. The sector was exposed to a series of severe droughts in the 2000s that undermined growth and investment and increased rural poverty (Thurlow, Diao, and Zhu 2012). Second, the prevalence of HIV/AIDS is extremely high in Zambia. Studies indicate that adult deaths reduced farm productivity and exacerbated the effects of droughts (Chapoto and Jayne 2008; Mason et al. 2010). Third, public fertilizer subsidies generated modest returns and even then only under fairly ideal agroecological conditions (Zhiying et al. 2009). Evidence also suggests that subsidies may have at times been allocated for political rather than economic reasons (Mason, Jayne, and van de Walle 2013). Fourth, the government established the Food Reserve Agency (FRA) in 1996, and this eventually became the dominant buyer of maize in Zambia. Evidence suggests that even though the FRA raised and stabilized prices it generated few benefits for small-scale farmers and may have hurt urban consumers (Mason and Myers 2013). Finally, even though public spending on agriculture rose during the 2000s, most of it was directed toward the FRA and fertilizer subsidies. Less funding was available for other investments, such as in research and extension (Thurlow et al. 2012).

Agriculture's stagnation was therefore in spite of large, albeit inefficient, investments in market price stabilization and improved farm inputs. Slow agricultural growth meant that poverty remained high in Zambia and became more concentrated among smallholder farmers (Diao, Hazell, and Thurlow 2010). Nevertheless, low-productivity agriculture remained a constant during this period, with most of the economic recovery and social changes occurring elsewhere.

Informal Trade Became the Dominant Nonfarm Employer

Trade was responsible for by far the largest increases in nonfarm employment during 2002–2010. Specifically, trade services accounted for 5.0 percent of the increase in GDP per capita during the 2000s but 19.6 percent of employment growth. A majority of the employment growth was specifically concentrated in informal trade, where 160,000 new jobs were created between 2002 and 2010.

In urban areas, informal trade is predominantly retail-based and engaged in by street hawkers and market vendors. Demographically, more than half of informal trade workers in urban areas are under the age of 35. Significantly, between 2002 and 2010 a third of these informal jobs were held by people who had completed secondary school. Since it is low paid, insecure, and often involves substandard labor conditions, employment in this sector is viewed more as a coping strategy than a route to a decent job. However, such trade does fill an important niche in that many of the informal retail markets are located within urban shanty compounds and thus provide easy access to a wide variety of goods in customizable sizes for the urban poor.

Economic liberalization in the 1990s contributed to the growth of informal trade in cities, particularly Lusaka, both by diminishing the number of jobs available in the formal sector and by removing controls on foreign exchange, imports, and prices, which reduced the barriers to entry into the sector (Hansen 2007). Increasingly, street vendors began establishing *tuntembas*, or makeshift plastic, wood, and cardboard stalls, along Lusaka's main streets. According to Hansen (2004), street vending reached "anarchic proportions" by the end of 1998. At the same time, the number of designated informal trade markets recognized by the Lusaka City Council grew from 36 to 57 between 1980 and 2000 (Nchito 2006). While a large variety of goods are found in the markets, *saluala*, or secondhand clothing, represent a major share of the merchandise sold by informal traders because, unlike some other African countries, Zambia does not place quotas on these imports or limit their distribution to solely charitable organizations (Hansen 2000).

Informal trade has demonstrated both negative and positive externalities on employment growth. On the one hand, during the 1990s the country's dwindling textile sector could not compete with the lower prices offered on secondhand goods, prompting a number of manufacturing firms to leave Zambia or restructure entirely. In response to demands from the Zambian Association of Manufacturing union, Chiluba's government attempted in 1998 to increase tariffs on imports of *saluala*, but this effort was met by large-scale resistance from street vendors and marketeers and was ultimately rescinded (Hansen 2000). On the other hand, informal trade creates linkages throughout the sector, as vendors often need to purchase food, stall materials, and other goods from each other.

Since the early 2000s, Zambian informal traders have faced a more challenging environment in at least two regards. First, some of the markets were upgraded to provide safer and cleaner stalls, sanitation facilities, and legalized access to electricity. Yet such upgrades required demolishing old structures and forcing many traders to either return to the streets or swell already dangerously overpopulated markets. Upon the completion of some of these new markets, traders found that the rents for stalls had increased beyond their means, allowing Chinese, Indian, and Lebanese traders to gain a foothold in the sector (Hansen 2007). Second, the MMD adopted a more stringent approach toward informal trade during Mwanawasa's tenure. For example, in mid-2002 there was a major effort by the Zambian police, paramilitary, and Lusaka City Council to clear vendors off the streets (Hansen 2004). Moreover, under Mwanawasa's "Keep Zambia Clean and Healthy" initiative, street vendors were targeted for littering, spreading cholera, creating traffic congestion, and deterring business investment. This initiative specifically involved adding more restrictive provisions to the Street Vending and Nuisances Act in order to fine anyone engaged in street vending or purchasing from vendors (*Times of Zambia* 2007).

Although not as large a source of employment as its informal counterpart, formal trade also provided a number of new jobs during the 2000s. In fact, the number of formal paid employees in the trade services sector nearly doubled between 2002 and 2010, from 51,000 to 101,000. By 2010, trade was Zambia's largest formal-sector employer outside the government. Driven by foreign investment, tourism,

and rising purchasing power among high-income locals, these formal jobs are primarily in retail trade, with some additional employment creation in hotels and restaurants.

Much of the retail trade boom has been concentrated in Lusaka's ten shopping malls, including the 72-store Levy Junction Mall that opened in late 2011. A characteristic feature of these malls is that they are located in Lusaka's low-density, more affluent neighborhoods (Nchito 2006) and they primarily house foreign retail chains. Although these foreign chains may have displaced indigenous traders or narrowed their profit margins, they have also in some cases created strong links to local agricultural and food suppliers. For example, as mentioned above, the South African-owned retailer Shoprite sources much of its stores' meat from the locally owned Zambeef (*Economist* 2013b). Yet formal-sector trade employment is not always synonymous with decent jobs, as evidenced by multiple strikes since 1999 at Shoprite chains across the country over low pay, lack of pensions, and the casualization of labor.

High-Value Services Benefited Mainly the Middle Class

During the 2000s, the largest contributors to growth were construction, transport and communication, and finance and business services, which collectively accounted for 56.2 percent of the increase in GDP per capita. However, these sectors generated only 14 percent of employment growth. Therefore, in contrast to trade, growth in these sectors was driven mainly by rising value-added per worker rather than an increase in the number of workers. Moreover, the demand for these services is largely linked to the growth in consumption by those at the higher end of the income distribution, which, as seen in Table 2.3, increased by 6 percent for the richest decile between 2002 and 2010. By contrast, poorer Zambians failed to significantly benefit from either the services generated by these sectors or from the jobs that they created.

Specifically, most of the new jobs in the construction sector were not for casual workers but for paid, formal employees. While only 5 percent of construction jobs in 2002 were held by paid, formal employees, this increased to approximately 33 percent by 2010. Most of Zambia's construction activities have involved the rehabilitation of major roads; new office blocks and shopping malls in Lusaka; mining developments in the Copperbelt; and suburban residential housing initiatives such as Lusaka Heights, a 3,700-unit high-end housing development (see Phillips 2007). Notably, the construction of housing for low-income groups in rapidly growing urban areas has been much less expansive. For example, in Lusaka approximately 70 percent of the population continues to live in unplanned shanty settlements (Nchito 2007). Most of these settlements lack proper infrastructure and key services such as internal plumbing, which often forces communities to share the same latrines and communal water taps (Taylor 2006).

The capital-intensive nature of the communications and financial sectors and their need for highly skilled workers provide the primary explanation for why these sectors did not represent a major source of employment creation. Much of the growth in the communications sector was due to the expanding availability of mobile phones, which are serviced by three main companies (UNCTAD 2011). Between 2000 and 2010, the number of mobile phone subscribers increased from 98,000 to more than 5 million (World Bank 2013), benefitting a large number of Zambians. While the number of fixed broadband Internet subscribers also increased, from 21 to more than 10,000 people (World Bank 2013), the fees lie far beyond the reach of much of the population.

In the financial services sector, bank lending increased by almost threefold between 2004 and 2007, and the establishment of a credit bureau in 2008 has enabled banks to assess borrowers' creditworthiness and reduce the costs of borrowing that were previously inflated by the perceived high risk of default (Baker 2008). The financial services sector is growing in at least two areas. One is the provision of housing mortgages for the small number of Zambians who are able to afford home ownership (Phillips 2007). The second is the gradual rise in mobile banking, which allows payments to be made to an individual's mobile phone, even if the owner does not possess a bank account (see Adongo 2007). Overall, by 2009, 37.3 percent of all Zambians used some type of financial service, with Lusaka and the Copperbelt provinces accounting for 60 percent of total banking customers in the country (Finscope 2010).

4. THE POLITICAL IMPLICATIONS OF UNEVEN TRANSFORMATION

The implications of the economic and social dynamics described above ultimately filtered into the political sphere. During successive electoral campaigns in 2006, 2008, and 2011, Sata effectively tapped into public disgruntlement with the lack of broad-based development and other aspects of Zambia's transformation in the 2000s.⁷ He overwhelmingly focused on urban areas, including Lusaka and cities such as Ndola and Kitwe in the Copperbelt. Given the resurgence of Zambia's urbanization, the country's major cities contained a large, concentrated source of potential votes.

Along with the unemployed, street vendors and other participants in the urban informal trade sector represented the main focus of his campaigns. Even though structural change had resulted in those in the informal trade sector gaining marginally higher wages than Zambians concentrated in rural areas, the MMD government had not necessarily been actively responsible for promoting this positive structural change. As discussed above, the MMD even at times actively harassed those involved in informal trade and attempted to implement legal restrictions on their activities.

Instead, as emphasized in Section 3, informal trade essentially became a coping strategy both for those exiting agriculture and for those who lost jobs in the formal sector due to the collapse of manufacturing. In other words, while migrants to urban areas were better off than they might have been if they had stayed in agriculture, those born in urban areas were worse off than they might have been due to the failure of mining, manufacturing, and high-value services to generate much employment. The urban milieu undoubtedly reinforced these disparities, as informal workers' living and working conditions were starkly contrasted against those of the increasingly visible symbols of Zambia's small but burgeoning middle and upper classes (see Larmer and Fraser 2007). As an indicator of these inequalities, Lusaka's Gini coefficient was estimated at 0.66 in 2006 (UN-Habitat 2010).

Based on the *Zambian Governance Survey*, Table 4.1 provides one indication of this difference by examining the opinions of both formally and informally employed Zambians in urban areas regarding the status of economic conditions in their country over the 12 months preceding the 2008 presidential elections.⁸ Urban informal workers were less sanguine than their formal counterparts about economic conditions, emphasizing the disjuncture between macroeconomic developments and individual perceptions of improvements.

Table 4.1 Assessments of the economy by employment status, 2008

In the past 12 months, how would you describe the economic conditions in this country?	Share agreeing with assessment (%)	
	Urban formal workers	Urban informal workers
Good or fairly good	59.8	49.2
Bad or very bad	37.7	44.7
Don't know	2.5	6.1
Number of observations	888	934

Source: Authors' calculations using the 2008 Governance Survey (Zambia, CSO, 2008).

Notes: "Formal" refers to those working for the central or local government, parastatals, the private sector, nongovernmental organizations, international organizations, or embassies or those who are themselves employers. "Informal" refers to those who are self-employed, subsistence farmers, piece workers, or household employees.

⁷ Although Sata also competed in the 2001 elections, he established the PF only 59 days before election day and therefore engaged in very little campaigning.

⁸ The 2008 *Zambian Governance Survey* was commissioned under the aegis of the country's Fifth National Development Plan (FNDP), for 2006–2010. The survey aimed to assess how well Zambians understood governance processes and institutions as well as to create a benchmark dataset for future analyses of governance progress within the country. The survey covered approximately 4,000 households in rural and urban areas in all nine provinces.

Within urban areas, Sata explicitly targeted the poor by opening and closing his campaigns in Lusaka's informal markets and shanty compounds (see Larmer and Fraser 2007; Kalaluka and Noyoo 2008). His policies aimed to address the major concerns of the urban poor. A survey in the shanty compounds revealed that foremost among these concerns were insufficient job opportunities, low wages, and the high price of basic goods (World Bank 2007). Specifically, the PF's slogan was "Lower taxes, more jobs, more money in your pockets." Even outside election years, Sata criticized the electricity outages and lack of clean water faced by the poor (*Post* 2005), and in 2007 he led a mass procession in Lusaka to denounce a proposal from the International Monetary Fund to increase value-added taxes on food and agricultural products (Larmer and Fraser 2007), which comprise a large share of the urban poor's daily consumption basket.

Furthermore, Sata condemned the MMD's harassment of those in the informal sector by emphasizing that the former ruling party had failed to provide adequate jobs for this constituency: "You can't force them [vendors] out of the streets... If you crack down on them [vendors], where are you going to take them? What I'm saying is, if you fail to provide for them, don't bring punitive measures against them" (cited in Resnick 2013, 78). Similarly, he denounced the MMD's allocation of upgraded market stalls to foreign traders, an issue of considerable contention among marketers (see Larmer and Fraser 2007).

Given that the informal sector has traditionally included a large share of young people, many youth were attracted to Sata's promises of more jobs. However, he made this appeal even more explicit in 2011 by using a rap song called *Donchi Kubeba* ("Don't Tell") by a popular local artist named Dandy Krazy. The song's message urged Zambians to accept campaign handouts from the MMD but to refuse to say which party they would actually support in the elections. Significantly, there were 1.2 million new registered voters in 2011, 54 percent of whom were between the ages of 18 and 35. The largest shares of these new youth voters were in the Copperbelt and Lusaka, highlighting that it was especially *urban* youth who were mobilized in the last elections (Nyimbili 2012).

Another important component of Sata's message was a focus on the way the mining sector had been managed. He denounced the low levels of tax paid by multinationals operating in the mining sector: "Zambians are paying high taxes while the mines pay little tax. This will change when we [the PF] come to power because the mines must also pay tax" (cited in Secombe 2006, 7). Specifically, he vowed to implement a 25 percent windfall tax on mining revenues if elected to office and promised to invest the additional revenues in the social service sector.

Given his urban focus, the PF did not focus significantly on the agricultural sector. The PF's former spokesperson, Given Lubinda, noted, "We talk about lower taxes, we talk about jobs for people. Now, that appeals to the people in the urban areas because they're the ones who are looking for jobs, they're the ones whose incomes are overtaxed. So, we appeal to them more than to rural dwellers. We haven't articulated issues of agriculture that strongly" (cited in Resnick 2013, 77). In fact, some of the promises Sata made in urban areas, such as reducing the price of food, were contrary to the interests of rural producers (see Cheeseman and Hinfelaar 2010). Instead, Sata often focused on ethno-linguistic appeals in rural areas, especially in Northern and Luapula Provinces, where many of his Bemba co-ethnics reside (see Resnick 2013).

The MMD adopted a different strategy by focusing heavily on rural areas and courting higher-income urban Zambians, the latter of whom had benefited the most from the country's structural change. Specifically, the MMD's recent manifestoes ranked agriculture as the number one priority for the country's development agenda (Resnick 2013). Despite the relatively poor performance of agriculture as a sector in generating structural change, the MMD's rural campaigns emphasized the fertilizer subsidy program and the role played by the FRA, aimed at reminding rural voters of the individual, material benefits they had accrued during the party's tenure.⁹ In 2008, for example, the MMD's Rupiah Banda promised on the campaign trail to expand the share of fertilizer that it subsidized from 60 to 75 percent

⁹ These programs, in various guises, had been running in Zambia under the MMD since 1996 (see Mason, Jayne, and van de Walle 2013).

(Miti 2008). The 2011 election campaign in particular coincided with a bumper harvest for maize, which the MMD attributed to the subsidy program (Redvers 2011).

Moreover, in urban areas, Banda launched both his 2008 and 2011 campaigns from Lusaka's plush InterContinental Hotel, presenting a sharp contrast to Sata's focus on shanty compounds. With the slogan "Security, stability, and prosperity," Banda tried to convince the members of the new middle class that their standard of living could be threatened if Sata became president (*Economist* 2011; Redvers 2011). In addition, he highlighted the MMD's investments in roads, schools, and hospitals while also opposing a windfall tax on mining, claiming it would deter foreign investment and undermine job growth (Commonwealth Secretariat 2011).

Collectively, the impact of these different strategies was evident in each successive election. Sata's highest share of votes continuously came from the two most urbanized regions, increasing from 58 to 63 percent in Lusaka's urban constituencies between 2006 and 2011 and from 51 to 68 percent in Copperbelt Province during the same period.¹⁰ The PF retained an especially strong foothold in high-density shanty settlements. While the MMD gained support from the affluent and new middle classes in urban centers (Cheeseman and Hinfelaar 2008), the size of this constituency meant that its overall voting power vis-à-vis the urban poor was much smaller.

In rural areas, the MMD continued to obtain the highest share of votes in many of the rest of the country's provinces. Two exceptions were the Bembaphone heartlands of Northern and Luapula Provinces, where Sata won with 64 and 73 percent of the vote, respectively, in 2011. During those elections, Sata finally defeated Banda by obtaining 42 percent of the national vote.¹¹ His victory was significant not only because it ended two decades of MMD rule but also because eight other opposition parties competed, increasing the likelihood that they would split the vote to the MMD's benefit. The PF's successful outcome therefore revealed how much the party's message resonated with those who, despite Zambia's economic resurgence during the 2000s, perceived little tangible improvement to their own living conditions.

¹⁰ Lusaka Province contains 12 constituencies but only 7 of these are considered urban: Chawama, Kabwata, Kanyama, Lusaka Central, Mandevu, Matero, and Munali.

¹¹ Election results are available from the Electoral Commission of Zambia: www.elections.org.zm.

5. CONCLUSIONS

Despite journalistic accounts highlighting Zambia's recent economic boom (for example, *Economist* 2013a), there have been no in-depth and systematic empirical analyses of the country's growth experience over the last decade. This paper therefore offers an important contribution by using shift-share analysis and multiple rounds of household survey data from 1991 until 2010 to examine the main sources of Zambia's economic and employment growth. By delving into more detailed discussions of five key sectors of the economy, we were further able to identify which sectors have contributed to structural change and why.

Overall, we found that Zambia's unprecedented levels of GDP growth over the last decade have indeed been accompanied by positive structural change driven by certain sectors. Agriculture and manufacturing remained stagnant, and mining's capital-intensive nature prevented it from generating much employment. Instead, a large share of employment growth occurred in trade, with much of it occurring in the informal sector and a smaller share in the formal sector as a consequence of the country's retail boom. A larger proportion of economic growth, but smaller share of employment generation, emerged from construction and high-value services, where value-added per worker is much higher. Importantly, the nature of this structural change did not translate into large-scale social transformation, as many newly created jobs in trade are low paid and often insecure. Furthermore, both the drivers and beneficiaries of construction and services tend to be higher-income groups in urban areas whose consumption share has increased since the 1990s. By the end of the 2000s, this trajectory had contributed to a Zambia characterized by three main groups: the rural poor, the urban poor, and a rising middle class that had reaped a majority of the benefits from macroeconomic growth. As shown by the election of Sata, these economic and social dynamics ultimately filtered into the political sphere.

Admittedly, the focus of this paper has been predominantly on the short term, and the impact of recent government policies on the potential for even greater social transformation remains unclear. For example, the higher investments in primary education initiated by the MMD in 2002 and expenditures by the PF government in universities could generate positive rewards if they are ultimately accompanied by the creation of skill-appropriate jobs for a well-educated cohort of Zambians. Moreover, the PF government discontinued the fertilizer subsidy program in May 2013 and decided to stop subsidizing the price of maize via the FRA (EIU 2013). The previous year, the government announced the establishment of industrial cluster zones aimed at increasing the value-added of agricultural products. These policies could promote further linkages with manufacturing, but it is not obvious whether they will stimulate agricultural production. Although he did not apply the 25 percent windfall tax on mining that he campaigned for, Sata did increase the tax rate on mining royalties for copper from 3 to 6 percent, with new revenues invested in pensions, public welfare assistance, and cash transfers (see OECD 2013). The sustainability of these higher royalty taxes would be threatened by a rise in production costs in the mining sector or a decline in global prices for copper.

Notwithstanding these uncertainties, the main findings from our paper indicate that the Zambian experience is not an anomaly but rather an instructive case study for many other African countries. Much of the region is characterized by stagnant agricultural production, insignificant levels of indigenous manufacturing, the predominance of informal-sector employment, and a small but burgeoning services sector. These factors are complicated by rapid urbanization, a youth bulge, a rising middle class, and political parties eager to capitalize on citizens' grievances in the region's growing number of democracies. Undoubtedly then, reconciling positive structural change with large-scale transformation will remain a major economic, social, and political concern not only for Zambia but for much of Africa over the foreseeable future.

APPENDIX: DATA SOURCES

Total GDP for 28 sectors for 1994–2010 was taken from the Central Statistical Office (Zambia, CSO 2011c). These figures were measured in constant 1994 prices—the last year when national accounts were rebased. Total GDP for 11 sectors for 1990–1993 was taken from the IMF (1999), which reconciled these estimates with the 1994 base-year estimates. GDP for six manufacturing subsectors was estimated for 1990–1993 using the index of industrial production (IMF 1999). All values were converted to 2002 US dollars using GDP deflators, exchange rates, and purchasing power conversion factors from the World Bank (2013).

The main concern about Zambian GDP estimates is the long delay in rebasing national accounts. It is possible that by 2010, national accounts no longer accurately reflected the level and structure of GDP. Of particular concern is the nonfarm informal sector, which employment data suggests has grown but which is difficult to capture without an economic census or large-sample firm surveys. Trade services GDP, for example, might be underestimated, implying that value-added per worker was higher in 2010 than the GDP time series suggests. Less concerning are agriculture and the formal sector, which were tracked using annual surveys and business registers.

Employment estimates were taken from censuses and surveys conducted by the Central Statistical Office. We compiled an employment time series for 16 sectors using the Population and Housing Censuses (1990, 2000, and 2010), Priority Surveys (PS) (1991 and 1993), Living Conditions Monitoring Surveys (LCMS) (1996, 1998, 2002, 2004, 2006, and 2010) and Labor Force Surveys (LFS) (1986, 2005, and 2008) (see Zambia, CSO 1993, 1994a, 1994b, 1997, 1999, 2003, 2004, 2005, 2007, 2011a, 2011b, 2012a, 2012b). Table A.1 reports total employment by sector from these data sources. Additional formal employment estimates are from the Quarterly Employment and Earnings Inquiry.

Table A.1 Total employment by sector, 1986–2010

Year and source	Employed (1,000s)	Share of total employment by sector (%)								
		AGR	MIN	MAN	UTL	CON	TRH	TRC	FBS	CGS
1990 C	1,858	68.4	3.3	5.1	0.6	1.9	3.8	2.9	2.0	12.0
2000 C	2,686	75.7	1.4	2.9	0.4	1.4	7.2	2.0	1.1	8.0
2010 C	3,704	66.5	1.9	3.6	0.4	3.0	9.9	4.2	0.5	10.0
1991 PS	2,519	65.4	1.9	4.3	0.9	1.9	10.8	2.9	1.8	10.1
1993 PS	2,813	73.6	2.5	3.7	0.4	1.0	8.5	2.2	1.4	6.7
1996 LCMS	3,371	67.1	1.8	5.1	0.4	1.1	12.1	1.7	1.4	9.3
1998 LCMS	3,526	70.4	1.6	3.8	0.2	0.9	11.1	2.0	1.3	8.6
2002 LCMS	3,520	71.7	1.4	3.5	0.3	1.3	9.6	1.6	1.5	9.1
2004 LCMS	3,910	69.5	1.6	3.7	0.5	1.5	10.9	2.1	1.3	9.1
2006 LCMS	4,224	71.0	1.6	3.8	0.4	1.3	10.0	2.0	2.0	7.9
2010 LCMS	4,385	67.7	1.3	3.0	0.4	1.8	11.9	2.1	2.4	9.4
1986 LFS	2,506	69.7	1.9	4.3	0.4	1.9	6.9	2.9	1.8	10.2
2005 LFS	4,130	72.2	1.4	4.0	0.4	1.4	10.5	2.1	1.0	7.0
2008 LFS	4,607	71.3	2.0	3.5	0.3	1.7	10.1	2.1	0.6	8.4

Source: Authors' estimates using survey and census data from Zambia, CSO (1993, 1994a, 1994b, 1997, 1999, 2003, 2004, 2005, 2007, 2011a, 2011b, 2012a, 2012b).

Notes: C is Population and Housing Census; PS is Priority Survey; LCMS is Living Conditions Monitoring Survey; LFS is Labor Force Survey; AGR is agriculture; MIN is mining; MAN is manufacturing; UTL is utilities (electricity, gas, and water); CON is construction; TRH is trade, hotels, and catering; TRC is transport and communication; FBS is finance, business, and real estate; and CGS is community and government services.

The population censuses underestimated total employment compared to the surveys, and the 1990 census underreported informal trade, possibly because a large number of workers did not report their sector of employment and because labor market questions are less detailed in censuses. We therefore used the 1991 PS and the 2002 and 2010 LCMS. Total and sectoral employment trends from these surveys are consistent with the LFS, which are designed to capture employment data but whose timing was not ideal for studying the 1990s and 2000s. Table A.2 reports value-added per worker based on the GDP and survey data.

Table A.2 Total value-added per worker by sector, 1991–2010

Year	Average annual gross domestic product per worker (2002 US\$ PPP)									
	TOT	AGR	MIN	MAN	UTL	CON	TRH	TRC	FBS	CGS
1991	2,879	671	30,418	7,183	10,457	12,767	4,922	6,079	15,686	2,244
1996	2,032	591	15,619	4,503	15,745	8,814	3,580	7,708	15,586	1,936
1998	1,978	517	12,594	6,144	28,202	12,037	4,024	6,762	19,897	1,963
2002	2,311	545	14,177	7,911	24,679	12,040	5,590	9,496	22,374	2,166
2004	2,343	554	13,429	7,524	14,204	13,921	4,986	7,455	25,231	1,990
2006	2,457	510	14,075	7,309	18,995	20,701	5,367	10,031	15,716	2,560
2010	3,056	607	24,155	9,936	20,653	20,929	4,891	15,715	15,559	2,991

Source: Authors' estimates using national accounts, survey and census data from Zambia, CSO (1993, 1997, 1999, 2004, 2005, 2011b, 2011c, 2012a).

Notes: PPP is purchasing power parity; TOT is all sectors; AGR is agriculture; MIN is mining; MAN is manufacturing; UTL is utilities (electricity, gas, and water); CON is construction; TRH is trade, hotels, and catering; TRC is transport and communication; FBS is finance, business, and real estate; and CGS is community and government services.

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