

The Status Quo and the Divestment Decisions

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Abstract: Although previous academic research has focused on the factors influencing divestment decision-making, there is no research dealing with the influence of the status quo in this decision. This paper investigates if the status quo influences venture capital divestment decision-making at the country level. The analysis uses regression analysis of panel data for 24 countries over the 2007-2015 periods. We find that initial public offering, trade sale, and liquidation are the most preferred exit routes. The choice of divestment decision does not depend on the choice in the previous year. This result shows that the divestment decision-making of venture capital firms is not vulnerable to the power of the status quo. We use only a few variables in our empirical model. Using more variables will promise research. Insights from the paper suggest that the CEO of the venture capital firm should perform a post-analysis of their divestment to understand their past behavior.

Keywords: venture capital, econometric software, status quo, decision-making.

1. Introduction

"To understand the venture capital industry, one must understand the whole venture cycle. The venture capital cycle starts with raising a venture fund; proceeds through the investment in, monitoring of, and adding value to firms; continues as the venture capital firm exits successful deals and returns capital to its investors, and renews itself with the venture capitalist raising additional funds" (Gompers and Lerner, 2001).

There are three stages in the venture capital cycle which is fundraising, venture investing, and exiting venture capital investments (Gompers and Lerner, 2001). The exit strategy is considered a painful and difficult process (Duhaime and Baird, 1987; Kong Chow and Hamilton, 1993; Porter, 1976) that is often taken externally as a sign of failure. More precisely, managers who exit from the business may be considered by potential employers as losers, as they will not have comparable responsibility (Porter, 1976). For instance, Phadtare (2010) cited examples of divestiture such as Hiving off of Ultratech cement by Larsen and Toubrou Limited, Hiving off Ready-mix by Larsen and Toubrou Limited, and Kuoni India the biggest tour and travel player.

From this perspective, understanding the exit strategy is critical to ensuring the conversion of the illiquid shareholdings into private companies. It is well known that venture capital investments do not pay a dividend; that is why the exit process is very important to gain cash (Cumming et al., 2006). A growing literature (Patton and Duhaime, 1978; Schendel and Patton, 1976; Yang, 2018) has been devoted to

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documenting the main factors that contribute to explaining this decision. Managerial preferences, firm's attitudes toward the divestment option, firm financial strength, interdependency among businesses of a firm, general economic, GDP growth, legal rights, and managerial attachment are all factors that are important in the divestment decision.

Although remarkable are the merits of the contributions considering these factors, we suspect in the light of the behavioral economy that the status quo (Samuelson and Zeckhauser, 1988) comes into play in the divestment decision. There exists a wealth of evidence suggesting that the status quo (as a tendency of maintaining one's current or previous decision) not only influences individual behaviors (Burmeister and Schade, 2007; Hartman et al., 1991; Johnson et al., 1993; Madrian and Shea, 2001; Schweitzer, 1994, 1995); but also exist at the institutional level (Elert et al., 2017; Fu and Li, 2014; Gaede and Meadowcroft, 2016; Kempf and Ruenzi, 2006; Kuran, 2009; Tekce et al., 2016), and the country level (Harbi and Toumia, 2020).

One of the chief purposes of the present paper is to investigate whether the status quo influences the divestment decision. We extend the previous contribution of Harbi and Toumia (2020) in which they investigate the presence of the status quo at the country level. They conclude the influence of the status quo on venture capital investments by using a dynamic panel probit model for twenty-four countries over 9 years (from 2007 to 2015). It is important to note that venture capitalists are professionals who collect and analyze information before making an investment or disinvestment decision. However, previous studies (Freiburg and Grichnik, 2013; Harbi and Toumia, 2020; Kempf and Ruenzi, 2006; Sandri et al., 2010; Tekce et al., 2016) have demonstrated that both institutional investors and private investors can be affected by the status quo bias. As far as we know, this article is the first attempt to approach the venture capital divestment decision by considering the status quo at the country level.

To detect the status quo, we follow the contribution of Kempf and Ruenzi (2006) in which they assume that the status quo may occur in the case where the external growth of a fund depends on its external growth in the previous year. Harbi and Toumia (2020) argued the presence of the status quo if the choice of investment sectors depends positively on the previous choice. By analogy, we suppose that venture capital divestments are influenced by the status quo if their choice of the divestment industry depends significantly and positively on their choice in the previous year.

To deal with the initial value problems in nonlinear dynamic random-effects panel data models, we use the strategy proposed by Wooldridge (2005) which is developed only in a balanced panel.

The paper proceeds as follows. The next section presents the literature review. Section 3 introduces the empirical model. Section 4 explains the econometric methodology. Section 5 describes the data. Section 6 presents the estimation results and section 7 concludes the paper.

2. Literature review

2.1. Venture capital exiting strategies

Venture capital firms invest in startup firms for a period not exceeding 7 to 10 years (Sahlman, 1990). After this period, they are expected to exit. Because high-tech start-ups initially do not generate profits to pay dividends or to buy back shares (Schwienbacher, 2008), the venture capitalists use business exits (also known as divestment activity¹) to realize a positive return on the investment (Schwienbacher, 2008). From

¹ There are three types of divestment decisions which are (i) distress (forced by the market); (ii) tactical (aimed to improve short-term performance); and (iii) strategic (to derive long-term advantages), (Montgomery and Thomas, 1988; Sharma and Manikutty, 2005). These divestments

this perspective, the type of exit and the exit conditions are crucial for both the venture capitalist and the entrepreneur (Schwienbacher, 2008).

Although there are various exit strategies² for start-ups backed by venture capital companies, previous contributions discussed mainly three important exit strategies which are initial public offering (IPO), trade sale (acquisition), and liquidation (Black and Gilson, 1998; Cumming et al., 2006; Giot and Schwienbacher, 2007). Bottazzi and Da Rin (2002) explained that IPO allows the highest valuation which is why it is considered for both venture capitalists and entrepreneurs as the most sought-after way of cashing in their investment. This form of exit is also preferred for a high-growth firm or when the entrepreneur's private value of control outweighs the loss of an entrepreneur in share value (Black and Gilson, 1998). Other studies (Cochrane, 2005; Cummings and MacIntosh, 2003; Darby and Zucker, 2002; Gompers, 1995) showed that only the most innovative and promising ventures exit through an IPO.

Compared to acquisition exits, IPO exits were the most profitable; they offered the highest return for venture investors, (Gompers, 1995). For instance, an average 60% annual return on investment in IPO exits was earned by venture capital funds, given that only 15% on investment in acquisition exits was earned (Gompers, 1995). Schwienbacher (2008) explained that entrepreneurs prefer an IPO over a trade sale because an IPO keeps the firm independent, and allow entrepreneurs to remain in control of their firm. Since an IPO allows more control; the venture capitalist and the entrepreneur may have a conflict over the choice of exit route (Schwienbacher, 2008).

In contrast to an IPO which is only available for the portfolio company in a case where the company is successful (Black and Gilson, 1998), trade sale is used for both highly successful startups and less successful portfolio companies (Bascha and Walz, 2001; Cumming and MacIntosh, 2001; Giot and Schwienbacher, 2007; Lerner, 1994; Schwienbacher, 2008). Giot and Schwienbacher (2007) highlighted that venture capitalists may choose a trade sale for unprofitable firms for which a larger company wants to acquire technology. According to EVCA (2017)³, European venture capital firms comprised around 31% of all divestments (i.e. nearly 1,200 companies) and the most prominent exit route in 2017 is trade sale (42%), followed by public offering (13%) and liquidation (18%).

Liquidation is considered the last option to quit a business that involves the failure of the firm. Bottazzi and Da Rin (2002) affirmed that the majority of venture capitalists will choose to write off the investment from its assets if a funded company fails. Cumming (2008) argued that a greater probability of liquidation may be explained by a weak venture capital control right. More specifically, in the case where venture capitalists used specific veto and control rights (for instance, the right to replace the Chief executive officer), write-offs were approximately 30% less likely.

decisions have a positive impact on the performance of publicly traded firms (Duhaime and Grant, 1984; Haynes et al., 2002; John and Ofek, 1995; Montgomery and Thomas, 1988)

² According to EVCA (2015), there are eight types of exit routes which are: Initial public offering, repayment of principal loans, repayment of silent partnership, sale of quoted equity, sale to another private equity firm, sale to financial institution, trade sale and write-off.

³<https://www.investeurope.eu/media/711867/invest-europe-2017-european-private-equity-activity.pdf>

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A growing body of literature has focused on evaluating the factors influencing divestment decision-making. Based on a review of the research literature, Duhaime and Grant (1984) listed the following main factors which were hypothesized to be individually important influences on the divestment decisions of large and diversified firms: (1) firm financial strength (Schendel and Patton, 1976), (2) unit strength (Patton and Duhaime, 1978), (3) interdependency among businesses of a firm (Dundas and Richardson, 1980; Korobkin, 1997; Patton and Duhaime, 1978; Porter, 1976), (4) general economic growth (Patton and Duhaime, 1978) and (5) managerial attachment (Patton and Duhaime, 1978). Nevertheless, when Duhaime and Grant (1984) conducted interviews with corporate executives of 40 large diversified firms, they found that a business unit's strength, its relationship to other units in its firm, and its parent firm's financial position were important factors influencing divestment decision-making. However, general economic conditions (contraction and expansion) were trivial to this type of decision. Contrary to Patton and Duhaime (1978), Duhaime and Grant (1984) found that divestment decision-making was not related to the economic cycle phase. They explained this finding by the limitation of the chosen methodology. Indeed, in their paper, conclusions could be drawn about divestment decisions' timing only based on decisions to divest and the participant cooperation could be difficult to obtain for a study because of confidentiality reasons. In the same vein, Yang (2018) tested the impact of macro factors on the exit of venture capital. He found that GDP growth and legal rights had a positive impact on successful exit; however, the market liquidity reduced the likelihood of trade sales. He explained this finding because investors prefer the most successful exit which is IPO when the market liquidity increases. Moreover, he found that firms funded by venture capital whose amount of investment and the syndicate size were important would have more opportunities for an IPO; however, the likelihood of trade sale and liquidation would decrease when venture capital investors had more experience. He evoked two reasons to explain this result: (1) an increase in the survival time of venture capital does not mean an increase in the experience of venture capital investors, and (2) the complexity of the emerging market. It is important to note that the disinvestment may be affected by cognitive bias. For instance, Sandri et al. (2010) investigated the entrepreneurs' disinvestment behavior when choices are irreversible. To do so, they conducted two experiments. The first one is addressed to undergraduate students from different schools and non- students. The second one is addressed to the founders of high-tech enterprises. Their results showed a pronounced '*psychological inertia*' for both entrepreneurs and non-entrepreneurs. Bertoni and Groh (2014) analyzed the impact of additional exit opportunities brought by cross-border VC investors on the exit mode (IPO, trade sale, and write-off) of 1,062 VC investments in 462 young high-tech companies in seven European countries. They found that trade sale is influenced by the additional set of mergers and acquisitions opportunities. Similarly, the IPO is also correlated with IPO volumes in the countries of cross-border investors.

2.2. The venture capitalists' decision-making process

Several factors influence venture capital decision-making. These factors include management skills (Poindexter, 1976), product (Wells, 1974), market (Tyejee and Bruno, 1981; Wells, 1974), education (Shepherd, 1999), experience (Shepherd et al., 2003), and cognitive biases (Franke et al., 2006; Shepherd et al., 2003; Zacharakis and Shepherd, 2001).

Zacharakis and Shepherd (2001) investigated the influence of overconfidence bias on venture capitalists' decision-making. They used a policy capturing experiment to investigate the investment process of 51 venture capitalists and they find that 96% of the participants exhibited significant overconfidence which affects negatively their decisions. Another important criterion is the influence of experience on VC decision-making. Lurigio and Carroll (1985) distinguished between experienced and inexperienced individuals Shepherd et al. (2003) discussed the impact of experience on 66 Australian venture capitalists.

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They ascertain that experience is profitable to VC decision-making only if it does not exceed fourteen years. However, having more experience than 14 years harms the performance of the venture capitalist. Similarly, Franke et al. (2008) extended the previous research of Shepherd et al. (2003) by reporting significant differences in the evaluation process between novice and experienced venture capital firms. Franke et al. (2006) reported the influence of another bias which is the similarity bias. Indeed, they use data on 51 venture capital firms from a conjoint experiment to examine the similarity bias and provide evidence that venture capitalists prefer to choose teams that have an identical type of training and professional experience to them. Knockaert et al. (2010) shed light on the importance of the previous experience of VC firms' managers in the choice of the investment industry, for instance, it may enhance the level of involvement in the development of their portfolio firms (Knockaert et al., 2006). However, Milosevic (2018) investigated the effects of two types of experiences (R&D and investment banking) that have not been searched before. His finding showed the positive influence of these two types of experiences on VC performance.

2.3. Status quo

Status quo bias⁴ is among the biases that are deemed to influence the quality of the decision. Samuelson and Zeckhauser (1988) declared that *"The status quo bias is best viewed as a deeply rooted decision-making practice stemming partly from a mental illusion and partly from psychological inclination."* They explained that status quo bias is the result of rational decision-making under uncertainty, cognitive misperceptions (i.e. endowment effect, loss aversion, anchoring), and psychological commitment (deriving from the sunk costs or other investments' resources, regret avoidance, consistency). There was burgeoning literature that was concerned by how decisions may be stuck in time yet conditions are changing. This literature focused either on individual behavior (Burmeister and Schade, 2007; Hartman et al., 1991; Johnson et al., 1993; Madrian and Shea, 2001; Schweitzer, 1994, 1995); or on the institutions (Elert et al., 2017; Fu and Li, 2014; Gaede and Meadowcroft, 2016; Kempf and Ruenzi, 2006; Kuran, 2009; Tekce et al., 2016). Kempf and Ruenzi (2006) examined the existence of the status quo in the mutual fund market from 1993 to 2001. Their results showed strong evidence of the status quo and confirmed the finding of Samuelson and Zeckhauser (1988) that the status quo depends positively on the number of alternatives. In other words, they found a preference of mutual fund investors to choose the status quo option in segments that had more funds to choose from. In the same vein, Tekce et al. (2016) proved the influence of status quo bias on 244,146 Turkish individual stock investors in 2011. Indeed, Fu and Li (2014) analyzed the choice policy of an office-holding politician and asserted the power of the institutional status quo in minimizing inefficient risk-taking. This institutional status quo becomes more persistent whenever the institutional setup performs reasonably (Kuran, 2009). Freiburg and Grichnik (2013) used a data set of 136 institutional investors and private equity firms in Germany. They find that reinvestments are influenced by the status quo bias. More specifically, institutional investors tend to invest in private equity firms in which they have invested before. However, the nature of the investment opportunity and some investor characteristics influence the magnitude of the status quo bias. Harbi and Toumia (2020) investigated the influence of status quo bias on venture capital investments at the country level and found that the status quo is meaningful in real decisions. Thus, they concluded that venture capitalists are not perfectly rational decision-makers. However, Elert et al. (2017) affirmed that the institutional status quo is not accepted by all economic actors.

⁴ Term was introduced by the contribution of Samuelson and Zeckhauser (1988) who state that the status quo is *"doing nothing or maintaining one's current or previous decision"*

3. Empirical Model

We investigate the influence of the status quo on the divestment choice of venture capital firms by exploring if the choice of the divestment industry depends significantly and positively on its choice in the previous years. To this end, we have introduced the lagged dependent variable, which complicates the estimation. Thus, Wooldridge (2005) proposed an alternative method to Heckman (1981) called the "Conditional Maximum Likelihood" (CML) estimator. This method is based on an auxiliary distribution of the unobserved individual effect that is conditioned on the initial period observations and exogenous covariates. This approach is very popular in empirical work, and the modeling of the initial conditions can be estimated without additional programming effort. To estimate the dynamic variants, we may use the existing commands of standard packages (For instance, STATA) that allow the estimation of these models in a static framework. Thus, we simply add the lagged dependent variables, the dependent variables taken at the first observed period, and the time-varying explanatory variable to estimate our model. We also include the index of economic freedom, the GDP growth, and the VC country attractiveness index.

3.1 Dependent variable

By observing the percentage of divestment in all exit routes from 2007 to 2015, we find that divestment by public offering (IPO), divestment by trade sale (TS), and divestment by write-off (W-off) are considered the "most attractive mechanism" (see Table 1).

Table 1: Percentage of venture capital divestments (IPO+TS+W-off) from 2007 to 2015

Year	Austria	Belgium	Bulgaria	Czech Republic	Denmark	Slovakia
2007	87.1%	95.9%	0%	0%	100%	0%
2008	84.1%	31.3%	0%	0%	82.6%	60.9%
2009	99.1%	80.3%	100%	100%	47.5%	13.9%
2010	79.3%	92.5%	0%	87.4%	53.6%	0%
2011	88.1%	60.4%	0%	89.6%	62.4%	100%
2012	84.8%	89.4%	0%	100%	65.3%	100%
2013	86.5%	92.3%	100%	100%	93.4%	0%
2014	77%	38.9%	0%	0%	99.1%	0%
2015	93.6%	98.1%	0%	100%	80.9%	100%
	Finland	France	Germany	Greece	Hungary	Ireland
2007	69.6%	79.4%	62.8%	0%	41.4%	55.8%
2008	82.4%	59.6%	61.3%	99.9%	6.4%	96.4%
2009	73.1%	67.1%	65.8%	0%	37.4%	85%
2010	55.7%	74%	71.9%	0%	21.3%	55%
2011	18%	81.9%	77.4%	0%	0%	92.7%
2012	85.8%	64%	78.9%	0%	100%	100%
2013	55.5%	76.3%	79.7%	0%	1%	99.9%
2014	79.3%	67%	75.7%	100%	93.3%	74.6%
2015	86.7%	73.6%	76.1%	0%	7.7%	87.5%
	Italy	Luxembourg	Netherlands	Norway	Poland	Portugal
2007	75%	0%	47.6%	61.2%	20.5%	89.2%
2008	40.4%	0%	43.9%	95.2%	31.3%	72.2%
2009	62.9%	0%	52.8%	89.9%	26.7%	13.9%
2010	100%	100%	43.9%	78.1%	2.1%	52%
2011	72.2%	0%	72.1%	77.3%	87.7%	49%

2012	2.8%	0%	58.1%	62.6%	36.2%	14.2%
2013	65%	0%	82.4%	69.4%	50%	46%
2014	97.1%	100%	76.6%	75.5%	26.6%	2.9%
2015	28%	0%	72.1%	79%	60.2%	64.4%

That is why; we construct a binary dependent variable that is "*the choice of divestment*". It takes the value of 1 when the venture capital divests by country in public offering, trade sale and write-off is maximum and 0 otherwise. To clarify further, we decide to construct a binary dependent variable instead of a multinomial dependent variable because, in the context of panel data, there is no solution dealing with endogeneity in the Multinomial Logit.

3.2 Independent variables

Our main independent variable is the choice of divestment decision in the previous year. As shown in the pioneering work of Samuelson and Zeckhauser (1988), participants who are subjects to a status quo bias tend to choose an alternative that was chosen previously. Their work was extended by many other contributions (Hartman et al., 1991; Johnson et al., 1993; Kempf and Ruenzi, 2006; Madrian and Shea, 2001; Schweitzer, 1995; Tekce et al., 2016). Kempf and Ruenzi (2006) detected the status quo through a positive relationship between the external growth of a fund and its external growth in the previous year. In the same vein, Harbi and Toumia (2020) argued that venture capitalists are subject to the SQB if the choice of the investment industry depends positively on its choice in the previous year. Following these authors, we assume that venture capitalists are influenced by the status quo when the choice of divestment decision depended on its choice in the previous year. Moreover, to better authenticate the relationship with the dependent variable we added the variable "*index of economic freedom (IEF)*" which is an annual index and ranking created in 1995 by the heritage foundation and the wall street journal to measure the degree of economic freedom in the world's nations. This index is based on 12 quantitative and qualitative factors, grouped into four broad categories or pillars, of economic freedom which are: rule of law (property rights, government integrity, juridical effectiveness), government size (government spending, tax burden, fiscal health), regulatory efficiency (business freedom, labor freedom, monetary freedom) and open markets (trade freedom, investment freedom, financial freedom), (Groh et al., 2010). Wang and Wang (2012) found that an increase in the index of economic freedom leads to an increase in the likelihood of a successful exit. So, we assume that the index of economic freedom influences the choice of divestment decision.

It is well documented that numerous studies (for example, Barry and Mihov, 2015; Faria and Barbosa, 2014; Geronikolaou and Papachristou, 2012; Li et al., 2014; Liao et al., 2014; Popov and Roosenboom, 2013; Samila and Sorenson, 2011) show that VC industries contribute to economic development. That's why; we expect that venture capital divestment and GDP growth are correlated.

We also assume that the choice of the divestment decision is correlated with the VC country attractiveness index. Indeed, this index takes into account six factors (economic activity; size and liquidity of capital markets; taxation; investor protection and corporate governance; the human and social environment; and entrepreneurial culture and opportunities) across nations and determines the relative position of particular economies and regions.

4. Econometric Methodology

To handle the endogeneity in binary Probit in the context of panel data, we use Wooldridge's method (2005), in which he proposed a strategy to deal with the initial value problem in the nonlinear dynamic random effects panel data models. He extended the previous literature (Chamberlain, 1992; Heckman,

1981; Honore, 1993; Honore and Kyriazidou, 2000) dealing with the initial conditions problem in nonlinear models. He introduced a Conditional Maximum Likelihood (CML) estimator that enables the estimation of a random effect probit model. It included only one lag of the dependent variable and other explanatory variables. In our research paper, we follow the methodology proposed by Wooldridge (2005). Thus, a simple dynamic model of divestment choice is the following:

$$P(\text{choice}_{i,t}=1|\text{choice}_{i,t-1}, \text{choice}_{2007}, \text{IEF}_{i,t}, \text{GDP}_{i,t}, \text{VCindex}_{i,t}, c_i) \quad (1)$$

$$= \phi(\gamma_1 \text{IEF}_{i,t} + \gamma_2 \text{GDP}_{i,t} + \gamma_3 \text{VCindex}_{i,t} + \rho_1 \text{choice}_{i,t-1} + c_i), t=1, \dots, T \quad (2)$$

Where $t=1$ corresponds to 2008 and $t=T$ corresponds to 2015. The $\text{choice}_{i,t}$ is a binary variable that equals to 1 when the venture capital divests in the public offering, trade sale, and Write-off is maximum and 0 otherwise, $\text{choice}_{i,t-1}$ is a measure of state dependence that represents the divestment choice in the previous year ($t-1$), ρ_1 is the coefficient of the lagged dependent variable; it is used to indicate if past divestment choice is significantly related to current choice. $\text{IEF}_{i,t}$ denotes the index of economic freedom of a country in year t , $\text{GDP}_{i,t}$ denotes the annual growth rate of GDP in year t , $\text{VCindex}_{i,t}$ denotes VC country attractiveness index in year t , choice_{2007} is the choice in 2007, and c_i is the unobserved effect.

5. Data

We collect data from Invest Europe, which contains information on European Private Equity and Venture Capital divestment. Moreover, we use data collected from heritage.

Table 2. Descriptive statistics

Variable And acronyms	Definition	Source	Descriptive statistics			
			Mean	SD	Min	Max
Choice of divestment strategy ($\text{choice}_{i,t}$)	It is a binary variable that has a value of 1 when the VC divests in IPO, TS and W-off is maximum and 0 otherwise.	Invest Europe	0.653	0.478	0	1
Lagged choice ($\text{choice}_{i,t-1}$)	It indicates the choice in the previous year (for year >2007).	Invest Europe	0.651	0.479	0	1
Choice in 2007 (choice_{2007})	It represents the choice of divestment strategy in 2007.	Invest Europe	0.542	0.499	0	1
Index of economic freedom ($\text{IEF}_{i,t}$)	It is the index of economic freedom	heritage	0.688	0.073	0.458	0.826
Gross domestic product growth ($\text{GDP}_{i,t}$)	The annual growth rate of GDP volume.	World bank	1.089	3.785	-14.8	25.2
VC Country Attractiveness Index ($\text{VCindex}_{i,t}$)	It captures six criteria	IESE	27.7	17.8	2	85

In sum, our data set contains information on 24⁵ countries between 2007 and 2015. Venture capital grew significantly in most OECD countries during the 1990s compared to the rest of the world. So, we think it

⁵ Austria, Belgium, Bulgaria, Czech Republic, Denmark, Slovakia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Luxembourg, Netherlands, Norway, Poland, Portugal, Romania, Spain, Sweden, Switzerland, Ukraine, United Kingdom.

will be more interesting to use this sample to respond to our research question. Table 2 presents the variables and their main description statistics. Table 3 depicts the variance inflation factor and the correlation matrix. We find that the correlation coefficients are between 0.3 and 0.7 which may indicate moderate positive relationships between the variables (see Cohen, 1988). We presume that there is not a problem of multicollinearity because the variables are not highly linearly related. Other researchers (Hair Jr et al., 1995; Kennedy, 1992; Marquardt, 1970) indicated that if the variance inflation factors (VIF) are less than 10, so there is no multicollinearity. This is consistent with our findings. More precisely, the VIF for each variable is under 4, and the mean VIF is equal to 2.17.

Table 3. VIF and Correlation matrix

	VIF	$choice_{i,t}$	$choice_{i,t-1}$	$choice_{2007}$	$IEF_{i,t}$	$GDP_{i,t}$	$VCindex_{i,t}$
$choice_{i,t}$	—	1.0000					
$choice_{i,t-1}$	1.62	0.2936*	1.0000				
$choice_{2007}$	2.21	0.4804*	0.5327*	1.0000			
$IEF_{i,t}$	2.14	0.4398*	0.4168*	0.4558*	1.0000		
$GDP_{i,t}$	1.07	0.0811	-0.0187	0.0100	0.1531*	1.0000	
$VCindex_{i,t}$	3.82	-0.5937*	-0.5933*	-0.7201*	-0.7160*	-0.1074	1.0000
Mean VIF	2.17						

Note: *denotes statistical significance at 5% level.

6. Results

We investigate the influence of the status quo on the choice of divestment decision by using Wooldridge's (2005) Dynamic Panel Random Probit. Table 4 presents the estimation results with and without VCE robust. In our analysis, we are particularly interested in the results provided by VCE robust. The use of VCE robust minimizes the impacts of autocorrelation and heteroskedasticity in the error term.

Table 4. Regression estimates of the Dynamic Panel Random Probit and Dynamic Panel Random Probit VCE (robust)

	Wooldridge's (2005) Dynamic Panel Random Probit	Wooldridge's (2005) Dynamic Panel Random Probit VCE (robust)	
	Estimates	Estimates	dy/dx
$choice_{i,t-1}$	-0.626 (0.075)	-0.626* (0.022)	-0.135
$choice_{2007}$	0.577 (0.187)	0.577 (0.270)	0.125
$IEF_{i,t}$	0.569 (0.847)	0.569 (0.851)	0.123
$GDP_{i,t}$	0.074 (0.071)	0.074 (0.090)	0.016
$VCindex_{i,t}$	-0.054**(0.003)	-0.054**(0.010)	-0.011
Constant	1.811 (0.463)	1.811 (0.509)	
Number of observation	192	192	
Number of groups	24	24	
Log likelihood	-81.818	-89.833	
Wald chi2	33.40	33.40	
Prob>chi2	(0.0000)	(0.0000)	
LR test of Rho	3.13		

Prob>=chibar2	(0.038)		
Sigma u	0.484	0.484	
Rho	0.190	0.190	
AIC	177.637	177.637	
BIC	200.440	200.440	

Legend: * p<.05; ** p<.01; *** p<.001

According to Table 4 column 3, we find that the lagged choice of divestment decision is negative and statistically significant at the 5%. Surprisingly, this result suggests that the previous decision influences the current one in the opposite sense, implying that individuals tend to change their previous choices. This result may reflect a general discontent that reins in the venture capital field-leading those venture capitalists to consider the previous decision not to adopt it again but to avoid it. Even if venture capitalists are aware of the status quo bias, they steer against this tendency and prefer to discover new approaches that may give them more utility.

Table 5. Wooldridge’s (2005) Dynamic Panel Random Probit for IPO, TS, W-off

	IPO VCE Robust Estimates (P > z)	TS VCE Robust Estimates (P > z)	W-off VCE Robust Estimates (P > z)
<i>choice_{i,t-1}</i>	-0.355 (0.391)	-0.384 (0.199)	0.369 (0.153)
<i>choice₂₀₀₇</i>	0.496 (0.312)	0.673* (0.013)	0.283 (0.399)
<i>IEF_{i,t}</i>	-16.30*** (0.001)	1.942 (0.452)	3.906 * (0.045)
<i>GDP_{i,t}</i>	0.053 (0.184)	0.098** (0.005)	-0.0521 (0.198)
<i>VCindex_{i,t}</i>	-0.078*** (0.000)	-0.028** (0.004)	0.0035 (0.680)
<i>Constant</i>	11.094** (0.002)	-0.837 (0.681)	-4.046** (0.009)
Number of observation	192	192	192
Number of groups	24	24	24
Log likelihood	-35.67	-105.077	-71.82
Wald chi2	7.13	30.34	6.51
Prob>chi2	(0.2108)	(0.0000)	(0.260)
Sigma u	0.494	0.358	0.257
Rho	0.196	0.113	0.062
AIC	85.346	224.154	157.652
BIC	108.148	246.956	180.455

Legend: * p<.05; ** p<.01; *** p<.001

Instead of having a stagnant and wasteful mode of operating, venture capitalists seem to be able to view the situations from a broader perspective and are not fearful of the unknown future. So, they avoid the status quo bias and make different decisions by seeing new choices as gains opportunities rather than just losses. However, it is important to note that their evidence is in previous research of a negative bias. For instance, Zacharakis and Shepherd (2001) find that venture capitalists exhibited significant overconfidence. Indeed, the correlation between overconfidence and accuracy was -0.704 which means that overconfidence negatively affects VC decision accuracy. Furthermore, the VC attractiveness index estimate is negatively significant. More precisely, we find the coefficient of the VC attractiveness index is

-0.054. This means that an increase in the VC attractiveness index decreases the predicted probability of the divestment decision choice. However, all other variables are insignificant.

Column 4 in Table 4 also shows the marginal effects. We find that if the lagged choice of divestment decision changes from zero to one, the probability for the variable "*choice of divestment strategy*" taking the value one decreases by 0.135. The p-value of the Wald test is less than 5%, thus we can reject the null hypothesis, showing that the coefficients are not simultaneously equal to zero.

From the above analysis, we may conclude that the divestment decision-making of venture capital firms is not vulnerable to the power of the status quo. However, we are aware that the influence of the previous choice of divestment strategy on the current choice might not be due to the status quo and might be due to other determinants that can influence the divestment decision. That is why we include the index of economic freedom, the GDP growth, and the VC country attractiveness index to control for these influences.

It is important to note that the economic drivers may be different for each divestment decision, thus we examine each divestment decision as a separate dependent variable (see table 5). For instance, we construct a binary dependent variable that takes a value of 1 when the venture capital divestments by TS are the maximum and 0 otherwise. Surprisingly, we find that the previous choice of divestment is not significant for the three models. These findings may be explained by the fact that the economic drivers are not the same for each divestment decision.

7. Conclusion

There is a growing literature showing that the status quo bias is useful for explaining many decisions at the individual levels (Burmeister and Schade, 2007; Hartman et al., 1991; Johnson et al., 1993; Madrian and Shea, 2001; Schweitzer, 1994, 1995), at the organizational level (Elert et al., 2017; Fu and Li, 2014; Gaede and Meadowcroft, 2016; Kuran, 2009), and at the country level (Harbi and Toumia, 2020). However, this is the first paper that attempts to investigate the presence of the status quo in the choice of venture capital divestment decisions. To respond to our research question, we have considered that the choice of venture capital divestment decision depends on the previous choice which may indicate the existence of the status quo. Technically, we consider panel data and use Wooldridge's (2005) methodology. We find a significant but negative correlation between the choice of the previous year and the current one in terms of divestment decisions. So, venture capitalists are affected negatively by the status quo when choosing the divestment decision denoting their strategy towards systematic changing the divestment strategy. However, given the fact that economic drivers can be different for each divestment decision, we examine each divestment decision as a separate dependent variable. Thus, we develop three models. Our results reveal that the choice of divestment decision does not depend on the divestment decision in the previous period.

Overall, this study contributes to a better understanding of the behavior of venture capital firms and the status quo they may be subject to when it comes to making divestment decisions. However, our paper should be regarded as a template for further analysis rather than providing a definitive model. Indeed, there are two principal limitations to this study. On the one hand, the divestment decision may be affected by other factors, hence the need to address other research. Future research may include other variables in the model and investigate if the divestment decisions of venture capital firms are influenced by the status quo option. On the other hand, our findings are adapted to European countries, which is why we cannot systematically generalize the results.

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