

THE EFFECTS OF TAX INCREMENT FINANCING
ON ASSESSED LAND VALUES

by

Burdette Edward Fullerton II

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Approved by:

Dr. Chad R. Miller, Committee Chair
Associate Professor, Economic Development, Tourism, and Sports Management

Dr. H. Quincy Brown, Committee Member
Assistant Professor, Human Capital Development

Dr. Cyndi H. Gaudet, Committee Member
Professor, Human Capital Development

Dr. Dale L. Lunsford, Committee Member
Assistant Professor, Human Capital Development

Dr. Patricia P. Phillips, Committee Member
Adjunct Professor, Human Capital Development

Dr. Cyndi H. Gaudet
Chair, Department of Human Capital Development

Dr. Karen S. Coats
Dean of the Graduate School

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ABSTRACT

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Public policy debate regarding the use of economic development incentives is active and growing with a focus on the costs and benefits to communities around the country. Communities grant economic development incentives that encourage real estate development, such as tax increment financing, without knowing if the growth of land value or building type valuation inside of tax increment areas accelerate faster than areas outside of tax increment districts. Without the knowledge of how tax increment financing influences land values, communities risk the misallocation of resources from public entities, such as schools and libraries to private entities. In an era of limited public resources, this lack of knowledge is unacceptable.

This quasi-experimental study addresses the problem by comparing the growth in assessed market value of land parcels in tax increment financing districts in Jackson County, MO over a period of ten years to the value growth of the remainder of the county. Additional analysis was conducted regarding the type of tax increment financing projects and the distance of the project from the city hall. The data was collected from archival records of the Jackson County, MO Assessor from 2000 to 2015. The research community and public policy officials will benefit from this analysis, which can be used to review the impact of tax increment financing.

Findings indicate tax increment financing does have a stimulating and significant effect on land value growth in Jackson County. Land parcels increase in value faster inside versus outside of tax increment financing districts. Specific building types, office, residential, retail, and public buildings in tax increment areas increase in value faster than the remainder of the county. Distance of tax increment financing districts from city hall had significant differences with retail buildings located within one half mile.

Additionally, significant differences existed with office, residential, retail, and public buildings between 1.0-1.49 miles from city hall. Tax increment financing plans located between .5-.99 and 1.5+ miles from city hall increased land value faster than other distance ranges. Recommendations are made to encourage office and retail developments due to strong value growth, as well as bringing additional benefits to communities.

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DEDICATION

I appreciate the opportunity to dedicate this manuscript to my family. I began the journey to achieve a Ph.D. shortly after recovering from cancer. I needed this focus on improving myself to mentally recover from that trauma. But more importantly, I needed to show my family and friends that learning never stops, even in the face of adversity. Pursuing a Ph.D. has been a long journey; one that has taken more time than everyone had hoped. So, to my family, thank you for your love, support, and patience. I wanted to be a model for you regarding two very important traits, continuous learning, and resiliency. I am afraid those worthy goals were many times coopted by the number of hours I spent away from you either studying or writing. If in the pursuit of this Ph.D., I was not as good of a husband, father, son, or brother I should have been, I apologize. But we made it, and we made it together!

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CHAPTER I - INTRODUCTION

While cities' fiscal situations are improving from the economic recession that began in 2007, city revenues have not returned to pre-recession levels (McFarland & Pagano, 2016). As an example of the impact the recession had on city budgets, the National League of Cities noted in 2008-2010 cities in the United States faced a combined deficit of between \$56 billion and \$83 billion, or between 2.5 to 3% of city general fund budgets (Hoene, 2009; Hoene & Pagano, 2010). Additionally, the *New York Times* reported state and local budgets sustained over \$156 billion in cuts in 2011 alone (Story, 2012). As the revenue situation improves, cities continue to grapple with the challenges of the growing costs of deferred infrastructure and employee retirement costs (McFarland & Pagano, 2016).

Beginning with the retrenchment of federal funding in the early 1980s and continuing with the forces of globalization and an increase in the mobility of capital, coupled with the economic downturn of the last few years, United States cities have struggled to maintain and enhance city services and bring in new jobs and tax base (Clarke & Gaile, 1989; Eisinger, 1988; Weber, 2003a). Concerns continue about how cities will be able to meet growing budget demands for pension, health care and infrastructure contributions (McFarland & Hoene, 2016). These major macro-level shifts have contributed to urban municipal challenges like population loss, job loss, decreased tax base, budget shortfalls, declining quality of city services, increasing crime, vacant or obsolete structures, and abandoned land (Kenyon, Langley, & Paquin, 2012).

As a result, local economic development has become an increasingly important function of state and local governments (Warner & Zheng, 2013). The function of

economic development is to reverse this fiscal challenge to cities through the creation of jobs and the increase of wealth to individuals and cities through the collection of taxes (Blakely, 2003). According to Blakely and Bradshaw (2002) *economic development* is defined as:

The process in which local governments or community-based organizations engage to stimulate or maintain business activity and/or employment opportunities in sectors that improve the community using existing human, natural and institutional resources. The principle goal of local economic development is to stimulate local employment opportunities. (p. xv-xvi)

Background

Cities have used various approaches and policies over the last 30 years to accommodate increasing opportunities for economic development. Some policies have focused on business development and location issues, such as job creation tax credits, tax abatements, business debt financing programs, infrastructure investments, regulatory policy, venture capital financing, research and development support, small business support, and job training programs (Blakely & Bradshaw, 2002; Bradshaw & Blakely, 1999). Other policies have focused on place-based incentives to develop or redevelop certain targeted real estate areas of cities, such as enterprise or empowerment zones, and tax increment financing (Oakley & Tsao, 2006; Pacewicz, 2013; Schram, 2010). In 2013, there were 1,800 state level incentive programs in the United States (Hurwitz, 2014), many of which are administered by local or regional bodies. Economic development strategies attempt to stimulate real estate activity to assist in the creation of jobs for human capital to be deployed in a community. Improved real estate has been noted as the

most important issue in the creation of jobs (Furth, 2015). Workers who experience extended periods of unemployment suffer a loss of job skills that hurt long-term earnings (Bartik, 2010).

Blackwell and Fox (2008) note place-based incentive programs focus on urban areas because that is where the need for real estate redevelopment is greatest. Blackwell and Fox state:

If large and growing classes of people are being left behind, the long term economic viability of cities and regions is compromised because not all residents are productively contributing to growth and prosperity. This is a particular danger in older industrial cities, which face the dual challenges of economic distress and entrenched economic, racial, and social inequity. (p. 352)

In an era of such limited public resources, utilizing effective economic development processes is essential. Effective economic development processes achieve their stated public policy goals by increasing job creation and tax base growth, which will bring higher and more stable levels of income or a more equitable income distribution within a given region or municipality (Bowen, Winson-Geideman, & Simons, 2003). A point of concern in the research community, as well as the public policy arena, is maximizing the public economic return on investment by determining the extent of the costs and benefits of encouraging new economic development in a community (Hurwitz, 2014; Kenyon et al., 2012). Benefits include an increase in jobs, wages, property and sales taxes, as well as indirect economic activity created due to the economic development project (Bartik, 1991). The analysis of costs includes the direct taxes abated or deferred, the public service costs such as police, fire, and education outlays, and

infrastructure costs such as road, water, and sewer developments needed to support the increased economic activity associated with economic development (Kenyon et al., 2012).

The issue of the costs of tax abatements of economic development incentives has increased in public disclosures. In 2015, the Government Accounting Standards Board (GASB), which issues standards regarding municipal financial reporting, issued statement number 77 which requires cities and counties to report the value of property, sales, and income taxes that have been abated and deferred in their audit documents (Governmental Accounting Standards Board, 2015). Implementation of this rule began with community financial statements for fiscal years after December 31, 2015 (Robinson, 2017). The reporting requirement is an attempt to improve city financial reporting by providing information that for the most part is not publicly reported (Francis, 2015). GASB determined the effects of tax abatements could limit and impact a city's financial health and ability to raise revenue (Governmental Accounting Standards Board, 2015).

Tax increment financing, a place-based economic development incentive, and the focus of the current study, is one of the most prevalent tools used by state and local governments to cultivate local economic development (Briffault, 2010). Funds generated through a tax increment financing district, such as property tax revenues are set aside to pay for public improvements within the designated district (Leavitt, Morris, & Lombard, 2008; Weber & Goddeeris, 2007). The intent for public-private partnerships is the creation of what Klijn & Teisman (2005) call surplus value. In the case of tax increment financing, the surplus value is increased economic activity in a targeted area that would not have occurred without the plan. An example of the surplus value would be growth in

property values, retail sales, and employment (Bland & Overton, 2014). The actual process of establishing a tax increment financing district, as well as the taxes collected, vary from state-to-state through its implementation legislation. Forty-nine states plus the District of Columbia have some form of tax increment financing legislation creating thousands of tax increment financing districts throughout the United States (Krohe, 2007; Lester, 2014).

Researchers who have looked at the increasing use of tax increment financing as an economic development tool have focused on seven areas: (a) the increasingly distressed economic condition in large cities, (b) the fiscal stresses on local government prompted by reduced intergovernmental aid and voter's resistance to tax increases, (c) the inter-jurisdictional competition for business for their jobs and tax base, (d) the shift in urban renewal strategy from rehabilitating areas to strengthening commercial and industrial tax bases, (e) the availability of multiple alternative economic development programs, (f) the jurisdiction-specific characteristics increase the use of tax increment financing, such as communities that have a high commercial tax base, and (g) the expected land valuation growth that may result from the implementation of tax increment financing (Man, 2001a). These seven factors contributed to the increased use of tax increment financing in the United States.

Klacik (2001) conducted surveys of economic development practitioners in all local governments in Indiana utilizing tax increment financing. Klacik (2001) revealed economic development practitioners believed tax increment financing to be the most politically acceptable way to fund new economic activity in their communities. Tax increment financing is believed to be an effective economic development tool for

attracting firms to locate or expand their businesses in the targeted area, which will result in increased economic activities, more jobs, lower unemployment, higher wages, greater property values, increased tax revenues, and the revitalization of the area (Man, 2001b). Supporters of place-based incentive programs point to the overall public benefits of the investment in public infrastructure (Leavitt et al., 2008). Supporter's note tax increment financing is a creative, flexible, and self-financing redevelopment tool with the ability to assist cities in pursuing long range, large scale projects (Hipler, 2007).

The area of analyzing the impact of tax increment financing on the growth of property values and those types of buildings that accelerate value growth serves as the basis of this paper. In the literature on tax increment financing, there is limited discussion regarding the impact of building types on the value growth of tax increment financing districts. Smith (2006) noted multifamily values increased faster in tax increment financing districts in Chicago. Additional research by Smith (2009) concluded tax increment financing increased land values in commercial properties. Byrne (2006) concluded industrial tax increment finance districts exhibit a higher value growth rate. While Weber et al. (2003) concluded values of industrial buildings in mixed-use districts increase faster than other building types; industrial buildings in industrial only tax increment financing areas did not grow as fast. In Wisconsin communities, Merriman, Skidmore & Kashian (2011) noted tax increment financing positively influenced the rate of land value growth on commercial buildings, but did not find similar value growth benefits on residential and industrial properties.

Statement of the Problem

Communities grant economic development incentives to stimulate economic activity, such as the creation of jobs and increases in sales and property taxes. A subset of economic development incentives, tax increment financing, are approved by communities with the intention of stimulating real estate development and land values where development would not occur otherwise. However, tax increment financing incentives are granted by communities without knowing (1) if the growth of land value inside tax increment districts accelerate faster than areas outside of the tax increment districts (Dye & Merriman, 2000, 2006), (2) whether certain types of buildings increase in value inside of tax increment districts (Smith, 2006, 2009), or (3) the influence the type or location of the tax increment district has on land value growth for certain types of buildings (Byrne, 2006, 2012). Without the knowledge of how tax increment financing influences land values, communities risk the misallocation of resources from public entities, such as schools and libraries to private entities (Kenyon et al., 2012; Weber, 2003b).

Purpose of the Study

The purpose of this study was to determine the differences between the growth of assessed land value inside of tax increment areas of Jackson County, MO and the remainder of the county. The study compared the difference between the growth of land value of different building types in tax increment financing districts. Finally, the study determined the relationship between characteristics of tax increment financing districts, the location of the district, and the land value growth of different building types.

The present study analyzed the difference between the growth of land value inside of tax increment areas and the remainder of Jackson County, MO. The original intent of tax increment financing is to influence land valuation growth (Weber, 2003c). Growth of assessed land value is the most direct measure of tax increment financing (Weber 2003c). The data from the present study will inform policy makers in analyzing the difference between the land value growth in tax increment areas and the remainder of the community.

The present study analyzed the types of buildings erected in tax increment areas to determine which building types grow faster than others (Smith, 2006, 2009). Building type value growth is important to note so policy makers can determine which tax increment financing projects have more of a stimulating effect on land values than other tax increment projects. Policymakers can use this data to consider the trends of valuation growth while reviewing and approving new development proposals. This data will help to support or refute issues, such as public/private led development, the impact of tax increment financing types, and the impact of the types of development assisted with economic development incentives.

The present study includes analysis of tax increment financing areas in both urban and suburban communities. Tax increment financing has its genesis as an urban redevelopment tool to alleviate economic blight (Gibson, 2003). However, tax increment financing has also been utilized in more rural and suburban locations (LeRoy, 2005). A significant number of studies focused only on urban communities, particularly in the upper Midwest (Man, 2001c; Scott, 2013). While Kansas City is the largest urban community located in Jackson County, there are a number of suburban communities

located in the county that have utilized tax increment financing. This comparison provides the opportunity to examine whether similar and different patterns of valuation growth in urban versus suburban areas.

Significance of the Study

The present study extends existing literature, particularly Dye & Merriman (2000) by lengthening the tax increment financing evaluation time analysis. Dye & Merriman (2000) used a three-year period prior to adoption of the tax increment financing district and a three-year period after the adoption for their analysis. A five-year period prior and five-year period post adoption timeframe is used in this study. A longer time line for analysis is important to be able to give the property time to achieve value growth. Shorter time lines for analysis are challenged in capturing value growth since the full value of development does not begin to be captured until after the construction of new buildings is complete.

The dissertation extends the literature by analyzing each tax increment financing district formed in Jackson County, MO separately, rather than the grouping of tax increment financing areas as developed by Dye & Merriman (2000) and Man & Rosentraub (1998). These prior studies grouped tax increment financing areas in multi-year adoption periods. Blending the start dates of tax increment areas lessens the time analysis of the plan area, thus potentially lowering the value growth captured in the study. Each active tax increment financing district in Jackson County, MO communities initiated from 2005-2010 were aligned in this study with their respective start year and analyzed for a five-year pre-adoption and a five-year post adoption period. This

alignment allows for the full 10 years of valuation growth to be captured for each plan included in the study.

A third area of significance for this study is the addition of literature supporting certain building types and value growth of tax increment financing districts in Jackson County, MO. This knowledge has the potential to assist in analyzing the effectiveness of tax increment financing and determining the efficacy of tax increment financing plans to increase land valuation. For example, if certain building types accelerate assessed valuation growth over other building types, public policy makers can make evidence-based decisions in reviewing and analyzing upcoming tax increment financing plans in their respective communities.

The fourth area of significance is the potential interest to the research community in creating an analysis for review of the impact of tax increment financing in other parts of the United States. The results of this study are of potential interest to all economic development practitioners and public policy officials, in general, but in particular to the communities in Jackson County and the state of Missouri. Currid-Halkett & Stolarick (2011) reviewed the relationship between economic development scholarship and practice. Economic development practitioners tend not to develop community programming through research and analysis, but instead, jump on fads. Academic research does not typically match research with existing community practice. The lack of research has produced a gap in the literature between theory, practice, and analysis. The lack of research based economic development programming was confirmed in research conducted by Reese & Rosenfeld (2001). Economic development professionals work in a results based world which is one explanation for the gap with research based

programming (Boarnet, 2001). However, the routine practice of economic development can benefit from basic education in research methodology (Currid-Halkett & Stolarick, 2011).

Research Objectives

Research objectives investigate the purpose of the dissertation. The following research objectives guide this study.

- RO1: Describe the land values of Jackson County, MO including the valuation of parcels inside and outside tax increment financing areas, and valuation of parcels of tax increment financing areas in the study.
- RO2: Compare the growth of land values of parcels in tax increment financing areas to the growth of land values in the remainder of the county.
- RO3: Compare the growth of land values of parcels containing different building types within tax increment financing areas.
- RO4: Compare the growth of land values of parcels containing different building types within tax increment financing areas and the growth of land values in the remainder of the county.
- RO5: Determine the relationship between the characteristics of the type of tax increment financing area, including (a) application rationale, (b) location, and (c) distance from city hall, and the value growth of different building types in tax increment financing areas.

Conceptual Framework

The conceptual framework of the study illustrates the five research objectives.

The conceptual framework is based on a chain of impact model of economic

development theory. Eisinger (1988) presented the progression or chain of impact from private investment to community economic development benefits. The chain of impact discusses how private investment generates jobs, increases income, provides larger tax revenues, generates fewer social expenditures, lowers the cost government, and produces a more robust employment multiplier (Eisinger, 1988).

The current study's conceptual framework, as noted in Figure 1, begins when a community initiates a real estate development plan through the establishment of a tax increment financing project. This plan approval encourages the private sector to make the real estate investment they would not have attempted without the offer of the tax increment incentive. The public benefits accrue to the community are jobs created by constructing the project and the permanent jobs locating on the real estate built inside the tax increment financing area. The development also contributes to the increase in sales taxes to the community and assists in increasing land values in adjacent properties, which leads to increased property taxes.

An additional public benefit is the increase in the tax base inside the tax increment financing area. This increase in tax base is the increment which is used to pay off obligations of public infrastructure associated with the development contract. The increase in land valuation is the basis of analysis for Research Objective Two (RO2), the comparison of the growth of land values inside the district to land values in the remainder of the county. Research Objective Three (RO3) compares the growth of land values of different building types inside of tax increment financing districts. The focus for Research Objective Four (RO4) is the comparison of the growth of land values of different building types in tax increment districts with the remainder of the county.

Research Objective Five (RO5) determines the relationship of the tax increment financing area characteristics with the growth of land values of different building types in tax increment districts.

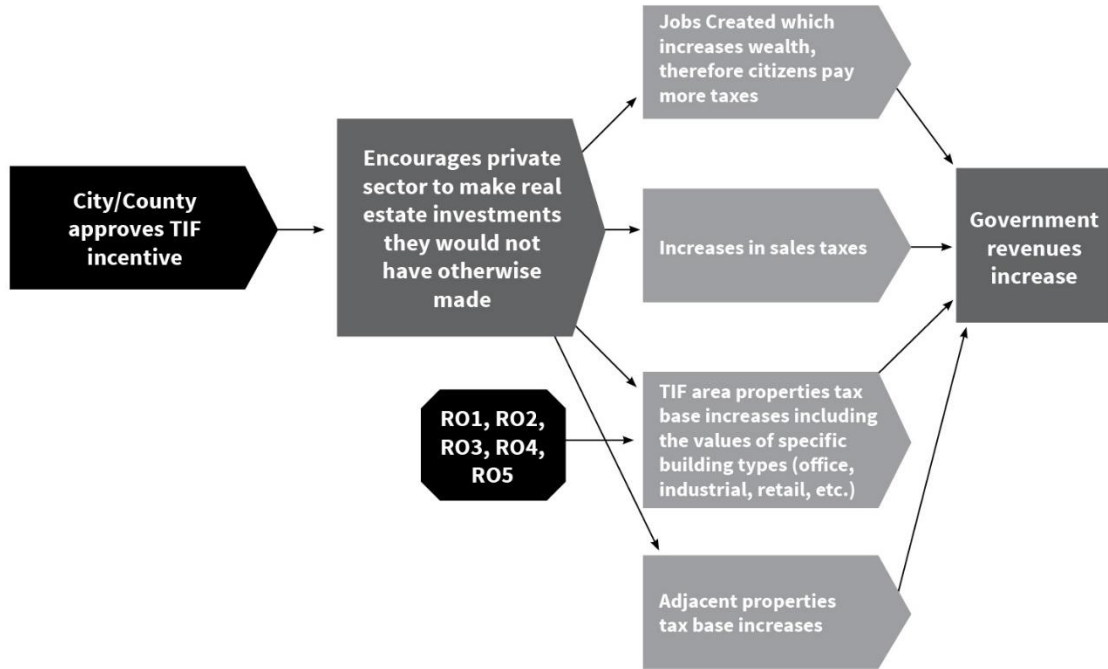


Figure 1. Conceptual Framework.

Limitations and Delimitations

This dissertation is limited to reviewing the impact of tax increment financing on the growth of assessed land value in Jackson County, MO over a limited period of 2000 to 2015. The timeframe is chosen because this period dates to when Jackson County, MO has digitized county land assessment records. Additionally, the assessed value data is limited to what is revealed in the assessment records and does not take into

consideration the timing and recording of reappraisals and reassessments as outlined by Missouri law.

The study is limited to only be directly applicable to Jackson County, MO due to the specific Missouri implementation legislation. Therefore, the results cannot be generalized as a judgment of tax increment financing in other communities. However, the study does provide a generalized discussion of the impact of tax increment financing which may be of assistance to other communities.

The present study is delimited in the study only analyzes the impact of this economic development tool on real estate values. The study does not analyze other issues such as why tax increment financing was adopted, the equity in the use of tax increment financing, and the use of other taxing jurisdiction's tax base in supporting this type of development. In addition, the study does not attempt to answer the question, would the development have occurred without tax increment financing, the so-called "but-for" decision.

Definitions of Terms

For the purposes of this research, the following definitions will be used.

1. *Economic Development* - "The process in which local governments or community-based organizations engage to stimulate or maintain business activity and/or employment opportunities in sectors that improve the community using existing human, natural and institutional resources. The principle goal of local economic development is to stimulate local employment opportunities." (Blakely & Bradshaw, 2002, p. xvi)

2. *Place-Based Incentives* – Economic development strategies that “shape the planning and implementation of physical revitalization efforts.” (Blackwell & Fox, 2008, p. 355)
3. *Tax Increment Financing (TIF)* – Tax Increment Financing is a place-based incentive that "allows municipalities to designate an area for redevelopment and to monetize the expected increase in property taxes to pay for initial and ongoing expenditures in the area.” (Weber & O'Neill-Kohl, 2013, p. 194)

Summary

Economic development is a process that attempts to create or enhance economic activity in a community (Blakely & Bradshaw, 2002). Wealth is created through this activity, which translates into increased governmental revenue (Bartik, 1991). One of the most popular economic development tools is the place-based incentive program called tax increment financing (Briffault, 2010). As with other economic development tools, tax increment financing has its supporters and detractors. One focus of controversy is in the analysis of tax increment financing's effectiveness in creating an increase in government resources (Man, 2001a). The current study analyzed whether the value of land parcels increased more rapidly inside of tax increment districts and the remainder of the county as well as investigating valuation growth of building types in tax increment financing districts in Jackson County, MO.

Chapter II of this paper outlines the dominant themes in the local economic development literature. The chapter begins with a review of economic development theory and then presents information on the major place-based economic development incentive programs. Chapter II concludes with a review of the tax increment financing

process, the benefits and challenges of tax increment financing, the effectiveness of tax increment financing as an economic development tool in the United States and a special emphasis of tax increment financing in Jackson County and the state of Missouri.

Chapter III presents the methodology to be used in the study. Chapter IV discusses the results of the analysis. Finally, Chapter V presents the findings of the study and its applicability to the economic development literature. Chapter V highlights the contributions of the study to the existing literature, evaluates the implications for the practice of community economic development and presents avenues for future research.

CHAPTER II - LITERATURE REVIEW

A significant amount of public policy have been developed, approved, and implemented which has focused on economic development and real estate incentives. Incentives have attempted to solve challenges associated with development, redevelopment of real estate, and the creation of jobs (Furth, 2015). The issue is sometimes communities grant economic development incentives, such as tax increment financing, for real estate development, without knowing if the growth of land values or building types inside of tax increment financing areas accelerate faster than areas outside of tax increment areas (Dye & Merriman, 2000, 2006; Smith, 2006, 2009). The benefits, such as the creation of jobs, increase in the real estate tax base, and the collection of taxes must be balanced with the costs of deferred taxes and increased demands to public entities due to increased real estate development.

The review of literature presented in this chapter is formatted as a funnel, from general to specific. Each section reviews the theory behind the economic development protocol and describes the findings of studies associated with the area of economic development research. The first section is on economic development theory which sets the overall framework for the rest of the literature. The next discussion will be a review of the literature associated with economic development incentives with a specific focus on place-based incentives. These place-based incentives set aside public resources to assist in the development or redevelopment of real estate in designated communities. The final area of review will be on a specific place-based program, tax increment financing. The review of tax increment financing will begin in a review of this development tool and then narrow to those parts of the literature focused on the influence of tax increment

financing on land valuations. Additional discussion will focus on tax increment financing as it exists in the state of Missouri and the Kansas City area.

Economic Development Theory

The economic development process is defined in many ways. Blakely and Bradshaw (2002) describe economic development as:

The process in which local governments or community-based organizations plan to stimulate or maintain business activity and/or employment opportunities in sectors that improve the community using existing human, natural and institutional resources. The principal goal of local economic development is to stimulate local employment opportunities. (p. xv-xvi)

The International Economic Development Council (2006) defines economic development as a “program, group of policies, or activity that seeks to improve the economic well-being and quality of life for a community by creating and retaining jobs that facilitate growth and provide a stable tax base” (p. 1). At its most basic, the definition of economic development focuses on improving community prosperity and enhancing the quality of life in order for individuals to achieve their potential (Feldman, Hadjimichael, & Lanahan, 2016).

Place-based incentives focus public policy on clustering amenities to support business development in a targeted area. In larger cities alleviating patterns of disinvestment is important in order to remedy negative consequences such as the deterioration in neglected neighborhoods and the increase of joblessness (Beekmans, Ploegmakers, Martens, & van der Krabben, 2015). The lack of private investment in urban areas combines with the challenging socio-economic conditions of the residents of

cities to compound the challenge of redevelopment (Beekmans et al., 2015). Blackwell and Fox (2008) noted place-based incentive programs focus on urban areas because that is where the need for real estate development is greatest, and the residents of these areas face employment challenges. Blackwell and Fox stated:

If large and growing classes of people are being left behind, the long term economic viability of cities and regions is compromised because not all residents are productively contributing to growth and prosperity. This is a particular danger in older industrial cities, which face the dual challenges of economic distress and entrenched economic, racial and social inequity. (p. 352)

The economic impact of the patterns of declining real estate values and human disinvestment has been two-fold. First, a negative effect exists on families left behind in deteriorating neighborhoods. Deteriorating neighborhoods possess limited access to employment opportunities and schools devoid of a positive learning environment (Blackwell & Fox, 2008). Second, these patterns have continued to undermine economic prosperity and perpetuate the cycle of economic isolation in urban areas (Vey, 2008). These factors contribute to prolonged periods of unemployment, which erode job skills and, ultimately, hurt long-term earnings (Bartik, 2010). Place-based economic development programs encourage capital investment from the private sector, which is a key driver of development and economic opportunity. The new private investment can bring retail amenities, jobs, community facilities and housing to previously underserved communities (Nowak, 2008).

Place and industry-based targeting has achieved success in some cases and failed in others. (Buss, 1999; Greenbaum, Russell, & Petras, 2010; Markusen, 2004). Critics of

place and industry targeting contend that it is difficult because the targeting relies on government accurately picking private sector winners and losers (Buss, 1999). The critics believe the public sector is incapable of achieving the necessary expertise to make these decisions (Markusen, 2004).

Economic Development Incentives

Tax-related incentives provided to businesses from communities began in colonial times and have increased over time (Buss, 2001). For example, Alexander Hamilton received tax incentives in 1791 to establish a factory in New Jersey (Buss, 2001). Additionally, Mississippi, in 1936, pioneered tax-exempt bonds to entice industries to locate in Mississippi (Sbragia, 1996). By 1963, nineteen additional states had finance authorities (Buss, 2001).

Post World War II, manufacturing firms were based largely in the Northeast or Midwest. Many southern cities and regions began “smokestack chasing” (Blakely, 2001). This term is traditionally used to describe activity by cities in the south that provided numerous and sizable incentives to bring firms and businesses away from northern locales (Blakely, 2001). The unemployment crises of the 1970s and recessions in early 1980s precipitated the “war between the states” in the 1990s, subsequently compelling states to compete intensely using tax incentives (Eisinger, 1988).

Coming out of the recent economic recession, economic development incentives continue to grow; with over 40 states offering tax concessions or credits for equipment, inventories, and job creation, as well as other tax exemption programs (Chi & Hofmann, 2000; Osgood, Opp, & Bernotsky, 2012; Warner & Zheng, 2013). In 2013, the International Economic Development Council estimated there were 1,800 state level

incentive programs in the United States (Hurwitz, 2014). More than \$80 billion dollars of incentives are annually awarded by United States cities, counties, and states (Hurwitz, 2014). The state of Texas alone awards over \$18 billion dollars a year (Story, 2012). Recently, the state of Louisiana changed its property tax abatement program after discovering communities across the state were losing over \$16 billion in abated property tax revenues (Deslatte, 2016; Sayre, 2016).

Types and Rationale for Economic Development Incentives

Levitt & Dubner (2005) noted an incentive is “simply a means of urging people to do more of a good thing and less of a bad thing” (p. 2). Economic Development incentives are defined as cash or near-cash assistance provided on a nonobligatory basis to attract or retain business enterprise (Bartik, 2005; Eisinger, 1988). Compensation includes property tax abatements, discretionary tax credits under the state’s corporate income tax, low-interest financing, and free land or buildings (Bartik, 2005; Dalehite, Mikesell, & Zorn, 2005). Incentives to attract or retain businesses may also include customized services. These services help meet the needs of an individual business, such as information on potential sites, assistance with state or local regulations, customized training for new or existing employees, and expedited provision of site-related public infrastructure, such as access roads (Bartik, 2005). Another close substitute for discretionary cash incentives are business tax breaks under state or local tax laws, such as investment or employment expansion tax credits, go “by right” to all businesses that meet the tax law’s criteria (Bartik, 2005). Other incentives may relate to the timing of their payment. In some instances, incentives are paid up front, in anticipation of achieving incentive objectives, such as job creation (Hurwitz, 2014). Other incentive programs

commit incentives to a company, but do not make payments until the objective, such as job creation are verified over a period of time (Hurwitz, 2014).

According to Eisinger (1988), there are two broad, but related justifications for incentives (a) incentives will lead to business investment creating new jobs, which will increase the local demand for goods and services, facilitating economic growth, and (b) economic growth increases public revenues, which improves public services. Companies need, particularly in a down economy, the free cash flow economic development incentives provide in order to spur business investment (Press, Schwartzman, Burkart, Spicer, & Geisler, 2008). Place-based incentives, such as tax increment financing address both areas of justification.

Costs of Economic Development Incentives

In an era of limited public resources, utilizing effective economic development processes is essential to achieving the stated public policy goals of increasing job creation and the tax base within a given region or municipality (Bowen et al., 2003). A point of concern in the research community, as well as the public policy arena, is maximizing the public economic return on investment by determining the extent of the costs and benefits of encouraging new economic development in a community (Hurwitz, 2014; Kenyon et al., 2012). Benefits include an increase in jobs and wages, and tax base increases in property and sales taxes, as well as the indirect economic activity created due to the economic development project (Bartik, 1991). The analysis of costs includes the direct taxes that are abated or deferred, the public service costs such as police, fire, and education outlays, as well as infrastructure costs, such as the road, water, and sewer

developments needed to accommodate the increased economic activity associated with the development (Kenyon et al., 2012).

The costs of tax abatements used as economic development incentives have led to an increased demand for public disclosures. For example, in the state of Michigan, over 20% of the industrial property throughout the state was under some form of property tax abatement (Anderson, Bolema, & Rosaen, 2010). In 2015, the Government Accounting Standards Board (2015), which issues standards regarding municipal financial reporting, issued Statement Number 77 which requires cities and counties to report the value of property and sales and income taxes abated and deferred in their audit documents. This rule began its implementation with community financial statements for fiscal years after December 31, 2015 (Robinson, 2017). One of the initial reports came from the city of New York, which reported the city had abated more than \$3 billion in 2016 (Robinson, 2017). The reporting requirement is an attempt to improve city financial reporting by providing information not previously reported so the public can understand the monetary significance of tax abatements (Francis, 2015). From 2010-2014, GASB researched the issue of the costs of tax abatement to communities and determined the effects of tax abatements could limit and impact a city's financial health and ability to raise revenue to meet community services in the future (Governmental Accounting Standards Board, 2015).

Evaluation of Economic Development Incentives

The conclusions in academic literature about economic development incentives as a worthy and effective form of public policy were mixed. Studies that support incentives note an increase in a community's wage earnings and property values (Greenstone,

Hornbeck, & Moretti, 2010; Greenstone & Moretti, 2003). Economic development incentives also encourage the expansion of industries targeted for expansion in states (Bartik & Erickcek, 2010, 2012). Incentives assist distressed areas in overcoming competitive disadvantages relative to other places (Lester, Lowe, & Freyer, 2014; Luger & Bae, 2005). Additionally, incentives increase employment opportunities for workers in a community (Fisher & Peters, 1998; Goss & Phillips, 1999). While the literature was mixed, support for economic development incentives such as tax increment financing assists in completing real estate transactions.

Gorin (2008) noted some researchers dismiss economic development incentives as unproductive or ineffective. He concluded researchers base their arguments in four ways: (a) Economic development incentives typically cannot significantly impact the behavior of new, relocating, or expanding firms (Fisher & Peters, 1998; Lee, 2008). Therefore, public resources flow to firms that do not produce any economic benefits for the area (Gabe & Kraybill, 2002; Hansen & Kalambokidis, 2010; Hicks & LaFaive, 2011). LeRoy (2005) noted state and local taxes make up only 1.2% of the typical company's cost of doing business, which is much less than labor, materials, and overhead; (b) Incentives distort the private marketplace because they misallocate private resources by leading firms to move to or expand in less than ideal locations (Cassell & Turner, 2010); (c) Incentives crowd out government spending on public goods (Markusen & Neese, 2007); (d) The provision of incentives is a zero-sum game; gains in any one location will be offset by losses in other locations (Chirinko & Wilson, 2008). Additional criticisms included incentives reward companies for locating or expanding in locations they would have located regardless of the incentives (Kenyon et al., 2012) and the

incentives typically are awarded to large companies, even though smaller companies possess higher levels of job creation (LeRoy et al., 2015).

Other negatives are presented in the literature regarding economic development incentives. Once economic development incentives are offered and used by a community, incentives may be continued after the original need for the incentive is met (Anderson & Wassmer, 1995; Reese, 2006; Reese, Blackmond Larnell, & Sands, 2010; Schwartz, Pelzman, & Keren, 2008). In addition, communities that awarded incentives did not see job increases compared to communities which did not award incentives (Whitacre, Shideler, & Williams, 2016) and the incomes of the residents of the community were not positively impacted (Reese, 2014).

Tax Increment Financing

California was the first state to enact tax increment financing enabling legislation (Dardia, 1998). Under the Federal Housing Act of 1949, receipt of federal urban redevelopment grants to cities was tied to matching local funds (Dardia, 1998). In California, several local governments were unable to contribute local dollars to acquire the federal money (Dardia, 1998). Tax increment financing was authorized in 1952 to supply the match (Lefcoe & Swenson, 2014). In 1978, California voters enacted Proposition 13, this initiative limited the capacity of local governments to raise property taxes for general purpose revenues (Dardia, 1998). The passage of Proposition 13 also forced local governments in California to pursue alternative means to finance capital improvements (Lefcoe & Swenson, 2014). Prior to tax increment financing, cities had three options to spur redevelopment. One was to abate or defer property taxes. The

second was to fund projects out of general funds. The third option was to commit their full faith and credit to paying back general obligation bonds (Weber, 2010).

Currently, 49 states plus the District of Columbia have some form of tax increment financing legislation which has created thousands of tax increment financing districts throughout the United States (Krohe, 2007; Lester et al., 2014). Tax increment financing is widely used around the country. For example, as of 2015, Chicago, IL had 145 tax increment financing districts that generated between \$350 million and \$400 million in tax increment financing reimbursements to developers (Spielman, 2015).

Tax increment financing adoption establishes a geographic area for which public improvements will be made to facilitate economic development or redevelopment (Weber & Goddeeris, 2007). This plan is generally accomplished by installing physical infrastructure that makes a project or series of projects possible (Leavitt et al., 2008). Public officials assume the public improvements will generate new private investment that will generate enough tax revenues (the increment) to pay for public infrastructure (Weber, 2003c). The increment pays for the infrastructure, and does not pay for general government services. A misperception of tax increment financing is it is a new tax or tax abatement, as is the case in special benefit taxing districts, enterprise or empowerment zones (Weber & Goddeeris, 2007). Property owners inside a tax increment financing district pay their normal tax burden as they would outside of a tax increment financing district (Weber & O'Neill-Kohl, 2013). Personal property taxes assessed and paid on business equipment is not captured, but accrues to the general taxing district (Klacik & Nunn, 2001).

During the plan development phase, decision makers identify a “blighted” or underdeveloped area and create a redevelopment plan (Weber & Goddeeris, 2007) . The redevelopment plan serves many purposes, but primarily is the planning tool that establishes the project’s objectives and timetable. The redevelopment plan also forms the written basis for communicating to the public approval board and taxpayers in the community (Weber & O’Neill-Kohl, 2013). The third phase involves adoption of the redevelopment plan by the public body in charge of the approval decision for the community (Weber & Goddeeris, 2007). After approval, the next phase is to establish the base year for the tax increment financing district (Weber & Goddeeris, 2007). At this point the property tax base is frozen. Any incremental increases in property tax revenues flow into the tax increment financing trust or fund (Weber, 2003c). In some states, other taxes, such as sales taxes, are also part of the frozen base and included in the incremental tax flow into the tax increment financing fund (Kelsay, 2007). Figure 2 shows the flow of the tax base collection of a tax increment financing plan.

While revenue generated from the existing property tax base is distributed to relevant taxing authorities as normal (shown in lighter shading, year 0 to year 20), the incremental revenue (shown in darker shading) is used in one of two ways (a) to finance infrastructure, service improvements, or development incentives in the district through a “pay-as-you-go” approach, or (b) to retire municipal bonds if debt is issued to finance all anticipated development activities at the onset of the tax increment financing program (Weber & Goddeeris, 2007).

The tax revenue from the incremental increase in property values continues to finance development throughout the lifespan of the tax increment financing district. A

period is determined by law as either the time required to finance the planned level of improvements or to pay off the bonding debt, as appropriate, typically in 20 or 30 years (Weber & Goddeeris, 2007). When the statutory limit on the district expires, all affected taxing jurisdictions are then eligible to collect tax revenues based on the full, rather than the frozen tax base from that point forward, as shown in lighter shading from year 20 onward) (Weber & Goddeeris, 2007). The more expediently the valuation growth occurs, the quicker the approved projects are paid for and the tax increment district is completed. The taxes then flow to the usual community taxing entities (Weber & O’Neill-Kohl, 2013).

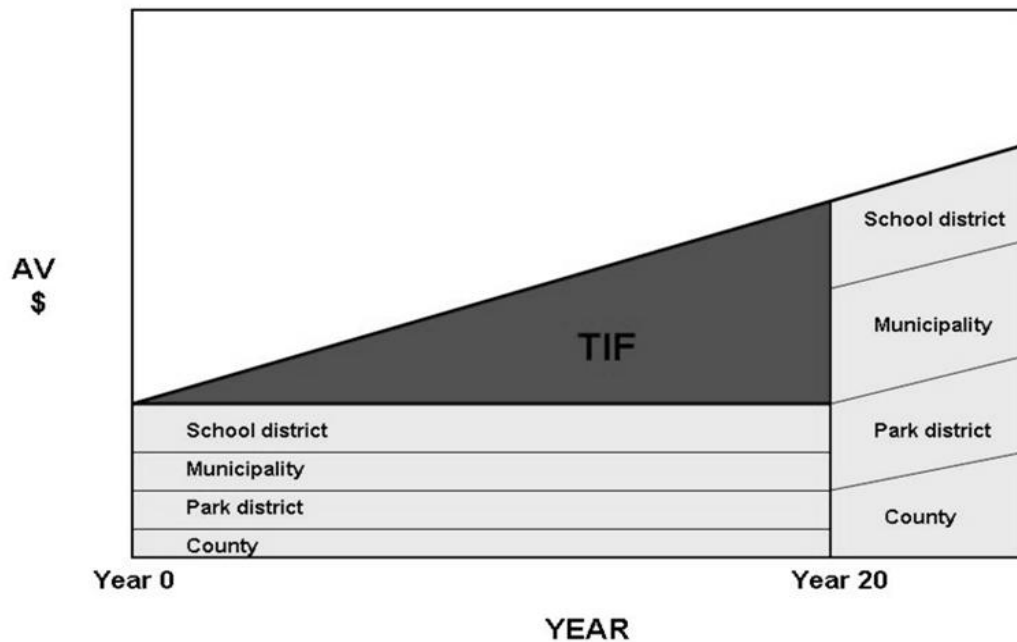


Figure 2. Allocation of Assessed Value (AV) in a Tax Increment Financing (TIF) Area

Note: From “Tax Increment Financing: Process and Planning” by R. Weber and L. Goddeeris, 2007, p. 9. Reprinted by permission of the Lincoln Institute of Land Policy, Cambridge, MA. (See Appendix B)

Tax increment financing is unique among geographically targeted development incentives. Tax increment financing often involves multiple levels of government

beyond city and state officials (Weber, 2003b). In some cases, agreement among all affected entities is legally required before designation can proceed. Eleven states allow for taxing entities, particularly school districts, to opt out of participating in tax increment financing plans (Weber, 2003b). In other states, only approval from local government and state agencies is needed to designate a tax increment financing district (Lefcoe, 2011). This situation can create strong opposition from other taxing bodies, whose incremental tax revenue may be directed towards incentives and improvements from which other taxing bodies derive no benefit, or even to which they are directly opposed (Briffault, 2010). This opposition is found in the state of Missouri as well (Byrne, 2012).

If a tax increment financing district did not exist, developers would have to pay infrastructure costs. In this sense, tax increment financing functions as an incentive for private investors for a specific location (Leavitt et al., 2008). The incentive ensures property taxes are used to pay for infrastructure that directly benefits the developer's property or business (Man, 1999). The underlying presumption is no private economic redevelopment would take place without the stimulation of the public redevelopment activities, such as the creation of a tax increment financing district (Youngman, 2011). This presumption is often referred to as the "but for" test where the authorizing governmental body finds development would most likely not occur without the assistance and public funds supplied by the government (Weber, 2003a). While theoretically elegant, the "but for" test is difficult to implement in practice (Johnson, 2001). While the "but for" question is a significant part of the evaluation of tax increment financing, only twenty states require finding that a tax increment financing district would not take place without the intervention of the local government (Youngman, 2011). In addition, the use

of the “but for” finding has done little to limit the use of tax increment financing (Merriman et al., 2011).

Studies have analyzed the “but for” question and have come to various conclusions. A study in Chicago noted the use of tax increment financing to capture tax benefits of increased economic activity would not occur without the use of the economic development tool (Gibson, 2003). While a separate study also using Chicago came to the opposite conclusion; tax increment financing was not a catalyst for private investment that would have occurred in any event (Lester, 2014).

Tax increment financing enabling legislation varies enormously between states (Johnson & Kriz, 2001). Despite the great variation in tax increment financing statutes, descriptions of the tax increment financing process in the literature are often illustrated generically to provide a basic understanding of the practice (Briffault, 2010). While a great deal of the literature on tax increment financing attempted to determine the policy’s effectiveness, the considerable variations in state enabling statutes and in the measurements used, yielded empirical studies that are difficult to compare with each other (Briffault, 2010; Johnson & Kriz, 2001; Krohe, 2007; Weber & Goddeeris, 2007).

Pros and Cons of Using Tax Increment Financing

The arguments for the use of tax increment financing according to Hipler (2007) evolve around three arguments: (a) Even though tax increment financing initially benefits a special district, the entire community can benefit and become energized in the long run. The result can include a more solid economy, an increase in employment, and greater appeal to potential residents, businesses, and developers; (b) Tax increment financing uses loans to finance capital assets and infrastructure in a district. These loans are repaid

over the duration of the tax increment financing timeframe with the use of incremental revenue from taxes collected from a district. Tax increment financing benefits communities by redeveloping economically depressed or physically blighted areas; attracting businesses that otherwise would not have located in the community; (c) Once established, tax increment financing can provide a consistent funding source for redevelopment activities in the district. This funding source helps local governments implement long range and large-scale projects with a steady stream of revenue.

The literature pointed to four additional arguments for the use of tax increment financing (a) avoiding community debt limits, (b) direct benefits of tax benefits to developers, (c) tax increment financing as a self-financing program, (d) tax increment financing flexibility. The first point was many state constitutions limit the amount of debt governmental bodies may incur, or create procedural requirements which must be met before acquiring additional debt (Sbragia, 1996). If governmental bodies are able to define tax increment financing as a special revenue obligation, the bonds are often not considered “debt” and are not subject to any state constitutional debt limitations (Selby & Hunter, 2004).

Secondly, tax increment financing provides benefits to property owners and developers within the tax increment financing district by assuring increases in the tax base derived from their new development will finance infrastructure improvements in and around the district (Leavitt et al., 2008). This direct benefit is a counter to paying general taxes and then seeing the indirect benefits of general local government expenditures (Weber, 2003c). Therefore, developers are able to directly see the benefits of their tax payments (Man, 1999).

A third issue was tax increment financing is perceived as a “self-financing” redevelopment tool because property taxes paid by new development within a tax increment financing district are used to finance public infrastructure improvements in the redevelopment area (Stinson, 1992). Ostensibly, those individuals most directly benefiting from the infrastructure are the ones paying for the public improvements (Man, 1999). In theory, the increased tax revenue stream over the life of the district is of equal value to the cost of the improvement or incentive issued, making the instrument self-financing and of particular appeal to local policymakers averse to increasing the tax burden of local residents to finance development efforts (Klemanski, 1989; Stinson, 1992).

Finally, tax increment financing is a flexible economic development tool as a plan can be created at any time. Funds can be used for a variety of purposes and tax increment financing can be used in concert with other public-private tools in achieving revitalization success (Selby & Hunter, 2004). This flexibility benefits the development community, but also creates policy challenges for communities (Man, 2001c).

Despite the strengths, several criticisms of the use of tax increment financing are discussed in the literature (a) avoidance of debt limits, (b) the property tax, which is the primary funding method for public entities, is diverted to underwriting tax increment financing, (c) development assisted by tax increment financing increases the costs to provide public services, but does not provide revenues to offset these costs, (d) projects take place over a long period of time, (e) government intervention into the private marketplace is improper, and (f) tax increment projects encourage local growth machines. One criticism was tax increment financing allows local governments to avoid

referendums requiring voter approval typical of the general obligation bond process (Klemanski, 1989). This criticism is counter to one of the argued benefits of tax increment financing. What one constituency believes is a positive regarding tax increment financings flexibility is another groups' concern that laws regarding referendums can be easily circumvented (Sbragia, 1996).

A second criticism against tax increment financing involved the use of ad valorem (property) taxes which is the primary method to fund public education and other community services (Lefcoe, 2011). Affected taxing bodies often object to tax increment financing because the tax increment financing district will capture taxes which would otherwise go to taxing bodies (Weber, 2003b). In addition, the taxing bodies worry the development will increase demand for services while their tax base remains the same for the life of the tax increment financing district (Davis, 1989; Lefcoe, 2011).

A third criticism of tax increment financing was the increased property tax revenues generated by new development are captured to retire the bonded tax increment financing obligation rather than being passed to local taxing entities, such as the county government or school districts (Lefcoe, 2011; Hicks, Faulk, & Devaraj, 2014). The concern is community resources are absorbed into the tax increment financing district instead of going to the regular taxing authority (Weber, 2003b). The cost of financing development or redevelopment partly shifts to other local governments and forces those governments to contribute to economic development projects (Lefcoe, 2011; Selby & Hunter, 2004).

A fourth criticism was projected dollar returns of tax increment financing are over long periods; ten, twenty, thirty years, or more. That length of time creates uncertainty

the development will succeed (Man, 2001c). Opponents contend there are too many market forces which cannot be predicted with reasonable certainty causing values to fluctuate during the duration of a tax increment financing district (Hipler, 2007).

A fifth criticism came from theorists that consider any intervention by government in the marketplace improper. The belief is the free market should dictate the location of businesses and corporate investment (Byrne, 2012). These theorists believe tax increment financing helps certain property owners at the expense of other property owners and businessmen (Davis, 1989).

The sixth criticism was tax increment financing benefits a few business and civic interests who are monetarily enhanced by the development of tax increment financing projects, the so-called growth machine (Molotch, 1976). Molotch (1976, 1988) made the case that localities develop growth machines which are comprised of business and professional elites (property owners, banks, real estate lawyers, engineers, architects, construction firms) use public authority and private power to stimulate economic development to enhance their own local business interests.

Evaluation of the Use of Tax Increment Financing – Land Valuation Studies

Research has focused heavily on the impact of tax increment financing on the growth of the land valuation. The debate about tax increment financing's influence on real estate values is at the heart of the debate about this economic development tool (Weber, 2003c). Growth of assessed land value is the most direct measure of tax increment financing with revenue being derived from increased value attributable to the project (Weber, 2003c). Indirect measures such as employment and personal income are important long-term economic development goals. However, these goals are subject to a

variety of other external influences which makes attributing tangible benefits to a real estate project difficult (Bartels & Hall, 2012).

Studies focused on tax increment financing and its impact on valuation growth have discovered a positive relationship between tax increment financing adoption and higher rates of growth in both business property and overall property values (Anderson, 1990; Dardia, 1998; Man & Rosentraub, 1998; PFM Group, 2016; Wassmer & Anderson, 2001). Carroll (2008) used parcel level valuations in a study of tax increment financing in Milwaukee, WI and concluded a parcel's inclusion in a tax increment financing district had a positive and statistically significant relationship to its growth in assessed land valuation. Cities that adopt tax increment financing experienced greater property value increases than non-tax increment financing adopting cities (Anderson, 1990) with substantial spillover valuation benefits to surrounding areas (Man & Rosentraub, 1998; Weber, Bhatta, & Merriman, 2007). Growth in values inside tax increment financing districts grow faster than the value of parcels outside of districts in the city (Byrne, 2006; Smith, 2009; Weber et al., 2003) and sale prices of properties located within a tax increment financing district versus properties selling outside tax increment financing districts (Smith, 2006).

As with other place-based economic development incentives, the literature included several studies that disputed the findings of positive impacts of tax increment financing on land value growth of a municipality. Studies have concluded tax increment financing projects do not increase property values by enough to justify the tax increment revenues districts receive (Dardia, 1998; Merriman et al., 2011). Dye and Merriman (2000) revealed municipalities with tax increment financing districts values increased

more slowly than municipalities without tax increment financing areas. More specifically, the rate of growth in land values for municipalities with tax increment financing districts was almost the same in the post-adoption period as land value growth was in the pre-adoption period (Dye & Merriman, 2000). In contrast, the municipalities without tax increment financing districts increase value faster in the post-adoption period than earlier (Dye & Merriman, 2000). Researchers concluded while tax increment financing use resulted in higher land value growth rates for targeted parcels, lower rates of growth for land values was revealed in the remainder of the community (Dye & Merriman, 2000, 2006; Kashian, Skidmore, & Merriman, 2007).

General economic conditions can play a role in land valuations. Dye, Merriman, and Goulde (2014) concluded there were large negative impacts on real estate values in Illinois and Nebraska due to the economic recession of 2007-2009. The decline was more extensive in Illinois, but not as large in Nebraska (Dye et al., 2014). Both states experienced values coming out of the recession to be incrementally slow as of 2011 for Illinois and 2013 for Nebraska (Dye et al., 2014).

Evaluation of the Use of Tax Increment Financing – Building Valuation Studies

Studies that focus on the impact of tax increment financing on building types were fewer than the studies on overall valuation growth. However, Smith (2006) noted the value of property located in a tax increment area increased faster than property in areas outside of the district. Smith's findings are related to the growth of value for multifamily properties in tax increment financing districts in Chicago. Additional research by Smith (2009) concluded commercial properties accrue value faster inside of tax increment districts than outside the designated area. Smith also noted this accelerated

value appreciation was particularly acute in parcels that were the most blighted (Smith, 2009).

Byrne (2006) noted tax increment districts in Chicago values increased at a rate 30% faster than the rest of the city. Additionally, industrial tax increment finance districts exhibited a higher value growth rate (Byrne, 2006). Weber et al. (2003) concluded values of industrial buildings in mixed-use districts in Chicago (i.e., those including commercial and residential properties) increased than other building types. However, industrial buildings in industrial only tax increment financing areas did not grow value as fast (Weber et al., 2003). Dye and Merriman (2003) noted a concern that valuation growth of commercial districts may not be entirely new to a community, the new development may move or substitute for activity outside of the tax increment district. However, Dye and Merriman (2003) concluded industrial districts tended to bring in new land value growth to the community.

Studies from other regions of the country also revealed certain building types in tax increment districts increased faster than others. In Milwaukee, Carroll (2008) reported business property values included in tax increment financing districts saw increased value growth. Merriman et al. (2011) examined how tax increment financing influenced growth of residential, commercial, and manufacturing values in Wisconsin communities. Merriman et al. (2011) noted tax increment financing positively influenced the rate of land value growth on commercial buildings, but did not find similar value growth benefits on residential and industrial properties. The limited and mixed results of research on tax increment financing's impact on specific building types suggest a need for further research.

Evaluation of the Use of Tax Increment Financing – Organizing and Locational Valuation Studies

Studies that focus on organizing principles, such as tax increment financing being utilized as a redevelopment tool versus a general development tool have reported controversy. Studies have concluded there is a concern many state governments define “distress” and “blight” rather loosely (LeRoy, 2005; Luce, 2003; Naccarato, 2007). Therefore, tax increment financing funds may not have been used exclusively to finance the revitalization of disinvested areas.

Tax increment financing was conceived to assist in the redevelopment of disadvantaged areas (Gibson, 2003). Evidence has shown tax increment financing districts located in areas more economically disadvantaged have increased land value growth, suggesting a positive relationship between blight and subsequent land value growth (Byrne, 2006). Additional research concluded urban areas, where crime was an issue, had an increase in property values after the establishment of a tax increment area (Carroll & Eger, 2006).

In the literature, many reasons for the expansion of tax increment financing to non-blighted areas are presented. Expansion of tax increment financing to non-blighted areas could be due to the competition between communities (Gibson, 2003), the fragmentation of local governments (Briffault, 2010), or tax increment financing is transforming from a primarily redevelopment tool to a job creating program (Byrne, 2012). LeRoy (2005) criticizes the expansion of tax increment financing because it has also been utilized in more rural and suburban locations. Tax increment financing has

morphed from inner city revitalization to being widely used to encourage urban sprawl by building shopping malls in greenfield open areas (LeRoy, 2008).

Gordon (2003) suggests broad state definitions of blight lead to tax grabbing for local communities by instituting a “laundry list of health and safety concerns” (p. 320). As an example, the state of Missouri definition for blight states the following:

A blighted area is defined as an area which, by reason of the predominance of defective or inadequate street layout, unsanitary or unsafe conditions, deterioration of site improvements, improper subdivision or obsolete platting, or the existence of conditions which endanger life or property by fire and other causes, or any combination of such factors, retards the provision of housing accommodations or constitutes an economic or social liability or a menace to the public health, safety, morals, or welfare in its present condition and use. (Missouri Revised Statutes, 99.805 (1))

These rather broad blight definitions have led to the financing of infrastructure improvements on fiscally healthy properties (Luce, 2003; Naccarato, 2007), thereby, making the threshold for acquiring the economic development incentive lower than some groups believe is appropriate (LeRoy, 2005). This broad definition of blight has resulted in the capturing of tax increments not directly related to the true purpose of redevelopment (LeRoy, 2008).

Some states do not require a finding of blight to utilize tax increment financing (Lefcoe, 2011). One-third of the states, including Iowa, Wisconsin, and Virginia, do not have the blight requirement (LeRoy, 2008; Skidmore & Kashian, 2010; Swenson & Eathington, 2002). While some state legislatures have chosen not to confine tax

increment financing to blighted areas, there is still an expectation the development incentive will go to areas in need of assistance (Lefcoe, 2011).

The next discussion focuses on reviewing tax increment financing in Jackson County, MO. Tax increment financing in Missouri has its advocates and detractors like other parts of the country. For information on the specific language of the state statute for Missouri's tax increment financing law, see Appendix A. Utilization of this place-based tool has been extensive in Missouri, particularly in the cities of St. Louis and Kansas City. From 1987 to 2009 two-hundred twenty-nine tax increment financing districts have been established in the St. Louis area (East West Gateway Council of Governments, 2011). On the western side of the state, by the end of 2015, communities in Jackson County, MO had approved over 100 tax increment financing districts (Missouri Department of Revenue, 2016). During the lifetime of the tax increment districts, over \$7.24 billion will be diverted to districts in the state of Missouri (Byrne, 2012). The cities of Kansas City and St. Louis share of these taxes are anticipated to be \$4.38 billion (Byrne, 2012).

Missouri's law creates the potential for overuse and abuse of tax increment financing. Missouri's tax increment financing districts definition permit virtually any municipality, not just those in blighted or depressed cities, to use this real estate incentive tool (Luce, 2003). Weak or vague definitions of tax increment financing districts fosters competition for tax base, which can lead to localities engaging in inefficient, zero-sum competition for tax base (Goshorn, 1999). Additionally, concerns are expressed that the Missouri law permits municipalities to exceed constitutional debt limitations, which creates a lack of voter accountability (Goshorn, 1999).

Missouri's use of tax increments that come from other taxes, such as sales, utility, and earnings taxes has been a source of research. Missouri is one of nine states which augment the property tax increment to include economic activity taxes which include sales and utility taxes (Kelsay, 2007). Missouri is one of only four states that also include earnings and profit taxes (Kelsay, 2007). The use of sales tax to help fund tax increment financing districts in Missouri is the direct result of actions by school districts (Hubbell & Eaton, 1997). Utilizing only the traditional property tax increment, negatively impacts school districts because a significant share of their revenues come from property tax. Sales, utility, and earnings taxes lessen the percentage of property tax needed to pay for tax increment financing projects (Hubbell & Eaton, 1997). Therefore, school districts supported the amendment of the original Missouri tax increment financing law to include sales, utility and earnings taxes in 1991 (Hubbell & Eaton, 1997).

While expanding the types of taxes which are used to finance infrastructure and capital costs may have been politically expedient, this expansion complicates the economics of Missouri tax increment financing analysis (Hubbell & Eaton, 1997). The objective of tax increment financing is to use incremental taxes, specifically taxes that would not have been collected but for the project. Hubbell and Eaton (1997) believe incremental tax from property is simple to determine, since property taxes are known and can be frozen. With economic activity taxes, however, the process of determining what is truly incremental is much more difficult (Hubbell & Eaton, 1997).

As an example, Hubbell and Eaton (1997) presented a grocery store project which locates in a tax increment financing district. If no sales tax was generated on the property prior to the project, then 50% of all sales tax generated by the grocery store is eligible for

use to finance public improvements. The public question then is how much of the sales tax is truly incremental? The new grocery store's customers were buying groceries prior to the project, and probably generating sales tax for the jurisdiction. Therefore, much of what is defined as incremental sales tax is really only a transfer of sales tax generated by a grocery store located in a tax increment financing district for sales tax being generated by a grocery store not in a tax increment financing district (Hubbell & Eaton, 1997).

A negative effect of tax increment financing is the quest for sales tax revenues required to support the expanded use of tax increment financing and creates an incentive for local governments to favor retail in their land use decisions (Lewis, 2001). This quest could establish a system which could create negative employment effects on municipalities that focus on tax increment financing use in retail development (Byrne, 2010). As an example, 80% of tax increment financing districts in St. Louis supported retail development (East West Gateway Council of Governments, 2011). The inclusion of sales tax base in the program tilts toward lower-wage jobs and retail projects, which rarely brings new economic activity into a region (Luce, 2003).

Summary

General economic development theory and the efficacy of economic development business development incentives were discussed first in Chapter II. The next phase of review highlighted a presentation of specific economic development incentives which focus on the development or redevelopment of real estate in a community. The final area of review discussed a specific place-based economic development incentive, and the focus of this study, tax increment financing. Tax increment financing was reviewed as to its implementation in Jackson County and the state of Missouri. In all areas, research

results were mixed and while there is a lack of consensus on the empirical effectiveness of the economic development tools, incentives continue to be popular as programs to increase real estate development and job opportunities in communities.

Chapter III will describe the five research objectives and the research design of the study. Chapter IV will present the findings of this study and Chapter V will summarize and provide conclusions and recommendations for further action and implications for future research.

CHAPTER III – RESEARCH DESIGN AND METHODOLOGY

The present study analyzed the growth of assessed land values inside tax increment areas and of buildings in tax increment financing area in Jackson County, MO. Additional analysis was conducted regarding the influence of type or location of the tax increment district on land value growth for certain types of buildings. Chapter III describes the research design of this study including the population and sample, data collection, procedures, and data analysis. The results of the study can provide economic developers and public policy leaders direction in determining the impact of tax increment financing on land value growth. The study addresses five research objectives.

- RO1: Describe the land values of Jackson County, MO including the valuation of parcels inside and outside tax increment financing areas, and valuation of parcels of tax increment financing areas in the study.
- RO2: Compare the growth of land values of parcels in tax increment financing areas to the growth of land values in the remainder of the county.
- RO3: Compare the growth of land values of parcels containing different building types within tax increment financing areas.
- RO4: Compare the growth of land values of parcels containing different building types within tax increment financing areas and the growth of land values in the remainder of the county.
- RO5: Determine the relationship between the characteristics of the type of tax increment financing area, including (a) application rationale, (b) location, and (c) distance from city hall, and the value growth of different building types in tax increment financing areas.

Research Design

The design of this study is quasi-experimental utilizing archival data. The study is quasi-experimental in that both control and experimental groups are used, but are not randomly assigned (Creswell, 2003). The present study has a pre-test, post-test control group design (Creswell, 2003) which describes the effect of tax increment financing on land valuation (Isaac & Michael, 1995).

The present study will build upon existing literature regarding tax increment financing focused on the comparison of the growth of assessed value inside the tax increment financing areas and the remainder of the community. Dye & Merriman (2000) analyzed tax increment financing areas adopted from 1984-1991 in the city of Chicago. Dye & Merriman (2000) used a pre-adoption period and post-adoption period of three years and then analyzed the mean annualized assessed value growth rates of cities that adopted tax increment financing. The present study extends the time of evaluation to 10 years for each tax increment plan. Allowing for a longer timeframe and focus on building types assists in determining the impact of tax increment financing on land values.

The values of areas and building types inside a tax increment financing district and land parcel valuations for the remainder of the county are collected five years prior to the activation of a tax increment financing project and five years after the activation of the tax increment financing project area. These values are compared and analyzed based on the location and characteristics of the tax increment financing plan.

Population & Sample

According to (Roberts, 2010), the population is the group to which the results of a study will be generalizable. For RO1, RO2, RO3, & RO4 in this study, the population is the 296,000 land parcels of Jackson County, MO (Jackson County Assessor, 2016). A sample is a smaller group selected from the population that represents a larger group (Roberts, 2010). The sample is Jackson County land parcels from 2000-2015. The timeline of study is the entire length of time Jackson County has digitized records of land values and parcel characteristics. Prior to 2000, archival land records are in microfilm formats, therefore unavailable for digital analysis. For RO5 the population is the total number of tax increment financing plans included in the annual report published by the Missouri Department of Revenue (Missouri Department of Revenue, 2016). The sample for RO5 is the tax increment financing plans which were approved by communities in Jackson County, MO since the inception of tax increment financing by the state of Missouri (Missouri Department of Revenue, 2016). At the end of 2015, over 100 plans had been approved in Jackson County, MO (Missouri Department of Revenue, 2016).

The sample consists of those plans initiated by communities in Jackson County from 2005-2010. Thirty-six plans with projects were activated from 2005-2010, which represented 95 projects. This grouping of plans was selected to have 10 years of analysis within the 2000-2015 land parcel database. Only those land parcels in projects from this time period that had valuations for the full 10-year period were included in the study. Other parcels created or subdivided when development happened, and therefore did not have a full 10-year timeframe of valuations, were eliminated. Therefore, 17 tax

increment financing projects are included in the study. Table 1 shows the tax increment financing districts in Jackson County included in this study.

Table 1

Tax Increment Financing Districts Included in Study

Community	Name of District
Blue Springs	Copperleaf Village
	Woods Chapel
Grandview	Grandview Crossing
	Patel Redevelopment
Independence	Old Landfill
Kansas City	811 Main
	19th Terrace & Central
	22nd & Main
	Baltimore Place
	Country Club Plaza
	Gateway 2000
	Hotel Phillips
	River Market
	Summit
Union Hill	
Lee's Summit	Lee's Summit East

Validity of the Research Design

The validity of a research project relates to conclusions drawn because of the study. Huck (2008) defined validity as accurately measuring variables the study intended to measure. Isaac and Michael (1995) described two types of validity, internal and external. Internal validity addresses the question, "Did the independent variable X really produce a change in the dependent variable?" (Isaac & Michael, 1995, p. 67).

Threats to internal validity include historic threats. Historic threats are those events occurring during the study timeframe which may affect the dependent variable in addition to the study's independent variables (Isaac & Michael, 1995). In the current study, the rate of inflation or deflation which occurred during the study timeframe is the event which could impact assessed valuation of land values in addition to the study's independent variables. During the study timeframe of 2000 to 2015, the economic recession of 2008-2010 influenced the value of real estate. In the case of Jackson County, overall assessed value of land declined 7.67% from 2008-2013 (Thomas & Colter, 2014). However, this issue did not affect the comparison of relationships, because all parcel land values within the population and sample were affected equally during the recessionary years.

External validity refers to the generalization of the study's findings (Isaac & Michael, 1995). An external threat for the current study is selection bias. Selection bias refers to a criterion based study sample which threatens the generalization of results (Isaac & Michael, 1995). The researcher may not be able to generalize if a cause-effect relationship exists between the growth of assessed land valuation and the location, characteristics, and development contained in tax increment financing districts in Jackson

County, MO due to the specific timing of the sample tax increment financing districts. Over 100 tax increment financing districts were approved in Jackson County since tax increment financing was approved by the state of Missouri in the mid-1980s. A sampling of 17 specific plans initiated in 2005-2010 with parcel values for the 10-year review period may not be representative of all plans approved by Jackson County.

Data Collection

The present study uses secondary archival data from historical land parcel records of Jackson County, MO from 2000-2015. Secondary data is collected by someone other than the researcher for uses not anticipated when the data was initially collected (Gupta, 2001). In the present study, the data was originally used to determine parcel property taxation. The data was gathered longitudinally with multiple observations over time. The data to analyze these research objectives came from land parcel assessed market value data collected from the County Assessor of Jackson County, MO. The County Assessor determines a market value of a land parcel. The market value is the value should a parcel be offered for sale (Jackson County Assessor, 2016). The County Assessor determines this value based on a comparison of similar types of property recently sold in the county (Jackson County Assessor, 2016). For a property tax to be calculated, the market value is subsequently discounted by a classification percentage by using 19% residential, 12% agricultural and 32% commercial to produce an appraised value (Jackson County Assessor, 2016). The appraised value is then charged a property tax rate to determine the property tax (Jackson County Assessor, 2016). A land parcel can vary in size, as well as type and size of building.

The data collection plan includes a timeline to complete the data collection and data analysis of the study. In addition, the data collection plan describes the specific tasks to be completed. Table 2 outlines the data collection plan for this study.

Table 2

Data Collection Plan

Week number	Item accomplished
Week 1	Contact Jackson County Assessor's office
Week 2	Meet with county officials to discuss general outline of the study
Week 3	Design data request
Week 4	Submit data request to county
Week 5	County assessor office to pull archival data records
Week 15	Receive database from county
Week 16	Add data from Missouri Department of Revenue annual report
Week 17	Conducted data analyses utilizing Microsoft Excel
Week 19	Added tables and created written analysis

The data was received from the County Assessor in Microsoft Excel format. The researcher utilized the data analysis package in Excel to complete the analysis. Tables and written analysis of the study are included in Chapter IV.

Procedures

Seventeen plans had projects with 10 years of valuation data included in the study. Under Missouri law, after community approval of a tax increment financing plan,

the developer has up to 10 years to activate the plan project. In addition, each plan can have multiple projects within the plan. For each tax increment parcel, there are two times assessed valuation data is captured: five years prior to the year the project was activated and five years after the project was activated. The researcher then aligned this data by the activated year. Parcels created or subdivided when development happened and therefore did not have a full 10-year timeframe of valuations were eliminated. For the 2005-2010 timeframe, 791 parcels were activated. However, 506 did not possess 10 years of valuation data. The net number of parcels included in the study which had 10 years of valuation data was 285.

The elimination of the parcels does limit the number of parcels in the study. However, the 10-year timeline balances external factors such as inflationary or recessionary impacts which could overly influence the values of the land parcels. A shorter timeline would have brought these external influences into the study.

One of the significant differences between the present study and others in the literature is each tax increment financing plan was aligned with its activation year, then data was collected five years prior and then five years forward from the activation point. Table 3 presents an example of this alignment of tax increment financing districts. In District A, the city activated the tax increment financing project in 2005. Therefore, the assessed value within the tax increment financing area will be collected in 2000 (pre-activated year) and in 2010 (post-activation year). The same process is repeated for tax increment financing district B and C and so on.

Table 3

Data Collection Alignment

Tax Increment District	Pre-Activation Year	Activation Year	Post Activation Year
A	2000	2005	2010
B	2002	2007	2012
C	2004	2009	2014

After the data from the parcels was aligned, a calculation of each parcel annualized mean growth rate was calculated. This calculation was used for the determination of the land growth rate over the 10-year term. The value of the parcel from the post activation year (year 10) less the pre-activation year (year 1) was then divided by 10 to determine each parcel’s annualized growth rate (year 10 value – year 1 value / 10 years). A similar calculation was completed for the total value growth and total mean value growth for the county both inside of tax increment financing districts and the remainder of the county during the period of review.

Jackson County assigns use codes to signify the type of building/development on each land parcel. Jackson County utilized 52 different use codes. The researcher determined that 52 different building types would make analysis difficult and spread the data too thin. Therefore, the use codes were grouped by common uses and then each parcel was coded to one of seven categorical groupings (Hotel, Industrial, Office, Residential, Retail, Vacant and Public). Those codes and the assigned groupings are shown in Appendix C.

The state of Missouri has three classifications or rationales for tax increment financing plans, blight, conservation, and economic development (Missouri Revised Statutes, 99.805). Blight classification requires a finding of obsolete infrastructure and or deterioration of property (Missouri Revised Statutes, 99.805 (1)). A conservation area designation requires 50% or more of the structures must be 35 years old or more (Missouri Revised Statutes, 99.805 (3)). The designation for an economic development area tax increment plan requires the municipality show a competition between communities which could either enhance or retain jobs (Missouri Revised Statutes, 99.805 (5)). For a full description of the Missouri law regarding tax increment financing see Appendix A. As a summary, both the blight and conservation designations are focused on the redevelopment of property while the economic development rationale can be used for proactive new development.

Google maps was used to determine the distance from the approving community city hall to the tax increment development area. The rings were established at .5 mile intervals up to 1.5 miles (Weber et al., 2007). This distance ring was used to provide information regarding the growth of parcel values of the entire tax increment financing district as it relates to distance from city hall. The distance variable was to review an urban or suburban difference in the growth of parcel value.

Data Analysis

To determine the impact of tax increment financing on the assessed value of Jackson County, MO an independent samples *t*-test analysis was conducted comparing the assessed valuations of those buildings built in a tax increment district versus those buildings not located in a tax increment area at two different points in time (once five

years before the activation of a tax increment financing project area and once five years after the activation of the tax increment financing project). The researcher also analyzed the legal designation organizing the tax increment financing area and the distance of the tax increment financing district from city hall.

The data analysis methodology for the research objectives is an independent samples t test. The independent samples t -test analysis looks at the difference between two sample means of two independent groups to determine if a relationship exists between the two samples (Green & Salkind, 2008). The researcher utilized Microsoft Excel's Data Analysis ToolPak to perform the t -test analysis.

To get to a t test, a comparison of variances is conducted (<http://www.excel-easy.com>). The F test was used to determine if the two samples have a uniform variance (Agresti & Findlay, 1997). The specific test in the Excel ToolPak is the F test for Two Samples for Variance. After the test is run for each comparison as outlined in the research objectives, the F value is compared to the F critical one-tail value. If the computed F value is larger than the F critical one-tail value, then the variances are not equal. An additional check for accuracy is performed by analyzing the p value. If the p value is at or less than .05, the computation is determined to be significant in the variances are not equal. In social science research an Alpha, or level of significance of .05 is commonly used (Huck, 2008). The follow up t -test analysis in Microsoft Excel is the t test samples assuming unequal variances (<http://www.excel-easy.com>). This test is referred to a Welch's t analysis (Andale, 2015). The Welch's t test compensates for the unequal variances between the two samples (Huck, 2008). If the F value is not

significant, then the variances are uniform. Therefore, the t test assuming equal variances is used. This test is also referred to as a student t test (Lane, 2013).

Independent samples t tests are used to compare means of samples to determine if a difference exists (Huck, 2008). Both types of performed t test calculations are determined to be significant if the t stat value exceeds the t critical two-tail value which is computed by Excel. In addition, if the p value is at or less than .05, then the computation is determined to be significant. In running both F and t tests, the Microsoft Data Analysis package requires the variable which has the highest variance is loaded into the data analysis calculation as the first variable with the other variable positioned second (Andale, 2013). While performing the t test procedure, Excel asks for a level of significance, a level of .05 was chosen. The F and the p one-tail value and the t stat and the p two-tail value is reported for each comparison. These values are revealed in the Chapter IV result tables. Therefore, through the two-step process of producing the F value and the t test, the test determines whether the sample means of two independent groups have a significant difference.

The independent samples t -test analysis used for this study was the data analysis package from Microsoft Excel. Variables include (a) assessed valuation of land parcel, (b) application rationale for the tax increment financing plan, (c) community location of the tax increment district, (d) type of structure on land parcel, and (e) distance from the tax increment district to the city hall. Table 4 identifies the coding of the variables used by the researcher.

Table 4

Variable Coding

Variable	Category	Coding
Land Parcel Assessed Value	2000 - 2015	
Tax Increment Financing Application Rationality per State Statute	Blight	1
	Conservation	2
	Economic Development	3
Community Location of the Tax Increment District	Blue Springs	1
	Grandview	2
	Independence	3
	Kansas City	4
	Lee's Summit	5
Type of Structure on Parcel	Hotel	1
	Industrial	2
	Office	3
	Residential	4
	Retail	5
	Vacant	6
	Public	7
Distance of Center of Tax Increment District to City Hall	0-.49 Miles	1
	.5-.99 Miles	2
	1.0-1.49 Miles	3
	1.5+ Miles	4

This study utilizes nominal, interval, and ordinal data. Nominal data denotes the type of structure on parcel, plan rationale, and community that approved the plan.

Nominal data is when no numerical connection exists between two subgroups (Huck, 2008). Interval data are numerical and possess equalized distance between data values (Lane, 2013). Interval data denotes the assessed market value, in dollars, of the parcel.

Ordinal data indicates a rank order (Gupta, 2001). Ordinal data denotes the distance from the plan to the community city hall. Table 5 describes the data analysis plan.

Table 5

Data Analysis Plan

Objective	Item	Data type	Statistical test
RO1	Assessed Value Data - annualized parcel growth rate	Interval	Descriptive Statistics including, Mean Values, Annualized Mean Growth, Standard Deviation
	Inside and outside TIF -	Nominal	
RO2	Assessed Value Data - annualized parcel growth rate	Interval	Descriptive Statistics including, Mean Values Inferential Statistics - Independent Samples T-Test
	Location of Parcel - Inside and outside TIF	Nominal	
RO3	Assessed Value Data - annualized parcel growth rate	Interval	Descriptive Statistics including, Mean Values, Annualized Mean Growth, Inferential Statistics - Independent Samples T-Test
	Location of Parcel - Inside of TIF	Nominal	
	Building Types -	Nominal	
RO4	Assessed Value Data - annualized parcel growth rate	Interval	Descriptive Statistics including, Mean Values, Annualized Mean Growth, Inferential Statistics - Independent Samples T-Test
	Location of Parcel - Inside and outside TIF	Nominal	
	Building Types -	Nominal	

Table 5 (Continued)

Objective	Item	Data type	Statistical test
RO5	Assessed Value Data - annualized parcel growth rate	Interval	Descriptive Statistics including, Mean Values, Annualized Mean Growth, Inferential Statistics - Independent Samples T-Test
	TIF District - Characteristics & Location of Parcel	Nominal	
	Inside of TIF	Interval	
		Ordinal	

The present study employs two types of statistics, descriptive and inferential. Descriptive statistics are used because they describe what the data shows (Huck, 2008). Descriptive statistics present quantitative data in a controllable form by taking large amounts of data and classifying the data into nominal and ordinal data (Isaac & Michael, 1995). Inferential statistics “allow researchers to generalize their findings beyond the actual data sets obtained” (Huck, 2008, p. 99). Researchers can use inferential statistics to infer relationships between variables (Huck, 2008). Inferential statistics draw conclusions which go beyond the basic data, using the sample to generalize about the entire population (Isaac & Michael, 1995). Inferential statistics identify the level of probability to determine if what occurs between groups is either related or simply a matter of chance (Isaac & Michael, 1995).

Limitations & Delimitations

This dissertation is limited to reviewing the impact of tax increment financing on the growth of assessed land value in Jackson County, MO over a limited period of 2000 to 2015. This timeframe is chosen because the period dates to when Jackson County, MO has digitized county land assessment records. Additionally, the assessed value data

is limited to what is in the assessment records and does not take into consideration the timing and recording of reappraisals and reassessments as outlined by Missouri law.

The study, because specific Missouri implementation legislation, is limited to and only directly applicable to Jackson County, MO. Therefore, the results should not be used solely as a judgment of tax increment financing in other communities. However, the study does provide a generalized discussion of the impact of tax increment financing which would be of assistance to other communities.

The present study is delimited in the study only analyzes the impact of this economic development tool on real estate values. The study does not analyze other issues such as why tax increment financing was adopted, the equity in the use of tax increment financing and the use of other taxing jurisdiction's tax base in supporting this type of development. In addition, the study does not attempt to answer the question, would the development have occurred without tax increment financing, the so-called "but-for" decision?

Summary

The problem is the influence of economic development incentives, particularly those that encourage real estate investments, such as tax increment financing, on the acceleration of land values are not fully understood. This quasi-experimental study addressed the problem by examining the growth of the assessed land value of building types in tax increment financing districts in Jackson County, MO communities over a period of ten years. Additional analysis was conducted regarding the types of tax increment financing projects and location of the tax increment financing districts. The growth of real estate value is an indicator of increased economic activity which brings

economic benefits to a community in the creation of jobs and the collection of taxes to assist with the costs of providing public services.

Chapter III presented the five research objectives and described the research design of the study which included the population and sample, data collection, procedures, and data analysis. Chapter IV will present the findings of this study and Chapter V will summarize and provide conclusions and recommendations for further action and implications for future research.

CHAPTER IV – ANALYSIS OF DATA

Without the knowledge of how economic development incentives, such as tax increment financing, influence land values, communities risk the misallocation of resources from public entities, such as schools and libraries to private entities (Weber, 2003b). The present study examined the growth of assessed value of land parcels and buildings inside tax increment financing areas in Jackson County, MO communities over a period of 10 years versus the assessed value growth of building types inside districts and the remainder of the county. Additional analysis was conducted regarding the type and location of tax increment financing projects in Jackson County.

Chapter IV describes and analyzes the data of the study's five research objectives. The research objectives of the study were developed to evaluate the impact of tax increment financing and to inform economic development policy in the future. The data analysis methodology for the research objectives is an independent samples *t* test. *T*-test analysis looks at the difference between two sample means to determine if a significant difference exists between the two samples (Isaac & Michael, 1995). A significance level of .05 was chosen for determination of this analysis, a commonly used level of significance for social science research (Huck, 2008). The significant *t* test values in the tables that follow is highlighted in asterisks. The results of the study can provide economic developers and public policy leaders assistance in determining the influence of tax increment financing on land value growth of building types, characteristics, and locations of tax increment financing districts.

Data Outline

This study analyzed land parcel value growth of tax increment financing plans initiated by communities in Jackson County, MO from 2000-2015. Only those land parcels in projects from this time period with 10 years of land value data were included in the study. Other parcels created or subdivided when development happened and did not have a full 10-year timeframe of valuations were eliminated. Therefore, 17 tax increment financing projects containing 285 land parcels are included in the study.

For each tax increment parcel, the assessed valuation data was collected for the year five years prior to the year the project was activated and five years after the project was activated. From this data, an annualized percentage of value growth over the 10-year cycle was calculated for each land parcel (year 10 value - year 1 value / 10 years). A similar calculation was completed for the total value growth and total mean value growth for the county both inside of tax increment financing districts and the remainder of the county during the period of review. The parcel value growth outside of the tax increment financing areas was matched in 10-year terms with specific parcel value growth timelines for parcels inside tax increment districts.

The parcel data was coded by the type of structure built on the parcel. Jackson County classifies land parcels with 52 different use codes. The researcher combined these codes into seven common grouped categories. An outline of these groupings is shown in Appendix C. The structure groupings were hotel, industrial, office, residential, retail, vacant, and public. After this grouping, the data revealed only one hotel parcel. The single hotel parcel is a result of the requirements of the study to include only those

parcels with ten years of valuation data. Without additional parcels, the hotel grouping was dropped from further study.

Further coding was completed regarding the characteristics of the tax increment financing plan. This information was collected from the state of Missouri Department of Revenue's 2015 annual report of tax increment financing in the state of Missouri. The first characteristic to be coded was the application rationale for the tax increment financing plan. State law requires the developer certify the development in one of three application rationales: blight, conservation, and economic development (Missouri Revised Statutes, 99.805). From 2000-2015 two plans were classified as an economic development area in Jackson County. Data revealed none of the parcels in the two economic development area tax increment financing plans had 10 years of valuation data. As with the hotel classification with a single parcel with 10 years of valuation data, the two economic development areas were not included in the study. A final characteristic examined the distance from the city hall of the approving community and the location of the tax increment plan. Google maps determined the distance. Coding was for four distances at one-half mile increments from the city hall to the tax increment area up to 1.5 miles (Weber et al., 2007). The distance rings were used to provide information regarding the growth of parcel value as it related to distance from city hall. This distance variable was reviewed to observe any differences in urban and suburban growth of parcel values. The classifications and coding of the parcels finished the preparation of the data for analysis.

Results by Research Objective

The results and findings of the study are presented for five research objectives. Research Objective One describes the land values of Jackson County, MO. Research Objective Two compares the growth of land values inside of tax increment financing districts and the remainder of the county. Research Objective Three compares the growth of land value between six building types in tax increment financing districts in Jackson County. Research Objective Four compares the land value growth of the six building types with the growth of land value in the remainder of the county. Research Objective Five will determine the relationship between the characteristics of the type of tax increment financing area, including (a) application rationale, (b) location and (c) distance from city hall, and the value growth of different building types in tax increment financing areas. The results and interpretations are discussed.

ROI: Describe the land values of Jackson County, MO including the valuation of parcels inside and outside tax increment financing areas, and valuation of parcels of tax increment financing areas in the study.

Research Objective One (RO1) outlines the data and reports the means of Jackson County valuation and tax increment financing plans included in the study. The county valuation information spans 16 years of data. The tax increment financing areas parcel data span a 10-year timeline. The mean values of the data were calculated by taking the total land value of the county by year, both inside of tax increment financing areas and the remainder of the county and dividing by 16, the number of years (Sum of values 2000 to 2015 / 16). The mean annualized percent data was derived at by calculating the growth of values over the 16 years and then dividing by 16, the total number of years

(2015 value - 2000 value / 16). For the tax increment financing areas, the mean values are determined by taking the total land value of the selected parcels divided by 10, representing the 10-year timeline (Sum of values / 10). The mean annualized percentage was arrived at by calculating the growth in land values in tax increment areas divided by 10, representing the 10-year timeline (year 10 value - year 1 value / 10).

The land valuations of Jackson County have increased from 2000-2015. Table 6 outlines the county valuation of the 16-year timeline. Over the 16-year term, valuations in the county outside of tax increment financing areas averaged \$30,010,698,973, while valuations inside these districts averaged \$975,085,040. The total number of parcels outside of tax increment financing districts in 2016 was 294,500, while the number of parcels inside of active plans during the study period was 3,500. In 2015, the final year of the study, the average parcel value inside of tax increment financing areas was \$412,038 and the average parcel value in the remainder of the county was \$113,106.33.

Table 6

Jackson County Valuation Summary Data 2000-2015

	Years	Mean Values	Annualized Mean Growth	Standard Deviation
Inside TIF Areas	16	\$975,085,040	452%	511,503,765
Outside TIF Areas	16	\$30,010,698,973	52%	39,65,179,463

The annualized mean value growth rate for parcels outside of tax increment districts is 52% while tax increment parcels increased 452%. While overall growth of

value in the county is evident, tax increment parcel value growth accelerated at a quicker rate. Figure 3 presents a graphical representation of the data.

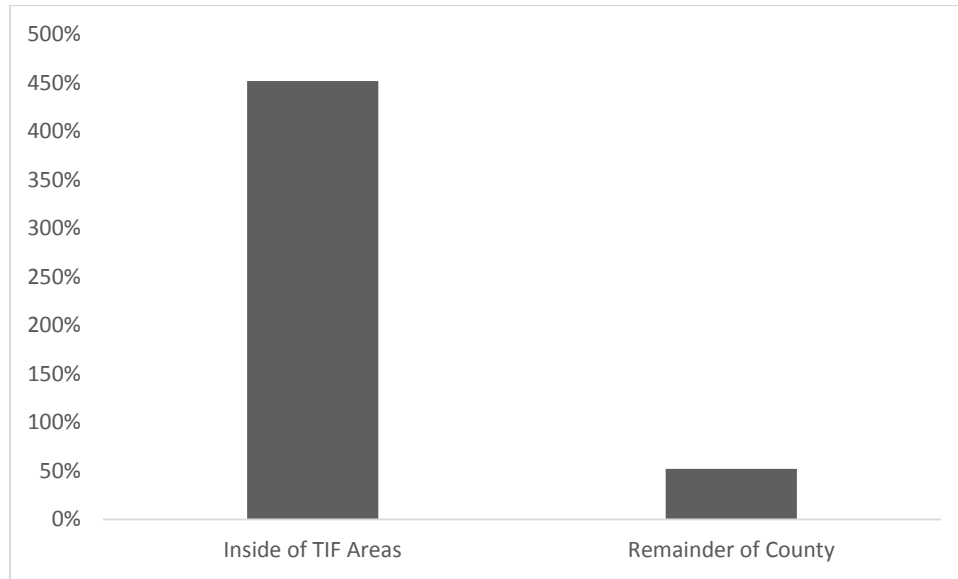


Figure 3. Annualized Mean Land Value Growth Inside of Tax Increment Financing (TIF) Areas Compared to the Remainder of the County

In the current study, 17 tax increment financing districts with 46 project areas were analyzed. The value growth of 285 land parcels was the basis of the analysis. While the Patel Redevelopment tax increment area in Grandview experienced the highest annualized mean value growth rate at 1,509%, the district included only two parcels. The Patel Redevelopment tax increment area high valuation growth rate accounted for 2% of the overall mean growth rate for tax increment parcels in the study. Union Hill, River Market and the 22nd & Main tax increment districts in Kansas City exceeded 200% annualized mean value growth with Union Hill leading with a value growth rate of 434%. At the other end of the growth curve, the two tax increment districts in the community of Blue Springs, Cloverleaf Village, and Woods Chapel, are the only districts demonstrating a negative value growth rate over the 10-year period. The Old Landfill district in

Independence did not experience any value growth during the study timeframe. Overall, the tax increment financing districts in the study possessed an annualized mean value growth rate of 175%. The percentages of annualized mean value growth of tax increment financing plans are presented in Figure 4.

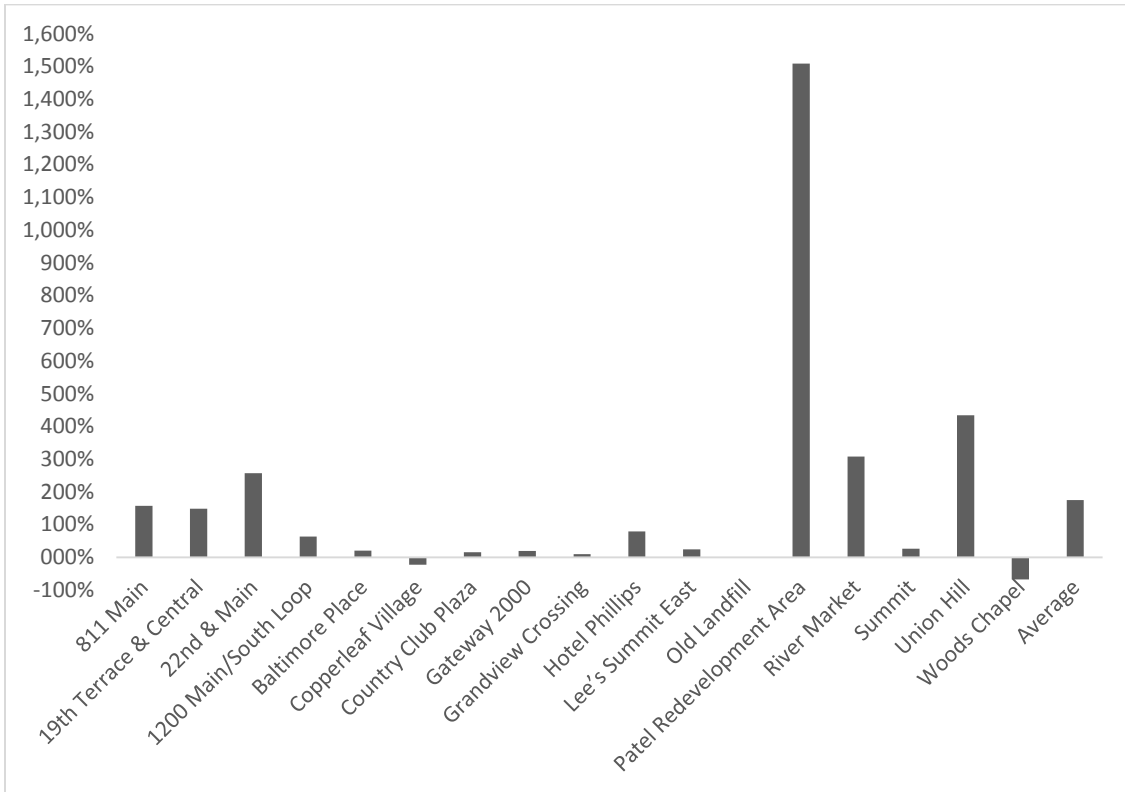


Figure 4. Annualized Mean Land Value Growth of Tax Increment Plans Included in the Study

The mean values of land parcels in tax increment financing plans are varied. Mean valuation for the 811 Main tax increment plan in Kansas City is the highest in the present study at \$8,280,000, followed by the Hotel Phillips tax increment plan in Kansas City with a mean value of \$5,905,533. At the other end of the valuation spectrum, the Old Landfill tax increment plan in the city of Independence had a parcel in the study valued at \$5,178. The Woods Chapel tax increment plan in Blue Springs had a valuation

of \$56,203. The mean values of the land parcels of tax increment financing plans in the present study are presented in Figure 5.

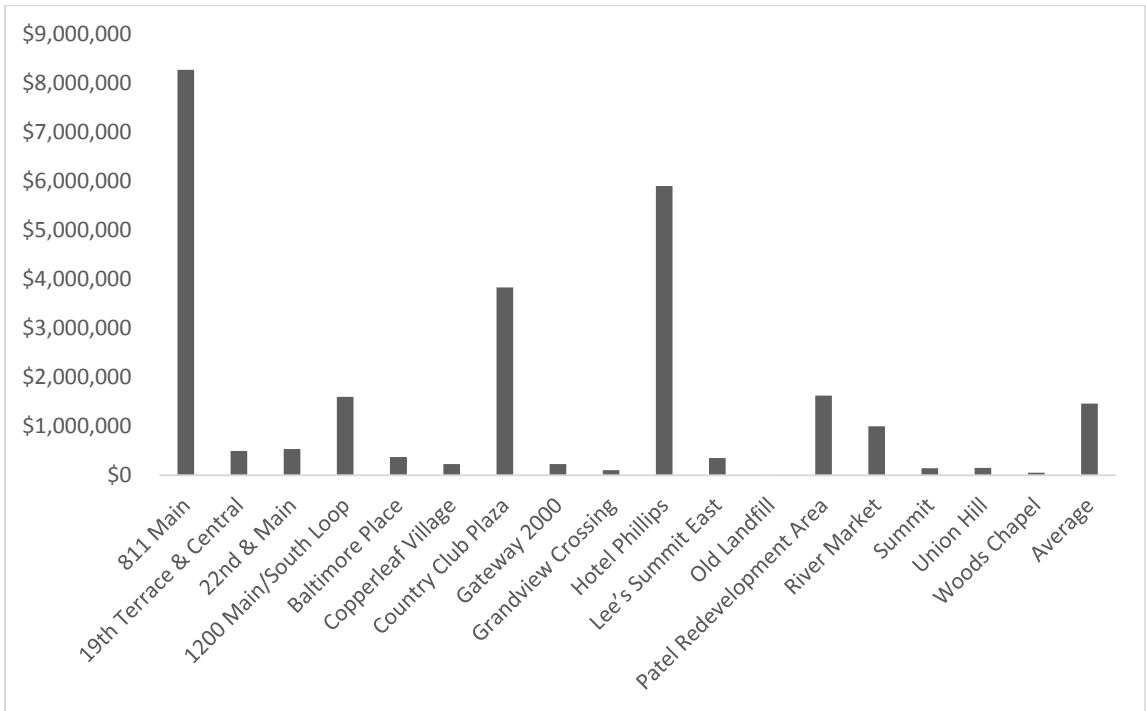


Figure 5. Mean Value of Land Parcels in Tax Increment Plans Included in the Study

RO2: Compare the growth of land values of parcels in tax increment financing areas to the growth of land values in the remainder of the county.

Research Objective Two (RO2) analyzed the comparable value growth from 2000 to 2015 for land parcels inside of tax increment financing districts versus the remainder of the county. RO2 analyzed valuation data to determine if the growth of value inside of tax increment financing districts is similar or dissimilar to the growth of value outside of tax increment districts in the remainder of Jackson County. The county valuation information spans 16 years of information for both the areas inside of tax increment financing areas and the remainder of the county. The mean value of the data was calculated by taking the total value of the county both inside of tax increment financing

areas and the remainder of the county and dividing by 16, the number of years the county has valuation data (Sum of values 2000 to 2015 / 16). The mean annualized percentage data was derived at by calculating the growth of values over the 16 years and then dividing by 16, the number of years (2015 value - 2000 value / 16).

The county valuation data represents the total market values both inside tax increment financing districts and outside in the remainder of the county annually from 2000-2015. Table 7 presents the yearly land values for the 16-year timeline. The land values inside tax increment financing areas in 2000 totaled \$261,306,836. Valuation increased to \$1,442,133,705 in 2015, a 452% annualized mean value growth rate over the 16-year timeline. This value growth compared to the net valuation outside of tax increment financing areas, increased from \$21,892,731,086 to \$33,309,813,315, which is a value growth rate of 52%. The values inside of tax increment financing districts range from a low in 2000 of \$261,306,836 to a high of \$1,442,133,705 in 2015. In the remainder of the county, values ranged from a low of \$21,892,731,085 in 2000 to a high of \$34,213,688,129 in 2007.

Table 7

Jackson County Valuations by Year of Tax Increment Areas and the Remainder of the County

Year	Total Tax Increment Market Value	Yearly +/- From Previous Year	Net County Total Value	Yearly +/- From Previous Year
2000	\$261,306,836		\$21,892,731,086	
2001	\$265,634,497	\$4,327,661	\$23,338,293,003	\$1,445,561,917
2002	\$364,457,268	\$98,822,771	\$23,765,922,428	\$427,629,425
2003	\$447,676,642	\$83,219,374	\$27,079,819,079	\$3,313,896,651
2004	\$488,118,667	\$40,442,025	\$27,765,250,749	\$685,431,670

Table 7 (Continued)

Year	Total Tax Increment Market Value	Yearly +/- From Previous Year	Net County Total Value	Yearly +/- From Previous Year
2005	\$551,155,733	\$63,037,066	\$31,448,132,346	\$3,682,881,597
2006	\$639,319,988	\$88,164,255	\$32,166,854,628	\$718,722,282
2007	\$1,153,043,107	\$513,723,119	\$34,213,688,129	\$2,046,833,501
2008	\$1,417,535,240	\$264,492,133	\$34,192,466,145	(\$21,221,984)
2009	\$1,476,420,336	\$58,885,096	\$32,038,058,446	(\$2,154,407,699)
2010	\$1,579,891,181	\$103,470,845	\$31,986,012,486	(\$52,045,960)
2011	\$1,447,121,109	(\$132,770,072)	\$31,698,427,906	(\$287,584,580)
2012	\$1,440,118,699	(\$7,002,410)	\$31,687,524,014	(\$10,903,892)
2013	\$1,310,610,678	(\$129,508,021)	\$31,754,758,179	\$67,234,165
2014	\$1,316,816,960	\$6,206,282	\$31,833,431,635	\$78,673,456
2015	\$1,442,133,705	\$125,316,745	\$33,309,813,315	\$1,476,381,680
16 Year Average	\$975,085,040		\$30,010,698,973	
16 Year Growth Rate	452%		52%	

An independent samples *t* test was conducted to compare the growth of land value from 2000-2015 inside of tax increment financing areas and the remainder of Jackson County, MO. An *F* statistic was computed to determine the level of variance between the two samples. The *F* statistic determined whether the *t* test for equal variance or unequal variance was utilized in the comparison. The results of the analysis for RO2 are presented in Table 8.

Table 8

Results of t test and Descriptive Statistics for Parcel Value by Location

	Location						<i>F-test of Variances</i>			<i>t</i>	df	<i>p</i>
	Inside of TIF			Remainder of county			<i>F</i>	<i>p</i>				
	M	V	N	M	V	n						
Parcel Value	\$975,085,040	2.61636E+17	16	\$30,010,698,973	1.57226E+19	16	60.094	<.001 ^U	29.050	15	<.001*	

Note: M = Mean. V = Variance. E = *t* test for equal variance, U = *t* test for unequal variance. * = *t* test $p < .05$.

Land Valuation Findings, RO2

Results of the independent samples *t* test revealed annualized mean land value growth differs between land inside of tax increment financing areas ($M = 975,085,040$, $V = 2.61636E+17$, $n = 16$) and outside of tax increment financing areas ($M = 30,010,698,973$, $SD = 1.57226E+19$, $n = 16$) at the .05 level of significance ($t = 29.050$, $df = 15$, $p < .05$). The findings displayed in Table 8 indicate areas in tax increment districts increased in value at a significantly higher rate than the overall county. Therefore, the value growth inside of tax increment districts in Jackson County increased at a higher rate than would be expected without the tax increment economic development incentive.

RO3: Compare the growth of land values of parcels containing different building types within tax increment financing areas.

Research Objective Three (RO3) compared the growth of assessed market values of different building types on land parcels in tax increment financing districts.

Understanding the value growth rate of different types of buildings in tax increment financing districts is of importance to understand. If a building type increased in value faster than another in a tax increment district, then policymakers can make data driven judgments when considering approval of future tax increment plans.

The valuation information spans 10 years of data including the number of parcels for each building type in the study. The mean values of the data were calculated by taking the total valuation of each building type and dividing by 10, the number of years studied (Sum of values / 10). The annualized mean percentage data was derived at by

calculating the growth of values over the 10 years and then dividing by 10, the number of years (year 10 value-year 1 value / 10).

The research design included hotel as a building type, but hotels were dropped from the study when only one parcel was identified during the 10 years of data. Building types included in the study were: industrial, office, residential, retail, vacant & public buildings. If building types increase in value faster than others in tax increment areas, then public policymakers can use this information to make decisions on future tax increment plan approvals.

The annualized mean value growth rates of the six types of building parcels varied from building type to building type. Over the individual parcel 10-year term, the grouping of 38 vacant parcels had an annualized mean value growth of 1,649%. The 29 parcels under public ownership, such as parks and schools, increased in value 223%; the 162 residential properties valuation increased 162%; and the 15 office properties increased in value 146%. Finally, the 10 industrial properties increased in value 94% and the 30 retail properties increased 63%. This data is graphically presented in Figure 6.

Vacant properties captured the highest valuation growth with the second highest value growth being publicly owned properties. Even though vacant and publicly owned properties captured value growth at a greater rate, vacant and publicly owned properties do not contribute to actual tax payments which support increment districts. Vacant properties do not have a building located on the parcel; resulting in a smaller overall valuation of the parcel. Public buildings owned by a public entity, such as a community, school district or church, are exempt from taxation. Therefore, publicly owned properties do not contribute anything monetarily to the tax increment financing district.

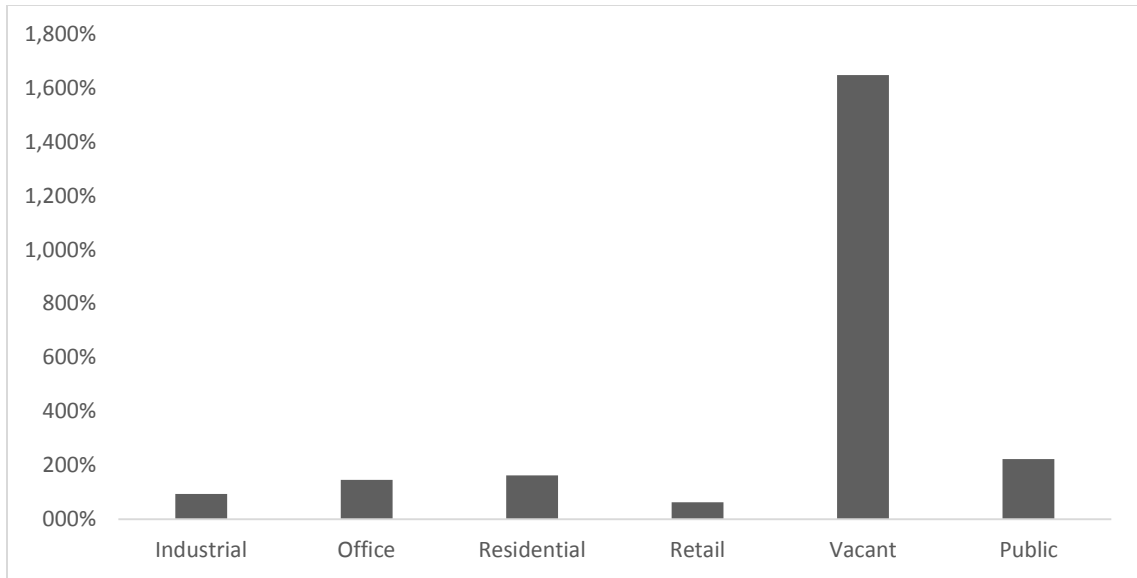


Figure 6. Annualized Mean Land Value Growth of Building Types in Tax Increment Financing Areas

The mean values of building types in tax increment financing plans are varied. Mean valuation for office is \$2,104,305, followed by industrial buildings with a mean value of \$597,823 and retail building with a mean value of \$556,281. At the other end of the valuation spectrum, vacant parcels were valued at \$32,241. Residential properties possessed a mean value of \$275,602 and public properties with a mean value of \$289,945. The mean value of the land parcels of building types in the current study are presented in Figure 7.

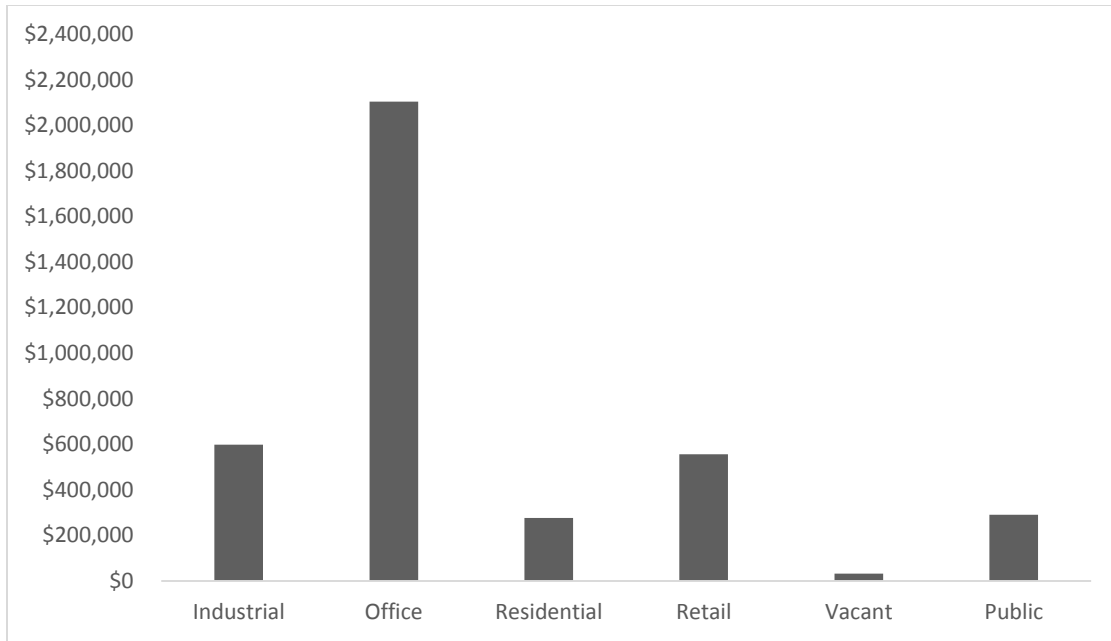


Figure 7. Mean Value of Building Types in Tax Increment Financing Areas

An independent samples *t* test was conducted to compare the growth of building types inside of tax increment financing areas in Jackson County, MO. An *F* statistic was computed to determine the level of variance between the two samples. The *F* statistic determined whether the *t* test for equal variance or unequal variance was utilized in the comparison. The results of the analysis for RO3 are presented in Table 9.

Table 9

Results of t test and Descriptive Statistics by Building Types

Building Type 1	M	V	N	Building Type 2	M	V	n	<i>F</i> -test of Variances		<i>t</i>	df	<i>p</i>
								<i>F</i>	<i>p</i>			
Office	1.476	2.617	15	Industrial	0.939	2.526	10	1.036	.495 ^E	0.819	23	.421
Residential	1.623	62.952	162	Industrial	0.939	2.526	10	24.926	<.001 ^U	0.854	51	.397
Residential	1.623	62.952	162	Office	1.476	2.617	15	24.051	<.001 ^U	0.195	102	.846
Retail	0.630	1.161	30	Industrial	0.939	2.526	10	2.175	.055 ^E	0.694	38	.492
Retail	0.630	1.161	30	Office	1.476	2.617	15	2.254	.032 ^U	1.832	20	.082
Retail	0.630	1.161	30	Residential	1.623	62.952	162	54.204	<.001 ^U	1.518	185	.131
Vacant	16.492	9780.673	38	Industrial	0.939	2.526	10	3872.715	<.001 ^U	0.969	37	.339
Vacant	16.492	9780.673	38	Office	1.476	2.617	15	3736.711	<.001 ^U	0.936	37	.356
Vacant	16.492	9780.673	38	Residential	1.623	62.952	162	155.367	<.001 ^U	0.926	37	.360
Vacant	16.492	9780.673	38	Retail	0.630	1.161	30	8421.490	<.001 ^U	0.989	37	.329
Public	2.229	11.338	29	Industrial	0.939	2.526	10	4.489	.012 ^U	1.607	33	.118
Public	2.229	11.338	29	Office	1.476	2.617	15	4.332	.003 ^U	1.000	42	.323
Public	2.229	11.338	29	Residential	1.623	62.952	162	5.553	<.001 ^U	-0.686	95	.494
Public	2.229	11.338	29	Retail	0.630	1.161	30	9.762	<.001 ^U	2.438	34	.020*
Public	2.229	11.338	29	Vacant	16.492	9780.673	38	862.682	<.001 ^U	0.888	37	.380

Note: M = Mean. V = Variance. E = *t* test for equal variance, U = *t* test for unequal variance. * = *t* test $p < .05$.

Building Valuation Findings, RO3

Results of the independent samples *t* test revealed annualized mean land value growth differs between public buildings inside of tax increment areas ($M = 2.229$, $V = 11.338$, $n = 29$) and retail buildings inside of tax increment financing areas ($M = 0.630$, $V = 1.161$, $n = 30$) at the .05 level of significance ($t = 2.438$, $df = 34$, $p < .05$). No statistical difference exists between the comparisons of industrial, office, residential, or vacant buildings or other comparisons of public and retail buildings. These findings displayed in Table 9 indicate a significant difference between retail parcel value growth and public buildings inside of tax increment districts. Therefore, policymakers reviewing future tax increment plans could expect to see similar valuation growth levels between all building types except for the combination of retail and public buildings

RO4: Compare the growth of land values of parcels containing different building types within tax increment financing areas and the growth of land values in the remainder of the county.

Research Objective Four (RO4) extends the comparison of the value growth of building types in tax increment districts to the value growth of parcels in the remainder of the county. The annualized mean growth values of the six building types were compared to the annualized mean value growth rates of the remainder of the county. Like RO2, RO4 analyzed whether different building types in tax increment districts increased in value faster or slower than land values in the remainder of the county.

For Research Objective Four (RO4) comparison, the growth of county valuation timeline needs to match the value growth timeline of the building parcels inside of tax increment financing areas. The comparison was accomplished by determining the growth

rate of county valuations for the six periods available in the 16-year data timeline (2000-2010, 2001-2011, 2002-2012, 2003-2013, 2004-2014, 2005-2015). For each 10-year period, the county annualized land value growth rate is calculated by taking the valuation growth of each period and dividing by 10, the number of years studied (year 10 value - year 1 value / 10). Each 10-year value growth rate was paired with the timeline for each building parcel for the comparison.

As noted in Research Objective Three, the various building types increased in annualized mean value from a high of 1,649% for vacant parcels to a low of 63% for office parcels over a 10-year term. The matching rate of annualized mean value growth for parcels outside of tax increment areas over a 10-year term is 22%. Mean values ranged from a high of \$2,104,305 for office buildings to a low of \$32,240 for vacant properties.

An independent samples *t* test was conducted to compare the growth of land values of building types inside of tax increment financing areas and the remainder of Jackson County, MO. An *F* statistic was computed to determine the level of variance between the two samples. The *F* statistic determined whether the *t* test for equal variance or unequal variance was utilized in the comparison. The results of the analysis for RO4 are presented in Table 10.

Table 10

Results of t test and Descriptive Statistics for Building Type by Location

Building Type	Location						<i>F-test of Variances</i>		<i>t</i>	df	<i>P</i>
	Inside of TIF			Remainder of county			<i>F</i>	<i>p</i>			
	M	V	n	M	V	n					
Industrial	0.939	2.526	10	0.219	0.011	285	224.51	<.001 ^U	1.434	9	.185
Office	1.476	2.617	15	0.219	0.011	285	232.68	<.001 ^U	3.011	14	.009*
Residential	1.623	62.952	162	0.219	0.011	285	5596.25	<.001 ^U	2.253	161	.026*
Retail	0.630	1.161	30	0.219	0.011	285	103.25	<.001 ^U	2.092	29	.045*
Vacant	16.492	9780.673	38	0.219	0.011	285	869472.61	<.001 ^U	1.014	37	.317
Public	2.229	11.338	29	0.219	0.011	285	1007.87	<.001 ^U	3.215	28	.003*

Note: M = Mean. V = Variance. E = *t* test for equal variance, U = *t* test for unequal variance. * = *t* test $p < .05$.

Building and Land Valuation Findings, RO4

Results of the independent samples *t* test revealed annualized mean land value growth differs between office buildings ($M = 1.476$, $V = 2.617$, $n = 15$) and outside of tax increment financing areas ($M = 0.219$, $V = 0.011$, $n = 285$) at the .05 level of significance ($t = 3.011$, $df = 14$, $p < .05$). A second independent samples *t* test revealed annualized mean value land growth differs between residential buildings inside of tax increment areas ($M = 1.623$, $V = 62.952$, $n = 162$) and outside of tax increment financing areas ($M = 0.219$, $V = 0.011$, $n = 285$) at the .05 level of significance ($t = 2.253$, $df = 161$, $p < .05$). A third independent samples *t* test revealed annualized mean value land growth differs between retail buildings inside of tax increment areas ($M = 0.630$, $V = 1.161$, $n = 30$) and outside of tax increment financing areas ($M = 0.219$, $V = 0.011$, $n = 285$) at the .05 level of significance ($t = 2.092$, $df = 29$, $p < .05$). And a fourth independent samples *t* test revealed mean annualized mean value land growth differs between public buildings inside of tax increment areas ($M = 2.229$, $V = 11.338$, $n = 29$) and outside of tax increment financing areas ($M = 0.219$, $V = 0.011$, $n = 285$) at the .05 level of significance ($t = 3.215$, $df = 28$, $p < .05$). No statistical difference exists between the comparisons of industrial or vacant properties and the remainder of the county. The data displayed in Table 10 indicates parcel annualized mean value growth in office, residential, retail, and public buildings inside of tax increment districts exceeded the value growth in the remainder of the county by a significant amount. Therefore, as in RO2, the parcel annualized mean value growth inside of tax increment financing areas significantly exceeded the rate of growth for the remainder of the county.

Only two building types did not meet the significant difference threshold, vacant and industrial parcels. Vacant properties were the fastest growing building type. However, this value growth was not able to exceed the remainder of the county because of the associated smaller valuations. The mean value of vacant properties was only \$32,241 per parcel. Vacant properties represent the smallest mean value of building type parcel values. Industrial classification did not exceed the county rate of value growth, which is a surprise with implications for future tax increment financing planning.

RO5: Determine the relationship between the characteristics of the type of tax increment financing area, including the (a) application rationale, (b) location, and (c) distance from city hall, and the value growth of different building types in tax increment financing areas.

Research Objective Five (RO5) examined the relationship between characteristics of the tax increment financing plans and their influence on value growth of building types. Organizing factors regarding the application rationale of a tax increment financing plan were analyzed relative to the rate of annualized mean value growth of building types in tax increment financing areas. Additionally, location factors by community and the distance of the tax increment financing area from city hall were compared with the rate of annualized mean value growth for all building types. Individually and collectively, the results of these comparisons can assist in influencing the implementation of economic development policy in relation to tax increment financing.

The valuation information spans 10 years of data including the number of parcels for each type of application rationale, location, and distance characteristic in the study. The mean values of the parcel data were calculated by taking the total valuation of each

building type and dividing by 10, the number of years studied (Sum of values / 10). The mean annualized percentage data was derived at by calculating the growth of values over the 10 years and then dividing by 10, the number of years (year 10 value - year 1 value / 10).

Research Objective Five (RO5a) compared the application rationale (blight and conservation) and the six building types (industrial, office, residential, retail, vacant, and public). Tax increment plans in the study qualified for either a blight classification or a conservation classification. Three application rationales are allowed by Missouri law for classifying tax increment financing areas, blight, conservation, and economic development (Missouri Revised Statutes, 99.805). All 17 tax increment financing plans included in the study were classified as either blight or conservation; therefore, no economic development plans were reviewed. Ten plans identified with a blight designation, possessed a mean valuation of \$1,318,542. Seven tax increment financing plans, presented a mean valuation of \$290,635 in conservation areas. See Figure 8 for a graphical representation of the application rationale data.

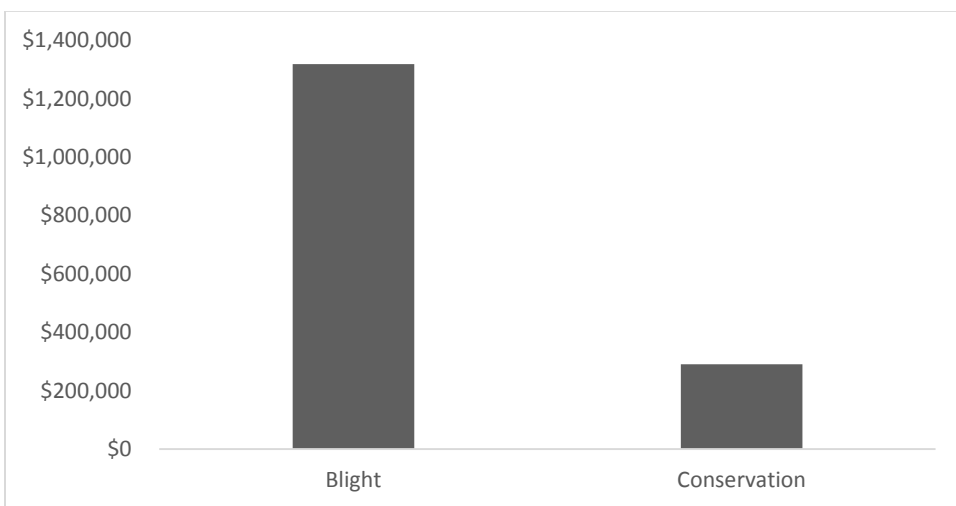


Figure 8. Mean Value of Land Parcels by Tax Increment Plan Rationale

The annualized mean value growth for blight tax increment financing plans was 135%, while annualized mean value growth of parcels in conservation areas reached 388%. The growth rate signifies parcels in both blight and conservation areas in Jackson County experienced substantial value growth as is presented in Figure 9.

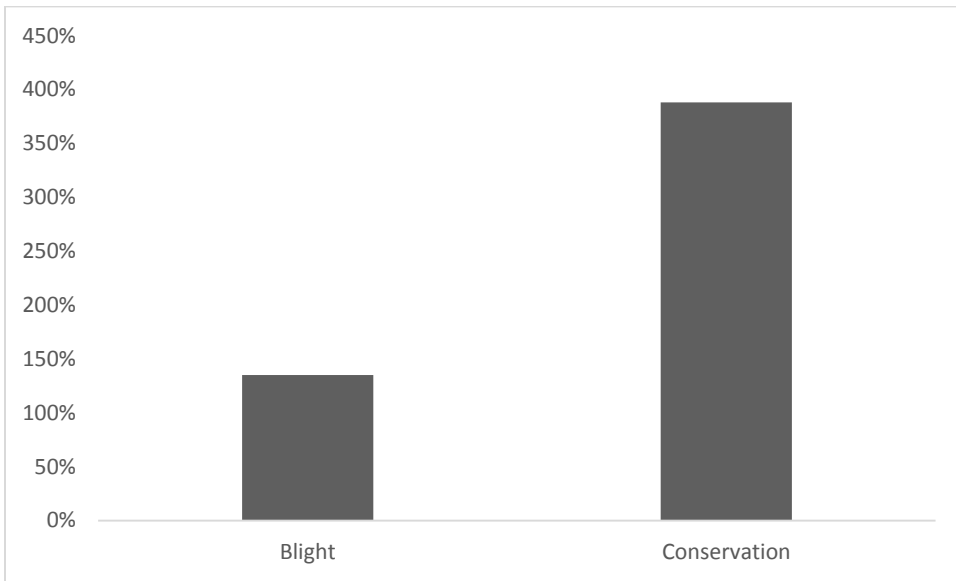


Figure 9. Annualized Mean Land Value Growth by Tax Increment Plan Rationale

An independent samples *t* test was conducted to compare the growth of land values by tax increment plan rationale and the 6 building types inside of tax increment financing areas and the remainder of Jackson County, MO. An *F* statistic was computed to determine the level of variance between the two samples. The *F* statistic determined whether the *t* test for equal variance or unequal variance was utilized in the comparison. The results of the analysis for RO5a are presented in Table 11.

Table 11

Results of t test and Descriptive Statistics for Building Type by Plan Rationale

Building Type	M	V	n	Blight	M	V	n	<i>F</i> -test of Variances		<i>t</i>	df	<i>p</i>
								<i>F</i>	<i>p</i>			
Industrial	0.939	2.526	10		1.345	32.002	28	12.671	<.001 ^U	0.343	35	.734
Office	1.476	2.617	15		1.345	32.002	28	12.226	<.001 ^U	-0.115	34	.909
Residential	1.623	62.952	162		1.345	32.002	28	1.967	.021 ^U	0.225	48	.823
Retail	0.630	1.161	30		1.345	32.002	28	27.555	<.001 ^U	0.657	29	.516
Vacant	16.492	9780.673	38		1.345	32.002	28	305.629	<.001 ^U	0.942	37	.352
Public	2.229	11.338	29		1.345	32.002	28	2.823	<.004 ^U	-0.714	44	.480

Note. M = Mean. V = Variance. E = *t* test for equal variance, U = *t* test for unequal variance. * = *t* test $p < .05$.

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Building Type	M	V	n	Conservation	M	V	n	<i>F</i> -test of Variances		<i>t</i>	df	<i>p</i>
								<i>F</i>	<i>p</i>			
Industrial	0.939	2.526	10		3.880	1482.452	257	586.985	<.001 ^U	1.198	264	.232
Office	1.476	2.617	15		3.880	1482.452	257	566.371	<.001 ^U	0.986	267	.325
Residential	1.623	62.952	162		3.880	1482.452	257	23.549	<.001 ^U	0.909	290	.364
Retail	0.630	1.161	30		3.880	1482.452	257	1276.411	<.001 ^U	1.348	259	.179
Vacant	16.492	9780.673	38		3.880	1482.452	257	6.598	<.001 ^U	0.778	39	.442
Public	2.229	11.338	29		3.880	1482.452	257	130.756	<.001 ^U	0.665	280	.507

Note: M = Mean. V = Variance. E = *t* test for equal variance, U = *t* test for unequal variance. * = *t* test $p < .05$.

Organizing and Locational Findings, RO5a

Results of the independent samples *t* test revealed no statistical difference exists between the comparisons of tax increment plan rationale and building types. The data presented in Table 11 did not present significant differences between the blight and conservation rationales and the comparison of building types. Due to the lack of data, the findings are adversely impacted by the absence of economic development tax increment plan land parcels.

Research Objective Five (RO5b) compared the community (Blue Springs, Grandview, Independence, Kansas City, Lee's Summit) and the six building types (industrial, office, residential, retail, vacant, and public). Locational aspects of the tax increment plan experienced varying growth rates by community. The annualized mean value growth rate in Kansas City parcels over their 10-year term was 380%. This growth rate compares with Lee's Summit parcels that increased mean value 24% and Grandview which increased in value at 11%. Only one parcel in Independence was identified in the study and that parcel did not increase in value over the 10-year term of the study. Two parcels were in the city of Blue Springs in the study and their annualized mean values declined 35%. Based on this information, the most tax increment financing plans in the study and the highest value growth rate were in Kansas City. The data is graphically represented in Figure 10.

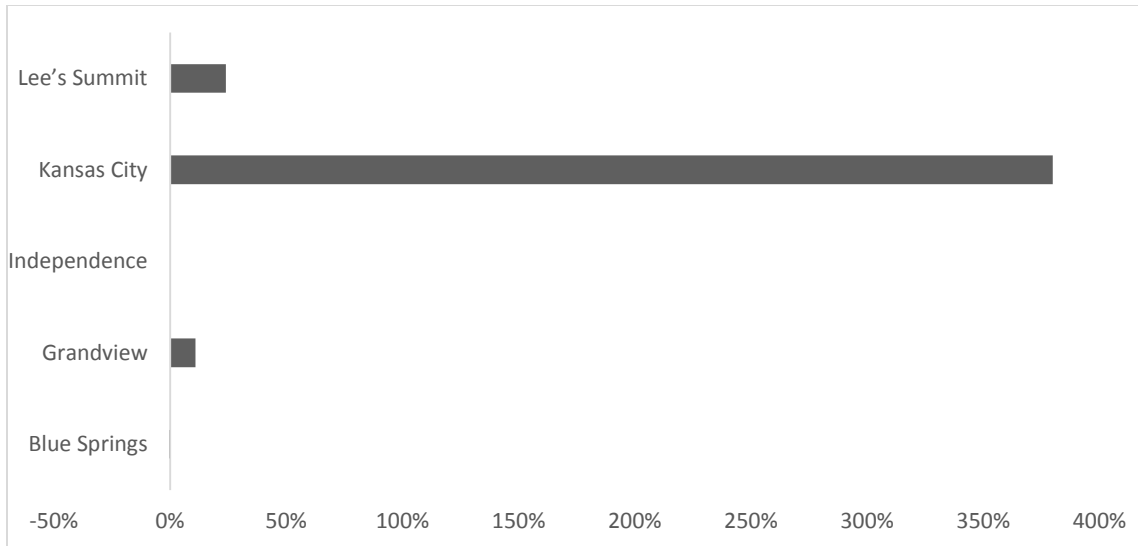


Figure 10. Annualized Mean Land Value Growth by Tax Increment Plan Location

The mean values of land values of tax increment financing plans in communities in Jackson County are mixed. The highest mean parcel valuation was in Grandview at \$445,013, followed by Kansas City with a mean value of \$394,389. At the other end of the valuation spectrum, parcels in Independence were valued at \$5,178. Blue Springs properties possessed a mean value of \$144,601, as presented in Figure 11.

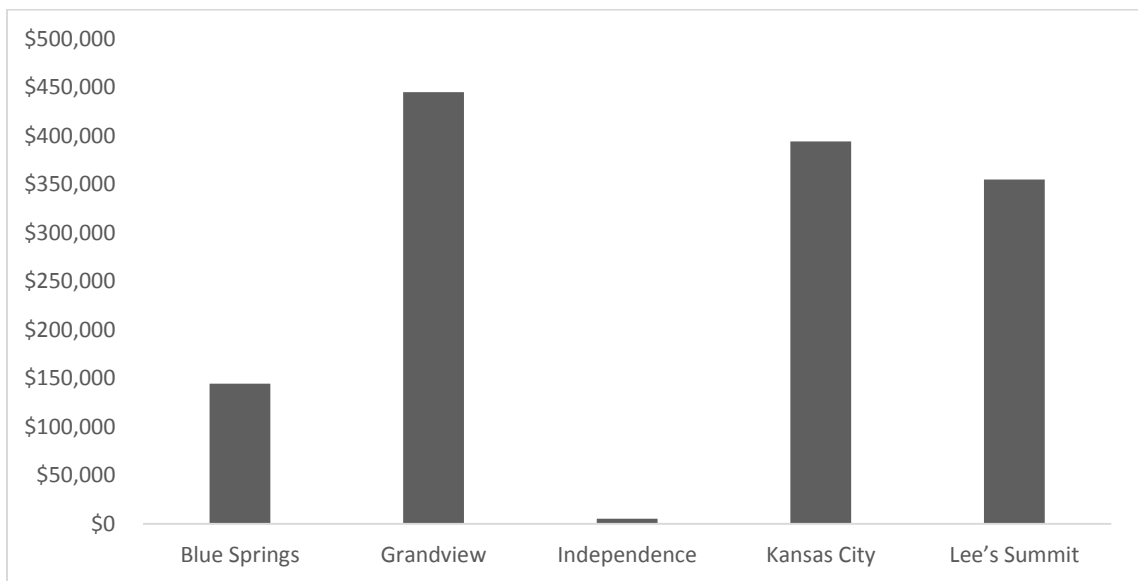


Figure 11. Mean Value of Land Parcels by Tax Increment Plan Location

An independent samples t test was conducted to compare the growth of land values in communities in Jackson County, MO and the six building types. Due to the lack of data, t tests could not be conducted for the land parcels in the city of Blue Springs and Independence. An F statistic was computed to determine the level of variance between the two samples. The F statistic determined whether the t test for equal variance or unequal variance was utilized in the comparison. The results of the analysis for RO5b are presented in Table 12.

Table 12

Results of t test and Descriptive Statistics for Building Type by Community

Building Type	M	V	n	Grandview	M	V	n	<i>F</i> -test of Variances		<i>t</i>	df	<i>p</i>
								<i>F</i>	<i>p</i>			
Retail	-0.005	0.071	2		0.105	0.027	8	2.686	.145 ^E	-0.777	8	.460
Vacant	0.162	0.177	5		0.105	0.027	8	1.503	.364 ^E	-0.647	11	.531

Note: M = Mean. V = Variance. E = *t* test for equal variance, U = *t* test for unequal variance. * = *t* test *p* < .05.

Building Type	M	V	n	Kansas City	M	V	N	<i>F</i> -test of Variances		<i>t</i>	df	<i>p</i>
								<i>F</i>	<i>p</i>			
Industrial	1.042	2.721	9		3.797	1443.278	264	530.333	<.001 ^U	1.147	266	.253
Office	1.592	2.603	14		3.797	1443.278	264	554.374	<.001 ^U	0.928	275	.355
Residential	1.633	63.330	161		3.797	1443.278	264	22.790	<.001 ^U	0.894	300	.372
Retail	0.729	1.454	23		3.797	1443.278	264	992.573	<.001 ^U	1.304	269	.193
Vacant	21.603	12810.211	29		3.797	1443.278	264	8.876	<.001 ^U	0.842	29	.407
Public	2.309	11.565	28		3.797	1443.278	264	124.793	<.001 ^U	0.614	288	.540

Note: M = Mean. V = Variance. E = *t* test for equal variance, U = *t* test for unequal variance. * = *t* test *p* < .05.

Building Type	M	V	n	Lee's Summit	M	V	n	<i>F</i> -test of Variances		<i>t</i>	df	<i>p</i>
								<i>F</i>	<i>P</i>			
Retail	0.429	0.096	5		0.235	0.105	9	1.092	.500 ^E	-1.090	12	.297

Note: M = Mean. V = Variance. E = *t* test for equal variance, U = *t* test for unequal variance. * = *t* test *p* < .05.

Organizing and Locational Findings, RO5b

Results of the independent samples *t* test revealed no statistical difference exists between the comparisons of communities with tax increment districts and building types. The data presented in Table 12 did not present any significant differences between community and building types. While the data revealed an annualized mean growth rate of 380% for Kansas City land parcels, due to the lack of data, the findings for other communities were adversely impacted.

Research Objective Five (RO5c) compared the distance of the tax increment area and the community city hall (0-.49 miles, .5-.99 miles, 1.0-1.49 miles, 1.5+ miles) and the six building types (industrial, office, residential, retail, vacant, and public). The distance from city hall to the tax increment plan area was analyzed in half mile increments up to 1.5 miles from city hall. Tax increment plans located over 1.5 miles from city hall increased in annualized mean value 396%. Followed by those plan areas ranging from .5-.99 miles at 366% and 0-.49 miles at 220%. Plans located 1-1.5 miles from city hall experienced the slowest rate of annualized mean value growth at 46%. Enhanced value growth rates occurred in three of the four distance categories, as presented in Figure 12.

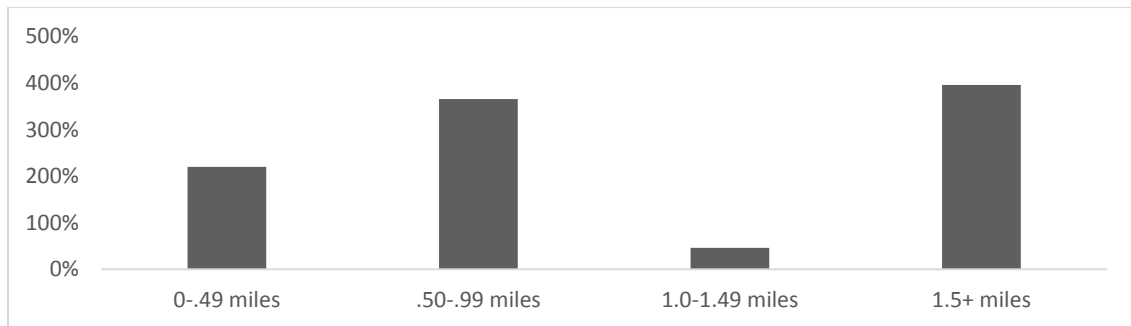


Figure 12. Annualized Mean Land Value Growth by Tax Increment Plan Distance from City Hall

The mean values of the tax increment plan distance from city hall are varied. Mean valuation for plans 0-.49 miles from city hall is \$1,494,796, followed by .50-.99 miles from city hall at \$658,595. The tax increment plans farther from city hall possess lower mean valuations; \$175,499 at 1.0-1.49 miles and \$192,087 1.5+ miles from city hall. The data is graphically displayed in Figure 13.

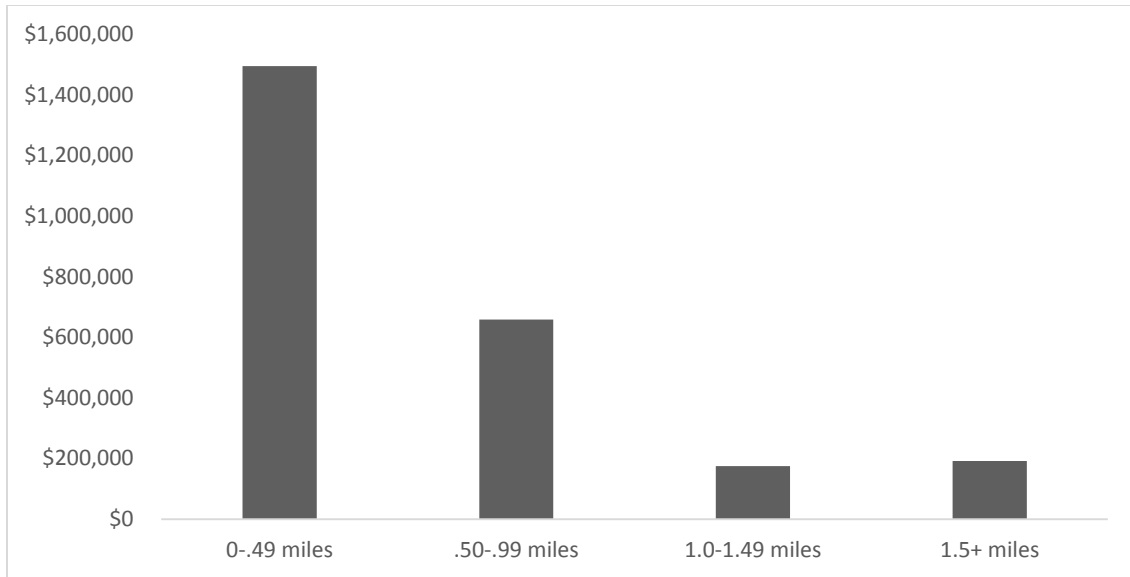


Figure 13. Mean Value of Land Parcels by Tax Increment Plan Distance to City Hall

An independent samples *t* test was conducted to compare the growth of land values from tax increment financing area distances from city hall and the six building types. An *F* statistic was computed to determine the level of variance between the two samples. The *F* statistic determined whether the *t* test for equal variance or unequal variance was utilized in the comparison. The results of the analysis for RO5c are presented in Table 13.

Table 13

Results of t test and Descriptive Statistics for Building Type by Distance from City Hall

Building Type	M	V	n	0 - .49 Miles	M	V	n	<i>F</i> -test of Variances		<i>t</i>	df	<i>p</i>
								<i>F</i>	<i>P</i>			
Industrial	0.939	2.526	10		2.202	10.517	38	4.164	.014 ^U	1.736	31	.093
Office	1.476	2.617	15		2.202	10.517	38	4.018	.004 ^U	1.080	48	.286
Residential	1.623	62.952	162		2.202	10.517	38	5.986	<.001 ^U	-0.710	147	.479
Retail	0.630	1.161	30		2.202	10.517	38	9.055	<.001 ^U	2.798	47	.007*
Vacant	16.492	9780.673	38		2.202	10.517	38	929.998	<.001 ^U	0.890	37	.380
Public	2.229	11.338	29		2.202	10.517	38	1.078	.410 ^E	0.033	65	.974

Note: M = Mean. V = Variance. E = *t* test for equal variance, U = *t* test for unequal variance. * = *t* test $p < .05$.

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Building Type	M	V	n	.5 - .99 Miles	M	V	n	<i>F</i> -test of Variances		<i>t</i>	df	<i>p</i>
								<i>F</i>	<i>P</i>			
Industrial	0.939	2.526	10		3.658	51.490	16	20.388	<.001 ^U	1.459	17	.163
Office	1.476	2.617	15		3.658	51.490	16	19.672	<.001 ^U	1.185	17	.253
Residential	1.623	62.952	162		3.658	51.490	16	1.223	.343 ^E	-0.987	176	.325
Retail	0.630	1.161	30		3.658	51.490	16	44.335	<.001 ^U	1.678	15	.114
Vacant	16.492	9780.673	38		3.658	51.490	16	189.952	<.001 ^U	0.795	38	.432
Public	2.229	11.338	29		3.658	51.490	16	4.542	<.001 ^U	0.752	19	.461

Note: M = Mean. V = Variance. E = *t* test for equal variance, U = *t* test for unequal variance. * = *t* test $p < .05$.

Results of *t* test and Descriptive Statistics for Building Type by Distance from City Hall (Continued)

Building Type	M	V	n	1.0 – 1.49 Miles			<i>F</i> -test of Variances		<i>t</i>	df	<i>p</i>
				M	V	n	<i>F</i>	<i>P</i>			
Industrial	0.939	2.526	10	0.045	0.101	6	25.063	.001 ^U	1.722	10	.116
Office	1.476	2.617	15	0.045	0.101	6	25.975	.001 ^U	3.272	16	.004*
Residential	1.623	62.952	162	0.045	0.101	6	624.731	<.001 ^U	2.478	165	.014*
Retail	0.630	1.161	30	0.045	0.101	6	11.526	.006 ^U	2.483	29	.019*
Vacant	16.492	9780.673	38	0.045	0.101	6	97062.543	<.001 ^U	1.025	27	.312
Public	2.229	11.338	29	0.045	0.101	6	112.513	<.001 ^U	3.419	30	.002*

Note: M = Mean. V = Variance. E = *t* test for equal variance, U = *t* test for unequal variance. * = *t* test $p < .05$.

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Building Type	M	V	n	1.5+ Miles			<i>F</i> -test of Variances		<i>t</i>	df	<i>p</i>
				M	V	n	<i>F</i>	<i>p</i>			
Industrial	0.939	2.526	10	3.965	1692.822	225	670.283	<.001 ^U	1.085	233	.279
Office	1.476	2.617	15	3.965	1692.822	225	646.743	<.001 ^U	0.897	233	.371
Residential	1.623	62.952	162	3.965	1692.822	225	26.891	<.001 ^U	0.833	247	.406
Retail	0.630	1.161	30	3.965	1692.822	225	1457.577	<.001 ^U	1.213	226	.227
Vacant	16.492	9780.673	38	3.965	1692.822	225	5.778	<.001 ^U	0.770	39	.446
Public	2.229	11.338	29	3.965	1692.822	225	149.311	<.001 ^U	0.617	243	.538

Note: M = Mean. V = Variance. E = *t* test for equal variance, U = *t* test for unequal variance. * = *t* test $p < .05$.

Organizing and Locational Findings, RO5c

Results of the independent samples *t* test revealed annualized mean land value growth differs between retail inside of tax increment areas ($M = 0.630$, $V = 1.161$, $n = 30$) and tax increment financing areas located 0-.49 miles from city hall ($M = 2.202$, $V = 10.517$, $n = 38$) at the .05 level of significance ($t = 2.798$, $df = 47$, $p < .05$). A second independent samples *t* test revealed annualized mean value land growth differs between office buildings inside of tax increment areas ($M = 1.476$, $V = 2.617$, $n = 15$) and tax increment financing areas located 1-1.49 miles from city hall ($M = 0.045$, $V = 0.101$, $n = 6$) at the .05 level of significance ($t = 3.272$, $df = 16$, $p < .05$). A third independent samples *t* test revealed annualized mean value land growth differs between residential properties inside of tax increment areas ($M = 1.623$, $V = 62.952$, $n = 162$) and tax increment financing areas located 1-1.49 miles from city hall ($M = 0.045$, $V = 0.101$, $n = 6$) at the .05 level of significance ($t = 2.478$, $df = 165$, $p < .05$). A fourth independent samples *t* test revealed annualized mean value land growth differs between retail buildings inside of tax increment areas ($M = 0.630$, $V = 1.161$, $n = 30$) and tax increment financing areas located 1-1.49 miles from city hall ($M = 0.045$, $V = 0.101$, $n = 6$) at the .05 level of significance ($t = 2.483$, $df = 29$, $p < .05$). And a fifth independent samples *t* test revealed annualized mean value land growth differs between public buildings inside of tax increment areas ($M = 2.229$, $V = 11.338$, $n = 29$) and tax increment financing areas located 1-1.49 miles from city hall ($M = 0.045$, $V = 0.101$, $n = 6$) at the .05 level of significance ($t = 3.419$, $df = 30$, $p < .05$).

Results regarding the distance from city hall to the tax increment district indicated the fastest value growth of parcels was districts located the farthest from city hall with an annualized mean value growth rate of 396%. However, tax increment districts located .5-.99 mile and 0-.49 mile of city hall, increased in annualized mean value 366% and 220% respectively. The slowest value growth area identified as being located between 1-1.49 miles of city hall. This study revealed tax increment areas .5-.99 miles and those 1.5+ miles from city hall increased parcel valuation faster than other distance ranges.

Summary

This quasi-experimental study addressed the issue of the impact of tax increment financing on the growth of land market value and building types in tax increment financing districts in Jackson County, MO communities over a period of ten years. The parcel growth rates of tax increment financing areas were compared to the assessed value growth of the remainder of the county. Additional analysis was conducted regarding the types of tax increment financing projects and location of the tax increment financing districts.

The present study revealed valuation growth inside tax increment financing areas in Jackson County was significantly greater than for those parcels located outside of tax increment areas (RO1) (RO2). In addition, when analyzed by building types; office, residential, retail, and public buildings each increased in value significantly faster than the remainder of the county (RO4). The only types with no significant growth rates when compared with the county were vacant and industrial properties (RO4). The study also revealed a significant difference between the value growth of retail and public buildings

(RO3). The findings with regards to application rationale and community did not yield any significant differences (RO5a) (RO5b). The findings when applied to the distance of tax increment districts from the community city hall revealed significant differences between retail buildings located at distances within one half mile and in office, residential, retail, and public buildings between 1.0-1.49 miles from city hall (RO5c). Therefore, the study findings indicate characteristics of tax increment plans regarding the distance from city hall can influence the accelerated growth of land parcel values.

The overview and summation of the study follows in Chapter V. Conclusions and recommendations are presented to address the study's problem and purpose statements. In addition, the study limitations, implications for further action and suggestions for further research are discussed in Chapter V.

CHAPTER V – FINDINGS, CONCLUSIONS, AND IMPLICATIONS

The present study examined the growth of assessed value of land parcels and building types in tax increment financing districts in Jackson County, MO over a period of ten years versus the assessed land value growth of other building types inside the districts and the remainder of the county. Additional analysis was conducted regarding the type and location of tax increment financing districts in Jackson County. Chapter V includes a review of the findings of the research study and a discussion of conclusions, implications for action, and recommendations for further research. The results of the study can impact future decisions by economic developers and public policy leaders.

Overview of the Problem

Communities grant economic development incentives to stimulate economic activity, such as the creation of jobs and increases in sales and property taxes. A subset of economic development incentives, tax increment financing, are approved by communities with the intention of stimulating real estate development and land values where development would not occur otherwise. However, tax increment financing incentives are granted by communities without knowing (1) if the growth of land value inside tax increment districts accelerate faster than areas outside of the tax increment districts (Dye & Merriman, 2000, 2006), (2) whether certain types of buildings increase in value inside of tax increment districts (Smith, 2006, 2009), or (3) the influence the type or location of the tax increment district has on land value growth for certain types of buildings (Byrne, 2006, 2012). Without the knowledge how tax increment financing influences land values, communities risk the misallocation of resources from public

entities, such as schools and libraries to private entities (Kenyon et al., 2012; Weber, 2003b).

Purpose Statement and Research Objectives

The purpose of this study was to determine the differences between the growth of assessed land value inside of tax increment areas of Jackson County, MO and the remainder of the county. The study compared the difference between the growth of land values of different building types in tax increment financing districts. Finally, the study determined the relationship between characteristics of tax increment financing districts, the location of the district, and the land value growth of different building types.

The following research objectives were used in this study.

- RO1: Describe the land values of Jackson County, MO including the valuation of parcels inside and outside tax increment financing areas, and valuation of parcels of tax increment financing areas in the study.
- RO2: Compare the growth of land values of parcels in tax increment financing areas to the growth of land values in the remainder of the county.
- RO3: Compare the growth of land values of parcels containing different building types within tax increment financing areas.
- RO4: Compare the growth of land values of parcels containing different building types within tax increment financing areas and the growth of land values in the remainder of the county.
- RO5: Determine the relationship between the characteristics of the type of tax increment financing area, including (a) application rationale, (b) location and (c)

distance from city hall, and the value growth of different building types in tax increment financing areas.

Review of the Methodology

This study used descriptive statistics and an independent samples *t* test to compare the growth of market land valuations of areas in tax increment financing areas in Jackson County and the remainder of the county. To utilize the full five-year pre-and-post adoption period with the available data, only those tax increment financing districts initiated by the communities in Jackson County, MO from 2005-2010 were included in the study. The study was limited to only those land parcels in projects from this time period with valuations for the full 10-year period. Other parcels created or subdivided by development which did not present a full 10-year timeframe of valuations were eliminated. Assessed valuation data was collected for each tax increment area for the period five years prior to the year of the plan's activation and five years after the plan was started. With the 10-year data, an annualized mean value growth rate was computed ($\text{year 10 value} - \text{year 1 value} / 10 \text{ years}$). A similar calculation was completed for the total value growth and total mean value growth for the county both inside of tax increment financing districts and the remainder of the county during the period of review. The study targeted 17 different tax increment financing plans which included 46 projects and 285 land parcels in Jackson County.

Major Findings

The influence of economic development incentives, particularly those that encourage real estate investments, such as tax increment financing, on the acceleration of

land values are not fully understood. The findings of this quasi-experimental study are presented in three sections. The first are findings and conclusions associated with land valuation growth in Jackson County, MO presented in RO1 and RO2. The second section includes findings and conclusions which come directly from the comparison of the value growth of 6 different building types presented in RO3 and RO4. The final section discusses the findings and conclusions associated with organizational and locational characteristics of tax increment financing in Jackson County presented in RO5.

Land Valuation Findings, RO1 and RO2

The land valuations of parcels in Jackson County increased both inside tax increment district areas and the remainder of the county from 2000-2015. However, over the 16-year term, total valuations inside of tax increment areas have grown significantly faster. Parcels in tax increment financing areas increased in value 452% while the remainder of the county increased 52% (RO2). For parcels specifically included in the study, the annualized mean growth rate inside of tax increment areas was 363% (RO1).

As a point of comparison, the residential marketing and sales firm, Zillow, posts data related to housing prices nationwide that is presented longitudinally (Zillow, 2017). For the 16-year term from 2000-2015, the state of Missouri's housing values increased 15% (Zillow, 2017). During the same period, housing values for the entire country declined (Zillow, 2017). While this housing value growth in Missouri and the total valuation growth of the local Jackson County market is not directly comparable, the data reveals the Jackson County, MO overall value growth rate of 52% led the state and country. Tax increment value growth in Jackson County far surpassed those numbers.

Given the study timeline included the 2007-2009 recession, the growth of valuation in Jackson County, both inside and outside of tax increment financing areas, is notable.

Land Valuation Conclusions, RO1 and RO2

One of the goals of forming a tax increment finance district is to increase land value. The value growth inside of tax increment districts in Jackson County during the period studied increased at a significantly higher rate than the remainder of the county. The sizable difference between the growth of value of land parcels in tax increment areas and the remainder of the county leads to the conclusion tax increment financing positively influences valuation growth. Therefore, the tax increment economic development incentive achieved the goal to increase land valuation growth.

Building Valuation Findings, RO3 and RO4

Extending the analysis to the annualized mean value growth of building types inside of tax increment financing districts versus the remainder of the county, the results of the study demonstrated four of the six building types increased land values significantly faster than the remainder of the county. Those areas experiencing high land value growth rates are office, residential, retail, and public parcels (RO4). As in RO1 and RO2, annualized mean value growth for most building types inside of tax increment areas exceeded the value growth of the remainder of the county.

Two building types did not increase land value significantly faster than the remainder of the county. Vacant property annualized valuations increased 1,649%. However, vacant properties possess lower valuations by individual parcel. The mean valuation of vacant properties in the study was \$32,241. The mean value of parcels in the

study was \$642,699. Industrial was the other building type which did not significantly exceed county value growth. While the mean valuation of industrial was \$597,823, only 10 industrial parcels were a part of the study. The small number of industrial parcels could be a contributing factor to the lack of significant value growth for this building type in the present study.

The comparison of the annualized mean value growth rates of the six types of building parcels showed rates varied from building type to building type. The annualized mean value growth ranged from a high of 1,649% for vacant parcels to 63% for retail parcels. Each building type annualized mean value growth rate exceeded the county growth rate of 22%. In comparing the parcel value growth, the study revealed retail buildings in tax increment plans have significant value growth differences with public building values (RO3). The findings indicated no relationship between the value growth of retail parcels and public buildings inside of tax increment districts. No other significant differences were presented between the annualized mean value growth of other building types: industrial, office, residential and vacant properties, or through other relationships with retail and public buildings.

The finding public properties capture and influence parcel value growth is balanced with the fact they do not contribute to actual tax payments. Since public buildings are owned by a public entity, such as a community, school district or church, they are exempt from taxation. This public ownership adversely impacts the tax increment financing areas, since payments through tax contributions ultimately pay off the obligations of the tax increment district.

While residential properties were concluded to be one of the four building types which increased value faster in tax increment areas than the remainder of Jackson County, multiple reasons exist to not recommend residential properties for tax increment financing. Residential buildings in the study increased by an annualized mean value of 162%. However, revenue and cost issues offset this growth rate. The mean residential value in the study was \$275,602, which compares unfavorably with the mean value of \$642,699. An additional challenge with residential properties is, in the state of Missouri, residential properties are taxed at 19% of fair market value. Commercial properties, such as industrial, office and retail, are taxed at 32%. Lower taxes are offset by the cost of the public services to support the residence, particularly if the residence includes children in public schools. Tax increment financing exacerbates this challenge of residential property taxes, because property tax growth in the tax increment financing district is redirected to project costs in the tax increment plan and is not directed to the respective school district for educating the children that live in the district. Therefore, tax increment financing should only be used to encourage residential development strategically. Other uses of tax increment financing for residential areas should be discouraged because the revenues generated by residential development in tax increment districts are not substantial, and the development increases costs to public jurisdictions without providing tax resources to assist in paying for the public services.

The study revealed retail and office buildings increased land values significantly faster than the remainder of the county. This outcome has added implications for Jackson County. Job creation of retail stores is a positive, but the wages paid by these jobs is

lower than average (LeRoy, 2008). However, when paired with office development, the job creation and the higher average wages of office positions delivered a bigger economic development impact (Furth, 2015).

An exclusive benefit of retail to communities is the local sales tax paid on retail sales (Lewis, 2001). While outside the scope of the present study, additional sales tax revenue would benefit the community. Missouri is one of nine states that allow sales tax to be included in tax increment financing revenues (Kelsay, 2007). This extra revenue source gives an additional amount with which to pay for more tax increment projects and possibly assist in shortening the life of the tax increment plan.

As a summary, four of the six building type annualized mean values increased faster than the remainder of the county. The two building types which did not grow significantly faster were vacant properties and industrial buildings. The other four building types were office, residential, retail, and public buildings. Public buildings, by nature of their public ownership by communities or other not for profit entities, are exempt from taxation and therefore do not contribute to the tax increment financing plan. Residential properties have a smaller mean valuation which brings in less tax revenue. In addition, residential properties can cost cities and school districts more in the services than the tax dollars collected. The revenues and the costs derived by residential properties is an issue regardless of location in a community (Weber, 2003b). However, this revenue and cost issue is especially important when the increase in property tax is diverted to paying for projects of a tax increment financing plan.

Building Valuation Conclusions, RO3 and RO4

The researcher compared building types, when paired together can accelerate the value growth of the tax increment district. The comparison was accomplished by comparing the annualized mean value growth of parcels inside of tax increment areas of 6 different building types (RO3). The only significant annualized mean value growth difference revealed was with retail and public buildings. Comparisons between industrial, office, residential, and vacant properties did not show any significant differences. Therefore, policymakers reviewing future tax increment plans could expect to see similar valuation growth levels between all building types except for the combination of retail and public buildings.

Research Objective Four (RO4) revealed office, residential, retail, and public buildings increase annualized mean land value significantly faster than the remainder of the county. Office, residential, retail, and public buildings should be encouraged as building types to be included in tax increment financing areas. The combination of office and retail building types increase land valuation faster than the remainder of the county and bring in added benefits, such as jobs and increased sales tax (Furth, 2015). Office and retail properties achieve faster value growth which can lead to accelerated revenues to the tax increment financing district.

Organizing and Locational Valuation Findings, RO5

Organizing and locational characteristics of tax increment financing plans were reviewed and compared. The analysis assists in giving direction to economic

development policy makers in reviewing types and locations of tax increment financing plans in their respective communities. The comparison yielded mixed results.

Organizing and Location Valuation Findings, RO5a

Research Objective Five (RO5a) compared the application rationale (blight and conservation), and the six building types (industrial, office, residential, retail, vacant, and public). Tax increment plans in the study qualified for either a blight classification or a conservation classification. Ten plans identified with a blight designation, possessed a mean valuation over \$1.3 million. Seven tax increment financing plans, presented a mean valuation of \$290,635 in conservation areas. The annualized mean value growth for blight tax increment financing plans was 135%, while annualized mean value growth of parcels in conservation areas reached 388%. While no significant differences were found between application rationale and building types, the growth rate signifies parcels in both blight and conservation areas in Jackson County experienced substantial value growth over the study period.

Organizing and Location Valuation Finding RO5b

Locational aspects of the tax increment plan demonstrated varying value growth rates by community. In the current study, the researcher analyzed 17 tax increment financing districts with 46 project areas which included 285 land parcels. The annualized mean value growth rate of Kansas City parcels over their 10-year term was 380%. Lee's Summit parcels increased an annualized mean value of 24% and Grandview at 11%. Overall, those tax increment financing districts in the study experienced an annualized

mean value growth rate of 175% compared to the 22% growth rate of the remainder of the county.

Comparing the communities that used tax increment financing during the study period, Kansas City's annualized mean value growth was at 380%, while the combined value growth rate of the projects in other communities (i.e., Blue Springs, Grandview, Independence, and Lee's Summit) calculated as a negative percentage. The negative value growth percentage could be a consequence of a lack of qualified data from other Jackson County communities. Only 21 of the study's 285 parcels were located outside of Kansas City. However, the most urbanized community utilizing tax increment financing in Jackson County, Kansas City, also presented the highest value growth rates.

Organizing and Location Findings, RO5c

The distance from city hall to the tax increment plan area was analyzed by half mile increments up to 1.5 miles from city hall. The distance from city hall was included to determine if tax increment plans closer to the city center increased land values than districts farther from the city center. On the location of tax increment districts within a half mile of the city hall had a significant difference on retail parcel value growth, as well as office, residential, retail, and public parcels one and one-half miles from city hall.

Organizing and Location Conclusions, RO5a, RO5b and RO5c

The conclusions regarding the organizing dynamics of tax increment plans are limited. Data was spread too narrowly to confidently conclude relationships between the organizing rationale, blight, and conservation areas, and building type value growth (RO5a). While the growth of land value in both blight and conservation areas was

substantial, the lack of available land parcels from tax increment financing plans that possessed an economic development rationale severely impacted the comparisons with the building types.

The conclusions regarding the community location possessed the same data limitations as existed with RO5a. Data was limited with regards to community location and distance of the tax increment financing district from city hall (RO5b). Therefore, no conclusions can be made regarding the comparison of community location and building types.

However, the bulk of the data came from Kansas City tax increment financing district parcels. Eleven of the 17 plans and 264 of the 285 parcels in the study were from Kansas City tax increment financing plans. Kansas City's parcels increased in annualized mean value 380%. The remainder of the county's tax increment financing parcels in the study possessed an overall negative value growth rate. Therefore, the researcher concludes Kansas City's tax increment financing plans, included in the study, increased in value substantially faster than the remainder of the county land parcels and was the major reason this study produced its key value growth findings.

RO5c compared the location of tax increment districts distance from city hall (RO5c) with the annualized mean land valuation of the 6 building types. The results showed tax increment districts within a half mile of the city hall had a significant difference on retail parcel value growth, as well as office, residential, retail, and public parcels 1.0-1.5 miles from city hall. Annualized mean land value growth in areas .5-.99 miles from city hall was 366%, while value growth was 396% 1.5+ miles from city hall.

Therefore, the distance finding for the study indicates the optimal distance from city hall to encourage the strong value growth of tax increment financing plans is between .5-.99 miles and over 1.5 miles from city hall.

Findings Related to the Literature

The present study contributes to the research literature regarding the use of tax increment financing in two ways. One, the study extends existing literature, particularly Dye & Merriman (2000) by increasing the tax increment financing evaluation time analysis. Dye & Merriman (2000) used three years prior to adoption and three years after the adoption of the tax increment financing plan for their analysis. The present study used a five-year prior and five-year post adoption timeframe for a total 10-year timeline. A longer timeline for analysis is important because a longer timeline gives more time for the property to achieve value growth after new development has occurred. Second, the present study analyzed each study tax increment financing district separately; not a grouping of tax increment financing areas as developed by Dye & Merriman (2000) and Man & Rosentraub (1998). These studies grouped tax increment financing areas in multi-year adoption periods. The present study's alignment allows for the full ten years of value growth to be captured for each plan included in the study.

Land Valuation Literature Connections, ROI and RO2

The current study noted tax increment parcels values increased faster than parcels outside of tax increment financing districts in Jackson County, MO. From 2000-2015, parcels inside tax increment districts increased in value 452% versus 52% in the remainder of the county. This finding supports the literature which concluded tax

increment financing had a positive impact on valuation growth (Anderson, 1990; Carroll, 2008; Dardia, 1998; Man & Rosentraub, 1998; PFM Group, 2016; Wassmer & Anderson, 2001). Additionally, the present study supported the literature which revealed tax increment financing use resulted in higher property value growth rates for targeted parcels (Byrne, 2006; Smith, 2009; Weber et al., 2003). However, the use of tax increment financing was accompanied by lower rates of growth for property values in the remainder of the community (Dye & Merriman, 2000, 2006; Kashian, Skidmore, & Merriman, 2007) . The current study supported literature associated with land valuation growth inside of tax increment financing and the remainder of the community.

Building Valuation Literature Connections, RO3 and RO4

Regarding the type of buildings, this study revealed the fastest growing categories, when compared with the county, are office, residential, retail, and public buildings. Comparing building type value growth to other building types inside of districts, retail, and public building values yielded significant growth differences. These findings supported studies that concluded residential (multifamily) parcels values increased faster in tax increment financing plans (Weber et al., 2003; Smith 2006), as well as commercial properties, which includes office and retail buildings (Weber et al., 2003; Smith, 2009; Merriman et al., 2011).

Byrne (2006) concluded industrial tax increment finance districts exhibited higher value growth rates. Weber et al. (2003) also concluded values of industrial buildings in mixed-use districts increased faster than other building types, industrial buildings in industrial only tax increment financing areas did not increase value as fast other building

types. Neither of these studies was supported by the present study. Merriman et al. (2011) concluded tax increment financing did not bring growth benefits to residential or industrial properties. The present study supported the finding regarding the lack of growth in industrial properties, but did find tax increment financing brought value growth to residential properties.

Organizing and Locational Literature Connections, RO5

Another focus of the present study included analysis of tax increment financing areas in both urban and suburban communities. A substantial number of other studies focused only on urban communities, particularly in the upper Midwest (Man, 2001c; Scott, 2013). This locational focus reviewed the performance of tax increment financing as it related to distance of the tax increment area from city hall including urban areas and communities more suburban or rural. Analysis of the data regarding the distance from city hall revealed significant differences for retail property value growth in tax increment districts within a half mile of city hall and office, residential, retail, and public development 1-1.5 miles away.

While Kansas City, the major urban city in Jackson County, had the greatest annualized value growth of tax increment parcels at 380%, the combined value growth of all other tax increment plans in other communities had an overall negative value growth rate. The negative value growth rate could lead to the conclusion urban plans increase in value faster than suburban tax increment plans. Because of data availability, not enough evidence exists to support or refute concerns regarding suburban use of tax increment financing in Jackson County as presented in Lefcoe (2011), LeRoy (2005, 2008), and

Luce (2003). As longitudinal data becomes available, Jackson County will be able to be a test of whether locational attributes are impactful to the growth of parcel valuation in tax increment financing areas. Therefore, the urban and suburban use of tax increment financing issue is recommended for future analysis and research.

Byrne (2006) and Carroll & Eger (2006) concluded in their studies that economically disadvantaged areas with tax increment financing districts can increase land values faster than other districts in more affluent areas. However, the present study was not able to analyze the different value growth patterns for Missouri tax increment financing plan rationales, blight, conservation, or economic development determinations. None of the 17 tax increment financing plans in the study was designated as an economic development area. Therefore, this area of focus is available for future research.

The current study adds to the existing literature examining whether tax increment financing leads to increased property value appreciation. Throughout the economic development literature, the findings are mixed regarding the use of development incentives. Local issues can influence how economic activity is created in each individual community. This localization does not undercut the applicability of this learning or the transference of knowledge. Learning how other communities accomplish success and then applying those strategies to other communities is a staple in the economic development profession. In Jackson County, tax increment financing worked as an accelerant to the growth in land parcel values.

In the literature, the state of Missouri has unique components (Byrne, 2012). One of the components in Missouri is the inclusion of other taxes captured in the tax

increment rather than real property tax growth exclusively, as is the case in other states (Kelsay, 2007). Local sales taxes are the biggest source of revenue included other than property taxes in the tax increment collection (Kelsay, 2007). However, the present study conducted in Missouri, is applicable to other studies in the literature which focused on real estate influences. The study only focused on real estate values and did not review other taxes.

Conclusions

The focus of this study was to analyze the influence of tax increment financing on the growth of land values of different types of buildings in tax increment financing districts. The growth of values of land parcels in tax increment financing areas provide knowledge of which building types increase value faster than other types. This knowledge assists policy makers in determining which types of tax increment financing districts assist in bringing additional public benefits, such as allowing a portion of the tax increment to be shared with the other taxing jurisdictions or shortening the life of the district which would allow for the tax value to be fully captured by public taxing districts.

Through the study's five research objectives, the following conclusions are made. Valuation growth inside tax increment financing areas in Jackson County were significantly greater than those parcels located outside of tax increment areas, 452% (363% for the 285 parcels included in the study) versus 52% parcel value growth in the remainder of the county (RO1) (RO2). Therefore, the utilization of tax increment financing in Jackson County leads to accelerated land valuation. The problem statement for this study states if communities do not understand the impact of tax increment

financing on land values, a misallocation of public resources can occur. The substantial new value growth shown in the present study reduces the worry of a misallocation or diversion of tax resources away from other taxing jurisdictions in Jackson County regarding the use of tax increment financing.

When the data is analyzed by building types, office, residential, retail, and public buildings each increase land value significantly faster than the remainder of the county (RO4). Two building types, office, and retail present both value growth and increased tax increment revenues. In addition, office and retail buildings bring additional benefits to the community, such as better jobs (office) and sales taxes to the community (retail) (Furth, 2015). Therefore, office and retail building types are recommended for future tax increment financing plans. Comparing the value growth of building type within districts revealed similar findings except for the comparison between retail and public buildings (RO3).

The conclusions regarding the organizing dynamics of tax increment plans are limited. Data was spread too narrowly to confidently conclude relationships between the organizing rationale, blight, and conservation areas, and building type value growth (RO5a). The same data situation existed with regards to community location and distance of the tax increment financing district from city hall (RO5b).

However, the bulk of the data came from Kansas City tax increment financing district parcels. Eleven of the 17 plans and 264 of the 285 parcels in the study were from Kansas City tax increment financing plans compared with the remainder of the communities in Jackson County. Kansas City's parcels increased in annualized mean

value 380%. The remainder of the county's tax increment financing parcels in the study possessed an overall negative value growth rate. Therefore, the researcher concludes Kansas City's tax increment financing plans, included in the study, increased in value substantially faster than the remainder of the county land parcels and was the major reason this study produced its key value growth findings (RO5c).

These findings add important information about which tax increment financing projects have more of a stimulating effect than other tax increment plans. This knowledge assists policy makers in determining which types of tax increment financing districts bring additional public benefits, such as shortening the life of the district which would allow for the tax value to be fully captured by public taxing districts. Based on these findings, tax increment financing does stimulate growth of the market values of land parcels at a faster rate than land parcels outside of tax increment areas. In addition, those parcels in districts that build retail and office buildings accelerate the growth of land valuation, thereby shortening the life of the tax increment financing district.

Implications for Action

With community controversies arising regarding the use of economic development incentives (Abouhalkah, 2015; Daslatte, 2016; Horsley, 2015, 2016; Sayre, 2016) and the new and growing mandate for communities to document the costs of tax abatements and tax diversions (Francis, 2015), there is a need to change the way communities plan, review and audit real estate projects receiving economic development incentives. The question for the community continues to be, is the project worth the

public cost to assist the private venture? This study addressed this issue for tax increment financing in Jackson County, MO.

While the present study is limited to reviewing the impact of tax increment financing on the growth of assessed land value in Jackson County over a limited period of time, and even though state law regarding tax increment varies from state-to-state, the findings do provide a generalized discussion and new information about the impact of tax increment financing. The research community, public policy makers, and the economic development practitioners are the primary audience of the results of this study. The findings of the present study provide information to these constituencies about how tax increment financing can influence growth in the valuation of land parcels. The findings reveal tax increment financing did accelerate parcel value growth in Jackson County, MO. This parcel value growth particularly holds true in relation to retail and office developments.

Jackson County has utilized tax increment financing extensively (Missouri Department of Revenue, 2016). This extensive use has created controversy, much like other communities utilizing tax increment financing (Horsley, 2015, 2016). Both supporters and detractors of tax increment financing have opinions and the luxury of choosing the information which validates their respective opinion (Abouhalkah, 2015). Therefore, objective statistical analysis is essential to review the effectiveness of tax increment financing in Jackson County. In addition, Jackson County had both urban and suburban locations to review, which makes the county a good model for reviewing the difference between urban and suburban communities. This study attempted to analyze

the issue of urban and suburban development in two ways, one was by community, the other by plan location from city hall. Consideration of data, such as presented in the study, is essential for each community when deciding what types of projects will work best and position economic development related projects for success.

The industrial classification not exceeding the county value growth is notable, and has implications for future tax increment financing planning. The implications are tax increment financing may not be the best incentive tool for industrial development. Tax increment financing relies on the value growth of the captured tax increment to pay for planned public improvements, such as roads and sewers. In the findings of the present study regarding valuation growth of industrial properties, industrial development could be problematic that the tax increment would be sufficient to pay for these public improvements. A different economic development incentive could be more appropriate to both the community and the business. Using a different economic development incentive instead of tax increment financing, the community could receive the benefit of the jobs created by the company without the strain of a possible underperforming tax increment district.

Data required in the disclosures with GASB 77 regarding the costs of tax abatements in community financial statements is expected to increase the awareness of economic development incentives and add to the data available for analysis. A worry is the information in these reports will just be about the cost without any analysis on the impact of these investments. Knowledge about what does and does not work in economic development should be shared as extensively as possible. The misallocation of

public dollars occurs when officials sign off on development projects they do not know will be successful. Adequate information can prevent this misallocation from occurring and lead to more successful projects.

Recommendations for Further Research

The researcher makes four recommendations for further research based on this study. The first would be to continue to collect and review the data as more longitudinal information becomes available. While the database of tax increment parcels in Jackson County has been digitized since 2000, more years of data will allow for more parcels to be included in a review of this design. At the time of the present study, over 3,500 parcels received tax increment treatment from 2000-2015. However, only 285 parcels possessed 10 years of valuations. As years pass, adding parcels with at least a decade of valuation will add depth to the evaluation of the impact of tax increment financing in Jackson County. Evaluation is particularly important to continue to monitor the impact of tax increment financing programming because the duration of the tax increment plans are 23-33 years. To fully analyze the impact of the tax increment financing program, data will need to continue to be collected over many years.

Secondly, designing and acquiring data regarding the value growth of non-tax increment financing related building types would give a better comparison with building types included in tax increment financing areas. When reviewing the comparative data of building type value growth inside of tax increment areas, this study used the net county value of non-tax increment areas. The researcher did not have access to this data by the

county. Future studies would be greatly assisted with the acquisition and analysis of this type of comparison data.

A third recommendation is to the research community. A need exists for more communities to review the type of buildings which are most impacted by tax increment financing. Additional studies will help confirm or refute the types of building value growth occurring in tax increment financing districts around the country.

The rationale for designing this analysis, such as has been completed in this study, had not been done before in Jackson County. Therefore, the most significant problem the researcher faced in executing the present study was the task of retroactively collecting and assembling data which had never been pulled together. The data had not commonly been presented for analysis and therefore was difficult to procure from the county. A researcher attempting to conduct a similar study in a community or county could face the same data collection challenge.

Therefore, a final recommendation, which is directed at both the research community and the economic development community, is to design evaluation methodologies proactively for economic development incentive projects such as tax increment financing projects. Proactive planning would make the analysis of the impact of tax increment financing on land values a smoother process. By collecting and coding data as it is received, communities could be well prepared for project analysis. Pulling together retroactive data is much more of a challenge than establishing evaluation procedures proactively.

Summary

Economic development is a process which attempts to create or enhance economic activity in a community. The definition of economic development is to bring in resources and initiatives to create jobs, taxes, and real estate value (Blakely & Bradshaw, 2002). The economic activity assists in creating prosperity for the citizens of the community (Feldman et al., 2016). Tax increment financing is an economic development tool that assists in growing a community and the prosperity of its citizens.

The problem is the influence of economic development incentives, particularly those that encourage real estate investments, such as tax increment financing, on the acceleration of land valuations are not fully understood. As with other economic development tools, tax increment financing has its supporters and detractors. One focus of controversy is in the analysis of tax increment financing's effectiveness in creating an increase in government resources. This quasi-experimental study addressed the issue of increasing the tax base by use of tax increment financing by examining the growth of market land value of building types in tax increment financing districts in Jackson County, MO communities over a period of 16 years. The value growth inside of tax increment financing areas and the value growth of buildings types was compared to the value growth of the remainder of the county. Additional analysis was conducted regarding the type or location of the tax increment financing districts. The growth of real estate value is an indicator of increased economic activity which brings economic benefits to a community in the creation of jobs and the collection of taxes to assist with the costs of providing public services.

The current study concluded tax increment financing did have a stimulating and significant effect on land value growth in Jackson County. The study revealed valuation growth inside tax increment financing areas in Jackson County was significantly greater than for those parcels located outside of tax increment areas (RO1) (RO2). In addition, when analyzed by building types; office, residential, retail, and public buildings each increase land value significantly faster than the remainder of the county (RO4). The only building types that did not increase in land value significantly when compared with the county were vacant and industrial properties (RO4).

The study also found significant differences between the value growth of retail and public buildings (RO3). The findings when applied to the distance of tax increment districts from the community city hall revealed significant differences with retail buildings at distances within one half mile and in office, residential, retail, and public buildings between 1.0-1.49 miles (RO5). Due to the lack of data, conclusions for Research Objective 5 cannot be made. However, the data did reveal that Kansas City's tax increment financing plans, included in the study, increased in valuation substantially faster than the remainder of the county land parcels.

With the application of economic development incentives, there is a worry the public policy goals of increased tax base and job creation are not being achieved or the goals are achieved by using other public resources that could be used by public institutions, such as schools and libraries, thereby creating a misallocation of public resources for a private development gain. The substantial new value growth revealed in this study assists in lessening the worry of a misallocation or diversion of tax resources

away from other taxing jurisdictions in Jackson County. The findings of the study assist economic development leaders and policy makers with the knowledge that tax increment financing does assist in bringing growth to land values. Additionally, the development of office and retail buildings show stronger direct value growth, as well as bringing additional benefits, such as better jobs in office developments and sales taxes to the community through retail facilities (Furth, 2015).

Having concluded tax increment financing assists in valuation growth in Jackson County, this researcher suggests the present study platform continue to be performed as new values are added in the years to come. Added data from more parcels in tax increment financing districts will contribute to the robustness of the findings and conclusions of the effectiveness of tax increment financing in Jackson County, MO. Tax increment financing is a long term economic development strategy and therefore requires a long-term commitment by public institutions to review, monitor and analyze the impact of this economic development program.

APPENDIX A – Tax Increment Financing – The Missouri Model

The state of Missouri passed its Real Property Tax Increment Allocation Redevelopment Act in 1982. To view the entire statute, see <http://www.moga.mo.gov/STATUTES/C099.HTM>, sections 99.800-99.865.

The Missouri tax increment financing act permits municipalities to undertake redevelopment projects within a redevelopment area. A municipality through an appointed tax increment financing commission implements tax increment financing. The tax increment financing commission conducts public hearings required under the law, and makes recommendations to the governing body of the municipality concerning the adoption of redevelopment plans or redevelopment projects and the designation of redevelopment areas. The redevelopment area must contain property that may be classified as a “blighted area,” a “conservation area” or an “economic development area”, or any combination thereof. The Missouri law defines a blighted area, a conservation area, and an economic development area as follows:

A blighted area is defined as an area which, by reason of the predominance of defective or inadequate street layout, unsanitary or unsafe conditions, deterioration of site improvements, improper subdivision or obsolete platting, or the existence of conditions which endanger life or property by fire and other causes, or any combination of such factors, retards the provision of housing accommodations or constitutes an economic or social liability or a menace to the public health, safety, morals, or welfare in its present condition and use (Missouri Revised Statutes, 99.805(1)).

A conservation area is defined as any improved area within the boundaries of a redevelopment area located within the territorial limits of a municipality in which fifty percent or more of the structures in the area have an age of thirty-five years or more. Such an area is not yet a blighted area but is detrimental to the public health, safety, morals, or welfare and may become a blighted area because of any one or more of the following factors: dilapidation; obsolescence; deterioration; illegal use of individual structures; presence of structures below minimum code standards; abandonment; excessive vacancies; overcrowding of structures and community facilities; lack of ventilation, light or sanitary facilities; inadequate utilities; excessive land coverage; deleterious land use or layout; depreciation of physical maintenance; and lack of community planning (Missouri Revised Statutes, 99.805(3)).

An economic development area is defined as any area or portion of an area located within the territorial limits of a municipality, which does not meet the requirements of [a blighted area or a conservation area], and in which the governing body of the municipality finds that redevelopment will not be solely used for development of commercial businesses which unfairly compete in the local economy and is in the public interest because it will: (1) discourage commerce, industry or manufacturing from moving their operations to another state; or (2) result in increased employment in the municipality; or (3) result in preservation or enhancement of the tax base of the municipality (Missouri Revised Statutes, 99.805(5)).

Additionally, the tax increment financing commission must provide the following evidence in support of the adoption of a redevelopment area:

a. The redevelopment area on the whole is a blighted area, a conservation area, or an economic development area, including a detailed description of the factors that qualify the redevelopment area.

b. The redevelopment area has not been subject to growth and development through investment by private enterprise and would not reasonably be anticipated to be developed without the adoption of tax increment financing (this is sometimes referred to as the “but-for” test, and must be supported by an affidavit of the developer submitted with the redevelopment plan.

c. The redevelopment plan conforms to the comprehensive plan for the development of the municipality as a whole.

d. The estimated dates, which shall not be more than twenty-three years from the adoption of the ordinance approving a redevelopment project within a redevelopment area, of completion of any redevelopment project and retirement of obligations incurred to finance redevelopment project costs have been stated.

e. A plan has been developed for relocation assistance for businesses and residences. The relocation plan must comply with the provisions of Sections 523.200 to 523.215 of the Revised Statutes of Missouri, as amended.

f. A cost-benefit analysis has been prepared showing the economic impact of the plan on each taxing district that is at least partially within the boundaries of the redevelopment area.

g. The redevelopment plan does not include the initial development or redevelopment of any gambling establishment (Missouri Revised Statutes, 99.810).

After an ordinance adopting the tax increment financing district is passed by the municipality, the County Assessor must determine the total equalized assessed value of all taxable real property within the redevelopment project area. Thereafter, the total equalized assessed valuation of taxable real property in the redevelopment project area in excess of the initial equalized assessed valuation is computed by the County Assessor for each year that tax increment financing is in effect. The payments in lieu of taxes are made by property owners in the redevelopment area on the increase in current equalized assessed valuation of each taxable parcel of real property over and above the initial equalized assessed valuation of each such parcel, and such payments are deposited into the special allocation fund (Missouri Revised Statutes, 99.845).

In addition, fifty percent of the increase in total revenues of incremental sales and utility taxes (referred to as “economic activity taxes”) are captured and deposited into the special allocation fund. Under the Missouri law, economic activity taxes do not include taxes imposed on sales or charges for sleeping rooms paid by transient guests of hotels and motels, licenses, fees, special assessments and personal property taxes (Missouri Revised Statutes, 99.845).

Either the municipality or the tax increment financing commission may issue bonds or other obligations, which are payable from moneys in the special allocation fund or other funds specifically pledged. The Missouri law provides that voter approval of tax increment financing bonds is not required. The bonds or other obligations must mature within twenty-three years, may bear any interest rate and may be sold at public or private sale as determined by the municipality or tax increment financing commission. The bonds or other obligations are not a general obligation of the municipality and,

accordingly, do not count toward the municipality's constitutional debt limitation
(*Missouri Revised Statutes*, n.d.).

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Name	Burdette E. Fullerton	Title	Student
Department	Department of Human Capital Development	Organization	University of Southern Mississippi
Home Address	6524 N. Mokane Court		
City/State/Zip/Country	Kansas City, Missouri 64151/USA		
Phone	816.519.6500	Fax	None
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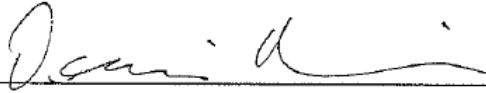
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Lincoln Institute of Land Policy
113 Brattle Street
Cambridge, MA 02138
Phone: 617-661-3016 / 800-526-3873
Fax: 617-661-7235 / 800-526-3944
Email: help@lincolninst.edu
Web: www.lincolninst.edu

APPENDIX C – County Use Codes – Groupings and Codes

52 parcel use codes as taken directly from County Assessor database. Researcher grouped and coded the following for the current study.

Hotel (Code 1)

HOTEL/MOTEL

Industrial (Code 2)

INDUST. MANUF. (HEAV
INDUST. MANUF. (LIGH
MISC. INDUSTRIAL
WAREHOUSE-STORAGE
WHOLESALE-TRADE

Office (Code 3)

OFF BLDG. <15000 SF
OFF BLDG. >15000 SF
OFFICE CONDO

Residential (Code 4)

RES IMPROVED C/A
APARTMENT 6 UT
APARTMENT 8 UT
COMM MULTI-FAM @19%
CONV. HOUSE TO MF
DET. GARAGE
DUPLEX
GARDEN APTS >8 UT
HIGHRISE APTS >8 UT
LOWRISE APTS >8 UT
MISC RES IMPROVEMENT
RES IMPROVED C/A
SF RESIDENCE

Retail (Code 5)

AMUSEMENT/REC
AUTO DEALERSHIP
BANK
BILLBOARD-COMM
MISC. RETAIL TRADE
MISC. RETAIL TRADE (
MISC. SERVICE
RESTAURANT
RETAIL STORE

SERVICE GARAGE
SERVICE STATION
SHOP. CENTER-COMMUNI
SHOP. CENTER-NBHD
SHOP. CENTER-REGIONA
USE CAR LOT

Vacant (Code 6)

IMP. COMM LAND C/A
RES VACANT C/A
UNIMP. COMM LAND
UNIMP. COMM LAND C/A
VACANT AG LAND
VACANT RES LAND

Public (Code 7)

CHURCH
GOLF COURSE
HOSPITAL
PARK
PARKING GARAGE
PARKING LOT
PUBLIC USE-MISC.
SCHOOL - PRIVATE
UTILITY

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