

POLICY ENVIRONMENT AND ENTREPRENEURIAL TRANSIENCE*

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Abstract

Relocation (transience) into the area of already existing ventures currently operating elsewhere directly affects the stock of gainfully employed entrepreneurial talent. Our longitudinal study of 88 Ohio counties over a 4-year period reveals some of the reasons behind this phenomenon. We identify several groups of local policy variables facilitating transience processes. Net rates of transience are positively associated with the level of educational attainment and negatively related to income tax rates in a focal county. Rates of transience are also related to sales and property tax rates, although the direction of these effects depends on average personal income levels in the county. Finally, past start-up rates are found to positively affect current rates of entrepreneurial transience.

Keywords: Entrepreneurial transience; environment; public policy and entrepreneurship

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Introduction

Local economies may benefit from entrepreneurial activity in many ways from new job creation to economic growth to innovation as well as poverty alleviation (Audretsch & Keilbach, 2004; Friar & Meyer, 2003; Fritsch, 1997; Thurik, 1999; Wennekers, Van Wennekers, Thurik, & Reynolds, 2005). Because the benefits flowing from entrepreneurship are not necessarily appropriated by the entrepreneurs themselves and tend to spill over, encouraging gainful employment of entrepreneurial talent may become one of the key elements of regional public policies (Georgellis & Wall, 2006). To understand and effectively manage the determinants of entrepreneurial capital formation is thus important in order for the region to accumulate entrepreneurial talent stock (ET stock) and capture a share of economic benefits provided by the local entrepreneurial activity.

But do we understand what contributes to the accumulation of entrepreneurial talent stock? Entrepreneurship literature offers several useful frameworks that deal with the rates of start-up (Acs & Szerb, 2007; Dubini, 1989; Okamuro & Kobayashi, 2006; Reynolds, Miller, & Maki, 1995; Santarelli & Piergiovanni, 1995) and – to some extent – entrepreneurial failure (Laitinen, 1992; Littunen, Storhammar, & Nenonen, 1998; Watson & Everett, 1996). Yet, with few exceptions it does not differentiate between the ventures started by the local population and those created within the focal region by the individuals residing elsewhere. As attracting entrepreneurial talent from elsewhere is important for accumulation of ET stock in the area, such omission is problematic. Besides, the *dynamic* component of the entrepreneurial landscape development – existing venture migration (transience) – has remained largely unaddressed by the entrepreneurship scholars. The magnitude of the phenomenon of business transience, factors af-

fecting firms' decisions to relocate, conditions making some areas but not others attractive to businesses currently operating elsewhere have been effectively ignored to date.

This dynamic component of the entrepreneurial landscape development – migration of the already existing businesses into or out of a region – is particularly important for a number of reasons. First and foremost, business transience directly affects the rates of accumulation of ET stock in the area *above and beyond* that which is attributable to firm start up and failure rates. Significant rates of business flight out of a region would subtract from a region's otherwise healthy rates of start-up. Similarly, business migration into the region would augment and complement the levels of new business founding observed in the locale. Yet, current research tends to overlook the issue of entrepreneurial transience concentrating on firm birth rates primarily. Second, and more importantly, the effects of transience are qualitative: unlike typical new firms for which the probability of failure is fairly significant (Gaskill, Van Auken, & Manning, 1993; Watson et al., 1996), transient companies have withstood the test of time in their original location (donor region) and are thus more likely to contribute to the recipient region's well-being than an average local startup. Third, and precisely due to established track record, transient firms are less likely to require public agencies' support accordingly providing the economic benefits to the region at virtually no cost to the local authorities and taxpayers. Finally, it is possible that the factors making the area attractive to startups differ from those required to lure transient ventures into a new region. As such, policies developed by the public agencies to stimulate new venture creation may impede the inflow into the locale of firms currently operating elsewhere and vice versa. It is thus important to gain a better understanding of the factors conducive to generating a positive flow of transient ventures and estimate the relative contribution into the region's well-

being of new and transient firms in order to develop a policy that could maximize the stock of gainfully employed entrepreneurial talent in the region.

In this paper we take the first step toward uncovering the phenomenon of entrepreneurial transience by paying particular attention to the dynamic component of the entrepreneurial landscape development. Even though there is no literature on entrepreneurial transience per se, several streams of research offer insights into the factors possibly motivating a firm's decision to relocate. While this choice may negatively affect the network ties of the focal firm and thus seem counterintuitive (Littunen, 2000), several factors possibly justifying a costly relocation decision could be found at the region's level. We test for the effects of these factors on entrepreneurial transience using a multi-source dataset covering transience phenomenon in 88 Ohio counties over the period of 4 years in a manner consistent with prior entrepreneurship literature (Anyadike-Danes, Hart, & O'Reilly, 2005).

Extant research has demonstrated that environmental characteristics are important determinants of the new venture creation dynamics, performance, and structural characteristics (Aldrich, 1990; Shane & Kolvereid, 1995). We believe they might be instrumental in explaining the dynamics of entrepreneurial transience as well. As Gartner notes, entrepreneurs 'do not operate in vacuums' but respond to their environments or 'characteristics that are viewed as relatively fixed conditions imposed on the new venture from without' (Gartner, 1985, p. 700). Yet, some of these 'fixed conditions' faced by ventures are amenable to manipulation by the local authorities and as such are an important economic development policy instrument. In this paper we analyze the effect of different policy variables on the processes of entrepreneurial transience.

The remainder of the paper is organized as follows. First, we introduce the phenomenon of entrepreneurial transience, identify the factors that are likely to affect firms' decision to relo-

cate, and formulate testable hypotheses. We proceed by introducing the sources of data and methodologies employed in hypotheses testing. The paper concludes with the discussion of our results, implications for entrepreneurship research and policy makers, and possible venues for future research.

Entrepreneurial transience

Entrepreneurship has long been claimed to be the driving force of economic development. Audreusch & Keilbach (2004), for instance, showed that entrepreneurial capital is positively and significantly related to labor productivity. Thurik (1999) relates entrepreneurship to higher rates of employment growth. Acs et al. (2004) demonstrate a positive statistically significant relationship between entrepreneurship and annual economic growth. Michelacci (2003) develops a model that positively links entrepreneurship and innovation. Bygrave, Hay, Ng, & Reynolds (2003) and Reynolds et al. (2003) demonstrate a positive association between entrepreneurship and GDP dynamics. Entrepreneurship literature is thus fairly unambiguous in assigning positive economic and social returns to entrepreneurial activity.

Accordingly, support for and promotion of entrepreneurship initiatives has become a vital element of public policies at all levels. Numerous programs are created by the municipal, county, state, and federal agencies including among others business incubators, subsidized loans and financial assistance programs, entrepreneurship education to aspiring, nascent, and experienced entrepreneurs, homestead exemptions of different sorts, etc. The end goal such programs pursue is to maximize the levels of ET stock in the region through stimulating startup rates while minimizing the rates of entrepreneurial failure. Yet again, the focus is often put on stimulating startup activities or net new venture creation rates (Anyadike-Danes et al., 2005) while transient

businesses are left out of equation. Because rates of transience directly contribute to accumulating ET stock in the area such exclusion is not only unjustified but can potentially mislead the policy-makers by suggesting certain recommendations that may work against maximizing the stock of gainfully employed entrepreneurial talent in the locale. We call for restoring entrepreneurial migration phenomenon back to the economic development puzzle by concentrating on ‘net transience’ defined as the difference between the number of firms moving into and out of a county in any given year.

Figure 1 summarizes possible ways of stimulating the accumulation of entrepreneurial talent in the region. Two of them (venture creation by individuals residing outside of the focal region and relocation into the region of the firms currently operating elsewhere) represent the phenomenon of transience. As entrepreneurial transience has to do with the migration of entrepreneurial talent it could encompass both aspiring entrepreneurs-to-be and already existing ventures. Attention given to these subcomponents of entrepreneurial transience by the extant literature is unequal. Namely, migration of entrepreneurial ventures into the region has remained largely undocumented while entrepreneurial activity in the region by outsiders has received some attention.

-----Insert Figure 1 about here-----

Because entrepreneurial talent is scarce (Murphy, Shleifer, & Vishny, 1991) attracting nascent/aspiring entrepreneurs from elsewhere may prove beneficial for the region. There has been some research lending support to this claim. At the country level, the U.S. economy has benefited from entrepreneurial initiatives of immigrants who could not realize their entrepreneurial vision in their home countries; business press is nothing short of illustrations (Iwata, 2007). To understand the factors enticing nascent entrepreneurs to start up outside their home regions, it

is important to distinguish between local businesses started by individuals from within the locale and those started by the entrepreneurs residing elsewhere, and to compare the respective environments. This comparison framework is sometimes used in the indigenous entrepreneurship literature when ventures started by the indigenous (however loosely defined) people are compared to those started by the outside entrepreneurs, immigrants or even multinational corporations (Heilbrunn & Kushnirovich, 2007). In a similar fashion, Anokhin, Mwaka & Franquesa (2007) explored entrepreneurial transience at the local (county) level. From their exploratory study they concluded that there was a substantial overlap between the factors explaining new venture creation and transience even though the effects exerted by those factors on firm formation and migration processes differed significantly. In general, businesses seemed to be more likely to be created in counties with above-average median income, higher population density and less crowded competitive landscape. Transient entrepreneurs also favored high-income counties but, in contrast, were drawn to areas with higher concentration of active firms and lower population density.

The dynamic component of entrepreneurial transience (both inflow and outflow of *existing* entrepreneurial firms into/out of the region) has not been explored systematically to date. Managing transience should, however, be present on the radar of public agencies responsible for policy formulation: business news provides multiple examples of regions' winning from inviting existing businesses to relocate even if direct tax subsidies are guaranteed to them to make such relocation possible. It is not unusual for local economies to soar if they are successful in attracting successful ventures from elsewhere. In fact, this is one of the motivations behind creating special economic zones in depressed regions: even though the transient businesses might be granted preferential tax treatment and in some cases full local income tax pardon the benefits to the region are manifold from new jobs creation to sales tax collection, infrastructure develop-

ment, etc. Such policies may be extremely successful: there are instances where gross regional product have grown more than fivefold and consolidated budget earnings have increased almost tenfold over the course of five years as a result of implementing a regional policy on attracting businesses previously headquartered elsewhere (Higgins, 2001). Yet, there are very few systematic attempts to explore the issues pertaining to existing ventures transience. When such attempts are undertaken they tend to concentrate on the migration of the multinational corporations' headquarters (Barner-Rasmussen, Piekkari, & Bjorkman, 2007).

Hypotheses development

Entrepreneurs do not operate in vacuum but respond to their environments (Gartner, 1985). Entrepreneurship literature distinguishes between several groups of environmental factors that may affect entrepreneurial dynamics within certain areas including government policies and procedures, socioeconomic conditions, entrepreneurial and business skills represented in the area, financial and non-financial assistance availability as well as network and ecological considerations (e.g., Gnyawali & Fogel, 1994; van Gelderen, Thurik, & Bosma, 2006). We build on this literature and scrutinize the effects of educational and socioeconomic conditions, regional enterprise support policies, financial environment and overall entrepreneurship dynamics in the area on the rates of entrepreneurial transience.

In our study we control for aspects of the environment that are beyond the local authorities' influence or are hard to modify (such as population size), but the focus of our investigation is rather on factors that can be modified in the short- to mid-range through government policy. Of particular interest are the local policies with respect to education, enterprise development zones, and taxation.

Education policies

Human resources are essential to any enterprise success. In fact, entrepreneurship necessarily implies the nexus of individuals and opportunities (Shane & Venkataraman, 2000). Thus, high-quality human resources may act as a natural magnet for already existing entities causing them to consider relocation. Microsoft, for instance, has announced opening up a division in Vancouver, Canada to tap into qualified international labor resources due to tightening of immigration policies in the United States (Microsoft, 2007). For smaller entities the option of expanding may not be sustainable; instead, moving existing operations to a new place could prove more viable.

Of the different workforce characteristics that may prompt migration of entrepreneurial firms, education is particularly important: prior research demonstrates that higher education level is positively associated with greater levels of certain types of entrepreneurial activities (Reynolds et al., 2003). As smaller firms may not have the resources to train personnel, and because training own personnel cannot always be done in a timely manner, entrepreneurial firms perceiving a need in high-quality labor may consider relocating to the areas with above-average endowment of highly educated residents to be able to exploit this local resource immediately. This may be particularly applicable to the already existing firms that have withstood the trials of the founding period and are scaling up their capabilities to latch on to a proven entrepreneurial opportunity. Accordingly, areas with above-average endowment of highly educated population are likely to attract ventures currently operating elsewhere while resident entities would have fewer reasons to leave. In other words, such locations should have higher levels of net transience. Stated formally:

Hypothesis 1: Net entrepreneurial transience is positively associated with the average level of educational attainment in the area.

Enterprise Development Policies

Entrepreneurship literature suggests that how environmental conditions are perceived by existing and aspiring entrepreneurs is an important determinant of business venturing activities (Dubini, 1989). Thus, the way entrepreneurship is promoted within the area matters: because many drivers of entrepreneurship are perceptual and are difficult to change in the short run, consistent support for enterprise development policies may play a pivotal role in ensuring gainful employment of entrepreneurial talent in the region (Acs et al., 2007). Even though empowerment zones and other programs aimed at fostering entrepreneurship may fail (Friar et al., 2003), new firm formation has been shown to respond positively to the development by regions of entrepreneurship support and development policies (Santarelli et al., 1995).

We suggest that development by a county of various policies aimed at promoting entrepreneurship in general may change entrepreneurial landscape in the locale in such a way that the area could become attractive not only to de novo start-ups but to transient firms as well. Location plays a significant role in a firm's success (Littunen, 2000). Hence, if a county develops a set of policies conducive to free enterprising (e.g., enterprise development zones of different kinds) such that firm birth rate in the area jumps above average, existing firms currently operating elsewhere may interpret it as a signal to relocate thus increasing net entrepreneurial transience rate. Stated formally:

Hypothesis 2: Net entrepreneurial transience is positively associated with the incidence of special enterprise development zones in the focal county.

Tax policies

Among the elements of external environment susceptible to manipulation by local regulators local taxes are perhaps most salient. In order to increase the attractiveness of an area to local and transient entrepreneurs regions may consider modifying the taxation structure such that the costs of doing business within that area are favorable compared to alternative locations. Generally, lowering the rate of taxation below region-average or authorizing exemptions of different nature could be seen as a way to stimulate entrepreneurship within the locale (Georgellis et al., 2006). Yet, current literature reports mixed results with respect to the relationship between tax rates and entrepreneurial activity: while some studies demonstrate negative association between income tax rates and aggregate rates of entrepreneurship (Robson & Wren, 1999), others report positive relationship between the two (Bruce & Mohsin, 2006). More advanced models have been developed to reconcile the contradicting perspectives and argue for the curvilinear (U-shaped) association between income tax rates and new firm formation (Georgellis et al., 2006). Below, we revisit this question in the context of entrepreneurial transience.

Besides, extant literature does not provide comprehensive treatment of the issues pertaining to the relationship between locally governed taxes and entrepreneurial activity: while several kinds of taxes could be administered locally (e.g., income, property, sales tax) the literature has predominantly concentrated on the association between income tax and start-up rates (Davidsson & Henrekson, 2002). We acknowledge this deficiency in current entrepreneurship literature and

develop testable hypotheses that link both property and sales tax rates to the levels of entrepreneurial transience observed in the area.

Reviewing empirical studies that have considered the effects of the policy environment on entrepreneurship, Georgellis & Wall (2006) note that most have focused on the relationship between income tax rates and new venture creation. While the general, ‘common-sense’ expectation is that higher tax rates should suppress entrepreneurship, nearly all studies reviewed have found a positive association. The explanation advanced by the current literature has to do with risk-taking: higher income tax rates provide net subsidy to an entrepreneur facing losses so that the deduction of the losses against other income would have greater tax-reducing value (Cullen & Gordon, 2007). The implication, of course, is that higher income tax rates encourage new venture creation by reducing the risks associated with high probability of business failure. Other studies show that both ‘common-sense’ and ‘risk-reduction’ logics hold under certain conditions, and that the relationship between income tax rates and start-up activity may, in fact, be curvilinear.

While we acknowledge the claim made above, we believe that the risk-reduction rationale is chiefly important for the emerging businesses that are only starting to exploit a particular entrepreneurial opportunity. As long as the profit-making potential of the opportunity is unknown, the likelihood of failure is high, and hedging against it is an important determinant of entrepreneurial behavior. For the transient ventures, however, the likelihood of failure is not as high; as said before, they have withstood the test of time and have a track record established. Accordingly, net subsidies to risk-taking provided by higher income tax rates are of less importance to transient firms, while their profit-diminishing capability is particularly troublesome. As such, we expect higher income tax rates to suppress entrepreneurial transience. Stated formally:

Hypothesis 3: Net entrepreneurial transience is negatively associated with the income tax rates in the area.

We generally expect to see the same negative association between the property tax rates and net entrepreneurial transience. Prior literature demonstrates that higher factor costs have a negative effect on entrepreneurial activity (Wagner & Sternberg, 2004). Higher property tax rates would inflate the costs of doing business and as such could be expected to hinder business venturing. Because relocation from one location into another incurs costs of its own, it is unlikely that (all else equal) higher property tax rates could generate a positive flow of transient firms into a region. On the contrary, the opposite is likely to be true: trying to minimize their operating expenditures active firms might consider moving out of a county with above-average property tax rate in to a more favorable environment even if initial relocation costs might be involved. Stated formally:

Hypothesis 4: Net entrepreneurial transience is negatively associated with the property tax rates in the area.

The effect of sales tax rates on entrepreneurial transience is, however, expected to be different from both income and property tax. Unlike income tax, sales tax does not reduce the entrepreneur's profits, nor does it constitute a cost of running a business like property tax. Sales tax is ultimately passed on to the customers and is often not evident in the price of the firm's products immediately but instead calculated ex post. Thus, there should be no negative association

between the sales tax rates and entrepreneurial activity. Moreover, while the firm collects sales tax from its customers at the moment of closing a sale, it does not have to re-pay the collected amount to the local authorities immediately. Most often, depending on business size and sales volume, the firm wires the amount collected to the appropriate agencies on a monthly or quarterly basis. Thus, the amount of sales tax collected by the firm constitutes an interest-free form of working capital. As having access to capital is important for existing firms to sustain growth (Aldrich, 1990; Evans & Jovanovic, 1989), higher sales tax rates could actually be positively related to entrepreneurial transience because they provide free (short-term) financial resource. Stated formally:

Hypothesis 5: Net entrepreneurial transience is positively associated with the sales tax rates in the area.

Moderating effect of income

Prior research clearly demonstrates that the relationships between different policy variables and entrepreneurship may be moderated by the region's relative wealth. Average personal income, for instance, apart from directly affecting the start-up rates in the region (Okamuro et al., 2006) significantly affects the effectiveness of various policy elements in explaining new venture formation (Acs et al., 2007). Types of activities suitable for entrepreneurs in more and less wealthy locations differ significantly (Wennekers et al., 2005). Even the much acclaimed relationship between entrepreneurship and economic development may turn out to be negative and not positive based on the levels of relative wealth (Tang & Koveos, 2004). Accordingly, we posit that average personal income in the area is likely to moderate the relationship between some of

the independent variables and entrepreneurial transience. Particularly, we suggest that the direction and/or strengths of the relationships between different taxes administered locally and the rates of entrepreneurial transience could be dependent on the average personal income within a county.

As explained above, high income tax rates reduce the profitability of a business. In that, income tax effects are similar to the effects of property tax which constitutes a cost of running a business. Accordingly, being born into a county with high income and property tax rates puts a start-up at cost disadvantage comparing to a business started in a more benign environment. If cost disadvantage imposed by a county is accompanied by low average personal income, local entrepreneurial activity is effectively discouraged. Accordingly, the stock of gainfully employed entrepreneurial talent in the locale is insufficient and, according to the population ecology theorists, may be expected to grow until it reaches carrying capacity (Aldrich, 1990). However, as natural growth (net births) is discouraged by the hostile environment, the void is likely to be filled by the out-of-county entrepreneurs that have withstood the test of time in their original location and could now move into a new county with low levels of local competition to exploit the respective opportunities. In other words, in poor counties high rates of income and property tax could be expected to suppress local start-up activities thus freeing the competitive landscape for transient ventures to take over. The opposite could be expected for richer counties. Stated formally:

Hypothesis 6a: Average personal income in the area negatively moderates the relationship between income tax rates and net entrepreneurial transience.

Hypothesis 6b: Average personal income in the area negatively moderates the relationship between property tax rates and net entrepreneurial transience.

As suggested earlier, collected sales tax can actually be used as a free financial resource for the firms, and the expected relationship between sales tax rates and entrepreneurial transience is positive. We suggest that this effect is reinforced by the area's average personal income: as county residents have higher disposable income, they are more likely to spend substantial amounts within the locale and are less likely to be willing to go elsewhere to make a purchase due to inconvenience even if it could result in certain savings. This would make the environment more attractive and, in turn, stimulate the inflow of transient firms into such locale. The opposite is true for the counties with low average personal income. Accordingly, we expect average personal income to positively moderate the relationship between sales tax rates and entrepreneurial transience. Stated formally:

Hypothesis 6c: Average personal income in the area positively moderates the relationship between sales tax rates and net entrepreneurial transience.

Data and Method

The population for the present study consists of the 88 counties in the state of Ohio. We collected data for each county and for each year between 2001 and 2004, to create a panel dataset containing 352 county-year observations. Data was drawn from a number of secondary sources including Ohio Bureau of Workers Compensation, Ohio Department of Development and Ohio Department of Taxation, as well as the Bureau of the Census, Bureau of Economic Analysis, Small Business Administration, and Federal Deposit Insurance Corporation.

Dependent Variable: Net Transience. Information for this variable was drawn from the Ohio Bureau of Workers Compensation (BWC) data files. Ohio employers (even part-time employers) are required to carry worker's compensation insurance. Large and financially stable employers are allowed to self-insure. All other employers must purchase and maintain a policy with the BWC by paying bi-annual premiums based on self-reported payroll in several employment categories or "manual codes". Given this legal requirement, the BWC database is believed to be a reliable source of employer counts in Ohio¹.

BWC data, however, includes more than just private business employers. Some state and county public employers contribute to the state insurance fund as well. In addition, private not-for-profit employers are also required to maintain active accounts with BWC. This includes schools, colleges, universities, and related activities (e.g., fraternities and sororities); emergency services; welfare and social services; religious organizations; athletic clubs and events; and even persons hiring uninsured domestic contractors and household employees. Therefore it was important to screen BWC accounts and select only those that corresponded to private businesses, as indicated by insurance manual codes. County-level aggregates of BWC policies corresponding to non-public for-profit employers during the 2000-2004 period were provided by the Office of Strategic Research of the Ohio Department of Development.

BWC data files include information on (i) active policies and the year they were started; (ii) cancelled policies and the year they were cancelled – in case the company is dissolved or moves out of state; and (iii) policies that become inactive due to firm bankruptcy. Interestingly, if a company moves within the state of Ohio its policy remains unchanged and active, and only the firm address is updated. Given the structure of BWC data, net transience for a particular

¹ County-level business counts obtained from BWC as part of this study were found to be comparable to county-level data on number of establishments from the Census Bureau.

county (i) in a particular year (t) was measured as the change in active policies that could not be explained either by new and cancelled policies during the period, or by firm bankruptcies:

$$\text{Net Transience}_{i,t} = [\text{Actives}_{i,t} - \text{Actives}_{i,t-1}] - [\text{New}_{i,t} - \text{Cancelled}_{i,t} - \text{Bankrupt}_{i,t}]$$

Our final *rate of net transience* measure was the estimated number of transient businesses, as defined above, divided by the county's population of active businesses, and expressed as a percentage – i.e., multiplied by 100 ($\mu=-0.24$; $\text{stdev}=2.46$).

Educational Attainment. Our indicator of education in the county is the percentage of adult population (25 years old or older) that has earned a bachelor's degree or higher, based on data from the Bureau of the Census (e.g., Goetz & Freshwater, 2001).

Enterprise Development Zones. An Enterprise Zone (EZ) is a designated area in which Ohio businesses can receive tax incentives in the form of tax exemptions on eligible new investments. The local government must identify the geographic area and may also propose limits on the types of businesses and projects eligible, but must then petition and gain EZ certification from the state. Once certification is granted municipalities are permitted to offer exemption of real and/or personal property taxes up to 75% for up to 10 years or an average of 60% over the term of the agreement on new investments, buildings, machinery/equipments and inventory improvements to existing land and buildings for a specified project. We divided the total number of active EZs in each county-year observation by the number of municipalities in the county to obtain a county-level measure of the relative incidence of enterprise zones.

Tax Rates. Tax data was obtained from Ohio Department of Taxation. Sales tax rates are established at the county-level, so that this was a straightforward variable. By contrast, both income and property taxes are established at the local level, and they had to be aggregated to the county-level. Income tax rates were averaged across all cities and villages within a county for

each year observation. In turn, average property tax rates were computed by dividing aggregated county-wide tax amounts due by county-wide property values in a particular tax year, for commercial, industrial, mineral, and public utility class of real property (i.e., Class II). Average property tax rates are expressed in mills (i.e., units of \$1 per \$1,000 of taxable value).

Control Variables. In order to distinguish antecedents of transience from antecedents of entrepreneurial activity in general, it was deemed important to control for local entrepreneurial activity in regression analyses. Local entrepreneurship rates were computed as the ratio of new business starts over total active businesses in each county in the year prior to each observation. We also controlled for socioeconomic conditions in the local market, including average personal income, change in average personal income (lagged), population, and change in population (lagged). Personal income data was obtained from the Bureau of Economic Analysis. Population estimates were obtained from the Census Bureau. To reduce skewness in the data we used the natural log transformation of population. The presence of colleges and/or universities will be positively related to the level of education attainment in the county (specially in rural counties) in ways that may not be associated with entrepreneurial activity or transience, since these high-quality human resource pools do not participate in commercial (i.e., for-profit) labor markets. Therefore, we decided to add a control for the number of colleges and universities (including branches) within a county relative to its population. Finally, following prior studies of entrepreneurial activity in economics (e.g., Goetz & Freshwater, 2001) and management (e.g., Pennings, 1982; Gnyawali & Fogel, 1994), we added two controls for financial resources within the county-year observation: The natural log of Small Business Administration loan guarantees (in \$ millions) per capita; and the level of competition among financial institutions as measured by the

number of bank offices per capita. The latter was obtained from the Federal Deposit Insurance Corporation.

Method. We test our hypotheses by means of random-effects generalized least squares regression of the rate of net transience using our sample of 352 county-year observations. The random county effect accounts for unobserved county-level factors. Given the panel structure of the data, we base our results on robust estimation of standard errors in order to avoid any potential effects of autocorrelation. We assess overall model fit by means of Wald chi-square statistics.

Since some of our hypotheses entail moderation, we used a hierarchical sequence of models. Our reduced model (Model 1) contains control variables as well as the main effects of all the variables of interest. This model will provide the test for Hypotheses 1 to 5. Subsequently, we fit the full model (Model 2) which includes also the interaction terms between tax rates and average income and, thus, provides a test for Hypotheses 6a-6c.

Results

Descriptive statistics are given in Table 1; results of hypotheses testing are summarized in Table 2.

----- Insert Table 1 about here -----

----- Insert Table 2 about here -----

Overall, the set of explanatory variables in our main effects model (Model 1) is strongly significant [$\chi^2(14) = 171.3; p < 0.001$]. Among the variables that contribute to the performance of the model, the coefficient for educational attainment is positive and significant ($\beta = 7.77$; $p = .039$). Consistent with Hypothesis 1, this result suggests that the greater the percent of population with college degrees the greater the net transience into the county.

The coefficient for enterprise zones is positive, as predicted, but it is not statistically significant. Thus, Hypothesis 2 is not supported.

The coefficient for average income tax is negative and significant ($\beta=-1.51$; $p=.005$). This result provides strong support for Hypothesis 3 and suggests that lessening income taxes will enhance the ability of a locale to attract ventures currently operating elsewhere.

The estimated coefficients for property tax rates and sales tax rates are against the expected direction, in both cases, and are non-significant, so that Hypotheses 4 and 5 are not supported. Despite the lack of linear effects, our subsequent findings suggest that both of these tax policies are important antecedents of net transience.

Model 2 in Table 2 contains the results of fitting our full model that includes interactions terms. The Chi-square difference test between Model 1 and Model 2 suggests that the set of interaction terms is jointly significant [$\chi^2(3)=54.3$; $p<0.001$]. With regard to individual effects, the regression coefficient for the interaction between average personal income and average income tax rate in a county is not statistically significant. Thus, Hypothesis 6a is not supported.

The coefficient for the interaction between average income and property tax rate is negative and significant ($\beta=-0.01$; $p=.039$), indicating that the slope of the relationship between property taxes and net transience declines as average income increases. This result provides support for Hypothesis 6b. Further analysis of the shape of this interaction term (see Figure 2 for a plot) demonstrates that the effect of property taxes on transience reverses over the mid-range of the distribution of average income values. In low income counties (we plot the relationship at one standard deviation below the mean) greater property taxes lead to greater net transience; while in high income counties (we plot at one standard deviation above the mean) greater property taxes lead to lesser net transience.

----- Insert Figure 2 about here -----

The coefficient for the interaction between average income and sales tax rate is positive and marginally significant ($\beta=0.20$; $p=.07$), indicating that the slope of the relationship between sales tax and net transience increases as average income increases. This result provides support for Hypothesis 6c. Further probing of this interaction effect (see Figure 3) shows that, in low-income counties, an increase in sales tax leads to a strong reduction in net transience. By contrast, in high-income counties, an increase in sales tax leads to a moderate increase in net transience.

----- Insert Figure 3 about here -----

Discussion, Implications, Conclusions

In this study we introduce a novel topic for entrepreneurship literature – entrepreneurial transience. We explore possible reasons that may justify a costly decision for a firm to migrate into another location, propose several hypotheses regarding regional policies and environmental factors that may affect net rates of entrepreneurial transience, and test our hypotheses using county-level data for the state of Ohio during the 2001-2004 period.

We demonstrate that local authorities possess several tools that could stimulate the inflow of businesses to the county from elsewhere. While some are well known in the entrepreneurship literature (such as education and income tax rates) others may have been overlooked by the extant research (property tax rates, sales tax rates). In line with prior literature on start-up rates (Goetz et al., 2001; Phillips, 1993), we find that high quality human capital is one of the important determinants of the entrepreneurial landscape: transient ventures favor counties with above-average endowment of individuals with a college degree. This finding adds a new dimension to

the economic benefits that result from education and underscores the importance of local (as well as federal and state) education policies. Policy initiatives directed to increasing high-school graduation rates and to facilitating transition to and completion of college studies hold the promise of future entrepreneurial dividends, not just in the form of more robust start-up rates, but also in the form of greater net flows of migrant ventures.

Interestingly, while education levels appear to have a similar effect on both start-up rates and net transience, our findings suggest that income taxes may have a different impact on these two components of the entrepreneurial landscape. Prior studies report either a linear positive (e.g., Evans & Leighton, 1989; Bruce & Mohsin, 2006) or U-shaped (Georgellis & Wall, 2006) relationship between income tax rates and rates of entrepreneurship. Authors argue that incentives to self-employment associated with greater personal income taxes (i.e., greater opportunities for tax evasion and/or greater net subsidies for risk taking) appear to overwhelm disincentives (i.e., lesser net profits) for at least some (i.e., those already facing a high level of taxes) emerging start-ups. By contrast, the present study finds the relationship of income taxes with net transience to be linear and negative. In other words, migrating entities appear to regard high income taxes as a disincentive. Since a firm's relocation is not as risky as the initial founding, and since relocating entrepreneurs may be past the point of considering alternatives to self-employment, the reduction in profits associated with higher income tax rates becomes the most salient aspect to transient ventures. The implication from this result is that local governments could reduce income tax rates as a means of attracting outside ventures into the region. Whether such policy could be justified in the long run is a question in its own right and future research is needed to find the balance between depriving the region of the respective income stream and indirect benefits that the phenomenon of transience may provide.

Beyond income taxes, property and sales tax rates are also found to be related to net transience. However, the direction of their effects depends on the average personal income level in the county. This was a bit of a surprise finding. We hypothesized main effects of both these variables that would be moderated (in strength, but not in sign) by personal income levels. In lieu of that, we found income moderation of a stronger form, whereby tax effects flipped their signs in poorer versus richer counties. In particular, our hypothesized negative effect of property tax rates and positive effect of sales tax rates on transience appear to be circumscribed to high-income counties only. These effects are reversed in low-income areas. The implication is that local governments may want to follow a contingency approach to property and sales tax policy design, depending on average personal income in their area.

The relative incidence of enterprise zones in a focal county did not appear to substantially increase transience rates. Thus, we find no evidence that direct promotion of business investment through special development zones leads to relocation into the focal county of businesses active in other Ohio counties. This doesn't mean that enterprise zones are a blunt economic development instrument. Rather, an ex-post perusal of enterprise zone agreements entered during the period of study across Ohio suggests that this policy tool may be targeted towards larger, more mature firms (both from state and out-of-state) that can bring substantial investment and employment gains to the area. Given this, it is possible that enterprise zones do more to promote mature businesses' expansion into the county as opposed to re-location by younger businesses. Additionally, it could also be that the sparse use of this local policy tool within Ohio counties makes it difficult to study its effects on transience at the county-level of analysis (as reported in Table 1 the average relative incidence of enterprise zones at the county-level was 0.11 - i.e., about 1 enterprise zone in each 10 municipalities). Aggregation in the present study, in order to

match observed transience flows, may be masking true effects at the municipality level. Future research may cast further light onto these questions.

Finally, our results indicate that population growth as well as past rates of new firm formation are also important drivers of net transience into a focal county. It is both sensible and consistent with the prior entrepreneurship literature that transient ventures would favor environments with high population growth rates. The effect of prior start-up rates is, perhaps, more interesting. It may be that, in our study, greater start-up rates proxy for the entrepreneurial climate or culture of a focal county, which may be the true reason why non-native young ventures relocate there. Alternatively, it may be that greater rates of new business creation provide greater business opportunities for some of the relocating firms. In either case, it would seem that the benefits of a vigorous entrepreneurial community spill over into net transience, thus compiling the accumulation in the locale of gainfully employed entrepreneurial talent. Hence, our findings underscore the importance of policies that seek to create a favorable environment to new ventures and to stimulate local rates of start-up.

Because it is an exploratory study into the nature of a novel phenomenon, the present research has certain limitations. While consistent with current approach to studying entrepreneurship (Santarelli et al., 1995) our data is limited to the firms with at least one employee. Our study is also limited to intra-state venture transience, as venture relocation from out-of-state would not be included in our measure of net transience. Nevertheless, we expect the former to represent the bulk of the phenomenon of interest. Our definition of transience follows the approach suggested by the prior research (Anyadike-Danes et al., 2005) in that we concentrate on ‘net’ transience rate. We acknowledge that it may be interesting to analyze inflow and outflow of ventures separately and would like to explore the issue further at a later point. While we see the use of multi-

ple independent data sources as the strengths of our study one might question whether or not they are fully compatible. We spent significant effort ensuring such compatibility and are fairly certain that our results reflect true state of affairs.

We do not make any claims with respect to the economic effect of transient ventures on local environments. While we suspect it may be significant we plan to explore this issue in details in our future work. Also, we would like to extend our treatment of entrepreneurial transience processes to the firm level as opposed to the county level. As the decision to leave one's network and move elsewhere is unorthodox and could be seen unwise under the mainstream entrepreneurship/network paradigm, reasons and motivations behind firms' decision to migrate require scholarly attention.

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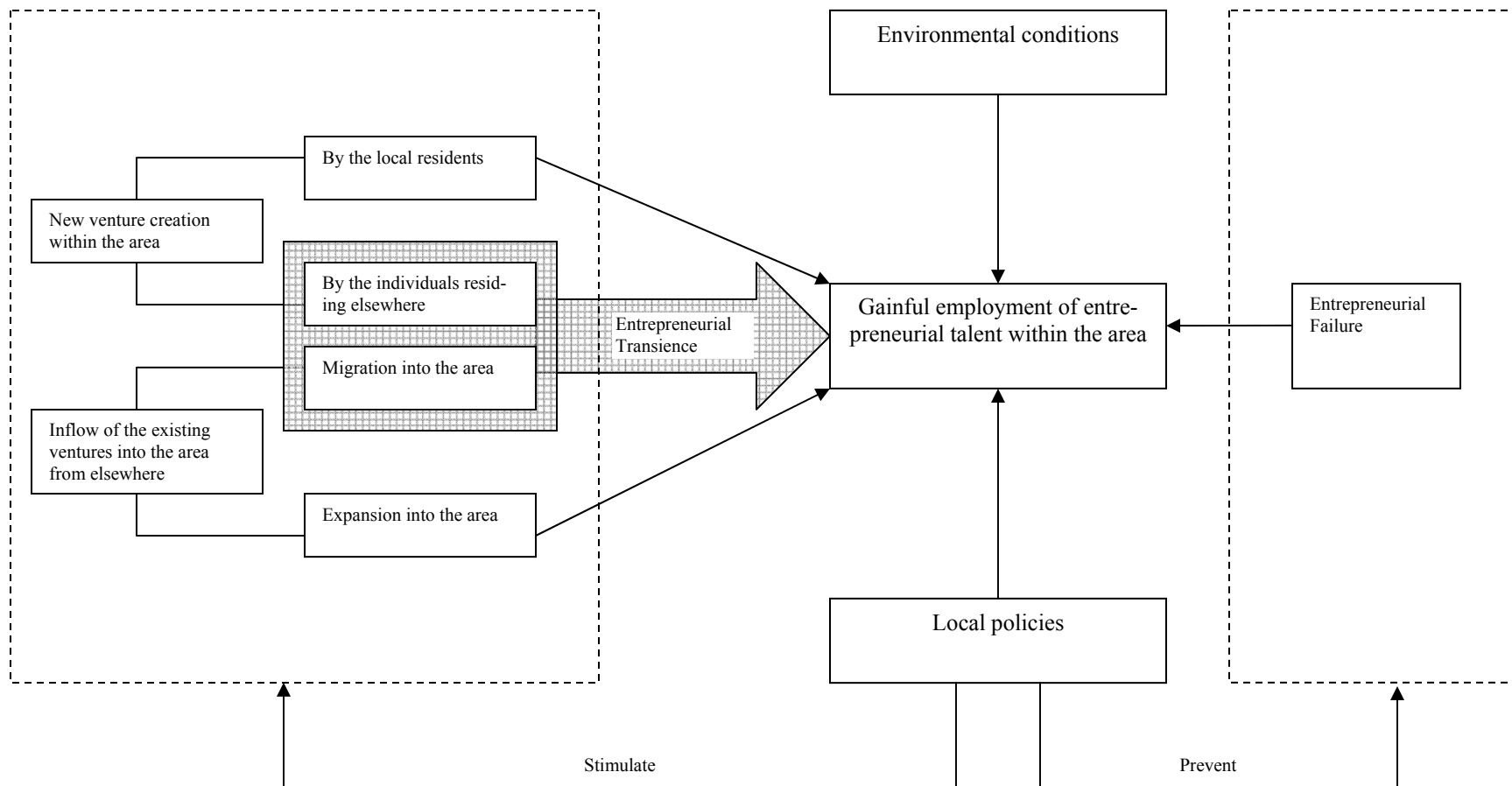


FIGURE 1

TABLE 1
Descriptive statistics and correlations^a

Variables	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11	12	13
1 Rate of net transience	-0.24	2.46													
2 Educational attainment	0.15	0.07	0.39												
3 Enterprize zones	0.11	0.08	0.05	0.23											
4 Income tax rate	0.25	0.25	0.07	0.42	0.63										
5 Property tax rate	48.77	7.64	0.17	0.50	0.22	0.52									
6 Sales tax rate	1.13	0.32	-0.23	-0.50	-0.15	-0.34	-0.31								
7 Rate of Entrepreneurship (lagged)	0.22	0.06	0.27	0.25	-0.03	0.07	0.11	-0.16							
8 Personal Income	25.79	4.37	0.36	0.83	0.34	0.50	0.46	-0.47	0.24						
9 Change in persopnal income (lagged)	0.03	0.02	-0.03	-0.08	-0.02	-0.06	-0.02	0.10	-0.04	-0.09					
10 Population (ln)	11.16	0.98	0.26	0.73	0.37	0.63	0.61	-0.54	0.24	0.67	-0.04				
11 Population Growth (lagged)	0.29	1.49	0.33	0.43	0.07	0.04	0.06	-0.21	0.28	0.35	-0.23	0.17			
12 Universities per capita	0.01	0.01	-0.05	0.06	-0.07	-0.11	-0.12	-0.08	-0.08	-0.01	0.08	0.03	-0.06		
13 SBA loan guarantees per capita (lagged)	2.53	1.24	0.21	0.44	0.20	0.33	0.32	-0.29	0.06	0.46	-0.08	0.49	0.19	-0.01	
14 Bank offices per capita	0.36	0.10	-0.11	-0.27	0.15	0.01	-0.25	0.15	-0.22	-0.07	0.01	-0.33	-0.11	0.04	-0.11

^a n = 352

TABLE 2.
Random-effects Regression of Rate of Net Transience^a

	Model 1	Model 2
Educational attainment	7.77 *	10.35 **
	(3.77)	(3.77)
Enterprize zones	0.42	-1.42
	(1.59)	(1.90)
Income tax rate	-1.51 **	-0.26
	(0.54)	(1.16)
Property tax rate	0.01	0.00
	(0.02)	(0.02)
Sales tax rate	-0.40	-0.35
	(0.37)	(0.44)
Income x income-tax		-0.07
		(0.14)
Income x property-tax		-0.01 *
		(0.00)
Income x sales-tax		0.20 †
		(0.11)
Control variables		
Rate of Entrepreneurship (lagged)	6.05 **	7.11 ***
	(2.16)	(2.25)
Personal Income	0.05	0.04
	(0.05)	(0.05)
Change in persopnal income (lagged)	5.00	4.26
	(5.37)	(5.34)
Population (ln)	0.03	0.10
	(0.23)	(0.23)
Population Growth (lagged)	0.26 **	0.18 †
	(0.10)	(0.11)
Universities per capita	-11.13	-16.92 *
	(8.73)	(8.55)
SBA loan guarantees per capita (lagged)	0.11	0.02
	(0.12)	(0.12)
Bank offices per capita	0.88	-0.11
	(1.66)	(1.55)
Intercept	-3.81	-3.89
	(2.85)	(2.78)
X^2	171.30 ***	225.60 ***
d.f.	14	17

^a n = 352, unstandardized regression coefficients, robust standard error in parenthesis, † p < .10, * p < .05, ** p < .01, *** p < .005

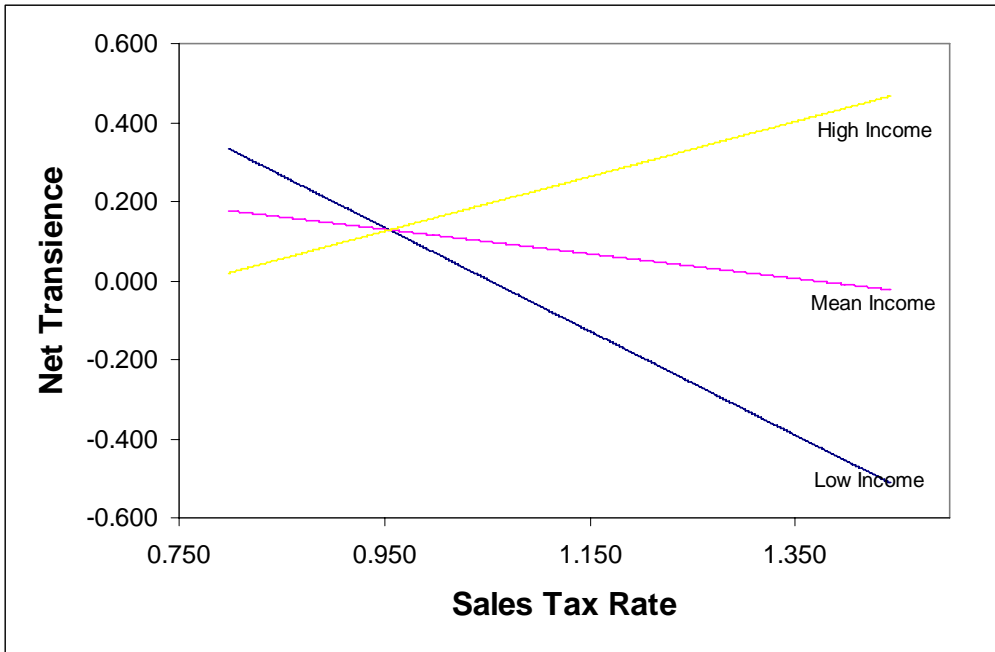


Figure 2

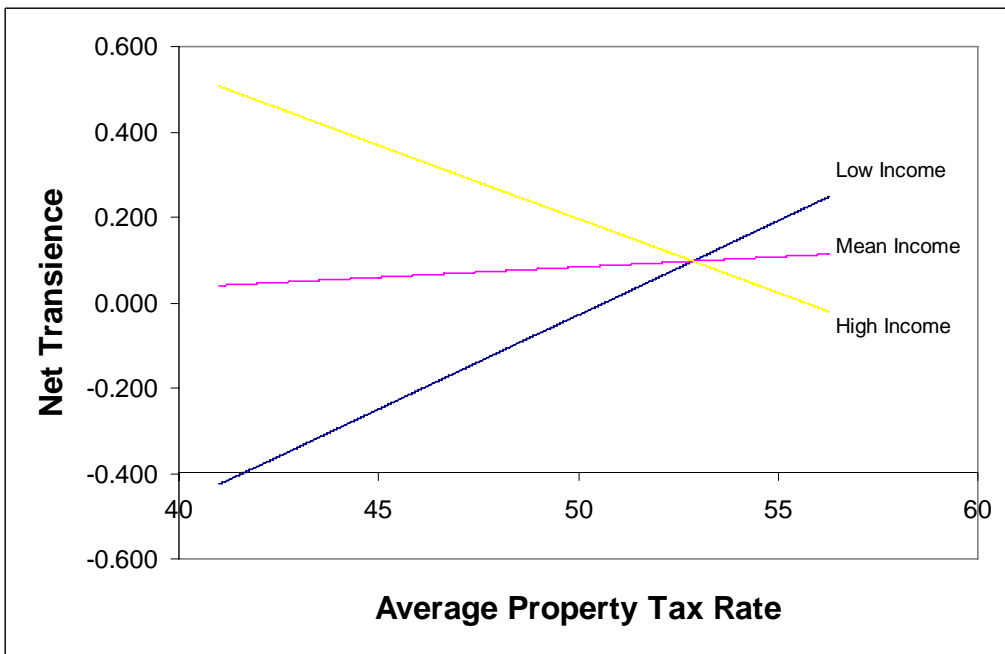


Figure 3