Regional Poverty and Population Response:
A Comparison of Three Regions in the United States and Germany

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Abstract: In this paper, we examine poverty in three regions in the United States and Germany and discuss its causes and demographic consequences. The three regions are those with the highest rates of poverty in the two countries: the Mississippi Delta and Texas Borderland in the United States and the Northeastern Border Region in Germany. We show that standard models to explain poverty need to be placed in the historical legacies of the three regions in order to understand their current levels of poverty. While our results show many common factors for poverty in the three regions, they also point to important differences. Similarly, we identify differences among the regions in their demographic responses to poverty, in part reflecting their different historical legacies. Thus, one implication of the paper is the importance of place-based poverty-mitigation strategies for successful policy planning.

Keywords: Determinants of poverty · Regional development · Outmigration · Germany · USA

1 Introduction

Economic development in most countries is characterized by substantial regional inequalities. Well-known examples include Italy’s Mezzogiorno, Brazil’s Northeast, and parts of the Southern United States. In most cases, economically lagging regions find it difficult to catch up with the more prosperous parts of their countries, since development is a moving target. In rare instances, regional laggards become leaders, as in the case of Bavaria in Germany. During the post-war period through the mid-1970s, Bavaria was one of the poorer states in the former West Germany. After the oil shock in the 1970s and the ensuing restructuring of the economy, it developed into one of the richest West German states and has maintained that status after unification.
The purpose of the present paper is an examination of poverty and demographic response in three regions in the United States and Germany: The Mississippi Delta, the Texas Borderland, and Northeastern Border Region of Germany. All three regions are the poorest ones in the two countries. While individual counties elsewhere might have poverty rates as high or even higher than those found in these three regions, they tend to be more isolated incidents and do not form contiguous poverty areas. (The sole exception in the United States is Central Appalachia whose level of poverty rivals that of the Mississippi Delta and Texas Borderland.) Our specific objectives are as follows: (1) to review the historical legacy for today’s conditions that are associated with poverty in the three regions; (2) to examine the correlates of poverty in these regions; and (3) to discuss the range of demographic responses to poverty in the three regions. We start out with a brief review of factors that previous research had found to be associated with poverty in non-metropolitan (hereafter non metro) and rural areas,1 to be followed by a discussion of the three regions in terms of the objectives listed above. The final section discusses differences and similarities among the three regions and addresses some policy implications.

2 Past Research Findings on Aggregate Poverty

Research on aggregate poverty has increasingly recognized the importance of place, both theoretically and methodologically (Gans 2002; Gieryn 2000; Lobao 2004; Lobao/Sáenz 2002; Lobao et al. 2007; Tickamyer 2000). The addition of a spatial dimension has expanded social stratification research and promises to help us understand how differential resource allocation across class, race, and gender are linked to issues of uneven regional development (Slack et al. 2009). The joining of the both perspectives holds the promise to detangle “both the importance of where actors are located in geographic space and how geographic entities themselves are molded by and mold stratification” (Lobao et al. 2007: 3). Focusing on place/region-specific poverty, as we do in this paper, permits us to contextualize poverty in space and time.

There is overwhelming research evidence for the United States that geographic location and poverty are connected (Lichter/Johnson 2007; Lyson/Falk 1993; Massey/Denton 1993; Rural Sociological Society Task Force on Persistent Rural Poverty 1993; Tickamyer/Duncan 1990; Wilson 1980). This evidence goes back to the War on Poverty in the United States during the 1960s when the President’s National Advisory Commission on Rural Poverty issued a report entitled The People Left Behind (1967). “In it, the commission noted that not only were poverty rates generally high-

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1 In the United States, metropolitan counties are those that include a city with a population of 50,000 inhabitants, or that are part of a larger metropolitan area as defined by the U.S. Bureau of the Census. Most counties in the two U.S. regions are non-metropolitan. In the German border region, the larger cities (Frankfurt/Oder, Cottbus, and Stralsund) are not included in any county (since they are kreisfreie [county-free] cities); thus, a metro-nonmetro distinction of counties in this region is not meaningful.
er in rural compared to urban areas, but that the very poorest regions of the country were in the rural South and Southwest and, with the exception of Appalachia, were characterized by high concentrations of racial/ethnic minorities. Forty-five years later, these observations remain sadly accurate (Slack et al. 2009: 355-356).

The relationship between place, on the one hand, and poverty and other social outcomes is complex. At the core of the argument made by those who call for a spatial perspective in social science analysis (e.g., Gieryn 2000; Lobao 2004; Lobao et al. 2007) is the assumption that individual outcomes (e.g., educational attainment as well as the return [occupational status and income] on education, employment, or crime) are in part a function of place. To address this relationship between place and social/individual outcome, it is useful to differentiate between levels of place or space. A common differentiation, in ascending order of spatial hierarchy, is neighborhoods, counties or county groupings, and regions.

Perhaps the most authoritative study of the effects of neighborhoods is Sampson’s The Great American City (2012) in which he brings together research spanning more than a decade on place and social outcomes. He shows that regardless of business cycles and economic dislocations, such as the recent Great Depression, the type of neighborhood had identifiable effects on a wide array of social, economic, and demographic outcomes. As put by Massey (2012: 35), “[That study] convincingly demonstrates that individual outcomes are not the simple result of atomistic choices but reflect highly contingent decisions that unfold within spatially grounded social structures and institutionalized processes that limit options and reproduce existing inequalities between individuals, households, and neighborhoods.” For the U.S., the neighborhood effect is not all that surprising, (although the sweep of that effect as demonstrated by Sampson is remarkable), given the close connection between school quality and neighborhood wealth that is the result of funding for schools through property taxes. With a different funding mechanism for schools in Germany, one could expect smaller neighborhood effects, or even their absence, in that country.

For some time now, social scientists have argued that even at higher levels of spatial aggregation, the relationships between, say, being in poverty and individual characteristics is shaped by contextual factors (DiPrete/Forristal 1994; Cotter 2002; Curley et al. 2009). Recently, Poston et al. (2010) showed that in the Texas Borderland and the Lower Mississippi Delta, characteristics of Public Use Microdata Areas (PUMA) not only affected the likelihood of a person being in poverty, they also had an effect on the slope of the individual determinants of poverty. Thus, even within the two high-poverty regions, variations in spatial characteristics affected the probability of being poor.

In the sections to follow, we detail the historic conditions that explain why the three regions covered in our analysis continue to have such high poverty rates. A

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2 PUMAs are aggregations of counties for which the U.S. Census Bureau makes individual-level survey data available. These aggregations are required to meet the 100,000 population threshold required for assuring confidentiality of the census.
root cause of poverty in the two U.S. regions is race and ethnicity, as evidenced by
the lingering effects of slavery and the plantation system in the Delta, and those of
slavery-like conditions for Latinos in the Texas Borderland. In the German region,
today’s poverty has its origin in the agrarian structure prevailing up to World War II
and, more recently, is the result of the economic dislocations in agriculture and in-
dustry after unification. Those conditions are more pronounced in the three regions
than in other parts of the United States or Germany.

Several previous publications (Slack et al. 2009; Fontenot et al. 2010; Poston et
al. 2010; Singelmann et al. 2012a/b) showed that the correlates of aggregate pov-
erty are multi-dimensional. Specifically, poverty is associated with the (1) economic
structure, (2) demographic structure, (3) human capital, and (4) the location of a
place on the urban-rural continuum.

(1) Economic Structure
Several indicators of the economic structure are associated with an area’s level of
poverty. The economic literature for a long time showed the importance of manu-
facturing for development (Clark 1940). The greater value-added of manufacturing
compared to agriculture leads to better wages which, in turn, reduce poverty. Simi-
larly, the growth of service industries, especially producer services, is a correlate
of more advanced industrial development (Singelmann 1978). Advanced industrial
countries typically have larger employment in financial and other producer services
to meet the needs of their economy. The associations between the size of the manu-
facturing sector and employment in the FIRE (financial, insurance and real estate)
services sector are similarly related to economic development among counties. Ac-
cordingly, counties with a higher share of employment in manufacturing and in FIRE
services tend to have lower poverty (Mencken/Singelmann 1998; Parisi et al. 2003;
Brady/Wallace 2001; Cotter 2002; Rupasingha/Goetz 2007). Similarly, the employ-
ment rate is negatively associated with the level of poverty (and, conversely, unem-
ployment and poverty are positively correlated) (Cotter 2002; Slack/Jensen 2002;
Gundersen 2006; Rupasingha/Goetz 2007).

(2) Demographic structure
Extensive research exists that demonstrated a positive association between pov-
erty and single female-headed households with children (Albrecht/Albrecht 2000;
Goe/Rhea 2000; Lichter et al. 2003; Lichter/McLaughlin 1995; Parisi et al. 2005;
Singelmann et al. 2012a). Single-headed households with children have the highest
poverty rates of all household types in both the United States and EU countries. In
the United States in 2010, 42.2 percent of all persons living in households headed
by a single female lived in poverty, compared to only 15.1 percent for persons in
all households and 10.1 percent for persons in married couple households (U.S.
Bureau of the Census 2011). According to data from the 2010 German Mikrozensus,
42.7 percent of persons living in households headed by single adults with children
(most of those adults are women) were poor (i.e., received Hartz IV [social security
payments]), compared to only 8.7 percent for persons in households headed by cou-
ples (Deutscher Paritätischer Wohlfahrtsverband 2012). Similarly, in Brandenburg in
2007, the poverty rate for households with children headed by a single parent was 34 percent, compared to a poverty rate of 14 percent for persons in all households (Ministerium für Arbeit, Soziales, Frauen und Familie des Landes Brandenburg 2009). And the corresponding poverty rates in Mecklenburg-Pomerania for female-headed households with children and two-parent households with children were 50 percent and 26 percent, respectively (Prognos 2009: 23). An earlier report by Smeeding and Torrey (1988) showed that the disadvantage of single-parent households with children is not a new phenomenon. The authors report that around 1980 in Australia, Canada, Germany, Sweden, United Kingdom, and the United States, the poverty rates of one-parent households were a multiple of those for two-parent families in all six countries except Sweden (where the difference was only 100 percent).

The intergenerational reproduction of poverty adds to the importance of family structure. In the United States, general consensus exists that family structure has an important effect on children’s educational attainment. Adolescents who grow up in single female-headed families have a greater risk of dropping out of high school than do those growing up in two-parent families, even when the usual socioeconomic factors are controlled for (Sandefur et al. 1992). McLanahan (1985) clearly showed how family structure is related to the reproduction of poverty; children growing up in a one-parent family are more likely to be poor in adulthood than those raised in two-parent families. Similar findings exist for Germany. Singelmann and Wojtkiewicz (1993) found for then West Germany that children from a one-parent family, net of other factors, were less likely to have a certified occupational training (vocational or university) than their counterparts from two-parent families. Francésconi et al. (2010) found evidence of the effect of family structure on schooling outcomes in Germany for the more recent past. Given the high correlation between social origin and allocation within the three-level educational system in Germany for social mobility where fewer children from the lower-income groups enter higher education than in most other European countries, the effects of family structure on educational attainment has a long-term effect to reproduce the high poverty of single-parent families for their children when they reach adulthood (see also Edelstein 2006; Legrand 2011).

Previous research (Cotter 2002; Rupasingha/Goetz 2007) has shown that a young age structure (percent population under 15 years of age) tends to be positively associated with poverty. Adelman and Jaret (1999) found that metro areas with large percentages of young blacks have higher poverty than metropolitan areas where the black population is older. The mechanisms for this relationship are not entirely clear. On the one hand, a larger percentage of the population that is young can be the result of domestic in-migration, since in-migrants are typically at the age at which they also have children. In that scenario, there is probably no effect of a
young age structure on poverty because domestic migrants tend to relocate because of job opportunities. On the other hand, where a higher proportion of the population under 15 years of age is largely made up by children in non-intact families, it would be a correlate of increased poverty. In both scenarios, the interaction between young population structure and either net migration or percent non-intact families would be important, in addition to the individual correlates.

The percent of an area’s foreign-born population also has an effect on poverty. Poverty among Mexican immigrants to the United States is substantially higher than among those that are native born (Crowley et al. 2006). The higher poverty rates among immigrants have significantly increased the overall size of the total American population living in poverty (Camarota 2001). The percent of the population foreign-born was found in previous research to increase poverty for metro areas, but was not found to be significant for nonmetro areas, including the nonmetro South (Rupasingha/Goetz 2007). Other research found that the percent of an area’s foreign-born population decreased black poverty but not white poverty in metro areas (Adelman/Jaret 1999). Research also found that foreign-born immigrants depressed earnings for natives in low-skill occupations, but not in high-skill occupations (Camarota 2001).

Finally, given the objective of this paper to examine the population response to regional poverty, the association between poverty and net migration is especially important. Several decades ago, Todaro (1969) developed a model of labor migration according to which migration between low-wage and high-wage areas would (re-)establish the wage equilibrium within countries. An important element in that model is the calculation by potential migrations of the probability of obtaining a job, as indicated by the unemployment rates among regions. Accordingly, positive net migration is often used as a proxy for economic growth. Although this model was developed to explain internal migration in developing countries, research has shown its relevance for poverty regions in more developed countries as well. For the United States, for example, Frey and Liaw (2005) found that migrants flock to areas that have significant employment growth; and Rupasingha and Goetz (2007) showed that counties with fewer in-migrants had higher rates of poverty. In Germany, states (excluding city states) with lower per-capita income have higher poverty rates (Deutscher Paritätischer Wohlfahrtsverband 2013: 10). According to migration theory (Todaro 1969; Borjas et al. 1992) migrants tend to relocate to areas with per capita income that is higher than in their areas of origin. While people also take the chance of employment (and its steadiness) into account before they decide to migrate to a certain destination, in Germany that assessment of employability appears to be more important than the wage differential between origin and destination (Institut für Arbeitsmarkt- und Berufsforschung 2012: 1).

(3) Human Capital
Two key aspects of human capital are education and the ability to speak the native language. An extensive body of research exists which shows that educational attainment is an important factor in reducing poverty rates in both Germany and the United States (Deutscher Paritätischer Wohlfahrtsverband 2012; Edelstein 2006;
Sáenz 1997a; Adelman/Jaret 1999; Rupasingha/Goetz 2007; Crowley et al. 2006). Fuhr (2012) showed the same importance of educational attainment for lowering the odds of becoming poor in Germany. Similarly, speaking English well (in the United States) results in better economic outcomes for immigrants (Davila et al. 1993). Immigrants who speak poor English are economically penalized in both border and non-border metro areas (Davila/Mora 2000). In their study of Mexican immigrants, Crowley et al. (2006) found that speaking English “very well” reduced the odds of poverty by 16 percent. In Germany, the ability to speak German well was found to be a major determinant of educational attainment (Kriele 2007: 9) and poverty (Fuhr 2012: 556).

(4) Urban-Rural Axis
Finally, an area’s status on the metro-nonmetro (in the United States) or urban-rural (in Germany) continuum is linked to its poverty level. Poverty has consistently been found to be positively associated with nonmetro location (Jensen/Tienda 1989; Parisi et al. 2003; Rank/Hirschl 1988; Rural Sociological Society Task Force on Persistent Rural Poverty 1993; Sáenz/Thomas 1991; Singelmann et al. 2002). In 1999, the rural South of the U.S. had the highest shares of families living below the poverty line (Rupasingha/Goetz 2007). Similarly, people in rural areas in Europe, Germany included, tend to have higher risks to be poor than persons living in urban areas (European Commission 2008).4

3 Data and Methodological Considerations
For the two U.S. poverty regions, the data for the empirical analyzes come from the 2000 U.S. Census, whereas the data for the German Border Region are for 2010 and were obtained from the statistical offices of the states of Brandenburg and Mecklenburg-Pomerania. The reason for why we use 2000 data for the U.S. regions is that during the 2000s, the American Community Survey (ACS) was introduced which has taken the place of the long-form of the decennial U.S. Census (which contains the information needed for our analyzes). While the advantage of the ACS is the collection of annual data, the sample size for small counties prevents publication of annual data for confidentiality reasons. Instead, depending on the population size of a county, only 3-year or 5-year averages are made available to the public. For many of the counties in the two U.S. poverty regions, only 5-year averages are available. Since the 5-year averages would not enable a precise time comparison with the German data, we decided to use the 2000 U.S. census data.

4 In some ways, of course, the urban-rural poverty differential is the result of this specific spatial dichotomization. In many metropolitan areas in both the United States and Germany, parts of their inner cities have poverty rates comparable to those in rural areas. But if rural areas, in turn, are more differentiated, one tends to find that poverty is especially high in areas furthest away from metro areas.
The difference in the reference years between the U.S. and German regions is less problematic than it appears. In previous analyzes, we found a high consistency between 1990 and 2000 in the correlates of poverty for the two U.S. regions (Fontenot et al. 2010). The study by Poston et al. (2010) further showed the same factors associated with poverty for the Delta and the Texas Borderland during the 2000s that we show below. Thus, we believe it to be a reasonable assumption that the correlates of poverty in the two U.S. regions did not change much between 2000 and 2010; only their coefficients will be slightly different.

It is also worth noting that a majority of the counties in the Delta and the Texas Borderland are classified as “persistently poor.” According to this definition by the U.S. Department of Agriculture, a county is persistently poor if its poverty rate has exceeded 20 percent since 1970. Again, this persistence of poverty in those two regions indicates a long-term absence of economic growth. If anything, the financial crisis that started in 2008 increased poverty in comparison to 2000; but again, we can assume that this increase did not change the factors associated with the level of poverty.

Finally, a substantial number of counties in the Texas Borderland are experiencing drilling for oil and natural gas through the “fracking” process. While this resource boom will change the landscape of poverty in the region in the coming years, the level of fracking activity in 2010 was not extensive enough to have affected the level of poverty at that time.

The three poverty regions differ in the geographical size, number, and population density of their counties. The Delta has the largest number of counties (133) which allowed us to estimate a full model for the correlates of poverty. We also conducted a diagnosis for spatial autocorrelation and found no need to adjust the model. We did not expect any spatial autocorrelation for the Texas Borderland counties because of their low population density and, indeed, did not find one. However, the smaller number of counties (41) made it necessary to reduce the full model used for the Delta to estimate the correlates of poverty in the Texas Borderland. Factor analyzes as well as Crombach’s Alpha, however, showed that the items of the constructed indices tapped one dimension and are comparable to the full model. The small number of counties in the German poverty region (14) only allowed a correlation analysis for which we analyzed the same or comparable factors as in the two U.S. regions. We should point out that regardless of the method used, we do not assume causality of population response to poverty because a variety of public policies that cannot be measured in the models are likely to play an important role in the relationship between poverty of a region and population response.

4 Mississippi Delta, Texas Borderland, and Northeastern Germany

Both the Delta and the Texas Borderland have a long history of poverty. Their traditional economy was based on agriculture, with few efforts made towards industrialization until late in the 20th century. The economies of both regions were based on economic systems that did not rely on labor markets, for such markets assume that
workers have free choices of where to work and with whom to enter labor contracts. The legacy of oppression in these two regions resulted in disenfranchisement of the social minority populations that remains to be fully overcome. Given those conditions, the concentration of minorities in the two regions resulted in especially high rates of aggregate poverty. The history of Northeastern Germany is somewhat different from this. While its economy has been dependent as much on agriculture as in the two U.S. regions, the historical events during the 20th century (two world wars and two economic system changes) lead to a more uneven economic trajectory in that part of Germany.

We now turn to a discussion of the three regions by briefly summarizing the historical context for their current conditions, to be followed by an examination of the correlates of poverty in these regions and, subsequently, a discussion of the range of possible demographic responses to unfavorable economic conditions.

1. Mississippi Delta
(1) Historical legacy. The Delta’s legacy is the plantation system that relied on slavery for economic survival. To control labor and keep it cheap after the end of slavery, land owners and power brokers systematically kept industries out of the region because it was feared that they would compete with agriculture for labor, thus likely raising wages in the region. While slavery was abolished after the Civil War, slave-like conditions (e.g., Jim Crow laws; voting conditions; tenant farming) continued after the end of Reconstruction in 1877 and lasted through the middle of the 20th century (Hyland/Timberlake 1993). In many ways, de facto slavery in the South did not end until the Civil Rights Act of 1964. The rejection of industrialization went hand in hand with limited access to the U.S. rail system and, especially, the road system, keeping the Delta economically isolated. Objections to industrialization and other non-agricultural activities continued well into the latter part of the 20th century, with landowners rejecting federal programs that could have diversified the economy. While the Delta includes some of the most fertile agricultural soil in the nation – found in the Mississippi River floodplain that benefited from the rich sediments of the river – the concentration of land ownership among a few families in many counties has meant a high level of income inequality, with a few families very well off and many in poverty. That inequality largely persists through today (Lee/Singelmann 2005). Those conditions gave rise to the Great Migration toward the North, mostly during the period 1916-1930, and the second Great Migration of the period 1930-1970 (Lemann 1991). As a lingering consequence of those adverse conditions, population growth in the Delta remains largely stagnant or is negative.

(2) Results of analysis. Our previous work on poverty in the Delta included modeling the correlates of aggregate poverty among counties. For that analysis, we used the definition of the Delta according to the geography delineated by the Lower Mississippi Delta Development Commission that was established by the U.S. Congress in the 1980s (now the Delta Regional Authority); we further restricted the geography to the core Delta area made up of counties in the states of Arkansas, Louisiana, and Mississippi (see Fig. 1). We use the term core Delta here because in many ways
these counties include the cultural, social, and economic geography that is called the Delta. Even in this core, political pressures lead to the inclusion of counties whose connection to the Delta is debatable (e.g., a number of Ozark counties in Arkansas). In these three states, 133 counties belong to the Delta area. Blacks are the largest racial/ethnic minority group in the Delta, making up 35 percent of the total population. In 30 of the 133 counties in the Delta, blacks represent a majority of the population, reaching as high as 86 percent.

Using 2000 U.S. census data, we built a model based on correlates of poverty discussed above and regressed the aggregate poverty rate of counties on those factors (Singelmann et al. 2012a/b; Slack et al. 2009). The results showed the following factors to be statistically significantly associated with poverty (see Table 1). As expected, the employment rate and the percent of employment in manufacturing tend to lower the poverty rate, whereas three factors are associated with higher poverty: the percent of the population under age 15, the percent of families headed by a single female, and the percent of the population 25 years of age and over that is without a high school education. None of the other factors discussed above had statistically significant effects on the level of poverty among Delta counties.

Source: U.S. Bureau of the Census 2000 U.S. Census Summary Files
Table 1: Total Family Poverty in the Delta States, the Delta Region, and the United States, 2000

<table>
<thead>
<tr>
<th>Variables (in percent)</th>
<th>United States</th>
<th>Delta</th>
<th>Louisiana</th>
<th>Mississippi</th>
<th>Arkansas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poor</td>
<td>9.2</td>
<td>16.1</td>
<td>15.8</td>
<td>16.0</td>
<td>12.0</td>
</tr>
<tr>
<td>Employed (-)</td>
<td>71.2</td>
<td>64.7</td>
<td>64.4</td>
<td>64.7</td>
<td>69.1</td>
</tr>
<tr>
<td>Manufacturing (-)</td>
<td>14.1</td>
<td>13.4</td>
<td>10.1</td>
<td>18.3</td>
<td>19.4</td>
</tr>
<tr>
<td>Net migration (1,000) (-)</td>
<td>4.6</td>
<td>-0.2</td>
<td>-1.6</td>
<td>1.1</td>
<td>4.9</td>
</tr>
<tr>
<td>Under age 15 (+)</td>
<td>22.8</td>
<td>22.2</td>
<td>24.0</td>
<td>24.1</td>
<td>22.5</td>
</tr>
<tr>
<td>Female-headed (+)</td>
<td>11.9</td>
<td>17.2</td>
<td>16.7</td>
<td>17.2</td>
<td>11.8</td>
</tr>
<tr>
<td>Less than HS. (+)</td>
<td>19.6</td>
<td>26.3</td>
<td>25.2</td>
<td>27.1</td>
<td>24.7</td>
</tr>
<tr>
<td>Nonmetro (+)</td>
<td>66.0</td>
<td>71.0</td>
<td>55.0</td>
<td>79.0</td>
<td>73.0</td>
</tr>
<tr>
<td>Average annual population growth</td>
<td>1.3</td>
<td>0.7</td>
<td>0.6</td>
<td>1.1</td>
<td>1.1</td>
</tr>
</tbody>
</table>

Notes: HS = High School
Percent nonmetro = percent of counties that are nonmetro
N=133

Source: U.S. Census Bureau. Variables shown to be associated with family poverty derived from multivariate regression analysis of county/parish-level data in the Delta. The cell entries represent the distribution of each variable at the respective geographic level. The (+) sign indicates a local factor that is associated with higher family poverty in the region, while a (-) sign indicates a local factor that is associated with lower family poverty in the region.

(3) Population and poverty. Table 1 also shows that net in-migration is associated with lower poverty rates. Overall, the Delta region experienced small net out-migration. Among the three states, Louisiana shows moderate out-migration; it is the only Southern state to have had more migrants leaving the state than coming in during the 1990s. In contrast, Mississippi had some population gain from net in-migration, and Arkansas benefitted substantially from net in-migration, further indicating that much of Arkansas is located outside the economically less advantaged Delta region. The relatively low overall net out-migration from the Delta region during the period 1990-2000 masks the fact that this region had lost substantially in population during the preceding decades. By 1990, the outflow had almost stabilized, and the Delta population is expected to remain at around the level observed in 2000.

2. Texas Borderland

(1) Historical legacy. The Texas Borderland had settlements dating back to when this part of the United States was part of Mexico, prior to formation of the Republic of Texas and the later incorporation of Texas into the Union as a state of the United States. Given that history, many of the native-born persons in the region are Latinos. The proximity of the Borderland to Mexico continued to fuel a steady supply of Mexican labor and, more recently, of immigrants from other Central American countries such as Guatemala, El Salvador, and Honduras (Betts/Slottje 1994; Snipp
Immigration laws such as the Bracero program that started during World War II and lasted until 1964 provided U.S. agribusiness with cheap and steady labor. Those workers had little to no labor mobility once in the United States. Subsequently, and especially after the implementation of the North American Free Trade Act (NAFTA), labor-intensive manufacturing plants known as maquiladoras were set up on both sides of the border and served as magnets for low-skilled labor (see Slack et al. 2009). The indirect effect of Mexican maquiladoras on the labor market in the Borderland has been to lower U.S. wages because of the lower wage level in Mexico. The special form of industrialization benefitted the region relatively little. As put by Yoskowitz et al. (2002: 30), the economy remains “one dimensional with regard to trade, mainly transportation and warehousing, leaving little possibilities for growth in other areas.”

A consequence of low wages that often do not raise families out of poverty has been the expansion of colonias. These are unincorporated subdivisions that are not part of municipalities and thus without the public services provided by towns. Colonias typically have very small plots and little infrastructure; houses there often lack such basic amenities as electricity and plumbing. Residents in the colonias are both socially and geographically isolated. According to one estimate, about 400,000 people in the Borderland live in such subdivisions (Texas Secretary of State 2009). Such residential concentration of poverty has been shown to have many socially undesirable outcomes (Massey/Denton 1993), including lack of job opportunities and the absence of social networks with resources.

(2) Results of analysis. The Borderland stretches from El Paso in the West along the Rio Grande River to Brownsville in the East (see Fig. 1). Following Sáenz (1997b), we include all counties in this region whose largest city is within 100 miles of the U.S.-Mexican border. Latinos represent the largest racial/ethnic minority group in the Borderland, making up 80.2 percent of the total population. In fact, Latinos are the numerical majority in 30 of the 41 counties in the Borderland, reaching as high as 98 percent.

The result of our regression analysis showed very similar factors to be statistically significant that we identified for the Delta (see Table 2). A key difference is the absence of significance for the percent single female-head families. Models differentiated by ethnicity showed that the lack of significance for this factor applies only to Latinos (but since Latinos make up the majority of the population in the Borderland, their results essentially drive the results for the entire population). For reasons not yet entirely clear to us, Latinos get economically less rewarded for having two-parent families, in contrast to findings for non-Hispanic whites or for blacks.

(3) Population and poverty. The Borderland region, in contrast to the Delta, has been experiencing net in-migration, at a yearly rate of about 1.0 per 1,000 population during the 1990s. This gain from migration has continued during the past decade. However, in contrast to the negative association between net migration and the poverty rate in the Delta, net migration has no statistically significant association with the poverty rate in the Borderland.
The substantial net in-migration to the Borderland occurred despite low wages prevailing in that region. Although migrants typically tend to seek out higher-wage areas, they also consider their chances of obtaining a job. Thus, the labor intensive manufacturing plants with their demands for low-skilled labor attract migrants with lower human capital who reason that they would be less competitive in higher-wage labor markets. In many ways, positive net migration in the Borderland contradicts the economic theory of migration (Todaro 1969) according to which migrants move from disadvantaged (poverty) areas to places with more favorable economic conditions. However, potential migrants also assess the likelihood of finding a job which is a function of unemployment at the place of destination as well as their competitiveness in terms of human capital. While many migrants who move to the Borderland would prefer places like Austin, Texas, with its well paid high-tech jobs, they know that their low human capital does not make them competitive in that kind of labor market. In the Borderland, their wages often do not get their families out of poverty (because of the low minimum wage in the United States), but at least they have a realistic chance of securing employment. In turn, the low-wage structure of the Borderland turns migration into a non-significant factor for variance among counties in their level of poverty.

Besides net in-migration, population growth in the Texas Borderland benefits from substantial natural increase. For one, Latinos in the United States have the highest fertility rate of all major ethnic groups. In addition, immigration of Latinos results in especially high growth rates for the population in child-bearing ages, thereby further adding to natural increase.
3. German Border Region

(1) Historical legacy. The Northeastern parts of the German federal states of Brandenburg and Mecklenburg-Pomerania form the largest continuous region of high-poverty counties in Germany. The region of Ostfriesland shows similar social and economic vulnerability, but it does not compare in size to Northeastern Germany.

For the past two centuries, the economic base of this region has been dependent on agriculture. Most counties in this region are rural with a lack of industrial centers. Some counties, of course, do include larger towns and cities (for example Greifswald), and the region features the three larger cities of Stralsund, Frankfurt/Oder, and Cottbus (all three are independent cities, i.e., they are not part of any county). But the development of this region has witnessed more upheavals during the past one hundred years than is the case with either the Delta or the Texas Borderland. In the Delta, the outcome of the Civil War with its de jure end to slavery formally ended the plantation system in the South. But after the short period of Reconstruction, the emergence of the Jim Crow laws provided for a de facto continuation of many elements of the plantation economy. The U.S.-Mexican War ended with the takeover by the United States of all land north of the Rio Grande, which has remained the contemporary border between the United States and Mexico. However, the peripheral position of the Texas Borderland continued throughout this period, with its emphasis on agriculture until the recent semi-industrialization as part of the North American Free Trade Act (NAFTA).

In contrast, Germany’s Northeast during that period saw a history of state-planned rural settlement as well as expulsion and mass migration. In this region, farm structures several times have been completely transformed. Before the Second World War, much of the land belonged to large (and often feudal) estates. In 1945, through a land reform agreed upon as part of the Potsdam Treaty, such holdings were expropriated and distributed among farm workers and small holders, with priority given to the thousands of refugees who were expelled from the former German territories. Also in 1945, the river Oder became the new border between Germany and Poland, turning the northern counties of the region that used to be part of the hinterland of the former German city Stettin (since then Szczecin) into a peripheral area (Siebert/Laschewski 2010). While this description applies most aptly to Mecklenburg-Pomerania, counties in Brandenburg that share a border with Poland are similarly peripheral and share the structural disadvantages of the counties further north.

In the German Democratic Republic (GDR), the society underwent a fundamental process of rural restructuring. Family-based farming, fisheries, and other economic activities were collectivized and, from the 1970s onwards, rural society was built on industry-like farm estates that also played a central role for local social and cultural development. The GDR government also attempted to reduce the structural differ-

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5 Since the county reform of 2011, Stralsund is no longer a "county-free" city and is now included in Ost-Vorpommern county.
ence between the mostly agricultural North and the more industrialized South by establishing large industrial facilities in East Germany’s Northeast (e.g., the petrochemical state combine in Schwedt with about 8,000 workers, steel manufacturing in Eisenhüttenstadt, or the nuclear reactor Lubmin near Greifswald with about 5,000 employees) (Siebert 2004; Bogai et al. 2006).

After 1989 and unification, rural eastern Germany, for the third time in less than 50 years, underwent a major process of restructuring, which once again imposed a new social order on rural society and, at the same time, brought about a radical decline of non-agricultural production, with a matching decrease of employment in both agriculture and non-agriculture. In Uckermark county, for example, employment in agriculture and forestry declined from 25,000 in 1990 to 4,500 in 1992. Employment in industry decreased similarly between 1990 and 1993. The former petrochemical state combine in Schwedt reduced its employment by 75 percent, from about 8,000 to 2,000; the decision in 1990 to close the nuclear reactor Lubmin reduced employment by 80 percent. Although new job positions were created after 1990 in retail trade, crafts industries, services, and tourism, the number of those positions are too small to compensate for the loss of employment that resulted from privatization. Similarly, new jobs were created in the former industrial sites such as Schwedt and Lubmin, but their total numbers are a fraction of the job losses during the early 1990s (Siebert 2004; Bogai et al. 2006).

Moreover, during that period, new farmers from western Germany and other western European countries moved into the area and set up new farm businesses. The speed as well as the scale of the changes that hit eastern German rural economies are almost without historical precedent, and are shaping the nature of development to this day (Laschewski/Siebert 2001, 2004).

This region nowadays serves as the “worst case” example of an economically depressed countryside in Germany and has been studied intensively by “experts” from all academic areas. It is facing huge demographic changes, and its rural economic outlook is perceived as close to hopeless. For some years now, cases such as this region have prompted a debate about rural decline, in which technocratic ideas of taking a proactive approach to empty sparsely populated areas have found considerable public attention (Berlin-Institut für Bevölkerung und Entwicklung 2007, 2011).

(2) Results of analysis. The economically most distressed counties in Brandenburg and Mecklenburg-Pomerania are those along the German-Polish border and most of the counties in the “second row” that are adjacent to the border counties. We call this area the German Border Region (see Fig. 2). It consists of the following counties: Uckermark, Barnim, Märkisch-Oderland, Landkreis Oder-Spree, Spree-Neisse, Oberhavel, Dahme-Spreewald, and Oberspreewald-Lausitz (all in Brandenburg); Rügen, Nordvorpommern, Ostvorpommern, Demmin, Uecker-Randow, and Mecklenburg-Strelitz (all in Mecklenburg-Pomerania). Table 3 shows the high levels of poverty in these counties, with the exception of counties that are in proximity to Berlin (Barnim and Landkreis Oder-Spree).
Fig. 2: Counties within the German Border Region

Source: Own design
In our previous comparisons of the correlates of poverty between the Delta and the Texas Borderland, we were restricted in the complexity of our models by the small sample size for the Texas Borderland (41 counties) (Singelmann et al. 2012a; Fontenot et al. 2010; Slack et al. 2009). With only 14 counties in the German Border Region, it is impossible to estimate a multiple regression model for poverty in this region. Thus, we had to resort to bivariate-correlation analyzes which we used to identify those factors that are statistically significantly associated with the poverty rate in the Border Region. In Table 3, we present the means for those factors for Germany, Brandenburg, Mecklenburg-Pomerania, and the German Border Region. The results show that in the German Border Region, very similar factors are associated with poverty that we had found for the Delta and the Texas Borderland. The data in Table 3 also clearly show that for all factors, Brandenburg and Mecklenburg-Pomerania compare less favorable with all of Germany, and that the situation is even worse in the Border Region. The percent employment in manufacturing and positive net migration both tend to be associated with lower levels of poverty; but there is less manufacturing in the Border Region, and the area experiences substantial out-migration. Conversely, the three factors associated with higher levels of poverty (percent leaving school without a formal certificate, unemployment rate, and percent of employment in agriculture) are all higher in the Border Region than in Germany as a whole.

**Tab. 3:** Poverty and its Correlates in the Northeast German Border Region, around 2010

<table>
<thead>
<tr>
<th>Variables (in percent)</th>
<th>Germany</th>
<th>Brandenburg</th>
<th>Mecklenburg-Vorpommern</th>
<th>Border Region</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poverty</td>
<td>14.5</td>
<td>16.3</td>
<td>22.4</td>
<td>18.5</td>
</tr>
<tr>
<td>Without school certifi cate (+)</td>
<td>6.2</td>
<td>8.2</td>
<td>13.7</td>
<td>11.1</td>
</tr>
<tr>
<td>Unemployed (+)</td>
<td>7.7</td>
<td>10.5</td>
<td>12.7</td>
<td>12.5</td>
</tr>
<tr>
<td>Agriculture (+)</td>
<td>2.1</td>
<td>3.6</td>
<td>3.9</td>
<td>4.8</td>
</tr>
<tr>
<td>Manufacturing (-)</td>
<td>24.8</td>
<td>22.7</td>
<td>18.1</td>
<td>22.2</td>
</tr>
<tr>
<td>Net migration Rate (per 1,000) (-)</td>
<td>1.5</td>
<td>0.2</td>
<td>-2.2</td>
<td>-4.0</td>
</tr>
<tr>
<td>Natural Growth (per 1,000)</td>
<td>-2.2</td>
<td>-3.5</td>
<td>-3.3</td>
<td>-4.5</td>
</tr>
</tbody>
</table>

Source: Statistisches Amt Mecklenburg-Vorpommern 2011; Statistisches Amt Brandenburg 2011

(3) Population and poverty. In Table 3, we also present the average rate of natural population growth for the four geographies. While all of Germany experiences negative natural population growth (i.e., the number of death exceeds the number of births), that gap between birth and death is more than twice as high in the Border Region than in all of Germany. The combined effect of substantial net out-migration from the Border Region and its negative population growth rate indicate a shrinking of the population in this area that is unmatched by any other region of Germany. The even more dire population projections have resulted in substantial attention to

5 Comparison and Discussion

In this paper, we selected the poorest regions in the United States – the Mississippi Delta and the Texas Borderland – and the Border Region in Northeast Germany for which we discussed the origin of their weak economies and identified factors associated with higher and lower levels of poverty at the county level. Despite the substantial differences among the three areas regarding their history, current socioeconomic, and demographic characteristics, and structural problems, similar factors emerged from these analyzes that help explain variation in aggregate poverty among counties. In general, human capital (education and language ability), employment rate, the size of the manufacturing sector, and net migration are associated with lower levels of poverty, whereas percent single female headed families, percent of the population under 15 years of age, and nonmetro status of a county are associated with higher poverty. But there also difference among the three regions in their correlates of poverty. For example, Latinos in the Texas Borderland gain much less from higher proportions of two-parent families than do either non-Hispanic whites or blacks. (We have not been able to obtain information on this variable at the county level for the German Border Region, but based on the discussion of the relationship between family structure and poverty in Germany earlier in this paper, we expect that it would also be associated with higher levels of poverty.) And the high poverty of the German Border Region, as is the case for the Delta, cannot be explained by high proportion of foreign born, because the percent foreign born in the Delta and the percent foreigners in eastern Germany is much lower than what is found in the United States outside the Delta and in other federal states in western Germany.

A major difference among the three poverty regions concerns migration and population growth. In the Delta, net out-migration is consistent with the economic theory of migration according to which the flow of migration goes from poor regions to those better off. Much of the out-migration from the Delta happened as part of the Great Migration to the north during the period 1930-1960 and then continued for about another 20 years. For that reason, the current level of net out-migration is lower than what the weak economic conditions would suggest. Furthermore, Latino immigrants for about the past two decades have gone to non-traditional destinations, including the South and parts of the Delta. This redirection of Latino migration has kept net migration close to zero. In addition, with fertility rates in the U.S. high enough to assure natural growth, a good part of net out-migration has been offset by the surplus of births over deaths with the result that the population of the Delta has remained fairly steady over the past two decades.
The Texas Borderland experiences substantial net in-migration which is only partly made up of immigrants, with most of the migrants to the Borderland coming from other parts of the United States. Often, they are return migrants who were born in that region and/or had grown up there. The pull of the region for migrants is the abundance of low-skilled jobs in light manufacturing (assembly work). Retail services that cater to Mexican customers from across the border create additional demand for labor. While those jobs offer wages that often do not lift a family out of poverty – even with full-time and year-round employment – migrants with low levels of human capital nevertheless have a high degree of certainty of finding a job. In addition, with Latinos having the highest fertility rates of all ethnic groups in the United States, the population in the Texas Borderland has experienced substantial growth rates that have contributed to Texas gaining more congressional representation almost every decade. In fact, during the 1990s, population growth in the Texas Borderland was higher than for the state of Texas as a whole, and was double the average U.S. population growth. This trend continued through the 2000s; after the 2010 population census, Texas was awarded four new congressional districts.

As is the case with the Delta, the Border Region in Northeast Germany also experiences net out-migration, reflecting the lack of economic opportunity in the region. However, its rate of net out-migration of -4.0 is substantially larger than the -0.2 out-migration rate for the Delta. This population loss is amplified by a high rate of natural decrease (-4.5) that is more than double the German average. As a result, the population loss of the German Border Region is very high, and population projections show no turnaround in this trend. In contrast to an increasing number of rural counties for which Latino in-migration (and increasingly natural increase for the Latino population already established) is the sole source of a stable population (Johnson 2012), ethnic in-migration to the German Border Region does not appear to be an option.

The place-based approach to our analysis helped us to show how poverty is embedded in structural and historic conditions. Even individual characteristics (educational attainment, for example) are in large part the result of neighborhoods, historical legacies, and structural dislocations. In both the Delta and the Texas Borderland, educational opportunities for blacks and Latinos were severely restricted for generations and only improved, albeit ever so slowly, after the mid-1960s. Even today, the quality of schools in areas with minority concentrations is far below the state average, even in states with low educational attainment (such as Louisiana, Mississippi, and even Texas). Moreover, migrants contribute a substantial share of overall population growth the Texas Borderland, despite that area’s high rate of poverty. The assessment by these migrants appears to be that with their low human capital, they at least find employment opportunities in the Borderland, although at wages that do not lift them out of poverty.

In sum, the demographic response to poverty conditions ranges from substantial population growth in the Texas Borderland to no growth in the Mississippi Delta and very heavy population losses in Germany’s northeastern Border Region. The regions also differ in the extent to which they have been the focus of policy initiative, or are in the spotlight for possible future policy measures.
The Delta is the only one of the three regions for which an institutional policy framework was set up. During the 1980s, the U.S. Congress established the Lower Mississippi Delta Development Commission to promote development and reduce poverty. That Commission initially charged all federal departments to clearly specify in their appropriations request to Congress what they specifically intended to do for the Delta. Much of those initiatives, however, remained on paper, and the Delta Commission never had the success of the Appalachian Development Commission after which it was modeled. The difference is partly historical: when the Appalachian Development Commission was established to reduce poverty and hunger in the mining region, there was still a fair consensus in the United States that government programs could solve social problems. By the 1980s, that belief had completely disappeared. With social welfare programs being viewed – incorrectly – as government support for African American, it could also be that the political will did not exist to establish a far-reaching development plan for the Delta because of its high concentrations of African Americans.

No government initiative was ever started for the Texas Borderland, partly because of its population growth dynamic and, partly, because it has been viewed – similarly incorrectly – as a region where only Latino immigrants are poor. The low voter turnout of Latinos in the past might have been another reason for lack of attention by legislators. However, the pivotal role played by Latinos in the 2012 presidential election is beginning to draw development projects to the Borderland (e.g., the establishment of a medical school by the University of Texas system).

The current focus on the German Border Region by policy debates has little to do, in our view, with the fact that the region has high poverty, but rather because it is shrinking dramatically in demographic terms. The tenor of the debates is less about how poverty can be reduced but how the population decrease can be stopped or at least slowed down. The terms of that debate – equality of opportunities, the costs of maintaining an infrastructure for fewer and fewer people, and rural landscapes as cultural value – are completely absent in any discussion of the two U.S. regions. It is important to note that in Germany, a law exists (Raumordnungsgesetz [ROG]) that mandates “equivalent living conditions” for persons in all regions. This implies a “value parity of living conditions which also considers structural differences of sub-areas” (Akademie für Raumforschung und Landesplanung 2005: 612). The aim of this legislation is an adequate accommodation of the population in all areas of life and an infrastructure that corresponds to the needs of the population.

The world economy is just coming out of the Great Recession, the worst economic crisis since the World Depression of the late 1920/early 1930s. Its aftermath has been a series of financial crises around the globe and shouldered governments with high levels of debt. The political response has largely focused on austerity measures that leave little room for social engineering. In the United States, for example, the strategy for reducing welfare rolls favored work-first over empowering poor people through better human capital and work-readiness training. The debt levels of many countries makes investments in human capital even less likely today. Thus, there is little prospect for reducing poverty in the Delta through development efforts that could also attract new in-migration. The future of the Texas Borderland
is closely tied to the integration of the border regions of the United States and Mexico, and that dynamic makes a continuation of population growth in the Borderland probable.

In Germany, the Great Recession was less severe. Cooperation between the government, labor unions, and the private sector made it possible to design labor market measures (e.g., Kurzarbeit [reduced work hours at less than equivalently reduced wages]) that buffered the increase in unemployment. Moreover, financial restrictions for buying real estate in Germany prevented a housing crisis as it existed in the United States. In Germany, people did not lose their homes due to foreclosure at nearly the rate existing in the United States; thus, German consumers were not burdened with as much debt as were their U.S. counterparts. But, as we pointed out above, the discussion about the German Border Region refers less to poverty – although it is one of the highest poverty regions in the country – but more to population loss resulting from both natural decrease and net out-migration. The core question in this debate is which future perspectives exist for peripheral areas in Germany in which ensuring a basic provision of infrastructure as well as a basic range of services for the public encounters many problems. As Hahne and Stieglke (2013: 33) note, the expected socioeconomic and demographic development in Germany (as well as in Europe) is likely to lead to a further polarization of the living conditions among regions. Thus, regional equivalency remains one of the key concerns for German policy makers in the future.

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