WHERE IS “FUN ON THE FARM” TO BE FOUND? : HOW STRUCTURAL FACTORS AFFECT THE LOCATION OF AGRITOURISM ENTERPRISES IN MICHIGAN

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A THESIS

Submitted to
Michigan State University
in partial fulfillment of the requirements
for the degree of

Sociology — Master of Arts

2015

ABSTRACT

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With growing emphasis on diversifying the agricultural sector, there is increasing interest in developing agritourism especially for small to mid-sized producers. This paper contributes to the literature in this subfield of scholarship by moving beyond the motivations of producers and consumers to consider what structural factors of place might explain the presence of agritourism operations. Using data on agritourism enterprises from the Michigan Agri-Tourism Association, I test three contending hypotheses. The first, derived from the literature on agritourism, argues that urban-ness is the main structural factor determining the presence of agritourism businesses. My second hypothesis, derived from Bourdieu's cultural capital theory, predicts that spatially grouped capitals such as income and education will be the main predictors of agritourism location. This goes beyond pure numbers of people and instead investigates the characteristics these groups possess that may create spaces supportive of agritourism. Finally, I hypothesize that urban-ness and capitals work together to predict the presence of agritourism more effectively than either factor alone. The results show that while spatial capitals are a stronger predictor of the location of agritourism enterprises, urban-ness has a unique multiplier effect that helps counties increase their number of agritourism businesses to three or more. This helps to resolve some debate over the complex effect of urban-ness on agritourism. The implications for future research and policy are discussed.

ACKNOWLEDGEMENTS

I would like to extend my gratitude to the members of my committee, Dr. Stephen Gasteyer, Dr. Craig Harris, and Dr. Wynne Wright, without whom this paper would not be a reality. Their continued support and dedication have been invaluable. They continually challenged me to rise to the occasion and produce my best possible work, and I truly appreciate their commitment to my growth as a researcher.

Julie Cotton has also been instrumental in supporting this paper through to completion. She has provided editing and content advice, resources on agricultural matters, and some truly bracing pep-talks to get me through the tough parts.

The Michigan State Map Library has been a fantastic resource throughout this journey. In particular, I would like to thank Kathleen Weessies and the interns of the Map Library for bearing with me through multiple iterations of my maps of Michigan, including such strange requests as reverse coding the colors. They have made my paper so much the brighter.

Finally, I would be remise not to mention the continual love and support of my family and friends. It has sustained my energy and given me life, without which no paper has a chance. Thank you.

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INTRODUCTION

Asparagus may seem like the antithesis of wine, but for one couple in Oceana County, Michigan, combining the two presented a novel opportunity to draw customers onto their farm for an agritourism experience. Kellie and Todd Fox began producing asparagus wine from an excess yield of the vegetable, and even they were surprised by its success (Creager, 2011). The success of agritourism in Michigan, however, is less surprising. According to the Michigan Agri-Tourism Association, an agritourism enterprise is "an agriculturally-based operation or activity that brings visitors to a farm or ranch" (Michigan Agri-Tourism Association, 2013). With an agricultural diversity second only to California, and with tourism and agriculture as its second and third largest industries, Michigan holds great potential for this type of business. (Che, A. Veeck, G. Veeck, & Lemberg, 2004; Che, A. Veeck, & G. Veeck, 2005) Indeed, agritourism enterprises in Michigan number in the hundreds, with specialties ranging from pumpkin patches and Christmas tree farms to honey and petting zoos. Additionally, there is a history of grant opportunities supporting the development of agritourism in Michigan. For example, in the past four years funds earmarked for agritourism in Michigan have come from the USDA, the Michigan Agricultural Cooperative Marketing Association, the Michigan Department of Agriculture, the Michigan Farm Marketing and Agri-Tourism Association, and Agriculture Innovation grants (Redman, 2014; Zipp, 2012). With all of this potential for growth, research on agritourism in Michigan is vital, and yet few studies have made it a focus. With the agritourism literature at large focusing on operator and consumer motivations, determining where agritourism businesses are located and why is the next step in understanding agritourism not only in Michigan but across the U.S.

While descriptions of Michigan agritourism enterprises are abundant on travel websites, academic research on these businesses is relatively scare. Che, A. Veeck, G. Veeck and Lemberg conducted several surveys on Michigan agritourism in the early 2000's, and these represent the majority of scholarship on the subject. They, like many agritourism researchers, investigate consumer and operator motivations and emphasize the importance of nearness to urban centers. Indeed, much of the literature on agritourism focuses on consumer motivations for engaging in agritourism and operator motivations for going into agritourism (e.g. Che, A. Veeck, & G. Veeck, 2005; G. Veeck, Che, & A. Veeck, 2006; Ilbery, 1991; Ilbery, Morris, Buller, Maye, & Kneafsey, 2005; McGehee & Kim, 2004; McGehee, 2007; Nickerson, Black, & McCool, 2001), while less concentration has been devoted to analyzing where agritourism enterprises are located and why (Burton, 2004). This locational factor, though underemphasized in much of the literature on agritourism, may play an important role in agritourism development – every family that goes to pick pumpkins has to have come from somewhere. The aggregate characteristics of people in the counties surrounding agritourism enterprises then become a source of influence on the development of agritourism businesses. What specific characteristics have an impact on the location of agritourism enterprises, though, requires further theorization and testing. Specifically, spatial theories present an opportunity to move beyond farm-level factors and investigate larger structural patterns.

Three approaches appear to have potential as spatial influences with respect to agritourism: urban/rural status, capitals, and place. For the purposes of this paper, I will investigate the interacting theories of urban/rural status and capitals, leaving the comparison of place for future research. Claims of the importance of urban consumers to agritourism are

particularly common. Indeed, it is the main structural level factor that has been discussed in the agritourism literature, although this is often presented in terms of individual urban consumers rather than characteristics of the counties surrounding an agritourism business. For example, while urban consumers are often recognized as having a particular desire for rural nostalgia that drives them to agritourism, (e.g. McGehee, 2007; Nickerson *et al.*, 2001; Wicks & Merrett, 2003; Wilson, Thilmany, & Watson, 2006; G. Veeck *et al.*, 2006), this same research deemphasizes the structural characteristics of urban areas. These characteristics, such as economic and cultural attributes, provide a second explanation for the location of agritourism. These capitals, as theorized by Bourdieu, go beyond a large raw quantity of potential consumers, addressing the characteristics of these consumers (such as high educational or economic capital) that may help to elucidate where agritourism businesses are located. While this explanation may compete with the urban theory, it is also possible that the urban-ness and capitals are complimentary and result in a greater agritourism potential where both are present.

Based on these potential explanations for the location of agritourism, this paper tests three contending hypotheses. The first is that the number of agritourism enterprises in a county is due primarily to the urban status of the county. The second is that the number of agritourism enterprises in a county is due primarily to the capital attributes of the population in that county. Finally, the third hypothesis is that urban-ness and agritourism together are stronger predictors of the presence of agritourism than either factor alone. I begin my analysis with a literature review of the relevant theoretical arguments, followed by a description of agritourism as it exists in Michigan. In order to test my hypotheses, I then analyze agritourism location data

from the Michigan Agri-Tourism Association (MATA) in conjunction with county-level U.S. Census and United States Department of Agriculture (USDA) data. My discussion then concludes with the implications of my findings, particularly regarding productive areas for agritourism development in Michigan, and proposed directions for future research.

LITERATURE REVIEW

While agritourism operator and consumer motivations are common foci in the literature, structural characteristics of counties in which agritourism enterprises are located have garnered less attention. Such factors, however, could play an important role in determining where more agritourism businesses are likely and able to cluster – focused here on the level of Michigan counties. In order to investigate these county level considerations, I will first review the existing literature investigating the impact of urban-ness on agritourism location. This reflects my first hypothesis that urban-ness will be the main determinant of agritourism location. I will then describe my second hypothesis utilizing Bourdieu's conceptions of economic, educational, and cultural capital, examining them individually and interactively as they relate to agritourism. Although the agritourism literature itself rarely explicitly engages with these capitals, I use Bourdieu's theories to connect veins of research related to appreciation and valuation of nature that have significance for participation in agritourism. Finally, for my third hypothesis, I describe how urban-ness and capitals may interact on a theoretical level to produce a region that is particularly supportive of agritourism.

HYPOTHESIS ONE: THE EFFECT OF URBAN STATUS ON AGRITOURISM

While much of the literature agrees that urban consumers have a particular desire to participate in agritourism (e.g. Brinkley, 2012; Che *et al.*, 2005; Ilbery, 1991; McGehee, 2007; Nickerson *et al.*, 2001; Scheyvens, 1999; G. Veeck *et al.*, 2006; Wicks & Merrett, 2003, Wilson *et al.*, 2006), how the urban status of a county actually effects agritourism in that county is debated. Many researchers avoid this question altogether, focusing instead on individual urban consumers rather than characteristics of the counties surrounding an agritourism business.

Secondly, when research does discuss the effect of an urban core, it is divided on the question of whether being near an urban center increases or decreases the potential for agritourism. What *is* agreed upon is that urban consumers are an important agritourist demographic, and that a county's urban status has a significant effect one way or another on agritourism in that county.

On one side of the issue, researchers argue that being near to an urban center increases the likelihood of there being more agritourism businesses. After all, urbanites are some of the most frequent and important agritourism participants (e.g. Brinkley, 2012; Che *et al.*, 2005; Ilbery, 1991; Jolly, 2005; McGehee, 2007; Nickerson *et al.*, 2001; Scheyvens, 1999; G. Veeck *et al.*, 2006; Wicks & Merrett, 2003, Wilson *et al.*, 2006). Additionally, the ability to participate in nature and idealized rural landscapes is becoming progressively more desirable *in particular* for urban residents for whom access to nature is an economic and cultural privilege (e.g. Fleischer & Tsur, 2000; Spurlock, 2009; Sims, 2009; Wilson *et al.*, 2006). Given this, it seems likely that being near an urban center would generate a substantial consumer base for agritourism businesses.

In support of the theory that high urban influence means more agritourism businesses, Ilbery (1991) found that farms on the urban fringe were in a particularly good location for diversification into agritourism, with "82% of the farmers [stating that] the proximity to a major urban market did influence their decision to diversify" (p. 213). Schilling and Sullivan (2014) identified a similar trend in New Jersey. In their study, farms nearer to the urban center of New York City were significantly more likely to offer agritourism attractions than farms further away from the urban core. These findings are additionally supported by Bagi and Reeder (2012) who

found that increasing distance from an urban center significantly decreased the number of farms participating in agritourism. These give credence to the idea that being near an urban center provides agritourism businesses with access to a ready population of consumers, and therefore more agritourism businesses will be located near these centers.

Not all research agrees with the theory that increasing urban-ness will result in increasing agritourism. In fact, there are findings that indicate an opposing trend. Brown and Reeder (2007) and Joo *et al.* (2013), for example, found that being *further* from an urban center significantly increased the likelihood of there being more agritourism businesses. Wilson, Thilman, & Sullins (2006), and Gasciogne, Sullins, & McFadden (2008) supported these findings, concluding that more agritourism businesses were located *away* from urban centers. Theoretically, this can be attributed to urban centers having insufficient farmland for agritourism (Joo *et al.*, 2013) or to consumers who are looking to 'get away' from their urban lives and visit the rural country side (Wilson, Thilman, & Sullins, 2006; Gasciogne, Sullins, & McFadden, 2008). This discrepancy in the effect of distance indicates urban nearness is not the only variable affecting development of agritourism. Indeed, several researchers have developed a more nuanced explanation, looking at the specific type of agritourism as a divisive factor.

While the discrepancy in the literature over urban-ness' effect on agritourism has not been resolved, type of agritourism has been presented as one potential clarifying factor. Bernardo, Valentin, & Leatherman's (2004) study of agritourism in Kansas, for instance, divided agritourism into two main types. Type I consisted of businesses that relied heavily on natural amenities and wilderness to attract consumers, such as hunting and fishing operations. Type II included businesses that focused on smaller day trips and were less reliant on wildlife, such as

apple orchards and wineries (Bernardo *et al.*, 2004). They found that Type I businesses were significantly more likely to be located in rural areas, which had the associated natural amenities these businesses relied on. Type II businesses, on the other hand, were significantly more likely to be located near urban centers, where there were more consumers and fewer natural resources. Baskerville (2013) tested this same hypothesis several years later in Nebraska and found the same trend – Type I businesses were located in less densely populated areas and Type II businesses were located in more densely populated areas. These findings present the potential to tie together two divergent trends in the agritourism literature – it may be that studies in which increasing urban-ness increased the potential for agritourism looked primarily at Type II businesses, while studies in which increasing urban-ness decreased the potential for agritourism looked primarily at Type I businesses. Given that 99% of the businesses in my study are in the Type II category, I expect that increasing urban-ness will increase the number of these agritourism businesses in a county.

Whether being near an urban center increases or decreases the number of agritourism businesses in an area, it is clear that urban-ness does have a significant effect on agritourism in the studies that include it as a variable. It is, in fact, possible that the seemingly opposing trends identified can be explained by categorizing agritourism businesses into different types as Bernardo *et al.* (2004) and Baskerville (2013) have. This evidence suggests that urban influence is a strong predictor of the location of certain types of agritourism enterprises, and that for the predominantly 'Type II' businesses in Michigan this would result in more businesses in increasingly urban areas. However, urban influence may not be the entire story. The structural qualities of rural and urban areas, such as economic, educational, and cultural attributes

present an alternative theory of agritourism location that goes beyond population density to address the characteristics of that population.

HYPOTHESIS TWO: THE EFFECT OF CAPITALS ON AGRITOURISM

As Bourdieu describes it, the interaction of economic, educational, and cultural capital is both varied and complex, with each influencing the other to differing degrees. These capitals, he argues, play a distinct part in determining a wide range of preferences and activities, including, to an extent, involvement in natural spaces (Bourdieu, 1986). Theoretically, then, I expect that high economic and related educational and cultural capital will have a complex but positive influence on participation in agritourism, which in turn will result in agritourism businesses clustering around high-capital geographic areas (for a graphic representation of this, please see Figure 1). In order to investigate Bourdieu's capitals more fully, I will break down their interaction into a discussion of first economic, then educational, and finally cultural capital, looking at how each individually and collectively can influence participation in agritourism and result in the geographic clustering of agritourism enterprises.

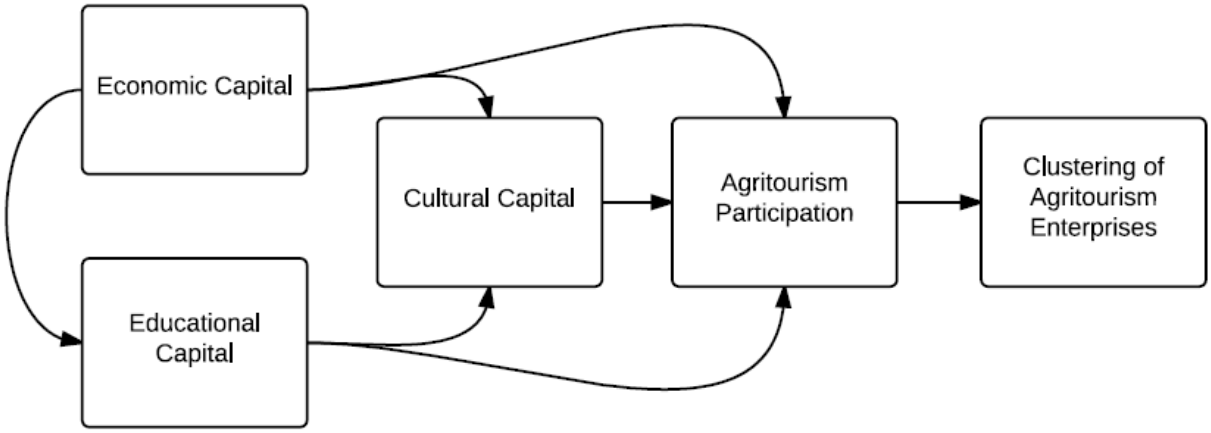

Figure 1. The Relationship of Capitals and Agritourism

Economic capital, according to Bourdieu, can be considered "…the root of all the other types of capital" (Bourdieu, 1986, para. 28), and therefore can be transformed, given time and investment, into both educational and cultural capital. Indeed, "the transformation of economic capital into cultural capital presupposes an expenditure of time that is made possible by possession of economic capital" (Bourdieu, 1986, para. 30). Economic capital, such as income and invested wealth, then enables the possessor to accumulate related cultural and educational capital, which themselves have characteristics that distinguish the possessor as belonging to a relatively higher class. For this study, I am concerned with how economic capital predisposes individuals to spend time in nature and natural tourist settings, of which agritourism is one (Geisler, 2014). This focuses on how income and wealth influence *participation* in nature activities and tourism, as opposed to *attitudes* and *actions* surrounding the natural world. While there is certainly contention in the literature over the role of income in the valuation of nature (e.g. Fairbrother, 2012), its role in participation is less contested.

According to Thompson, Aspinall, & Montarzino (2007) and Strife & Downey (2009), part of spending time in nature as an adult can be attributed to how much time was spent in nature as a child, which research suggests is closely connected to upper class advantages. For instance, Strife & Downey (2009) cite research (e.g. Wolch *et al.*, 2002; Frumkin, 2005; & Kohlhuber *et al.*, 2006) finding that rich white youth have better access to parks, pristine wilderness, and natural spaces than minority and poor youth. This, then, encourages economically advantaged children to participate in nature activities when they become adults, while economically disadvantaged children may avoid nature activities in the future.

This pattern of access is reflected in the literature on outdoor recreation as well. In this body of research, income is often described as an important factor in outdoor recreation participation, which is itself a commonly recognized component of agritourism (Department of Agriculture and Natural Resources, University of California, 2012). For instance, Lee, Scott, & Floyd (2001) found that income was the most significant predictor of participation in outdoor recreation, followed by education. Indeed, leisure-focused research on outdoor recreation commonly cites income as one of the most important predictors of participation in outdoor recreation (e.g. Alexandris & Carroll, 1997; Brown et al., 2001; Kelly, 1980; Scott & Munson, 1994; Searle & Jackson, 1985; Shores, Scott, & Floyd, 2007; and White, 1975). Additionally, in a U.S. survey conducted by Synovate/IPSOS (2014), the Outdoor Foundation found that from 2009-2012 the highest proportion of participation in outdoor activities belonged to households with an income of $100,000 or more, roughly corresponding to the upper-middle class (Morello, 2014).

For agritourism in particular, Joo, Khanal, & Mishra (2013) found that "higher median household income in a county and the number of agritourism farms operating in the county have a positive and significant correlation" (pg. 483). Although this is one of the only studies to include such a variable, it is corroborated by the literature on participation in nature as a child and on outdoor recreation at any age. It should be noted that outdoor recreation and participation in nature are by no means the only activities included in agritourism – however they are significant aspects of the agritourism field, and the significance of income in their determination points to the *potential* for economic factors to significantly affect participation in agritourism. It would therefore be imprudent to ignore this trend. It is expected, then, that

income and wealth will have a positive direct effect on the number of agritourism businesses in a county.

As we have seen, economic capital has some direct effect on access to and participation in nature and outdoor recreation. However, economic capital can also have an indirect effect on this participation through educational and cultural capital. I will first address the dynamic effect of educational capital – i.e. amount of schooling/education and the resulting knowledge and connections. Bourdieu (1986) contends that educational systems in capitalist societies tend to reflect the values and ideals of the elite class – that is, economic capital has an influence on what is taught and considered valuable in schools. Education, according to Bourdieu, is then both influenced by and reflective of the ideals of the higher classes. It does, however, appear to have its own unique influence on participation in outdoor recreation. While income and education are often the top two indicators of participation, education is commonly the stronger of the two predictors (Kelly, 1983; Lee *et al.*, 2001; Lucas, 1990; White, 1975). Therefore, while income is expected to influence agritourism participation in part due to its documented influence on outdoor recreation, education may have an even stronger effect given its status as a more significant predictor of outdoor recreation participation.

The potential effect of education on agritourism participation is additionally enhanced by research on how education influences environmental attitudes. In their review of the literature, Kollmuss & Agyeman (2002) find that education is one of the most consistent and valid predictors of pro-environmental attitudes. Similarly, Dunlap, Van Liere, Mertig, & Jones' (2000) review of the endorsement of the New Ecological Paradigm (NEP) cites education as a reliable positive predictor of support for the NEP, due to the fact that the better educated are

"…exposed to more information about environmental issues" and are "…more capable of comprehending the ecological perspective implicit in the NEP" (Dunlap *et al.*, 2000). More specifically, Ignatow (2006) found that education strongly increased ecologically based valuation of the environment, while Kaltenborn & Bjerke (2002) discovered that education was correlated with a preference for traditional farming landscapes. This extensive literature linking education to environmental concern, knowledge of the environment, and even environmental preferences, indicates that high levels of education have at least some effect on environmental mind-sets. These attitudes, in turn, may predispose educated people/households to participate in environmentally-based recreation such as agritourism. Therefore, I hypothesize that educational capital will have a direct positive influence on the number of agritourism businesses in a county, although this effect may be slightly lessened by the influence of economic capital.

While Bourdieu (1986) asserts that educational capital is influenced by economic capital, he also contends that educational capital can be one form of cultural capital. Cultural capital, then, refers to certain tastes, behaviors, and preferences that produce and reflect class standing, and is the complex product of economic capital, educational capital, and economic capital working *through* educational capital (Bourdieu, 1984; Bourdieu, 1986; Goldthorpe, 2007). These cultural preferences are developed and fixed through wealth and education – specifically in an educational system that Bourdieu argues favors and teaches towards cultural behaviors and knowledge of the upper classes (Bourdieu, 1984; Goldthorpe, 2007; Holt, 1997). Cultural capital is thus considered by Bourdieu to be a product of economic capital that is both secured by and helps to secure educational capital. Given this, I expect that some of the effect

of cultural capital on the location of agritourism businesses will be explained by educational and economic capital. This is especially relevant given that economic capital and educational capital play an important role in outdoor recreation participation, and both of these capitals help to produce cultural preferences. However, Bourdieu's theory leads me to hypothesize that cultural capital will also have its own direct effect on agritourism in addition to the mediated effects of economic and educational capital.

The impact cultural capital may have on agritourism participation is likely to be partially determined by socio-historical or geographical contexts. Although Bourdieu (1986) argues that economic capital and educational capital influence cultural capital, cultural capital is not flat. That is to say, all households with a high level of economic and/or educational capital may not prefer precisely the same cultural goods. As Holt (1997) argues, cultural capital in the United States must be considered in terms of its socio-historical context – a context in which cultural objects are far less important than styles of consuming those objects. For instance, Holt (1997) finds that liking rap music can be indicative of high cultural capital or low cultural capital depending on geographical and socio-historical context. He points out that individuals with high cultural capital tend to seek out exotic experiences – in an urban context rap is commonplace and indicative of the current life circumstances of low-capital urban residents. However, when removed from an urban context, rap becomes exotic and preferred by high-capital individuals as an example of global and cosmopolitan tastes.

Holt's (1997) argument highlights the importance of situating cultural capital in its socio-historical and geographic context. Here, the distinction between urban and rural consumer's cultural aspirations are important contexts. For instance, the ability to participate in nature and

idealized rural landscapes is becoming progressively more desirable *in particular* for urban residents for whom access to nature is an economic and cultural privilege (e.g. Fleischer & Tsur, 2000; Spurlock, 2009; Sims, 2009; Wilson *et al.*, 2006). This privilege has to do with geographic location and the social-historical moment – access to natural and rural places may not be as culturally relevant in a different context. Thus, the ability of agritourism to provide an experience linked to nature and relatively 'rural' places provides a significant cultural attraction that may not be sufficiently explained through economic and educational capital alone, but rather through a contextually located cultural capital. Therefore I hypothesize that cultural capital will have a positive effect on the number of agritourism businesses in a county through educational and economic capital. Additionally, I expect that cultural capital will help to explain the influence of urban-ness on the number of agritourism businesses in a county – according to Bourdieu and Holt, it is not the raw population or urban centers that matter, but rather the cultural attitudes of that population.

According to Bourdieu's theoretical stance, higher classes would engage in agritourism in part due to economics, education, and cultural capital, and in part due to the interactions of these capitals. In particular, Bourdieu's theories of capital allow for a clearer connection between outdoor recreation participation, valuation of the environment, valuation of exotic experiences, and agritourism. For example, research has demonstrated connections between economic capital and participation in outdoor recreation, educational capital and outdoor recreation/valuation of the environment, cultural capital and the valuation of certain types of exotic experiences, and economic capital and agritourism participation. Based on this theoretical analysis of the related literature, my second hypothesis is that the number of

agritourism businesses in a county will solely depend on that county having high economic, educational, and cultural capital, and we will see agritourism businesses cluster around counties with these grouped structural characteristics.

HYPOTHESIS THREE: THE COMBINED EFFECT OF URBAN-NESS AND CAPTIALS

Given that urban-ness and capitals are predicted to increase the presence of agritourism businesses (and specifically Type II businesses as defined by Bernardo *et al.* (2004)), it seems logical that places with both urban-ness and capitals would be particularly likely to have more agritourism. However, no research to date has compared the individual and combined effects of urban-ness and capitals on agritourism. Therefore it is difficult to base conjectures about their relationship on the current literature. While some research suggests that economic, educational, and cultural capital tend to be greater in urban settings (Andres & Looker, 2001; Dumais, 2002; Rye, 2006), how these characteristics interact specifically to impact agritourism is unknown. Rather, as urban-ness and capitals are expected to increase agritourism presence separately, combining them is expected to multiply this effect.

In particular, if urban-ness increases the number of Type II agritourism businesses as Bernardo *et al.* (2004) and Baskerville (2013) have found, urban spaces that also have high levels of capitals may enhance the support of agritourism. As theorized through Bourdieu's explanation of capitals, people with high economic, educational, and cultural capitals will be more likely to support agritourism. If those people are located in an urban area, which supplies the necessary mass of people to make nearby agritourism possible, then the population density may interact with the characteristics of that population to create a place that is supportive of agritourism in a multiplicity of ways. However, if either of my hypotheses regarding the positive

effects of urban-ness and capitals on agritourism are incorrect, then there is reason to suppose that the two factors combined will not have greater predictive power than one or the other alone. This leaves open the possibility that either of my first two hypotheses could better account for the presence of agritourism than my third hypothesis, although it is expected that the combination of urban-ness and capitals will prove to be the strongest predictor.

MICHIGAN BACKGROUND

Michigan is particularly well situated for agritourism growth, with a crop diversity second only to California's (Che *et al.*, 2004; Che *et al.*, 2005), a strong tourism sector focused on natural amenities (G. Veeck *et al.*, 2006), a mix of urban and rural areas (U.S Census Bureau, 2010), and several hundred already established agritourism enterprises (Gentry, 2014). The most comprehensive description of Michigan as an agritourism state comes from Che, A. Veeck, G. Veeck, and Lemberg, who conducted several surveys in the early 2000's looking at agritourism operators and consumers in Michigan. Their findings represent the majority of research on agritourism in Michigan, and their descriptive statistics provide some necessary background for agritourism in the state. A brief review of their findings is presented, followed by a supplementary account of agritourism in Michigan from local news sources and business websites. These provide background information on the state of agritourism in Michigan in order to gain a more comprehensive understanding of the place in which this study was conducted, as well how it may benefit from an investigation of structural factors.

In G. Veeck, Che, A. Veeck's and Lemberg's 2004 report on agritourism in Michigan, 301 agritourism businesses were surveyed to determine descriptive trends such as average income, number of customers, and common operator motivations. They found that agritourism operations in Michigan had an average of 11,647 customers in 2002, resulting in an average gross sales of $141,334 (although this had a standard deviation of $357,017). This translated to about $10,000-$15,000 in direct income from agritourism, indicating that most Michigan agritourism businesses are sources of supplementary, rather than primary, income (G. Veeck *et al.*, 2006). Indeed, additional income was one of the top reasons agritourism operators cited for

going into the business. Other motivations included maintaining a way of life, keeping the family farm, and employing family members. When they chose to go into agritourism, Michigan operators tended to be involved in one (or more) of the following types; berries, orchards, farm markets, fall harvest festivals, Christmas-themed products, animal products/attractions, farm experiences, honey/maple syrup, nurseries, and vineyards (G. Veeck *et al.*, 2006). Among these groups, diversification to remain open all year round was key, as were promotional products to draw in consumers. Agritourism operators were also firm in their belief that agritourism was beneficial to Michigan in a larger sense, citing preservation of open space/farmland, keeping Michigan tourist dollars in-state, and maintaining the viability of agriculture in Michigan.

On the consumer side, Che, A. Veeck, G. Veeck, and Lemberg (2004) conducted a survey of 1,550 agritourism customers, finding that agritourists in Michigan were mostly Michiganders. Indeed, 95% of consumer respondents reported a Michigan zip code for their residence and over half of all respondents lived within 10 miles of the agritourism business at which they were surveyed. Repeat consumers were also found to be vital to agritourism businesses, with 85% of respondents reporting that they had visited the same business more than once. Consumers commonly cited a desire to obtain fresh and local produce as their motivation for participating in agritourism, and natural attractions were often mentioned as Michigan's best feature. Che, A. Veeck and G. Veeck (2006) also emphasized the importance of urban and suburban populations looking for a nostalgic farm experience, citing that the "…intangible, emotional connection is critical in agritourism since customers are buying a lifestyle, not just a product" (p. 98). They recommended that agritourism businesses appeal to this emotional connection by

selling the experience of 'rurality' and working together to create a sense of place for agritourism in Michigan.

While Che, A. Veeck, G. Veeck, and Lemberg provide a detailed overview of the characteristics of agritourism businesses and consumers in Michigan, their surveys are now nearly 10 years old. In this time, agritourism in Michigan has developed to focus less on produce and more on holistic farm experiences, as demonstrated by the various news reports and business websites dealing with Michigan agritourism. According to these sources, Michigan agritourism has experienced an increase in attractions such as wagon rides, amusement parks, photo ops, culinary tourism (i.e. farm-to-table), wedding venues, and emphasized local products and experiences (Lavey, 2014; Patterson, 2013; Gibbons, 2013). The Michigan Department of Agriculture (2007) concurs that "opening up farms to visitors is increasingly becoming a way for Michigan growers to create a dependable source of revenue to ride out uncertainties of weather, disease, and crop prices" (p. 9). Accordingly, somewhere between 270 and 645 agritourism businesses exist in Michigan (Gentry, 2014; Creager, 2011), depending on how they are defined and who's doing the counting. While many of these businesses, such as Nottawa Fruit Farm, Irish Hills Michigan, The Country Dairy, and Robinette's Apple Haus & Winery are well-established businesses that have been in operation for up to 100 years, there are also newer operations that are coming up with innovative ways to stand out, draw in customers, and supplement their income.

Many newer agritourism ventures utilize niche marketing to draw in consumers, with news sources reporting specialization in products such as organics, yak yarn, educational school tours, hard cider, and asparagus wine (Creager, 2011; MacLeod, 2013; Carmichael, 2009). For

example, *Corp Magazine* reports that the Critter Barn in Zeeland, MI started out as a one-time educational experience for kids at a local church and has developed into an agritourism business that hosts approximately 25,000 guests every year (Carmichael, 2009). Black Farms in Armada is another example, expanding into agritourism within the last 15 years to supplement their farming income and beginning a hard cider operation in 2013 to draw in the 21-35 age group (MacLeod, 2013), while Kellie Fox of Fox Farms developed an asparagus wine as part of transforming her 4th generation family owned farm into an agritourism operation (Creager, 2011). These and other agritourism businesses capitalize on the desire for an authentic rural experience, niche or 'local' products, and a wholesome family activity (Nottawa Fruit Farm, 2009; Oshwal, 2014), but may fail to take into account structural factors that can make a particular location well or poorly situated for agritourism development.

While innovative Michigan entrepreneurs are tackling the problem of drawing consumers to their agritourism businesses by developing unique products and marketing schemes, a better understanding of structural factors effecting agritourism is additionally necessary to provide support to agritourism businesses that are in the process of developing their attractions and consumer base. The MATA president in 2013, Charles Goodman, stated in an interview with the *Grand Traverse Scene* that Southwest Michigan is likely the most popular area for agritourism due to nearby urban centers, followed by Traverse City (Gibbons, 2013). In a report on Berrien County, *Harbor Shores Living* emphasizes that although the region has experienced urbanization, over 80% of the land in the county is current or potential agricultural land that is ripe with agritourism potential. On the other hand, *The Lapeer Area View* goes with *Harvest Ontario*'s report that the typical agritourist is from a moderate to high income urban

family, emphasizing the importance of wealthy urban consumers over open farmland (Arnholt, 2008). This shows how a variety of structural factors, such as nearness to urban centers, a large number of farms, and high income consumers are all suggested by local news sources as increasing agritourism's potential in regions of Michigan. These suggestions, however, do not have verifiable data to back them up. Is nearness to urban centers the most important factor, as several sources suggest? Could high income and other capitals play a more important role in the location of agritourism? Or is the interaction of urban-ness and capitals together stronger than either alone? More demonstrably significant connections between structural factors and agritourism presence in Michigan are necessary to clarify these claims.

Michigan provides a prime situation in which to investigate the location of agritourism farms due to its agricultural and touristic profile, mix of rural and urban areas, and recognized agritourism industry. While it has many established businesses making the transition to experience-based agritourism, a better understanding of the structural factors that impact new and growing businesses is necessary to support these endeavors. This makes it all the more vital that there is tangible data on how urban-ness, income, education, etc. impact where agritourism businesses are situated in Michigan. If certain areas of Michigan are particularly well or poorly suited for agritourism based on their structural characteristics, this will have a real and significant impact on how different agritourism businesses should be supported in the state and beyond.

MATERIALS AND METHODS

In order to investigate whether urban-ness, capitals, or a combination of the two predict more agritourism businesses in Michigan counties, I created three separate models featuring odds ratios. The first looks at the influence of urban-ness on number of agritourism enterprises. The second is a progressive adjustment showing the impact of Bourdieu's capitals on the number of agritourism enterprises in Michigan counties. Finally, my third model combines the first two models to investigate how urban-ness and capitals interact to predict agritourism presence. I obtained my data for this analysis from MATA, SimplyMap (providing U.S. Census Data), and the United States Department of Agriculture (USDA). Given that my interest is in the number of agritourism businesses in a county, variables were measured at the county level.

My dependent variable was the number of agritourism businesses in each county in Michigan. The data for my dependent variable was obtained from MATA, which maintains a list of 226 registered member agritourism enterprises. Counties in Michigan ranged from having zero agritourism enterprises to a maximum of 24 in Berrien County. It should be noted that bed and breakfasts, wineries, and urban agritourism initiatives are not part of the MATA directory, and are therefore not included in this study. Farmer's markets are included in a separate section of the directory and were not analyzed as part of this dataset.

To measure a county's relative urban-ness, I used the USDA's Urban Influence Code (UIC). The UIC measures "metropolitan counties by population size of their metro area, and nonmetropolitan counties by size of the largest city or town and proximity to metro and micropolitan areas" (USDA, 2013). This breaks down into 2 metropolitan categories and 10 micropolitan categories resulting in a 12 point scale. I reverse coded UIC such that an increase

in UIC reflects an increase towards a more metropolitan county. However it should be noted that UIC also implicitly measures rurality – therefore it is accounting for a wide range of urban-ness from very rural to very urban. Additionally, the way UIC is measured reflects not only the urban-ness of the measured county, but also the influence of adjacent counties on the measured county. This is a concern when studying agritourism due to the fact that people will be traveling from other counties to visit an agritourism business (Che *et al.,* 2004), meaning that the characteristics of adjacent counties will have an influence on agritourism in the measured county. Therefore, using UIC is particularly appropriate as it captures the effect of nearby urban counties on an otherwise non-urban county.

In order to study the effect of Boudieu's capitals on the number of agritourism businesses in Michigan counties, I chose three independent variables – one for each capital. Each of these variables was obtained from SimplyMap, – a data service run and maintained by Geographic Research, Inc. (2013a). SimplyMap organizes and provides data from a variety of sources, including the U.S. Census data in 2010 geographies, as well as data from Easy Analytic Software Inc. and other marketing groups such as Experian.

The independent variables I chose from SimplyMap are categorized as follows, with the year the data was collected and the data source in parentheses. For economic capital, median household income (2013 U.S. Census) was chosen as an independent variable after testing it and other possible economic variables for pair-wise correlation with cultural and educational indicators. Average years of education (2013 U.S. Census) was chosen to represent educational capital. For cultural capital, money spent on fees and admissions (supplied by Easy Analytic Software, Inc. using 2013 Bureau of Labor Statistics' Consumer Expenditure Study) was chosen

as it refers to “fees to participate in sports; admissions to sporting events, movies, concerts, and plays; health, swimming, tennis and country club memberships; fees for other social, recreational, and fraternal organizations; recreational lessons or instruction; rental of movies, and recreation expenses on trips” (Geographic Research Inc., 2013b), covering a wide range of cultural activities. These variables were measured on the county level, and presented in terms of county-wide statistics such as averages, medians, and percentages.

According to Che *et al.* (2004), Michigan agritourism consumers are predicted to travel about 22 miles to reach an agritourism destination, meaning that a significant portion of agritourism consumers in a specific county are visiting from its adjacent counties. This is likely to be particularly true for Type II agritourism businesses (99% of my sample) due to their focus on day-trip activities such as U-picks. In order to account for this, I recoded my variables for fees/admissions, education, and income to include the value for the main county *plus* the values of each of its surrounding counties. I termed this the ‘county-block’ level and used the resulting variables to investigate whether the county-block level had a greater influence on the number of agritourism enterprises than the individual county level. The only variable that was significant at the county-block level but not at the individual county level was income; therefore it was measured at the county-block level throughout the analysis while all other variables were measured at the individual county level. The implications of income’s county-block significance are analyzed further in the ‘Discussion’ section of this paper.

Two additional variables were included as controls in my analysis. Firstly, the number of farms in each Michigan county (as measured by the USDA) was expected to have some influence on the number of agritourism initiatives in that county since agritourism initiatives

may develop from previously commodity-based farms. Additionally, a region variable was included in order to control for other geographic factors that may be influential such as variations in climate, for example, that may impact both agriculture and tourism. This information was obtained from the MATA categorization of agritourism regions and contained seven regions including the Upper Peninsula (1), Northwest (2), Northeast (3), Central-West (4), Central-East (5), Southwest (6), and Southeast (7) (see Figure 4.). Region 6 (Southwest Michigan) was chosen as the control region due to having the highest number of agritourism enterprises. The regions were tested for correlation with UIC to verify that they were not measuring the same construct (i.e. population) and found to be uncorrelated. However, Region 1 (the Upper Peninsula) was ultimately dropped from analysis due to having only one agritourism enterprise listed with MATA. It is likely that the reason for this deficit is not related to capitals, but rather to other factors such as climate, number of farms, and dominant tourism types.

An ordered logistic regression was chosen for this analysis to deal with the very positively skewed dependent variable. Therefore, 'number of agritourism enterprises' was recoded into three categories (zero, one-two, and three plus businesses). UIC, fees/admissions, education, income, and number of farms were also recoded into 3-4 categories each to address the problem of small and zero cells. When the full ordered logistic regression model was tested for violation of the proportional odds assumption, the Brandt test indicated that this assumption was violated. This was concerning given the small sample size of 68 counties – therefore gologit2 was chosen to replace ordered logistic regressions for the analysis.

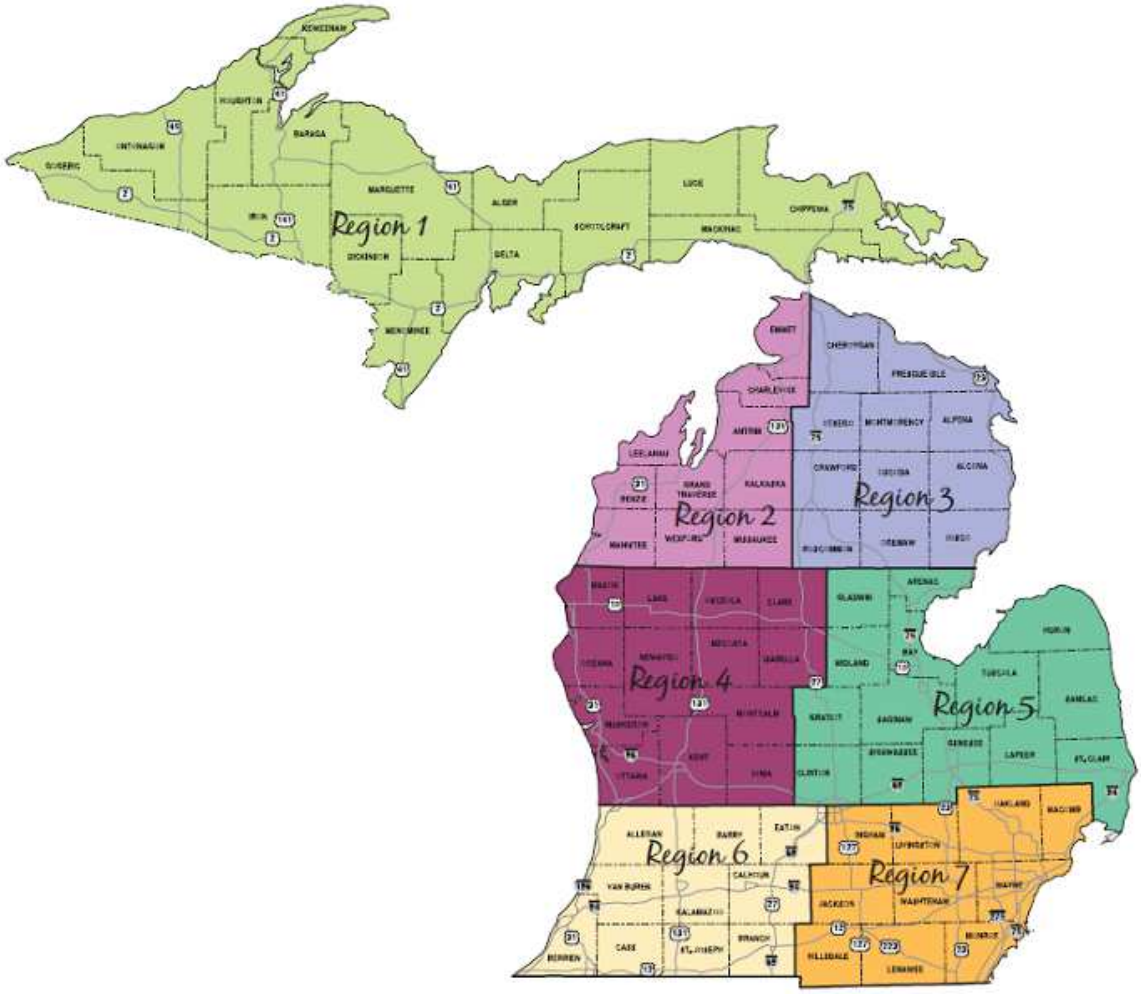

Figure 2. Michigan Agri-Tourism Association Region Map (Michigan Agri-Tourism Association. 2013. Directory. Retrieved February 20, 2014 from: http://michiganfarmfun.com/images/pdf/region_map.pdf)

Gologit2 was developed by Robert Williams to deal with the violation of the proportional odds assumption in ordered logistic regressions (Williams, 2006). This model estimates the generalized ordered logit models for ordinal variables, with dependent variables coded so that larger values correspond with 'higher' outcomes. In effect, multiple binary models are run in which the variables that violate the proportional odds assumption are constrained and the variables that do not violate the proportional odds assumption are left unconstrained (Sarkisian, 2014; Williams, 2006). These constraints can be automatically chosen and applied by Stata using the autofit option, which was chosen for my analysis.

A gologit2 model for my dependent variable (number of agritourism businesses in a county) has two 'sub-models' – Category 1 vs. Categories 2 and 3, and Categories 1 and 2 vs. Category 3. This means the first sub-model compares counties with zero agritourism businesses to counties with one or more business, and the second sub-model compares counties with zero, one, or two businesses to counties with three or more businesses. Variables that do not violate the proportional odds assumption have the same coefficient in each sub-model due to being run as normal, unconstrained regressions. Variables that are constrained, however, have different coefficients in each sub-model due to the transformation (Sarkisian, 2014; Williams, 2006). Therefore running gologit2 not only fixes addresses violations of the proportional odds assumption, but allows for a more nuanced investigation of the variables by using sub-models.

My first model testing the effect of urban-ness on number of agritourism enterprises was initially run with UIC as the only independent variable. My second model testing the effect of capitals was run as a progressive adjustment. Within my progressive adjustment testing capitals, the indicator of cultural capital was the first independent variable, followed by the

addition of education, then income. This order was chosen due to Bourdieu's contention that cultural capital is partially accounted for by educational/economic capital, educational capital is partly accounted for by economic capital, and these capitals have a geographic clustering component that needs to be controlled for. Finally, my third model includes UIC and all three measures of capital.

My first hypothesis is that UIC will be the main predictor of number of agritourism enterprises in a county, meaning that in my final model it would take away any previous significance attributed to capitals. If urban-ness is significant, I hypothesize that it will be in the positive direction given that 99% of the agritourism businesses analyzed are 'Type II' and should therefore benefit from being near an urban center (Bernardo *et. al,* 2004; Baskerville, 2013). It should be noted that if urban-ness is significant in the negative direction, it would mean rural counties are much more likely to have more agritourism businesses. Although this result would go against some conventional wisdom in the agritourism literature, I would still consider it confirmation of my first hypothesis as urban-ness would be the strongest predictor in my model. Therefore my first null hypothesis is that UIC will not be significant, meaning I cannot say that urban-ness of a county has any effect on the number of agritourism businesses in that county.

My second hypothesis is that capitals are the main predictor of number of agritourism enterprises in a county, meaning that in my final model they would take away any significance previously attributed to urban-ness. Therefore my second null hypothesis is that none of my predictors of capital will be significant, meaning that I cannot say that the capitals of a county have any effect on the number of agritourism businesses in that county.

My third hypothesis is that urban-ness and capitals together predict more agritourism businesses than either factor alone, meaning that my indicators of urban-ness and capitals would all be significant in my final model and have a higher R-squared values than previous models. Following this, my third null hypothesis is that only urban-ness or capitals, but not both, will be significant in my final model. Additionally, the R-squared value would not be significantly different from that in my first two models. This would indicate that either urban-ness or capitals is a stronger predictor alone than when they are combined.

RESULTS

In the first model run within gologit2 and reported in odds ratios, UIC was found to be a significant predictor of the number of agritourism enterprises (Table 1). In the second model, however, education and income were also found to be significant predictors, although cultural capital was not (Table 2). In the final model containing all variables, education and income were the strongest and most significant predictors of number of agritourism enterprises, although UIC was significant for a portion of the model (Table 3). This model had the highest R-squared value out of all the models. These findings partially support my third hypothesis that capitals and urban-ness together are a better predictor of agritourism presence than either factor alone.

In my first model (Table 1), UIC was significant at the $p<0.01$ level when run alone, and at the $p<0.05$ level when run with the control variables. In the model with the controls, UIC was the most significant predictor and had an odds ratio of 3.22. This indicates that for every category a county increases in urban-ness, they are 3.22 times more likely to have more agritourism enterprises. Number of farms and Region 2 (North West) were also significant in this model but at the higher $p<0.10$ level. This model had an R-squared value of .17, indicating that it accounts for about 17% of the variability in agritourism location.

In my second model (Table 2), average household spending on fees and admissions was significant at the $p<0.01$ level when run alone. However, adding average years of education made fees and admissions insignificant. Education itself was significant throughout the model, as was income. In the final model with controls, education was significant at the $p<0.01$ level with an odds ratio of 5.30, indicating that for every category a county's education increases,

that county is 5.30 times more likely to have more agritourism businesses. Income was significant in the final model at the $p<0.01$ level with an odds ratio of 5.77, indicating that for every category a county-block's income increases, the measured county is 5.77 times more likely to have more agritourism enterprises. Region 2(North West) and Region 3 (North East) were also significant in the positive direction. This model has an R-squared of .29, indicating that it is a better fit than the urban-ness model.

In my final model (Table 3), UIC and all the predictors of capital were first run together without the control variables. In this model, education and income were the only significant predictors throughout the entire model. When number of farms and region were added as control variables, education and income remained significant and Region 2(North West) was significant at the $p<0.05$ level. Additionally, in this model UIC became slightly significant in a specific context. Before discussing this, let us look at the final effects of the capitals. Fees and admissions was insignificant throughout this model. Education, in the final model with controls, was significant at the $p<0.01$ level with an odds ratio of 5.12, indicating that for every category a county's education increases, that county is 5.12 times more likely to have more agritourism businesses), UIC is insignificant while education and income are significant. However, in the second sub-model (comparing counties with zero/one/two agritourism businesses to counties with three or more businesses) UIC becomes significant at the $p<0.10$ level while education and income maintain their earlier significance. This indicates that for every category that a county's urban-ness increases, that county is 4.14 times more likely to have three or more agritourism businesses. However, as seen in the first sub-model, increasing the urban-ness of a county does not impact that county's moving from zero to 'one or more' businesses. Throughout the model,

Table 1. Progressive Adjustment using Ordered Logistic Regressions - Number of Agritourism Businesses by UIC with Controls (Region 6 as Reference) N=68

		Model 1	Model 2
Comparing Zero Businesses with One or More	Urban Influence Code	3.41***	3.22**
	Number of Farms	-	1.93*
	Region 2 - North West	-	8.45*
	Region 3 - North East	-	3.15
	Region 4 - Central West	-	1.41
	Region 5 - Central East	-	0.48
	Region 7 - South East	-	3.77
	Constant	0.17***	0.03*
Comparing Zero/One/Two Businesses with Three or More	Urban Influence Code	3.41***	3.22**
	Number of Farms	-	1.93*
	Region 2 - North West	-	8.45*
	Region 3 - North East	-	3.15
	Region 4 - Central West	-	1.41
	Region 5 - Central East	-	0.48
	Region 7 - South East	-	3.77
	Constant	0.02***	0.00***
R-Squared (Total Model)		0.11	0.17

*p<0.10; **p<0.05, ***p<0.01

Table 2. Progressive Adjustment using Ordered Logistic Regressions - Number of Agritourism Businesses in a County by Capital Variables (Region 6 as Reference) N=68

		Model 1	Model 2	Model 3	Model 4
Comparing Zero Businesses with One or More	Average Household Spending on Fees and Admissions	1.91***	1.22	0.80	0.73
	Average Years of Education	-	4.18***	5.31***	5.30***
	Median Household Income - County Block Level	-	-	3.35***	5.77***
	Number of Farms	-	-	-	1.91
	Region 2 - North West	-	-	-	10.48*
	Region 3 - North East	-	-	-	15.45*
	Region 4 - Central West	-	-	-	3.17
	Region 5 - Central East	-	-	-	0.98
	Region 7 - South East	-	-	-	2.51
	Constant	0.59	0.15***	0.03***	0.00***
Comparing Zero/One/Two Businesses with Three or More	Average Household Spending on Fees and Admissions	1.91***	1.22	0.8	0.73
	Average Years of Education	-	4.18***	5.31***	5.30***
	Median Household Income - County Block Level	-	-	3.35***	5.77***
	Number of Farms	-	-	-	1.91
	Region 2 - North West	-	-	-	10.48*
	Region 3 - North East	-	-	-	15.45*
	Region 4 - Central West	-	-	-	3.17
	Region 5 - Central East	-	-	-	0.98
	Region 7 - South East	-	-	-	2.51
	Constant	0.05***	0.01***	0.00***	0.00***
R-Squared (Total Model)		0.07	0.17	0.25	0.29

* p<0.10; **p<0.05; *** p<0.01

education and income are stronger and more significant predictors than urban-ness. The R-squared for this model is .33, indicating that it is a better fitting model than either of the previous two.

Based on my final model, there are four significant indicators that influence 'number of agritourism enterprises' in Michigan counties. All of these were in the positive direction, indicating that an increase in these variables results in an increased number of agritourism enterprises. The four significant variables are education, income (county-block level), and Region 2 throughout the model, with UIC being significant *only* in the second sub-model. Education was significant at the lowest p-value ($p<0.01$), Region 2 had the largest odds ratio (25.45), and UIC (in the second sub-model) had the highest p-value (0.059).

Table 3. Progressive Adjustment using Ordered Logistic Regressions - Number of Agritourism Businesses in a County by All Independent Variables (Region 6 as Reference) N=68

		Model 1	Model 2
Comparing Zero Businesses with One or More	Urban Influence Code	1.16	0.81
	Average Household Spending on Fees and Admissions	0.81	0.73
	Average Years of Education	5.12***	5.12***
	Median Household Income - County Block Level	3.04***	4.96**
	Number of Farms	-	2.07
	Region 2 - North West	-	25.45**
	Region 3 - North East	-	17.80
	Region 4 - Central West	-	3.92
	Region 5 - Central East	-	1.10
	Region 7 - South East	-	2.15
	Constant	0.03***	0.00***
Comparing Zero/One/Two Businesses with Three or More	Urban Influence Code	1.16	4.14**
	Average Household Spending on Fees and Admissions	0.81	0.73
	Average Years of Education	5.12***	5.12***
	Median Household Income - County Block Level	3.04***	4.96**
	Number of Farms	-	2.07
	Region 2 - North West	-	25.45**
	Region 3 - North East	-	17.80
	Region 4 - Central West	-	3.92
	Region 5 - Central East	-	1.10
	Region 7 - South East	-	2.15
	Constant	-	2.51
	Constant	0.00***	0.00***
R-Squared (Total Model)		0.25	0.33

* p<0.10; **p<0.05; *** p<0.01

DISCUSSION

Education and income were the most significant predictors in my final model, indicating that these capitals are better predictors of the number of agritourism businesses in a Michigan county than urban-ness. However, my indicator of cultural capital was not significant. Additionally, UIC was significant in an important portion of my model. Therefore I can accept neither urban-ness nor capitals as the sole predictor of the number of agritourism enterprises in a county. My third hypothesis, however, holds true. Specifically, according to my model, education and income are the primary predictors of number of agritourism businesses, with urban-ness acting as a supplementary factor that enhances the number of businesses in a county that would otherwise have only one or two. This indicates that while specific capitals are the baseline for a county having agritourism, urban-ness has a multiplier effect in counties with high education and income.

Before addressing my main predictor variables, I will discuss the one control variable that remained significant in the final model. Region 2 (North West) was the only control variable to maintain significance– other regions and 'number of farms' were insignificant determinants of 'number of agritourism enterprises'. Region 2 is predicted to have significantly more agritourism enterprises than Region 6 (South West). Since Region 6 does in reality have the most agritourism businesses as confirmed by the MATA list, this indicates that the number of businesses in Region 6 is more dependent on other variables in the model, while the number of businesses in Region 2 is more dependent on characteristics of that region. Given that Region 2 contains the Traverse Bay area, an extremely popular tourist destination, it may be that this region draws tourists from further away and therefore relies less on the capitals of the county

itself. Given that this was the only significant control variable, the model shows that predictors of capital and urban-ness do have significant effects on the number of agritourism enterprises beyond what can be explained by region or number of farms.

Looking at the three types of capitals tested, two were found to be significant and one was not. Fees and admissions, which represented cultural capital, was not significant in any portion of the model. Therefore I accept my null hypothesis that it has no effect on the number of agritourism businesses in a Michigan county. This is a somewhat surprising result given the strong significance of my other two indicators of capital. There are several possible explanations for this observation.

First of all, it is possible that fees and admissions is not an accurate indicator of cultural capital. This seems particularly possible given that both educational and economic capitals, which Bourdieu (1984) claims produce cultural capital, were positive significant predictors of the presence of agritourism businesses, yet cultural capital was not. Indeed, Holt (1997) criticizes current popular survey measures of cultural capital as largely inaccurate and in need of change. He recommends that measures of taste, rather than preferences for consumption of given objects, be used as cultural capital survey instruments. Fees and admissions, for instance, includes participation in sports, rental of movies, membership at country clubs, and a wide variety of other cultural objects. This gets at practices, but does not specifically measure tastes. Behaviors and practices that can only be observed via ethnographic research are, as Holt (1997) describes, more desirable as indicators of cultural capital. Unfortunately such measures were not feasible for this study and therefore my variable may not reference the underlying construct of cultural capital as I would wish.

A second explanation is that cultural capital in fact does not have any effect on the presence of agritourism businesses. It is possible that households in which there is high cultural capital choose different activities than households in which there is high income and education but relatively low cultural capital. Agritourism, then, may not be appealing as a high-status activity for households with very high cultural capital. This would contradict not only my hypothesis but also theoretical framework from Holt (1997) – therefore this result necessitates further testing, particularly given the issues with measuring cultural capital in this study and in general.

One type of capital that *did* have a positive effect on the number of agritourism enterprises in a Michigan county was education. This supports my hypothesis that higher education leads to higher participation in nature activities and valuation of nature (Ignatow, 2006; Kelly, 1983; Lee *et al.,* 2001; Lucas, 1990; and White, 1975) and therefore supports the presence of agritourism businesses. The strength of the effect of education was not influenced by adding the income variable, indicating that the effect of education is separate from that of income. This goes against Bourdieu's contention that income effects education, indicating that, for agritourism at least, counties having higher education without higher income still produce more agritourism businesses. This is partially explained by the peculiar effect of income itself.

Income was also a significant and positive predictor of the number of agritourism enterprises in Michigan counties, but only when measured at the county-block level. Therefore, although income did have the significant positive effect we would expect given the literature on outdoor recreation, it was only influential when considering the income of the main county *plus* that of the surrounding counties. It is possible, then, that the income of a county-block

influences customers traveling to agritourism businesses whereas education, conversely, functions at the individual county level to influence the creation of agritourism businesses. If this is true, then income and education are operating at different levels of influence, which may account for the fact that income did not mitigate the influence of education in my model.

While education and income were the strongest and most significant predictors of the number of agritourism businesses in a county, UIC had an impact as well. In my final model, it was not significant in the first sub-model but was significant in the second sub-model. This provides evidence that the urban-ness of a county can have a multiplier effect on the number of agritourism businesses in that county – and in particular for the kinds of businesses in this study. These businesses were 99% 'Type II' as defined by Bernardo *et. al* (2004), meaning that they rely less on wilderness and benefit more from being near urban centers. This theory appears to hold in my analysis. Specifically, for these businesses, being more urban appears to help counties cross a threshold from having only one or two agritourism businesses to having three or more. That is, a county need not be urban in order to have *any* agritourism, but being urban helps agritourism businesses multiply. This indicates confirmation of my third hypothesis – that urban-ness and capitals, when in the same place, will result in a greater number of agritourism businesses than there would be if only one of these factors was present. These results help to shed light on the debate over how urban-ness influences agritourism, and in the future it would be interesting investigate this trend in tandem with both of Baskerville (2013) and Bernardo's (2004) agritourism types.

In order to gain a better understanding of the three significant indicators of interest in my model, education, income, and UIC, three maps of Michigan were created in order to show

where agritourism businesses are distributed across Michigan (see Figures 3, 4, and 5). Figure 3 overlays the location of these businesses on average education by county, Figure 4 on average household income by county, and Figure 5 on UIC code by county. Looking at these figures, three distinct areas stand out as clusters of agritourism businesses. These are Southwestern Michigan (especially along the coast), Southeastern Michigan (clustered around Washtenaw county), and the Grand Traverse Bay Area.

The Southwestern area includes Ottawa, Kent, Allegan, VanBuren, Berrien, Cass, and Kalamazoo counties. It has a relatively high income, average education, and high UIC compared to the rest of Michigan. Common agritourism products in this area include apples, u-picks, blueberries, peaches, and pumpkins. Compared to the most common agritourism products in all of Michigan (which include apples, pumpkins, and U-picks), blueberries and peaches stand out as uniquely important to the Southwestern region. This makes sense given that this region is within the West Michigan 'fruit belt'. It should be noted that this area may be influenced by its nearness to the tourist-producing Chicago metropolitan area, as well as tourists traveling further distances to visit the famous Lake Michigan – therefore urban consumers may be even more important to this region than they seem to be from my model. This should be taken into consideration in future research on agritourism in the area.

The Southeastern area includes Oakland, Washtenaw, Wayne, Macomb, Livingston, Genesee, Lapeer, and St. Clair counties. It has very high income, very high education, and very high urban influence making it an ideal agritourism location according to my models. Agritourism products that are common in this area include u-picks, pumpkins, apples, and bakeries – products which are particularly well suited to Type II agritourism businesses focused

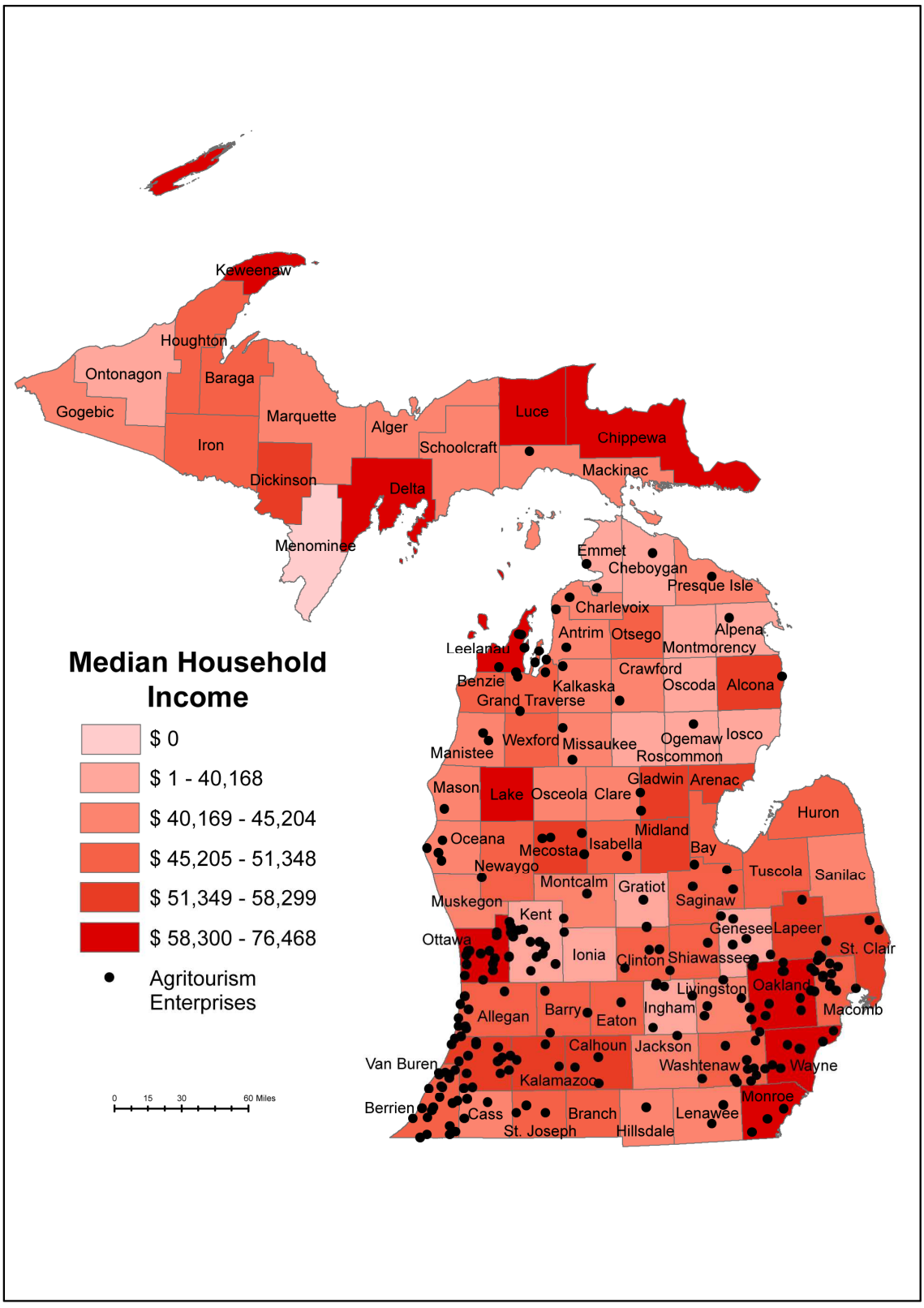

Figure 3. Clustering of Agritourism Enterprises Overlaid on a Map of Median Household Income

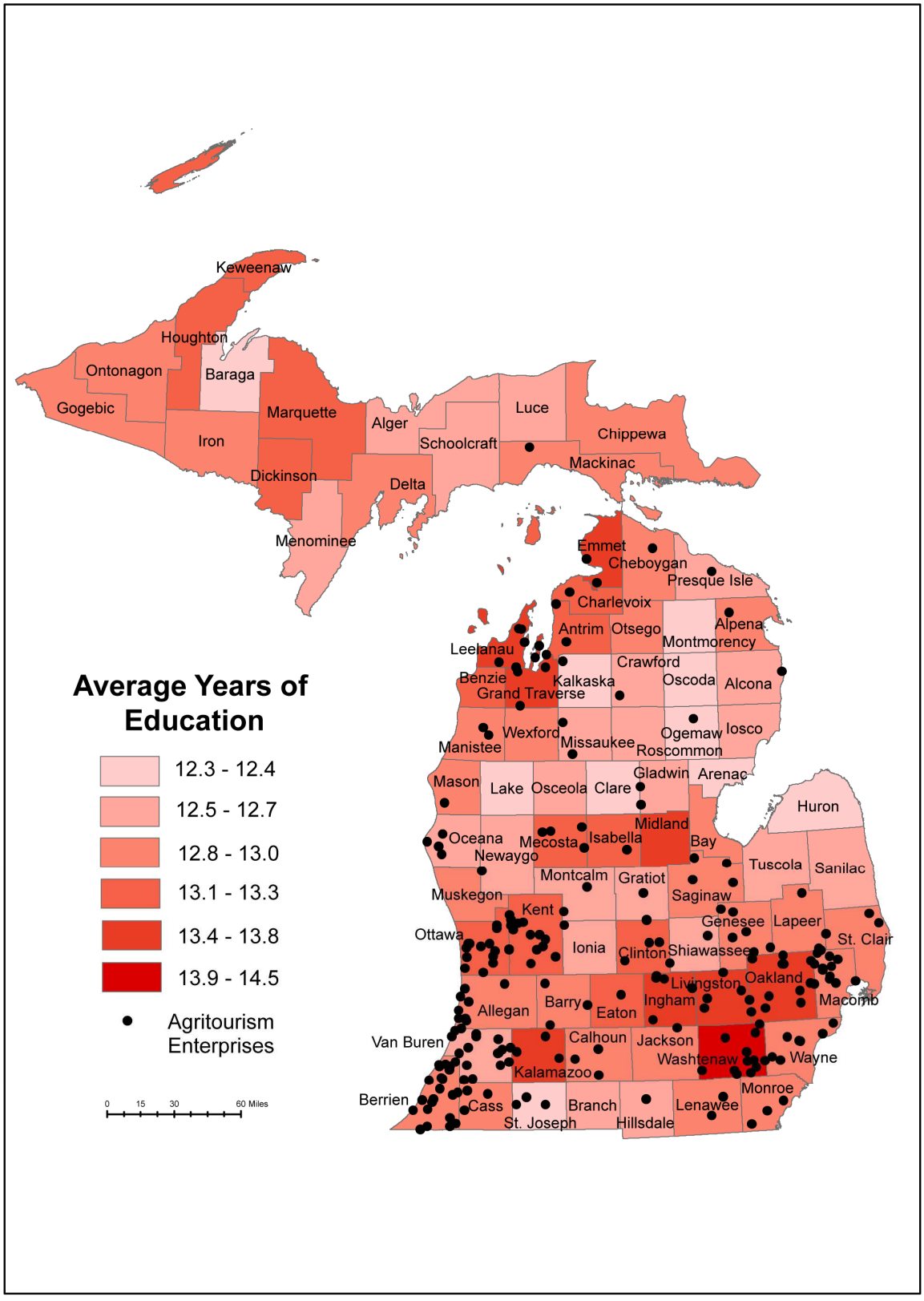

Figure 4. Clustering of Agritourism Enterprises Overlaid on a Map of Average Education in Years

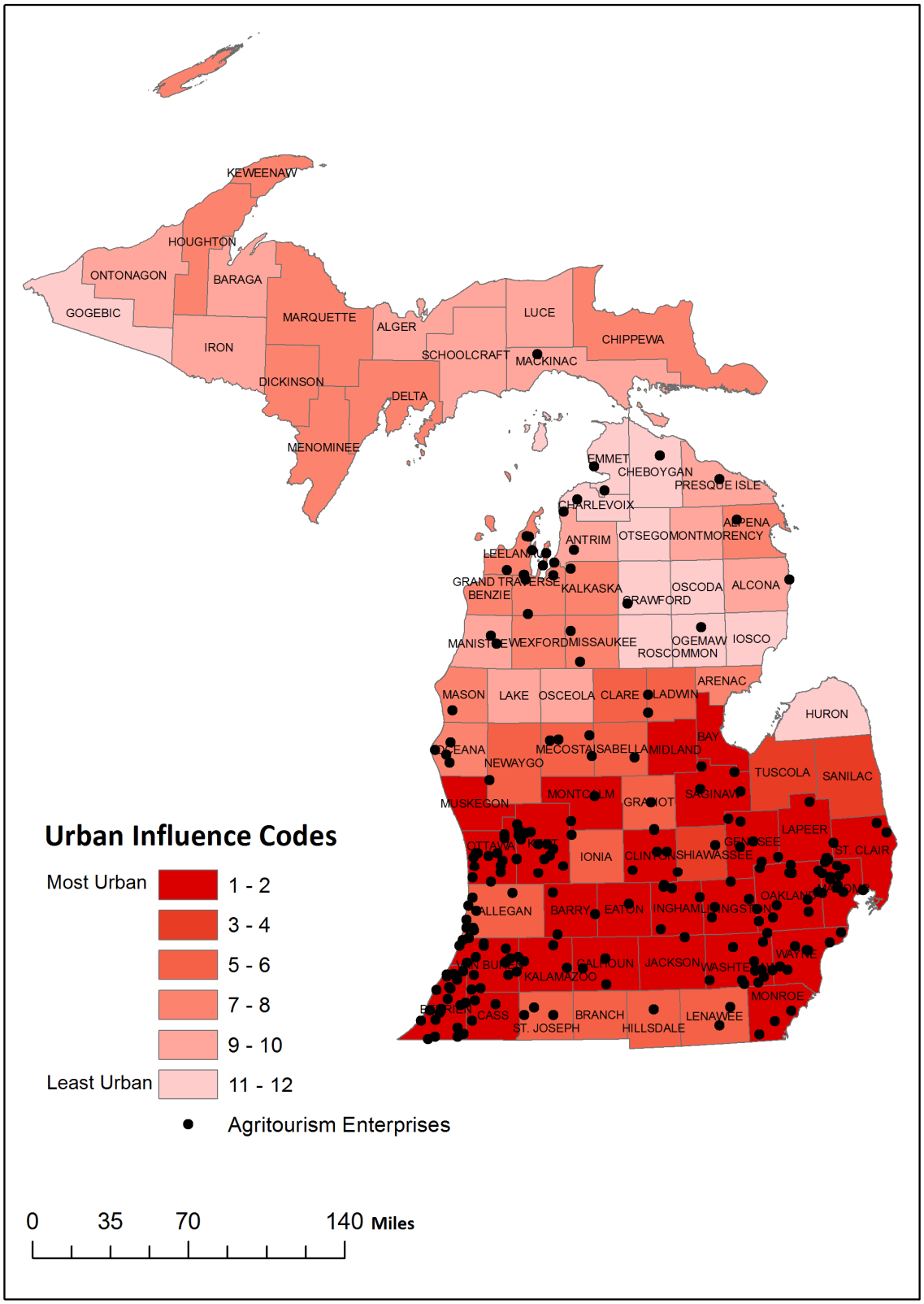

Figure 5. Clustering of Agritourism Enterprises Overlaid on a Map of Urban Influence Code

on day trips. Pumpkins and bakeries particularly stand out as being of unique importance to this region compared to other parts of Michigan, which is relatively unsurprising given that this area is not located on the Western coast fruit belt of Michigan. Therefore, Southeastern Michigan agritourism businesses may be less capable of capitalizing on customers participating in other tourist activities. For instance, Southwestern Michigan agritourism may benefit from tourists who are in the region not specifically for agritourism, but rather to visit the lakeshore. This may result in more customers in the Southeastern region having more local agritourism customers. Therefore, the very high urban-ness in this area likely directly contributes to the multiplier effect of the UIC variable in my final model.

The Grand Traverse Bay area includes Leelanau, Grand Traverse, Antrim, Charlevoix, Missaukee, Kalkaska, and Manistee counties. It has very high income and high education, but a low UIC score. The most common agritourism products in this area are apples, cherries, jam/jellies, and u-pick. Cherries and jams/jellies stand out as particularly important in this area, which is logical given that the Grand Traverse area is known for its annual Cherry Festival. It is possible that this area reduces the importance of urban-ness in my model due to its low UIC score combined with high number of agritourism businesses. The Grand Traverse Bay area is well known as a tourist destination – which may mean that tourists are willing to travel long distances from urban areas and therefore fall outside of the measured UIC zone. This emphasizes the importance of having accurate information on how far agritourists travel to agritourism destinations. This area also falls within Region 2, which was significant and implied that there are characteristics of this region, such as climate or status as a tourism destination, that make it particularly well-suited to agritourism. While data on county-level tourism

statistics for Michigan are currently unavailable, this data would be valuable to include in future research.

My findings, then, indicate that the location of agritourism businesses in Michigan is highly dependent on the level of education in a county and the level of income in a county-block, such that higher education and income predict more agritourism businesses. I also find that there is a particular effect in which increasing urban-ness of a county does not influence that county having one to two agritourism businesses, but does increase the chances of a county having three or more agritourism businesses. These results confirm my third hypothesis that urban-ness and capitals combined predict more agritourism businesses than either factor individually. As my model shows, education and income are predictors of a county having any agritourism. When urban-ness is added to a county with high income and education, it then multiples this effect so that the county passes a threshold into having three or more agritourism businesses. These results suggest that although capitals and urban-ness together create a more robust case for increasing agritourism businesses, the capital characteristics are the stronger of the two predictors. This takes the study of agritourism beyond an abstract inclusion of 'urban-ness' and into the qualities of people located in urban and rural places. Indeed, it is possible that the agritourism literature, which has done a fine job of researching farmer motivations, should now turn its attention towards structural factors related to capital as it is embedded in particular places.

CONCLUSIONS

While neither urban-ness nor capitals completely account for the number of agritourism businesses in a Michigan county, they each partially impact this number in interlocking ways. Specifically, education and income (at the county-block level) were found to be important components of a county having more than zero agritourism businesses. When urban-ness is combined with these variables, it does not predict a county having one or two businesses, but does predict a county having three or more businesses. This indicates that a county need not be urban to have *any* agritourism – having relatively high education and income will take care of that. However being urban does help a county get over the threshold to three or more businesses, showing how capital and urban-ness combined have more predictive power than either factor alone. Urban-ness was, however, the least significant of these three indicators. Therefore it appears that education and income are the baseline necessary for having any agritourism, and that urban-ness is supplementary to these capitals. Given the agritourism literature's debate on the effect of urban-ness, these results call for increased research on how capitals interact with urban-ness to impact agritourism.

There are several limitations to this study that are important to note. First, the Michigan Agri-Tourism Association list of agritourism businesses is not exhaustive. Ideally, future research would supplement this list with expanded data on the location of agritourism businesses. In particular, it would be valuable to include 'Type I' businesses that rely on wilderness and natural resources in order to see if the same findings hold true as for 'Type II' businesses. Additionally, my measure of cultural capital was somewhat weak. Better measures of cultural capital should be developed for inclusion on surveys that may be used to assess

agritourism, and these measures should be carefully chosen and assessed. This may cause the effect of cultural capital that I observed to change in meaningful ways. Thirdly, research on how far agritourism consumers travel within Michigan to get to their agritourism destination needs further study, as only one research team has dealt with this issue and their data is becoming outdated. This has significant implications for the effect of urban-ness and county-block level income on agritourism. In particular, it is possible that certain agritourism enterprises are located within regional tourist markets. The success of these enterprises, then, may not be due to urban proximity or high capitals, but rather their location embedded within a popular tourism area that people travel some distance to reach. Unfortunately, as of the time of this research, reliable information on the tourism markets of Michigan counties is unavailable. Future research should endeavor to include such information if it is available for the area of interest.

Of course, this study is also limited to its context in Michigan. Further studies of capital and urban-ness in different states, across the U.S., and in international contexts will be necessary to determine whether the effects found in this study can be generalized to different agritourism frameworks. Furthermore, given the significance of geographically-based capitals in this study, additional spatial theories are a noteworthy avenue for future research. One such theoretical avenue is place. As Gieryn states in his seminal work on the topic, “Nothing of interest to sociologists is nowhere: everything that we study is emplaced” (2000, p. 466). Agritourism is not exempt from this emplacement, and my findings suggest that spatial characteristics are indeed important determinants of where agritourism businesses are located. I suggest, then, that theories of place provide a fertile direction for future agritourism research.

Within agritourism, the inclusion of spatial theories will involve concentrating not only on the agritourism business itself as a place, but also taking into consideration the larger space in which an agritourism business is embedded. In particular, it will be important to consider the complex effect of urban-ness and how this is interrelated with Bourdieu's capitals. These relationships and their embeddedness in specific spaces/places have the potential to create territorial inequalities in agritourism development that will be important to understand if agritourism is to be supported. In Michigan, for example, there has been interest in promoting agritourism – therefore knowing that the education of a county, for example, can have a significant positive effect on agritourism businesses is helpful in identifying where territorial constraints to agritourism may occur. This provides context for organizations such as the USDA, MDARD, and MATA, informing them of locations where agritourism is an appropriate diversification strategy and should receive support and promotion. Conversely, it may also prevent promotion of agritourism as a strategy for farms and other enterprises that are not in a suitable place for such an approach, leading to more applicable solutions for farmers and business owners in different contexts. Future research on spatial theories and capitals will then be vital to the study of agritourism, and in particular to determining whether the influence of education, income, and urban-ness on Michigan agritourism businesses transfers to other places - or if these places have their own unique set of factors that influence where agritourism enterprises develop and thrive.

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