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Educational Referendum Voting In Ohio Based On District Size, Socio-Economic Status, And Median Income

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EDUCATIONAL REFERENDUM VOTING IN OHIO BASED ON DISTRICT SIZE, SOCIO-ECONOMIC STATUS, AND MEDIAN INCOME

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ABSTRACT

The purpose of this study was to identify the successful tax levy votes for capital project referendums in Ohio over the past 17 elections and correlate those with the socio-economic level, median income, and district enrollment in which the votes took place. This will serve as a guide to predict what school districts in Indiana would have successful capital project referendum votes based on the Ohio results. The study used data provided directly from the Ohio Department of Education in regards to the levy votes and the poverty level of the school districts over the past 17 elections from school years spanning 2004-2009. Once data were compiled, a threshold was developed of the frequency of success rates of the votes relative to poverty level, median income, and enrollment.

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CHAPTER 1

INTRODUCTION

Horace Mann is considered the father of American education and saw the opportunity to learn as the great equalizer. Mann was credited as one of the original school reformers in the late 1830s (Mason-King, 2010). Mann's view on the necessity of equal education in terms of leveling societal structures is at the forefront of some of today's key educational questions. Schools in the United States clearly have been considered the great equalizer in terms of society and the differences experienced by people in America (Mason-King, 2010). One distinct difference is the socio-economic level of school districts in America; this topic became a critical piece in school assignments after a June 2007 ruling of the Supreme Court stating a school's families could not be assigned based on race (Taylor, 2007). The debate over socio-economic impact on education is not new but has been thrust into the educational cross-hairs after this historic ruling. Now school districts are looking at a division of educational communities based on poverty versus race.

The top award for an American school is titled a "Blue Ribbon" school by the U.S. Department of Education (2010). On Thursday, September 9, 2010, U.S. Secretary of Education Arne Duncan announced the nation's Blue Ribbon Schools for 2010. Schools are awarded a "Blue Ribbon" based on academic excellence, 314 nationwide. Of the 314 schools, 264 were public schools and 50 were private schools. Indiana was represented by only one

private school and no public schools, while Ohio had 18 total schools represented. Twelve of the schools were public and six were private. The public schools consisted of both charter and non-charter schools. Charter schools consisted of students who are selected for participation or had vouchers to attend the school from a traditionally geographically-assigned location in a public school boundary. The public schools lacked either socio-economic or demographic diversity and did not have voucher enrollments. When the awards were distributed in Washington, D.C., in November 2010, Ohio and Indiana did not qualify a single school that had a configuration of locked district enrollment (no external enrollments) for learning (U.S. Department of Education, 2010).

At-risk children continue to be a focus of the modern education system. *At-risk* is defined as a "characterization of person or property subject to unique jeopardy or threat, as in the case of youth *at-risk* for increased likelihood of delinquency due to home and environmental factors" ("At-risk," 2010, ¶ 1). One *at-risk* factor as identified by educational experts is socio-economic standing. Students who are impacted by poverty are less likely to achieve in the academic setting. Students in schools with poverty rates over 50% clearly show less academic achievement than schools that have higher socio-economic levels (Wake County Public School System, 1999). Students in economically disadvantaged schools who are below the poverty level do not out-perform the same disadvantaged student in a non-economically disadvantaged school (Wake County Public School System, 1999).

Socio-economic impact clearly changes the way schools approach teaching and learning on a daily basis. Communities struggle with the knowledge that disadvantaged children already are in need of education to propel themselves into desirable life outcomes. This knowledge clearly impacts the way people deal with the creation of learning environments in districts with

impoverished children and is clearly a byproduct of poverty (Wake County Public School System, 1999). Children without solid socio-economic standing face additional hardship if the school facility they are to be educated in does not meet a 21st century learning environment standard.

According to the Environmental Protection Agency (EPA), school facilities impact learning:

> High performance schools are facilities that improve the learning environment while saving energy, resources, and money. The key is in understanding the lifetime value of high performance schools and effectively managing priorities, time, and budget during the design and construction process. (EPA, 2010, ¶ 1)

Creating environments that are conducive for learning helps formulate a stronger educational basis for children at earlier ages. Students clearly can have the building blocks of a fundamental education put into place to assist in lifelong learning by an enhanced physical, educational environment (EPA, 2010).

High performance school refers to the intersection of the physical school facility and the school grounds coming together to create a distraction- and risk-free environment for learning (EPA, 2010). According to the EPA, good teachers and students who are motivated can overcome any learning environment, but in turn, attitude and performance are affected by the physical learning environment (EPA, 2010). Current and future school designs can be altered to reflect "smart" schools that are also high performance schools. All building systems must be optimized to create energy efficient, conducive learning centers. Heating, ventilation, air conditioning, and lighting come together in design and function to form a school of the future.

Without upgrades low performing students are continuously placed at an educational and environmental disadvantage that impacts learning (EPA, 2010).

The EPA (2010) stated that faltering buildings clearly have an impact on student attendance as air quality leads to asthma reactions and causes a decrease in average daily attendance. Statistics are staggering when presented by the EPA evaluating the effects of older facilities and the new, smarter facilities.

> A growing number of studies are confirming the relationship between a school's physical condition, especially its lighting and indoor air quality, and student performance. One recent study of school districts in California, Washington, and Colorado indicates a strong correlation between increased day lighting and improved student performance (EPA, 2010). In the California district, for example, students in classrooms with the most day lighting progressed 20% faster on math tests and 26% faster on reading tests in one year than those in classrooms with the least amount of daylight. This study confirms what teachers, students, and parents have known anecdotally for years: a better facility — one with appropriate acoustics, lighting, indoor air quality, and other high performance features — will enhance learning and may improve test results. (EPA, 2010, Higher Test Scores section, ¶1)

Learning is directly impacted by school facilities. It has been found that teachers perform less proficiently if they are not satisfied with their environment (Schneider, 2003). Our nation's school facilities are a critical part of the educational process. It is vital that the condition and upkeep of the schools are addressed regularly to ensure that a conducive working and learning environment is present. During a survey conducted in Washington, D.C., and Chicago, Illinois, it was found that teachers who ranked their school facilities below a mid-level

C on an A (highest) to F (lowest) satisfaction scale were likely to request transfer or consider leaving the teaching profession (Schneider, 2003). Again indoor air quality, thermal comfort, and lighting played a role as negatively impacting the continual dissatisfaction of the teachers. The impact of teacher turnover rate has been shown to negatively impact student learning and performance (Schneider, 2003).

Teachers are the number one factor in student performance (Wong, 2005). If teacher performance increases, then the greatest impact on student achievement is possible. This supersedes race and poverty indicators for lack of success. Students who have several effective teachers in a row make dramatic achievement gains as compared to students who do not have effective teachers (Wong, 2005). The first factor in helping educators move towards success as an individual is the school environment, the physical environment factors directly into this equation. Buildings and the functionality of school settings impact teacher performance (Wong, 2005).

> Established in 1997, the Ohio School Facilities Commission administers the state's comprehensive Kindergarten through 12th grade public school construction program. The agency helps school districts fund, plan, design, and build or renovate schools. Teachers and students find it easier to focus on education when their environment is comfortable and flexible, and their classrooms have good lighting and adequate storage space. Today's educational requirements also demand that classrooms be wired for multiple computers and visual education equipment. Schools of the 21st century must be responsive to the needs of modern education methods. While bricks and mortar are only one part of learning, a quality educational facility plays a positive role in children's lives and futures. (Ohio School Facilities Commission, 2008, p. 2)

Referendums in Ohio are used for multiple purposes (Ohio Department of Education, 2010). New construction is crucial to developing the 21st century learning environment necessary for student success. If new construction is not a possibility for a community, then improvements to existing facilities can be made via a tax referendum as well. Referendum levy reviewed in this study include: a) Permanent Improvement, b) Replacement Permanent Improvement, c) Building Assistance Issues, d) Bonding Issues, e) Bond Issue Combination, and f) Bond Issue and Income Tax. These titles are the definitions of tax levies used by the state of Ohio to encompass improvements, additions, or new construction when dealing with school buildings (Ohio Department of Education, 2010).

Schools must sell bonds to cover the cost of construction if cash on hand is not readily available. School funding formulas for bonding capacity center on the assessed value of a district and the amount of debt that the entity can bond out to banks or holding units. In Indiana, the bonding capacity of a school district is commonly shown as 2% of one-third the assessed value of the corporation. Communities must vote on the taxing levies over $2 million dollars in Indiana after current legislation was passed (Department of Local Government Finance [DLGF], 2010).

The history of school building construction in Indiana has been a steady process for more than 100 years. Individual school districts could raise and lower tax levy via an established process within a community including the approval of the department of local government finance in order to create funding for building projects (Taxation, 2006). A base tax levy, referred to in this study as a tax levy, is defined as the total dollar amount of the property tax levied by a school corporation for the school corporation's general fund (Referendum Tax Levy, 2010). Prior to July 1, 2008, the DLGF reviewed the school

corporation's plan, gauging the amount of non-traditional classroom space, degree of community support, district graduation rates, ISTEP+ scores, and steps to reduce costs. A change occurred after July 1, 2008, in which school corporations must pass a referendum vote to obtain an increased tax levy on building projects over $10 million on the elementary level and $20 million on high school construction. This change was empowered by House Enrolled Act 1001-2008. The system now in place to approve construction projects can be rooted in 1890's politics in neighboring states where referendum practice began clearly showing the connection between Indiana and Ohio referendum voting (DLGF, 2009a).

School systems currently process the need for environmental changes in terms of the physical structures to accommodate an increase in 21st century skill development (Partnership for 21st Century Learning, 2010). The 21st Century Skills initiative centers on the development of problem solving, critical thinking, and technology-based skills to enhance workplace readiness. School systems have encountered a need for flexible learning spaces in order to create educational opportunities, whereas other systems find that the age of buildings leads them to need new or renovated construction. The climate of Indiana and the scrutiny of school building projects is clearly cemented in the current political landscape. Legislation has been passed that moves Indiana from a remonstrance, one-to-one signature battle, to a ballot-based voting system or referendum. The move away from remonstrance to referendum leads school corporations to uncharted waters.

Statement of the Problem

Direct democracy, the idea that individual citizens vote on tax increases, is now the norm for Indiana schools to fund building projects in terms of the referendum voting process. School districts must muster campaigns in order to inform constituents and to push forward a

funding cause that they feel is in the best interest of the community and students. The issue is that community voting can be directly impacted by the socio-economic level of those who reside in a school jurisdiction. There exists a need to explore the relationship of a community's poverty rate to the likelihood of a referendum passing. This information would alert the superintendent and educational leadership of the district, to the necessity of the referendum vote, in terms of probability of passing in the district based on the poverty rate and the efforts needed to inform the community.

Purpose of the Study

The purpose of the study was to identify the socio-economic, median income and district enrollment size and how they impacted or did not impact the passing of capital project referendum rates in Ohio over the last five years and 17 elections. This was used in order to alert current Indiana superintendents in preparation for referendum voting campaigns they undertake in the school district they serve.

Research Questions

1. Is there a significant difference in the passing rates of school capital project referendums in Ohio school districts when examining the district socio-economic level?
2. Is there a significant difference in the passing rates of school capital project referendums in Ohio school districts when examining the median income of the district?
3. Is there a significant difference in the passing rates of school capital project referendums in Ohio school districts when examining the district enrollment size?
4. Is there a significant difference in the passing rates of school capital project

referendums in Ohio school districts when examining a combination of median income, district enrollment size, and district socio-economic level?

Null Hypotheses

$H_0$1: There is no significant difference in passing rates of capital projects referendums in Ohio when examining socio-economic rate of the districts.

$H_0$2**:** There is no significant difference in passing rates of capital projects referendums in Ohio when examining median income rate of the districts.

$H_0$3: There is no significant difference in passing rates of capital projects referendums in Ohio when examining district enrollment size.

$H_0$4: There is no significant difference in passing rates of capital projects referendums in Ohio when examining any combination of median income, district enrollment size, and district socio-economic level.

Definition of Terms

Assessed value refers to "the taxable value of land and improvements (i.e. buildings) for real property tax" (Ohio Department of Education, 2010, ¶ 1).

At-risk is the characterization "of person or property subject to unique jeopardy or threat, as in the case of youth 'at-risk' for increased likelihood of academic failure due to home and environmental factors" ("At-risk," 2010, ¶ 1).

"Average daily membership (ADM) is calculated by dividing the total aggregate membership of the first full week of school in October, by the number of days in the week that the school is open for instruction" (Ohio Department of Education, 2010, ¶ 1).

Aggregate membership is "the sum of aggregate attendance plus authorized absences. This number includes students in grades 1-12, kindergarten, special and vocational education

students as well as students attending joint vocational schools (JVS), community schools and those participating in open enrollment programs" (Ohio Laws and Rules, 2007, p. 1).

"Base tax levy is the total dollar amount of the property tax dollars levied by a school corporation for the school corporation's general fund for taxes collectible" (Ohio Department of Education, 2010, p. 1).

Blue Ribbon Schools are schools chosen by the U.S. Department of Education as high performing based on state assessment indicators.

Bond levy/levies are used for the construction and maintenance of capital property by school corporations.

Construction tax vote is a referendum vote taken to build or make improvements to current building structures.

Free and reduced lunch program refers to a federally-funded program providing lunch opportunities for students at a free or reduced price based on family income levels.

High performing school refers to the intersection of the physical school facility and the school grounds coming together to create a distraction- and risk-free environment for learning.

Market value refers to the value of real property determined by its price on an open market.

Median income is the income per state tax return filed by the residents of school districts.

Poverty, as defined by the U.S. Census Bureau, uses family income, family size, and composition to determine who is in poverty. "If a family's total income is less than the family's threshold, then that family and every individual in it is considered in poverty" (U.S. Census Bureau, 2010, ¶ 1).

Referendum is a system of voting on legislation or taxes where proposed laws or tax increases are submitted to popular vote.

Remonstrance is the process of showing community decent in a public building process, has been replaced by the referendum vote.

Vote is to cast a ballot in an election.

Limitations

The findings were limited to the last 17 elections in Ohio, spanning five years (2005-2009). The limitation of calculation of election results was valid only if the current governmental system was agreed upon as an accurate method of voting collection. Other referendum votes that existed not related to building construction or renovation were not included in the study but may impact the outcome of the tax levy vote for construction projects.

Summary and Organization

This study is divided into five chapters. Chapter 1 provides an overview for the study including the problem, purpose, research questions, hypothesis, and related terms. This chapter also formulates the plan for the study. Chapter 2 provides a review of current educational trends with regard to building projects and related background information on direct democracy and referendum voting. Chapter 2 also provides a description of indicators of poverty impact on educational outcomes. Chapter 3 presents the research methods utilized. The selected method was identified to break down data and show relevance in statistical impact of the referendum voting. Chapter 4 presents the data as statistically evaluated via the research methods selected to answer the hypotheses in regards to the researched questions of chapter 1. Chapter 5 presents the results of the study in summary manner, conclusions, and a discussion of the implications of those findings.

CHAPTER 2

REVIEW OF THE LITERATURE

In an article entitled "School Facility Funding and Capital-Outlay Distribution in the States" (Duncombe & Wang, 2009), a clear focus is placed on the idea that school facilities have been at the center of local and national political debate. Facilities have been a target for litigation as clearly shown by the publicity generated when the public scrutinizes the condition and functionality of school facilities in comparison with perceived needs and desires. According to the National Center for Education Statistics (NCES) in 2000, three-quarters of the schools in the United States were in need of renovation or new construction at a staggering cost of $127 billion. That same year the National Education Association released a study that spoke to the costs of school facility modernization to be estimated at $322 billion. The issue clearly pointed out in the studies was that school funding for facilities was without direct intervention by governmental units or districts themselves, buildings would worsen, not self-correct issues leading to decay (Duncombe & Wang, 2009).

The history of school facility funding can be shown by looking at a timeline that consisted of only 12 states funding school construction until the 1940s. During the 1950s after the *baby boom,* local governments quickly aided in the construction of schools. Not until the 1970s did states become actively involved after court ruling occurred that mandated the closing of the financial gap between rich and poor schools leading to the direct impact on overall school

equality when it came to demographics. An historic court case in Arizona was enacted solely on financial inequality in the school funding structure; the ruling stated that the state's funding system did not accurately afford the district's financial equality in order to provide consistent education to students across districts and throughout the state in question (Duncombe & Wang, 2009).

Additional cases followed that required states to alter funding methods for school construction. Research concluded that California spends on average 20% less on school facilities than other states (Duncombe & Wang, 2009). Despite the deplorable condition of state funding in California, direct democracy in terms of referendums existed that forced the local citizenry to either approve or dismiss requests for building construction and renovation. The condition has been directly attributed to failing referendum votes. As of 2000, 11 states still did not have funding for facilities at the state level in terms of any program for district level assistance (Duncombe & Wang, 2009).

States utilize three types of aid: loan programs, building-aid programs, or credit enhancement. Lump-sum provisions for funding may occur or matching funds exist depending on the aid programs (Duncombe & Wang, 2009). Many states priority rank or place matching limits on the projects. Ohio, Indiana, and California place restrictions on funding support based on socio-economic levels of the districts in need thus hindering the process further. Although these applications exist they are irrelevant in referendum states if the decision at the local level to fund projects is not approved. Only when local control grants approval will building projects commence to support new and applicable learning spaces for students that increase opportunities for positive achievement enhanced by the environment and coupled with potential best practice (Duncombe & Wang, 2009).

According to Rhode Island's Coordinated School Health Program, named THRIVE, which was created in 1994, school environments are essential to the proper education of children (Rhode Island Department of Health, n.d.).

> The physical environment of school buildings and school grounds is a key factor in the overall health and safety of students, staff, and visitors. School buildings and grounds must be designed and maintained to be accessible and free of health and safety hazards, and to promote learning and school engagement. (State of Rhode Island, n.d., ¶. 2)

Policies and protocols must be in place to ensure food protection, sanitation, safe water supply, healthy air quality, good lighting, safe playgrounds, and emergency evacuation, among other issues that relate to the physical environment of schools. "As partners in THRIVE, the Rhode Island Departments of Education and Health work to build infrastructure supports with state, school, and community partners to help create safe, healthy, and nurturing schools that reduce barriers to learning" (Rhode Island Department of Health, n.d., ¶ 2). Multiple Rhode Island state level legislative initiatives have been created under the guidance of THRIVE, ensuring and maintaining the appropriate physical school environment dealing with educational compliance (Rhode Island Department of Health, n.d.). One such code is Rhode Island Code § 16-21-3: Standards for school building, guaranteeing all buildings meet code and are functional for students receiving a proper education deemed appropriate by not just the community but state and federal standards (State of Rhode Island, n.d.).

Legislating schools to safety and code is a regular practice. Building codes are common in all 50 states in the United States with state level variance depending on the legislation. The basis for the state's plans has a storied tradition. Building codes have a long and rich history. It is widely accepted that the Code of Hammurabi, an ancient law code, contained the first text of

building specifications. This code was created approximately 1790 BC by the sixth Babylonian King, Hammurabi. The code itself talks about the liability of the builder and the consequences of poor construction, including death of the builder and family members should the structure collapse and cause death to anyone (as cited in Hooker, 1999). This example was the predecessor to current building code that has changed to what we utilize today to maintain building safety and integrity. Indiana school buildings must maintain a level of appropriate acceptance per the Indiana Building Code: 675-IAC-13 IBC, but must also meet the needs of a changing educational environment in terms of air quality, lighting, energy efficiency, and conduciveness to learning (Indiana Association of Building Officials [IABO], 2009).

Current codes have evolved from the International Code Council (ICC), an organization committed to safety and service of the construction business. All 50 states have adopted the codes of the ICC at the state or jurisdictional level. This organization was developed in 1994 as a not-for-profit and has developed three levels of building codes that are universally accepted. The organization receives backing and support from the International Conference of Building Officials (ICBO), Southern Building Code Congress International, Inc. (SBCCI), and the Building Officials and Code Administrators International, Inc. (BOCA). Building codes are paramount to the construction process and IC 20-49-4-7 School Building Construction Program, Sec. 7. "As used in this research, 'school building construction program' means the purchase, lease, or financing of land, the construction and equipping of school buildings, and the remodeling, repairing, or improving of school buildings by a school corporation" (Office of Code Revision Indiana Legislative Services Agency, 2010, ¶ 10). The framework of what to build is clearly stated per code, the flexibility comes from architectural design, age level appropriateness, and community desires. According to the National Institute of Building

Sciences (NIBS) (2009), educational facilities have become increasingly specialized to fit the needs of learning spaces that are flexible and move away from the instructor focused model to a collaborative setting that works to facilitate learning.

Schools are focusing on changing the environment to 21st Century Skill Models as defined by the Partnership for 21st Century Skills. This program has four parts:

> 1) mastering core subjects of English, reading or language arts, world languages, arts, mathematics, economics, science, geography, history, government and civics; 2) learning and innovation skills such as creativity and innovation, critical thinking and problem solving, communication and collaboration; 3) information, media and technology skills of information literacy, media literacy, ICT literacy, and 4) life and career skills that consists of flexibility and adaptability, initiative and self-direction, social and cross-cultural skills, productivity and accountability, and leadership and responsibility. (Partnership for 21st Century Skills, 2010, p. 2)

These skills cannot be developed without a change to the physical environment of the building, in most cases this means creating flexible learning spaces and an opportunity to enhance 21st Century Tools. Examples given would be the using and training in the use of massive amounts of technology and hands on skill development needed to create and employ a diverse work force (Partnership for 21st Century Skills, 2010).

According to the Ohio Schools Facility Commission (2008), very strict parameters are used to make 21st Century Learning Environments happen. Through the Ohio School Facilities Commission, the State of Ohio has invested more than $8 billion for construction and renovation of school facilities. "Since its inception, there are 300 school districts with projects either completed or in progress and more than 700 new or renovated schools" (Ohio Schools

Facility Commission, 2008, p. 10). It is evident that the commission believes that partnerships with the community provide opportunities to proactively plan and initiate building projects that offer resources to schools and students. The commission stresses that it is vital to open up dialogue with all stakeholders, in order to set forth on a plan of action that meets the desires of the community and sustains a focus of all those involved by instituting this program after continual capital project referendum failures.

The commission states that it is vital to plan in a manner that allows for sustaining the facilities created at a high level to impact education. Building a structure or educational space that is not able to be sustained after the completion, both from a functional standpoint and staffed with expertise, will damage the perceived building process, increasing the chances of having a community rift occur. Learning spaces must control lighting, air quality, heating, and cooling in order to create ideal conditions to enhance learning. It is further stated by the commission that having a grasp and consistency of these impactful topics will enhance learning potential (Ohio Schools Facility Commission, 2008).

The commission also recommends that teachers, students, and community members be included in enhancement opportunities that fortify the opportunity to share and explore ways that school spaces can be used to enhance instruction. References to The Third Teacher and Language of School Design show that both works explore education space as necessary to enhanced student learning, characterizing a thought process on school design necessary for understanding of expenditures (Ohio Schools Facility Commission, 2008).

According to the Whole Building Design Guide (WBDG) created by the National Institute of Building Sciences (NBIS), it has become evident via research that specific structural capacities included in the framework of school buildings increases student productivity and

achievement (NBIS, 2009). Such items include the use of *day lighting*, sustainable and non-toxic building materials, and the use of renewable energy resources. It is important to understand that when dealing with a school budget for operational costs that any reduction in funding decreases the level of additional monies for other items that enhance educational opportunities for students (NBIS, 2009). Building changes in design are something that are becoming commonplace in Indiana with over 100 projects in the last three years, each with a separate building design, according to CSO Architects, a major Indiana design firm for school models, John E. Rigsbee (personal communication, May 6, 2010). This validates the individuality of the building models and plans put into action. Plans are necessary, but paying for schools is an entirely different issue.

> Walking down the halls of an elementary school in a New Jersey suburban community evokes an environment reminiscent of a 1950s and 1960s elementary school experience. Brick schools, chairs and seats lined up in rows, blackboard at the front of the room, highly polished floors. When the art on the cart teacher appeared I was sure Wally and the Beaver Cleaver couldn't be far behind. (Walker, 1996, p. 34)

The fundamental idea in 1996 is still an issue that drives building projects today. Walker (1996) continued by claiming that schools have inadequate computer lab spaces and that business in the 1990s had radical change, re-invention, downsizing, and re-engineering while schools remained in the status quo. This argument too is paramount to the school change initiative of today. Facility changes, meeting the needs of 21st century learning, and deciding the overall direction of classroom instruction to meet the changing and flattening world have become the topics of today, seemingly the topics of the past 20 years. Funding must be accessible and obtained for a new school structure to be erected.

Local communities must decide clearly between multiple schools of thought: a) renovation/remodel or b) new construction constituting one portion of the equation dealing with an environmental upgrade for the school setting. In Ohio, the scope of the upgrade is a decision that the school community makes via the referendum process. If the project is over $2 million, a similar process applies in Indiana. The other option is not funding building redesign or renovation. In other words, to move forward with the funding or not is the critical decision that the referendum process brings to the people of a taxing entity. Either choice has a lasting impact on quality of education within a school system. Preventative maintenance clearly is designed to keep a building within health code but may not offer the changes that are described in creating a 21st Century Learning Environment as these buildings in need of attention were not constructed with the current education setting as a template. Little was known about ergonomics, brain research, or environmental stimulation at the time of school construction prior to the last 10 years.

If communities decide to undertake the process of securing additional funds for school construction they must decide if renovation or new construction will be the pathway undertaken. Communities struggle at times to answer this question clearly and it can have an impact on the building process. According to the Ohio Schools Facility Commission (2008) these are the key questions that unite or divide a community prior to a building project, during the discussion phase or after the project completion:

- Does the building have historical significance?
- Do the costs of rehabilitating the current facility outweigh the costs of building new?
- Can the facility be renovated to accommodate 21st century instructional delivery practices and modern technologies?

- Are there parts of the building that should be retained? Are there sections that should be replaced?
- Is the facility properly sized for the school population of today and of the future?
- Is the building well lit, spacious and comfortable?
- Will the facility be operationally efficient?
- Does the environment impart a feeling of safety and wellbeing? (Ohio Schools Facility Commission, 2009, p. 1)

School demolition is an issue that will haunt a community years after a school has been removed to make way for new construction. According to Renovate Ohio Schools (2010), 65 school buildings ranging in construction date from 1909 to 1961 were razed during 2010. More than 25 more buildings are to be demolished in the Cleveland City Schools this year, bringing the total to 90 buildings that many consider historical landmarks and community foundation pieces. The website goes on to say that renovation costs are equal to or less than the cost of demolishing and then building new structures. More issues exist when cultural heritage is destroyed. A continued dialogue occurs as to the nature and accuracy of the feasibility study conducted by the school corporation's architects, many at times who will design the new buildings and benefit from their construction. Issues exist as to the building code language and the driving force that it is characterized as by proponents of new buildings. Regardless of the reasoning this organization clearly maintains that the *greatest* building is the one already built (Renovate Ohio Schools, 2010).

Funding School Projects

The Indiana DLGF had the responsibility of approving, disapproving, or modifying school building projects prior to July 1, 2008. According to the DLGF (2010),

> the department examined the amount of non-traditional classroom space in the project, the degree of community support, the district's graduation rate, ISTEP+ scores, and the steps the district took to reduce costs. House Enrolled Act 1001-2008 initiated a change in the way school construction projects are approved. Since July 1, 2008, voters in the local community make the final determination regarding approval of school construction projects. The DLGF is no longer required to approve construction projects that are initiated after July 1, 2008. If the community members don't object to the proposed project or they do not file enough signatures on a petition to initiate a referendum or petition and remonstrance process, the school district would move forward with its construction project. If 100 or more registered voters or property owners signed a petition opposing a school construction project within the legal timeframe, the project is subject to either the petition or remonstrance process. Elementary and middle school construction projects are subject to the referendum process, if the projected cost is more than $10 million, and high school construction projects are subject to the referendum process if the projected cost is more than $20 million. Construction projects with projected costs less than these thresholds but greater than $2 million will be subject to the petition and remonstrance process. In either process, if a majority of the participating individuals are in favor of the project, the district may proceed with the construction process. (DLGF, 2010, ¶ 2)

Annual construction projects continued to rise in cost during the 2005 fiscal year in the state of Indiana. A report was generated in 2006 by the DLGF that $777 million in property taxes were paid to construction debt by state tax revenue (DLGF, 2006). After the 2005 election of current Indiana Governor Mitch Daniels, a critical look was taken at school finance

and over $80 million in estimated savings occurred once guidelines were taken by the DLGF to reconfigure school construction. Although $1.3 billion in school construction was approved, it was evident to the Indiana government that the excess in spending of $162 million on school construction over the national average had become an issue. Figures indicating Indiana built schools 39.3% larger than the national average, but 5.7% smaller than the previous year in Indiana made little sense to the current governor. Indiana reported that building debt amounted to $698.44 per student based on current population statistics. DLGF statistics showed in 2005 $1.3 billion in school building projects were approved by the state, paying .75% more per square foot than the national average to build, using monies that equated to 54% of each dollar of taxes collected going to schools (DLGF, 2010). Schools must adhere to the guidelines in order to achieve funding approval. The format of this approval changed in recent years to include a process that involves voters in a direct manner in order to cast a clear opinion on questions of funding but prior to this change all school monies flowed through the DLGF.

The law now provides the opportunity for school corporations to pursue a public referendum even if voters and property owners do not agree with the project. The school board can pass a resolution that the issuance of construction bonds is contingent on a referendum based on Indiana Code 6-1.1-20-3.7. The project cost thresholds are set low enough to capture the majority of school construction projects, hence controlling property taxes for school building projects and making citizen vote the clear definition for tax increases of this nature (Hiller & Spradlin, 2010).

DLGF Approval

Prior to July 1, 2008, the process for approval of a school building project was in a completely different format than the current structure. The DLGF approves all state budgets

and building projects in Indiana. It has a five-member board that is appointed by the state governor. Steps revolved around a local-based decision with state review.

School systems determine that a project is required. Once the determination is made,

1. The school design is created.
2. Tax payers are notified via public hearing and an opportunity for remonstrance is available.
3. If a remonstrance occurs, the school system must successfully succeed in defending the plan via community vote.
4. The plan is then presented to the School Tax Control Board.
5. Approval, disapproval, or modification is recommended to the commissioner of this body.
6. The commissioner makes a final determination on the project.
7. Factors in the decision making include but are not limited to community support, district educational statistics (ISTEP, Graduation Rates, Attendance Rates), and the steps in the process. (DLGF, 2008b, ¶ 2)

The process of remonstrance was the Indiana safe guard for the voicing of dissenting public opinion on projects controlled by a local government entity (Appendix A). According to the Indiana code IC 6-1.1-20,

> a *controlled project* is one that costs more than $2 million, total gross assessed value of property within the political subdivision on the last assessment date, if that amount is at least $1 million, or a project that the government expects to pay for using funds other than the property taxes that are exempt from the levy limitations. After the notice to the community of a determination to issue bonds, or enter into a lease for a controlled

project, property owners and registered voters within the political subdivision may begin application for the remonstrance. (Office of Code Revision Indiana Legislative Services Agency, 2009, p. 1)

The former remonstrance process was enacted by a citizen:

1. An initial signature list of 100 registered voters, property owners, or five percent of the registered voters in the district of local unit of government must be obtained to activate the process.
2. The voter registration office makes an approval constituting the start of the process from the state's perspective.
3. Thirty days must go by in order to have a *cooling off* period in which no work on the remonstrance can be done.
4. Then, 30 days are granted for a signature race. Qualifying signatures must meet the previously stated signature requirement.
5. Carriers of petitions of approval or the remonstrance had to meet voter or land requirements, sign the form and do so in front of a notary swearing that they witnessed every signature on the petition or remonstrance that they carried.
6. Signatures are collected and verified for authenticity in regards to the project with the objective to obtain the most signatures to *win*.
7. If the remonstrance is successful then the organization proposing the project cannot continue with the project for one year.
8. If the remonstrance is defeated the process continues to the DLGF. (DLGF, 2009b, p. 1)

Referendum Voting

A referendum is now available for public use when school corporations are trying to increase the base tax levy (Appendix B). This process has replaced the remonstrance for public education. Base tax levy is the total dollar amount of the property tax levied by a school corporation for the school corporation's general fund for taxes collectible, assuming 100% tax collection (DLGF, 2008a). Operating referendums have a maximum time frame of seven years, although they can be extended or renewed. Capital project referendums can be financed for 20 years or, based on pending 2011 legislation, beyond. Referendums allow registered voters in a governmental districted area to vote directly on a spending issue in order to assure that every citizen has a say in funding governmental entities' building projects, in this case impacting school building projects directly. Schools now must begin the process of involving themselves in what has been titled *direct democracy* in the United States. Direct democracy became law in 2008 with the establishment of Public Law 146 in Indiana. With school referenda becoming more frequent, in part due to the recession and budgetary issues, it is important to understand the history of referendum as a whole and the impact it has by its use (Center For Evaluation and Education Policy, 2010).

The history of the referendum is one that has a past cemented in opportunities to involve citizens directly in the process of democracy. A form of initiative and referendum has existed in one capacity or another since the early 1600s. New England town hall meetings utilized a system in which citizens ratified laws via proposal by elected officials (Waters, 2009). In 1775, Thomas Jefferson advocated for the addition to the Virginia state constitution to include referendum. The belief was based on the fact that he believed in the sovereignty of the people to govern, not solely the elected officials of the state (Schmidt, 1985). Supported by James

Madison in Federalist 49, "the people are the only legitimate fountain of power. . . . It may be necessary to enlarge, diminish or new-model the powers of government" (as cited in Waters, 2009, ¶ 2). The 1890s became a time in which governmental scrutiny and dissatisfaction led to the formation of the Populist Party. Referendum topics began and the Progressive Party took up the banner as a way to enhance representative government, not destroy it (Waters, 2009). South Dakota became the first state in 1898 to adopt referendum and initiative voting. The drive was pushed forward by the fact that a feeling of angst with the legislative process was established as not having lived up to expectations (Cronin, 1989). The leader of this movement was James W. Sullivan, who began a 15-year journey after studying the Swiss model of direct legislation. In Switzerland, the model of referendum exists as part of the constitution of the nation. Referenda are not a choice but governed by law. The movement took hold and by 1912, 22 states had adopted this process. Future president Woodrow Wilson, then governor of New Jersey, stated that "if state legislatures were genuinely representative, there would be no need to pursue initiative and referendum" (as cited in Braunstein, 2004a, p. 1). Although most of the states passing this action were in the west, again echoing the populist movement citing the right of the population to rule, states with high industrial bases would begin to move towards referendum in order to curb the power of special interest groups. As a result, these reformers were quickly labeled as champions of direct democracy.

Current Referendum Practice

In 1959, Alaska became a part of the United States of America as the 49th state. This territory had initiative and referendum in its founding constitution. Cited as one of the most influential uses of the initiative process, California passed Proposition 13, lowering property taxes from 2.5% to 1% statewide. This signified an enormous step in the use of direct

democracy. It is widely noted that referendum has been influential in many state initiatives, not just limited to school funding and construction.

There are many historically significant topics that have been directly impacted by the use of direct democracy. Topics of significance include women gaining the right to vote, adopting term limits for politicians, prohibition adopted and abolished, and campaign finance reform. States tackled the issues of poll taxes, bottle taxes for environmental protection, the establishment of an eight hour workday, adoption of the death penalty, as well as the removal of racial discrimination in governmental hiring. These topics impact the social framework of a community and society at large. Direct democracy is a powerful tool in formulating the scope of a community in both form and function (Waters, 2009).

The ideological pattern of this list lends to the thought that the initiative and referendum process continually touches liberal, conservative, libertarian, and populist ideals (Waters, 2009). Direct democracy can initiate and correctly gauge the interest of constituents in a politically-defined geographic area or a taxing entity such as a school corporation. In a study of source and ballot success from 1964-2000 of states with initiative and referendum voting, 39.6% dealt directly with revenue and taxation or educational issues (Braunstein, 2004c).

The benefits of a direct democracy model have been defined to include the process as having a rich grounding in social capital. People are afforded an opportunity to directly impact decision making, making a statement of favor or dissent at the polling place. Another positive element or effect of direct democracy is the making of issues very public and in a format that makes debate very open and accessible (Braunstein, 2004b). Research has yet to be concluded that directly relates voting turnout to referendum process, but the information transfer and transparency of the topics in this model are considered positives. The discussion of inclusive

and exclusive legislature is directly related to this process. It has been determined that voters can clearly place emphasis on practice that allows the adoption of policies that benefit the entire community based on the passing of a referendum (Braunstein, 2004b). Current topics of interest to communities, such as school tax levy for building and general fund expenditures, clearly show an immediate impact on communities as the process is not done to them but with them.

Negatives to referendum voting can be summarized by examining three examples. Numerous New Jersey school districts failed many times to pass referendums for school buildings to the point the governor signed the Education Facilities and Construction Financing Act to address the dilemma. In 1998, the New Jersey Supreme Court ruled that the state was not funding building projects and was creating unsafe, aging, and overcrowded schools, thus violating the mission of the state constitution to provide thorough and efficient education to all children. Over $8 billion was allocated for school projects by 2002 (Schools Development Authority, 2009). An additional $4.5 billion was allocated to the Schools Development Authority in 2008 to continue the process of renovating and maintaining aging buildings. In northern Idaho voters rejected a plan to replace a 94-year-old building that was deemed dilapidated and dangerous. The building failed three inspections and was going to lose state funding and accreditation (Davis & Tyson, 2003). In 1995, the United States General Accounting Office released a study that estimated $111 billion dollars would be needed to upgrade America's school facilities to a good condition (as cited in Muir & Schneider, 1999). This figure is in 1995 dollars; the cost of renovating schools has changed drastically since 1995. With referendum voting present, citizens must understand a commitment of this nature is a large undertaking (Muir & Schneider, 1999). Indiana and school construction is a current hot

topic as shown by the 1.8 million hits on a Google search. Tremendous information exists for Indiana referendums as the topic is new and in the minds of citizens. The media is continually focusing attention on schools and, with the previously mentioned examples of governmental scrutiny of school construction spending, it is evident that this process is designed to take the decision out of state governmental hands, fueled by school corporations, in a manner to make the everyday citizen aware of the issue at hand and have a say in the outcome of the decision.

Ohio Referendum

The Ohio constitution was amended on September 3, 1912, to include the initiative and referendum process. This afforded Ohio residents the opportunity to initiate constitutional amendments on their own, of which, through 2007, 17 of 63 have been approved. The amendment also afforded the opportunity to initiate new laws, overturn legislation, and approve legislatively approved constitutional amendments. Over 74 years, 94 of 142 legislatively-approved constitutional amendments were approved by voters. Ohio was originally vested in the movement of direct democracy, having four of 56 vice presidents elected during the 1896 National Direct Legislation League meeting in St. Louis (BallotPedia, 2009). The four seats were the most from any state of the 36 represented. The Rev. Herbert Bigelow of Cincinnati, Ohio, championed the progressive movement and in turn led Ohio to the constitutional amendment in 1912. The first initiatives to win approval were a Prohibition measure and a federal amendment law (BallotPedia, 2009). Initiatives moved forward over time, included bans on food taxes, and eliminated single-ballot, whole-party voting at the polling centers. Historically, Ohio has voted on state tax levy for school building projects and has a rich history of battling the establishment of the political and industrial machines shown by the direct democracy and its roots in creation.

Socio-economic Identification

Socio-economic level is directly defined by the U.S. Department of Education via a poverty guideline published each year from within the department. The poverty thresholds are updated each year by the U.S. Census Bureau, in order to maintain a statistic estimate of the number of Americans in poverty for reporting purposes and program funding. The poverty guidelines are issued by the U.S. Department of Health and Human Services, a simplification of poverty thresholds for administrative usage created to help administer the program. See Table 1.

Table 1

U.S. Poverty Guidelines (48 Contiguous States)

Household Size	2005	2006	2007	2008	2009
1	$9,570	$9,800	$10,210	$10,400	$10,830
2	$12,830	$13,200	$13,690	$14,000	$14,570
3	$16,090	$16,600	$17,170	$17,600	$18,310
4	$19,350	$20,000	$20,650	$21,200	$22,050
5	$22,610	$23,400	$24,130	$24,800	$25,790
6	$25,870	$26,800	$27,610	$28,400	$29,530
7	$29,130	$30,200	$31,090	$32,000	$33,270
8	$32,390	$33,600	$34,570	$35,600	$37,010
>8 Add for each	$3,260	$3,400	$3,480	$3,600	$10,830

Source. U.S. Department of Health and Human Services (2005, 2006, 2007, 2008, 2009). Hawaii and Alaska have slightly higher rates.

The national school lunch program works directly from these figures of poverty determination (U.S. Department of Health and Human Services, 2010). Indiana and Ohio utilize free and reduced lunch program numbers to determine socio-economic status within the school districts for state level comparison and reporting. The national school lunch program provides over 100,000 schools with assistance to provide nutritionally balanced meals to over 30.5 million students daily. The program is administered in Ohio and Indiana by the state education departments according to stringent federal guidelines. Students qualify for the program depending on their poverty level as either free or reduced lunch and in turn receive funding for fees, textbooks, and the school lunch program for nourishment (U.S. Department of Agriculture [USDA], 2009).

One myth that continues to come to the forefront of educational conversation is that the *rich get richer, while the poor get poorer*. This theory would indicate that based on socio-economic levels of the community more wealth would generate more funding and more 21st Century-ready schools. Renovations, additions, and new construction would increasingly appear in wealthy districts while districts with less funding capacity will have communities that do not support these initiatives.

Schools with wealth can generate specialized programs that include international baccalaureate and advanced placement seminars, thus widening the achievement gap. Clearly private donations from wealthy benefactors and companies afford students advantages in affluent communities versus impoverished ones. This widens the achievement gap and creates improper stereotypes of schools and communities (Rushowy & Winsa, 2011).

Ohio and Indiana Data Comparison

Both Ohio and Indiana have very similar structures when comparing data of the populations of the states. Although extremely different in actual size (in 2008, Ohio covered 41,300 square miles versus 36,185 square miles for Indiana) and population (in 2008, 11,528,072 for Ohio and 6,388,309 for Indiana) median income of individuals is very comparable in both states. In 2007, Ohio showed a median income of $46,296 per person as compared to Indiana at $47,034. In 2008, that number increased to $48,023 for Ohio and $48,175 for Indiana. Education of constituents is very similar when a two-year comparison is made between the states. In 2007, Indiana reported 21.6% of persons over the age of 25 with bachelor's degrees while Ohio reported 23.3%. In 2008, the number increased to 22.3% for Indiana and 23.8% for Ohio with bachelor's degrees (US Census Bureau, 2010).

When exploring students enrolled in K-12 education, Ohio reported 86.9% of children school age attending while Indiana reported 88.3% of students enrolled in K-12 during the 2008 school year. The same trend is found when comparing populations over the age of 60. In 2008, Ohio had 18.4% of the population over the age of 60 while Indiana recorded 17.3% of the population over 60. Regarding poverty statistics, students who fell below the free or reduced cutoff as dictated by the federal government was reported as 18.5% in Ohio and 17.3% in Indiana during the 2007 calendar year. In 2008, the numbers increased to 17.7% in Indiana, but remained static at 18.5% in Ohio (U.S. Census Bureau, 2010). The data reflect a very similar population in both states despite the size of population and actual state size which are clearly not equal when taken as raw data.

Summary

The review of literature validated the notion that school funding in Ohio and Indiana have similar roots tied into building project code, governmental approval, processes for funding, and referendum-style voting for project approval. Although Indiana recently adopted the referendum process, Ohio has a rich history in this arena. The comparison of process clearly shows that the referendum system is enacted from similar means and fits the definition of direct democracy. Both the Ohio Department of Education and the Indiana Department of Education utilize the U.S. Department of Education guidelines for free and reduced lunch as a subgroup for data collection and the definition of the subgroup is defined by the same guidelines. Ohio and Indiana share common history in identifying school districts for classification purposes.

Further analysis shows the connection that school design has to learning and the dilemma of the school systems in answering questions about renovation or new construction. The movement of *green* schools that are environmentally friendly and the idea that educational space is clearly a factor in student achievement has made the school construction funding issue a more pressing issue in today's political arena as opposed to even 10 years ago. In the case of Ohio school funding rates from the state end were radically increased after 1997 with the development of the Ohio Schools Facility Commission. Schools were in a deplorable condition, some due to economic decline, some due to referendum voting. The same process occurred in New Jersey with the state government having to become a funding agent for school construction in order to satisfy educational setting needs for proper student learning. The history in California is the same when school construction and renovation are concerned, as state government intervention has been needed to upgrade and maintain buildings after failed

referendum votes. The forecast for Indiana looks ominous at best when looking to these three examples of funding building design and change as a model for the future of Indiana facilities when including direct democracy as the agent of choice in tax levy approval.

CHAPTER 3

METHODOLOGY

School referendum voting has become the process for funding projects in the state of Indiana. The impact on a passing or failing referendum is a point of conflict for a community and will have a major impact on the superintendent in charge of the process of raising funds for school construction. It was anticipated that this study would produce results and conclusions so that superintendents can properly prepare themselves for the referendum process knowing what impact socio-economics, median income, and district size may have on the outcome of any referendum when dealing with facility renovation or construction. Referendum votes are a link to direct democracy and give the people the ability to approve spending on school projects in Indiana.

The passing or failing of a capital project referendum vote is evident in terms of facility upkeep and the impact it can have on the school environment. Passing votes equate to facility upgrades, environments that are conducive to learning, technology upgrades, and efficient systems of temperature and air control. These factors are linked to increased student achievement and have become a priority for school districts to address via referendum voting. This chapter discusses research methodology including the null hypotheses, data sources, and the collection process.

The purpose of the study was to determine the relationship of socio-economic levels, median income, and district enrollment size on passing rates of referendum tax levy voting using Ohio capital projects over the last 17 elections spanning the previous five years as model for development. The elections reflect the current economic times and are spread throughout the state of Ohio. It is anticipated that the results will afford a clear picture of impact of the three listed factors on passing referendum votes.

Research Questions

The following research questions were asked as a basis for the study:

1. Is there a significant difference in the passing rates of school capital project referendums in Ohio school districts when examining the district socio-economic level?
2. Is there a significant difference in the passing rates of school capital project referendums in Ohio school districts when examining the median income of the district?
3. Is there a significant difference in the passing rates of school capital project referendums in Ohio school districts when examining the district enrollment size?
4. Is there a significant difference in the passing rates of school capital project referendums in Ohio school districts when examining a combination of median income, district enrollment size, and district socio-economic level?

Null Hypotheses

$H_0$1. There is no significant difference in passing rates of capital projects referendums in Ohio when examining socio-economic rate of the districts.

$H_0$2. There is no significant difference in passing rates of capital projects referendums in Ohio when examining median income rate of the districts.

$H_0$3. There is no significant difference in passing rates of capital projects referendums in Ohio when examining district enrollment size.

$H_0$4. There is no significant difference in passing rates of capital projects referendums in Ohio when examining any combination of median income, district enrollment size, and district socio-economic level.

It has long been agreed upon in educational circles that socio-economic level is a factor in determining student achievement outcomes. This study is designed to take this factor and to explore the impact it has on passing referendum votes. A null hypothesis is stating that the socio-economic level of families in districts will not impact voting outcomes. If socio-economic level of the parents has a positive impact on learning then it would reason that parents would support referendum votes for capital project outlay in their communities. It would reason that educational patterns clearly will dictate that affluent communities would support building projects and quality physical educational structures for their students. It was proposed that the research will clearly show if this is the case or not by studying 17 elections in five years in diverse districts.

When factoring in the median incomes the study showed a range of voting patterns based on median wealth within the district. It was clear that districts exist with pockets of wealth or poverty. By examining the median income, I identified a threshold which impacted the outcomes of the elections for capital projects. If none existed the null hypothesis would in fact be true; if a significant impact occurred then the opportunity existed to connect this data point to a state-wide comparison, leaving desired information available for existing

superintendents to understand that a district with a level of median income would be more successful than one with lower income levels. This example was different from the socio-economic level of the district in terms of large numbers of impoverished families not always significantly lowering the median income of a district to a level that would equate to poverty. An example would be a district that has significant poverty but a pocket of extreme wealth. The median income would look much higher than if the district was examined based on free and reduced lunch qualification of the families.

School district size was another important factor to examine in terms of impact on passing referendum votes for capital project levy. This was an interesting variable that showed significant impact multiple ways. One impact would be that districts that are very small could have significant impact on the votes putting into focus that smaller communities can *rally* around school building projects to cast a positive vote for updated and well-maintained facilities. The converse would be that smaller district influence was more difficult to gain the level of support to make a project of this nature successful as people in districts of a lesser size, based on pure population numbers, do not have the ability to sway enough votes for a capital project referendum to succeed. Votes of this nature polarize communities to *yes* and *no* stances, without a large enough population this can radically swing a vote. In districts of larger size, the impact of these issues was shown to be opposite if a significant impact was found.

This study could provide current and future superintendents a look into what factors in combination might help the successful votes of capital project referendum issues. If superintendents could narrow the factors to an example of a small district and low socio-economic rates as having higher passing capacity, this study could help them approach and

prepare the referendum process much differently than thinking these issues do not factor into voting outcomes.

Data Source

The data were collected from the state of Ohio directly in collaboration with the Ohio Department of Education, examining tax levy voting results for construction projects and free and reduced lunch populations for the state after the data were compiled by the state Department of Education. Data collected on median income and district enrollment size were taken directly from the Ohio Department of Education website as pre-existing data. No direct questionnaire was used and no live subjects were required during this information-gathering process. Data sources were considered valid, as they are endorsed and monitored by the state and federal government after local-level collection for funding purposes and census bureau information, which legally cannot be manipulated.

Data Collection Process

1. Ohio data were collected directly from the Ohio Department of Education website after a correspondence with the department official in charge of data mining.
2. All data from Ohio were accessible and in spreadsheet format that afforded a clear and concise look at the last five years of tax levy voting in the state, including 17 separate elections. Free and reduced populations (socio-economic level), district enrollment size, and median district income were available on the site in the same format.
3. No surveys were used, as human subjects were not needed in the analysis.
4. Collection was limited to the past five years of data and information.

5. Passing and failing votes were organized by district as are the factors of median income, socio-economic level, and district size.

Statistical Analysis

The statistical analysis of the study was conducted using discriminant function analysis, regression with categorical data. This statistical procedure afforded me an opportunity to test along the lines of an analysis of variance, or ANOVA. It moves beyond the results of multiple variables in MANOVA and creates an opportunity to examine the impact of three or more variables on the event of study. The procedure began with a set of observations where both group membership and the values of the interval variables were known. An additional use of discriminant function analysis was an understanding of the data set in order to clearly define the relationship of impact among the multiple variables. First, the multivariate test was run to determine significance then examined across groups. This function gave me a clear understanding of individual and grouped impact of the variables. This in turn afforded a concrete look at the impact on the passing referendum votes by weighing each independent variable separately and in combination to help clearly indicate the impact, or lack thereof, on the passing vote.

For the purposes of the study the dependent variable was passing capital project referendum votes over the five year timeframe. The independent variables were socio-economic level, median income, and district enrollment size. The independent variables were structured into a linear composite and checked to see if a weighted combination of independent variables predicted the probability of passing a capital projects referendum. Voting results were taken as one sample over the five years, not broken down into separate samples that were one year in length, to create a sample that has more depth.

Different analyses were used for each individual independent variable starting with ANOVA to determine a significant or non-significant impact on the result of the referendum. By examining ANOVA and MANOVA results and moving to discriminant function analysis to test a combination of the independent variables, a clear outcome of significance or no significance was shown. This afforded a straightforward look at the independent variables standing alone and then combined to better inform current and future superintendents of their preparation and needs for the referendum process.

Summary

In this chapter the design of the study was discussed including the introduction, hypotheses, data source, and collection method. The purpose of the study was to analyze the impact of socio-economic level, median income, and size of districts in terms of capital project tax levy voting in order to help Indiana superintendents prepare referendum proceedings in their respective districts. The use of multiple tests of significance gave the research a multi-faceted approach to individual, independent variables and also a combination of the variables to show impact on the dependent variable of passing capital project referendum votes.

Chapter 4

PRESENTATION AND ANALYSIS OF DATA

The purpose of the study was to determine the impact of district enrollment, median income, and free/reduced lunch percentages of students on capital project referendum voting in Ohio over 17 elections from the school years 2004-2009. The study was descriptive in nature. District enrollment was chosen to show differences between population and the potential impact on voting. Poverty levels and median income were chosen to determine wealth of the district and its impact during voting on capital project referendums. A district could have a level of poverty that is great but a median income in an average range due to wealthy areas within the district lines. Examining both indicators and their impact on voting afforded a distinct look at the measure of poverty within the district.

Descriptive Analysis

Data were gathered from the Ohio Department of Education and evaluated using discriminant function analysis, regression with categorical data (Appendices C through H). This combines the ANOVA and MANOVA processes to examine each piece of data both independently against the results of the election and in combination in a stepwise pattern. Of the 382 votes taken and examined in this study, 198 did not pass while 184 passed (Table 2).

Table 2

Passing and Not Passing Capital Project Referendum Breakdown

Prior Probabilities for Groups			
		Cases Used in Analysis	
Dependent Variable	Prior	Un-weighted	Weighted
Did not pass	.500	198	198.00
Pass	.500	184	184.00
Total	1.000	382	382.00

The statistics taken as a group show the mean and standard deviations of the pass and did not pass voting breakout for the 382 capital project referendum votes chosen over the 17 elections. The average enrollment size of a district with a passing vote was 3,160 students compared with a slightly smaller average district size of 2,707 students with a non-passing vote. The median income of an average passing district was $33,772 per family while a non-passing vote had a family median income of $32,512. A district's percentage of free and reduced lunch students with a passing vote was 26.3% while a district with a non-passing vote had a slightly higher percentage of students who qualified for free and reduced lunch at 28.4% (Table 3).

Table 3

Group Statistics for 382 Votes Taken

Dependent Variable	Independent Variable	Mean	*SD*	Valid *N* (listwise) Un-weighted	Valid *N* (listwise) Weighted
Did not pass	enrollment	2706.67	4198.74	198	198.00
	medincome	32511.61	7005.84	198	198.00
	freereduced	28.42	15.07	198	198.00
Pass	enrollment	3160.27	3479.63	184	184.00
	medincome	33771.64	8059.89	184	184.00
	freereduced	26.38	16.37	184	184.00
Total	enrollment	2925.16	3870.73	382	382.00
	medincome	33118.53	7548.37	382	382.00
	freereduced	27.44	15.72	382	382.00

When examined in a format that tested the independent variables of enrollment, median income, and poverty level in order to understand the levels of impact on capital project referendum, the factors show no significance (Table 4). The significance ranged from .103 to .253 and had no bearing on the election result. The Wilks' Lambda test showed no significance with a range from .993 to .997. The results of the *F* test were the same with ranges from 1.211 to 2.669.

Table 4

Independent Variables Tested for Voting Impact

	Wilks' Lambda	*F*	*df*1	*df*2	Sig.
enrollment	.997	1.311	1	380	.253
medincome	.993	2.669	1	380	.103
freereduced	.996	1.613	1	380	.205

When combined in a descriptive analysis format that tested the independent variables of enrollment, median income, and poverty level in a stepwise format, the levels of impact show no significance. The impact is minor in regards to a pooled with-in group matrices as well showing levels of impact in combination that are between -.586 and .223 in correlation (Table 5).

Table 5

Independent Variables Combined (Stepwise) Impact on Voting Outcomes

Pooled Within Groups Matrices[a]

	Independent Variable	enrollment	medincome	freereduced
Covariance	enrollment	14970335.51	6510933.57	8374.48
	medincome	6510933.57	56729324.23	-69349.74
	freereduced	8374.48	-69349.74	246.85
Correlation	enrollment	1.000	.22	.14
	medincome	.22	1.000	-.59
	freereduced	.14	-.59	1.00

Note. [a] The covariance matrix has 380 degrees of freedom.

The discriminant function analysis also predicts group membership from a set of predicting variables at different levels of categorical dependent variables. This function creates a canonical discriminant function coefficient. Table 6 shows no significance in regards to the the variables and is reinforced by Table 7 showing that 55% of the cases were correctly classified. This number is well below significance and strengthened the argument that the variables created no measurable impact.

Table 6

Standardized Canonical Discriminant Function Coefficients

	Function 1
enrollment	.554
medincome	.438
freereduced	-.471

Table 7

Classification Results[a]

			Predicted Group Membership		
		passnotpass	did not pass	pass	Total
Original	Count	did not pass	126.0	72.0	198.0
		pass	100.0	84.0	184.0
	%	did not pass	63.6	36.4	100.0
		pass	54.3	45.7	100.0

Note. [a] indicates 55.0% of original grouped cases correctly classified

Null Hypothesis One ($H_0$1**)** was formulated as follows: There is no significant difference in passing rates of capital projects referendums in Ohio when examining socio-economic rate of the districts. $H_0$1 was analyzed using a descriptive analysis format. The dependent variables of passing or not passing a capital projects referendum vote were examined by introducing an independent variable of socio-economic rate of the districts to determine if the independent variable impacted the vote outcome. I failed to reject the $H_0$1 based on the lack of significance

found (.205) in regards to the impact of socio-economic level on the outcome of the 382 capital project referendum votes examined.

Null Hypothesis Two ($H_0$1**)** was formulated as follows: There is no significant difference in passing rates of capital projects referendums in Ohio when examining median income rate of the districts. $H_0$2 was analyzed using a descriptive analysis format. The dependent variables of passing or not passing a capital projects referendum vote were examined by introducing an independent variable of family median income of the districts to determine if the independent variable impacted the vote outcome. I failed to reject the $H_0$2 based on the lack of significance found (.103) in regards to the impact of family median income level on the outcome of the 382 capital project referendum votes examined.

Null Hypothesis Three ($H_0$3**)** was formulated as follows: There is no significant difference in passing rates of capital projects referendums in Ohio when examining district enrollment size. $H_0$3 was analyzed using a descriptive analysis format. The dependent variables of passing or not passing a capital projects referendum vote were examined by introducing an independent variable of district enrollment size to determine if the independent variable impacted the vote outcome. I failed to reject the $H_0$3 based on the lack of significance found (.253) in regards to the impact of district enrollment size on the outcome of the 382 capital project referendum votes examined.

Null Hypothesis Four ($H_0$4**)** was formulated as follows: There is no significant difference in passing rates of capital projects referendums in Ohio when examining any combination of median income, district enrollment size, and district socio-economic level. $H_0$4 was analyzed using a descriptive analysis format, including a stepwise method of statistical analysis. The dependent variables of passing or not passing a capital projects referendum vote

were examined by introducing the combination of independent variables of district enrollment size, family median income, and poverty level to determine if the independent variables impacted the vote outcome. I failed to reject the $H_0$4 based on the lack of significance found (-.586 and .223) in regards to the impact of district enrollment size on the outcome of the 382 capital project referendum votes examined.

Summary

Descriptive analysis was applied to the null hypotheses $H_0$1, $H_0$2, $H_0$3, and $H_0$4 to determine the impact on capital project voting referendum of three independent variables of socio-economic level, district size, and median income, if these variables were applied separately or in combination. I failed to reject null hypotheses $H_0$1, $H_0$2, $H_0$3, and $H_0$4.

Chapter 5

CONCLUSIONS, DISCUSSION, AND IMPLICATIONS FOR FUTURE RESEARCH

Schools cannot rely on the ability of capital projects funds to make the necessary renovations to facilities without the infusion of external dollars. Capital project referendums fill the void in funding currently in the states of Indiana and Ohio. A capital projects referendum is vital for a school system in maintaining facilities so that they meet legal building code and provide an environment for student learning that is a productive aid in student learning. The purpose of the study was to determine if factors of socio-economic level, median income, and district size influence the passing or failing of the capital projects referendum votes. When examining capital project referendums and the success they have had in Ohio from the school years 2004-2009, it was my hope to validate or debunk the myth that larger districts pass referendums or that districts with less poverty pass referendums versus those with poverty and that the rich get richer and the poor continue to suffer. Indiana recently moved towards referendum voting, a direct democracy pathway that Ohio has had for many years.

A review of literature showed that facilities do impact student learning. Air quality, lighting, temperature control, noise reduction and avoidance, and color schemes factor into a learning environment that can positively or negatively impact children in their quest for knowledge. The literature showed that teacher morale clearly is impacted by environment, and communities support the facilities in different capacities (Ohio Schools Facility Commission,

2008). Referendum voting has roots in direct democratic thinking of the early 1900s in which every voting citizen has the ability to cast his or her approval or disapproval on an issue (Waters, 2009). Referendums have been introduced in Indiana and clearly have changed the landscape of facility upkeep, construction, and mindsets of those involved in the education business. School projects now must be under a threshold of $2 million or face a public vote that will determine the passage of the construction/improvement bid. This has changed the process in which schools undertake building or renovation initiatives.

With current research pointing towards an environmental impact on learning (Ohio Schools Facility Commission, 2010), it is evident that capital project referendums are sought after under the new Indiana system of financial approval. This research was nonexistent as little as 10 years ago and now becomes a focal point in the educational conversation. With technology improvements and future needs within buildings that are sometimes older than 50 years, capital project referendums will continue to be a topic of the future. Wireless infrastructure, *green* environmentally-friendly buildings that are energy efficient and friendly, and technology-driven assessment and instruction (i.e., smart technology) are topics that continue to arise in daily educational conversation.

These topics are validated by the number of speakers, sessions, and information transfers that occur at facility expos and principal, building director, business official, and superintendent trainings at both the state and national levels. Building improvements are here to stay and even further validated by New Jersey and California restricting project approvals and then having to fund them at the state level via future initiatives.

Research questions were developed that would examine the myths surrounding capital project referendum voting as Indiana moves full steam ahead into this arena. Socio-economic

levels and district size factor into many of the conversations in educational circles as determinants to success. These research questions and null hypotheses were designed to focus on validating or debunking the myths of poverty and enrollment. This tool would be vital if validated or invalidated to help current and future superintendents undertake referendum proceedings to improve facilities.

$H_0$1: There is no significant difference in passing rates of capital projects referendums in Ohio when examining socio-economic rate of the districts.

$H_0$2: There is no significant difference in passing rates of capital projects referendums in Ohio when examining median income rate of the districts.

$H_0$3: There is no significant difference in passing rates of capital projects referendums in Ohio when examining district enrollment size.

$H_0$4: There is no significant difference in passing rates of capital projects referendums in Ohio when examining any combination of median income, district enrollment size, and district socio-economic level.

Interestingly, I failed to reject the four null hypotheses based on the lack of statistical significance. The impact of the independent variables was concluded on an individual basis and in a stepwise method combining the variables without statistical impact.

Further Data Conclusions

The 17 elections comprising the 382 capital project votes that made up the sample of data gathered showed a very even distribution in passing and failing results. If broken down, the capital project referendum votes clearly were statistically even with 198 failing and 184 passing. This 50% breakdown showed that the evidence collected was not heavily favoring a passing versus failing capital project referendum outcome or a failing versus passing capital

project referendum outcome. The capital project referendum vote outcomes during the election were evenly balanced.

When investigating the differences in the election results by evaluating the enrollment data over the 382 capital project referendum votes taken during the 17 elections, a very small difference in the mean of the district enrollment size was evident. The 198 non-passing capital project referendum votes that were evaluated had a mean district size of 2707 students per district. This compared very similarly to the 184 passing capital project referendum votes that were evaluated that had a mean district size of 3160 students. This difference was only 453 students between passing and failing capital project referendum district sizes. The overall mean of district enrollment size was 2925 students.

The two largest districts with a failing capital project referendum vote had enrollments of 20,786 and 9,658 students respectively as compared to the smallest two districts having a failing capital project referendum vote of 83 and 273 students respectively. The largest two districts that passed capital project referendum votes had 51,963 and 25,816 students respectively as compared to the smallest two districts having a passing capital project referendum vote of 413 and 444 students respectively.

When investigating the differences in the election results by evaluating the median income data over the 382 capital project referendum votes taken during the 17 elections, a very small difference in the median family income of the district was evident. The 198 non-passing capital project referendum votes that were evaluated had a median family income of $32,512. This compared very similarly to the 184 passing capital project referendum votes that were evaluated that had a median family income within the district of $33,772. This difference was

only $1,260 between passing and failing capital project referendum family median income within the districts. The overall median family income for all districts was $33,118.

The two wealthiest districts to have a failing capital project referendum vote had median family incomes of $60,720 and $56,266 respectively as compared to the two poorest districts having a failing capital project referendum vote with median family incomes per district at $21,372 and $21,945 respectively. The two wealthiest districts to pass capital project referendum votes had median family incomes of $69,046 and $56,696 students respectively as compared to the poorest two districts having a passing capital project referendum vote with median family incomes of $19,508 and $21,372 respectively.

When investigating the differences in the election results by evaluating the poverty level over the 382 capital project referendum votes taken during the 17 elections, a very small difference in the free and reduced lunch status by district was evident. The 198 non-passing capital project referendum votes that were evaluated had a free and reduced lunch calculation of 28.4%. This compared very similarly to the 184 passing capital project referendum votes that were evaluated that had a free and reduced lunch calculation within the district of 26.4%. This difference was only 2% lower between passing and failing capital project referendum free and reduced populations within the districts. The overall free and reduced lunch population for all districts was 27.4%.

The two highest free and reduced lunch districts with a failing capital project referendum vote had district wide populations of 65.3% and 61.8% respectively, as compared to the two lowest free and reduced lunch districts having a failing capital project referendum vote had district wide populations at 1.4% and 3.9% respectively. The two highest free and reduced lunch districts to pass capital project referendum votes had district wide populations of 80.2%

and 72.4% respectively, as compared to the two lowest free and reduced lunch districts having a passing capital project referendum vote with student populations at 1.6% for both the districts that passed the vote.

When evaluating all three factors for both passing and failing capital project referendum votes the data collected as low and high points were spread across the years of collection. Dates of votes that were both high and low were found from 2004-2009. Information has clearly spanned the 17 elections and the five school years of investigation giving a robust look to the overall data sample, not limiting it to one school year of impact out of five.

Conclusions

While examining the data gathered on 382 capital project referendum votes in Ohio from 2004-2009 over 17 elections, it was clear that no significant difference was evident when examining family median income, as district passing votes had a $1,260 difference in median income compared to districts whose votes failed. The same was true for poverty rates of students in the districts with capital project referendums: passing votes in districts only had 2.1% less poverty than districts who had failing votes.

On average 453 more students were enrolled in districts' buildings with passing votes than districts that had capital project referendums fail. No significant data were evident when the three factors acting as independent variables were combined to see if this would influence voting outcomes. No significant impact was found on passing or failing votes over the data range that was collected directly from Ohio Department of Education for any of the variables. These data showed that no advantage is evident when dealing with socio-economic levels nor corporation size.

This brings me to the myth of the rich get richer and the big are able to accomplish whatever they choose based on their funding sources. The Ohio examination showed that districts really were similar in composite make-up of the three factors. Research supported that the Ohio and Indiana systems of referendum were connected and the process used for passing mirrored each other. It would be wise to inform the superintendents in Indiana that the value their communities place on education is the deciding factor in regards to passing a referendum and much effort must be placed into the process of preparing the district to undertake a referendum.

District size, big or small, poverty levels, rich or poor, nor levels of income are the deciding factors in a smooth passing of a capital projects referendum. I hoped the Ohio findings would inform Indiana schools superintendents about districts based on size, poverty level, or median income as it relates to the likelihood of a passing or failing referendum. This was not viable because no significant impact was found with these variables.

One important aspect of this research was the use of discriminant function analysis as the method for determining statistical impact of the factors of median income, enrollment size, and poverty levels. The rare use of a combined ANOVA and MANOVA method gave me a clear opportunity to measure the impact of all three variables on the outcome of the voting in isolation and in combination with each other. Clearly the depth added to the statistical process afforded a clear look at whether one factor could impact others or the outcomes by itself. It gave strength to the findings in terms of validating that none of the independent variables had any significant impact on the outcomes of the referendum voting or the dependent variable.

This evidence obtained thru the usage of a significant process of statistical analysis truly helped to determine that poverty, income, nor enrollment size should be a determining factor

encouraging or discouraging current or future superintendents in pursuing capital project referendums. Without the depth of this analysis a case could be made that multiple factors could impact voting outcomes. This has been clearly disproven and is a major impacting factor on the validity of this study.

Direct democracy was validated through this study as the will of the people, exercised by the hand of the people. Individual citizens based on personal voting preference on this topic, free from factors of wealth, poverty, or district size, moved the process of improving schools via capital project referendum down a path of their communities' choices. These choices were made at the voting booth and the outcomes were based on the individual voter exercising the over 100-year-old practice of direct democracy.

Implications for Future Research

1. A study analyzing the size in dollars of the capital project referendum could show a dollar value that is a breaking point between passing or failing. This research could determine if a monetary level of referendum shows a passing capacity, affording strategy-building of single, larger dollar projects or smaller divided projects. With the current referendum cap set at $2 million in Indiana, it is evident that breakouts are possible from $2 million and beyond to see if any grouping can be done to impact success. It is recommended that the projects be broken down to include new construction or improvements to existing facilities. This may help guide school persons in strategy planning. If a determination can be found that projects of a certain level or value tend to pass more frequently then it will be useful to current and future superintendents. Facility upgrades may or may not pass at a more

frequent level than new construction or vice versa. This determination would help guide projects towards or away from new construction.

2. It is recommended that future research identify whether capital projects referendums are more likely to pass if funds are used on elementary-level projects (K-6) or secondary-level projects (7-12). This would be pertinent to determine if voting is influenced by the age levels of children impacted. Could elementary-level initiatives evoke emotion because children are smaller and at earlier stages of their educational development? Elementary age levels range from 4-11 years in most models while secondary ages range from 12-18 years of age for the students attending schools. With the movement towards early college and senior learning centers it could be pertinent to see if the last stage of preparation for the next step in a student's life invokes a desire to approve additional spending. If a significant impact on voting can be determined, a clear advantage could be obtained in pushing for referendum votes at one level versus another.
3. A study should be considered analyzing whether a district had passed any other type of referendum locally to determine if this impacted the passing or failing of a school capital projects referendum. This clearly shows that a recent vote is a determining factor in whether the current vote at hand will be successful. A break in years between a passing or failing referendum could show a current or future superintendent whether or not time is needed between a previous vote and the current vote undertaken. It would be vital to understand that a vote failing needed a number of years of inaction before another is attempted or if a passing vote gave "momentum" to another passing vote. This information could help long-term

strategic planning for facilities and drive board or community relations while preparing a campaign for a referendum. Nothing in education currently is without planning if success is the desired outcome. Planning, board training, and community outreach are minimums to secure success in regards to capital project referendums.

4. It is recommended that a study be considered that would analyze the election time of the capital projects referendum vote. Voting can take place during primary elections, special elections, and regularly scheduled elections. This component would inform superintendents if any advantage can be gained or lost by the placement of the capital project referendum on the calendar.
5. After determining the impact of the independent variables within this study as not rejecting any of the four the null hypotheses, an additional research study could be formulated that would use multivariate regression to rethink this data set in order to reaffirm validity of the research using the independent variables.

Summary

After researching and investigating capital project referendum process in Ohio to align the procedure as identical to Indiana in order to inform superintendents of potential obstacles or advantages entering the referendum process, it was statistically proven that the independent variables of socio-economic level, median income, nor enrollment size of the districts had any impact on the passing or failing of the capital project referendum votes. Statistical data in terms of means showed extremely small variance when dealing with any of the three independent variables and the impact they had on the outcome of the capital project referendum votes.

Superintendents in Indiana can take away from this research that the independent variables do not impact the outcome of the capital project referendum votes separately or in combination.

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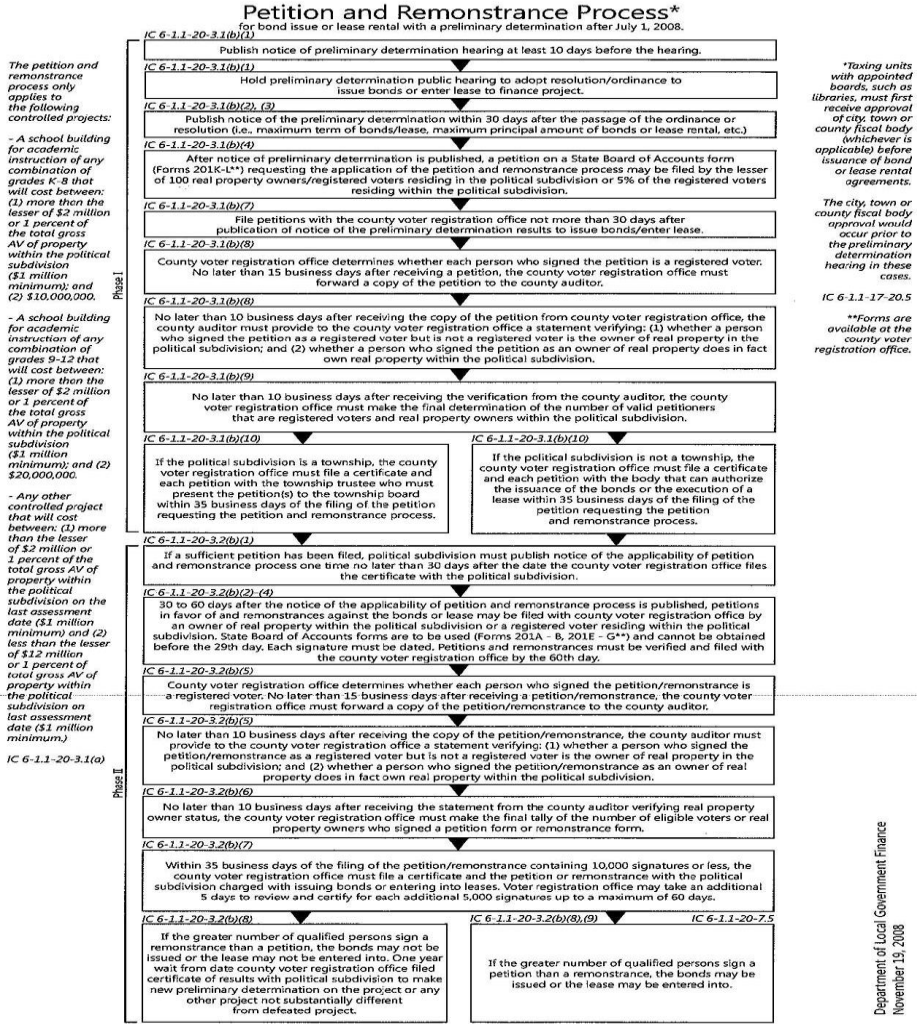
APPENDIX A: Indiana Remonstrance Process



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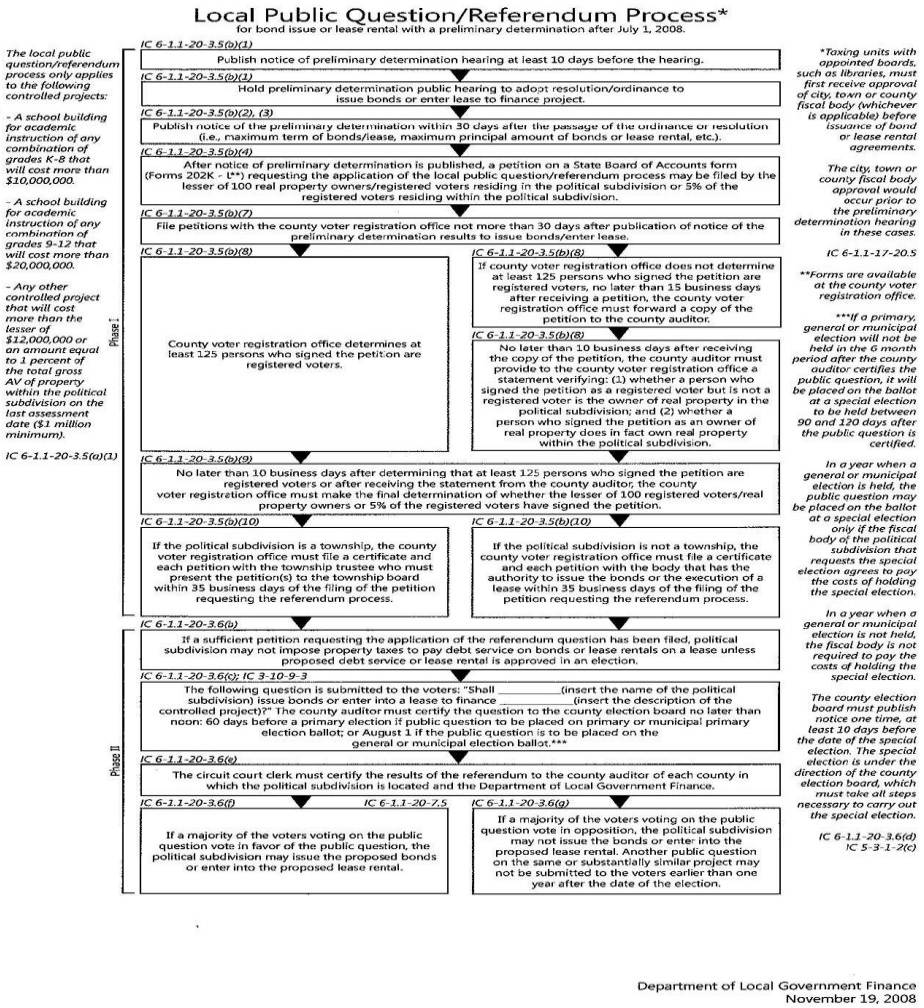
APPENDIX B: Indiana Referendum Process



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APPENDIX C: Free/Reduced Lunch Failing

District	Poverty Level Refer. Failed	2008-2009	2007-2008	2006-2007	2005-2006	2004-2005
43539	Barberton City		58.90%			
43604	Belpre City		45.00%			
43604	Belpre City		45.00%			
43638	Bowling Green City			21.30%		
43638	Bowling Green City				19.70%	
43687	Bucyrus City				47.40%	
44065	Girard City			42.80%		
44149	Ironton City				54.20%	
44172	Kenton City		44.00%			
44172	Kenton City		44.00%			
44412	Mt Healthy City			57.60%		
44495	Niles City			45.70%		
44495	Niles City			45.70%		
44529	North Olmsted City				21.30%	
44529	North Olmsted City				21.30%	
44537	North Ridgeville City		17.70%			
44537	North Ridgeville City		17.70%			
44651	Port Clinton City				33.90%	
44651	Port Clinton City				33.90%	
44677	Princeton City		48.20%			
44685	Ravenna School District				44.60%	
44693	Reading Community City		27.20%			
44743	Sandusky City		65.30%			
44743	Sandusky City				61.80%	
44800	South-Western City	49.60%				
44891	Tiffin City		31.40%			
44891	Tiffin City			33.10%		
44941	Urbana City			37.80%		
44941	Urbana City				25.90%	
44941	Urbana City					34.30%
45021	Wellston City		57.00%			
45021	Wellston City			50.50%		

District	Poverty Level Refer. Failed	2008-2009	2007-2008	2006-2007	2005-2006	2004-2005
45096	Willard City	49.90%				
45153	Xenia Community City	44.10%				
45245	Harrison Hills City			51.20%		
45245	Harrison Hills City		49.30%			
45245	Harrison Hills City			49.30%		
45252	Caldwell Exempted Village			29.00%		
45252	Caldwell Exempted Village			29.00%		
45252	Caldwell Exempted Village			29.00%		
45278	Carrollton Exempted Vil		45.10%			
45278	Carrollton Exempted Vil			41.80%		
45278	Carrollton Exempted Vil			41.80%		
45302	Clyde-Green Springs Exmp		30.90%			
45302	Clyde-Green Springs Exmp			29.50%		
45336	Covington Exempted Vil		19.90%			
45336	Covington Exempted Vil		19.90%			
45393	Granville Exempted Vil			1.40%		
45542	Newcomerstown Exmp Vil		53.60%			
45567	Newton Falls Exmp Vil		31.90%			
45583	Perrysburg Exempted Vil			6.40%		
45583	Perrysburg Exempted Vil			6.40%		
45658	Wellington Exempted Vil	34.20%				
45658	Wellington Exempted Vil	34.20%				
45773	Elida Local			27.90%		
45781	Perry Local			14.40%		
45823	Hillsdale Local	29.80%				
45880	Pymatuning Valley Local		44.30%			
45914	Federal Hocking Local				52.90%	
45914	Federal Hocking Local					36.30%
45963	New Knoxville Local				6.50%	
45971	Waynesfield-Goshen Local				18.00%	
46078	Ripley-Union-Lewis-Hunt	57.70%				
46102	Fairfield City	20.00%				
46102	Fairfield City		31.60%			
46136	New Miami Local				52.30%	
46151	Talawanda City		30.80%			
46219	West Liberty-Salem Local			16.30%		
46219	West Liberty-Salem Local			16.30%		
46219	West Liberty-Salem Local			16.30%		
46250	Northeastern Local		18.20%			

District	Poverty Level Refer. Failed	2008-2009	2007-2008	2006-2007	2005-2006	2004-2005
46250	Northeastern Local	14.70%				
46250	Northeastern Local		14.70%			
46276	Southeastern Local			18.80%		
46284	Clark-Shawnee Local					16.00%
46284	Clark-Shawnee Local					16.00%
46359	West Clermont Local			20.20%		
46359	West Clermont Local				15.50%	
46425	Beaver Local			39.70%		
46425	Beaver Local					37.80%
46599	Richmond Heights Local		27.90%			
46599	Richmond Heights Local			26.00%		
46631	Arcanum-Butler Local		16.50%			
46649	Franklin Monroe Local					11.40%
46714	Central Local			27.60%		
46714	Central Local				30.00%	
46714	Central Local				30.00%	
46755	Buckeye Valley Local		16.30%			
46755	Buckeye Valley Local			14.50%		
46805	Margaretta Local			23.60%		
46862	Bloom-Carroll Local	9.00%				
46896	Pickerington Local				9.90%	
46896	Pickerington Local					10.00%
46896	Pickerington Local				9.90%	
46904	Walnut Township Local				27.90%	
46920	Miami Trace Local		29.60%			
46920	Miami Trace Local		29.60%			
46979	Groveport Madison Local				32.40%	
46979	Groveport Madison Local					31.20%
46995	New Albany-Plain Local		4.90%			
46995	New Albany-Plain Local			3.90%		
47001	Reynoldsburg City			26.40%		
47084	Pike-Delta-York Local		31.00%			
47084	Pike-Delta-York Local		31.00%			
47241	Beavercreek City		9.00%			
47241	Beavercreek City			9.30%		
47266	Greeneview Local					19.20%
47399	Three Rivers Local			21.50%		
47423	Arlington Local	18.80%				
47423	Arlington Local		11.20%			

District	Poverty Level Refer. Failed	2008-2009	2007-2008	2006-2007	2005-2006	2004-2005
47431	Cory-Rawson Local			17.60%		
47449	Liberty-Benton Local	12.10%				
47449	Liberty-Benton Local	12.10%				
47456	McComb Local		27.80%			
47472	Vanlue Local			19.40%		
47456	McComb Local		27.80%			
47472	Vanlue Local			19.40%		
47472	Vanlue Local			19.40%		
47506	Ridgemont Local		26.50%			
47506	Ridgemont Local		26.50%			
47589	Liberty Center Local	24.10%				
47589	Liberty Center Local		24.00%			
47712	Monroeville Local			19.70%		
47712	Monroeville Local			19.70%		
47712	Monroeville Local					16.50%
47738	South Central Local				27.50%	
47738	South Central Local				27.50%	
47738	South Central Local				27.50%	
47803	Indian Creek Local		34.50%			
47803	Indian Creek Local			49.30%		
47829	Centerburg Local		18.50%			
47878	Kirtland Local					5.70%
47878	Kirtland Local					5.70%
47936	Fairland Local	38.90%				
47985	Johnstown-Monroe Local	14.00%				
47985	Johnstown-Monroe Local		16.90%			
47985	Johnstown-Monroe Local				13.20%	
47985	Johnstown-Monroe Local					10.10%
48025	North Fork Local	30.10%				
48041	Southwest Licking Local	26.30%				
48082	Indian Lake Local			32.70%		
48140	Columbia Local				14.10%	
48165	Keystone Local		17.30%			
48173	Midview Local	30.30%				
48173	Midview Local		25.20%			
48223	Springfield Local	32.90%				
48223	Springfield Local		30.60%			
48306	Boardman Local			24.50%		
48322	Jackson-Milton Local			32.80%		

District	Poverty Level Refer. Failed	2008-2009	2007-2008	2006-2007	2005-2006	2004-2005
48322	Jackson-Milton Local				31.30%	
48462	Black River Local					20.00%
48462	Black River Local					20.00%
48496	Highland Local		6.10%			
48496	Highland Local		6.10%			
48611	Bethel Local				4.80%	
48611	Bethel Local					4.00%
48652	Switzerland Of Ohio Local					42.40%
48694	Trotwood-Madison City					65.70%
48751	Huber Heights City			25.60%		
48819	Northmor Local		29.30%			
48942	Genoa Area Local		18.90%			
48942	Genoa Area Local			17.00%		
49171	Aurora City		6.00%			
49239	Streetsboro City					26.50%
49239	Streetsboro City					26.50%
49270	National Trail Local		40.20%			
49312	Columbus Grove Local		18.30%			
49312	Columbus Grove Local			17.10%		
49452	Madison Local		46.60%			
49791	Hardin-Houston Local		25.70%			
49791	Hardin-Houston Local					21.60%
49866	Lake Local	18.20%				
49890	Minerva Local				37.80%	
49890	Minerva Local				37.80%	
49916	Osnaburg Local			30.60%		
49999	Coventry Local		31.80%			
49999	Coventry Local			31.60%		
50047	Nordonia Hills City	16.00%				
50047	Nordonia Hills City		14.50%			
50161	Howland Local	22.60%				
50237	Southington Local		22.30%			
50237	Southington Local			25.70%		
50237	Southington Local		22.30%			
50286	Indian Valley Local					33.30%
50286	Indian Valley Local					33.30%
50302	Tuscarawas Valley Local	32.50%				
50328	Fairbanks Local				11.30%	
50443	Little Miami Local					9.80%

District	Poverty Level Refer. Failed	2008-2009	2007-2008	2006-2007	2005-2006	2004-2005
50443	Little Miami Local					9.80%
50450	Mason City			4.50%		
50567	North Central Local	33.00%				
50591	Triway Local					23.70%
50708	North Baltimore Local	37.50%				
50740	Mohawk Local			20.00%		

APPENDIX D: District Enrollment Failing

District	Enrollment Refer. Failed	2008-2009	2007-2008	2006-2007	2005-2006	2004-2005
43539	Barberton City		3,873			
43604	Belpre City		1,145			
43604	Belpre City		1,145			
43638	Bowling Green City			3,006		
43687	Bucyrus City				1,650	
44065	Girard City			1,685		
44149	Ironton City				1,625	
44172	Kenton City		1,980			
44172	Kenton City		1,980			
44412	Mt Healthy City			3,459		
44495	Niles City			2,801		
44495	Niles City			2,801		
44529	North Olmsted City				4,447	
44529	North Olmsted City				4,447	
44537	North Ridgeville City		3,655			
44537	North Ridgeville City		3,655			
44651	Port Clinton City				1,755	
44651	Port Clinton City				1,755	
44677	Princeton City		5,080			
44685	Ravenna City				3,040	
44693	Reading Community City		1,434			
44693	Reading Community City				1,413	
44743	Sandusky City		3,772			
44743	Sandusky City				3,978	
44800	South-Western City	20,786				
44891	Tiffin City		2,781			
44891	Tiffin City		2,781			
44941	Urbana City			2,342		
44941	Urbana City				2,338	
44941	Urbana City					2,320
45021	Wellston City		1,656			
45021	Wellston City			1,630		

District	Enrollment Refer. Failed	2008-2009	2007-2008	2006-2007	2005-2006	2004-2005
45096	Willard City	1,841				
45153	Xenia Community City	4,839				
45245	Harrison Hills City			1,987		
45245	Harrison Hills City		1,857			
45245	Harrison Hills City			1,987		
45252	Caldwell Exempted Village			954		
45252	Caldwell Exempted Village			954		
45252	Caldwell Exempted Village			954		
45278	Carrollton Exempted Village		2,541			
45278	Carrollton Exempted Village			2,504		
45278	Carrollton Exempted Village			2,504		
45302	Clyde-Green Springs Exem		2,154			
45302	Clyde-Green Springs Exem			2,210		
45336	Covington Exempted Village		824			
45336	Covington Exempted Village		824			
45393	Granville Exempted Village			2,334		
45542	Newcomerstown Exem		1,149			
45567	Newton Falls Exempted Vill		1,406			
45583	Perrysburg Exempted Vill			4,103		
45583	Perrysburg Exempted Vill			4,103		
45658	Wellington Exempted Vill	1,486				
45658	Wellington Exempted Vill	1,486				
45773	Elida Local			2,429		
45781	Perry Local			813		
45823	Hillsdale Local	1,097				
45880	Pymatuning Valley Local		1,297			
45914	Federal Hocking Local				1,238	
45914	Federal Hocking Local					1,289
45963	New Knoxville Local				444	
45971	Waynesfield-Goshen Local				617	
46078	Ripley-Union-Lewis-Hunt	1,165				
46102	Fairfield City	9,520				
46102	Fairfield City		9,658			
46136	New Miami Local				861	
46151	Talawanda City		2,982			
46219	West Liberty-Salem Local			1,202		
46219	West Liberty-Salem Local			1,202		
46219	West Liberty-Salem Local			1,202		
46250	Northeastern Local		3,693			

District	Enrollment Refer. Failed	2008-2009	2007-2008	2006-2007	2005-2006	2004-2005
46250	Northeastern Local	3,638				
46250	Northeastern Local		3,693			
46276	Southeastern Local			847		
46284	Clark-Shawnee Local					2,370
46359	West Clermont Local			8,646		
46359	West Clermont Local				8,756	
46425	Beaver Local			2,356		
46425	Beaver Local					2,405
46599	Richmond Heights Local		962			
46599	Richmond Heights Local			1,062		
46631	Arcanum-Butler Local		1,031			
46649	Franklin Monroe Local					764
46714	Central Local			1,113		
46714	Central Local				1,179	
46714	Central Local				1,179	
46755	Buckeye Valley Local		2,256			
46755	Buckeye Valley Local			2,219		
46805	Margaretta Local			1,368		
46862	Bloom-Carroll Local	1,599				
46896	Pickerington Local				9,114	
46896	Pickerington Local				9,114	
46896	Pickerington Local					8,925
46904	Walnut Township Local				686	
46920	Miami Trace Local		2,593			
46920	Miami Trace Local		2,593			
46979	Groveport Madison Local				6,148	
46979	Groveport Madison Local					5,983
46995	New Albany-Plain Local		3,765			
46995	New Albany-Plain Local			3,500		
47001	Reynoldsburg City			6,470		
47084	Pike-Delta-York Local		1,408			
47084	Pike-Delta-York Local		1,408			
47241	Beavercreek City		5,985			
47241	Beavercreek City			7,280		
47266	Greeneview Local					1,545
47399	Three Rivers Local			1,828		
47423	Arlington Local	612				
47423	Arlington Local		614			
47431	Cory-Rawson Local			657		

District	Enrollment Refer. Failed	2008-2009	2007-2008	2006-2007	2005-2006	2004-2005
47449	Liberty-Benton Local	1,243				
47449	Liberty-Benton Local	1,243				
47456	McComb Local		731			
47472	Vanlue Local			273		
47472	Vanlue Local			273		
47506	Ridgemont Local		590			
47506	Ridgemont Local		590			
47589	Liberty Center Local	1,221				
47589	Liberty Center Local		1,212			
47712	Monroeville Local			676		
47712	Monroeville Local			676		
47712	Monroeville Local					716
47738	South Central Local				930	
47738	South Central Local				930	
47738	South Central Local				930	
47803	Indian Creek Local		2,258			
47803	Indian Creek Local			2,159		
47829	Centerburg Local		1,155			
47878	Kirtland Local					1,084
47878	Kirtland Local					1,084
47936	Fairland Local	1,801				
47985	Johnstown-Monroe Local	1,517				
47985	Johnstown-Monroe Local		1,608			
47985	Johnstown-Monroe Local				1,525	
47985	Johnstown-Monroe Local					1,485
48025	North Fork Local	1,889				
48041	Southwest Licking Local	3,904				
48082	Indian Lake Local			1,873		
48140	Columbia Local				1,181	
48165	Keystone Local		1,803			
48173	Midview Local	3,567				
48173	Midview Local		3,512			
48223	Springfield Local	3,917				
48223	Springfield Local		3,882			
48306	Boardman Local			4,773		
48322	Jackson-Milton Local			894		
48322	Jackson-Milton Local				892	
48462	Black River Local					1,618
48462	Black River Local					1,618

District	Enrollment Refer. Failed	2008-2009	2007-2008	2006-2007	2005-2006	2004-2005
48496	Highland Local		3,269			
48496	Highland Local		3,269			
48611	Bethel Local				936	
48611	Bethel Local					948
48652	Switzerland Of Ohio Local					2,680
48694	Trotwood-Madison City					3,166
48751	Huber Heights City			6,203		
48819	Northmor Local		1,219			
48942	Genoa Area Local		1,521			
48942	Genoa Area Local			1,524		
49171	Aurora City		2,941			
49239	Streetsboro City					2,034
49239	Streetsboro City					2,034
49270	National Trail Local		1,084			
49312	Columbus Grove Local		916			
49312	Columbus Grove Local			910		
49452	Madison Local		2,916			
49791	Hardin-Houston Local		898			
49791	Hardin-Houston Local					884
49866	Lake Local	3,487				
49890	Minerva Local				2,341	
49890	Minerva Local				2,341	
49916	Osnaburg Local			904		
49999	Coventry Local		2,273			
49999	Coventry Local			2,305		
50047	Nordonia Hills City	3,950				
50047	Nordonia Hills City		3,772			
50161	Howland Local	2,995				
50237	Southington Local		673			
50237	Southington Local			686		
50237	Southington Local		673			
50286	Indian Valley Local					1,808
50286	Indian Valley Local					1,808
50302	Tuscarawas Valley Local	1,598				
50328	Fairbanks Local				932	
50443	Little Miami Local					3,272
50443	Little Miami Local					3,272
50476	Washington County ESC					83
50567	Norwayne Local	1,368				

District	Enrollment Refer. Failed	2008-2009	2007-2008	2006-2007	2005-2006	2004-2005
50591	Triway Local					2,014
50708	North Baltimore Local	703				
50740	Mohawk Local			1,023		

APPENDIX E: District Median Income Failing

District	Mean Income Refer. Failed	2008-2009	2007-2008	2006-2007	2005-2006	2004-2005
43539	Barberton City		$25,472			
43604	Belpre City		$26,654			
43604	Belpre City		$26,654			
43638	Bowling Green City			$26,735		
43638	Bowling Green City				$27,248	
43687	Bucyrus City				$24,992	
44065	Girard City			$25,973		
44149	Ironton City				$21,372	
44172	Kenton City		$26,629			
44172	Kenton City		$26,629			
44412	Mt Healthy City			$27,452		
44495	Niles City			$25,549		
44495	Niles City			$25,549		
44529	North Olmsted City				$34,604	
44529	North Olmsted City				$34,604	
44537	North Ridgeville City		$40,374			
44537	North Ridgeville City		$40,374			
44651	Port Clinton City				$27,253	
44651	Port Clinton City				$27,253	
44677	Princeton City		$33,411			
44685	Ravenna City				$27,307	
44693	Reading Community City		$29,188			
44743	Sandusky City		$21,945			
44743	Sandusky City				$22,431	
44800	South-Western City	$32,462				
44891	Tiffin City		$27,184			
44891	Tiffin City			$25,839		
44941	Urbana City			$28,361		
44941	Urbana City				$28,569	
44941	Urbana City					$28,068
45021	Wellston City		$24,700			
45021	Wellston City			$24,223		

District	Mean Income Refer. Failed	2008-2009	2007-2008	2006-2007	2005-2006	2004-2005
45096	Willard City	$27,754				
45153	Xenia Community City	$28,756				
45245	Harrison Hills City			$24,834		
45245	Harrison Hills City		$25,101			
45245	Harrison Hills City			$24,834		
45252	Caldwell Exempted Village			$23,552		
45252	Caldwell Exempted Village			$23,552		
45252	Caldwell Exempted Village			$23,552		
45278	Carrollton Exempted Village		$28,706			
45278	Carrollton Exempted Village			$27,373		
45278	Carrollton Exempted Village			$27,373		
45302	Clyde-Green Springs Exem		$28,991			
45302	Clyde-Green Springs Exem			$27,992		
45336	Covington Exempted Vil		$30,608			
45336	Covington Exempted Vil		$30,608			
45393	Granville Exempted Village			$52,697		
45542	Newcomerstown Exem Vill		$23,925			
45567	Newton Falls Exempted Vill		$30,744			
45583	Perrysburg Exempted Vil			$47,024		
45583	Perrysburg Exempted Vil			$47,024		
45658	Wellington Exempted Vil	$32,017				
45658	Wellington Exempted Vil	$32,017				
45773	Elida Local			$28,492		
45781	Perry Local			$25,231		
45823	Hillsdale Local	$34,480				
45880	Pymatuning Valley Local		$26,295			
45914	Federal Hocking Local				$25,855	
45914	Federal Hocking Local					$25,394
45963	New Knoxville Local				$29,095	
45971	Waynesfield-Goshen Local				$31,341	
46078	Ripley-Union-Lewis-Hunt	$25,523				
46102	Fairfield City	$36,921				
46102	Fairfield City		$36,401			
46136	New Miami Local				$25,053	
46151	Talawanda City		$33,315			
46219	West Liberty-Salem Local			$33,389		
46219	West Liberty-Salem Local			$33,389		
46219	West Liberty-Salem Local			$33,389		
46250	Northeastern Local		$35,744			

District	Mean Income Refer. Failed	2008-2009	2007-2008	2006-2007	2005-2006	2004-2005
46250	Northeastern Local	$36,113				
46250	Northeastern Local		$35,744			
46276	Southeastern Local			$32,492		
46284	Clark-Shawnee Local					$32,092
46359	West Clermont Local			$33,444		
46359	West Clermont Local				$33,823	
46425	Beaver Local			$27,501		
46425	Beaver Local					$26,722
46599	Richmond Heights Local		$33,167			
46599	Richmond Heights Local			$32,146		
46631	Arcanum-Butler Local		$30,994			
46649	Franklin Monroe Local					$30,618
46714	Central Local			$30,702		
46714	Central Local				$31,514	
46714	Central Local				$31,514	
46755	Buckeye Valley Local		$44,050			
46755	Buckeye Valley Local			$42,304		
46805	Margaretta Local			$31,310		
46862	Bloom-Carroll Local	$42,393				
46896	Pickerington Local				$46,457	
46896	Pickerington Local				$46,457	
46896	Pickerington Local					$46,676
46904	Walnut Township Local				$30,964	
46920	Miami Trace Local		$28,970			
46920	Miami Trace Local		$28,970			
46979	Groveport Madison Local				$30,733	
46979	Groveport Madison Local					$30,708
46995	New Albany-Plain Local		$66,720			
46995	New Albany-Plain Local			$58,493		
47001	Reynoldsburg City			$33,098		
47084	Pike-Delta-York Local		$31,556			
47084	Pike-Delta-York Local		$31,556			
47241	Beavercreek City		$47,449			
47241	Beavercreek City			$45,859		
47266	Greeneview Local					$31,703
47399	Three Rivers Local			$38,902		
47423	Arlington Local	$35,708				
47423	Arlington Local		$32,930			
47431	Cory-Rawson Local			$31,867		

District	Mean Income Refer. Failed	2008-2009	2007-2008	2006-2007	2005-2006	2004-2005
47449	Liberty-Benton Local	$36,078				
47449	Liberty-Benton Local	$36,078				
47456	McComb Local		$32,164			
47472	Vanlue Local			$33,391		
47472	Vanlue Local			$33,391		
47506	Ridgemont Local		$32,086			
47506	Ridgemont Local		$32,086			
47589	Liberty Center Local	$36,258				
47589	Liberty Center Local		$35,207			
47712	Monroeville Local			$31,362		
47712	Monroeville Local			$31,362		
47712	Monroeville Local					$31,594
47738	South Central Local				$29,022	
47738	South Central Local				$29,022	
47738	South Central Local				$29,022	
47803	Indian Creek Local		$28,886			
47803	Indian Creek Local		$28,886	$27,467		
47829	Centerburg Local		$37,334			
47878	Kirtland Local					$39,155
47878	Kirtland Local					$39,155
47936	Fairland Local	$28,722				
47985	Johnstown-Monroe Local	$38,397				
47985	Johnstown-Monroe Local		$37,731			
47985	Johnstown-Monroe Local				$36,563	
47985	Johnstown-Monroe Local					$35,979
48025	North Fork Local	$32,623				
48041	Southwest Licking Local	$42,467				
48082	Indian Lake Local			$29,210		
48140	Columbia Local				$35,608	
48165	Keystone Local		$37,790			
48173	Midview Local	$34,062				
48173	Midview Local		$34,200			
48223	Springfield Local	$35,858				
48223	Springfield Local		$35,718			
48306	Boardman Local			$30,208		
48322	Jackson-Milton Local			$30,860		
48322	Jackson-Milton Local				$31,145	
48462	Black River Local					$32,251
48462	Black River Local					$32,251

District	Mean Income Refer. Failed	2008-2009	2007-2008	2006-2007	2005-2006	2004-2005
48496	Highland Local		$48,340			
48496	Highland Local		$48,340			
48611	Bethel Local				$38,722	
48611	Bethel Local					$37,197
48652	Switzerland Of Ohio Local					$24,601
48694	Trotwood-Madison City					$24,836
48751	Huber Heights City			$33,866		
48819	Northmor Local		$31,530			
48942	Genoa Area Local		$36,436			
48942	Genoa Area Local			$34,703		
49171	Aurora City		$50,278			
49239	Streetsboro City					$33,305
49239	Streetsboro City					$33,305
49270	National Trail Local		$29,536			
49312	Columbus Grove Local		$32,299			
49312	Columbus Grove Local			$30,429		
49452	Madison Local		$27,298			
49791	Hardin-Houston Local		$31,597			
49791	Hardin-Houston Local					$30,351
49866	Lake Local	$37,990				
49890	Minerva Local				$28,100	
49890	Minerva Local				$28,100	
49916	Osnaburg Local			$27,796		
49999	Coventry Local		$31,980			
49999	Coventry Local			$31,319		
50047	Nordonia Hills City	$43,166				
50047	Nordonia Hills City		$42,482			
50161	Howland Local	$32,751				
50237	Southington Local		$32,900			
50237	Southington Local			$32,381		
50237	Southington Local		$32,900			
50286	Indian Valley Local					$25,379
50286	Indian Valley Local					$25,379
50302	Tuscarawas Valley Local	$33,404				
50328	Fairbanks Local				$39,552	
50443	Little Miami Local					$43,181
50443	Little Miami Local					$43,181
50450	Mason City			$56,266		
50591	Triway Local					$29,124

District	Mean Income Refer. Failed	2008-2009	2007-2008	2006-2007	2005-2006	2004-2005
50641	North Central Local	$29,969				
50708	North Baltimore Local	$30,642				
50740	Mohawk Local			$29,717		

APPENDIX F: Free/Reduced Lunch Passing

District	Poverty Level Refer. Passed	2008-2009	2007-2008	2006-2007	2005-2006	2004-2005
43497	Alliance City			69.10%		
43513	Ashtabula Area City		63.00%			
43539	Barberton City		58.90%			
43653	Brooklyn City		35.70%			
43687	Bucyrus City			45.50%		
43802	Columbus City	81.10%				
43869	Defiance City				36.20%	
43943	Elyria City			51.50%		
43976	Fairview Park City					19.90%
44032	Gallipolis City				37.80%	
44099	Greenville City	35.50%				
44107	Hamilton City			52.60%		
44149	Ironton City				54.20%	
44214	Lebanon City		19.30%			
44305	Maple Heights City		61.10%			
44305	Maple Heights City		61.10%			
44347	Martins Ferry City					40.40%
44396	Miamisburg City		31.20%			
44412	Mt Healthy City			57.60%		
44420	Mount Vernon City		31.60%	33.40%		
44446	Nelsonville-York City					52.30%
44453	Newark City					40.30%
44461	New Boston Local	80.20%				
44487	New Philadelphia City		40.70%			
44495	Niles City	53.40%				
44511	North College Hill City		63.60%			
44586	Oakwood City			1.60%		
44602	Oregon City	36.20%				24.10%
44610	Orrville City			33.60%		
44727	St Marys City		25.40%			
44735	Salem City		41.40%			
44743	Sandusky City	69.00%				

District	Poverty Level Refer. Passed	2008-2009	2007-2008	2006-2007	2005-2006	2004-2005
44750	Shaker Heights City					21.30%
44875	Sylvania City	6.40%				
44883	Tallmadge City					11.20%
44891	Tiffin City		31.40%			
44909	Toledo City	66.20%				
44925	Troy City					20.20%
44941	Urbana City	48.50%				
44974	Wadsworth City	17.90%				
44982	Wapakoneta City		26.10%			
45005	Warrensville Heights City			22.60%		
45039	Wellsville Local	51.90%				
45070	Whitehall City	72.40%				
45096	Willard City			44.20%		
45138	Worthington City			14.10%		
45161	Youngstown City					82.80%
45187	Ada Exempted Village				27.30%	
45195	Amherst Exempted Village		16.20%			
45393	Granville Exempted Village	1.80%				
45419	Hicksville Exempted Village				25.60%	
45427	Hubbard Exempted Village			28.60%		
45468	Loudonville-Perrysville Exemp Vill		40.40%			
45484	Mechanicsburg ExempVill	25.70%				
45492	Mentor Exempted Village		15.50%			
45500	Milford Exempted Village		14.80%			
45542	Newcomerstown Exemp Vill			52.40%		
45617	Tipp City Exempted Village	14.40%				
45633	Versailles Exempted Village			9.00%		
45641	Wauseon Exempted Village			28.00%		
45674	Yellow Springs Exempted Village		7.50%			
45765	Bath Local			30.50%		
45773	Elida Local		34.60%			
45799	Shawnee Local		20.40%			
45872	Jefferson Area Local			34.70%		
45963	New Knoxville Local				6.50%	
45971	Waynesfield-Goshen Local	23.50%				
46037	Eastern Local				35.10%	
46045	Fayetteville-Perry Local				20.60%	
46094	Edgewood City	27.90%				

District	Poverty Level Refer. Passed	2008-2009	2007-2008	2006-2007	2005-2006	2004-2005
46110	Lakota Local		10.30%			7.20%
46151	Talawanda City	21.90%				
46219	West Liberty-Salem Local	12.00%				
46250	Northeastern Local	18.20%				
46359	West Clermont Local		20.50%			
46383	Blanchester Local			37.40%		
46458	United Local	34.60%				
46508	Buckeye Central Local			31.00%		
46573	Olmsted Falls City			10.20%		
46607	Solon City		4.20%			
46631	Arcanum-Butler Local		16.50%			
46649	Franklin Monroe Local	16.90%				
46722	Northeastern Local	22.60%				
46748	Big Walnut Local	17.40%				14.30%
46755	Buckeye Valley Local	14.50%	16.30%			
46763	Olentangy Local		6.30%		6.70%	
46805	Margaretta Local		24.90%			
46813	Perkins Local		24.20%			
46870	Fairfield Union Local				26.70%	16.70%
46888	Liberty Union-Thurston Local		23.60%			
46896	Pickerington Local			10.70%		
46920	Miami Trace Local	35.00%			28.50%	
46946	Canal Winchester Local			15.00%		15.40%
46953	Hamilton Local				40.60%	
47001	Reynoldsburg City		33.60%			20.20%
47019	Hilliard City				14.60%	
47027	Dublin City	11.00%				6.70%
47076	Pettisville Local	23.80%				
47084	Pike-Delta-York Local	38.20%				
47167	Berkshire Local	8.60%				
47241	Beavercreek City	10.20%				
47258	Cedar Cliff Local	14.60%				
47274	Bellbrook-Sugarcreek Local		10.50%			
47431	Cory-Rawson Local		17.70%			
47498	Hardin Northern Local		19.00%			
47621	Fairfield Local		32.80%			
47688	East Holmes Local			26.30%		
47696	West Holmes Local	41.80%				
47712	Monroeville Local		16.70%			

District	Poverty Level Refer. Passed	2008-2009	2007-2008	2006-2007	2005-2006	2004-2005
47803	Indian Creek Local	53.00%				
47829	Centerburg Local		18.50%			
47845	East Knox Local		33.80%			
47878	Kirtland Local				7.90%	
47886	Madison Local	33.30%				
47993	Lakewood Local			33.60%		
48116	Avon Local	9.40%			9.00%	
48223	Springfield Local		30.60%			
48306	Boardman Local		27.80%			
48322	Jackson-Milton Local	38.60%				
48348	Poland Local		12.10%			
48363	South Range Local			19.10%		
48397	Western Reserve Local	16.40%				
48496	Highland Local	6.90%				
48611	Bethel Local		7.20%			
48629	Miami East Local	13.70%				
48652	Switzerland Of Ohio Local	53.90%				
48694	Trotwood-Madison City					65.70%
48710	New Lebanon Local		29.20%			
48751	Huber Heights City		28.00%			
48819	Northmor Local		29.30%			
48835	East Muskingum Local		28.00%			
48926	Benton Carroll Salem Local	28.70%				
49080	Logan Elm Local		24.00%			
49098	Teays Valley Local			21.50%		
49106	Westfall Local	65.10%				
49171	Aurora City		6.00%			
49189	Crestwood Local			19.10%		
49197	Field Local					19.10%
49312	Columbus Grove Local	18.70%	18.30%			
49320	Continental Local	31.30%				
49346	Kalida Local	9.50%				
49379	Ottawa-Glandorf Local	16.70%	15.70%			
49668	Wheelersburg Local					26.30%
49775	Fairlawn Local			22.80%		
49783	Fort Loramie Local			8.30%		
49791	Hardin-Houston Local	26.10%				
49841	Fairless Local					39.50%
49858	Jackson Local					8.70%

District	Poverty Level Refer. Passed	2008-2009	2007-2008	2006-2007	2005-2006	2004-2005
49916	Osnaburg Local			30.60%		
49940	Sandy Valley Local				35.70%	
50005	Manchester Local			10.00%		
50039	Mogadore Local					15.50%
50047	Nordonia Hills City		14.50%			
50070	Twinsburg City		13.00%			
50120	Brookfield Local		44.90%			
50153	Mathews Local		18.00%			
50237	Southington Local			25.70%		
50245	LaBrae Local	45.20%				
50278	Garaway Local			26.30%		
50294	Strasburg-Franklin Local		1.60%			12.70%
50328	Fairbanks Local				11.30%	
50369	Lincolnview Local	29.50%			21.00%	
50393	Vinton County Local					53.10%
50435	Kings Local			11.40%		
50443	Little Miami Local				11.10%	
50450	Mason City			4.50%		
50542	Dalton Local			17.40%		
50559	Green Local	10.20%				
50567	North Central Local			27.10%		
50583	Southeast Local	41.50%				
50633	Millcreek-West Unity Local				32.00%	
50658	Stryker Local				23.80%	
50708	North Baltimore Local		28.50%			
61903	Adams County/Ohio Valley Local				53.60%	
65680	Gallia County Local				48.50%	

APPENDIX G: District Enrollment Passing

ID	Enrollment Refer. Passed	2008-2009	2007-2008	2006-2007	2005-2006	2004-2005
43497	Alliance City			3,068		
43513	Ashtabula Area City		4,039			
43539	Barberton City		3,873			
43653	Brooklyn City		1,462			
43687	Bucyrus City			1,649		
43802	Columbus City	51,963				
43869	Defiance City				2,360	
43943	Elyria City			7,277		
43976	Fairview Park City					1,758
44032	Gallipolis City				2,360	
44099	Greenville City	2,839				
44107	Hamilton City			9,141		
44149	Ironton City				1,625	
44214	Lebanon City		5,202			
44305	Maple Heights City		3,726			
44305	Maple Heights City		3,726			
44347	Martins Ferry City					1,552
44396	Miamisburg City		5,562			
44412	Mt Healthy City			3,459		
44420	Mount Vernon City		4,058	3,894		
44446	Nelsonvi-York City					1,301
44453	Newark City					6,411
44461	New Boston Local	413				
44487	New Philadelp City		3,245			
44495	Niles City	2,774				
44511	North Coll Hill City		1,545			
44586	Oakwood City			2,104		
44602	Oregon City	3,837				3,838
44610	Orrville City			1,704		
44727	St Marys City		2,329			
44735	Salem City		2,078			
44743	Sandusky City	3,543				

ID	Enrollment Refer. Passed	2008-2009	2007-2008	2006-2007	2005-2006	2004-2005
44750	Shaker Height City					5,600
44875	Sylvania City	7,489				
44883	Tallmadge City					2,721
44891	Tiffin City		2,781			
44909	Toledo City	25,816				
44925	Troy City					4,405
44941	Urbana City	2,296				
44974	Wadsworth City	4,638				
44982	Wapakoneta City		3,025			
45005	Warrensv Heig City			2,359		
45039	Wellsville Local	917				
45070	Whitehall City	2,736				
45096	Willard City			1,913		
45138	Worthington City			8,911		
45161	Youngstown City					8,843
45187	Ada ExemptVillage				813	
45195	Amherst Exe Villa		4,094			
45393	Granville ExemVil	2,454				
45419	Hicksville Exem Vi				979	
45427	Hu Exempted Village			2,178		
45468	Loudonville-Perry Ex		1,245			
45484	Mechanicsburg Exe	924				
45492	Men Exempted Village		9,060			
45500	Mil Exempted Village		6,060			
45542	Newcotown Exe Vill			1,140		
45617	Tipp Exempted Village	2,568				
45633	Vers Exempted Village			1,340		
45641	Wa Exempted Village			1,995		
45674	Ye Springs Exemp Vill		643			
45765	Bath Local			1,922		
45773	Elida Local		2,376			
45799	Shawnee Local		2,697			
45872	Jefferson Area Local			2,056		
45963	New Knoxville Local				444	
45971	Waynes-Goshen Local	614				
46037	Eastern Local				1,494	
46045	Fayette-Perry Local				1,001	
46094	Edgewood City	3,499				
46110	Lakota Local		17,265			16,002

ID	Enrollment Refer. Passed	2008-2009	2007-2008	2006-2007	2005-2006	2004-2005
46151	Talawanda City	3,037				
46219	West Liberty-Salem Lo	1,225				
46250	Northeastern Local	3,638				
46359	West Clermont Local		8,679			
46383	Blanchester Local			1,753		
46458	United Local	1,318				
46508	Buckeye Central Local			732		
46573	Olmsted Falls City			3,461		
46607	Solon City		5,253			
46631	Arcanum-Butler Local		1,031			
46649	Franklin Monroe Local	757				
46722	Northeastern Local	1,131				
46748	Big Walnut Local	2,795				2,535
46755	Buckeye Valley Local	2,339	2,256			
46763	Olentangy Local		13,064		10,959	
46805	Margaretta Local		1,346			
46813	Perkins Local		2,131			
46870	Fairfield Union Local				1,964	2,011
46888	Liber Union-Thu Local		1,375			
46896	Pickerington Local			9,671		
46920	Miami Trace Local	2,497			2,744	
46946	Canal Winchester Local			3,024		2,723
46953	Hamilton Local				2,771	
47001	Reynoldsburg City		6,398			6,268
47019	Hilliard City				14,126	
47027	Dublin City	13,125				12,178
47076	Pettisville Local	551				
47084	Pike-Delta-York Local	1,391				
47167	Berkshire Local	1,126				
47241	Beavercreek City	7,811				
47258	Cedar Cliff Local	621				
47274	Bellbrook-Sugar Local		2,653			
47431	Cory-Rawson Local		634			
47498	Hardin Northern Local		495			
47621	Fairfield Local		863			
47688	East Holmes Local			1,941		
47696	West Holmes Local	2,575				
47712	Monroeville Local		676			
47803	Indian Creek Local	2,224				

ID	Enrollment Refer. Passed	2008-2009	2007-2008	2006-2007	2005-2006	2004-2005
47829	Centerburg Local		1,155			
47845	East Knox Local		1,226			
47878	Kirtland Local				1,107	
47886	Madison Local	3,265				
47993	Lakewood Local			2,328		
48116	Avon Local	3,461			2,892	
48223	Springfield Local		3,882			
48306	Boardman Local		4,732			
48322	Jackson-Milton Local	881				
48348	Poland Local		2,336			
48363	South Range Local			1,342		
48397	Western Reserve Local	771				
48496	Highland Local	3,274				
48611	Bethel Local		868			
48629	Miami East Local	1,222				
48652	Switzerl Of Ohio Local	2,595				
48694	Trotwood-Madiso City					3,166
48710	New Lebanon Local		1,172			
48751	Huber Heights City		6,095			
48819	Northmor Local		1,219			
48835	East Muskingum Local		2,188			
48926	Benton Carr Salem Loc	1,925				
49080	Logan Elm Local		2,317			
49098	Teays Valley Local			3,438		
49106	Westfall Local	1,675				
49171	Aurora City		2,941			
49189	Crestwood Local			2,496		
49197	Field Local					2,345
49312	Columbus Grove Local	908	916			
49320	Continental Local	580				
49346	Kalida Local	641				
49379	Ottawa-Glandorf Local	1,431	1,426			
49668	Wheelersburg Local					1,448
49775	Fairlawn Local			551		
49783	Fort Loramie Local			819		
49791	Hardin-Houston Local	888				
49841	Fairless Local					1,870
49858	Jackson Local					5,751
49916	Osnaburg Local			904		

ID	Enrollment Refer. Passed	2008-2009	2007-2008	2006-2007	2005-2006	2004-2005
49940	Sandy Valley Local				1,489	
50005	Manchester Local			1,480		
50039	Mogadore Local					854
50047	Nordonia Hills City		3,772			
50070	Twinsburg City		4,265			
50120	Brookfield Local		1,191			
50153	Mathews Local		901			
50237	Southington Local			686		
50245	LaBrae Local	1,480				
50278	Garaway Local			1,203		
50294	Strasburg-Franklin Loc		682			696
50328	Fairbanks Local				932	
50369	Lincolnview Local	920			903	
50393	Vinton County Local					2,494
50435	Kings Local			3,615		
50443	Little Miami Local				3,419	
50450	Mason City			9,778		
50542	Dalton Local			939		
50559	Green Local	1,196				
50567	North Central Local			1,411		
50583	Southeast Local	1,680				
50633	Mill-West Unity Local				708	
50658	Stryker Local				484	
50708	North Baltimore Local		697			
61903	Adams County/Ohio				4,117	
65680	Gallia County Local				2,426	

APPENDIX H: Distric Median Income Passing

District	Median Income Refer. Passed	2008-2009	2007-2008	2006-2007	2005-2006	2004-2005
43497	Alliance City			$22,680		
43513	Ashtabula Area City		$25,211			
43539	Barberton City		$25,472			
43653	Brooklyn City		$29,339			
43687	Bucyrus City			$24,741		
43802	Columbus City	$26,467				
43869	Defiance City				$28,449	
43943	Elyria City			$26,559		
43976	Fairview Park City					$34,448
44032	Gallipolis City				$26,280	
44099	Greenville City	$27,145				
44107	Hamilton City			$26,200		
44149	Ironton City				$21,372	
44214	Lebanon City		$37,591			
44305	Maple Heights City		$27,934			
44305	Maple Heights City		$27,934			
44347	Martins Ferry City					$23,021
44396	Miamisburg City		$35,645			
44412	Mt Healthy City			$27,452		
44420	Mount Vernon City		$28,661	$27,883		
44446	Nelsonville-York City					$21,609
44453	Newark City					$25,364
44461	New Boston Local	$17,208				
44487	New Philadelphia City		$26,426			
44495	Niles City	$26,132				
44511	North College Hill City		$27,834			
44586	Oakwood City			$55,033		
44602	Oregon City	$34,705				$32,441
44610	Orrville City			$29,209		
44727	St Marys City		$30,029			
44735	Salem City		$26,595			
44743	Sandusky City	$21,821				
44750	Shaker Heights City					$41,357
44875	Sylvania City	$43,255				
44883	Tallmadge City					$33,835
44891	Tiffin City		$27,184			
44909	Toledo City	$25,096				
44925	Troy City					$30,963
44941	Urbana City	$28,550				
44974	Wadsworth City	$37,223				

District	Median Income Refer. Passed	2008-2009	2007-2008	2006-2007	2005-2006	2004-2005
44982	Wapakoneta City		$30,905			
45005	Warrensville Heights City			$25,251		
45039	Wellsville Local	$23,811				
45070	Whitehall City	$24,531				
45096	Willard City			$27,616		
45138	Worthington City			$41,593		
45161	Youngstown City					$19,508
45187	Ada Exempted Village				$28,392	
45195	Amherst Exempted Village		$37,721			
45393	Granville Exempted Village	$56,696				
45419	Hicksville Exempted Village				$29,374	
45427	Hubbard Exempted Village			$28,813		
45468	Loudonville-Perrysville ExemVil		$27,832			
45484	Mechanicsburg Exemp Vill	$35,197				
45492	Mentor Exempted Village		$37,156			
45500	Milford Exempted Village		$40,988			
45542	Newcomerstown Exemp Vill			$22,885		
45617	Tipp City Exempted Village	$38,427				
45633	Versailles Exempted Village			$30,965		
45641	Wauseon Exempted Village			$29,327		
45674	Yellow Springs Exempted Vill		$36,968			
45765	Bath Local			$30,675		
45773	Elida Local		$29,596			
45799	Shawnee Local		$37,065			
45872	Jefferson Area Local			$28,697		
45963	New Knoxville Local				$29,095	
45971	Waynesfield-Goshen Local	$34,123				
46037	Eastern Local				$28,293	
46045	Fayetteville-Perry Local				$32,807	
46094	Edgewood City	$34,512				
46110	Lakota Local		$51,419			$48,921
46151	Talawanda City	$33,768				
46219	West Liberty-Salem Local	$35,215				
46250	Northeastern Local	$36,113				
46359	West Clermont Local		$34,257			
46383	Blanchester Local			$29,065		
46458	United Local	$29,936				
46508	Buckeye Central Local			$29,117		
46573	Olmsted Falls City			$38,535		
46607	Solon City		$48,104			
46631	Arcanum-Butler Local		$30,994			
46649	Franklin Monroe Local	$34,346				
46722	Northeastern Local	$34,544				
46748	Big Walnut Local	$43,531				$39,189
46755	Buckeye Valley Local	$44,717	$44,050			
46763	Olentangy Local		$69,046		$65,121	
46805	Margaretta Local		$31,630			
46813	Perkins Local		$33,831			

District	Median Income Refer. Passed	2008-2009	2007-2008	2006-2007	2005-2006	2004-2005
46870	Fairfield Union Local				$31,439	$30,609
46888	Liberty Union-Thurston Local		$36,185			
46896	Pickerington Local			$45,587		
46920	Miami Trace Local	$29,627			$28,480	
46946	Canal Winchester Local			$39,612		$38,982
46953	Hamilton Local				$28,924	
47001	Reynoldsburg City		$33,942			$33,499
47019	Hilliard City				$44,889	
47027	Dublin City	$48,274				$46,922
47076	Pettisville Local	$33,092				
47084	Pike-Delta-York Local	$32,013				
47167	Berkshire Local	$34,320				
47241	Beavercreek City	$47,670				
47258	Cedar Cliff Local	$32,513				
47274	Bellbrook-Sugarcreek Local		$50,158			
47431	Cory-Rawson Local		$33,063			
47498	Hardin Northern Local		$32,401			
47621	Fairfield Local		$30,807			
47688	East Holmes Local			$26,236		
47696	West Holmes Local	$27,408				
47712	Monroeville Local		$32,659			
47803	Indian Creek Local	$29,107				
47829	Centerburg Local		$37,334			
47845	East Knox Local		$32,708			
47878	Kirtland Local				$40,509	
47886	Madison Local	$32,657				
47993	Lakewood Local			$29,798		
48116	Avon Local	$54,561			$49,383	
48223	Springfield Local		$35,718			
48306	Boardman Local		$30,987			
48322	Jackson-Milton Local	$31,581				
48348	Poland Local		$37,541			
48363	South Range Local			$32,953		
48397	Western Reserve Local	$34,246				
48496	Highland Local	$48,894				
48611	Bethel Local		$39,407			
48629	Miami East Local	$36,725				
48652	Switzerland Of Ohio Local	$26,243				
48694	Trotwood-Madison City					$24,836
48710	New Lebanon Local		$30,174			
48751	Huber Heights City		$34,216			
48819	Northmor Local		$31,530			
48835	East Muskingum Local		$30,373			
48926	Benton Carroll Salem Local	$34,218				
49080	Logan Elm Local		$32,865			
49098	Teays Valley Local			$35,340		
49106	Westfall Local	$34,246				
49171	Aurora City		$50,278			