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## CHAPTER 6

### TIME TO ENTRY AND BUSINESS TOURISM: PANEL DURATION MODELS WITH CENSORED DATA

#### 1. Introduction

The rates at which new organizations are created and at which organizations disappear or grow are of obvious interest. Managers or investors both want to know what puts economic agent at risk of failure, or conversely, helps them to register a new firm. Length of time in starting entrepreneurship project is one of the most important factors in decisions made by entrepreneur as it conditions their initial expenditure, and may cause psychological stress if opening is long-lasting. Developing countries are often characterized by burdensome regulations, which are perceived as an important obstacle to firm creation, formalization and growth. In order to reduce this regulatory burden, many countries have devoted substantial efforts to reduce the monetary and non-

monetary costs of registering a business [Bruhn and McKenzie (2014)]. Kaplan et al (2011) estimate the effect on business start-ups of a program that significantly speeds up firm registration procedures.

The following research questions are asked in this paper in an effort to analyze the main problem: what determinants explain and predict the probability that a some country in Europe and its average entrepreneur in it would spend shorter time in activities which elapse between starting and finishing constitution of a new firm, and what significant determinants divides the countries groups based on their similarity.

The paper is organized as follows. The next section begins by mapping out the research strategy, including the conceptual framework, the summary of dataset, the model specification and the variables. The subsequent section presents and discusses the empirical results, and the final section concludes by providing implications for public administration policy and further research.

## 2. Conceptual Framework

### 2.1. Role of time required to start a business

Broadly, there are two ways in which time required to start a new business can impact any country's ability to compete in arena of interconnected international economy; it can affect a country's image or „brand“ of pro-business country as well as its economic and business environment. First, in regard to country image, entry regulation can affect profit persistence in incumbent firms across countries. So, over-regulation in starting a new business linked to prolonged time in waiting line to obtain additional permit, can lead to perception of one country as overly bureaucratized and that where the excessive application of rules and regulations can suffocate planned entrepreneurship's project.

Second, in order to have an economic growth, an economy must have a healthy business environment, which must stimulate the entrepreneurial capacity of the population and financial investors (Levin, 1998) to develop new businesses. Many countries experience slow productivity growth. One of the possible reasons for this is over-bureaucratization and over-regulation that obstruct dynamic adaptation, innovative power and entrepreneurial activity (de Jong & van Witteloostuijn, 2015). Bureaucrats can be an even more important factor in protection of status quo, in slowing down, unlucky flow of time etc. Over-regulation leads to excessive para-fiscal obligations toward state institutions. Often those extra charges that have to be paid without clear association with business can predestinate future business failure. That can discourage potential investors and stimulate instead of self-employment a rent-seeking activity (employment in state agency). Expectations on the number of those charges increase as days go by. The excess of laws, regulations, taxes, paperwork and time to fulfill the requirements when opening or running a business is one of the reasons, per example, why 40% of Brazilian start-up businesses do not survive for more than two years after opening, according to data revealed by the end of 2011 by IBGE, Brazil's main government research institute (Gomes, 2102). Evidence that the effect of regulatory policy depends on a country's circumstances is provided by Aghion, Burgess, Redding, and Zilibotti (2005), who study the effects of delicensing entry in India over the 1980-1997. Starting days, in this paper, measures the time required to start a business, which is defined as the number of days that incorporation lawyers indicate is necessary to complete all required procedures with minimum follow-up with government agencies and no extra payments (Klapper & Love, 2011).

In summary, the presence of prolonged register procedure measured in days passing by tarnishes a country's image of pro-business country and weakens a country's economic and business environment that is needed for successful economy.

## 2.2. Control variables

Before a statistical analysis examining the relationship between time required to start a business and the level of business tourism can be performed, conjointly with the other institutional, socio-economic, and monetary variables identified as affecting time in our presumption need to be addressed.

### 2.2.1. Institutional development

If the private firms cannot be sure which regulations apply in the near future, whether private contracts are un-arbitrarily enforced, or whether their property will be protected against violence private firms typically react by cutting back on long-term investment. The considerable sunk costs of most investment projects create large disincentives against binding any resources to long-term investment projects if the firm operates in uncertain environments. The theory of irreversible investment (e.g. Dixit and Pindyck 1994) has reinforced the argument that such uncertainties are particularly costly in terms of aggregate investment. In starting a new business, beside days need to registering new firm, there is set of other very important activity, that suggest that an economically free nation with an established and stable legal and monetary system and efficient labor and product markets, with open trade and investment opportunities, tends to have a more stable and competitive business environment. Some of that activity is result of institutional development. The World Bank developed a country ranking business index system using the methodology of the Ease of doing business index. The Ease doing business index is composed of, the among lot of them, some indicators (World Bank) that signals range of institutional development. We will include further on that indicators as an independent variable in our regressions. There is no doubt that pro-business countries would strive to minimize the number of procedures and start up cost,

driving to maximize the number of new firms. According to Schumpeter, the "gale of creative destruction" describes the "process of industrial mutation that incessantly revolutionizes the economic structure from within, incessantly destroying the old one, incessantly creating a new one". According to Aghion and Howitt, the higher entry costs and lower degree of turnover in Europe compared to the United States are an important part of the explanation for the relatively disappointing European growth performance over the nineties, that has been shown in empirical work by Nicoletti and Scarpetta (2003). Pedro Gesteira (2014) studies how the costs and time lags to obtain construction permits affect the response of aggregate consumption, employment in construction and house prices to interest rate shocks. Firms confronted with demands for bribes take approximately 1.5 to 1.8 times longer to get a construction permit, and 1.5 to 1.6 longer to get an operating license or electrical connection than firms that did not have to pay bribes (Caroline Freund; Mary Hallward-Driemeier and Bob Rijkers, 2014). Research by Knack and Keefer (1995), Mauro (1995) suggest that an economically free nation with an established and stable legal and monetary system and efficient labor and product markets, with open trade and investment opportunities, tends to have a more stable and competitive business environment. Erick Ariel Gonzales Rocha (2012) shows that low entry costs, easy access to finance, and good levels of business sophistication and innovation predict a larger SME sector. Thus, countries with higher levels of institutional development tend to be more competitive in register a start up firm. In this study, institutional development is proxied by first: start-up procedures. In other words, by various documents, required to start a business; including interactions to obtain necessary permits and licenses and to complete all inscriptions, verifications, and notifications to start business operations. The second: cost in percentage of income per capita in start-up procedures, and third the new businesses registered as a number of new limited liability corporations registered in the calendar year. Businesses that

register are assigned a unique organization number that identifies the business (as sole proprietorships, partnerships with mutual responsibility, partnership with shared responsibility and unlisted limited liability companies). Therefore, it is hypothesized that:

H1: The higher the number of procedures on the occasion of collecting license, the higher role of time required to start a business.

H2: The higher costs in start up procedures imply a hypothesis that there is an inverse relationship among initial cost in emerging of new firm and starting days.

H3: The country with more new business registered per year are better than less in entrepreneur disposition's country to set up regulation that is significantly related to subsequent early starting of new firm.

### 2.2.2. Economic development

While this study proposes a negative relationship between productivity and time required to start a business, the effect of increase in productivity arguably can have a different impact on country's length of time in register a new firm, depending on its level of economic development according to our view about convergence in those issues. The theory of global convergence states that poorer economies tend to grow at faster rates than wealthier economies. There is extensive empirical growth literature that examines the convergence hypothesis over an extended period. Following the seminal work of Baumol (1986), which found that convergence amongst industrialized countries was almost perfect, the DeLong (1988) critique, and the extensions by Barro and Sala-i-Martin (1991, 1992) and Mankiw et al. (1992), the convergence issue attracted

considerable attention thereafter in empirical literature. Convergence is well documented for EU15, and membership in the customs union proved to be an important factor, though this is not an automatic outcome. Consequently, ever since the enlargement of the EU in 2004, many researchers covered the new member states (NMS), prominently the Central Eastern European (CEE) countries, in the convergence debate (Kaitila, 2004; Varblane & Vahter, 2005; Prochniak, 2008; Vojinović & Oplotnik, 2008; Vojinović et al., 2010). The literature generally reports that the catching-up process is sensitive to both the study period and the chosen cluster of countries. Drowning on this theory, the magnitude of the effect of an increase in GDP per employment could be different, depending on the economic development of the country. Specifically, if a developing country experiences a increase in the level of GDP per capita, the improvement it observes in its doing business competitiveness could be greater than the increase enjoyed by a developed country with a comparable increase rate in economic development. Since developed countries are generally well endowed in the business and economic resources that make public administration competitive and well-managed, a increases in GDP per employment in a development country potentially can have a smaller marginal impact in improving rapidity of opening a new business, relative to a developing country that may have fewer of the same resources, less agility to do the work up to date among public servants.

Therefore, it is hypothesized that:

H4: The higher the level of productivity in a country, the lower the number of days required to constitute a new firm.

H5: The marginal gain in shortening time needed to open a new firm from increase in productivity is greater for developing (mainly covered by post-socialist countries in our sample) countries relative to developed countries.

### 2.3. Monetary factor

The equilibrium interest rate or Wicksellian interest rate is the real interest rate consistent with full employment of labor and capital resources, perhaps after some period of adjustment. Many factors affect the equilibrium rate, which can and does change over time. In a rapidly growing, dynamic economy, we would expect the equilibrium interest rate to be high, all else equal, reflecting the high prospective return on capital investments. In a slowly growing or recessionary economy, the equilibrium real rate is likely to be low, since investment opportunities are limited and relatively unprofitable. Large deficits will tend to increase the equilibrium real rate (again, all else equal), because government borrowing diverts savings away from private investment. In those circumstances we can foresee less than enough various licenses about starting up the new business. There is evidence, real interest rates are very low and many asset prices too high relative to their underlying fundamental value in equities, real estate, credit and government, bonds, today but mainly in stable countries. We have negative nominal interest rate at the policy level in most of Europe – including the Euro zone, Switzerland, Denmark and Sweden (Roubini, 2016). But countries, plagued by debt and deficit problems (countries like Greece, Croatia etc.), no doubt certainly would endeavor to alleviate start-up with business.

H6: Governments the Europe over are concerned with promoting entrepreneurship and new business start-ups, hence higher rate of interest (real and nominal) in a country, the lower the number of days required to start a new business.



#### 2.4. Business tourism development

A vibrant business tourism is essential to entrepreneurial sector, business travelers along the country drive business dynamics – the birth, expansion, contraction and death of firms – and fuel overall economic growth. There is a strong relation between the health of national economy of the countries (and its pro-business leaning) and business tourism. Because this sector usually would promote national industry, enhance communication channels and upgrade quality of management skills in different economic sectors. Business tourism is able to gain many economic fruits for the interest of the national economy. It is considered a key driver for temporary and permanent jobs. The sector generates a large number of permanent and temporary jobs in the field of event's chain, organization and management in addition to accompanied services. Business tourism has only become a global phenomenon when the benefits of aviation have evolved from a few to a market service available to broader strata of business travelers. In fact, air transport and business tourism have always been interlinked; the business tourism can be referred as: (1) air trips organized to meet customers or suppliers in order to sign contract, to develop business plans, or for technical assistance; (2) trips organized to attend trade fairs; (3) trips organized to attend conferences, conventions, or business meetings (Canova, Figini, 2012). Bearing in mind these considerations, we expect that business tourism proxied by number of air passenger per capita affect duration of time assigned to a register firm purpose.

H7: A country with a longer length of firm registration is influenced by lower frequency of air trips per capita.

## 2.5. Econometric Model

Censored regression model for panel data was used to estimate the relationship between dependent variable  $y_i$  (time required to start a business in days) and a vector of explanatory variables  $x_i$  (determinants of opening business efficiency). For the  $i$ th country, the censored regression model for panel data can be defined as follows:

$$y_{it}^* = \beta x_{it}' + \varepsilon_{it} = \beta x_{it}' + u_i + v_{it}$$

$$y_{it} = \begin{cases} a & \text{if } y_{it}^* \leq a \\ y_{it} & \text{if } a < y_{it}^* < b \\ b & \text{if } y_{it}^* \geq b \end{cases}$$

The dependent variable is the time required to start a business in days, which is censored at 20 (hence  $a = 20$  days or about the mean of that variable) from below and at 60 ( $b=60$  days) from above. This motivates the use of the estimation procedures proposed in this paper. If the censored constraints are slightly different (below or left-censored at zero), than for the  $i$ th country, the Tobit model for panel data can be applied:

$$y_{it} = \begin{cases} 0 & \text{if } y_{it}^* \leq a \\ y_{it} & \text{if } a < y_{it}^* < b \\ 1 & \text{if } y_{it}^* \geq b \end{cases}$$

Here the subscript  $i = 1, N$  indicates the country, subscript  $t = 1, T_i$  indicates the time period,  $T_i$  is the number of time periods observed for the  $i$ th country,  $u_i$  is a time-invariant country effect, and  $v_{it}$  is the remaining disturbance.

### 2.5.1. Descriptive statistics, regression analysis and results

In this study, the censored regression model for panel data are estimated for a sample of 43 countries (mostly European) whose data for years 2003-2014 are completely available from the World Bank Online Source Site for the determination of time series that affect time to start business. The countries used in the analysis are included in the Table 4. Country clusters

Table 1 & 2 provide a summary of all data used in the analysis and correlation matrix.

Table 1. Descriptive statistics

VARIABLE	MIN	MAX	RANGE	MEAN	STD.DEV
DAYS	2	138	136	20.26	20.7
LICENS	2	16	14	6.79	3.05
NEWFIRM	1205	537658	536453	34246.11	63554.74
GDP_EMP	6096	62584	56488	32351.65	14397.76
REALINTR	-34	48	82	5.1	6.5
LENDINTR	1	40	39	10.55	6.06
COSTSTART	0	57	57	8.06	8.57
BUSINESSTRIP	0.39	2188.78	2188.39	112.2	263.5

Source: Author's estimation

Notes: definition of variable. DAYS = Time required to start a business is the number of calendar days needed to complete the procedures to legally operate a business; LICENS = Start-up procedures are those required to start a business, including interactions to obtain necessary permits and licenses and to complete all inscriptions, verifications, and notifications to start operations; *NEWFIRM* = New businesses

registered are the number of new limited liability corporations registered in the calendar year.; *GDP\_EMP* = GDP per person employed is gross domestic product (GDP) divided by total employment in the economy; *REALINTR* = Real interest rate is the lending interest rate adjusted for inflation as measured by the GDP deflator; *LENDINTR* = Lending rate is the bank rate that usually meets the short- and medium-term financing needs of the private sector; *COSTSTART* = Cost to register a business is normalized by presenting it as a percentage of gross national income (GNI) per capita; *BUSINESSTRIP* = Air transport, passengers carried divided to population.

Table 2. Correlation matrix

	<i>DAYS</i>	<i>LICENS</i>	<i>NEWFIRM</i>	<i>GDP_EMP</i>	<i>REALINTR</i>	<i>LENDINTR</i>	<i>COSTSTART</i>	<i>BUSINTRIP</i>
DAYS	1	0.69	-0.18*	-0.08	-0.13*	-0.07*	0.42	-0.24
LICENS		1	-0.11*	-0.28	-0.12*	0	0.57	-0.27
NEWFIRM			1	0.31	-0.16	-0.3	-0.18	0.10*
GDP_EMP				1	-0.23	-0.7	-0.21	0.52
REALINTR					1	0.4	0.05*	-0.06
LENDINTR						1	0.02*	-0.25
COSTSTART							1	-0.22
BUSINTR								1

Notes: \* indicates significant correlation at 5

In this section we investigate if public authority curtails the number of days in starting a business as a response to the changes in control variables. To test the hypotheses,

three separate regression models are estimated. Theoretically, the fixed-effects panel Tobit (as a special kind of censored panel model) is affected by the incidental parameters problem (Neyman and Scott 1948; Lancaster 2000), i.e. the estimated coefficients are inconsistent unless the number of time periods ( $T_i$ ) approaches infinity for each individual  $i$ . So, we choose to estimate the random-effects model instead of fixed in both variants for all specifications. However, primarily, we use the classical linear panel estimations. Following Wooldridge (2010) and Drukker (2003), we test for panel autocorrelation and find no evidence for first order autocorrelation. There could be a concern about heteroskedasticity across countries; we use Breusch-Pagan / Cook-Weisberg test and find no evidence of heteroskedasticity.

Table 3. Random Effects Censored Regression Estimates of The Number Of Days Required To Start A New Business

VARIABLES	MODEL 1		MODEL 2		MODEL 3	
	TOBIT	PANEL	TOBIT	PANEL	TOBIT	<b>PANEL</b>
(Intercept)	-1.793*** (-6.375) [0.000]	-54.256*** (-5.605) [0.000]	-0.386 (-0.751) [0.453]	-13.959 (-1.004) [0.316]	8.543* (2.03) [0.042]	14.521 (0.131) [0.895]
LICENS	0.226*** 0.053 (9.513) [0.000]	7.175 0.798*** (9.042) [0.000]	0.178*** 0.020 (5.453) [0.000]	5.326*** 0.089 (5.711) [0.000]	0.164*** 0.037 (7.659) [0.000]	5.224*** <b>0.642</b> (8.574) [0.000]

NEWFIRM	-0.004 (-1.339) [0.181]	-0.0001 (-0.088) [0.93]	-0.000 (-1.234) [0.217]	0.000 (-1.481) [0.139]		
GDP_EMP	0.008 (1.476) [0.14]	0.001*** 0.0008 (3.808) [0.000]	0 (-0.075) [0.94]	0.001 0.00005 (3.102) [0.002]	-0.619 -0.143 (-2.271) [0.023]	0.878 (0.122) [0.903]
BUSINESSTR IP	-0.005 -0.002 (-2.932) [0.003]	-0.205*** -0.022 (-3.645) [0.000]	-0.014*** -0.001 (-3.225) [0.001]	-0.546*** -0.009 (-3.926) [0.000]	-0.008** -0.0019 (-3.032) [0.002]	-0.23*** -0.028 (-3.242) [0.001]
REALINTR			-0.005 (-0.504) [0.614]	-0.105 (-0.389) [0.697]		
LENDINTR			-0.037* -0.004 (-1.948) [0.051]	-1.112* -0.018 (-2.243) [0.025]	-0.041** -0.009 (-2.795) [0.005]	-0.836* -0.102 (-2.226) [0.026]
COSTSTART			-0.005 (-0.542) [0.588]	0.229 (1.009) [0.318]		

log(GDP_EM Pc)* BUSINESSTR IP c					-0.209 (-1.635) [0.102]	-2.147 (-0.657) [0.511]
logSigma	-0.208# (-2.593) [0.01]	3.056*** (33.41) [0.000]	-0.293** (-2.958) [0.003]	2.831*** (25.532) [0.000]	-0.444*** (-5.076) [0.000]	2.693*** (28.985) [0.000]
Test of Parameter Equality (d.f.)	26193 (6)	15573(6)	45899(9)	49434(9)	19898(6)	24543(6)
Prop>chi2	0.000	0.000	0.000	0.000	0.000	0.000
AIC	427.05	887.29	266.4817	549.784	345.765	467.876
logLike	-207.526	-437.98	-124.240	-265.892	-130.001	-327.746
# countries x years /observations	516/318	516/318	516/212	516/212	516/209	516/209
# left/uncensore d/right censored obs	213/105/0	219 / 79/ 20	144/ 68/ 0	147/ 52/13	125/ /84 0	131/ 69/ 9

*Notes:* Null hypothesis rejected; 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘#’ 0.1 ‘; Numbers within parentheses () denote asymptotic t-values, and within [ ] p-values. *Marginal effects* in bold. The data set as a basis of regression is an unbalanced panel, since some data are missing.

The first regression, or baseline model, is a regression of control variables on DAYS and is defined

$$DAYS_{it} = \beta_0 + \beta_1 LICENS_{it} + \beta_2 NEWFIRM_{it} + \beta_3 \ln GDP\_EMP_{it} + \dots + \beta_4 BUSINESSSTRIP_{it} + u_i + v_{it} \quad (1)$$

We regress days on the number of license, number of new firm, the log of GDP per employment, and the intensity of business traveling. Table 3 presents the parameter estimates from estimating random effects Tobit and random effects censored regression models for the number of days required to constitute the firm. The estimated parameter on the number of license is positive and significant.

A priori, it is clear that enlargement of number of procedures, as a result of deterioration of institutional confidence, necessary to create a new firm, would have significantly impact on firm registration.

That result is confirmed in rest of the specifications. Most importantly, the coefficient for *BUSINESSSTRIP* is significant and positive, which suggests that countries with higher levels of business tourism enjoy shortening days regarding to constitute a firm.

Given the support for the baseline model, a second regression - model (2) that include borrowing conditions and cost to start a business as an additional repressors, is defined as:

$$DAYS_{it} = \beta_0 + \beta_1 LICENS_{it} + \beta_2 NEWFIRM_{it} + \beta_3 \ln GDP\_EMP_{it} + \beta_4 BUSINESSSTRIP_{it} + \dots + \beta_5 REALINTR_{it} + \beta_6 LENDINTR_{it} + \beta_7 COSTSTART_{it} + u_i + v_{it} \quad (2)$$

To reflect financial entry burden we use the cost of starting a business, as percent of GDP per capita. We expect that when starting costs are significantly reduced, the cost



of registrations for some firms will move below the expected benefits of formal sector registration, and these firms will chose to register under the new reformed regime; there is no doubt that the new reformed regime would require less working days to register. Yet, our empirical tests result with insignificant finding in that case.

To account for overall regulatory arrangements which could reasonably impact new firms opening, we also use the interest rate as the average borrowing condition in the country. Opposite to conventional wisdom that says that rising rates, particularly nominal (as a significant), are bad for new business our result reflect peculiar impression that increase in nominal interest rates contribute to shortening in days to start a new business. We have predicted this in our earlier theoretical considerations.

To test the hypothesis that the marginal gain from a reduction in time assigned to constitute a firm is greater for developing countries relative to developed countries, an interaction term between *BUSINESSTRIP* and *lnGDP\_EMP* is required in the regression model.

In regard that the mean values of *BUSINESSTRIP* and *lnGDP\_EMP* are not close to zero and that preliminary regression analyses using non-centered data suggested that mild collinearity is presented, the *BUSINESSTRIP* and *lnGDP\_EMP* are centered by respective means before calculating their cross product. Now, we remove a set of variables that are not significant from the previous regressions to just show significant variables.

$$\begin{aligned}
 DAYS_{it} = & \beta_0 + \beta_1 LICENS_{it} + \beta_1 \ln GDP\_EMP_{it} + \beta_3 BUSINESSSTRIP_{it} + \beta_4 LENDINTR_{it} + \dots \\
 & \dots + \beta_5 BUSINESSSTRIP_{it} * \ln GDP\_EMP_{it} + u_i + v_{it}
 \end{aligned} \tag{3}$$

Among the significant variable is  $\ln GDP\_EMP$  but not the interaction term. From the Tobit (3.) regression, we are able to confirm as expected that the higher the level of productivity in a country is linked to the lower number of days required constituting a new firm. However, in previous two models this has a positive sign.

### 2.5.2. Cluster analysis

In effort to highlight potential global trends in time required to start a business, a cluster analysis is performed. The cluster analysis divides the set of countries into groups based on their similarity in regard to all significant independent variables from model 1-3. With the exception of  $NEWFIRM$ ,  $REALINTR$ ,  $COSTSTART$ , and interaction term all of the rest independent variables in model are insignificant to at least the 95% confidence level and are used to form the clusters.

A non-hierarchical cluster analysis is performed using the squared Euclidean distance as the measure of how 'close' or similar two countries are in regard to the four significant variables (those variables are  $LICENS$ ,  $\log GDP\_EMP$ ,  $BUSINESSTRIP$ ,  $LENDINTR$ ). After considering different cluster, a grouping of four clusters was chosen, based on the minimum group of sums of squares as presented in Table 4.

Table 4. Country cluster

CLUSTER 1	CLUSTER 2	CLUSTER 3	CLUSTER 4
Austria,Belgium,Cyprus Denmark,Estonia,Spain, Estonia,Finland,France, Hungary,Iceland,Israel, Italy, Norway, Poland, Portugal,Slovenia, Sweden, Switzerland, Turkey, United Kingdom	Belarus, Bosnia and Herzegovina, Czech Republic, Greece, Poland, Slovak, Spain	Albania,Armenia, Azerbaijan, Bulgaria, Croatia,Georgia, Germany, Kazakhstan, Kyrgyz Republic, Macedonia, FYR, Moldova,Romania, Serbia, Ukraine	Ireland
MEAN			
15.24 days	41.89 days	20.66 days	13.16 days
SAMPLE SIZE			
21 countries	7 countries	14 countries	1 country

Table 5. Test of differences in means across clusters

	CLUSTER 1	CLUSTER 2
CLUSTER 1	-	
CLUSTER 2	t = -3.23 p-value = 0.016	-
CLUSTER 3	t = -2.21 p-value = 0.036	t = 2.536 p-value = 0.039

Note: Cluster 4 (consist of Ireland alone) has not enough observations; due to that crossed t-test is not performed it.

Cluster 1 represents the group of countries that are most homogenous in regard to their institutional development (LICENS), economic development (logGDP\_EMP), monetary conditions (LENDINTR), business tourism (BUSINESSTRIP), and most heterogeneous to the other country clusters (Clusters 2, 3 and 4) with respect these variables, and so on. This cluster is the second best in ranking regards to minimum number of days required to start a new business among the nations observed in our analysis.

Briefly, country in Cluster 4 (Ireland alone) has the highest levels of institutional development, their authorities require not so numerous licenses when comes to opening a new business, the business community in this country enjoy a low tariff air trips, appreciably productivity and some of the lowest lending rates compared to Cluster 2.

Cluster 2 include intermingled group of some of the least developed or free countries (BIH and Belarus) with low levels of institutional and economic development and high nominal lending rate.

Clusters 2 and 3 can be described as the set of the emerging and transitioning nations (ex-communist countries). Though Greece and Spain belong to that club (Cluster 2), in which entrepreneur need even 42 days to pick up all the needed licenses.

Having grouped the countries, the differences in the clusters' number of days required levels should be detectable and, as shown in Table 4, the mean days differs across the clusters;

Cluster 4, as we say, enjoys the highest level of open business competitiveness, Cluster 2 the least and Clusters 1 and 3 are in the middle, with the countries in Cluster 3 enjoying more number of days competitiveness than Cluster 2.

Further, a series of t-test indicate that the differences in the mean across the country clusters are significant at the 95% confidence level.

The results of the cluster analysis indicate that if countries are grouped by their institutional development (LICENS), economic development (GDP\_EMP), business tourism (AIR\_POP), borrowing conditions (LENDINTR), significant differences in their level of time required competitiveness to start a new business can be detected, further supporting the analysis results.

### 3. Conclusions

The global debate over the time required to enter as a policy goal has grown significantly over the past decades. Many countries, especially less developed or transition nations in Europe, by opening up to foreign investors, have gradually become more dependent on business tourism as a source of revenue. Given this dependence and the expected continued growth of the business tourism industry, it is increasingly important to understand the relevance of business tourism in constructing a better business climate. The purpose of this research is to explore the role of various factors related to business tourism on a country's time to entry competitiveness as a policy goal. The major empirical finding of this research suggests that policies in developing business tourism should significantly decrease the time required to start a business across nations. Further, this study offers empirical evidence that the impact of business tourism on time to start up a firm differs among nations facing different levels of institutional, monetary and economic development. While the main result of this study is significant, further research is needed in this area. In particular, as more data becomes available for more

countries over time, future research can test the robustness of these results by exploring how time to entry is affected by changes in business tourism levels over time. In other words, given a country's existing socio-economic and institutional make-up, can an increase in business tourism be a significant factor in enhancing and promoting the goal of economic policy referred to reduction of time to entry, over time? We are aware of some shortcomings of this research and possible irrelevancy because we have a mixed disparate bunch of non-experimental data in order to test a dependent variable. Overall, the results of this research provide new information regarding the effect of business tourism on policy goal, which policymakers, political leaders and analysts can use to tailor strategies for promoting shorter time to entry.

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