Working Poverty In Michigan, 1998 and 2007: 
The Roles of Transfers, Labor Market, and Demographic Characteristics

Udaya R. Wagle, Western Michigan University

This paper is available online at the National Poverty Center Working Paper Series index at: 
http://www.npc.umich.edu/publications/working_papers/

Any opinions, findings, conclusions, or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the view of the National Poverty Center or any sponsoring agency.
Abstract: Despite increasing research attention in the recent past, the scale of working poverty and its structures are not fully known. This paper examines working poverty between 1998 and 2007 in the financially struggling state of Michigan offering great policy significance for the entire United States. Findings suggest that working families with low-wage jobs are the hardest hit by the current economic changes even with increasing availability of means-tested public transfers. A largely stable labor market attachment of the working poor indicates that higher minimum wages would hold the labor market accountable to reduce working poverty and free up policy resources to help others in more dire need. An increasingly sporadic concentration of the poverty experience among working families suggests that working poverty can affect a broad range of population.

Keywords: Working families; Poverty; Public transfers, Labor Market; Michigan

JEL: D6, I3, J3, O1

1. Introduction

“In the Key West, I earned $1,039 in one month and spent $517 on food, gas, toiletries, laundry, phone, and utilities. Rent was the deal breaker. If I had remained in my $500 efficiency, I would have been able to pay the rent and have $22 left over (which is still $78 less than the cash I had in my pocket at the start of the month). This in itself would have been a dicey situation if I had attempted to continue for a few more months, because sooner or later I would have had to spend something on medical and dental care or drugs other than ibuprofen.” (Ehrenreich 2001: 197)

The above quote is from a book written by a biologist after exploring the world of less-skilled, low-wage workers firsthand so that the hardship and predicament facing them could be brought into wider attention. One can question the validity of this exploratory experiment since the highly

---

1 The author acknowledges a grant from the Upjohn Institute for Employment Research and is thankful for the valuable comments from Bob Haveman, Christopher O’Leary, Tim Smeeding, Stephen Woodbury, and participants at the seminars and forums at Institute for Research on Poverty (University of Wisconsin Madison), Upjohn Institute for employment Research, and McCormack Graduate School of Policy Studies (University of Massachusetts Boston).
educated professional woman may not have been able to fully replicate the life of a typical less-skilled, low-wage worker. Her income would not even make her poor, for example, using the official poverty line of $8,480 applicable to a single person in 1998 (US Census Bureau 2008). But this story capturing the experience around the turn of the 20th century invariably applies today as the labor market conditions and lifestyle choices facing these workers have not substantively changed.

Historically, the American belief has been that ‘work pays enough,’ with those holding full time jobs expected to be non-poor. But lately, there is a growing realization that work has not always paid enough as people have fallen in poverty despite working full time year round in stable jobs (Glennerster 2002). As the above account and those included in Newman (1999, 2006), Shipler (2004), Shulman (2003), Zuberi (2006), and others demonstrate, the issue of ‘working poverty’—poverty among individuals or families with working adults—is real and a growing concern in modern America. At the typical minimum wage of under $6 in 2007, for example, a full time year round worker would earn less than $12,000, barely enough to exceed the official poverty line income of $11,000 for single person but well short of over $14,000 needed to support one additional child. At the federal minimum wage, both adults would have to work full time year round to be non-poor for a family of four, a scenario not likely when children are present.

The government minimum wages set the floor so that no one can fall below. This, together with the expectation that wages rise with experience and skills, explains why typical labor market earnings run much higher. According to the data from the US Department of Labor (2008b), for example, the median hourly wage for non-farm employment was $15 in 2007, with those at the 90th percentile earning over $36 and those at the 10th percentile earning less than $8. Assuming two adults working full time year round, the wage at the 10th percentile may enable a family of four to

---

2 The federal minimum wage increased to $5.85 in July 24, 2007, after remaining $5.15 for 10 years. While a majority of the states have minimum wages of their own running higher than the federal minimum, the difference does not typically exceed one dollar. See US Department of Labor (2008a) for details.
earn income greater than the official poverty line. Poverty is highly likely, however, when two adults cannot work full time year round, when one adult has to support a family of three or more, or when the wages fall below the 10th percentile.

These often realistic scenarios lead to increasing concerns of working poverty. Many less-skilled and low-wage workers have also experienced stagnant real wages during the past few decades increasing their likelihood of falling in poverty (Borjas 2006; Hall 2006). Equally important is the fact that the official poverty lines are widely viewed as highly insufficient to maintain a minimally acceptable living standard. In fact, what Ehrenreich (2001) experienced in the late 1990s characterizes the hardship resulting from incomes slightly above the poverty line. Many people in similar situations have children or entire families to support, making them less likely to hold full time jobs and more likely to remain poor.

Using data from the Current Population Survey, this paper examines working poverty and its structure between 1998 and 2007 in Michigan. With the assumption that families with at least one full time worker—‘working families’—would normally be able to avoid poverty, I investigate how this population has fared over time and what roles the means-tested transfer has played to lift them out of poverty. Next section surveys the existing research on working poverty. Section three discusses the context of labor market and poverty in Michigan and develops questions and hypotheses. Data and operational issues are discussed in section four. The following three sections report the magnitudes of poverty using various poverty thresholds and identify the roles of transfers and labor market attachment. Section eight identifies the key demographic profiles of the working poor between 1998 and 2007 and the final section concludes.

2. Factors Affecting Working Poverty

The financial hardship of families with stable labor market attachment may rise or fall with business cycles. The expanded labor demand suppressed unemployment and helped increase earnings for all
workers during the economic boom of the 1990s. The current economic downturn, in contrast, has contracted labor demand, increasing unemployment and flattening earnings especially for low-wage workers. A greater attention to working poverty in the post 1990s partly reflects this cyclical nature of the economy with profound implications for low-wage workers.

Explaining changes in working poverty involves more than business cycles, however. As the Conference Board (Barrington 2000) showed, for example, between two and three percent of the full time year round workers remained poor throughout much of the 1970s, 1980s, and 1990s, the period with enormously changing macroeconomic performance. The fact that the incidence of working poverty trended upwards during the major economic expansion of the 1990s suggests that the low wage workers did not necessarily share the benefits of economic growth (Barrington 2000). This is also consistent with the statistics reported by the US Department of Labor (2000, 2007) exhibiting that poverty among population in families with members in the labor force for at least 27 weeks remained between five and six percent during 1995 and 2005.

Labor market factors such as inequality of earnings, technology, and labor force composition play crucial roles in determining the earnings of the low-wage workers and their poverty status (Blank, Danziger, and Schoeni 2006). The US economy has undergone unprecedented deindustrialization during the past four decades with cities and states trying to put their manufacturing infrastructures behind. In the present era, industries are reinventing and adapting to advanced technology. The result has been massive downsizing with emphasis on a productive and skilled workforce. The gulf between productivity of skilled and unskilled or semiskilled workers has widened, increasing the skills-premium and fueling disparity in wages (Acemoglu 2002; Cormier and Craypo 2000; Danziger and Gottschalk 1995; Galbraith 1998). Not only have the less-skilled workers experienced flattening real wages (Hall 2006), they have also seen a bleak prospect for reemployment or job mobility (Blank, Card, and Robins 1999).
Changes have also occurred in the supply side of labor with the labor force becoming more diverse. The labor force participation of women has expanded due to the economic expansion of the 1990s, coupled by changes in the welfare provision with tax credits and more stringent work requirements (Blank and Shierholz 2006; Danziger, Corcoran, Danziger, and Heflin 2000; Meyer and Rosenbaum 2001). Immigration especially with a large Hispanic population has diversified the low-wage labor force by race/ethnicity and nativity as well as by education, age, presence of children, and family composition (Blank et al. 2006; Borjas 2006). A more socio-demographically diverse workforce puts tremendous pressure on the low-wage market at a time when the economy is facing deindustrialization and transformation with a highly segmented labor market disallowing mobility (Doeringer and Piore 1971).

Public policies constitute another factor affecting working poverty. The past two decades have seen falling real minimum wages together with major welfare reform underscoring work and expanding means-tested supports (Blank et al. 2006; Hassett and Moore 2006; Zuberi 2006). Welfare reform policies have been more stringent, gradually replacing the traditionally available general cash assistance with child care and other financial incentives (Blank et al. 1999). A policy shift has occurred from general assistance for the poor to support for the working poor so that people’s behavior can be reinforced toward valuing work and decreasing reliance on public support (Glennerster 2002; Sawhill 2003). The welfare reform has thrown out many welfare recipients into the labor market without adequate safeguards, thus increasing the size of the working poor. Despite occasional revisions, real minimum wages have continuously fallen since the 1970s, making it more difficult for low-wage workers to maintain families without working multiple jobs or without limiting parental involvement in raising and educating children (Newman and Chin 2003). Expansion of the Earned Income Tax Credit (EITC) has also helped promote work at a time with massive cutback in welfare support. Other tax policies such as child tax credit have supported
families with children regardless of earnings whereas increases in state and local taxes have made the tax system less progressive potentially hurting the working poor (Hasset and Moore 2006). Programs such as state sponsored health insurance, School Lunch, and Food Stamps have also helped low income families regardless of work status.

3. The Context and Questions

No other state in the United States is more appropriate to examine working poverty than in Michigan. Historically, Michigan’s was one of the most vibrant economies with strong manufacturing sector led by its booming automotive industry. The overall per capita income in the state was higher than the average for the US up until the late 1990s, after which it began to lag increasingly behind. Recent years have brought enormous setback in its economic performance with stagnant and mostly negative income growth, thus widening the gulf with the US per capita income as shown in Figure 1.

(Figure 1)

The growth in real per capita income during the decade ending in 2007 averaged less than two percent in Michigan compared to 13 percent in the US (see Table 1). The state unemployment rate, which was less than that for the US in 1998, increased a whopping 85 percent by 2007 compared to the meager two percent increase in the US. The difference is enlarging with the unemployment rate in the state surpassing 8.5 percent by the summer of 2008, an absolutely unparalleled recent trend among states. The automobile industry has been at the front-burner of the current economic meltdown. While the declining manufacturing sector is a national phenomenon with the ever-increasing process of deindustrialization in the US, the magnitude of decline and its spillover effects have been daunting in Michigan. The manufacturing employment in the state shrank 33 percent during this decade alone, compared to 21 percent in the US. Inconsistent with the national trend, employment declined in almost all other sectors of the state except education and health services.
These economic and labor market changes have affected no other population group more adversely than those at the bottom stratum of skills and earnings. No doubt, rising unemployment is a growing concern in Michigan as it detaches economically active people from the labor market and incomes necessary to escape poverty. For those with jobs, too, rampant unemployment causes downward pressure in wages and bleak prospect for job mobility especially in case of workers with fewer skills. An unprecedented shrinkage in relatively well-paying manufacturing jobs has already hit the toll in labor market earnings as these have been at best replaced by non-manufacturing, retail or service jobs. For those stuck with low human capital, declining manufacturing jobs are making it profoundly difficult to find jobs or jobs with decent pay. Result has been detrimental to the overall earning prospect with a growing number of people employed and yet unable to make ends meet at a time when inflation and the overall cost of living are skyrocketing.

In this analysis, I expect to find rising poverty figures for the economically volatile year of 2007 compared to those for the relatively prosperous year of 1998. Given the restructuring in the labor market with adverse effects on job mobility, the magnitude of working poverty may have increased rapidly. How much poverty there is, however, depends on many factors including the measurement approach taken and income from public transfer. Headcount ratios often used in poverty measurement do not fully capture the intensity of poverty families are experiencing necessitating alternative measures such as poverty gap, defined as the average shortfall in income needed to escape poverty. Since working families have greater access to earned incomes and means-tested transfers designed to encourage work, I expect relatively lower poverty gap among them. Given the declining real wages for low-wage workers, however, the intensity of poverty may have also remained largely unchanged if not increased over time. Finally, I expect the means-tested transfers

---

3 While these years do not fully capture the pinnacle and nadir of the economic cycle, the points are highly divergent especially in the Michigan economy.
to make increasingly large contributions toward the incomes of working poor families.

Like every other state, the Michigan economy is constantly transitioning to knowledge-based service economy. This has meant state strategies to grow the professional sector including business and especially educational and health services, requiring a workforce with advanced skills and technological knowhow (Glazer and Grimes 2008). Consequently, its 10 percent projected growth in the professional jobs seems more than adequate to recoup the major loss in manufacturing jobs by 2014 (MDLEG 2008).

Yet, whether or not these high growth industries help reduce working poverty remains unclear. While these industries requiring greater skills and education are expected to reduce poverty level wages, their actual impact on reducing poverty may not be as large. More of the impact may occur due to the changing individual and family characteristics shaping today’s workforce. Research supports that demographic characteristics such as age, race, family composition, and education are related to poverty (Danziger and Gottschalk 2005; Gleicher and Stevens 2005; Iceland 2003; Meyer and Rosenbaum 2001; Wagle 2008c; Wilson 1996). Given the focus on the families with stable labor market attachment, this analysis identifies how these characteristics and employment patterns interact with working poverty in Michigan.

4. Data and Operational Issues
This analysis uses data from the 1998 and 2007 March Supplements of the CPS, focusing specifically on their Michigan subsamples. In the past, poverty analyses have been conducted at household, family, or individual levels. Yet, individual level analyses are not typically accurate since individuals within families or households tend to pool resources together. Although families are deemed to share resources within households, members within families are related by birth, marriage, or adoption, making resource-sharing more substantively meaningful. This means that data need to be organized by families, defined as subunits of households. In most cases, families
also represent households, making this organization relatively simple. In some cases, however, households are composed of multiple families or unrelated individuals co-occupying a housing unit and sharing resources\(^4\) further complicates the process.

Poverty measurement is a delicate task with different methodologies yielding different outcomes. While income is the dominant form of resourcefulness used to measure poverty in the US,\(^5\) different types of income can be applied. The official approach adopted by the US Census Bureau (2004) uses gross income including all cash incomes from private and public sources. Included in cash income are the incomes from wages and salaries, self employment, retirement, dividend, rent, interest, and other private and public transfer.\(^6\) Because these incomes do not fully capture one’s access to financial resources, this analysis uses income after taxes and transfer as an alternative form of income. The near-cash transfers used to derive the after tax and transfer income include such means-tested public assistance as Food Stamps, School Lunch, and housing subsidies. Although taxes paid to the federal and state governments do not typically factor in while calculating access to resources, it is reasonable to include such negative taxes as EITC.\(^7\) Incomes after taxes and transfers, therefore, signify the actual disposable income after accounting for near-cash sources.

To identify the families in poverty, I apply the official as well as adjusted poverty lines. The official poverty lines developed and updated by the US Census Bureau (2008) identify the amounts of income needed for families of various sizes and types to be considered non-poor. Despite their widespread use, researchers, policymakers, and administrators recognize that these poverty lines

---

\(^4\) See US Census Bureau (2004) for definitions of terms including households, families, and individuals used in the CPS.

\(^5\) The recent developments in international poverty research render these income- or consumption-based poverty measurement outcomes highly inadequate or inappropriate. Given these developments focusing on capabilities and social inclusion, some see a need to move beyond income to more accurately measure poverty in the US (Blank 2008; Wagle 2008a, 2008b, 2008c).

\(^6\) These include such social insurance benefits as child support and alimony, social security, veteran’s benefits, and unemployment insurance and means-tested social assistance benefits as TANF.

\(^7\) Sales and property taxes are not incorporated in the computation given their unavailability and complex relationships with housing and mortgage costs. Also not included are the capital gains that tend to be unstable from one year to next. Since low income households do not typically have capital gains, their exclusion does not bias the poverty outcomes.
poorly reflect a basic living standard (Blank 2008; Citro and Michael 1995; Wagle 2008b, 2008c). Recognizing this inadequacy, many federal and state agencies including the US Census Bureau (2008) use its 125, 150, and 200 (or even larger) percent adjustments for poverty measurement. To be consistent, this analysis uses 200 percent adjustment as an alternative poverty line so that the outcomes can be compared. This is quite relevant here since working families typically spend large portions of their income on childcare, transportation, and other work-related expenses (Harvey and Mukhopadhyay 2006).

A related issue concerns defining working families. The US Department of Labor (2000, 2007) defines ‘working’ as being in the labor force either working or looking for work for at least 27 weeks. For the purpose of poverty measurement, however, one can normatively expect poverty not to be present especially among families with at least one member working full time year round. Adopting the US Census Bureau (2004) definition of full time year round work, I define ‘working’ as working 35 hours or greater per week for at least 50 weeks. Families with at least one full time worker are defined as ‘working families.’ Given the implication of working full time year round on wages and benefits, two or more adults making up an equivalent of this amount does not count as working full time. While this definition excludes many families with comparable hours of work—even more in cases with two or more adults working part time—the idea is to identify families that are poor despite having stable labor market attachment. Further, individuals younger than 18 and older than 64 are normally considered economically inactive and thus are excluded from working adults. The latter criterion has wider implication for this analysis since all families headed by members aged 65 and older are dropped making the sample size much more restrictive.

---

8 The eligibility criteria for Food Stamps, for example, include gross incomes of up to 130 percent of the official poverty line whereas those for typical state Sponsored Child Health Insurance Programs (SCHIP) include gross incomes of up to 200 percent of the official poverty line (NSCL 2008; US DHHS 2007).

9 This process yields sample sizes that are smaller by 349 families in 1998 and 330 families in 2007. The subsamples used here include about 1,500 families covering close to 4,000 people (Table 2 provides information on sample sizes.)
The CPS data identify individuals maintaining households as householders (or household reference people) but do not identify individuals maintaining families. It is straightforward to identify ‘family householders’ as householders when households comprise single families. In case of multi-family households, however, family householders need to be identified separately. I select as the family householder the oldest adult in the family working the most hours, with an older person in case of two adults working the same number of hours. Albeit somewhat arbitrary, I expect this process combining age and work hours to yield reasonably accurate results.

5. Magnitudes of Poverty

The magnitude of poverty is different for different population groups and years, with part of these differences stemming from the application of different poverty lines. As reported in Table 2, between 10 and 26 percent of the population representing 14 to 29 percent of families in Michigan was poor in 1998, depending on the specific poverty lines used. These figures increased by up to 26 percent by 2007. Given that families with at least one full time worker earn higher labor market incomes, their poverty headcount ratios were between five and 16 percent covering three to 15 percent of the population in 1998. These estimates increased by up to 54 percent by 2007.

(Table 2)

A number of observations are noteworthy in Table 2. First, the specific poverty lines used affect the resulting poverty headcount ratios. The application of official poverty lines produces relatively similar measurement outcomes despite the use of gross and after transfer incomes as the bases. Since low income families typically have net gains from transfer including the payment of federal and state income taxes and receipts of cash and near-cash public transfers, poverty incidences based

---

10 Data show that close to 11 percent of the population in Michigan was below the official poverty lines in 1998 with over 14 percent in 2007. While these figures do not match with the figures for the entire country estimated at close to 13 percent in 1998 and slightly above 12 percent in 2007 (US Census Bureau 2008), the use of population in families headed by people between 18 and 64 years of age suggests that the actual estimates for the entire population may be slightly different. The above average economic performance of the Michigan economy during the 1990s and the below average performance after the 2000s also help explain some of these differences. Further, the data from the CPS March Supplements of 1998 and 2007 refer to the income and labor market situations for a year earlier.
on after transfer incomes are typically smaller. The role of near-cash transfers on reducing poverty are small but sizable—almost three percent in 2007. When the poverty lines are doubled with 200 percent adjustment, these poverty estimates more than double, yielding a quite large proportion as poor. It is clear that not all families with gross incomes below these adjusted poverty lines are extremely poor. Yet, the more than unitary effects of poverty thresholds on measurement outcomes suggest that a significant proportion of families experience either extreme poverty or very close it.

Second, the poverty incidence is much larger for all families than for working families. In 1998, between three and 15 percent of the population from working families was poor compared to between 11 and 26 percent of those from all families. In 2007, these rates were three and 17 percents in case of working families and between 11 and 29 percents in case of all families. Regardless of the unit—i.e., individuals or families—poverty rates for all families run at least three times higher than those for working families, a finding not very surprising since working families are not normally expected to be poor. What is surprising, however, is that up to six percent of the families did not derive income enough to meet their most basic needs as indicated by the official poverty lines, despite working full time year round. This population—slightly smaller when transfers are included—jumps over four times when the 200 percent adjusted poverty lines are used, a jump much larger than in case of all families. Even more important is that over 12 percent of the population, not categorized as severely poor by the official poverty lines, is very close to it.

Third, most of these poverty rates increased by 2007, some quite significantly. While a larger proportion of the population in all families was poor, the poverty headcount ratios increased much more pronouncedly for working families. Excluding estimates from income after transfers, poverty rates among population from working families increased between 10 and 54 percent compared to an increase of seven to 26 percent in case of all families. These increases were even more starkly different in case of children younger than 18. Poverty rates among children from working families
increased up to 73 percent compared to that up to 20 percent for all families.

The worsening labor market situations augmented the poverty incidence as lower employability and earning potential made one economically more vulnerable. While many working families were able to escape below official poverty line incomes with the help of cash and near-cash public transfers, the benefits received were not sufficient to eradicate severe poverty even among working families. The fact that families and especially those with children experienced wider poverty rates suggests that they tended to face greater economic hardship over time.

Fourth, the role of transfers increased especially in lifting working families out of poverty. The changes in poverty headcount ratio were negative for the population in working families compared to the positive changes for all families. Given that many transfers are targeted at working families, these negative changes are not unexpected for this population. The changing welfare context rewards working families by qualifying them for many means-tested programs. But the non-qualification of non-working families increases their vulnerability. The transfers more than reversed the greater poverty experience among all families, as supports received by non-working families were largely inadequate to lift them out of poverty.

Figure 2 helps understand the magnitude of poverty facing the working poor better by depicting poverty gaps to be understood as the depth of poverty experienced. In 1998, the average shortfall in income was between 39 and 62 percent of the poverty thresholds for working poor families depending on the methodology used, which increased to between 40 and 67 percent by 2007. During the decade ending in 2007, the average shortfall in income decreased to 55 to 51 percent of the official poverty lines. This indicates a slightly better position of families on gross income over the period. At the same time, this shortfall increased from 39 to 40 percent of the 200 percent adjusted poverty lines on gross income and from 62 to 67 percent of the official poverty line on income after transfers. The smaller and relatively unchanging poverty gaps indicate that most of the
near poor working families are close to escaping the less-stringent 200 percent adjusted poverty line out of their cash incomes. Given that not all families in this group qualify for public transfers, this is an indication of the inadequacy, albeit worsening over time, of the labor market income to lead non-poor lifestyle. What is troubling is the much larger and increasing poverty gaps for the severely poor families as resulting from the use of official poverty line on income after transfers. It must be noted that the number of working poor families using this criterion is relatively small (over 5 percent of the sample) with many other less severely poor working families considered non-poor with the help of transfer incomes. Yet, their inability to escape severe poverty by over 60 percent of the official poverty line income despite receiving transfer benefits is a serious public policy issue, calling into question the efficacy of the existing labor market and transfer programs.

(Figure 2)

6. Role of Transfer

Means tested transfers are expected to help alleviate poverty especially among low income working families. But to what extent do these transfers help them? Figure 3 suggests that between nine and 23 percent of the income after transfer for working poor families came from means-tested transfers in 1998, which only slightly changed to 11 and 22 percent by 2007. Just like the case of poverty gap, families that have escaped poverty with the help of means-tested transfer are not included in these estimates especially when the official poverty lines are used. For this reason, the ratio of transfer to income for the poor identified by the official poverty lines on gross income was relatively higher and slightly decreasing during the period when in fact that for the poor following the two other criteria increased. The relatively small size of this ratio for the poor following 200 percent adjusted poverty lines is also consistent since families especially at the margin of these poverty lines would not typically qualify for many means tested transfers. Yet, the fact that the poor following the official poverty lines on after transfer incomes receive transfers much smaller than
those received by the poor following official poverty lines on gross income indicates that the poorest of the working poor may not have been the prime recipients of these supports.

(Figure 3)

The contribution of transfers to income also appears to be almost linearly distributed among working poor families. Figure 4 plots the ratio of the cash and near cash means-tested transfer to the after transfer incomes for the poor identified using the 200 percent adjusted official poverty lines on gross income.\(^{11}\) Because means tested transfers are available to working families based on their incomes from other sources, those with the greatest poverty gap receive the highest benefits with those with the smallest poverty gap receiving the lowest benefits. At the same time, some benefits such as Food Stamps are available for families with gross incomes up to 130 percent of the official poverty lines, making the share of the transfer on income increasingly larger for families with poverty gaps of 60 percent or higher. Also, families experiencing the most poverty derive less than 50 percent of their income from means tested transfer while those with near poor incomes derive less than 10 percent of their income from transfer. The major forms of transfer in this category include the EITC, public assistance under Temporary Assistance to Needy Families (TANF), and Food Stamps. The size of these transfers has also remained consistent over time. There have been some downward adjustments to the transfers received by families with 65 to 75 percent poverty gaps as indicated by the valley along the dashed line in Figure 4.

(Figure 4)

The means tested transfers have played large roles in reducing poverty among low income working families. It is also desirable to increase the contributions of these transfers toward the income security of working families. But the fact that some of these working families are still

\(^{11}\) This subsample includes the working poor families identified by any of the three criteria used here. While the poor identified using the official poverty lines on income after transfers may still have gross income higher than the 200 percent adjusted poverty lines, especially if they end up paying substantially more in taxes, this is almost impractical.
among the hard core poor underscores a critical public policy dilemma regarding reducing poverty and incentivizing work. For one, some of the poor tend to shirk participation in these transfer programs despite their eligibility (Daponte, Sanders, Taylor 1999; Kopczuk and Pop-Eleches 2007). Similarly, the transfer aimed at the working poor may have incentivized work at the expense of those who cannot find work due to the labor market restructuring.

6. Role of Labor Market

**Work Hours:** Much of the focus on poverty revolves around people not making enough work efforts. The argument is that people remain poor because they do not have adequate labor market attachment (Bartik 2004; Murray 1999; Sawhill 2003; Swartz 2007). The fact that poverty exists among a sizable portion of the working families suggests, however, that a meaningful labor market attachment is necessary but not sufficient to avoid poverty. More important can be the actual hours of work that families are able to generate, with the working poor unable to maximize work hours.

Figure 5 plots the average hours of work for poor and non-poor families with one and two full time workers. While poverty status has been identified in three different ways, this part of the analysis focuses on 200 percent adjusted official poverty line and gross income. The results are also indicative since the categorizations of one and two full time workers do not fully capture the combination of hours and workers especially when some family members work part time. Findings suggest that poor and non-poor families do not differ much in the total number of work hours. The hours of work are almost identical for families with two full time workers whereas they slightly differ in case of families with one worker. Even in the latter case, non-poor families work between 12 and 15 percent greater hours than their poor counterparts indicating that the major source of variation in poverty status may not be work hours. Although families witnessed increasing work hours during the 1980s and 1990s due to expanding labor market (Blank, Danziger, and Schoeni

---

12 The number of full time workers in a family is not same as the number of members. While a single member family cannot have more than one working adult, large families can also have only one working adult.
2006; Meyer and Rosenbaum 2001), data here do not support this pattern between 1998 and 2007, which is partly consistent with the contemporary labor market changes.

(Figure 5)

Poverty status is a function of both the amount of income and family size. At the same time, a full time worker will not see increased earned incomes just because she has to feed multiple mouths. A glimpse on the actual earnings of poor and non-poor working families with different work hours will help better understand the role of work hours on poverty status. Plotting the 1998 and 2007 data separately, Figures 6 and 7 show that poor families receive considerably lower labor market earnings despite exhibiting highly comparable hours of work. Not only are the earnings for poor families highly concentrated at the bottom, they are virtually flat regardless of the hours of work as indicated by the associated fit lines. It is true that work hours are generally larger for non-poor families but the fact that even the families with considerably larger work hours cannot increase their earnings invalidates the argument that increasing labor market attachment can cure poverty among a large segment of the population. This relationship remained consistent between 1998 and 2007 as the respective profiles with family earnings indicate.

(Figures 6 and 7)

**Employment Industry:** In Michigan, as in the rest of the country but to a larger extent, the labor market restructuring has had enormous impact on employment, earnings, and poverty. But how likely are the jobs in various industries to provide wages that cause poverty for their families? Figures 8 and 9 plot the poverty headcount ratios and poverty gaps for families headed by members employed in various industries. Given the contemporary changes in the state, the focus here is on the manufacturing, wholesale and retail sales, and education and healthcare industries. Results

---

13 This is to note that this could ideally be answered by using earnings data at the individual level since the earnings by other members in the family would also affect one’s poverty status. This would not be free of controversy, however, as families are an integral part of determining poverty.
indicate that in 1998, employment in the manufacturing industry yielded the average rates of poverty among working families whereas that in educational and health services industry contributed to greater poverty rates especially when the 200 percent adjusted poverty lines are used. Families with their heads in the wholesale and retail sales industry witnessed lower rates of poverty applying the official poverty lines. By 2007, the manufacturing industry turned out to lower poverty and the wholesale and retail sales and educational and health services industries to increase it. It is reasonable to expect the traditionally well-paying manufacturing employment to reduce poverty. A higher rate of poverty among families with employment in wholesale and retail sales is also consistent with the expectation especially in case of 200 percent adjusted poverty line as this industry tends to pay lower wages. The finding that a considerably greater percentage of families with employment in educational and health services are poor is interesting for two reasons. First, while the role of family size and multiple workers is important in determining poverty status, a considerable portion of these jobs appear to provide wages that are insufficient even to escape poverty using the official poverty lines. Second, a greater poverty incidence in this high employment growth industry indicates that working poverty is likely to rise in the future.

(Figures 8 and 9)

How poor are the working poor associated with these categories? Figure 9 suggests that the poverty gap may have been higher among the poor families with their heads in the manufacturing and educational and health services industries. Quite contrary to the finding that manufacturing employment helps reduce poverty, the poor identified by the more stringent official poverty lines tended to experience poverty gap averaging between 66 and 79 percent in 1998. This also remained consistent in 2007 even though the poor by the less stringent 200 percent adjusted poverty lines experienced poverty gaps much smaller than those of the average poor. The case of educational and health services is also interesting since the above-average performance in 1998 appears to have
been reversed by 2007 especially when the less stringent 200 percent adjusted poverty lines are used. Those attached to the wholesale and retail sales, however, experienced smaller poverty gaps in 1998 which further improved by 2007, suggesting that these families were either truly better off or had other sources of income to count on.

Finally, this study finds a generally inconsistent role of employment industry. Of the four industries included in the analysis, only educational and health services appear to help increase the likelihood of poverty more consistently. The higher concentrations of poverty among those employed in the wholesale and retail sales and educational and health services industries are noteworthy as these have been shown as the major players in the restructuring of the labor market with the latter demonstrating relatively better growth prospect in Michigan (MDLEG 2008). While the former appears to help reduce the degree of poverty, it is also a source of large poverty concentration especially when the 200 percent adjusted poverty lines are used.

8. Demographic Profiles of the Working Poor

Age: Age is an important factor affecting labor market earnings with young age lowering one’s earning potential and making the family more vulnerable to poverty (Blank et al. 2006; Borjas 2006). Table 3 suggests that in 1998 the poverty headcount ratio among families headed by workers 25 years of age or younger was above average under each measurement criterion. It further increased over time as indicated by their consistently higher poverty incidence. The fact that close to half of these families would be poor in 1998 using 200 percent adjusted poverty lines substantiates that even the families shown to be slightly better off than the official poverty lines were within the margin of widely perceived degree of low income. At the other end of the spectrum

---

14 While family and individual level characteristics may differ within families, most of this analysis uses the characteristics of family householders. In over 74 percent of the cases (75 percent in 1998 and 74 percent in 2007), where households are composed of single families, the actual householders identified by the CPS are labeled as family householders. In the remaining 25 percent of the cases, however, these findings partly depend on the ability to accurately identify family householders. While the systematic process taken here (see Data and Operational Issues) is expected to minimize any inaccuracy and bias, this caveat still applies to the findings.
are the families headed by members older than 55, exhibiting considerably smaller poverty concentrations. Data support that these families typically with long labor market experience may be able to generate earnings to avoid poverty. Because most of the families in this category either are single individuals or have only two members, increased earning potential interacts with smaller family sizes to reduce the likelihood of poverty. Families headed by members aged between 26 and 55 tend to have the smallest poverty incidence. Although a majority of these families include greater than two members, their greater earning potential makes them least vulnerable to below poverty line incomes. This does not imply a complete absence of poverty experience as between five and 18 percent of these families were poor in 2007 depending on the specific criteria used. But their likelihood of being poor closely aligns with the average for all working families.

(Table 3)

The poverty gap estimates reported in Table 4 are helpful to better understand the actual poverty experience among poor families. Families headed by young members, for example, appear to have smaller shortfalls in income than the older groups. Despite greater vulnerability to poverty, they experienced average shortfall in income in 1998, with some improvement by 2007. The poverty experience for the other two family groups and especially families with older householders was less predictable with their poverty gaps depending on the poverty criteria used. It is important to note the effective number of cases as only one or a few families in this category were poor especially in 1998. But the fact that this group manifests larger poverty gaps using both official and 200 percent adjusted poverty lines in 2007 suggests that this group when poor tends to fall short of even the most basic standard of living. This is not necessarily the case when public transfers are included as transfer incomes significantly reduce their vulnerability.

(Table 4)

Race: Race is another factor to affect the likelihood of poverty among working families. Most of
the discussion on race centers around the notion that minorities and especially Blacks are less likely to be working or working full time year round and thus are likely to be poor (Borjas 2006; Shipler 2004; Sawhill 1988; Wilson 1996). Among those working full time, however, this effect of race may be small. The concentration of poverty among Blacks is quite pronounced especially when gross income is used with other minorities including American Indians, Asians, and Hispanics showing much lower concentrations.\textsuperscript{15} From large concentration of poverty based on income after transfers in 1998, poverty headcount ratios improved by 2007 among other minorities, which is plausible given that the participation especially of Hispanics in transfer programs increased (Cody, Schirm, Stuart, Castner, and Zaslavsky 2008). But the small sample size disallows investigation of specific changes across different minority groups. As expected, Whites were consistently better off with the lowest poverty rates for both years.

The picture painted by the poverty gap figures is somewhat different. From the average and below-average values, Blacks witnessed their poverty gaps deteriorate with a significant increase when transfer incomes are included. Transfer incomes did not prove to be as useful because the participation rates for this group declined or because the benefits received were largely inadequate. The finding that the systematic effect of being Black may exist for families with stable jobs is inconsistent with findings from other studies (Joassart-Marcelli 2005). The next noteworthy anomaly comes from the poverty gaps for other minorities. The poverty gaps improved for these groups using the official poverty lines on gross income even though their incomes lagged considerably behind when compared with the 200 percent adjusted poverty lines and the official poverty lines on after transfer incomes. Despite increasing participation in transfer programs, minorities with low incomes tended to experience greater degrees of poverty. This, together with poverty gaps that are lower than those of the Whites using the 200 percent adjusted poverty lines, indicates a polarization...
of the poverty experience among the minorities with some much better off than others.

**Family Type:** The concentration of poverty differs considerably by types of families. Data show that poverty incidence is typically higher among single individuals regardless of the measurement criteria. Even more likely to be poor were the families headed by single mothers with their poverty rates running considerably higher especially when gross incomes are used. Their poverty rates were 58 percent in 1998, compared to 14 percent for all family types. Multi-member families, on the other hand, were less likely to be poor with their poverty headcount ratios running relatively smaller. Particularly smaller were the rates using the official poverty lines, an indication that they are less likely to be poor when more stringent criteria are used. These observations are quite consistent over time with the use of 200 percent adjusted poverty lines yielding much larger headcount ratios in 2007. In case of single mothers, however, poverty incidences declined during this period from 17 to eight percent using income after transfer and from 58 to 51 percent using 200 percent adjusted poverty lines.

Multi-member families, once poor, are likely to experience lesser degrees of poverty than do single individuals. Compared to all family types, poverty gaps were particularly smaller for individuals in 2007. Families headed by single mothers also experienced average degrees of poverty in both 1998 and 2007, with their poverty gaps based on income after transfer running smaller. Individuals were the ones to experience higher degrees of poverty manifesting above average poverty gaps for both years, with 2007 recording higher estimates using both official and 200 percent adjusted poverty lines.

The fact that single individuals experience consistently higher poverty incidence suggests the gross inadequacy of labor market earnings. The fact that their poverty experience worsens when a less stringent poverty threshold of 200 percent poverty lines is used further suggests that their low income remains highly persistent. Yet, the consistently higher poverty incidence following the
official poverty lines on both gross and after transfer income invalidates the thesis that most of these single individuals are only slightly poor. The argument that they typically are young and yet to climb job ladders (Mead 1992; Murray 1999; Sawhill 1988, 2003; Schwartz 2007) does not hold as only less than nine percent of the single individuals were less than 25 years of age in 2007. Findings also reaffirm that the single motherhood positively contributes to the likelihood of poverty. While lower poverty gaps using after transfer income substantiate the role of transfer in reducing poverty, their consistently higher poverty headcount ratios do not show the transfers to be sufficient. Given that the welfare reform and economic expansion of the 1990s forced many single mothers with low human capital into the labor market, the increasing usage of transfer did not reduce their vulnerabilities (Blank et al. 1999; Daziger et al. 2000; Meyer and Rosenbaum 2001).

**Education:** The role of education is equally important in today’s technologically sophisticated service economy with education representing the knowledge and skills workers need to remain competitive. Data indicate that families headed by those with less than high school education had the highest poverty rates in 1998, which further increased by 2007 especially when using gross incomes. Close to one half of families in this category were either poor or near poor in 2007. This higher poverty concentration also applies to families headed by high school graduates when using the less stringent criterion. Poverty headcount ratios were moderate among families with junior college education whereas they were much smaller among families with college and especially graduate education.

This observation is partly consistent with the poverty gap data. Once poor, the degree of poverty experienced by the families headed by those with less than high school education depends on the use of specific poverty criteria with more stringent ones causing smaller poverty gaps and stringent ones causing larger poverty gaps. Surprising, however, is the observation that the families headed by those with college and especially graduate education also appear to experience greater degrees of
poverty. The poor working families with graduate education, in particular, experienced much wider
degrees of poverty in 2007, an observation not very consistent with one’s expectation that they
would be either non-poor or slightly poor as in case of the 200 percent adjusted poverty lines. This
clearly suggests that education may not have helped these families much, calling for explanations
beyond the role of knowledge and skills.

Overall, education does matter with those with higher education being less likely to be poor. The
distinction is starkest, however, between those with and without college education, as the latter are
more likely to be poor with lower education further worsening the poverty experience. Yet, the
differences in the degrees of poverty for families with college and especially graduate education
pose a question on the value of education beyond a junior college degree. While there are important
changes over time with junior and four years college degrees decreasing the likelihood of poverty,
these appear to matter less to the degree of poverty experienced. Despite increasing cleavages in
real earnings between workers with and without college degrees nationally (Blank et al 2006; Blank
and Shierholz 2006; Hall 2006), graduate education does not consistently improve one’s prospect to
escape poverty in Michigan. The evidence may be extended further to suggest that education above
a junior college degree may not have mattered much to working families in 2007, a finding
consistent with the recent labor market trend with mass layoff and unemployment.

9. Conclusion

The current economic contraction has produced many woes. While economic growth was mostly
robust until recently, leaving only a few traces of downturn, state experiences varied greatly. The
Michigan economy is quintessential to the economic struggle that many states, if not already facing,
may undergo in near future. The restructuring of the labor market has caused great pain among
workers who are less-skilled and ill-prepared for the 21st century jobs in the professional and service
industries. Their employment and earnings prospect has never been bleaker, with a rapid rise in
families that cannot earn enough despite working full time year round.

Whereas the society places enormous value to holding stable, full time jobs, the fact that families with reasonable work attachment are unable to earn enough partly indicates the failure of the labor market. These cases are not very common as less than 20 percent of the population or families are poor, with official poverty lines indicating working poverty rates of less than six percent in Michigan. Data on poverty gap, however, suggest a worsening experience among the working poor. No doubt, there have been great many improvements in the way the working poor have been supported with increases in public transfer to encourage work. Yet, the extent to which the labor market has failed the working poor and its mechanisms have important policy implications. Among others, this analysis makes four noteworthy observations.

A first is the inadequacy of income for the working poor. Difficult times like this pose substantial hardship to people with low incomes, leading to an increase in poverty. But even faster increases in the incidence of working poverty indicate that the wages offered to these full time year round workers are highly inadequate. While over half of the states including Michigan set their minimum wages slightly higher than the federal minimum, the federal minimum wage which did not increase during the decade covered in this analysis serve as the benchmark for any state level wage adjustments. Understandably, minimum wages are not what workers actually get paid. But for many less-skilled workers not receiving significantly higher wages, it is the low wage, not necessarily the low hours, that prohibits from earning incomes adequate to escape poverty.

One must realize that the political economy of minimum wages is much more complex with arguments that any drastic increases would likely have negative consequences for small businesses. Many means-tested public transfers are intended to encourage work and help working families escape poverty without causing disequilibrium in the labor market. The fact that the poverty incidences based on after transfer incomes have decreased for the working poor, together with their
relatively small increases in poverty gaps, suggests that the working poor have benefitted from these transfers more than the non-working poor during the decade. Yet, the lower rates of participation in such transfer programs pose a question on their effectiveness at reducing working poverty.  

Given the failure of the prevailing minimum wages to prevent poverty among a large cross-section of low-wage workers, large increases have been proposed. The notion of ‘living wage’ that attaches wages with the living standard (Quigley 2003; Waltman 2004) has been adopted at many local levels. While studies of the impact of living wages based on a limited number of local living wage ordinances caution against sluggish economic growth as an unintended consequence (Bartik 2004), more conclusive findings especially with broader coverage are yet to emerge.

A second relates to the efficient usage of policy resources to support the poor. The working poor constitute a deserving population and targeting resources at them is morally and politically justified. Given limited resources, however, one can question the efficiency of policy targeting as this likely occurs at the expense of increasing poverty among the non-working population. A large part of this population is either unable to work or unable to find work. Because the non-working poor cannot establish a meaningful labor market attachment, they would be in a more dire need of policy resources to maintain their well-being. By siphoning off resources to those who could generate on their own, had an appropriate policy framework (such as adequate minimum wage) been in place, the labor market would be held accountable to reduce poverty among the working population and free up resources to help the groups in more dire need. After all, reducing poverty has important externalities in society.

A third relates to the role of basic demographic characteristics. Although the stereotype of the poor as young, minorities, single individuals, single mothers, and less educated largely applies to

---

16 Studies show, for example, that the rate of non-participation in the Food Stamps Program may be as high as 50 percent of the eligible households (Cody et al. 2008; Daponte, Sanders, and Taylor 1999). Similarly, non-participation in EITC may be 15 percent or higher (Kopczuk and Pop-Eleches 2007). Researchers argue that these numbers can be much larger since many working families are even not sure about their eligibility.
the working poor, the degree of working poverty families experience tends to vary by the specific poverty measurement criteria. These characteristics are also less consistent when less stringent criteria are used suggesting that a much wider range of the population is likely to experience poverty. Some of these factors may be idiosyncratic to the labor market in Michigan but most will also apply to the entire US economy.

Finally, this analysis reaffirms the effect of education on poverty among working families. Education considered to be a reasonable proxy for the skills and preparation needed to navigate in today’s sophisticated and highly segmented labor market affects the likelihood of poverty. No one can challenge the universal emphasis on education as the most efficient strategy to cope with future labor market challenges. When it comes to placing the strategic emphasis on a few industries to lead economic growth and avoid poverty for the workers, however, a consensus is not highly likely. The Michigan places heavy emphasis on educational and health services, together with professional and business services, as the focal industries. The projected employment growth in these industries is also consistent. Yet, findings suggest that industries do not often help reduce working poverty especially when the less stringent criterion is used. For the working poor, being in these industries helps increase the degree of poverty over time. Reversing the increasing poverty trend in Michigan will remain a challenge in years to come.

References


US Department of Labor. 2008a. Wage and Hours Division Website. (http://www.dol.gov/esa/whd/flsa/)


Figure 1, Per Capita Income in Michigan and the United States
(Values in 2007 Dollars)

Table 1. Some Economic Indicators, 1998 and 2007

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Michigan</th>
<th>United States</th>
<th>% Change</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Per capita income (in 2007 dollars)</td>
<td>33,713</td>
<td>34,342</td>
<td>1.87</td>
<td>34,196</td>
</tr>
<tr>
<td>Total Labor Force (in thousands)</td>
<td>5,046</td>
<td>4,989</td>
<td>-1.13</td>
<td>137,673</td>
</tr>
<tr>
<td>Total Employment (in thousands)</td>
<td>4,842</td>
<td>4,617</td>
<td>-4.65</td>
<td>127,359</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>896</td>
<td>601</td>
<td>-32.92</td>
<td>17,447</td>
</tr>
<tr>
<td>Trade, Transportation, and Utilities</td>
<td>860</td>
<td>784</td>
<td>-8.84</td>
<td>25,420</td>
</tr>
<tr>
<td>Professional and Business Services</td>
<td>609</td>
<td>569</td>
<td>-6.57</td>
<td>15,512</td>
</tr>
<tr>
<td>Education and Health Services</td>
<td>487</td>
<td>600</td>
<td>23.20</td>
<td>14,627</td>
</tr>
<tr>
<td>Unemployment Rate (%)</td>
<td>4.0</td>
<td>7.4</td>
<td>85.00</td>
<td>4.5</td>
</tr>
</tbody>
</table>

Note: a. Inflation adjusted income using Consumer Price Index for urban areas.
   b. This category is included in Professional and Business Services.
   c. Unemployment rates in June 2008 were 8.5% in Michigan and 5.5% in the US.


Table 2. Poverty Headcount Ratios (Values as percentages unless otherwise indicated)

<table>
<thead>
<tr>
<th>Description</th>
<th>Working Families</th>
<th>All Families</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>% of the Families Poor</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N (Poor and Non-Poor)</td>
<td>1150</td>
<td>1239</td>
<td>1496</td>
</tr>
<tr>
<td>Official poverty line and gross income</td>
<td>4.84</td>
<td>5.94</td>
<td>13.70</td>
</tr>
<tr>
<td>200% official poverty line and gross income</td>
<td>16.19</td>
<td>18.25</td>
<td>29.23</td>
</tr>
<tr>
<td>Official poverty line and income after taxes and transfers</td>
<td>5.80</td>
<td>5.18</td>
<td>14.17</td>
</tr>
<tr>
<td>% of the Population Poor</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N (Poor and Non-Poor)</td>
<td>3055</td>
<td>3295</td>
<td>3763</td>
</tr>
<tr>
<td>Official poverty line and gross income</td>
<td>3.09</td>
<td>4.75</td>
<td>11.19</td>
</tr>
<tr>
<td>200% official poverty line and gross income</td>
<td>15.38</td>
<td>16.89</td>
<td>26.26</td>
</tr>
<tr>
<td>Official poverty line and income after taxes and transfers</td>
<td>3.44</td>
<td>2.85</td>
<td>10.57</td>
</tr>
<tr>
<td>% of the Children under 18</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N (Poor and Non-Poor)</td>
<td>1154</td>
<td>1575</td>
<td>1465</td>
</tr>
<tr>
<td>Official poverty line and gross income</td>
<td>3.73</td>
<td>6.47</td>
<td>15.55</td>
</tr>
<tr>
<td>200% official poverty line and gross income</td>
<td>21.62</td>
<td>23.42</td>
<td>34.12</td>
</tr>
<tr>
<td>Official poverty line and income after taxes and transfers</td>
<td>3.50</td>
<td>2.13</td>
<td>13.28</td>
</tr>
</tbody>
</table>
Figure 2, Poverty Gap among Working Families
(Values are average shortfall from poverty line income)

- Official and gross income
- 200% official and gross income
- Official and income after transfers

Figure 3, Means-Tested Transfer Relative to Income after Transfer for Working Poor Families

- Official and gross income
- 200% official and gross income
- Official and income after transfers
Figure 4, Means-Tested Transfer and Poverty Gap for Working Families
(Using 200% Adjusted Official Poverty Lines)

Figure 5, Hours of Work for Poor and Non-Poor Families
(Using 200% adjusted poverty lines)
Figure 6, Total Earnings and Work Hours for Poor and Non-Poor Working Families, 1998
(Using 200% adjusted official poverty lines)

<table>
<thead>
<tr>
<th>Non-Poor</th>
<th>Poor</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Figure 7, Total Earnings and Work Hours for Poor and Non-Poor Working Families, 2007
(Using 200% adjusted official poverty lines)

<table>
<thead>
<tr>
<th>Non-Poor</th>
<th>Poor</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Figure 8, Poverty Headcount Ratio Among Working Families
(Using official and 200% adjusted poverty lines)

- Official and Gross Income
- Official and Income After Transfer
- 200% Official and Gross Income

1998 2007

Figure 9, Poverty Gap For Poor Working Families
(Using official and 200% adjusted poverty lines)

- Official and Gross Income
- Official and Income After Transfer
- 200% Official and Gross Income

1998 2007
### Table 3. Poverty Headcount Ratios for Working Families, 1998 and 2007 (Figures are percentages unless otherwise indicated)

<table>
<thead>
<tr>
<th>Variables</th>
<th>1998</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Official and Gross Income</td>
<td>Official and Income After Transfer</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>25 and Younger</td>
<td>115</td>
<td>12.48</td>
</tr>
<tr>
<td>26 - 55</td>
<td>945</td>
<td>4.23</td>
</tr>
<tr>
<td>56 and Older</td>
<td>92</td>
<td>0.99</td>
</tr>
<tr>
<td>Race</td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>982</td>
<td>4.32</td>
</tr>
<tr>
<td>Black</td>
<td>112</td>
<td>10.12</td>
</tr>
<tr>
<td>Other Minorities</td>
<td>56</td>
<td>2.80</td>
</tr>
<tr>
<td>Family Type</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Individuals</td>
<td>322</td>
<td>10.84</td>
</tr>
<tr>
<td>Families</td>
<td>828</td>
<td>2.53</td>
</tr>
<tr>
<td>Single Mother</td>
<td>68</td>
<td>18.74</td>
</tr>
<tr>
<td>Educational Attainment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less Than High School</td>
<td>93</td>
<td>11.40</td>
</tr>
<tr>
<td>High School</td>
<td>419</td>
<td>5.92</td>
</tr>
<tr>
<td>Some College</td>
<td>321</td>
<td>4.61</td>
</tr>
<tr>
<td>College</td>
<td>207</td>
<td>2.08</td>
</tr>
<tr>
<td>Graduate</td>
<td>110</td>
<td>0.99</td>
</tr>
</tbody>
</table>

### Table 4. Poverty Gap for Working Poor Families, 1998 and 2007 (Figures are percentage shortfall on the applicable poverty lines)

<table>
<thead>
<tr>
<th>Variables</th>
<th>1998</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Official and Gross Income</td>
<td>Official and Income After Transfer</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>25 and Younger</td>
<td>57.17</td>
<td>63.69</td>
</tr>
<tr>
<td>26 - 55</td>
<td>53.65</td>
<td>38.79</td>
</tr>
<tr>
<td>56 and Older</td>
<td>69.57</td>
<td>41.28</td>
</tr>
<tr>
<td>Race</td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>56.90</td>
<td>67.68</td>
</tr>
<tr>
<td>Black</td>
<td>45.87</td>
<td>39.96</td>
</tr>
<tr>
<td>Other Minorities</td>
<td>68.32</td>
<td>45.01</td>
</tr>
<tr>
<td>Family Type</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Individuals</td>
<td>56.10</td>
<td>65.47</td>
</tr>
<tr>
<td>Families</td>
<td>52.75</td>
<td>54.61</td>
</tr>
<tr>
<td>Single Mother</td>
<td>54.13</td>
<td>47.22</td>
</tr>
<tr>
<td>Educational Attainment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less Than High School</td>
<td>44.01</td>
<td>58.64</td>
</tr>
<tr>
<td>High School</td>
<td>59.42</td>
<td>58.39</td>
</tr>
<tr>
<td>Some College</td>
<td>56.78</td>
<td>64.13</td>
</tr>
<tr>
<td>College</td>
<td>40.94</td>
<td>71.19</td>
</tr>
<tr>
<td>Graduate</td>
<td>79.88</td>
<td>76.36</td>
</tr>
</tbody>
</table>