This research analyzed 2007 to 2010 data from the Pennsylvania Department of Community and Economic Development’s (DCED) Survey of Financial Condition (SOFC) to identify municipalities experiencing the symptoms of financial distress.

The researchers collected socio-demographic, economic, and financial data on all 2,562 cities, boroughs and townships in Pennsylvania and defined a symptom of financial distress as any “yes” answer on the SOFC form, if the question matched the criteria of financial distress established by the Municipalities Financial Recovery Act of 1987 (53 P.S. §§ 11701.101 to 11701.501 and all amendments), also known as Act 47. The researchers controlled for a municipality’s status as rural or urban and its type as a city, borough, township of the first class or township of the second class.

The research identified 321 (13 percent) Pennsylvania municipalities experiencing the symptoms of financial distress. Forty-eight percent of cities, about 13 percent of boroughs, 11 percent of townships of the first class, and 11 percent of townships of the second class were experiencing symptoms of financial distress.

Fewer rural Pennsylvania municipalities were experiencing the symptoms of financial distress than urban Pennsylvania municipalities.

Among all municipalities, the frequency of distress increased from 2007 to 2010. In general, the symptoms impacted approximately 2.1 million people, 268,840 of whom lived in rural municipalities.

The most common reason for a municipality answering yes to a SOFC question, regardless of the type of municipality, was an excess of expenditures over revenues for 3 or more years. Accumulated deficits of 5 percent or more for 2 consecutive years were also very common. Rural municipalities were responsible for most of the missed payrolls, failed attempts to negotiate large claims, and bankruptcy filings. Urban municipalities were responsible for nearly all of the unfunded pension obligations and bond defaults.

The researchers developed profiles of rural and urban municipalities experiencing the symptoms of distress. Rural municipalities experiencing the symptoms of financial distress were characterized by populations with lower percentages of poverty and higher percentages of people with college degrees than rural municipalities not experiencing the symptoms of distress. Urban municipalities experiencing the symptoms of financial distress were characterized by populations with higher percentages of poverty and minorities, and lower percentages of people with college degrees than urban municipalities not experiencing the symptoms of distress.

The municipalities experiencing the most symptoms of distress were clustered in the northeast and southwest regions of the state. This distress was likely caused by the migration of the coal and steel industries from these regions several decades ago. The commonwealth’s early warning system encourages collaboration, but it will be interesting to see whether the efforts of individual municipalities can mitigate the chronic symptoms of financial distress found in these regions, since the remedies for long-term, structural distress usually require significant, new, economic development efforts.

Financial distress at the municipal level is an intergovernmental problem. It can make state government unstable by threatening its bond-ratings, and putting pressure on it to deliver public services if the distressed municipalities become unable to do so. Municipal financial distress can also impair the willingness of new businesses to move into the area. State government can play an important role in preventing, detecting, and mitigating the symptoms of financial distress in municipalities, but only if it is aware of the symptoms.
Introduction

The Municipalities Financial Recovery Act of 1987 (53 P.S. §§ 11701.101 to 11701.501 and all amendments), also known as the Financially Distressed Municipalities Act and Act 47, states that a key public policy of Pennsylvania is to foster the financial stability of municipal governments so that they may provide public health, safety and welfare to the people living in the commonwealth (Pennsylvania Department of Community and Economic Development, 2001). In Pennsylvania, municipalities are the key providers of public safety, water, sewer, streets, parks, and recreation (Patrick and Trussel, 2011; Trussel and Patrick, 2009); however, they can provide these important public services only if they avoid financial distress (Honadle, Costa and Cigler, 2004).

State governments can play an active role in helping municipalities prevent, detect and mitigate financial distress (Honadle, 2003). Pennsylvania’s role in addressing financial distress is formalized in Act 47 (Pennsylvania Department of Community and Economic Development, 2001). Act 47 charges the Department of Community and Economic Development (DCED) with the responsibility of assisting municipalities experiencing the symptoms of financial distress and divides that responsibility into two key areas. The first is assisting municipalities with formal designations of distress. The second is administering an early intervention program to help municipalities avoid formal designations of distress by helping them to reduce the symptoms.

Both processes begin with the annual Survey of Financial Condition (SOFC). Act 47 requires each municipality to file an annual SOFC with DCED. The SOFC contains a series of questions that match the 11 criteria of financial distress established by Act 47 (DCED, 2001). The SOFC enables DCED to monitor the financial conditions of municipalities. If a municipality answers “yes” to any question on the SOFC form, DCED will review that municipality to determine if the municipality needs assistance to correct a minor fiscal problem or whether the municipality is experiencing a financial emergency (DCED, 2001).

Act 47 empowers DCED to designate any municipality that answers “yes” to any question on the SOFC as distressed, but formal designations of distress are rarely initiated by DCED, as municipalities experiencing serious or prolonged symptoms of distress usually apply for formal designations of distress under Act 47. If granted, the formal designation of distress results in the development of a long-term plan to mitigate the distress and priority status in the administration of certain commonwealth programs (DCED, 2001). The plan can be developed by the municipality or a coordinator, depending on the circumstances, and typically includes projections of revenues and expenditures, and strategies for satisfying existing liabilities, reducing fund deficits, restoring money from accounts used for other purposes, and balancing the budget (DCED, 2001). The plan can also suggest changes in accounting practices, special audits, changes in ordinances or staffing, the outsourcing of services, and consolidations or mergers. The plan should address issues capable of mitigating the symptoms of distress.

Municipalities with formal designations of distress are given priority status in the commonwealth’s economic and development programs. Formal designations of distress also entitle municipalities to the rapid distribution of funds by other commonwealth agencies and the right to participate in the emergency financial aid programs administered by DCED. The legislature initially appropriated $4.5 million for emergency grants, interest-free loans, and the cost of Act 47 coordinators in municipalities with formal designations of distress (DCED, 2001). However, annual appropriations since then have ranged from about $1 million in years 2008 through 2011 to $12 million in 2012 (F. Reddig, personal communication, January 12, 2013).

DCED also administers an early intervention program under Act 47. The purpose of the early intervention program is to address the symptoms of distress before they create a financial emergency (DCED, 2009). DCED uses SOFC data, financial reports, and other information to monitor municipalities for the early symptoms of distress. DCED monitors the financial condition of municipalities, but does not use this information to deem municipalities as being “at risk” of financial distress. Municipalities wishing to participate in the early intervention program must apply and every municipality is eligible for consideration.

Municipalities that participate in the early intervention program are eligible for grants of up to $100,000 that may be used to hire an independent consultant to develop a 3- to 5-year plan to mitigate the symptoms of financial distress (DCED, 2009). The consultant’s plan should provide a trend analysis of revenues and expenditures; a trend analysis of economic, socio-economic and demographic data; an emergency plan for the current year, if necessary; an audit of any proposed managerial and technological changes; a schedule for public comment; and a plan for implementation (DCED, 2009). DCED evaluates applications based on the extent to which the plans are likely to improve the finan-
cial condition and administrative capacity of the municipalities (DCED, 2009). DCED considers the financial, economic, and demographic condition of the municipalities, as well as the extent to which the plans propose to use intra-governmental and regional cooperation to deliver public services. DCED also looks for adherence to the Keystone Principles and Criteria for Growth, Investment and Resource Conservation, more commonly called the Keystone Principles (DCED, 2009).

Municipalities applying for the early intervention program follow the normal procurement process for professional services to select consultants, but DCED must approve the final consultant (DCED, 2009). Historically, DCED has received $750,000 a year for early intervention program grants; however, the amount was increased to $1,785,000 in 2012 (F. Reddig, personal communication, January 12, 2013). Municipalities must match half the funds, but DCED can reduce the match for municipalities experiencing extreme symptoms of distress and those pursuing consolidations or mergers (DCED, 2009). DCED looks at the number of affirmative answers on the SOFC to determine if a municipality’s symptoms warrant a reduction in matching funds (DCED, 2009).

This study analyzed SOFC data from 2007 to 2010 to identify the extent, type, and characteristics of rural and urban municipalities experiencing the symptoms of financial distress. The researchers defined a symptom of financial distress as any affirmative answer on the SOFC, if the question matched the criteria of distress established by Act 47.

This study is important because the symptoms of financial distress are on the rise. In October 2011, Governor Corbett declared that a fiscal emergency existed in the City of Harrisburg (Roberts, 2011). The City of Harrisburg became formally distressed under Act 47 in December 2010 (DCED, 2012). Other recently distressed cities include Pittsburgh (2003), Nanticoke (2006), New Castle (2007), Reading (2009), and Altoona (2012). As of 2012, there were 13 cities with formal distress designations (DCED, 2012). The City of Jeannette was not formally distressed, but was struggling to meet its pension obligations (Gazarik, 2012). DCED does not publicize the municipalities participating in the early intervention program, but the increase in the number of formal declarations suggests that the number of municipalities experiencing the symptoms of distress also may be on the rise.

Financial distress in municipalities is an intergovernmental problem (Honadle, 2003; Kloha, Weissert and Kleine, 2005b). It can make state governments unstable by threatening their bond-ratings, and putting pressure on them to help deliver services when municipalities can no longer do so (CRCM, 2000; Honadle, 2003). Municipal financial distress can also impair the willingness of businesses to move into local areas, since business decisions are often based on local taxes, services, infrastructure, and fees (Honadle, 2003). Intervention by state governments during the early stages of financial distress is important because it is less costly than intervention at the later stages, and anything that affects the health and welfare of the people living within a state is a concern of the state (Honadle, 2003). For these reasons, state governments should be proactive in preventing, detecting and mitigating financial distress at the municipal level (Honadle, 2003; Kloha et al., 2005b).

**Goals and Methodology**

This research, conducted in 2012, identified the extent, type, and characteristics of rural and urban municipalities experiencing the symptoms of financial distress from 2007 to 2010. The researchers developed indicators of financial distress in three categories: socio-demographic, economic, and financial. They computed descriptive statistics such as the mean values of the socio-demographic, economic, and financial indicators for rural and urban municipalities, partitioned by type, where the mean is the average value of the data. The researchers calculated statistics for rural and urban municipalities across the socio-demographic, economic, and financial indicators, partitioned by type of municipality, and compared how the profiles of the rural and urban municipalities experiencing symptoms of financial distress differed from those that were not experiencing distress.

**Symptoms of Financial Distress**

A municipality is said to be experiencing the symptoms of financial distress when it experiences financial problems. However, researchers have been unable to establish a single definition of financial distress because municipalities usually differ by tax base, population, demographic characteristics, and service delivery (Cahill et al., 1994; CRCM, 2000). Also, financial distress usually occurs gradually and exists on a continuum (Cahill et al., 1994). Municipalities move in and out of distress and some municipalities are more distressed than others (Cahill et al., 1994; CRCM, 2000).

Researchers are also unable to agree upon the symptoms. Some researchers measure financial distress as the presence of persistent budget deficits (Trussel and
Patrick 2009, 2012) or as significant reductions in public service expenditures (Patrick and Trussel, 2011), while others measure it as a deterioration of the tax base, a decline in infrastructure assets, bond defaults, downgrades in bond-ratings, and the need for financial assistance (CRCM, 2000).

In Pennsylvania, the definition of financial distress is simplified by Act 47, which establishes 11 criteria as the symptoms of financial distress. Three of the criteria measure the breadth and depth of a municipality’s deficits, where a deficit is defined as an excess of expenditures over revenues. Some of the criteria measure whether a municipality has missed important payments, such as payrolls, rental payments, principal or interest payments on bonds, or payments to creditors, while other criteria look at whether the municipality has failed to remit payroll taxes or fund the municipality’s pension plan. A few criteria measure whether the municipality has unsuccessfully sought to adjust a large claim, filed a plan under Chapter 9 of the Bankruptcy Code, or decreased public services. The SOFC questions match the criteria established by Act 47 to identify the symptoms of distress and are listed in Table 1.

DCED uses SOFC data to monitor the financial condition of Pennsylvania municipalities. Act 47 allows DCED to declare a municipality as financially distressed if it answers yes to any question on the SOFC. Accordingly, the researchers obtained SOFC data for 2007 through 2010 and deemed a municipality as experiencing the symptoms of financial distress if it answered yes to any question on the SOFC and the question met the criteria of Act 47.

Indicators of Financial Distress
The researchers assumed that the financial condition of a municipality is a function of the needs and resources of the people it serves and the financial resources of the municipality, where the needs of the people are reflected in the type of services they need, the resources of the people are reflected in their ability to pay for those services, and the financial resources of a municipality are reflected in its ability to finance public services (CBO, 1978; CRCM, 2000).

Working on these assumptions, the researchers used socio-demographic indicators to proxy the needs of the people, economic indicators to proxy the resources of the people, and financial indicators to proxy the resources of the municipalities. The indicators are described below.

Socio-Demographic Indicators
The researchers used socio-demographic indicators, including population, the percentage of elderly, the percentage of poverty, the percentage of minorities, and the percentage of people with college degrees to proxy the needs of people. The socio-demographic indicators are described below.

Population. The population of a municipality is highly correlated with its revenues and is often used to

<table>
<thead>
<tr>
<th>Table 1: The Survey of Financial Condition Questions</th>
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<tbody>
<tr>
<td>Question 1: Has your municipality maintained a deficit over a 3-year period, with a deficit of 1% or more in each of the previous fiscal years?</td>
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<tr>
<td>Question 2: Have your municipality’s expenditures exceeded revenues for a period of 3 years or more?</td>
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<td>Question 3: Has your municipality defaulted in payment of principal or interest on any of its bonds or notes or in payment of rentals due any authority?</td>
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<td>Question 4: Has your municipality missed a payroll for 30 days?</td>
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<td>Question 5: Has your municipality failed to make required payments to judgment creditors for 30 days beyond the date of the recording of the judgment?</td>
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<td>Question 6: Has your municipality, for a period of at least 30 days beyond the due date, failed to forward taxes withheld on the income of employees or failed to transfer employer or employee contributions to social security?</td>
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<td>Question 7: Has your municipality accumulated and operated for each of 2 successive years a deficit equal to 5 percent or more of its revenue?</td>
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<td>Question 8: Has your municipality failed to make the budgeted payment of its minimum obligation as required by Section 302 of the Act of December 18, 1984, known as the Municipal Pension Fund Act, during the fiscal year for which the payment was budgeted and failed to take action within that time period to make required payments?</td>
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<tr>
<td>Question 9: Has your municipality sought to negotiate resolution or adjustment of a claim in excess of 30 percent against a fund or budget and failed to reach an agreement with creditors?</td>
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<tr>
<td>Question 10: Has your municipality filed a municipal debt readjustment plan pursuant to Chapter 9 of the Bankruptcy Code?</td>
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<tr>
<td>Question 11a: Was your municipality at the maximum general purpose real estate tax limit as of the last municipal fiscal year?</td>
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<tr>
<td>Question 11b: If yes, have you reduced police, highway or other services this fiscal year because of your inability to raise general purpose real estate taxes?</td>
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proxy a municipality’s size (Trussel and Patrick, 2009). Damanpour (1991) found that larger organizations have better access to resources, information and innovations. While the resources of large municipalities may help them avoid financial distress, PEL (2007) and the U.S. Advisory Commission on Intergovernmental Relations, or ACIR, (1985) found that larger, older, industrialized municipalities in Pennsylvania were more likely to be distressed. In fact, many of the distressed municipalities in Pennsylvania are cities with large populations (DCED, 2012). These municipalities have large populations, but they also have higher population densities, more brownfields, higher percentages of people in poverty, and higher percentages of minorities than their smaller counterparts (Brookings, 2003). The researchers measured population as the annual counts of people in the municipalities, obtained from the 2010 Census.

**Percentage of Elderly.** Elderly adults tend to have higher demands for public services than other age groups (Choi et al., 2010; Peterson, 1981). They depend more on public health and human services, public transportation, and public safety. Many times they are unable to pay the costs associated with the services they need, so the services are provided by or subsidized by a municipal government. Research suggests that municipalities serving populations with higher proportions of elderly people have higher rates of financial distress (Howell and Stamm, 1979; Nathan and Adams, 1976; Wood, 2005). The researchers measured elderly populations as the 2005-09 American Community Survey (ACS) estimates of the percentage of people over age 64 in municipalities.

**Percentage of Poverty.** People living in poverty typically need more public services (CBO, 1978; Howell and Stamm, 1979; Nathan and Adams, 1976; Wood, 2005). Impoverished people tend to live in communities with higher rates of crime, more substandard housing, more juvenile delinquency, more lower-skilled workers, and higher rates of joblessness (CBO, 1978). These populations rely heavily on public transportation, law enforcement, emergency medical services and judicial systems (CBO, 1978; Maher and Deller, 2009). Municipal governments are often the key providers of these services. Evidence suggests that municipalities serving communities with higher percentages of poverty have higher rates of financial distress (CBO, 1978; Howell and Stamm, 1979; Nathan and Adams, 1976; Wood, 2005). The researchers measured poverty as the 2005-09 ACS estimates of the percentage of people in municipalities at or below the poverty-level.

**Percentage of Minorities.** Nationwide research of municipal governments from 1960 through 2000 indicated that race is the strongest predictor of financial distress (Wood, 2005). Minority populations tend to have limited employment opportunities, limited educational opportunities, and higher needs for public services (Schiller, 1995; Wood, 2005). The U.S. Department of Labor (2010) reported that minorities have had consistently higher rates of unemployment than their white counterparts since 1975. The unemployment rates for black men and women in 2010, for example, were approximately 18 percent compared to about 10 percent for white men and 8 percent for white women (U.S. Department of Labor, 2010). Municipalities that serve minority populations have persistently higher rates of financial distress (Howell and Stamm, 1979; Wood, 2005). The researchers measured minorities as the 2005-09 ACS estimates of the percentage of people in municipalities who claim to be non-white.

**Percentage with College Degrees.** People with 4-year college degrees tend to have more employment opportunities, higher incomes, and lower demands for public services (CBO, 1978; Nathan and Adams, 1976; Wood, 2005). People with at least a bachelor’s degree usually work in services and professional industries, and the percentage of these industries is correlated with lower rates of financial distress (Wood, 2005). Municipalities serving communities with higher proportions of people with college degrees have lower rates of financial distress (CBO, 1978; Nathan and Adams, 1976; Wood, 2005). The researchers used the 2005-09 ACS estimates of the percentage of people in municipalities with at least a bachelor’s degree or higher.

**Economic Indicators**

The researchers used economic indicators such as household income, property values, market values per capita, unemployment rates, and population growth rates to proxy the resources of the people. The economic indicators are described below.

**Household Income.** Household income is a key source of municipal revenue and a widely accepted measure of economic prosperity (PEL, 2007). Research suggests that municipalities serving people with higher household incomes are less likely to be financially distressed (Maher and Deller, 2009; PEL, 2007; Stonecash and McAfee, 1981). The researchers measured household income as the 2005-09 ACS estimates of the median household income of households in municipalities.

**Property Values.** Property tax revenue is the foundation of the tax base in many municipalities (PEL, 2007). Higher property values mean higher taxes for
people and more revenue for municipalities (DeSanto et al., 1991). Property values have declined in many Pennsylvania cities and many of these cities are experiencing financial distress (PEL, 2007). The researchers measured property values two ways. First, they used market values per capita as the 2009 market values of all real property, as obtained from DCED, divided by the 2010 population of municipalities, obtained from the 2010 Census.

Unemployment Rates. Unemployment rates are directly associated with financial distress (Nathan and Adams, 1976; Howell and Stamm, 1979; Wood, 2005). Unemployment rates are also tied to low-income industries such as mining and agriculture, and to major plant closings and plant relocations (Wood, 2005). Unemployed people may be more likely than others to become temporarily delinquent in their tax payments to municipalities and may even have to leave the local area to find work (Wood, 2005). Unemployed people also may be more likely than others to temporarily rely on public goods and services (Woods, 2005). Unemployment rates are directly associated with financial distress throughout the nation (Wood, 2005). The researchers measured the rate of unemployment as the 2009 unemployment rates of the counties in which the municipalities were located, as obtained from the U.S. Department of Labor, divided by the population of the municipalities, as obtained from the 2010 Census.

Population Growth. Municipalities rely on their taxpayers for revenue and compete with other municipalities for taxpayers (CRCM, 2000). Municipalities attempt to attract high-income taxpayers to their areas with high quality public goods and services, low tax and crime rates, and attractive parks and recreation (CBO, 1978; CRCM, 2000). In Pennsylvania, cities tend to have trouble maintaining their populations while the rural townships of the second class tend to be growing (Brookings, 2003; PEL, 2007). Declining populations are more of a problem than growing populations because municipalities experiencing out-migration must usually provide the same level of services with less revenue (CRCM, 2000). This can put a financial strain on municipalities experiencing out-migration (CRCM, 2000). The researchers measured population growth as the percent change in municipal populations between 2000 and 2010, as obtained from the U.S. Census.

Financial Indicators
The researchers used financial indicators such as fiscal capacity, revenue per capita, debt per capita, taxes per capita, and tax effort to proxy the financial position of the municipalities. The financial indicators are described below.

Fiscal Capacity. Fiscal capacity is the ability of a municipality to generate revenue to meet operating expenditures, pay for planned capital projects, and deal with economic changes (Alter and McLaughlin, 1984). Honadle (1999) defines capacity as a municipality’s ability to provide public services and manage resources. Reid (1986) defines fiscal capacity as a municipality’s ability to operate without intergovernmental revenue. As the Congressional Budget Office (1978) notes, rising expenditures and increasing demands for public services are not a problem if the municipality can finance those services. This makes fiscal capacity a key factor in assessing a municipality’s ability to finance public services.

Previous research has attempted to proxy fiscal capacity with a variety of measures. DCED (2011) measures fiscal capacity as the assessed value of real property per capita and suggests that fiscal capacity is a measure of a municipality’s fiscal health. DeSanto et al. (1991) and the Pennsylvania Economy League (PEL, 2007) link declines in the assessed value of real property to financial distress in Pennsylvania municipalities. Using DCED’s (2011) definition of fiscal capacity, the researchers measured assessed value as the 2009 assessed value of real property, obtained from DCED, divided by the population, obtained from the 2010 Census.

Revenue per Capita. DCED (2011) measures revenue per capita as total operating revenue divided by population and suggests that revenue per capita can be used to assess the strength of a municipality’s tax base. DCED holds that revenue per capita reflects changes in tax rates, fee structures, and shifts in revenue sources. DCED (2011) warns that municipalities with decreasing revenue per capita need to find alternative sources of revenue, if they wish to maintain their current level of services. Otherwise, the decreasing revenues could lead to financial distress or a reduction in services. The researchers measured revenue per capita as total operating revenues in 2009, obtained from DCED, divided by the population, obtained from the 2010 Census.

Debt per Capita. Debt is the single most important determinant of financial distress (Trussel and Patrick, 2009). The excessive use of debt can cause municipalities to divert revenues from important public programs and services to debt service (Trussel and Patrick, 2009).
Debt is a fixed cost that can result in cash flow problems and insolvency, if used in excess (DCED, 2011). The researchers measured debt per capita as total liabilities in 2009, obtained from DCED, divided by the population, obtained from the 2010 Census.

_Taxes per Capita_. Municipalities rely heavily on taxes to finance their operations (DCED, 2011). Taxes tend to be the single largest source of revenues for many Pennsylvania municipalities (DCED, 2011). When populations or property values decline, tax revenues also usually decline and this could result in financial distress (DCED, 2011). The researchers measured taxes per capita as total revenues derived from taxes in 2009, obtained from DCED, divided by the population, obtained from the 2010 Census.

_Tax Effort_. Tax effort is the ability of a municipality to raise the funds needed to provide public services (PEL, 2007). Tax effort is a measure of self-reliance and independence from intergovernmental revenue (PEL 2007). ACIR (1973) measures tax effort as the percentage of a municipality’s own-source revenues to total revenues. Researchers have used a variety of indicators to proxy tax effort (CBO, 1978; PEL, 2007; Stonecash and McAfee, 1981). For this study, the researchers measured tax effort as the complement of the 2009 percentage of revenues received from other governments to total revenues, as obtained from DCED.

**Data Sources**

DCED annually collects SOFC data from every municipality on Form DCED-CLGS-69. The researchers obtained this data for 2007 through 2010 and used it to identify municipalities experiencing the symptoms of financial distress. The researchers classified a municipality as experiencing the symptoms of financial distress if it answered yes to any question on the SOFC and the question met the criteria of Act 47.

The researchers obtained estimated socio-demographic and economic data from the American Community Survey (ACS) for 2009. The ACS compiles estimates of 2009, using data from 2005 to 2009. The researchers used the 2005-09 ACS data because they best reflect the conditions experienced by municipalities during the study period. The researchers obtained population data from the U.S. Census Bureau for 2000 through 2010 and unemployment rates from the U.S. Department of Labor for 2009.

DCED annually collects Audit and Financial Reports on Form DCED-CLGS-30 from every municipality. These reports contain annual revenue, expenditure and long-term debt information about each municipality. The researchers obtained this financial data for the year ending December 31, 2009. The researchers did not adjust the data for inflation because such adjustments would not impact the overall results.

**Municipalities in the Study**

The U.S. Census Bureau collects a Census of Local Governments every 5 years and a sample of governments in the other years. The researchers obtained a census of Pennsylvania municipalities from the U.S. Census Bureau databases for 2007 through 2010. The Census data included all the cities, boroughs, town, and townships in Pennsylvania. After the researchers adjusted the data for duplicate municipalities, the data consisted of 56 cities, 959 boroughs, 92 townships of the first class and 1,455 townships of the second class for a total of 2,562 municipalities. The researchers included every municipality in the study, but not all municipalities had complete data and the researchers did not replace any of the missing data.

The U.S. Census Bureau classifies counties as non-municipal local governments, so the researchers excluded counties. The researchers coded Bloomsburg, the commonwealth’s only town, as a borough. The researchers referred to all the cities, boroughs, and townships as “municipalities” in the study.

The researchers controlled for differences in the municipalities by type. A municipality’s type, such as city, borough, or township, reflected its population density, the historical circumstances surrounding its designation, and the type of services it provided (PEL, 2007). Its type also reflected how the municipality was incorporated, how it governed, and how its tax revenues were regulated (PEL, 2007). Classifying municipalities by type helped to establish benchmarks to assess financial distress (CRCM, 2000).

The researchers controlled for a municipality’s status as rural or urban. Using the Center for Rural Pennsylvania’s definition of rural, the researchers classified any municipality with a population density of less than 284 people per square mile or a total population of less than 2,500 people, unless more than 50 percent of the people lived in an urbanized area, as rural. The researchers classified all other municipalities as urban.

The distinction between rural and urban is important because, historically, financial distress was an urban problem (CBO, 1978). Today, the evidence is mixed. For example, Wood (2005) found rural municipalities in Pennsylvania’s Appalachian corridor were distressed. These rural municipalities, which were distant from
social and economic opportunities, tended to attract people without college degrees and lose their working-aged and better-educated populations through out-migration (Wood 2005). PEL (2007) also found many of Pennsylvania’s rural municipalities in distress. Specifically, PEL (2007) found rural townships of the second class, with large tracts of forest land, in north central Pennsylvania to be the most distressed. These findings suggest that distress is no longer just an urban problem. Rural areas are also suffering from the symptoms of financial distress (PEL, 2007; Wood, 2005).

Data Analysis

The researchers performed statistical analyses on the socio-demographic, economic, and financial indicators to distinguish between the urban and rural municipalities experiencing distress and those not experiencing financial distress. The researchers compared the profiles of the rural and urban municipalities experiencing the symptoms of financial distress with their non-distressed counterparts.

Results

Municipalities Experiencing the Symptoms of Financial Distress

According to the research findings, 321 municipalities were experiencing the symptoms of financial distress during the study period, and 148 of those municipalities were rural. The population in these municipalities totaled 2,090,331, 268,840 (13 percent) of whom lived in rural municipalities.

Panel A of Table 2 shows the municipalities partitioned by their type and rural/urban status. In general, about 2 percent were cities, 4 percent were first class townships, 37 percent were boroughs, and 57 percent were second class townships. Sixty-two percent of the municipalities were rural.

Panel B of Table 2 shows urban and rural municipalities partitioned by whether or not they were experiencing the symptoms of financial distress. Panel B of Table 2 shows that about 13 percent of municipalities were experiencing the symptoms of financial distress, with cities experiencing the highest rate of distress at about 48 percent. The other types of municipalities were experiencing the symptoms of financial distress at much smaller proportions than cities. For example, about 11 percent of first class townships, 13 percent of boroughs, and 11 percent of second class townships were experiencing the symptoms of distress.

Panel B of Table 2 shows that about 9 percent of rural and 18 percent of urban municipalities were experiencing the symptoms of financial distress. Except for the two rural cities and one rural first class township, which did not report any symptoms of distress, rural boroughs and rural second class townships were reporting rates of distress of about 8 percent and 10 percent, respectively. About 50 percent of urban cities, 11 percent of urban first class townships, 16 percent of urban boroughs, and 18 percent of urban second class townships were experiencing symptoms of distress. These findings show that both rural and urban municipalities were experiencing symptoms of distress, but urban municipalities were experiencing symptoms of distress at about twice the rate of their rural counterparts.

Table 3 shows the frequency of affirmative answers on the SOFC. The frequency of affirmative answers increased from 155 affirmative answers in 2007 to 286 affirmative answers in 2010. The question most frequently causing an affirmative answer was Question 2, which asked if expenditures exceeded revenues for a period of 3 years or more. Also answered with high frequency was Question 7, which asked if the municipality has had 2 consecutive years of deficits equal to 5 percent or more of revenues. Some of the other questions were also answered with high frequency. For example, Question 1 asked if the municipality had deficits
of at least 1 percent for 3 years. Question 11a asked if the municipality reached its maximum real estate tax rate. Questions 1, 2, 7 and 11a were most frequently answered in the affirmative.

Table 3 also shows the frequency of the affirmative answers on the SOFC by the municipalities’ rural or urban status. Rural municipalities were responsible for about 39 percent of all affirmative answers, including those for missed payrolls (Question 4) and failure to negotiate large claims (Question 9), and about 67 percent of the bankruptcy filings (Question 10). Almost all of the unfunded pension obligation (Question 8) and bond default (Question 3) questions were answered affirmatively by urban municipalities. These findings suggest that urban and rural municipalities were experiencing the symptoms of distress, but for different reasons.

Table 3 shows that municipalities experiencing the symptoms of distress answered affirmatively 857 times to the SOFC questions. Since only 321 municipalities reported 857 symptoms, the average municipality experienced more than one symptom of distress. Many cities answered yes to 10 or more questions.

Table 4 on Page 10 shows the frequency of municipalities experiencing the symptoms of financial distress by county. Forty-one percent of municipalities in urban Luzerne County, 39 percent of municipalities in rural Pike County, and 29 percent in rural Washington County were experiencing the symptoms of financial distress. Twenty-five percent of municipalities in urban Delaware and Lackawanna counties and rural Monroe County were experiencing the symptoms of distress. Cameron, Forest, Greene, Juniata, Mifflin, Philadelphia, Snyder, Sullivan and Union counties did not have any municipalities reporting the symptoms of distress. With the exception of Philadelphia, which is urban, these are some of the most rural counties in Pennsylvania.

ACIR (1985) asserts that the symptoms of financial distress can be caused by cyclical or structural forces. Cyclical forces are short-term conditions that correspond to swings in business cycles, whereas structural forces are long-term changes in the economy beyond the control of a municipality. ACIR asserts that municipalities can usually recover from short-term cyclical swings, but holds that the structural forces that create downturns in the economic tax bases of municipalities can be difficult to reverse. ACIR (1985) uses the decline in the steel industry in Pennsylvania to illustrate how long-term, structural distress can impact an entire region.

The researchers plotted the municipalities that reported the symptoms of financial distress on a map to see if they were clustered by geographic region. Figure 1 on Page 10 shows that municipalities reporting the most symptoms of distress were located in the northeast and southwest regions of Pennsylvania. Many of these municipalities became distressed in the mid-1980s, when the coal and steel industries moved out of these regions, and have remained distressed since (DCED, 2012). The distress experienced by these municipalities appears to support ACIR’s (1985) assertion that long-term, structural distress impacts broad geographic regions and is difficult to reverse.

Figure 1 plots the municipalities based on the number of times they answered yes to the SOFC questions. The municipalities that tended to answer yes to multiple questions were urban cities and boroughs throughout the state and rural second class townsips in Washington County.

### Table 3: Frequency of the Affirmative Answers on the Survey of Financial Condition

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This table shows the number of rural and urban municipalities that answered “Yes” to the questions on the SOFC. Rural is the number of rural municipalities that answered “Yes” to the indicated question on the SOFC. Urban is the number of urban municipalities that answered “Yes” to the indicated question on the SOFC. Percentage of Rural is the number of rural municipalities that answered “Yes” to the indicated question on the SOFC divided by the total number of municipalities that answered affirmatively to that question (e.g., the Pct. Rural for Question No. 1 is 58/161 = 36.0%). The list of SOFC questions can be found on Table 1.
Panels A through F of Table 5 display the descriptive statistics for the socio-demographic, economic, and financial indicators for rural and urban municipalities. The analysis compared rural and urban municipalities across the different types of municipalities. In general, the analysis showed that, across all indicators, rural and urban second class townships had lower percentages of elderly, poverty, and minorities than the other types of municipalities. Rural and urban second class townships also had higher percentages of people with college degrees, higher household incomes, higher property values, higher market values, and higher population growth rates than the other types. When comparing the socio-demographic indicators for all types of rural municipalities to all types of urban municipalities, the results indicated that rural municipalities were smaller and had about the same percentages of elderly and poverty, yet had smaller percentages of minorities and people with college degrees. Except for similar unemployment rates, rural municipalities had lower percentages for every economic and financial indicator than their urban counterparts.

Table 5 shows a comparison of municipality types by indicator to the average municipality of the same type and status. Rural and urban municipalities of every type can use these benchmarks to compare their results with other municipalities of the same type and status.
Profiles of Municipalities Experiencing Symptoms of Financial Distress

Table 6 on Page 13 compares the averages of all socio-demographic, economic, and financial characteristics of municipalities experiencing the symptoms of financial distress with those not experiencing the symptoms of distress by rural/urban status.

Socio-Demographic Profile of Financial Distress

Panel A of Table 6 displays the socio-demographic profile of urban and rural municipalities according to whether or not they were experiencing the symptoms of distress. Urban municipalities experiencing the symptoms of distress had larger populations, higher percentages of poverty and minorities, and lower percentages of elderly and people with college degrees than urban municipalities not experiencing the symptoms of distress. However, the only statistically significant differences in the averages between the two groups of urban municipalities were the percentages of poverty, minorities, and people with college degrees.

The socio-demographic profile of rural municipalities was different than their urban counterparts. Rural municipalities experiencing the symptoms of financial distress had larger populations and higher percentages of people with college degrees, but lower percentages of elderly, poverty, and minorities than rural municipalities not experiencing the symptoms of distress. However, only the differences for poverty and college degrees were statistically significant.

In summary, urban municipalities experiencing the symptoms of financial distress were characterized by populations with higher percentages of poverty and minorities, and...
lower percentages of people with college degrees. Rural municipalities experiencing the symptoms of financial distress were characterized by populations with lower percentages of poverty and higher percentages of people with college degrees.

Economic Profile of Financial Distress

Panel B of Table 6 displays the economic profile of urban and rural municipalities according to whether or not they were experiencing the symptoms of distress. Urban municipalities experiencing the symptoms of distress had lower household incomes, lower property values, lower market values, and lower population growth rates, but higher unemployment rates than urban municipalities not experiencing the symptoms of distress. All these factors, except population growth rates, had statistically significant different averages between the two groups of urban municipalities.

The economic profile of rural municipalities experiencing distress was different than their urban counterparts. Rural municipalities experiencing the symptoms of distress had higher household incomes, higher property values, higher market values, higher unemployment rates, and higher population growth rates than the rural municipalities not experiencing the symptoms of distress. However, only the differences for household incomes, property values, and unemployment rates were statistically significant between the two groups.

In summary, urban municipalities experiencing the symptoms of distress were characterized by lower household incomes, lower property values, lower market values, and higher unemployment rates. Rural municipalities experiencing the symptoms of distress were characterized by higher household incomes, higher property values, and higher unemployment rates.

Financial Profile of Financial Distress

Panel C of Table 6 displays the financial profile of urban and rural municipalities according to whether or not they were experiencing the symptoms of distress. Urban municipalities experiencing the symptoms of distress had lower assessed values (fiscal capacity), lower revenues per capita, lower debt per capita, higher taxes per capita, and lower taxes from their own sources (tax effort) than urban municipalities not experiencing the symptoms of distress. All the differences, except for debt per capita, were statistically significant between the two groups of urban municipalities.

The financial profile of rural municipalities experiencing the symptoms of distress was different than their urban counterparts. Rural municipalities experiencing the symptoms of distress had higher assessed values and tax efforts, but lower revenues per capita, debt per capita, and taxes per capita than rural municipalities not experiencing the symptoms of distress. However, none of the differences were statistically significant.

In summary, urban municipalities experiencing the symptoms of distress were characterized by lower assessed values, lower revenues per capita, lower taxes per capita, and lower tax efforts. The symptoms of financial distress in rural municipalities were not statistically associated with any financial indicator.
Accuracy of Self-Reported Financial Distress

DCED uses affirmative answers on the SOFC to identify the symptoms of financial distress. The researchers tested the efficacy of this approach, since research shows that municipalities tend to underreport the symptoms of distress (Honadle, 2003). To test the accuracy with which the municipalities reported the symptoms of distress, the researchers independently determined which municipalities met the criteria in Questions No. 1, 2 and 7 of the SOFC. The researchers chose these questions because they were quantifiable and the data were readily available.

Using financial data, the researchers determined the answers to Questions 1, 2 and 7 for a sample of municipalities. The results, displayed in Table 7, show that about 6 percent of urban and 4 percent of rural municipalities may have underreported the symptoms of distress. Only about 2 percent of urban and 1 percent of rural municipalities appeared to have over-reported the symptoms of distress. The researchers estimated that, altogether, about 5 percent of municipalities may have underreported and 1 percent of municipalities may have over-reported the symptoms of distress.

There are a number of reasons why municipalities...
may inaccurately report the symptoms of distress. Municipalities that understate the symptoms of distress may fear the negative ramifications of DCED or the public knowing they are experiencing the symptoms of distress. Municipalities that overstate the symptoms of distress may wish to reduce the required matching funds in the early warning program. Recall that DCED can use the number of affirmative answers on the SOFC to reduce matching funds. It is also possible that human error and different interpretations of the criteria are responsible for how the symptoms are reported.

CONCLUSIONS

Determining whether a municipality is experiencing the symptoms of financial distress is a complex matter. The symptoms of financial distress exist on a continuum and the symptoms are not a permanent condition (CRCM, 2000). Municipalities move in and out of financial distress, and some municipalities are more distressed than others (CRCM, 2000). The very nature of financial distress makes it difficult to identify and measure. The researchers classified a municipality as experiencing the symptoms of financial distress if it affirmatively answered any question on the SOFC, but the SOFC questions may not be equally relevant and a single affirmative answer may not warrant classifying a municipality as experiencing the symptoms of financial distress.

The researchers grounded their selection indicators on previous studies, but the selection of indicators was a problem because the field uses too many indicators, has never identified the most important indicators, and cannot agree upon the interpretation of the indicators (Cahill et al., 1994). These problems confounded the selection of the indicators.

The researchers attempted to determine the extent to which municipalities accurately reported the symptoms of distress and found the criteria established by Act 47 difficult to measure. For example, Question 1 asks if the municipality has had deficits for 3 years with a deficit of at least 1 percent in each of the previous years. Question 7 asks if the municipality has had a deficit of at least 5 percent of revenues for 2 consecutive years. The researchers found it difficult to understand and calculate the criteria.

One of the more interesting insights revealed by this study is that the municipalities experiencing financial distress in Pennsylvania tended to be clustered in the northeast and southwest regions of the state. According to ACIR (1985), these areas underwent long-term, structural, changes in their economic tax bases decades ago, when the coal and steel industries moved out of these areas. It is likely that these changes are responsible for the symptoms of distress that persist today. This study did not attempt to analyze financial distress by geographic region or to identify the underlying causes of distress. However, Figure 1 showed that the municipalities experiencing the most symptoms of distress were clustered in regions.

The clustering of financial distress in geographic regions presents an important question. If chronic distress is caused by long-term, structural shifts in regional economic development, as ACIR (1985) suggests, then it will be interesting to see if the early warning program can help remedy the underlying causes of this distress. The early intervention program upholds the Keystone Principles and encourages municipalities to engage in collaboration, but it is questionable whether a single municipality or even groups of municipalities can remedy the underlying causes of distress caused by the out-migration of entire industries from a region. This study did not attempt to evaluate the efficacy of the commonwealth’s early warning program, but the chronic symptoms of distress experienced by these municipalities may not be abated until new economic development opportunities move into these regions.

This study found municipalities across the entire commonwealth experiencing the symptoms of distress. These symptoms impacted 321 municipalities and more than 2.1 million people. People depend on their municipalities to provide vital public services. If the symptoms are left unmitigated, these municipalities may have to reduce their public services or look to the commonwealth to deliver them. Worse, these symptoms could impact the fiscal viability of the commonwealth. Municipal financial distress is a serious matter that can result in financial, economic, and social consequences for everyone involved. The commonwealth takes an active role to help prevent, detect, and mitigate the symptoms of municipal distress, but it may take more than the efforts of individual municipalities participating in the early warning program to reduce the symptoms of the long-term, structural, financial distress found in the northeast and southwest regions of the commonwealth.
References


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### The Center for Rural Pennsylvania Board of Directors

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The Center for Rural Pennsylvania is a bipartisan, bicameral legislative agency that serves as a resource for rural policy within the Pennsylvania General Assembly. It was created in 1987 under Act 16, the Rural Revitalization Act, to promote and sustain the vitality of Pennsylvania’s rural and small communities.

Information contained in this report does not necessarily reflect the views of individual board members or the Center for Rural Pennsylvania. For more information, contact the Center for Rural Pennsylvania, 625 Forster St., Room 902, Harrisburg, PA 17120, telephone (717) 787-9555, email: info@rural.palegislature.us, www.rural.palegislature.us.