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Religious diversity and entrepreneurship in transition: lessons for policymakers

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Abstract

Using the 2010 Life in Transition Survey, we show that localities with higher religious diversity have more respondents who have tried to set up a business. Although religious diversity also correlates with a higher start-up probability (following trial), this effect is driven by access to finance and risk preferences. We provide suggestive evidence that the positive association between religious diversity and entrepreneurial trial is positively moderated by social capital (when measured as access to weak ties and the ability to bridge structural holes). Our results suggest that programs which encourage entrepreneurial attempts in diverse areas and develop such social capital are likely to be particularly effective. At the start-up stage, relaxing credit constraints should rank high on the policy agenda.

JEL codes: J15; L26; P23

Keywords: Entrepreneurship; Diversity; Transition region

Introduction

The success of the transition economies in the former Soviet Union and Central and Eastern Europe has been tightly linked to entrepreneurship. Entrepreneurial activity is an important ingredient of growth, particularly in the early years of transition, since small business owners established businesses in industries that did not exist, or were stagnant, under socialism (Berkowitz and DeJong 2011). Likewise, sales and employment grow faster in entrepreneurial ventures than in state or privatized firms, and new businesses are more efficient (McMillan and Woodruff 2002). Entrepreneurial ventures may also be an effective way of mitigating income shocks by providing households with an alternative source of employment. Yet the determinants of entrepreneurship in transition countries are insufficiently understood. This is not only due to the lack of comparable data on business attempts and start-ups across all transition countries, but also because it is difficult to define an entrepreneur in this context. In the transition region, the most common type of business owner is not the well studied Schumpeterian type prevalent in the West, but rather the Kirznerian type that is less innovative and more dependent on his environment for the generation of opportunities (Estrin et al. 2006).

In this paper, we bridge these gaps by studying the link between local religious diversity (measured as religious fractionalization in each respondent's locality, or primary sampling unit) and individual entrepreneurial behavior, using a new data set: the 2010 Life in Transition Survey (LiTS). This rich data set, which covers 29 transition countries, allows

us to focus on individuals who have taken steps towards founding a business but who have not yet become business owners (the trial stage), as well as on those who have managed to complete the process of founding an enterprise (the start-up stage). In particular, our data captures small businesses that may operate in either the formal or the informal sector.

We find that religiously diverse localities have more respondents who tried to start a business as well as a higher number of start-ups. While the former correlation survives when we introduce additional individual and local-level controls, the latter disappears once we control for the respondent's access to borrowing and risk preferences, highlighting the role of financing constraints for business survival. In addition, our results are less likely to be driven by the differential impact of diversity on necessity versus opportunity entrepreneurs, as we control for respondents' education and family socio-economic characteristics. To understand further what drives the link between religious diversity and entrepreneurship, we also investigate the moderating role of social capital, which may be particularly relevant for businesses when formal institutions are weak or insecure, as is the case in many transition countries. We find that social capital, measured by the extent to which the respondent meets friends, *negatively* moderates the association between local diversity and entrepreneurial trial and startup. In contrast, religious diversity has a strong positive effect on entrepreneurial trial for those respondents whose social networks expand beyond the family, close friends and work colleagues, or who believe that effort and hard work, or intelligence and skills are the most important factors to succeed in one's country.

Our research design has a number of attractive features. Focusing on a group of countries with similar history, geography and culture helps us to overcome the issue of country heterogeneity present in broader cross-country studies, such as those using the Global Entrepreneurship Monitor (GEM) data. All of the countries in our sample underwent almost half a century of Soviet rule, which, in addition to imposing a common set of political and economic institutions, also banned private enterprise, which re-emerged following the collapse of communism across the region in 1989. Second, the richness of our data set allows us to account for a wide variety of characteristics that may affect both religious diversity and entrepreneurship, such as individual and family communist party membership, family background, or risk preferences. One notable innovation of our paper is that we are also able to account for fixed national and sub-national characteristics that may be confounding our results by including country fixed effects, along with primary sampling unit (PSU) geographic characteristics. Moreover, while most of the literature has calculated *national* diversity measures which may be correlated with a variety of country-level characteristics, our data instead allows us to calculate a new, sub-national measure of religious diversity at the PSU level.[1]

Our work integrates several strands of the literature. First, our findings are relevant for the small but growing literature on entrepreneurship in transition countries (Aidis et al. 2008; Demirguc-Kunt et al. 2011; Djankov et al. 2005, 2006). In addition, we speak to an extensive literature which links ethnic, language and religious diversity to aggregate-level outcomes such as economic development, war or the provision of public goods. While one strand of this work claims that diversity can breed poverty and conflict (Alesina et al. 1999; Easterly and Levine 1997; Reynal-Querol 2002), recent work has instead reached more nuanced conclusions. For example, Ashraf and Galor 2013 show that historical

differences in genetic diversity within a society have a hump-shaped effect on productivity, while Ager and Brückner 2013 find that cultural fractionalization within the US in the 1870-1920 period actually increased output. Similarly, Alesina et al. 2013 find that an index of birthplace diversity is positively related to economic development.[2] Finally, our paper relates to a large management literature on the (mostly undecided) impact of diversity at the firm level, which we review in more detail in the next section.

From a policy perspective, our results suggest that programs encouraging entrepreneurial attempts may be particularly successful in more diverse areas. In addition, social capital which fosters the formation of non-familial ties and belief in one's own abilities, possibly through access to new communication technologies or networking opportunities with more experienced business owners, is likely to enhance these effects. However, religious diversity matters less at the startup stage, where the highest impact could come from facilitating access to finance. As we discuss in the last section of the paper, formal banking may be less effective at easing credit constraints for informal entrepreneurs, and less traditional approaches (such as microcredit schemes, for instance) may have to be adopted. All in all, our results suggest that, under the appropriate circumstances, nurturing Kirznerian entrepreneurs may accelerate the transition to a market economy which has stalled in many countries in the region. Such small-scale businesses may not only provide valuable employment and income opportunities, but may also eventually transform into fully fledged enterprises.

The approach and results of this paper are subject to two main caveats. First, LiTS is neither an entrepreneurial survey nor a country census, so one may question the reliability of our measures of diversity and entrepreneurship. This is less likely to be a serious concern, as the country-level correlations between our survey variables and those from the Global Entrepreneurship Monitor (on the comparable questions on entrepreneurial trial) and the Alesina et al. 2003 data on religious and language fractionalization are between 0.6 and 0.85. Second, while LiTS is representative at the country level, this is not the case for sub-national levels of aggregation. Unfortunately, no other sub-national measures of religious diversity for the entire transition region are available. Analysis at the primary sampling unit (PSU) level using the LiTS data has also been undertaken in other published work, such as Grosjean 2011 and Grosjean and Senik 2011. We also replicate our results using diversity calculated at the level of sub-national administrative regions and obtain similar results.

Our empirical results provide strong evidence that local religious diversity is positively correlated with entrepreneurial trial as well as start-up (the latter through its effect on access to finance and risk attitudes). There do, however, remain other possible explanations that may account for the patterns observed in the data. In particular, our identification assumes that local religious fractionalization is not correlated with omitted characteristics at the individual or locality level. Moreover, it is possible that entrepreneurship directly affects diversity.

We use three inter-related approaches to address these concerns. First, we control for a wide variety of individual and PSU-level characteristics, ranging from a respondent's religion to PSU-level corruption and trust. We also include country fixed effects and a battery of PSU-level geographic controls in all regressions. Second, using the approach developed by Altonji et al. 2005, we calculate that the effect of unobservables needs to be at least two times higher than the effect of observables to explain away the diversity effect,

which is unlikely. Third, our results survive when we control for whether the respondent has ever moved, as well as when we limit our observations to only years after 2005, suggesting that reverse causality between entrepreneurship and diversity is less likely to be an issue. Admittedly, several of our control variables - such as our measures of social capital, risk attitudes, or PSU-level non-geographic controls - are less likely to be exogenous, which suggests that our results should be regarded primarily as correlations. Nevertheless, our multi-pronged approach makes it less likely that our results capture simply a spurious relationship.

Theory and hypotheses

The determinants of entrepreneurship

An individual will become an entrepreneur provided that the perceived benefits of such an undertaking are higher than the expected costs. Unfortunately, researchers rarely observe decision making directly, so a "second-best" solution is to proxy such costs and benefits using various individual and environmental factors. For instance, more risk-loving individuals may have higher perceived returns to entrepreneurship, while starting a business in a rural area may be regarded as costly, due to higher transportation costs or lower market size.

The relative importance of various factors may be different at different stages of entrepreneurship, which can be regarded as a multi-stage selection process (Eckhardt and Ciuchta 2008). Entrepreneurs draw from an initial pool of opportunities with varying characteristics, following which further selection, either internal (by the entrepreneur) or external (by other market participants), takes place. Local factors that generate entrepreneurial opportunities may thus be crucial in the initial entrepreneurial stage, and less important in subsequent stages.

Alternatively, localities with distinct economic, political and cultural characteristics may not produce the same *type* of entrepreneur. In the transition region, Estrin et al. 2006 examine the different types of entrepreneurs associated with each stage of the transition process. In the first stage with extreme uncertainty, no market structure and only informal networks, there is place only for Kirznerian entrepreneurs. While the spotlight in the literature has been on the glorious Schumpeterian entrepreneur who brings about "creative destruction" (Schumpeter 1934), Kirzner 1973 argues that opportunities do not arise from new information, but from differential access to existing information. A Kirznerian opportunity is more common, less innovative and reinforces established business practices.

In the second stage, the price mechanism starts slowly functioning as a conveyor of information. But it is only in the third stage - the development of which has stalled in many transition countries - that more developed market institutions and property rights create the necessary environment for the existence of Schumpeterian entrepreneurs. Progression from stage to stage is not automatic and the initial Kirznerian entrepreneurship can become entrenched.

As a result, these two conflicting views of entrepreneurship lead to very different expectations of its determinants. A Kirznerian entrepreneur, unlike his Schumpeterian counter-part, is deeply tied to his environment, due to its generating capacity of opportunities. As a result, characteristics of the entrepreneur's locality, such as diversity, may be particularly important.

In the rest of this section, we discuss in more detail the mechanisms through which diversity may affect the costs and benefits associated with the decision to become an entrepreneur. We close by examining how social capital may affect the relationship between diversity and entrepreneurship.

The role of (religious) diversity

Diversity can affect entrepreneurship through at least two potentially opposing channels. At the firm or group level, heterogeneity could lead to better decision-making and positive outcomes. For instance, diverse groups are likely to have access to non-overlapping information sets and various skills relevant to a particular task (Lazear 1999). Moreover, exposure to different views can lead to creativity and innovation (Hong and Page 2001). On the other hand, diversity may breed conflicts and poor outcomes. According to the social characterization view, people categorize themselves and others based on similarities and differences, which leads to the distinction between insiders and outsiders (Williams and O'Reilly 1998). In-group members may be more trusted, which implies that homogeneous groups have fewer conflicts, are more committed and can better impose sanctions and enforce contracts (Fearon and Laitin 1996).[3]

As discussed in the introduction, diversity can have similar opposing effects in the cross-country setting as well. Diversity can lead to more conflict, less growth and less trust, but it can also spur productivity, output and economic development. The inability of diverse societies to agree on public good provision documented in the literature (Alesina et al. 1999) may be overcome with the provision of more but equally efficient private goods. In addition, diversity may be more likely to have a positive effect for more advanced societies, as opposed to poor economies.

Separating these effects of diversity is challenging from both a substantive and empirical point of view. Conceptually, diversity may capture language, ethnic and religious differences, among others. In this paper, we focus on religious diversity for several reasons. First, defining diversity precisely is important, as not all types of diversity may affect entrepreneurship in the same way. Second, religious identity is arguably less imprecise as compared to ethnicity or language: even if a person can be multilingual or multi-ethnic, one can rarely be a member of multiple religious group. As a result, endogenous reporting of religious affiliation may be less likely, as compared to ethnicity or language. Moreover, even though communist governments suppressed religious practise, religious cleavages have been important in the region both historically (during the times of the Ottoman empire) as well as more recently (during the civil wars in former Yugoslavia, Kosovo and Tajikistan, among others). Even so, we replicate our analysis below with a language diversity measure and obtain similar results (Unfortunately, we cannot do the same for ethnicity, as due to the open-ended nature of the survey question, ethnicity data is missing for a very large number of observations).

Our expectation is that, in the transition region context, the positive effects of religious diversity on entrepreneurship are likely to dominate. Despite the salience of religious divisions, faith-based conflict has been circumscribed to several countries only, while in most places peaceful co-existence has been the norm. Moreover, strong income growth in many transition countries may have provided additional incentives

to harness the benefits, rather than costs, of diversity. Alternatively, it is also possible that some of diversity's negative consequences, such as higher likelihood of conflict or labor discrimination, provide niche markets for business starters. For example, individuals excluded from government employment may be more likely to set up successful businesses, while post-conflict reconstruction may create demand for entrepreneurs' services.

Social capital

The individual and environmental determinants of entrepreneurship discussed at the beginning of this section may not exist in isolation. For instance, social capital has been found to be a key driver of entrepreneurial behavior, as it allows access to information through social networks (Burt 1992). Information is sticky, so contact to the person holding it may be important (Von Hippel 1994). Social capital may also matter when market information is ambiguous and not a clear guide to behavior, as networks can replace information (Bourdieu and Wacquant 1992). As a result, entrepreneurs with social capital may be better equipped to take advantage of the positive effects of diversity.

Social capital can arise from different types of structures. Coleman 1994 argue for the benefits of closed, dense networks, where everybody is connected to everybody. In such a network, frequent contact not only leads to exchange of information, but also to trust as collective sanctions can be easily imposed and reputation can arise. Therefore, closure increases the risk of cooperation. In contrast, Burt 1992, argues that structural holes in a network increase the benefits of cooperation, as those who bridge these holes obtain a competitive advantage, due to the different information which each group carries. The broker between two groups gets early access to new information and achieves entrepreneurial control over the flow of information.[4]

In short, the social capital of a group may increase with the network density inside the group and as well as with weak ties to outside groups. We expect that a community that is religiously diverse can benefit from both of these advantages. On the one hand, religious groups are densely connected within. Religion's function, according to evolutionary theorists, is to offer selective advantage at the group level by promoting cooperative behavior within the group (Norenzayan and Shariff 2008). Moreover, each additional religious group creates additional structural holes in the community that offer potential for bridging to entrepreneurial individuals with social capital. Therefore, religious diversity could harness both the benefits of closure around a particular religion and the bridging advantages among different groups.

This discussion leads us to three hypotheses which we will test in the remainder of the paper:

H1: The two stages of entrepreneurship, Trial and Startup, are affected differently by individual and environmental factors.

H2: Religious diversity is positively associated with entrepreneurship (either Trial, Startup or both).

H3: Religious diversity in a community is particularly beneficial to entrepreneurs with social capital.

Data and method

Data description

Our main data source is the Life in Transition Survey II (LiTS) conducted by the European Bank for Reconstruction and Development and the World Bank in 2010. LiTS is a nationally representative survey which covers 29 post-transition countries.[5] Respondents were drawn randomly, using a two-stage sampling method with primary and secondary sampling units. The Primary Sampling Units (PSU) are electoral districts, polling station territories, census enumeration districts or geo-administrative divisions. In our analysis, a locality is equivalent to a PSU. The Secondary Sampling Units are households. Each country has a minimum of 50 PSUs with each PSU containing around 20 households (for a total of approximately 1,000 observations), with the exception of Russia, Ukraine, Uzbekistan, Serbia and Poland, where 75 PSUs containing around 20 households each were drawn (for a total of approximately 1,500 observations).

The head of the household or another knowledgeable household member answered the Household Roster and questions about housing and expenses. All other modules were answered by a randomly drawn adult (over 18 years of age) from the household with no substitutions possible.[6] The survey company, IPSOS-Mori, provided us with additional data on PSU population size. We supplemented the survey data with external data on PSU geographic characteristics and access to natural resources. More information on the sources and definitions of all variables can be found in the next subsection as well as in the Additional file 1.

Econometric method

Dependent variables

Our first dependent variable (*Trial*) is a dummy equal to 1 if the respondent positively answers the question "Have you ever tried to set up a business?" Our second depdendent variable, *Startup*, is a binary variable equal to 1 if the respondent positively answers the question "Did you manage to set it up?" Our definition of entrepreneurship is very much in line with the approach taken in the rest of the literature, which takes a broad view and considers those who are business starters and owners, as well as formally and informally self-employed individuals (Brück et al. 2013). However, note the use of the term "set up." Rather than based on objective criteria related to founding a company, such as its profits or sales, the answer is left to the subjective definition of the respondent. This comes with the obvious pitfall that each respondent's understanding of setting up a business may be different. For example, the respondents' definitions of business startup may be culturally determined, which however should be mitigated by including country fixed effects and clustering the errors at the country level.

Nevertheless, we believe that our measures of entrepreneurship capture more than simply noise. In the transition context, where legal frameworks in many countries are in a constant reform process, where contracts are not always enforced by courts and where market mechanisms can fail to function, it may be difficult to find an objective definition of entrepreneurship that remains unchanged over the years.[7] Moreover, in such an environment of bureaucratic hurdles and high legislative uncertainty, many entrepreneurs may prefer to not register a formal business (Estrin et al. 2006). Although our data cannot distinguish between formal and informal businesses, one advantage of our entrepreneurship measures is that they are likely to capture both.

Independent variables

Our main explanatory variable is religious diversity in an individual's community, with the latter defined as the PSU in which each respondent lives. In particular, we use data on each respondent's self-identified religion to calculate an index of religious fractionalization.[8] This variable measures the probability that two randomly selected individuals in a given community belong to different religious groups. The formula for the religious fractionalization of locality l is:

$$Diversity_l = 1 - \sum_{r=1}^{8} s_{rl}^2 \tag{1}$$

where s_{rl} is the proportion of respondents within locality l that belong to the religious group r. The eight religious groups in our dataset are: Atheistic/Agnostic/None; Buddhist; Jewish; Orthodox Christian; Catholic; Other Christian including Protestant; Muslim; and Other.

We control for a respondent's gender, age, risk-taking attitude and urban residence (Demirguc-Kunt et al. 2011). Our regressions also account for a respondent's educational attainment, since this may be positively associated with entrepreneurship (Ardagna and Lusardi). As Audretsch et al. 2007 argue, religion influences the decision to become an entrepreneur, so we control for an individual's religion, and thus also make sure that the effect of religious fractionalization comes from diversity itself and not from the specific religion to which an individual belongs.

Research has argued that respondents who have more access to capital, income and connections will be more likely to both try to start a business and succeed in setting it up, so we control for all three factors. The survey provides information on whether the entrepreneur tried to borrow and was successful or unsuccessful in doing so when trying to found the business (with the omitted category those respondents that did not try to borrow), which we include in the regressions. Instead of controlling directly for individual income and exposure to social networks, we capture both of these variables by including each respondent's father's education level and whether the respondent or any member of his family were members of the former communist party in the spirit of Djankov et al. 2005, 2006. We do this for two reasons. Not only are households reluctant to respond to direct questions about income or wealth, but there may also be reverse causality from past entrepreneurial experiences (which are part of our dependent variables) to current income levels. Moreover, former communist party membership accounts for the fact that in the initial phase of transition nomenclature networks were used for bridging lacking market structures (Estrin et al. 2006). We also control for a respondent's risk attitude, though this variable may be affected by past entrepreneurial attempts.

At the locality level, we calculate our control variables by aggregating individual responses to several survey questions at the PSU level. For community wealth, we aggregate each respondent's perceived place on a ten-step income ladder. To measure the quality of informal institutions, we use a respondent's score of trust in other people. To measure the degree of local corruption, we use information on the number of respondents who believe that people like them have to make unofficial payments or gifts when requesting official documents or when going to courts for a civil matter. Previous work has explored extensively the link between these three variables and entrepreneurship (Aidis et al. 2008; George et al. 2012). We are well aware that these variables may be

endogenous to individual entrepreneurial behavior and that their effects can only be interpreted as correlations.

Geographic characteristics which enable easy transportation access, such as low altitude or being located close to a river or sea, may encourage both the formation of diverse societies and entrepreneurship (Michalopoulos and Papaioannou 2013). We therefore include the altitude, latitude and longitude of a locality, as well as the distance of each PSU to the country's border, to the capital and a dummy if the locality has access to a waterway. In addition, we capture the importance of natural resources by also including the distance of each PSU to the nearest mine. We also control for the adult population of each PSU, since larger PSUs may be more diverse.

Econometric specification

To study the relationship between entrepreneurship and religious diversity, we estimate a separate probit regression for each stage of entrepreneurship:

$$
\begin{aligned}
&Pr\left(Trial_{ilk} = 1 | X_{ilk}, Y_{lk}\right) \\
&= \Phi\left(\delta_0 + Diversity_{lk}\,\beta + X_{ilk}\delta_1 + Y_{lk}\delta_2 + \lambda_k + \epsilon_{ilk}\right)
\end{aligned}
\tag{2}
$$

$$
\begin{aligned}
&Pr\left(Startup_{ilk} = 1 | X_{ilk}^*, Y_{lk}, Trial_{ilk} = 1\right) \\
&= \Phi\left(\gamma_0 + Diversity_{lk}\,\xi + X_{ilk}^*\gamma_1 + Y_{lk}\gamma_2 + \lambda_k + \eta_{ilk}\right)
\end{aligned}
\tag{3}
$$

where $Trial_{ilk}$ and $Startup_{ilk}$ are binary variables equal to unity if individual i from locality l and country k ever tried to set up a business, and succeeded at setting it up, respectively. $\Phi(\cdot)$ is the cumulative distribution function of the normal distribution. The coefficients of interest are β and ξ, which measure the correlation between the first two stages of entrepreneurship and the religious diversity of the community, $Diversity_{lk}$. The two regression equations also contain a vector of individual controls X_{ilk} for trial and X_{ilk}^* for startup, the latter containing all elements of X_{ilk} plus the two extra variables measuring access to finance. Included is also a vector of locality controls Y_{lk} as well as country fixed effects, λ_k, which eliminate the effect of fixed or slowly changing country-level variables that could confound the results. Since the responses of individuals within a country will likely be correlated, we also cluster the errors, ϵ_{ilk} and η_{ilk}, at the country level. All regressions also include sample weights which ensure that the data are representative at the country level.

Identification in our regression specification is based on the strong assumption that there are no unobservable factors that would correlate with both individual entrepreneurship and locality diversity. Our inclusion of country fixed effects and a battery of observable individual and locality controls is therefore crucial. However, as discussed above, some of our control variables are endogenous. In addition, there is the possibility of selection bias as some of our control variables also have missing observations. What is more, it is unlikely that controlling for observables will completely eliminate the problem of omitted variable bias.

Therefore, we also adopt a second strategy. We apply the insight of Altonji et al. 2005 that selection on observables can be used to calculate the potential bias from unobservables and compute the ratio developed by Bellows and Miguel 2009. The ratio is $\frac{\beta^F}{\beta^R - \beta^F}$, where β^F is the coefficient for diversity in the regression with the full set of controls and β^R is the coefficient for diversity in the regression without any controls. Bellows and

Miguel 2009 show that this is a consistent measure for how many times higher selection on unobservables must be than selection on observables to completely explain away the effect of diversity.

Results

Descriptive statistics

Table 1 presents means of all variables used in the main estimations and highlights several interesting patterns. Columns 1 and 2 include the entire sample of respondents, while columns 3 and 4 limit the sample to only those respondents who tried to set up a business. On average 14% of respondents try to start a new venture, and 63% of those that tried manage to start it up. An average locality is moderately diverse with a religious fractionalization score of 0.19 (trial) and 0.22 (startup). Around one quarter of respondents are Muslim, while over 60% are Christian (either Catholic, Orthodox or Protestant). Those who have started a business are more likely to be male, and are more risk-loving. The vast majority of respondents have finished their secondary education, but only around 20% have a university degree (with a higher value, 28% for those respondents who have tried to setup a business). A respondent's father has on average 9-10 years of education. In nearly

Table 1 Means of variables

	(1)	(2)	(3)	(4)
	Entire sample		Sub-sample of those that tried	
	Mean	Standard deviation	Mean	Standard deviation
Trial	0.14	(0.35)	1.00	(0.00)
Startup	–	–	0.63	(0.48)
Diversity	0.19	(0.21)	0.22	(0.22)
Male	0.40	(0.49)	0.53	(0.50)
Age	43.88	(16.76)	42.49	(13.31)
Muslim	0.27	(0.44)	0.23	(0.42)
Christian	0.63	(0.48)	0.62	(0.48)
Risk Score	4.77	(2.62)	5.95	(2.72)
Secondary Education	0.68	(0.47)	0.67	(0.47)
Bachelor/Master's Education	0.21	(0.41)	0.28	(0.45)
Father's Education	9.32	(4.10)	9.91	(3.98)
Member Communist Party	0.24	(0.43)	0.30	(0.46)
Urban	0.59	(0.49)	0.62	(0.49)
Loan Accepted	–	–	0.27	(0.45)
Loam Rejected	–	–	0.09	(0.29)
Locality Average Wealth	4.33	(0.95)	4.27	(0.89)
Locality Average Trust	3.12	(0.68)	3.08	(0.67)
Locality Average Corruption	1.82	(0.78)	1.85	(0.76)
Locality Population	84,290.09	(307,594.98)	85,750.97	(323,595.66)
Locality Latitude	45.76	(4.90)	45.70	(4.65)
Locality Longitude	34.59	(22.60)	36.55	(26.48)
Locality Altitude	378.38	(419.56)	398.46	(442.70)
Locality Distance to Mine	64.79	(71.53)	60.86	(67.16)
Locality Distance to Capital	134.36	(266.73)	144.99	(323.82)
Locality Distance to Border	34.52	(52.63)	36.14	(53.39)
Locality on Water	0.41	(0.49)	0.43	(0.49)
Observations	21,725		3,046	

Notes. See the text and the Additional file 1 for definitions of all variables.

one third of the cases, somebody in the respondent's family or the respondent herself was a former communist party member. The rest of the individual and PSU-level variables are fairly similar across both samples.

Results

In Tables 2 and 3 we present regressions investigating the association between diversity and entrepreneurial trial and startup. For each dependent variable, we present probit average marginal effects, which are closely comparable to the point estimates from a linear probability model.[9] We experiment with the number and types of controls that we include in columns 1-2, and present the full specification in column 3. Our average marginal

Table 2 Probit regressions: entrepreneurial trial

	(1) margins_b/margins_se	(2) margins_b/margins_se	(3) margins_b/margins_se
Diversity	0.08***	0.06***	0.05**
	(0.02)	(0.02)	(0.02)
Male		0.06***	0.06***
		(0.01)	(0.01)
Age		0.00***	0.00***
		(0.00)	(0.00)
Age^2		−	−
Muslim		-0.01	-0.02
		(0.02)	(0.02)
Christian		0.01	0.01
		(0.01)	(0.01)
Risk Score		0.02***	0.02***
		(0.00)	(0.00)
Secondary Education		0.06***	0.06***
		(0.01)	(0.01)
College Education		0.09***	0.09***
		(0.02)	(0.02)
Father's Education		0.00***	0.00***
		(0.00)	(0.00)
Member Communist Party		0.03***	0.03***
		(0.01)	(0.01)
Urban		-0.00	0.00
		(0.01)	(0.01)
Locality Avg. Wealth			-0.01***
			(0.01)
Locality Avg. Trust			-0.01***
			(0.00)
Locality Avg. Corruption			0.00
			(0.01)
Geography Controls			✓
Country F.E.	✓	✓	✓
Obs.	32,302	22,779	21,725
Pseudo R^2	0.02	0.11	0.11

Notes. The table presents average marginal effects obtained from probit regressions. The dependent variable is whether the individual ever tried to set up a business. Robust standard errors in parentheses are clustered at the country level. The *Geography Controls* not listed in the table are: Locality Population, Locality Latitude, Locality Longitude, Locality Altitude, Locality Distance to Mine, Locality Distance to Capital, Locality Distance to Border, Locality on Water.
*p < 0.10, **p < 0.05, ***p < 0.01. Checkmarks indicate that the respective control is included in the regressions.

Table 3 Probit regressions: entrepreneurial startup

	(1) margins_b/margins_se	(2) margins_b/margins_se	(3) margins_b/margins_se
Diversity	0.11**	0.05	0.06
	(0.06)	(0.06)	(0.06)
Male		-0.01	-0.01
		(0.02)	(0.01)
Age		0.00	0.00
		(0.00)	(0.00)
Age^2		–	–
Muslim		-0.03	-0.03
		(0.04)	(0.05)
Christian		0.01	0.02
		(0.03)	(0.03)
Risk Score		0.02***	0.02***
		(0.01)	(0.01)
Secondary Education		0.03	0.04
		(0.04)	(0.04)
College Education		0.07	0.06
		(0.04)	(0.05)
Father's Education		0.00	0.00
		(0.00)	(0.00)
Member Communist Party		-0.02	-0.02
		(0.02)	(0.02)
Urban		-0.01	-0.01
		(0.02)	(0.02)
Loan Accepted		0.14***	0.14***
		(0.02)	(0.02)
Loan Rejected		-0.34***	-0.33***
		(0.04)	(0.04)
Locality Avg. Wealth			0.01
			(0.01)
Locality Avg. Trust			0.01
			(0.02)
Locality Avg. Corruption			-0.01
			(0.02)
Geography Controls			✓
Country F.E.	✓	✓	✓
Obs.	4,106	3,172	3,046
Pseudo R^2	0.07	0.16	0.16

Notes. The table presents average marginal effects obtained from probit regressions. The dependent variable is whether the individual ever set up a business (conditional on trial). Robust standard errors in parentheses are clustered at the country level. The *Geography Controls* not listed in the table are: Locality Population, Locality Latitude, Locality Longitude, Locality Altitude, Locality Distance to Mine, Locality Distance to Capital, Locality Distance to Border, Locality on Water.
*p < 0.10, ** p < 0.05, *** p<0.01. Checkmarks indicate that the respective control is included in the regressions.

effect estimates in column 3 of Table 2 suggest that, on average, religious fractionalization increases the probability of entrepreneurial trial by 0.05, or 35% relative to the sample mean, which is a fairly large effect.

Turning to Table 3, we see that religious diversity is positively and significantly associated with entrepreneurial startup in column 1, when no individual or PSU-level controls are included. This effect stays positive but becomes very imprecise once the additional

controls are added. In particular, once access to finance (proxied by the two variables indicating whether the respondent was successfully (unsuccessfully) able to obtain a formal or informal loan for the business, with the omitted category those respondents who did not try to borrow) and risk preferences are included, the significance of the diversity coefficient disappears. This suggests that the effect of religious diversity on entrepreneurial startup may be overshadowed by these factors. We therefore conclude that Hypothesis 2 is only partially validated. Increased religious diversity is only positively associated with the very first stage of entrepreneurship, trial, but not with the subsequent one, startup.

The control variables show several interesting patterns and point to the importance of different criteria at the two stages of entrepreneurship as in Hypothesis 1. While on average women are approximately 6 percentage points less likely to try to become entrepreneurs, they are no less successful than men in the startup stage. Age has an inverted U-shaped relationship with entrepreneurial trial, but no relationship with startup. More risk loving individuals are about 2 percentage points more likely to both try to become entrepreneurs and to start up a business, though of course this could be driven by reverse causality from entrepreneurship. More education is positively associated only with entrepreneurial trial, but not with startup. Similarly, individuals that are wealthier and better connected (as proxied by the respondent's father's education and family membership in the former communist party) are more likely to try to start a business, but no more likely to succeed in the startup phase. Access to finance is the strongest correlate of entrepreneurial start-up: individuals who tried to borrow but could not are nearly a third more likely to fail compared to those who did not try to borrow, while entrepreneurs who borrowed successfully are 14 percentage points more likely to start a business.

When it comes to local-level controls, individuals in PSUs that are wealthier and with better informal institutions are less likely to try to start a business, but the effect is minor. It could be that in these locations respondents have other more profitable sources of employment. Neither of these two variables is significant in the startup equation, and the quality of local institutions - captured through the extent of corruption at the PSU level - is irrelevant for both potential and nascent entrepreneurs. None of the included PSU variables affect entrepreneurial startup, possibly because they are overshadowed by access to finance. Again, the PSU controls are likely to be endogenous to entrepreneurial behavior, so their coefficients should be interpreted with caution. All in all, we also find support for Hypothesis 1, which posited that entrepreneurial trial and startup are affected differently by individual and environmental factors.

The main findings of Tables 2 and 3 are that diversity is positively associated with entrepreneurial trial, but that its effect on entrepreneurial startup is overshadowed by access to finance and risk attitudes. We now turn to calculate the ratio of Bellows and Miguel 2009 to estimate the impact of unobservables for the trial regressions. For β^R we use the coefficient from Table 2, Row 1, Column 1 and for β^F the coefficient from Table 2, Row 1, Column 3. We obtain that selection on unobservables needs to be more than double (2.16) as high as selection on observables to explain away our results. Such a scenario is unlikely to happen (Altonji et al. 2008), suggesting that even in the light of remaining omitted variable bias, our results still stand.

Interaction effects

To understand how social capital moderates the association between diversity and entrepreneurial trial and startup, we include three interaction terms. Due to the complexity of interpreting interaction terms in non-linear models, we implement a linear probability model (to which our earlier results are also robust). We measure social capital in three inter-related ways. The first variable we use is *Friends* which is equal to 1 if the respondent meets frequently (more than once a month) with his friends. We expect this variable to be a proxy of how densely connected the social group of the respondent is. The second variable we examine is *Weak Ties*, a dummy variable equal to 1 if the respondent knows someone, other than relatives, friends, classmates or boss, who he can ask for help. This is a measure of access to non-familial, or weak ties. Our final proxy is *Internal*, a dummy equal to unity if the respondent believes that the factors most important to succeeding in his country are effort and hard work, or intelligence and skills.[10] We use this variable as a proxy for internal locus of control, which is defined as the belief that one's life is not determined by external factors that they cannot influence. Previous studies have found that people who believe to be in control of the events in their lives, a personality feature that tends to be relatively stable throughout life, are more likely to bridge structural holes (Kalish and Robins 2006). Note that all three of these variable capture a respondent's overall social capital, rather than networks within or across religious groups, about which the LiTS does not provide any information.

Table 4 reports the results of linear probability models examining the correlations between the interactions of social capital and diversity and entrepreneurial trial and startup. The coefficients on the controls remain largely the same, and to conserve space we omit them from the table. Hypothesis 3 suggests that all three measures of social capital will interact with diversity to positively affect entrepreneurship, but the results in columns 1 and 2 in Table 4 contradict it. Social capital, when proxied by network density, in fact *negatively* moderates the association between diversity and entrepreneurship. The coefficient of the interaction term between *Diversity* and *Friends* is significant at the 5% level for Trial and at the 10% level for Startup and has in both cases a negative sign. Respondents who meet frequently with friends and live in diverse locations are in fact 6 percentage points less likely to try to start a business and nearly 12 percentage points less likely to actually start it up. The stand-alone coefficient on the variable proxying meeting frequently with friends is, however, not significant. These results suggests that respondents who are *not* embedded in a dense network can draw more benefits from diversity in their entrepreneurial attempts.

The results of columns 3 and 4 partially confirm Hypothesis 3. Social capital, this time understood as access to weak ties, does positively moderate the association between diversity and entrepreneurship, but only for trial. The coefficient of the interaction term between *Diversity* and *Weak Ties* is significant at the 1% level for Trial, but insignificant for Startup. Respondents who can access weak ties in times of need seem to be better equipped to harness the benefits of diversity so as to have a probability of nearly 31 percentage points higher of trying to set up a business. Unfortunately, access to weak ties does not translate to a higher probability of actually starting the business in more diverse localities. Moreover, the coefficient of *Weak Ties* is insignificant for both Trial and Startup.

Table 4 OLS regressions: interactions

	(1) Trial b/se	(2) Startup b/se	(3) Trial b/se	(4) Startup b/se	(5) Trial b/se	(6) Startup b/se
Diversity	0.105***	0.156*	0.0527*	0.0551	0.0108	0.0392
	(2.84)	(1.80)	(2.03)	(0.88)	(0.37)	(0.49)
Friends	0.0154	0.0153				
	(1.60)	(0.51)				
Friends X Diversity	-0.0610**	-0.118*				
	(-2.13)	(-1.83)				
Weak Ties			-0.0181	-0.0727		
			(-0.78)	(-0.46)		
Weak Ties X Diversity			0.308***	0.301		
			(3.21)	(0.99)		
Internal					-0.0168*	0.0140
					(-2.03)	(0.44)
Internal X Diversity					0.0580**	0.0170
					(2.35)	(0.21)
Individual Controls	✓	✓	✓	✓	✓	✓
Locality Controls	✓	✓	✓	✓	✓	✓
Country Fixed Effects	✓	✓	✓	✓	✓	✓
Obs.	21,725	3,046	21,725	3,046	20,615	2,921
Pseudo R^2						

Notes. The table presents coefficients obtained from OLS regressions. The dependent variables are whether the individual ever tried to set up a business and whether he managed to set it up (conditional on trial). Robust standard errors in parentheses are clustered at the country level. The *Individual Controls* and *Locality Controls* not listed in the table are all of the control variables included in Tables 2 and 3. Checkmarks indicate that the respective control is included in the regressions. *p < 0.10, **p < 0.05, ***p < 0.01.

Columns 5 and 6 also partially confirm Hypothesis 3. Social capital, understood as the ability to bridge structural holes, does positively moderate the association between diversity and entrepreneurship, but only for trial. The coefficient of the interaction term between *Diversity* and *Internal* is significant at the 5% level for Trial, but insignificant for Startup. Respondents with a strong internal locus of control may be better equipped to bridge the structural holes that emerge in a diverse community and therefore may be more willing to try to set up businesses in diverse communities. However, those with internal locus of control in general try less to set up a new business, as the negative coefficient of *Internal* indicates. It may be that they value other employment opportunities more as compared to entrepreneurship.

Hypothesis 3 is therefore confirmed only when social capital is understood as the opportunity to bridge structural holes and access to weak ties, but not as network density.

Robustness checks

Measures of diversity

Averaging our main explanatory variable at the PSU level, when the survey is not representative at this level, is not ideal. However, as discussed in the introduction, there is no other sub-national data on religious diversity for our sample. Moreover, as explained earlier, our measure of religious diversity correlates well with country-level measures of religious fractionalization. In Table 5, we address this concern further by creating, for each PSU, a dummy variable equal to unity if the fractionalization index is higher than 30%. As

Table 5 Probit regressions: robustness checks

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Trial	Startup	Trial	Startup	Trial	Startup	Trial	Startup
	Diversity dummy		Regional diversity		After 2005		Moving	
Diversity	0.02*	0.03	0.10**	-0.09	0.04**	0.08	0.05**	0.06
	(0.01)	(0.03)	(0.04)	(0.14)	(0.02)	(0.11)	(0.02)	(0.06)
Male	0.06***	-0.01	0.06***	-0.01	0.03***	0.03	0.06***	-0.01
	(0.01)	(0.02)	(0.01)	(0.02)	(0.00)	(0.02)	(0.01)	(0.02)
Age	0.00***	0.00	0.00***	0.00	0.00***	0.00	0.00***	0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Age^2	–	–	–		–	–	–	–
Muslim	-0.02	-0.03	-0.02	-0.04	0.00	-0.02	-0.02	-0.02
	(0.02)	(0.05)	(0.02)	(0.04)	(0.01)	(0.05)	(0.02)	(0.05)
Christian	0.01	0.02	0.01	0.01	0.01	0.00	0.01	0.02
	(0.01)	(0.03)	(0.01)	(0.03)	(0.01)	(0.05)	(0.01)	(0.03)
Risk Score	0.02***	0.02***	0.02***	0.02***	0.01***	0.01	0.02***	0.02***
	(0.00)	(0.01)	(0.00)	(0.01)	(0.00)	(0.01)	(0.00)	(0.01)
Secondary Education	0.06***	0.04	0.06***	0.04	0.03***	0.07	0.06***	0.04
	(0.01)	(0.04)	(0.01)	(0.04)	(0.01)	(0.05)	(0.01)	(0.04)
College Education	0.09***	0.07	0.09***	0.06	0.05***	0.09*	0.09***	0.06
	(0.02)	(0.05)	(0.02)	(0.05)	(0.01)	(0.05)	(0.02)	(0.05)
Father's Education	0.00***	0.00	0.00***	0.00	0.00***	0.01	0.00***	0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Member Communist Party	0.03***	-0.02	0.03***	-0.02	0.01***	-0.05**	0.03***	-0.02
	(0.01)	(0.02)	(0.01)	(0.02)	(0.00)	(0.03)	(0.01)	(0.02)
Urban	0.00	-0.01	0.00	-0.00	0.00	0.01	0.00	-0.01
	(0.01)	(0.02)	(0.01)	(0.02)	(0.00)	(0.03)	(0.01)	(0.02)
No Move							-0.02***	0.00
							(0.01)	(0.02)
Loan Accepted		0.14***		0.14***		0.13***		0.14***
		(0.02)		(0.02)		(0.03)		(0.02)
Loan Rejected		-0.33***		-0.33***		-0.38***		-0.33***
		(0.04)		(0.04)		(0.04)		(0.04)
Locality Controls	✓	✓	✓	✓	✓	✓	✓	✓
Country Fixed Effects	✓	✓	✓	✓	✓	✓	✓	✓
Obs.	21,725	3,046	21,725	3,046	20,079	1,401	21,634	3,042
Pseudo R^2	0.11	0.16	0.11	0.16	0.12	0.16	0.11	0.16

Notes. The table presents average marginal effects obtained from probit regressions. The dependent variables are whether the individual ever tried to set up a business and whether he managed to set it up (conditional on trial). Robust standard errors are in parentheses clustered at the country level. In Columns 1 and 2 *Diversity* is calculated as a dummy variable equal to 1 if local religious fractionalization is higher than 0.3. In Columns 3 and 4 *Diversity* is calculated as regional religious fractionalization. In Columns 5 - 8 *Diversity* is calculated as local religious fractionalization. Columns 5-6 limit the sample to those who tried to start a business only after 2005, while columns 7-8 control for whether the individual has ever moved. The *Locality Controls* not listed in the table are all of the locality (PSU) control variables included in Tables 2 and 3.
*p < 0.10, **p < 0.05, ***p < 0.01. Checkmarks indicate that the respective control is included in the regressions.

can be seen in columns 1 and 2 of the table, religious diversity is still positively associated with Trial at the 10% significance level and still not associated with Startup, which is similar to our earlier results. Another worry is that each PSU contains about 20 households and that this introduces small sample bias in the measure. We therefore calculate diversity as a fractionalization index also at the sub-national regional level, where there are on average 138 households per region. In Column 3 and 4 of Table 5, it can be seen that the main results remain confirmed and are actually stronger for the trial regressions. In unreported

specifications, we also experimented with using language rather than religious fractionalization as a measure of diversity. We also ran specifications in which religious diversity is measured by religious polarization, which is maximized when there are two groups of equal size.[11] The literature has argued that cultural polarization is more relevant for outcomes such as civil war (Montalvo and Reynal-Querol 2005). In both cases, we obtain very similar results to our baseline specification.

Endogeneity

Although diversity is likely to change more slowly than entrepreneurship, it is possible that our results capture reverse causality to some extent. As the number of entrepreneurs in an area grows, exchange linkages become more complex, and cultural heterogeneity is more easily tolerated, which in turn may increase migration and diversity. Since such a mechanism works over the long term, we experimented with limiting the sample only to respondents that tried to start a business recently (after 2005) or not at all, and the results, available in Columns 5 and 6 of Table 5, are unchanged. We also show that there is no evidence that nascent entrepreneurs choose to move to more diverse areas, relative to non-entrepreneurs. In Columns 7 and 8, we control for whether the respondent has ever moved, which has little effect on the results.

Selection bias

Since entrepreneurial startup is conditional on trial, an independent estimation of the startup equation could suffer from selection bias. In order to account for this we run a Heckman sample selection model. Due to the difficulty in finding a variable that affects trial, but not startup, these results should be interpreted as suggestive only. We argue that the following individual-level variable can function as an exclusion restriction: a dummy for whether the respondent's preferred type of employment is self-employment, but with the caveat that it may be endogenous to entrepreneurial startup. We assume that a respondent's preference for entrepreneurship influences only his trial stage, but not his startup stage. The results from the Heckprobit estimates of entrepreneurial startup (available upon request) are very similar to our baseline specification. The selection coefficient (or the inverse Mill's ratio) is significant, indicating that there is selection bias in the simple probit estimations. Nevertheless, the results are largely consistent with those in Table 3, although some parameters are more precisely estimated.

   We also perform the following additional robustness checks, for which results available upon request. Our results survive when we aggregate all dependent and independent variables at the PSU level and when we cluster the standard errors by PSU to account for possible correlation between the individual and PSU-level variables.

Conclusions and policy implications

Using a new and rich survey data set (the 2010 round of the Life in Transition Survey), this paper seeks to understand if local religious diversity helps or hinders entrepreneurs in the transition region. Contrary to a large literature that finds a negative impact of diversity on firm-level and country-level outcomes, we do not find any evidence that religious diversity stifles entrepreneurial trial or start-up. But does local religious diversity *help* business owners? Our results suggest that the answer here is more nuanced: yes, but

not in all stages of entrepreneurship. While local religious diversity has a positive impact on business trial, it has a weak effect in the subsequent business start-up phase which is overshadowed by an individual's access to finance and risk attitudes. What is more, the potential entrepreneurs who are best positioned to benefit from local religious diversity are those that have social capital in the sense of capacity to bridge over structural holes and access weak ties, but not necessarily those that belong to dense social networks. Understanding the drivers of both phases of entrepreneurship is highly policy-relevant, as many individuals who embark on the process of starting a business never reach the point of actually founding it.

The finding that religious diversity helps in the trial phase of entrepreneurship, but not in actually starting up the new venture is puzzling. A possible explanation is that the transition region contains mostly Kirznerian entrepreneurs who are dependent on their environment for generating business opportunities. These opportunities may arise because religious diversity spurs creative ideas or provides access to new information. But it could also be that some of diversity's negative consequences, such as labor discrimination, distrust, or underprovision of public goods, provide niche markets for business starters. For example, retail entrepreneurs may be able to play a bridging role in divided localities, while underprovided public goods may be equally well provided privately.

Whatever the source of these extra opportunities, they do not seem to translate to more start-ups in diverse communities. Instead, our results point to the importance of access to (formal as well as informal) finance and risk attitudes. On the one hand, it could be that entrepreneurs in more diverse places are more likely to get financing, either because such business starters have better ideas or a better supply of opportunities. On the other hand, entrepreneurs in diverse environments may require more financing because the fixed or variable costs of operating a business there may be higher. It could also be that localities with higher availability of financing also attract more diverse populations, although several of our robustness checks suggested that this channel is less likely to be at work. Alternatively, living in a diverse area may change respondents' behavior and attitudes, including those toward risk taking, although disentangling such an effect is difficult due to reverse causality from entrepreneurship.

Even though our data preclude us from pinpointing the exact mechanism at work, the finding that credit constraints are more important than local religious diversity for entrepreneurial startup has several important implications. First, it is surprising that access to finance has such a strong effect for the small (and often informal) businesses captured in the LiTS, which goes *beyond* the impact of other proxies of personal wealth, such as education or parental background. These results echo cross-country work on larger firms which shows that underdeveloped capital markets are an impediment to entrepreneurial activity in the transition region, but not in the more mature European economies (Desai et al. 2003). Second, external financing could have stronger disciplining benefits on the entrepreneur as opposed to personal wealth or remittances (see, for instance, Demirguc-Kunt et al. 2011). What is more, it is also plausible that the effects of access to finance vary with the religious diversity of the entrepreneur's locality, either because commitment may be easier or more difficult to enforce in more diverse places, or because diverse regions are more likely to produce as well as fund viable entrepreneurial opportunities. However, this is less likely to be the case, as in

unreported results, we fail to find an interaction effect between access to finance and diversity.

What are the broader policy recommendations that emerge from our paper? Governments and international organizations acknowledge that fostering entrepreneurship is crucial for creating a dynamic market economy. We find that there are slow-changing variables (such as religious diversity) that may be less susceptible to policy interventions but that should still be taken into account when designing entrepreneurial policies and choosing which regions to support. But we also uncover several potentially useful policy levers, which may in fact differ at various entrepreneurial stages. Non-familial social ties and the belief that one's abilities are most important for success in life, which we found to be particularly important for entrepreneurial trial in diverse localities, could be nurtured via training and networking programs, for instance. Since we also demonstrate that more educated respondents are more likely to try entrepreneurial activities, a case could be made for more and better education, possibly focused on skills relevant for entrepreneurs. One concrete suggestion could be to encourage interaction between entrepreneurs and experienced managers in the developed world, which may be particularly beneficial for enterprises located in diverse environments. One such example is the EBRD's Small Business Support Program, which matches Western executives to private enterprises in the transition region in order to facilitate the sharing of technical and management knowledge.

At the same time, expanding the availability of credit appears to be the key factor in increasing the number of business startups and should also rank high on the policy agenda. Such a recommendation poses both opportunities and challenges. A new generation of banks exclusively focused on funding for micro and small enterprises, such as ProCredit Bank, which operates throughout the transition region, could be one potential solution. In addition, an entrepreneur-friendly legal framework may also be important. For example, creating high-quality business registries or easing the collateral requirements for new business loans may be useful. However, formal financing is less likely to benefit small informal businesses, and perhaps alternative financial strategies - such as traditional microfinance schemes - may need to be pursued. For instance, the Bosnian microfinance organization EKI provides credit to small businesses in the rural and agricultural sector, where informality may be particularly high.

Finally, we hope to have shown that governments should pay increasing attention to nurturing the Kirznerian entrepreneur, and even more so in diverse localities. Although Schumpeterian entrepreneurs are likely to drive economic transformation in transition, small-scale entrepreneurship may not only provide a valuable income buffer for households, but can also aide the transition to larger, formal businesses. Ever prevalent, but often neglected, the Kirznerian entrepreneur epitomizes the difficult but promising economic transition which many countries in a region scarred by nearly fifty years of communism are still undergoing.

Endnotes

[1] A literature looking at US communities finds that an ethnically diverse population is associated with less efficient provision of public goods, less trust and less economic growth (Alesina et al. 1999; Luttmer 2001; Alesina and La Ferrara 2002; Ottaviano and Peri 2005; Alesina and La Ferrara 2005). Furthermore, Alesina and Zhuravskaya 2011 calculate diversity and segregation measures for a large number of countries using

census data at the level of country administrative regions (which are more aggregated than the PSU analysis we use). However, none of these papers provide sub-national diversity measures for the entire transition region (the latter paper only covers 14 transition countries).

[2] See also Laitin and Jeon 2013 for a broader review of this literature.

[3] The empirical findings in the management literature are inconclusive. At the team-level, Joshi and Roh 2009 report that more than half of the studies reviewed do not find a relationship between team outcomes and team diversity, while the rest find either positive or negative effects.

[4] Granovetter 1973 makes a similar argument which distinguishes between strong and weak ties.

[5] These are Albania, Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Estonia, Georgia, Hungary, Kazakhstan, Kyrgyz Republic, Latvia, Lithuania, FYR Macedonia, Moldova, Mongolia, Poland, Romania, Russia, Serbia, Slovak Republic, Slovenia, Tajikistan, Ukraine, Uzbekistan, Kosovo and Montenegro. The survey also includes for comparison purposes five Western European countries (France, Germany, Italy, Sweden, United Kingdom) and Turkey. We exclude these countries from our sample because they did not experience a period of communism and therefore do not belong to the transition region, which is the focus of our study.

[6] The other modules are: Attitudes and Values; Climate Change; Labor, Education and Entrepreneurial Activity; Governance, and Miscellaneous Questions.

[7] Note also that the trial question refers to having *ever* tried to set up a business. Thus the ventures could have been set up anytime between 1989 and 2010 (in fact, the survey asks for the year in which the respondent last tried to start a business). Our definition of entrepreneurship thus needs to fit throughout this entire period of extreme change.

[8] See Section Robustness checks for a discussion of the potential pitfalls of this measure and robustness checks.

[9] We do not present coefficient estimates for Age squared due to the difficulty of interpreting interaction effects in non-linear models.

[10] When *Internal* is equal to 0, the respondent believes that most important for success in his country are either political connections, breaking the law of something else.

[11] The formula for religious polarization for the eight religious groups in our data (described above) is:

$$Diversity_l = 4 \sum_{r=1}^{8} [s_{rl}]^2 [1 - s_{rl}],$$

where s_{rl} is the proportion of respondents within locality l that belong to each religious group r.

Additional file

Additional file 1: Online appendix - additional data information.

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