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Does the Status Quo Affect the Private Equity Investment Decisions?

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Does the Status Quo Affect the Private Equity Investment Decisions?

Oumeima Toumia ^α & Sana El Harbi ^σ

Abstract- Despite the huge literature that has been carried to investigate the determinants of the private equity market, studies examining the extent of the SQB in the private equity investments' decisions are missing. Our regressions are based on a data set that covers 24 OECD members' countries from 2007 to 2015. We discovered the absence of a link between the SQB and the choice of private equity investments. However, the added value by activity, the private equity country attractiveness index, and the research & development expenditures have a significant impact on the choice of the investment sector. Thus, private equity investors are considered rational decision-makers compared to individuals. The crucial role of the status quo has been shown in many fields. Nevertheless, whether this bias affects the private equity investment decision at the country level remains unanswered by prior research.

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I. INTRODUCTION

Private equity (PE) investment had experienced a major boom in the nineties, (Gompers et al., 2016; Hung and Tsai, 2017). For instance, Hung and Tsai (2017) reported that private equity investment had grown rapidly¹ because of the boom of the venture capital in 1990, to the technology bust of 2000 to 2001, and the leveraged buyouts boom and bust in 2000. They also added that the resistance of lending standards in 2008 has caused the fall of the investments of the private equity industry. Nevertheless, it is well documented that private equity activity had a positive influence on economic development and entrepreneurship, (Bernoth and Colavecchio, 2014; Bernstein et al., 2016; Hellmann and Puri, 2000; Lerner, 2000). It positively affected the innovation by the introducing of new products, processes, or services on the market, the productivity and economic growth (i. e. to ensure the improvement of the production system, growth of high-tech start-up, development of skills that induce an effective use of existing knowledge), business dynamics and employment growth, (see, for instance, Belke et al., 2003; Engel and Keilbach, 2007; Gompers, 1994; Khan et al., 2018; Levine, 1997; Li et al., 2014;

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¹ Ghai et al. (2014) stated that the private equity grew approximately 1.5% of global stock-market capitalization in 2000 compared to 3.9% in 2012.

Milosevic, 2018; Ning et al., 2015; Puri and Zarutskie, 2012; Samila and Sorenson, 2011). Therefore, the determinants of private equity investment had received considerable attention (Bernoth and Colavecchio, 2014; Bernstein et al., 2016; Black and Gilson, 1998; Félix et al., 2013; Fenn et al., 1997; Gompers and Lerner, 1998; Precup, 2015) such as the real GDP growth, the market capitalization, the interest rate, the capital formation, the unemployment rate, the tax rate, the institutional and legal environment, the productivity index, the corruption index, the inflation rate, and the R&D expenditure.

Despite the existing literature, there is still no broad consensus on the influence of the status quo bias² on PE investments. It is important to mention that private equity investors are professionals who dedicate time to collect and analyze information before making an investment decision. For that reason, their decisions should be more rational (i.e. less affected by cognitive biases) than those of individuals. However, a review of studies undertaken looking at the existence of SQB at the institutional level (Elert et al., 2017; Freiburg and Grichnik, 2013; Fu and Li, 2014; Gaede and Meadowcroft, 2016; Kempf and Ruenzi, 2006; Kuran, 2009; Sandri et al., 2010; Tekçe et al., 2016) and the country level (Harbi and Toumia, 2020) had shown the vulnerable power of the status quo. We seek to develop a novel approach, to detect the SQB on the investment choice of PE investments across 24 countries for nine years (from 2007 to 2015) using the dynamic panel probit (respectively logit) model. In the present work, we extend the previous work of Harbi and Toumia (2020) in which they proved the existence of SQB in the venture capital industry at the country level. More precisely, we expect the presence of SQB in the private equity at the country level if the influence of the previous choice of the investment industry depends positively on the present one.

The rest of the paper is structured as follows. Section two is divided into two parts. The first part presents the determinants and criteria that influence the private equity industry. The second part investigates the impact of the status quo. Section three describes our empirical method. Section four presents the dataset and the main statistics. Section five sets out our results.

² Status quo, which is "doing nothing or maintaining one's current or previous decision" (Samuelson and Zeckhauser, 1988), caught the attention of researches in many fields (see for a review, Agnew et al., 2003; Kempf and Ruenzi, 2006; Tekçe et al., 2016)

Section six concludes the paper and explains its main implications.

II. LITERATURE REVIEW

To date, the bulk of the academic and practitioner literature focuses on the determinants of private equity decisions and their role in economic growth. Bernoth and Colavecchio (2014) affirmed that private equity includes five investment stages which are venture capital, growth capital, replacement capital, rescue/turnaround, and buyouts. The role of this mode of financing is not limited to provide financial resources, but they also added value to their companies by assisting with a variety of services. They helped in establishing strategies, providing technical and commercial advice, attracting key personnel, enhancing the design process, and developing the portfolio companies, (Bygrave and Timmons, 1992; De Clercq, et al., 2006; Gompers and Lerner, 2001; Gorman and Sahlman, 1989; Lerner, 1995; Sapienza, 1992; Schwienbacher, 2008). Bloom et al. (2015) added that private equity-owned firms have significantly willed management practices³ than other ownership groups (i. e. government, family, and privately-owned companies).

Understanding the factors which influence private equity has interested a lot of researchers. Among these factors, we state the real GDP growth, the market capitalization, the interest rate, the unemployment rate, the tax rate, and the R&D expenditure (Black and Gilson, 1998; Félix et al., 2013; Gompers and Lerner, 1998). Gompers and Lerner (1998) found that the GDP growth, interest, tax rate, and R&D expenditure are key factors in the evolution of venture capital; however, there is no relationship between the number of IPOs and the funds raised for the venture capital investments. In the same vein, Félix et al. (2013) investigated the determinants of the European private equity market for a group of 23 European countries for the period 1998-2003. They found that the GDP growth, market capitalization, the number of IPOs, the number of mergers and acquisitions (M&A), the interest, and the unemployment rate were considered as drivers of the private equity market in Europe. Contrary to Gompers and Lerner (1998), they found that R&D expenditure has no impact on private equity activity.

Given the fact that is not a broad consensus on the macroeconomic determinants of private equity investments in the Central and Eastern European countries, Bernoth and Colavecchio (2014) tried to fill this gap. They identified the determinants of private equity in Central and Eastern European and Western European countries from 2001 to 2011. They showed that economic activity, the inflation rate, equity market capitalization, unit labor costs, unemployment, the

institutional and legal environment influence the private equity activity. Precup (2015) extended previous literature by identifying the major determinants of the European private equity market. He used data on 27 European countries in his empirical panel analysis from 2000 to 2013. Among several determinants already tested in previous works (GDP growth, Market Capitalization, Interest rates, unemployment rate, Research & Development Expenditures), he included in his empirical model two variables which are productivity and corruption index. He found that the new determinants introduced in his model are relevant to explain the development of private equity in Europe. Bernstein et al., (2016) examined the impact of private equity investments on aggregate growth by using data from 20 industries in 26 nations between 1991 and 2009. They proved that total production, employment, and capital formation grow more quickly in the industries where private equity funds are active. They further added that these industries are less exposed to economic fluctuations. However, Kelly (2012) examined the drivers of private equity activity for 17 countries from 2003 to 2008 by employing a dynamic panel data framework. He distinguished between cyclical (GDP, GDP per capita, inflation rate) and structural factors (Entrepreneurial environment, Institutional environment, Taxation regimes, Labour market, Capital market) and he sheds light on the impact of both factors in spurring private equity investments.

To have an in-depth insight into the decisions of private equity firms, several researchers had analyzed the quasi-rational decision-making under risk and uncertainty by proposing several formal theories (e.g., prospect theory (Kahneman and Tversky, 1979) and regret theory (Bell, 1982)). Kahneman and Tversky (1979) had proposed the prospect theory, which is an alternative to the expected utility theory (also called Morgenstern-Von Neumann utility theory). It is a descriptive model of decision-making under risk by which the decisions made by individuals do not follow rational calculation. However, Bell's (1982) regret theory announced that an individual may recognize by observing the relevant outcomes that another alternative would have been preferable after deciding under uncertainty. This knowledge may yield a sense of loss or regret. Overall, the irrationality of the decision-maker has been analyzed in several types of research, and the explanations of this behavior have not gone unnoticed. From this perspective, many studies confirm the fact that both individuals and institutions do not behave rationally (Antonczyk and Salzmann, 2014; Barberis and Thaler, 2003; Elert et al., 2017; Gaede and Meadowcroft, 2016; Kahneman and Tversky, 1979; Tekçe et al., 2016) and may be affected by several biases such as status quo, loss aversion (i.e. people value loss deeper than gains), overconfidence, confirmation bias, an illusion of control, familiarity heuristic, (Burmeister and Schade,

³ Examples of management practices: hiring, firing, pay, promotions, lean manufacturing, continuous improvement, and monitoring.

2007; Hartman et al., 1991; Elert et al., 2017; Gaede and Meadowcroft, 2016; Kahneman and Tversky, 1979; Shefrin, 2001).

Many other contributions (Agnew et al., 2003; Kempf and Ruenzi, 2006; Samuelson and Zeckhauser, 1988; Tekçe et al., 2016) have focused on the impact of status quo in financial decisions. Among these studies, we find the work of Samuelson and Zeckhauser (1988). They demonstrated the presence of SQB when they examine the pension plans of Harvard employees. Indeed, it is well documented that mutual fund investors are subject to the status quo bias (Kempf and Ruenzi, 2006; Patel et al., 1991; Patel et al., 1994). In the same line, Agarwal et al., (2003) confirmed that hedge fund investors are influenced by the status quo bias. Barber et al., (2005) proved that investors have a great tendency to buy stocks they have already bought in the past. Agnew et al. (2003) found that U.S. investors prefer to maintain their initial asset allocation. Johnson et al. (1993) showed in their experimental study that the status quo intervenes in the choice of an insurance policy. Schweitzer (1995) addressed questionnaires to 400 staff at a large University. He found that status quo bias affects health care financing decisions. More concretely, individuals selected status quo alternatives more often than other alternatives. Madrian and Shea (2001) found a positive relationship between retirement savings and the status quo by using a database that contains information on 401(k) participation and savings behavior in the health care and insurance industry. Cronqvist and Thaler (2004) confirmed the consensus that inertia has also been found in U.S. 401(k) plans (Madrian and Shea, 2001; Samuelson and Zeckhauser, 1988). They found that recent returns influence the investments of participants. Indeed, the percentages of participants who remained with their portfolio during the three first years were 98.3, 97.3, and 96.9, respectively. Kempf and Ruenzi (2006) found strong evidence of the SQB by examining the U.S. equity mutual fund market. Moreover, Tekçe et al. (2016) argued that Turkish

individual stock investors are subject to the status quo bias. Furthermore, they found that gender affects the choice of status quo alternatives. More precisely, female investors are more biased toward the status quo more than male investors. Burmeister and Schade (2007) extended previous studies (Busenitz and Barney, 1997; Parlich and Bagby, 1995) in which it is shown that entrepreneurs exhibit cognitive biases and they are more affected by cognitive biases than other individuals. They used an experimental study to compare the decisions of entrepreneurs with those made by students and bankers in an experimental study. They found that the three categories (i.e. entrepreneurs, students, and bankers) are affected by the status quo. However, bankers are more affected by the status quo than both entrepreneurs and students. Harbi and Toumia (2020) reported the influence of status quo bias on the venture capital industry at the country level. They used a dynamic panel probit (respectively logit) model for 24 OECD member countries from 2007 to 2015.

III. EMPIRICAL MODEL

The main aim of our paper is to provide a deeper understanding of the influence of status quo bias in the private equity market. To do so, we look at the impact of the previous choice of the investment sector on the present ones. We follow the method used in the work of Harbi and Toumia (2020). More precisely, they expect the presence of SQB in the venture capital industry when there is a positive relationship between the actual choice of the investment industry and the present one. Table 1 shows the percentage of PE investment for Information & Communication Technology (ICT) and healthcare & life sciences (LS). A closer look at these percentages reveals a preference for both sectors. So, we construct a variable "*choice of PE investment sector*". It takes a value of 1 if the percentage of PE investment in ICT and "healthcare and LS" is the maximum and 0 otherwise.

Table 1: Percentage of PE investment in ICT and LS from 2007 to 2015

Year	Austria	Belgium	Denmark	Ukraine	Bulgaria	Germany
2007	22.8%	22.7%	42.4%	55.4%	66.4%	24.3%
2008	13.8%	15.1%	17.2%	18.8%	40.5%	21.1%
2009	47.9%	16.3%	65.2%	65%	83%	39.5%
2010	8.7%	21.6%	56%	36%	98.1%	40.7%
2011	28.6%	58.4%	28.3%	55.7%	88.9%	23.2%
2012	69.9%	21.3%	45.3%	86.2%	77.4%	37.6%
2013	24.6%	12.5%	45.7%	46%	14.4%	35%
2014	26%	13%	75.3%	55.7%	43.7%	37.1%
2015	15.5%	20.1%	22.1%	16.1%	62.6%	41.1%
	Spain	Sweden	Romania	Greece	Slovakia	Switzerland
2007	41%	42.6%	33%	0.2%	5.5%	20.4%
2008	37.1%	16.7%	29.7%	73.2%	7.6%	35.2%
2009	21.8%	25.2%	38.4%	68.6%	11.9%	59.9%
2010	28.5%	44.8%	45.3%	0%	1.4%	72.7%
2011	36.6%	50.4%	6.1%	2.9%	20.9%	18.1%

2012	31.3%	17.4%	14.3%	0%	79.1%	64%
2013	33.2%	37.8%	23.7%	84%	59.5%	59.6%
2014	29.5%	49.7%	34.3%	100%	5%	64.6%
2015	56.5%	21.1%	67.7%	100%	1.7%	39.1%
	Italy	Hungary	Portugal	Poland	Czech Republic	Luxembourg
2007	9.8%	15.3%	28.1%	21.9%	49.4%	11.8%
2008	28%	94.8%	6.1%	12.7%	75.1%	59.9%
2009	17.4%	95.1%	37.7%	55.1%	15.4%	80.2%
2010	39.9%	32.4%	5.7%	16.9%	45.1%	7.6%
2011	16.1%	17.4%	14.4%	45.8%	16.9%	16.9%
2012	31.7%	29%	10.7%	16.3%	85.7%	30.7%
2013	20.1%	16%	8.7%	23.7%	16.9%	12.9%
2014	5.7%	38.6%	22.8%	50.1%	76.1%	45.3%
2015	10.9%	6.6%	38.1%	12.1%	20.3%	0.6%
	Ireland	Netherlands	France	Finland	Norway	United Kingdom
2007	72.8%	30.8%	24.3%	43.9%	40.7%	29.7%
2008	36.1%	13.4%	37.2%	38.2%	27%	28.5%
2009	19.8%	34.8%	32.1%	44.5%	22.6%	30.1%
2010	31.7%	21.9%	35.5%	53.5%	65.4%	25.4%
2011	35.7%	12.5%	27.5%	54.6%	24.9%	42.7%
2012	35.7%	27.1%	17.4%	19.2%	40.7%	32.8%
2013	67.9%	34.8%	18.9%	75.8%	17%	28.2%
2014	93%	72.4%	39.9%	34.7%	34%	31.3%
2015	28.5%	23.6%	31.2%	16.1%	44.6%	25.8%

Nonetheless, we also include other variables such as the added value by activity, the private equity country attractiveness index, and the research & development expenditures (see for a review, Gompers and Lerner, 1998; Groh et al., 2010; Harbi and Toumia, 2020; Hellmann and Puri, 2000; Lahr and Mina, 2016).

So, our model is the following:

$$P(\text{choice}_{i,t} = 1 | \text{choice}_{i,t-1}, \text{choice}_{2007}, VA_{i,t}, PEindex_{i,t}, R\&D_{i,t}, c_i), t=2008, \dots, 2015 \quad (1)$$

$$= \phi(\gamma_1 VA_{i,t} + \gamma_2 PEindex_{i,t} + \gamma_3 R\&D_{i,t} + \rho_1 \text{choice}_{i,t-1} + c_i), t=2008, \dots, 2015 \quad (2)$$

Where the $\text{choice}_{i,t}$ is our binary dependent variable that equals 1 when the percentage of PE investment in ICT and "healthcare & LS" is the maximum and 0 otherwise., $\text{choice}_{i,t-1}$ is the main independent variable of interest which is the choice of PE investment sector in the previous, ρ_1 is the coefficient of the lagged dependent variable, $VA_{i,t}$ denotes the added value by the activity of PE investment sector in a year "t", $PE index_{i,t}$ denotes PE Country Attractiveness Index in a year "t", $R \& D_{i,t}$ represents the R&D expenditure of a country in a year "t", choice_{2007} is the initial choice in 2007 and c_i is the unobserved effect.

IV. DATA AND STATISTICS

The data used comes from many online databases that contain annual information: Invest Europe/ PEREP_Analytics, World Bank, OECD (Organization for Economic Co-operation and

Similar to Harbi and Toumia (2020), we use the conditional maximum likelihood (CML) estimator proposed by Wooldridge (2005). This estimator allows the estimation of the dynamic panel probit model for the balanced panel.

Development), and IESE Business School. In sum, we get a data set that covers 24⁴ European countries from 2007 to 2015. We are limited to this period because the reports provided by the Private Equity and Venture Capital association contain data only for the years 2007 to 2015. Table 2 presents the main variables and descriptive statistics. Table 3 presents the correlation matrix and the variance inflation factor (VIF).

⁴ 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.

Table 2: Descriptive statistics

Variable	Source	Descriptive statistics				
		N	Mean	SD	Min	Max
$choice_{i,t}$		216	0.514	0.501	0	1
$choice_{i,t-1}$		192	0.526	0.501	0	1
$choice_{2007}$		192	0.536	0.500	0	1
$VA_{i,t}$		216	3.513	8.611	-19.47	44.47
$PEindex_{i,t}$		216	30.041	18.934	2	90
$R\&D_{i,t}$		216	1.720	0.899	0.382	3.750

The Pearson correlation coefficients are not significant and low for most pairs of variables. Among all the correlation coefficients, the only highest one is

between the $PE\ index_{i,t}$ and the $R\ \&\ D_{i,t}$ (correlation = -0.7330). Thus, there isn't a multicollinearity problem.

Table 3: VIF and Correlation matrix

	VIF	$choice_{i,t}$	$choice_{i,t-1}$	$choice_{2007}$	$VA_{i,t}$	$PEindex_{i,t}$	$R\&D_{i,t}$
$choice_{i,t}$		1.0000					
$choice_{i,t-1}$	1.09	-0.0115	1.0000				
$choice_{2007}$	1.08	0.1134	0.2054*	1.0000			
$VA_{i,t}$	1.07	0.2648*	0.1403	-0.0716	1.0000		
$PEindex_{i,t}$	2.24	0.0963	0.0621	0.1818*	-0.1857*	1.0000	
$R\&D_{i,t}$	2.32	0.0126	0.0344	-0.1128	0.1163	-0.7330*	1.0000

Note: *denotes statistical significance at 5% level.

This ascertainment was further supported by the use of VIF. Kennedy (1992) and Marquardt (1970), revealed the existence of major multicollinearity when a VIF is greater than 10. In the same vein, O'Brien (2007) stated that high correlation may be problematic and should be treated with caution in the case where the VIFs are greater than 5 or 10 or 30. As shown in Table 3, the VIF is under 3, so there is a limited threat of multicollinearity. So, we may assume that the regression

coefficients are well-conditioned estimated and the multiple correlations with other variables aren't high.

V. ESTIMATIONS RESULTS

Table 4 presents the results of dynamic panel random probit (respectively logit) with the robust estimator of the variance. The results are similar for both models.

Table 4: Wooldridge's (2005) Dynamic Panel Random Probit/Logit for the Whole Sample (N=192)

	Wooldridge's (2005) Probit VCE robust		Wooldridge's (2005) Logit VCE robust	
	Estimates ($P > z $)	dy/dx	Estimates ($P > z $)	dy/dx
$choice_{i,t-1}$	-0.275 (0.182)	-0.100	-0.431 (0.191)	-0.096
$choice_{2007}$	0.344 (0.091)	0.125	0.571 (0.090)	0.127
$VA_{i,t}$	0.046** (0.009)	0.017	0.081* (0.014)	0.018
$PEindex_{i,t}$	0.019** (0.010)	0.0069	0.031* (0.011)	0.007
$R\&D_{i,t}$	0.302* (0.013)	0.110	0.482* (0.016)	0.107
Constant	-1.229** (0.006)		-2.024** (0.006)	
Number of observation	192		192	
Number of groups	24		24	
Log pseudo-likelihood	-122.4025		-122.1760	
Wald chi2(5)	20.04		18.30	
Prob>chi2	(0.0012)		0.0026	
LR chi2(5)	21.20		21.65	
Prob>chi2	0.0007		0.0006	
Sigma u	0.0017674		0.0047433	
Rho	3.12e ⁻⁰⁶		6.84e ⁻⁰⁶	
AIC	258.805		258.351	
BIC	281.607		281.154	

Legend: * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

As shown in table 4, we find that the previous choice of the PE investment sector is not significant. This result leads to the conclusion that private equity

investors are considered rational decision-makers compared to individuals. They analyze and collect the information of all available opportunities rather than

select the status quo option. This is an interesting finding, as it is contrary to what we know from the previous contribution of Harbi and Toumia (2020). There are two possible explanations: (1) there are many

differences between these two modes of funding (i.e. types of firms in which they invest, the level of capital invested, etc), and (2) the data set used in both studies are not totally similar.

Table 5: Wooldridge's (2005) Dynamic Panel Random Probit for ICT and LS

	ICT VCE Robust		LS VCE Robust	
	Estimates ($P > z $)	dy/dx	Estimates ($P > z $)	dy/dx
$choice_{i,t-1}$	-0.474 (0.098)	-0.141	-0.139 (0.730)	-0.029
$choice_{2007}$	0.219 (0.371)	0.0656	0.605 (0.096)	0.126
$VA_{i,t}$	0.031 (0.084)	0.0093	0.044** (0.010)	0.009
$PEindex_{i,t}$	0.0120 (0.255)	0.0036	0.0268** (0.002)	0.0055
$R\&D_{i,t}$	0.111 (0.563)	0.0333	0.312 (0.161)	0.0651
<i>Constant</i>	-1.2967* (0.046)		-2.599*** (0.000)	
Number of observation	192		192	
Number of groups	24		24	
Log pseudo-likelihood	-103.81708		-72.913689	
Wald chi2(5)	7.11		12.41	
Prob>chi2	0.2126		0.0296	
LR chi2(5)	8.26		13.64	
Prob>chi2	0.1425		0.0180	
Sigma u	0.293		0.0005	
Rho	0.079		2.55 e ⁻⁰⁷	
AIC	221.634		159.827	
BIC	244.436		182.629	

Legend: * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

Also, the initial choice in 2007 ($choice_{2007}$) is not significant. Furthermore, we find that the added value by activity, the private equity country attractiveness index, and the research & development expenditures have a positive significant impact on the choice of the investment sector.

This finding is in line with previous studies (Gompers and Lerner, 1998; Groh et al., 2010; Harbi and Toumia, 2020; Hellmann and Puri, 2000; Lahr and Mina, 2016). The p-value of the Wald test and LR test are less than 5%, implying that the coefficients are not simultaneously equal to zero. Moreover, the rho differs from zero, concluding the difference between the panel estimator and the pooled estimator.

However, this finding suffers from a possible limitation notably related to the consideration of the regression results of a combined variable (ICT + healthcare & LS). These two sectors may have different economic drivers that may influence our results. For the sake of clarity and better analysis, we examined each PE investment sector as a separate dependent variable (see table 5). Column 2 in Table 5 presents the results of regression when the binary dependent variable is equal to 1 if the percentage of PE investment in ICT is the maximum and 0 otherwise. Column 4 in Table 5 presents the case when the dependent variable is 1 if the percentage of PE investment in healthcare & LS is the maximum and 0 otherwise. Similar to previous

results, we find that the previous choice of divestment is not significant for both models (see table 5).

VI. CONCLUSION

So far, there is a huge literature that enumerates the determinants of private equity activity because of its major impact on economic development and entrepreneurship, (Bonini and Alkan, 2012; Gompers and Lerner, 1998). Nevertheless, the influence of the status quo on the private equity investments' decision has never been discussed beforehand. Hence our contribution is unique in trying to filling the gap in the existing literature by investigating if private equity firms are subject to the status quo. Contrary to the work of Harbi and Toumia (2020), we find that the previous choice of the investment industry doesn't depend on the present one.

Although this study provided an empirical model to show how private equity firms make their decisions, it is essential to recognize the influence of other factors that do not change over time that may influence the decision of private equity firms. Thus we tried to control the influence of some variables which are recognized as determinants of the private equity market. Indeed, following previous contributions (Gompers and Lerner, 1998; Groh et al., 2010; Harbi and Toumia, 2020; Hellmann and Puri, 2000; Lahr and Mina, 2016), the added value by activity, the private equity country

attractiveness index, and the research & development expenditures have a significant and a positive impact on the choice of the investment sector.

For organizations, our findings can help to further understanding why the status quo occurs. Using the results of our research, private equity investors may better frame their decisions to overcome this bias. Moreover, the status quo is considered a critical barrier to organizational change and development. Investors may not recognize that they are too attached to their ideas, opinions, and decision-making. Thus they may interpret the status quo as signaling success and they feel no need to search for novel perspectives or ideas. Being aware of this limit, it would be advisable for managers to adopt a proactive behavior (Bindl and Parker, 2017; Bohlmann and Zacher, 2020; Cangiano, et al., 2019; Parker et al., 2010; Parker and Collins, 2010; Parker et al., 2006; Seibert et al., 2001; Thompson, 2005; Thomas et al., 2010). This behavior involves "taking action to change the status quo has great importance in the modern organization, (Bohlmann and Zacher, 2020).

Since we are entirely interested in our analysis on the impact of the status quo, we have not included other macroeconomic determinants of the private equity investment industry. We only include variables that measure economic activity. Hence, our contribution provides a better understanding of the behavior of private equity firms, however, our results may not be considered as definitive. Indeed our sample is composed of European countries; although we are not sure that our findings would also hold with, e.g., African countries, Asian countries, or American countries. So, we should not underestimate the relevance of country differences, that's why; we recommend performing other studies to confirm our result.

Declarations

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BIBLIOGRAPHY

- Agarwal, V., Daniel, N., & Naik, N. Y. (2003). Flows, performance, and managerial incentives in the hedge fund industry. *Georgia State University and London Business School, Working Paper*, 7(24), 03.
- Agnew, J., Balduzzi, P., & Sundén, A. (2003). Portfolio choice and trading in a large 401 (k) plan. *American Economic Review*, 93(1), 193-215.
- Antonczyk, R. C., & Salzman, A. J. (2014). Overconfidence and optimism: The effect of national culture on capital structure. *Research in International Business and Finance*, 31(C), 132-151.
- Barber, B. M., Odean, T., & Zheng, L. (2005). Out of sight, out of mind: The effects of expenses on mutual fund flows. *The Journal of Business*, 78(6), 2095-2120.
- Barberis, N., & Thaler, R. (2003). A survey of behavioral finance. *Handbook of the Economics of Finance*, 1, 1053-1128.
- Belke, A., Fehn, R., & Foster, N. (2003). *Does Venture Capital Investment Spur Employment Growth?- Further Evidence* (No. 216/ 2003). Department of Economics, University of Hohenheim, Germany.
- Bell, D. E. (1982). Regret in decision making under uncertainty. *Operations research*, 30(5), 961-981.
- Bernoth, K., & Colavecchio, R. (2014). The macroeconomic determinants of private equity investment: a European comparison. *Applied Economics*, 46(11), 1170-1183.
- Bernstein, S., Lerner, J., Sorensen, M., & Strömberg, P. (2016). Private equity and industry performance. *Management Science*, 63(4), 1198-1213.
- Bindl, U. K., & Parker, S. K. (2017). New perspectives and directions for understanding proactivity in organizations.
- Black, B. S., & Gilson, R. J. (1998). Venture capital and the structure of capital markets: banks versus stock markets. *Journal of financial economics*, 47(3), 243-277.
- Bloom, N., Sadun, R., & Van Reenen, J. (2015). Do private equity-owned firms have better management practices?. *American Economic Review*, 105(5), 442-46.
- Bohlmann, C., & Zacher, H. (2020). Making Things Happen (Un) Expectedly: Interactive Effects of Age, Gender, and Motives on Evaluations of Proactive Behavior. *Journal of Business and Psychology*, 1-23.
- Bonini, S., & Alkan, S. (2012). The political and legal determinants of venture capital investments around the world. *Small Business Economics*, 39(4), 997-1016.
- Burmeister, K., & Schade, C. (2007). Are entrepreneurs' decisions more biased? An experimental investigation of the susceptibility to status quo bias. *Journal of Business Venturing*, 22(3), 340-362.
- Busenitz, L. W., & Barney, J. B. (1997). Differences between entrepreneurs and managers in large organizations: Biases and heuristics in strategic decision-making. *Journal of business venturing*, 12(1), 9-30.
- Bygrave, W. D., & Timmons, J. A. (1992). *Venture capital at the crossroads*. Harvard Business Press.
- Cangiano, F., Parker, S. K., & Yeo, G. B. (2019). Does daily proactivity affect well-being? The moderating role of punitive supervision. *Journal of Organizational Behavior*, 40(1), 59-72.

19. Cronqvist, H., & Thaler, R. H. (2004). Design choices in privatized social-security systems: Learning from the Swedish experience. *American Economic Review*, 94(2), 424-428.
20. De Clercq, D., Fried, V. H., Lehtonen, O., & Sapienza, H. J. (2006). An entrepreneur's guide to the venture capital galaxy. *Academy of Management Perspectives*, 20(3), 90-112.
21. Elert, N., & Henrekson, M. (2017). Status Quo Institutions and the Benefits of Institutional Deviations. *International Review of Entrepreneurship*, 15(1), 86-105.
22. Engel, D., & Keilbach, M. (2007). Firm-level implications of early-stage venture capital investment—An empirical investigation. *Journal of Empirical Finance*, 14(2), 150-167.
23. Félix, E. G. S., Pires, C. P., & Gulamhussen, M. A. (2013). The determinants of venture capital in Europe—Evidence across countries. *Journal of Financial Services Research*, 44(3), 259-279.
24. Fenn, G. W., Liang, N., & Prowse, S. (1997). The private equity market: An overview. *Financial Markets, Institutions & Instruments*, 6(4), 1-106.
25. Franke, N., Gruber, M., Harhoff, D., & Henkel, J. (2006). What you are is what you like—similarity biases in venture capitalists' evaluations of start-up teams. *Journal of Business Venturing*, 21(6), 802-826.
26. Freiburg, M., & Grichnik, D. (2013). Institutional Reinvestments in Private Equity Funds as a Double-Edged Sword: the Role of the Status Quo Bias. *Journal of Behavioral Finance*, 14(2), 134-148.
27. Fu, Q., & Li, M. (2014). Reputation-concerned policy makers and institutional status quo bias. *Journal of Public Economics*, 110(C), 15-25.
28. Gaede, J., & Meadowcroft, J. (2016). A question of authenticity: Status quo bias and the International Energy Agency's World Energy Outlook. *Journal of environmental policy & planning*, 18(5), 608-627.
29. Ghai, S., Kehoe, C., & Pinkus, G. (2014). Private equity: Changing perceptions and new realities. *Mc Kinsey Quarterly*.
30. Gompers, P. (1994). The rise and fall of venture capital. *Business and Economic History*, 23(2), 1-26.
31. Gompers, P., Kaplan, S. N., & Mukharlyamov, V. (2016). What do private equity firms say they do?. *Journal of Financial Economics*, 121(3), 449-476.
32. Gompers, P., & Lerner, J. (1998). What drives venture capital fundraising?. *Brookings Papers on Economic Activity*, 29, 149-192.
33. Gompers, P., & Lerner, J. (2001). The venture capital revolution. *Journal of economic perspectives*, 15 (2), 145-168.
34. Gorman, M., & Sahlman, W. A. (1989). What do venture capitalists do?. *Journal of business venturing*, 4(4), 231-248.
35. Groh, A. P., Von Liechtenstein, H., & Lieser, K. (2010). The European venture capital and private equity country attractiveness indices. *Journal of Corporate Finance*, 16(2), 205-224.
36. Harbi, S. E., and Toumia, O. (2020). The status quo and the investment decisions. *Managerial Finance* 46(9):1183 -1197.
37. Hartman, R. S., Doane, M. J., & Woo, C. K. (1991). Consumer rationality and the status quo. *The Quarterly Journal of Economics*, 106(1), 141-162.
38. Hellmann, T., & Puri, M. (2000). The interaction between product market and financing strategy: The role of venture capital. *The review of financial studies*, 13(4), 959-984.
39. Hung, Y. D., & Tsai, M. H. (2017). Value Creation and Value Transfer of Leveraged Buyouts: A Review of Recent Developments and Challenges for Emerging Markets. *Emerging Markets Finance and Trade*, 53(4), 877-917.
40. Johnson, E. J., Hershey, J., Meszaros, J., & Kunreuther, H. (1993). Framing, probability distortions, and insurance decisions. *Journal of Risk and Uncertainty*, 7(1), 35-51.
41. Kahneman, D. & Tversky, A. (1979). Prospect Theory: An Analysis of Decision under Risk. *Econometrica* 47(2), 263-291.
42. Kelly, R. (2012). Drivers of private equity investment activity: are buyout and venture investors really so different?. *Venture Capital*, 14(4), 309-330.
43. Kempf, A., & Ruenzi, S. (2006). Status quo bias and the number of alternatives: An empirical illustration from the mutual fund industry. *The journal of behavioral finance*, 7(4), 204-213.
44. Kennedy, P. (1992), *A Guide to Econometrics*, The MIT press, Cambridge, Massachusetts.
45. Khan, N., She, Q., Zhang, L., & Ahmad, I. (2018). Does Venture Capital Investment Spur Innovation? Cross Countries Analysis. *Cross Countries Analysis (December 19, 2018)*.
46. Kuran, T. (2009). Explaining the economic trajectories of civilizations: The systemic approach. *Journal of Economic Behavior & Organization*, 71 (3), 593-605.
47. Lahr, H., & Mina, A. (2016). Venture capital investments and the technological performance of portfolio firms. *Research Policy*, 45(1), 303-318.
48. Lerner, J. (1995). Venture capitalists and the oversight of private firms. *The Journal of Finance*, 50(1), 301-318.
49. Lerner, J. (2000). Assessing the contribution of venture capital. *The RAND Journal of Economics*, 31(4), 674-692.
50. Levine, R. (1997). Financial Development and Economic Growth: Views and Agenda. *Journal of Economic Literature*, 35(2), 688-726.
51. Li, Y., Vertinsky, I. B., & Li, J. (2014). National distances, international experience, and venture

- capital investment performance. *Journal of Business Venturing*, 29(4), 471-489.
52. Milosevic, M. (2018). Skills or networks? success and fundraising determinants in a low performing venture capital market. *Research Policy*, 47(1):49–60.
 53. Madrian, B. C., & Shea, D. F. (2001). The Power of Suggestion: Inertia in 401 (k) Participation and Savings Behavior. *The Quarterly Journal of Economics*, 116(4), 1149-1187.
 54. Marquardt, D.W. (1970), Generalized inverses, ridge regression, biased linear estimation, and nonlinear estimation, *Technometrics*, 12(3), 591-612.
 55. Ning, Y., Wang, W., & Yu, B. (2015). The driving forces of venture capital investments. *Small Business Economics*, 44(2), 315-344.
 56. O'brien, R. M. (2007). A caution regarding rules of thumb for variance inflation factors. *Quality & quantity*, 41(5), 673-690.
 57. Palich, L., Bagby, D., 1995. Using cognitive theory to explain entrepreneurial risk-taking: challenging conventional wisdom. *Journal of Business Venturing* 10 (6), 425 – 438.
 59. Parker, S. K., Bindl, U. K., & Strauss, K. (2010). Making things happen: A model of proactive motivation. *Journal of management*, 36(4), 827-856.
 60. Parker, S. K., & Collins, C. G. (2010). Taking stock: Integrating and differentiating multiple proactive behaviors. *Journal of management*, 36(3), 633-662.
 61. Parker, S. K., Williams, H. M., & Turner, N. (2006). Modeling the antecedents of proactive behavior at work. *Journal of applied psychology*, 91(3), 636.
 62. Patel, J., Zeckhauser, R., & Hendricks, D. (1991). The rationality struggle: Illustrations from financial markets. *The American Economic Review*, 81(2), 232-236.
 62. Patel, J., Zeckhauser, R. J., & Hendricks, D. (1994). Investment flows and performance: Evidence from mutual funds, cross-border investments, and new issues. *Japan, Europe and the international financial markets: Analytical and empirical perspectives*, 51-72.
 63. Precup, M. (2015). The Future of Private Equity in Europe–The Determinants Across Countries. *Romanian Journal of European Affairs*, 15(4), 72-92.
 64. Puri, M., & Zarutskie, R. (2012). On the life cycle dynamics of venture-capital-and non-venture-capital-financed firms. *The Journal of Finance*, 67(6), 2247-2293.
 65. Samila, S., & Sorenson, O. (2011). Venture capital, entrepreneurship, and economic growth. *The Review of Economics and Statistics*, 93(1), 338-349.
 66. Samuelson, W., & Zeckhauser, R. (1988). Status quo bias in decision making. *Journal of risk and uncertainty*, 1 (1), 7-59.
 67. Sandri, S., Schade, C., Musshoff, O., & Odening, M. (2010). Holding on for too long? An experimental study on inertia in entrepreneurs' and non-entrepreneurs' disinvestment choices. *Journal of economic behavior & organization*, 76(1), 30-44.
 68. Sapienza, H. J. (1992). When do venture capitalists add value?. *Journal of Business Venturing*, 7(1), 9-27.
 69. Schweitzer, M. (1995). Multiple reference points, framing, and the status quo bias in health care financing decisions. *Organizational Behavior and Human Decision Processes*, 63(1), 69-72.
 70. Schwienbacher, A. (2008). Innovation and venture capital exits. *The Economic Journal*, 118(533), 1888-1916.
 71. Seibert, S. E., Kraimer, M. L., & Crant, J. M. (2001). What do proactive people do? A longitudinal model linking proactive personality and career success. *Personnel psychology*, 54(4), 845-874.
 72. Shefrin, H. (2001). Behavioral corporate finance. *Journal of applied corporate finance*, 14(3), 113-126.
 73. Tekçe, B., Yılmaz, N., & Bildik, R. (2016). What factors affect behavioral biases? Evidence from Turkish individual stock investors. *Research in International Business and Finance*, 37(C), 515-526.
 74. Thompson, J. A. (2005). Proactive personality and job performance: a social capital perspective. *Journal of Applied psychology*, 90(5), 1011.
 75. Thomas, J. P., Whitman, D. S., & Viswesvaran, C. (2010). Employee proactivity in organizations: A comparative meta-analysis of emergent proactive constructs. *Journal of occupational and organizational psychology*, 83 (2), 275-300.