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GCC Sovereign Wealth Funds: Why do they Take Control?

J. Amar*, C. Lecourt[†] and J.F. Carpentier[‡]

This version: November 2021

Abstract

In this paper, we investigate what are the drivers of cross-border equity acquisitions made by Sovereign Wealth Funds (SWFs) of the Gulf Cooperation Council (GCC) countries. GCC SWFs are considered as relatively opaque investors and strongly politicized, raising some concerns for perceived political and security risks. Using both Logit and ordered Logit models, we test if the usual determinants of SWFs investments still stand when we look at large or majority acquisitions made by GCC SWFs. Unlike results found in the literature investigating the determinants of SWFs cross-border investments, we find that GCC SWFs do not take into account the financial characteristics of the target firm by taking majority stakes, apart from its financial wealth. The economic, institutional and financial factors of the target country as well as the existence of trade agreements between both countries do not matter in their acquisition/control decision. We also find that firms operating in strategic sectors are targeted by GCC SWFs for diversification purposes but not for the purpose of acquisition or control. Overall, our results lend support to the hypothesis that GCC SWFs differ from other institutional investors in terms of acquisition decision strategy and that financial and commercial motives are not the exclusive target of their acquisition strategy.

JEL classification: F310; F31; G15

Keywords: Sovereign Wealth Funds; Cross-border Majority Acquisitions; Ordered Logit model ; GCC.

*University of Côte d'Azur, GREDEG, CNRS. jeanne.amar@univ-cotedazur.fr.

[†]Aix-Marseille Univ., CNRS, EHESS, Centrale Marseille, AMSE. christelle.lecourt@univ-amu.fr.

[‡]Aix-Marseille University, Cergam EA 4225, jean-francois.carpantier@univ-amu.fr.

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In this paper, we investigate what are the drivers of cross-border equity acquisitions made by Sovereign Wealth Funds (SWFs) of the Gulf Cooperation Council (GCC) countries. GCC SWFs are considered as relatively opaque investors and strongly politicized, raising some concerns for perceived political and security risks. Using both Logit and ordered Logit models, we test if the usual determinants of SWFs investments still stand when we look at large or majority acquisitions made by GCC SWFs. Unlike results found in the literature investigating the determinants of SWFs cross-border investments, we find that GCC SWFs do not take into account the financial characteristics of the target firm by taking majority stakes, apart from its financial wealth. The economic, institutional and financial factors of the target country as well as the existence of trade agreements between both countries do not matter in their acquisition/control decision. We also find that firms operating in strategic sectors are targeted by GCC SWFs for diversification purposes but not for the purpose of acquisition or control. Overall, our results lend support to the hypothesis that GCC SWFs differ from other institutional investors in terms of acquisition decision strategy and that financial and commercial motives are not the exclusive target of their acquisition strategy.

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1 Introduction

Sovereign wealth funds (SWFs) have sharply grown over the last decade, with resources estimated to be USD 8.3 trillion in 2020, thanks to high oil prices, financial globalisation and sustained global large imbalances.¹ While the size and rapid growth of SWFs suggest that they have become major players in the world, buying large stakes in companies and giving government's exposure to sectors they may otherwise be unable to achieve, their objectives and behavior are not well understood. In particular, the opaqueness surrounding their structure and activities is a major concern in host countries, as it is unclear whether SWFs behave like governments or institutional investors: *"the prospect of significant investments by SWFs potentially giving foreign countries control over important parts of an investee country's economy has emerged as a political issue"* (Greene and Yeager, 2008). The possibility that their capital could be used for political purposes, including through investments in strategic sectors, has raised concerns in many countries (Chhaochharia et al. (2008); Ferreira and Matos (2008); Knill et al. (2012)).

This is particularly the case of SWFs originating from the Gulf Cooperation Council (GCC) countries², whose accumulated assets have dramatically increased since 10 years due to the increasing prices of commodities such as oil and natural gas. The SWFs of GCC countries manage around 40% of SWFs global assets. They are broadening their investment portfolios and focusing on achieving higher returns. Consequently, they have invested all over the world during the last decade with the bulk of them focused on developed countries and in particular Europe. It has become common news to hear that one of these GCC funds is in the process of buying, planning to buy or investing in a major institution in Western countries. A revealing example is the full acquisition by Qatar Investment Authority (QIA) in 2011 of the popular football club Paris St. Germain. The same SWF has played the role of deal-maker with the Glencore acquisition of Xstrata in 2013 and with Glencore again by buying stakes in Russian oil company Rosneft in December 2016. In June 2016, the Public Investment Fund (PIF) of Saudi Arabia has announced to have taken a USD 3.5 billion stake in the taxi company Uber, in order to diversify the economy of the country by investing in sectors less dependent on oil. These examples illustrate well the fact that the motives of GCC funds can be other than pure profit maximisation of the financial investment and reveal their capacity to take the control or to be able to influence companies involving the strategic national interests.

SWFs differ from other funds like hedge funds, mutual funds and ETFs by their fundings, structure and motivations. First, they are sovereign-owned institutions, which are managed either by finance ministries or a board composed of government officials with the aim of transferring sovereign wealth from now to future.

¹According to the Sovereign wealth Fund Institute, the assets managed by these funds were estimated to be USD 3,2 trillion in September 2007, which means that the size of these funds has more than doubled since the beginning of the financial crisis (source: www.swfinstitute.org).

²GCC member states are Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates. The United Arab Emirates are a federation of seven emirates, including Abu Dhabi, Dubai and Ras al-Khaimah, which all have their own SWF.

Second, they can be classified into two main categories based on their source of funding: commodity funds and non-commodity funds funded by excess foreign currency reserves due to commodity exports, trade surplus or public pension assets (Aggarwal and Goodell (2018)). In terms of investment strategy, they can behave like other institutional investors participating in the financial market with the aim of profit maximisation or they can also act as vehicles for home states by serving the political agenda of the home state and pursuing foreign policy goals. In this last case, they must be considered as political and not economic actors with non-pecuniary motives such as domestic concerns (development of the national economy, maximization of employment levels) and/or strategic international political and military goals like, for example, foreign investments designed to control sources of raw materials, technology or other strategic resources. SWFs have been created by many different types of governments (democratic or autocratic) with quality differences in terms of national governance and are managed by many different structures. Even the SWFs of western nations, such as Norway, have substantial differences in terms of structure, governance and objectives. The lack of transparency and opacity of some funds, coupled with the fact that these funds may be issued from autocratic countries like for example GCC SWFs, keep the mystery on their real motivations when they invest abroad and take majority stakes in foreign firms.

Existing research studying the determinants of SWFs cross-border investments found rather mixed evidence on their motivation when they invest. Some studies find that SWFs act as pure economic investors (Amar et al. (2019); Avendaño and Santiso (2009); Ciarlone and Miceli (2016)) whereas other studies conclude that these funds are not entirely driven by the incentive to maximise profit (Chhaochharia et al. (2008); Dyck and Morse (2011); Grira et al. (2020); Karolyi and Liao (2017); Knill et al. (2012)). Other empirical works stress the link between the characteristics of funds, such as size, degree of opacity, origins (commodity versus non-commodity) and the investment decision (Avendaño and Santiso (2009); Knill et al. (2012); Megginson et al. (2013)). These mixed results can be explained in part by the fact that SWFs are extremely different in terms of objectives.

The abundant body of research on the determinants of SWFs cross-border investments can be categorized into three sub-groups of papers that address distinct questions.³ The first set of papers examines the determinants of the investment decision as a dichotomous choice of whether or not to invest in a target firm (see among others Gangi et al. (2019); Grira et al. (2020); Heaney et al. (2011); Kotter and Lel (2011)). Alternatively, some other papers contrast the dichotomous investment decision of the SWF with alternative acquirers: SWFs vs pension funds (Boubakri et al. (2016)), SWFs vs other government-controlled acquirers (Karolyi and Liao (2017)), Arabic SWFs vs non-Arabic SWFs (Arouri et al. (2018)), government acquirers vs private acquirers (Ang et al. (2017); Karolyi and Liao (2017)).⁴ A second set of papers is interested in the

³See the recent literature surveys of Bahoo et al. (2020), Megginson and Gao (2020) and Megginson and Fotak (2015).

⁴Other papers rely on similar probit/logit model but look at the determinants of investing in target firm profiles (see for

amounts invested by sovereign wealth funds in cross-border companies and/or the size of the shares. The size is either measured by: i) the USD amount of the stakes as in studies looking at the country pair level of investment flows from SWFs to firms (Amar et al. (2019); Debarsy et al. (2017); Knill et al. (2012)); ii) a percentage of the SWF's portfolio (Ciarlone and Miceli (2016), Chhaochharia et al. (2008); Dyck and Morse (2011)) ; or iii) as a percentage of target firm capitalization, that is the degree of ownership (Avendaño and Santiso (2009); Gnabo et al. (2017); Heaney et al. (2011)). The last group of papers combines the first two views using estimation methods to model a multi-stage decision-making process: should we invest in? And, if so, how much? (Amar et al. (2019); Gnabo et al. (2017); Knill et al. (2012)).

Our paper fits in this second category of papers, and provides more precisely insights on the decision regarding the size of the share acquired. We investigate in this paper what are the determinants of majority cross-border equity acquisitions made by GCC SWFs over the period 2006-2015. More specifically, we shed light on the drivers of SWFs when they decide to acquire a majority stake: do GCC SWFs take cross-border majority stakes based on the financial health of the target firms? Based on the sectors, potentially strategic ones? Based on country specific characteristics (political or macroeconomic ones)? Using an original large-scale database including both data on announced cross-border stakes done by GCC SWFs, macroeconomic data on target countries as well as financial data on listed target firms, we use Logit models as well as ordered Logit models to explain the motivation of GCC SWFs to make large ($\geq 10\%$) or majority ($\geq 50\%$) cross-border acquisitions.

Our contribution is threefold. First, this is the first paper that studies the determinants of majority acquisitions by SWFs ($\geq 50\%$ vs $< 50\%$). Gnabo et al. (2017) also studied the determinants of large stakes, but these were defined as stakes larger than 10% and their analysis was restricted to the cross-border investments of Temasek. Karolyi and Liao (2017) analyzed cross-border majority acquisitions of government-led acquirers but they did not focus on SWFs. Avendaño (2012) examined the determinants of the percentage of shares acquired over 2006-2009, but it differs from our analysis firstly, by a sample restricted to a period characterized by the financial crisis, and secondly, by an analysis of the degree of ownership, while we focus on specific majority thresholds (50% and 10% stakes).⁵ Second, this paper contributes to the research devoted to the specificities of GCC SWFs (Asutay (2008); Bazoobandi (2011); El-Kharouf et al. (2010)). GCC SWFs present some key characteristics that make them a distinct group among SWFs: a) they are all funded by commodity revenues (mostly oil) meaning that their proceeds are extremely dependent on oil prices; b) example like Bernstein et al. (2013) who consider private vs public firms and Johan et al. (2013) who do the distinction between domestic vs foreign firms).

⁵Some papers also refer indirectly to the size of the stakes, by including it as an explanatory variable. Boubakri et al. (2016), who investigated how SWFs differ from Pension funds in their investment decision, included the percentage of shares acquired (and, alternatively, controlled) as explanatory variable and found that SWFs take significantly larger stakes than pension funds. Murtinu and Scalera (2016) showed that taking cross-border majority stakes is one driver of the use of investment vehicles by SWFs.

they are considered as relatively opaque investors and strongly politicized; c) they come from autocratic countries; d) they are located in a same region, with common language and religion. Similarly, [Arouri et al. \(2018\)](#) compare the investment decision of Arabic SWFs versus non-Arabic SWFs, but our paper is the first that addresses the motivation of GCC SWF to take a majority stake in cross-border target firms. Finally, our modelling approach allows to capture the non-linear influence of our determinants at different relevant thresholds (10% and 50%), as we expect some thresholds to matter specifically for cross-border investments.

Anticipating on our results, we find that the usual determinants of SWFs investments are not the same when we look at large ($> 10\%$) or majority ($> 50\%$) acquisitions made by GCC SWFs. Unlike results found in the literature investigating the determinants of SWFs cross-border investments, our results indicate that: i) GCC SWFs do not take into account the financial characteristics of the target firm excepted for the firms' debt; ii) the economic and financial development of the target country does not matter in their acquisition strategy ; and iii) they do not seek countries with better investor protection or with which they have concluded trade agreements. We also find that that firms operating in strategic sectors (finance, energy) are targeted by GCC funds for diversification purposes but not for the purpose of acquisition or control. When we consider the objectives of the funds, we find that our results are mainly explained by GCC Reserve Investment funds.

The paper is organized as follows. The next section introduces the hypotheses for analyzing GCC SWFs cross-border investment decisions. Section 3 provides details on our data. Section 4 presents our empirical analysis. Section 5 concludes.

2 Review of literature and hypotheses

Large or majority acquisitions raise very specific questions for the following reasons. First, a large or a majority acquisition, potentially signals an activist stance and willingness to engage in effective corporate governance activities. Second, it can be part of a general commercial or industrial development strategy of the home country of the SWF. It allows the development of joint ventures and eases the strengthening of expertises or industrial complementarities relevant from the home country perspective (typically the downstream integration of energy value-chain). Third it signals that the investment might go beyond passive portfolio management and mean-variance optimization framework, which is quite obvious knowing that SWFs are government-owned entities. Given these features, we analyse in this paper the determinants of SWF majority acquisitions through 4 key hypotheses.

As documented by [Bernstein et al. \(2013\)](#), the presence of politicians inside the board of the SWFs (which is the case for all GCC SWFs) influence them to pursue strategic objectives rather than purely

financial objectives. An abundant literature (Chhaochharia et al. (2008); Ciarlone and Miceli (2016); Dyck and Morse (2011); Grira et al. (2020); Johan et al. (2013); Knill et al. (2012) among others) has shown that policy factors drive SWFs investment decisions. At the same time, part of the literature shows that SWFs investment decisions are also financial (Fernandes (2014), Kotter and Lel (2011), Megginson et al. (2013)). Fernandes (2014) shows that SWFs tend to act as prudent investors, taking stakes in large firms with proven profitability. He also concludes that, given their long term investment horizon, SWFs have no preference for liquid stocks. Kotter and Lel (2011) find that SWFs tend to invest in large firms located in financially developed countries, exhibiting financial difficulties. They then deduce that SWFs are similar to institutional investors in their preference for target firm characteristics. Megginson et al. (2013) analyze the determinants of SWFs investments from the country perspective. They test whether SWFs are purely commercial investors facilitating cross-border corporate investments or if their investment strategies are biased by political objectives. Their results suggest that SWFs make investment decisions principally for commercial purposes.

The findings that SWFs investment decisions are dissimilar to those of traditional institutional investors can be explained by several factors. First, SWFs are sovereign-owned institutions, which may be managed either by the ministry of finance or by a board composed of government officials. Unlike other funds, the politics or the structure of the fund owned/controlled directly by the government may influence asset allocation decisions. Second, in terms of social welfare, governments have broader goals than wealth maximisation of the firm, such as the development of the national economy or the maximisation of the employment level. Third, according to the natural resources curse theory (see among others Sachs and Warner (1995, 2001); Sala-i-Martin and Subramanian (2003); Smith (2004)), countries with weak institutions, like GCC countries, generally have natural resource wealth that leads to resource dependency and rentierism. Even if the declared objective of these SWFs is to ensure that the proceeds from natural resources rents will be channelled through a transparent, accountable and professionally managed fund, they may be a mean for these autocratic countries to embezzle natural resources revenues in order to invest abroad (Carpantier and Vermeulen (2018)). To the extent that control decisions potentially go beyond pure portfolio risk-return management, we expect the financial factors of the target firms to have a low weight, if any, in the decision process:

H1 - GCC SWFs take cross-border majority stakes without considering the financial characteristics of the target.

In cross-border acquisition literatures and entry mode theory, one source of exogenous uncertainty is economic, financial and political risk related to the target country (Brouthers and Brouthers (2000); Chari

and Chang (2009)). A better knowledge about the target country can help to reduce the bargaining and transaction costs associated to greater information asymmetry between the SWF and the target firm in international takeover bids.

Several papers study the impact of target country economic, financial and institutional development on the SWFs investment strategies. Some authors (Megginson et al. (2013) among others) find that country factors do not explain SWFs investment decisions. On the contrary, Knill et al. (2012) find that SWFs are more likely to invest, and for larger amounts, in countries that have a level of economic development close to theirs. Ciarlone and Miceli (2016) find that SWFs tend to invest in countries that have a higher degree of economic development which is consistent with Karolyi and Liao (2017) who show that government-controlled investments flow from emerging to developed economies. Furthermore, the financial openness of the target country is one of the drivers of SWFs investments. Amar et al. (2019) and Ciarlone and Miceli (2016) show indeed that SWFs are more likely to invest in countries that are financially opened. Finally, some authors find that the level of investors protection significantly explain SWFs investment decisions. Knill et al. (2012) show that SWFs are more likely to invest in a country with a high level of investors protection, but when they do so, they tend to invest smaller amounts, which is consistent with Ciarlone and Miceli (2016) but not with Megginson et al. (2013) who find that a higher level of investors protection leads to larger amounts.

If the literature tells us that economic development, financial openness and the level of investors protection matter in SWFs investment decisions, the way these factors impact the decision is not unanimously accepted. These different results in the literature may be explained by the great heterogeneity of this group of investors. As we use here a homogenous group of SWFs (i.e. the GCC SWFs), we would like to test whether GCC SWFs take cross-border majority acquisitions by considering the economic and financial development of the target country:

H2 - GCC SWFs will seek to take large (small) or majority (minority) stakes in countries with high (low) level of financial and economic development of the target country.

The institutional context is subject to legal constraints imposed by the target country and to whether there are bilateral trade, financial or political agreements in force between the home and host countries. Entering foreign markets implies for the SWF to face exogenous uncertainty which increases investment risks. The existence of bilateral trade, financial or political agreements between home's and host countries help to reduce this uncertainty. Majority acquisitions are expected to be part of a broader partnership between countries.

We consider the impact of bilateral trade, financial or political agreements between SWFs and host

countries on the acquisition decision. In line with [Hoeckman and Kostecki \(2009\)](#) and [Murtinu and Scalera \(2016\)](#), we refer to bilateral trade agreements as reflection of political relations and decisions among countries. As explained by [Murtinu and Scalera \(2016\)](#), international trade agreements first allow the government to signal a credible lasting commitment to liberal economic policies, limited intervention in the domestic economy and peaceful relations. Second, trade agreements are useful to reinforce political power.⁶ GCC countries have free trade agreements with some countries such as Singapore (GSFTA), or some European countries (the EFTA is a free trade agreement between GCC countries and Iceland, Lichtenstein, Norway and Switzerland). The existence of bilateral trade agreements between SWFs and target countries should facilitate the entry of SWFs into these countries by reducing the perception of risk associated with SWFs investments and thus mitigating potential fears against their acquisitions.

Some papers find that SWFs tend to invest in countries that are identified as trade partners ([Megginson et al. \(2013\)](#)). In the same way, [Murtinu and Scalera \(2016\)](#) find that bilateral trade agreements reduce the use of corporate investment vehicles for SWFs wishing to take cross-border majority acquisitions. In addition, in the literature on cross-border acquisitions, some authors such as [Blonigen and Piger \(2014\)](#) show that regional trade agreements strongly influence cross-border investment decisions. Related to this literature, we expect GCC SWFs to be more likely to take majority acquisitions overseas in countries with which they are bound by bilateral trade agreements:

H3 - GCC SWFs will seek to take majority equity stakes in countries where there are bilateral trade agreements.

The hostility of the host countries' public opinion and governments towards SWFs can be explained by the fact that SWFs might seek stakes in strategic sectors as defense, finance, telecommunication, energy or transportation ([Dyck and Morse \(2011\)](#)). This is the reason why many governments want to hinder foreign SWFs investments when the target is a strategic infrastructure or a sensitive firm operating in a strategic sector ([Karolyi and Liao \(2017\)](#), [Knill et al. \(2012\)](#)). [Fernandes \(2014\)](#) gives some examples of regulatory/enforcements efforts in order to hinder SWF investments: *"the German government has announced that it would introduce controls on investments by SWFs, especially if they seek stakes in strategic sectors. French President Nicolas Sarkozy has announced that he would use his country's state-owned bank (Caisse des Dépôts et Consignations) to help protect French companies against potentiel takeover threats posed by SWFs"*. As explained by [Murtinu and Scalera \(2016\)](#), the risk of political and financial destabilization for the host country is higher when the target investment is a strategic infrastructure. Two deal-level character-

⁶An example is the trade agreement between the US and 11 Asia-Pacific countries (the Trans-Pacific Partnership), where the exclusion of China by the US reveals the political nature of this agreement.

istics can explain the fear of the host country: i) the sector of the foreign target company; and ii) the degree of control on this company. The greater the control of SWFs over target companies operating in strategic industries, the more hostile the host countries will be.

Why, then, would SWFs seek to target strategic cross-border industries despite the hostility this is likely to provoke from the target countries? Three main reasons can be evoked for explaining why SWFs may respond to sovereign considerations and invest in strategic industries. First, the acquisition of strategic industries may serve the global development of the country or the development of key industries that may contribute to skills acquisition. Second, the political motives of cross-border SWFs acquisitions in strategic industries can be explained by the search of a greater industrial diversification or a better access to lower-cost resource inputs. SWFs may be used to diversify the industrial base of their home country by targeting foreign industries in which their country is under-represented. In the specific case of resource-rich countries, such as GCC countries, the heavy dependence of their economies on oil prices further accentuates the need to pursue an objective of industrial diversification. It is fundamental for these countries to diversify their revenues by targeting foreign industries in which the country is under-represented (Sturm et al. (2008)). Therefore, the search of a greater industrial diversification may be a result of reducing dependency on oil revenues but also the search of strategic industrial gains in order to control access to technologies with the aim of maximizing long-term returns (Seznec (2008)). At last, SWFs may simply seek to increase their political influence on the world economy by acquiring majority stakes in cross-border strategic industries.

According to the literature on SWFs (Aroui et al. (2018); Bernstein et al. (2013); Karolyi and Liao (2017); Murtinu and Scalera (2016)), three factors contribute to increase the probability of cross-border majority acquisitions in strategic industries: i) the undemocratic and authoritarian nature of the countries where SWFs originate from; ii) the high level of foreign currency reserves; and iii) the involvement of politicians in the board of SWFs. As GCC countries combines these three factors, we expect that they seek to acquire majority stakes in cross-border companies operating in strategic industries other than energy for a home state development objective or for increasing their political influence on the world economy. As far as energy industry concerned, they are more likely to take minority stakes by the search of a greater industrial diversification:

H4.1 - GCC SWFs will seek to take majority stakes in cross-border companies operating in strategic industries other than energy.

H4.2 - GCC SWFs will seek lower equity shares in cross-border companies operating in energy industry.

3 Data and descriptive analysis

3.1 The SWF sample

One key challenge when working on SWFs investments is data acquisition. While there are databases that list SWF investments, the list of funds varies widely from one database to another. We therefore decided to build a database from scratch. We conducted a search of all existing GCC SWFs and their wholly owned subsidiaries using different sources ((Catalano (2009); Fernandez & Eschweiler (2008); Lyons (2007)) and the SWFs' websites in order to have the most complete list. We ultimately get 15 entities. We find 7 SWFs in the United Arab Emirates, 3 SWFs in Saudi Arabia, 2 SWFs in Oman, 1 in Bahrain, 1 in Kuwait and 1 in Qatar. Names, inception dates, estimated sizes are reported in Table 1. We then conducted a search of all wholly-owned subsidiaries of these funds using the online database Thomson Reuters Eikon and the funds' websites, which are also reported in Table 1, together with the Linaburg-Maduell transparency index (the higher the index, the more transparent the SWF) and the announced main objective(s) of the funds.

3.2 Investment data

We construct our sample of SWFs' investments in listed firms using two different sources. First, we used Thomson Reuters Security Corporation's (SDC) Platinum Mergers and Acquisitions database to collect data on announced cross-border acquisitions done by GCC SWFs directly or by their wholly-owned subsidiaries. Second, we use the online database Factiva to complete the missing acquisitions.⁷ The features of each transaction are collected: information about the targeted firms (name and country), information about the SWFs (name, subsidiary, and country), the date of the transaction, the pre- and post-acquisition shares of the investment in the target firm and the value of the deal. We collected a number of data items, including information about the targeted firms (name, country), information about the SWFs (name, subsidiary, country), the date of the transaction, the pre- and post-acquisition share of the SWF in the targeted firm and the deal value, if disclosed. This search yielded a sample of 124 cross-border acquisitions from GCC SWFs in 28 target countries over the period 2006-2015.⁸

Our dependent variable is a discrete variable characterized by specific ownership share aimed at capturing the degree of acquisition in a target firm. We identify three levels of control, with thresholds at 10% and 50% of the target value. The first threshold follows the definition of Foreign Direct Investments (FDIs) according to which *"a FDI (...) reflects the objective of a resident in one economy obtaining a lasting interest in*

⁷More precisely, we have established a list of keywords to retrieve all articles related to GCC SWFs investments. We then analyzed these articles to identify the transactions and their characteristics. Investment data are extracted for both the SWFs and their wholly owned subsidiaries.

⁸Cross-border investments of SWFs from non-Arab economies and particularly from Arab economies experienced a dramatic expansion specially since 2005. This is the reason why we begin our study in 2006.

Table 1: GCC SWFs characteristics

This table describes GCC SWFs' main characteristics. Column (3) gives the date of the creation of each fund. Column (4) gives the list of each fund's wholly-owned subsidiaries, based on the authors' researches. Column (5) gives the assets under management of each fund in USD billion. Column (6) gives the Linaburg-Maduell transparency index of each fund.^a Column (7) gives the objective(s) of the funds, based on the SWFs websites.

Country	Name	Creation	Wholly-owned Subsidiaries	AUM	Transparency index	Objective(s)
Bahrain	Bahrain Muntalakat Holding	2006	Atbahrain B.S.C; Bahrain Real Estate Investment; Gulf Aviation Academy	11.1	8	Reserve investment fund
Kuwait	Kuwait Investment Authority	1953	Reserve fund for future generations; General reserve fund; Saint Martins Property Co	592	6	Reserve investment fund
Oman	Oman Investment Fund	2006		6	4	Reserve investment fund
	State General Reserve Fund	1980		9	4	Saving; Reserve investment fund; Domestic economic support
Qatar	Qatar Investment Authority	2005	Qatar Airways; Qatar holding llc; Qatar Sport Investments	256	5	Reserve investment fund
Saudi Arabia	Kingdom Holding Company	1980		25	nc	Domestic economic support
	Public Investment Fund	2008	Sanabil Investment	160	4	Domestic economic support
	SAMA Foreign Holding	1952		632.3	4	Reserve investment fund
UAE	Abu Dhabi International Petroleum Investment Company	1984	CEPSA ; Nova Chemicals Corp.; Aabar investment	66.3	9	Reserve investment fund
	Abu Dhabi Investment Authority	1976	Harina Company Limited ; Luxinva SA; Tawreed Investments	773	5	Reserve investment fund
	Abu Dhabi Investment Council	2007	Al Hilal Bank PJSC	110	nc	Reserve investment fund
	Abu Dhabi Mubadale Development Company	2002	Mubadala Capital and Real Estate; Mubadale Capital LLC; Mubadala Commercial Finance; Mubadala Petroleum; Mubadala technology	66.3	10	Domestic Economic Support
	Emirates Investment Authority	2007		15	3	Reserve investment fund
	Investment Corporation of Dubai	2006	Dubai Holding ; Dubai World; Is-tithmar world; Dubai Ports World; Dubai world Africa service; Dubai Airport Free Zone Authority; Emirates airlines; Emirates Group; Emirates national oil co LTD; National Bonds Corporation	183	5	Reserve investment fund
	RAK Investment Authority	2005	Al-ghail power	1.2	3	Domestic economic support

^aThe Linaburg-Maduell transparency index was developed at the SWF Institute by C. Linaburg and M. Maduell. It rates SWFs according to their level of transparency from 1 to 10. The higher the index is, the more transparent the fund is. For more details on the index construction, see: <http://www.swfinstitute.org/statistics-research/linaburg-maduell-transparency-index/>.

an enterprise resident in another economy. (...) A direct investment relationship is established when the direct investor has acquired 10 percent or more of the ordinary shares or voting power of an enterprise abroad” So, the first category of deals, called *DEALS – 10%*, include transactions where the SWFs take shares of the target such that their total holding is less than 10% (minor stakes). The second category, called *DEALS + 10%*, collects the transactions leading to stakes larger than 10% but inferior to 50% (large stakes).⁹ Following Karolyi and Liao (2017), we identify a third level of investment, called *DEALS + 50%*, which includes transactions where the SWFs take shares such that the holdings are at least 50% of the target (control/majority stakes).

Table 2 presents the number of cross-border transactions carried out by GCC sovereign wealth funds over the period 2006-2015. We first note that 11 SWFs (out of the 15 SWFs identified for GCC countries) actually made cross-border acquisitions over the period 2006-2015, mainly those of Qatar and UAE, which together account for more than 90% of the deals. We also note that 40% of the deals are minority acquisitions (< 10%), 32% are large stake acquisitions (larger than 10% but inferior to 50%) and finally 27% of the deals are majority transactions (larger than 50%).

Table 2: Overview of GCC SWFs’ transactions

This table presents the number of deals made by GCC SWFs over the period 2006-2015. *DEALS* represents the total number of deals involving GCC SWFs. *DEALS – 10%* represents the number of deals in which the post-acquisition stakes are lower than 10%. *DEALS + 10%* represents the number of deals in which the post-acquisition stakes are higher or equal to 10% and lower than 50%. *DEALS + 50%* represents the number of deals in which the post-acquisition stakes is higher or equal to 50%.

SWF country	DEALS	DEALS-10%	DEALS+10%	DEALS+50%
Abu Dhabi International Petroleum Investment Company	19	6	7	6
Abu Dhabi Investment Authority (UAE)	11	8	1	2
Abu Dhabi Mubadala Development Company (UAE)	11	2	5	4
Investment corporation of Dubai (UAE)	20	6	6	8
Kuwait Investment Authority	6	3	2	1
Oman Investment Fund	2	1	0	1
Public Investment Fund (SA)	1	0	1	0
Qatar Investment Authority	50	21	18	11
RAK Investment authority (UAE)	1	1	0	0
SAMA Foreign Holding (SA)	1	1	0	0
State General Reserve Fund (Oman)	2	1	0	1
Total	124	50	40	34
	100%	40%	32%	27%

Figure 1 shows the evolution of GCC SWFs foreign investments over the period 2006-2015. This figure reveals that GCC SWFs have a tendency to acquire large stakes as the average post-acquisition share is larger than 19% every year. During the financial crisis (2008-2009), SWFs made more investments but have reduced the size of their stakes. This is linked with the large number of investments made in financial institutions, such as Qatar Investment Authority investing in Barclays Bank or Abu Dhabi Investment Authority investing in Citigroup. After the crisis, the number of acquisitions decreased in number but not

⁹10% is also the relevant threshold used in the European legislation for defining ”qualifying holdings” (Article 92 of Directive 2001/34/EC) and in the above-mentioned Commission Delegated Regulation (EU) 2017/1946 of 11 July 2017.

in value. After 2013, the average post-acquisition share was higher than 30%.

Figure 1: Evolution of GCC SWFs Foreign Investments

This Figure presents the number of deals and the average post-acquisition stake of cross-border investments led by GCC SWFs over the period 2006-2015. The graph excludes investments of Qatar Investment Authority in Xstrata which consists in 39 acquisitions of less than 1% of the target firm.

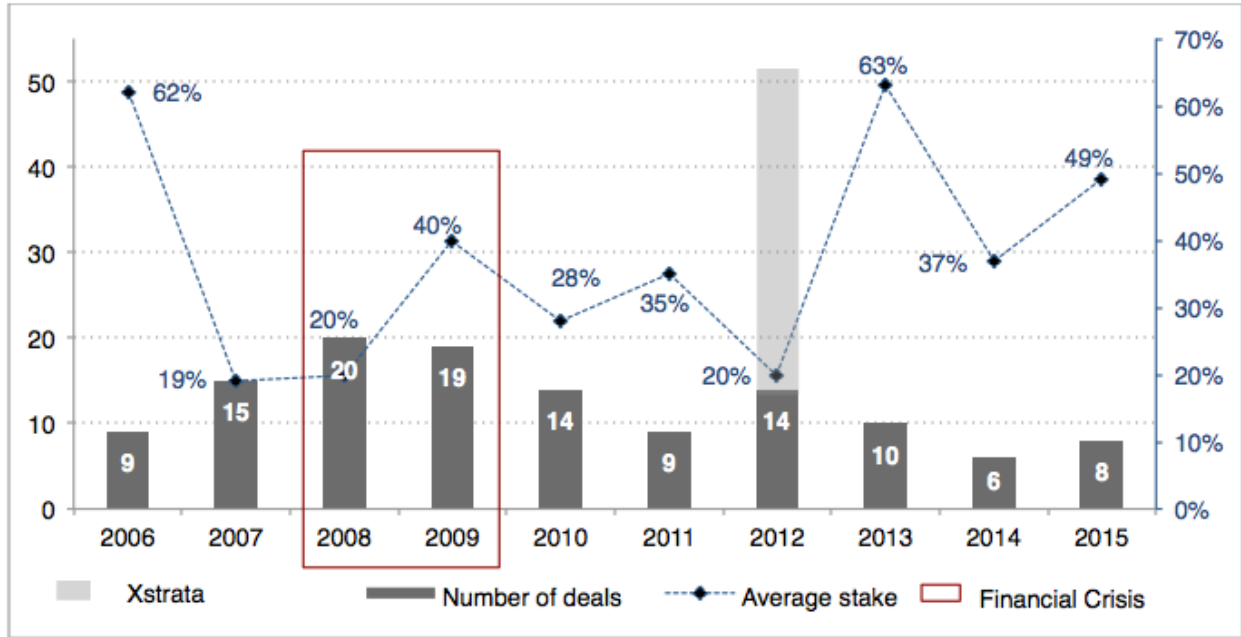


Table 3 gives the geographic distribution of GCC SWFs cross-border acquisitions. More than half of these transactions target companies in the European Union (EU) and they are mainly large or majority acquisitions (64% of the deals are post-transaction shares of 10% or more and 32% are shares of 50% or more). The other most targeted regions are North America (almost 13% of total deals) with mainly minority investments (63% of deals less than 10% of shares) and East and Southeast Asia (10% of total deals) with larger stakes (62% of deals of more than 10% of shares). On the other hand, the other regions like Africa and South America do not attract GCC SWFs, as they have invested only four times in these regions over the period 2006-2015.

Table 4 gives the sectorial repartition of GCC SWFs acquisitions and majority acquisitions over 2006-2015. Energy, finance, industry and luxury are key sectors and account each for more than 10% of the deals (even 20% for the energy sector). We also note that 50% of the deals in the luxury sector are majority deals, while they represent only 14% and 16% respectively for finance and industry sectors.

Table 3: Geographic repartition of GCC SWF cross-border investments

This table presents the number of deals and majority deals by target region of cross-border investments led by GCC SWFs over the period 2006-2015. *DEALS* represents the total number of deals involving GCC SWFs. *DEALS - 10%* represents the number of deals in which the post-acquisition stakes owned by the SWFs is lower than 10%. *DEALS + 10%* represents the number of deals in which the post-acquisition stakes owned by the SWFs is higher or equal to 10% and lower than 50%. *DEALS + 50%* represents the number of deals in which the post-acquisition stakes owned by the SWFs is higher or equal to 50%.

Region target	DEALS	DEALS-10%	DEALS+10%	DEALS+50%
Africa	3	3	0	0
	100%	100%	0%	0%
Central Asia	6	3	1	2
	100%	50%	17%	33%
East and Southeast Asia	13	3	8	2
	100%	23%	62%	15%
North America	16	10	3	3
	100%	63%	19%	19%
Oceanic Bassin	8	4	2	2
	100%	50%	25%	25%
South America	1	0	1	0
	100%	0%	100%	0%
Europe	77	27	25	25
	100%	35%	32%	32%
Total	124	50	40	34
	100%	40%	32%	27%

Table 4: Sectoral repartition of GCC SWF cross-border investments

This table presents the number of cross-border deals and majority deals by target sectors led by GCC SWFs over the period 2006-2015. *DEALS* represents the total number of deals involving GCC SWFs. *DEALS - 10%* represents the number of deals in which the post-acquisition stakes owned by the SWFs is lower than 10%. *DEALS + 10%* represents the number of deals in which the post-acquisition stakes owned by the SWFs is higher or equal to 10% and lower than 50%. *DEALS + 50%* represents the number of deals in which the post-acquisition stakes owned by the SWFs is higher or equal to 50%.

Sector target	DEALS	DEALS-10%	DEALS+10%	DEALS+50%
Energy	30	14	9	7
	100%	47%	30%	23%
Finance	14	8	4	2
	100%	57%	29%	14%
Industry	19	9	7	3
	100%	47%	37%	16%
Luxury	18	5	4	9
	100%	28%	22%	50%
Others	43	14	16	13
	100%	33%	37%	30%
Total	124	50	40	34
	100%	40%	32%	27%

3.3 Explanatory variables

We introduce some explanatory variables that should potentially explain the decision to acquire minority/majority stakes for GCC SWFS. These variables relate to firm and industry -level factors, target country-level factors and SWF specific variables. Details on variables construction and their respective sources are presented in Table 5.

Target firm/sector specific variables:

In order to test whether GCC SWFs take cross-border large or majority stakes without considering the financial characteristics of the target firm (see H1), we use a set of explanatory variables that can be allocated to the broad classification "performance, risk and liquidity". As a measure of firms' performance, we use

Table 5: Description of the variables

Variables	Hyp.	Description	Source
<i>Target firm specific variables</i>			
ROA	1	Three-year average value ($t - 1, t - 2, t - 3$) of the target firm's Return-on-Assets.	Datastream
LIQUIDITY	1	Three-years average value ($t - 1, t - 2$ and $t - 3$) of the liquidity ratio of the target firm.	Datastream
logDEBT	1	Natural logarithm of the three-year average value ($t - 1, t - 2, t - 3$) of the long term debt of the target firm.	Datastream
SECTORS	4	Dummy variable that equals 1 if the target firm operates in the sector and 0 otherwise. Sectors include <i>ENERGY, FINANCE, INDUSTRY</i> and <i>LUXURY</i> .	Datastream
<i>Target country specific variables</i>			
ANTISELF	2	Anti-self dealing index of the target country. The anti-self dealing index is a measure of legal protection of minority shareholders against expropriation by corporate insiders.	Djankov et al. (2005)
dlogREER	2	Variation of the natural logarithm of the three-years average ($t - 1, t - 2$ and $t - 3$) value of the REER of the target country. The REER is the consumer price index-based real effective exchange rate. Positive variation is an appreciation.	Bruegel Database
logKAOPEN	2	Natural logarithm of the normalized KAOPEN index of the target country the year before the transaction. Initially introduced by Chinn and Ito (2006), this index measures a country's degree of capital account openness.	Chinn-Ito website
POLITY	2	Polity IV score of the targeted country the year before the transaction. The score captures the regime authority spectrum on a 21-point scale ranging from -10 (hereditary monarchy) to +10 (consolidated democracy).	Polity Project IV
FTAFORCE	3	Dummy variable equals to 1 if there is a free-trade agreement in force between the country of the SWF and the target country, and 0 otherwise.	Governments' websites
<i>Other specific variables</i>			
SIZESWF	-	Size of SWF assets under management (USD billion).	SWF Institute
TRANSPARENT	-	Dummy variable equals to 1 if the Lindaburg-Maduell Transparency index of the SWF is higher than 5 and 0 otherwise. The index ranges between 0 and 10. The higher the index is, the more transparent is the SWF.	SWF Institute
CRISIS	-	Dummy variable equals to 1 in 2008 and 2009, and 0 otherwise	Authors' analysis
logOILPRICE	-	Natural logarithm of the average Brent crude oil price the year before the transaction.	FRED database
EU DUMMY	-	Dummy variable equals to 1 if the target country is in the Europe, and 0 otherwise	Authors' analysis

the Return-on-Assets (*ROA*).¹⁰ As a proxy of the financial risk of target firm, we adopt two alternative measures: i) the natural logarithm of the long term debt (*logDEBT*) as a simple proxy of a firms' risk of financial distress; ii) the liquidity ratio of the target company (*LIQUIDITY*) as financial health indicator. These financial variables are based on the three years preceding the investment in order to take into account the information available at the time of the investment.¹¹ If SWFs are similar to institutional investors in their preference for target characteristics, they should target financially distressed, cash-constrained foreign firms with poor performance in a long-run objective of increasing target firm value (Ferreira and Matos (2008); Karpoff et al. (1996); Kotter and Lel (2011); Wahal (1996)). As stated in H1, we expect these

¹⁰We also use Return on Equity (*ROE*) that gives similar results.

¹¹We also consider the logarithm of the total assets of the company and the debt-on-assets ratio as alternative variables. As these variables are highly correlated with the variable *DEBT*, we cannot include them in the models.

variables to play a minor role, if any, in the investment decision-making process of GCC SWFs.

In order to test whether GCC SWFs target specific sectors when they take large/majority stakes, we consider target firms' strategic sectors as explanatory variables (see H4.1 and H4.2). As underlined by Karolyi and Liao (2017), the following sectors can be considered strategic: aerospace and defense, telecommunication equipments, chemicals, banks, industrial transportation, telecommunication service providers, industrial materials and the commodity sectors (oil, gas, coal, industrial metals and mining). As aerospace, defense and telecommunication sectors are subject to regulatory constraints concerning cross-border acquisitions, we decide to remove them and focus on the following sectors: commodity sectors (*ENERGY*), industrial materials, chemicals (*INDUSTRY*) and banks (*FINANCE*). Even if it is not listed as strategic sectors in the sectors listed above, we also consider the luxury industry as strategic sector (*LUXURY*) because it is considered as emblematic of the national flagship in which SWFs like to invest.¹² As stated by H4.1, we expect *INDUSTRY*, *FINANCE* and *LUXURY* to be positive and significant. On the contrary, relying on H4.2, *ENERGY* should be negative and significant.

Target country specific variables:

From the target country's perspective, we test whether GCC SWFs rather acquire large or majority stakes in countries with high level of financial, political and economic development of the target country. For that, we select country-level variables that have been shown in the literature to be related to international investment choices of SWFs (see among others Amar et al. (2019); Ciarlone and Miceli (2016); Gnabo et al. (2017); Karolyi and Liao (2017); Megginson et al. (2013)). To proxy for the level of economic development of the target country we use the real effective exchange rate variations of the target country (*dlogREER*) as indicator of gain/loss of competitiveness.¹³ Although controls to the free movement of goods and capitals have been greatly reduced in many countries, there are still restrictions on foreign equity investment and capital flows in some countries like tariffs barriers to international trade aimed to protect domestic strategic industries. These restrictions should negatively affect the decision to take large or majority stakes in these countries. In order to account this factor, we employ two proxies of the degree of financial openness: the anti-self-dealing index (*ANTISELF*) constructed by Djankov et al. (2008) and measuring the ex-ante and ex-post effectiveness of regulation and enforcement against violators and the Chinn-Ito index (*logKAOPEN*), which measures a country's degree of capital account openness. This allows to test whether GCC SWFs are more likely to take large or majority stakes in countries with few legal restrictions and/or with a high financial openness degree. We also consider the quality of political institutions in a target country as determinants

¹²We exclude as strategic sectors industrial transportation because there were only 7 stakes on the period in this sector (see Table 4).

¹³We also considered GDP which appears to be never significant. As it is highly correlated to KAOPEN, we cannot use both variables in the same model. Results are available upon request.

of the stake size by measuring the level of authority of the targeted country as defined by the Polity IV database *POLITY*. We expect a positive relationship between this variable and large or majority stakes taken by GCC SWFs. At last, in order to test whether GCC SWFs are more likely to take large or majority stakes in countries where there are bilateral trade agreements (H3), we consider as proxy of bilateral trade agreements a dummy variable *FTA FORCE* equals 1 if there is a free trade agreement in force between the SWF's country and the targeted firm's country. We predict that GCC SWFs tend to take large or majority stakes in countries where there exists bilateral trade agreements.

Other specific variables

In addition to the above variables designed to test our hypotheses, we have controlled for a number of factors that may influence the decision of GCC SWF acquisitions. First, we consider some variables measuring the characteristics of GCC SWFs themselves. The variable *SIZESWF* measured as the value of the assets under management is a proxy of the size of GCC SWFs (small or large funds). We predict that large SWFs will seek to take larger stakes. Second, we take into account GCC SWFs' level of opacity in terms of governance and investment strategy as documented in the literature ((Asutay (2008); Bazoobandi (2011); El-Kharouf et al. (2010)). SWFs in less democratic or autocratic countries like GCC must be transparent enough to the target country if it is to have legitimacy to enter the market. In that case, assurances that the SWF will have to give to the target country on their commercial motives will be crucial. In this spirit, we expect that more transparent SWFs will seek to take larger acquisitions compared to funds less transparent or opaque. For measuring the level of GCC SWF transparency (*TRANSPARENT*), we construct a dummy variable equals 1 if the Linaburg-Maduell Transparency index of the fund is higher than 5 and 0 otherwise. The inclusion of the variable *logOILPRICE* allows to control the oil price fluctuations because oil trade resources may be the main driver of GCC SWFs acquisition strategies. We also include a dummy variable that equal one in the years 2008-2009 at the heart of the financial crisis (*CRISIS*). At last, a regional dummy (*EUDUMMY*) for the European Union is also included in order to test whether European countries are well a prime target of GCC SWFs. This dummy variable equals 1 if the target country is in the European Union and 0 otherwise.

4 Empirical Part

We first provide some preliminary insights into the data by estimating two separate Logit models based on the 10%, and 50% thresholds respectively. We then estimate a multinomial ordered Logit model designed to better fit the investment decision-making process of SWFs. We finally discuss our results and compare them to the main outcomes of the literature on SWFs' investment decisions.

4.1 Preliminary findings with binary Logit models

We model the probability of taking a majority (resp. large) stake in the target firm as a function of the explanatory variables described above (target firm variables, target country variables, SWF specific variables as well as additional variables), by relying on the Logit specification. The model is defined as follows:

$$Prob(Y_{ij} = 1|X) = \Lambda(X\beta) = \frac{e^{X\beta}}{1 + e^{X\beta}} \quad (1)$$

where Y_{ij} is a dummy variable equal to 1 if the fund i takes a stake of 10% or more (resp. 50% or more) in a cross-border firm j and to 0 otherwise, where β is the coefficient vector, X is the vector of explanatory variables and $\Lambda(\cdot)$ is the standard logistic distribution function.¹⁴ Relying on a distribution function, like the logistic, ensures that we get values between zero and one, as we expect from a probability.¹⁵ We thus test our hypotheses respectively on the determinants of GCC SWFs large (+10%) and majority (+50%) cross-border acquisitions and report the estimation results in Table 6 for full models (columns (3) and (5)) and then, by applying a general-to-specific backward-selection approach for parsimonious models (columns (4) and (6)).¹⁶ In order to take into the potential small sample bias (estimators consistent but biased, imprecise standard errors, leading to incorrect confidence intervals), we rely on bootstrap to do finite sample statistical inference and to improve the precision of asymptotic approximations in small samples (Fisher and Hall (1991)).¹⁷ The significance level of the variables entering in the Logit models have been obtained using (parametric) bootstrapped confidence intervals with bias correction for 500 replications.

First, the results of the Logit estimations, based on the parsimonious models, show that the decision to take a large stake and the decision to take a majority stake do not give the same results, which confirms that the comparison of acquisition level is an important aspect of the empirical analysis. We thus note that the variable *CRISIS* is negatively significant in the model with threshold at 50% but not in the model with threshold at the 10% level, which means that GCC SWFs have a tendency to reduce their majority shareholdings during the financial crisis. We find the reverse for the variables *EU DUMMY*, *FINANCE* and *ENERGY* that are significant in the model with threshold at 10% but not in the model with threshold at the 50% level. This difference of results in the two binary Logit models confirms the relevance of considering different thresholds in our analysis.

Concerning firm-level factors, we find evidence that the financial characteristics of the target firm do

¹⁴Similar results are obtained by relying on probit rather than Logit models. Results are available on request.

¹⁵The Logit model can also be derived from underlying behavioural assumptions, which lead to a latent variable representation of the model (see Wooldridge (2010) and the next sub-section where this approach is presented in a more general 3-discrete choice framework).

¹⁶We use the automatic general-to-specific selection (Autometrics) in Oxmetrics to select variables at 10% in our parsimonious model.

¹⁷we are very grateful for the constructive comment of an anonymous referee on this issue.

not matter in the cross-border acquisition decision done by GCC, except for the variable *logDEBT* which is significantly negative both in the model with thresholds at 10% and at 50% level. It means that they do not rely on the firm's performance or liquidity when making the decision to acquire it. The only financial criterion they take into account is that the target firm is not financially distressed at the time of the acquisition decision. This result, that is contrary to studies done on investment decisions (Bernstein et al. (2013) and Kotter and Lel (2011)), confirms that the determinants of the investment decision and those explaining the acquisition decision are not the same. It also confirms the relevance of studying specifically GCC SWFs.

Regarding H2 which stresses that GCC SWFs take cross-border acquisitions by considering the economic and financial development of the target country, all the country factor variables are not significant. This means that GCC SWFs do not take into account the economic and financial development of the target country in their acquisition decision as it is the case for the investment decision if we refer to the existing literature (Amar et al. (2019); Arouri et al. (2018); Ciarlone and Miceli (2016); Gnabo et al. (2017); Megginson et al. (2013)).

We find no empirical support for H3 which stated that GCC SWFs rather take large/majority stakes in countries where there are bilateral trade agreements as *FTAFORCE* is never significant. Compared to

Table 6: Logit models - large stakes and majority stakes

This table reports the results of separate estimations of Logit models. In model columns (3) and (4) (resp. (5) and (6)), the endogenous variable (Y_{ij}) is a dummy variable equals to zero if the post-transaction share of the SWF i in the target j is smaller than 10% (resp. 50%), and equals to one if its is larger or equal. Columns (3) and (5) report the estimates for the full models, while columns (4) and (6) report the results of the parsimonious models. The significance level of the variables have been obtained using (parametric) bootstrapped confidence intervals with bias correction for 500 replications.

	Hyp.	<i>DEALS</i> + 10%		<i>DEALS</i> + 50%	
		Complete	Parsimonious	Complete	Parsimonious
logDEBT	1	-0.213 *	-0.246 ***	-0.328 **	-0.266 **
LIQUIDITY	1	0.316	0.287	0.125	
ROA	1	-0.020		-0.036	
ANTISELF	2	0.068		2.059	
logKAOPEN	2	0.536		0.803	
POLITY	2	-0.141 *	-0.130	0.004	
dlogREER	2	0.858		8.818 *	
FTAFORCE	3	0.026		-1.949	
FINANCE	4a	-2.375 ***	-2.182 **	0.000	
INDUSTRY	4a	-0.716		-1.074	
LUXURY	4a	-0.324		1.041	
ENERGY	4b	-1.697 *	-1.856 **	-1.171	
<hr/>					
TRANSPARENT		1.265	1.721 ***	2.148 *	1.291 **
EUDUMMY		1.530 **	1.870 **	1.046	
logOILPRICE		1.678	2.006	1.042	
CRISIS		0.274		-2.663 ***	-1.396 ***
SIZESWF		-0.002		-0.003	
_cons		-6.446	-8.852 *	-7.022	-1.422 ***

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Meggison et al. (2013) and Knill et al. (2012) who find that bilateral trade, financial or political agreements between SWFs and host countries facilitate SWFs cross-border investment decision, our result shows that GCC SWFs differ from other institutional investors.

In order to analyse the political motivation of GCC SWFs, we have tested whether these funds seek majority stakes in strategic sectors as explained in H4.1. The significance of the variable *FINANCE* shows that GCC SWFs take into account the sector of the target firm in their investment decision-making process. This variable is negatively related to large acquisitions made by GCC SWFs (more than 10%), which can be explained first, by regulatory/enforcements efforts made by developed countries (especially US and the EU countries) in order to hinder SWFs majority acquisitions in this sector, and second by the large size of firms operating in this sector (a large amount may correspond to a minority stake). Consistent with H4.2, we find that cross-border large acquisitions (more than 10%) of GCC SWFs are under-represented in the energy sector (*ENERGY* is negative and significant in model (1)), indicating that resource-rich countries, that are extremely dependent on revenues from oil and gas, try to reduce their dependency on this underlying commodity. As explained by Aroui et al. (2018), Arab SWFs try to diversify their future revenues by seeking industries that are the mainstay of the target country.

Concerning the SWF-level variables, we find that the probability for GCC SWFs of taking a large (10% or more) stake in a cross-border industry is positively related with the transparency of the fund. Transparent SWFs are indeed less likely to provoke hostility and political pressure from host governments, which increases the likelihood of large/major shareholdings. The result is in line with Murtinu and Scalera (2016) who find that opaque SWFs are more likely make cross-border investments through an investment vehicle than transparent SWFs in order to show a passive investment approach and reduce the political pressure in the host country. In addition, the variable *EU DUMMY* is found significant which means that GCC SWFs rather target countries of the European Union when they take large stakes. This result is consistent with Hay and Milelli (2014) who find that Europe is the privileged destination for Middle Eastern SWFs.¹⁸

4.2 Ordered Logit Analysis

4.2.1 The model

Although informative, the separate (binary) Logit estimates are not fully satisfactory. First, the results for our two specifications (thresholds at 10% and 50%) are not always in line and their consistency cannot be easily tested in such setting. Second, the SWFs investment decision is a 1-step decision in a 3-choice setting and not a set of two independent binary decisions as implied by the Logit approach. We thus

¹⁸GCC SWFs have several partnerships with European companies. For example, the SWF of Abu Dhabi has partnerships with Airbus and Total from France, Siemens from Germany or Rolls-Royce from UK.

need a multinomial discrete (three) choice model able to capture an efficient/simultaneous estimate of the parameters since SWFs have to decide either to stay minority shareholders (stake of less than 10%) in the foreign industry or to take more than 10% but less than 50% in order to have a significant influence on the management of the target or to take the control of the firm (more than 50%).

The ordered Logit model meets these requirements and addresses well for the specificities of the SWFs investment decision making-process.¹⁹ Number of studies such as [Ederington \(1985\)](#) or [Poon \(2007\)](#) illustrate the relevance of considering ordered Logit models in explaining and predicting similar ordered categorical variables such as bond or credit rating (see also [Wooldridge \(2010\)](#) and [Long and Freese \(2014\)](#)).

In our set-up, we define Y_{ij} , the degree of acquisition of the fund i in a target j as follows:²⁰

$$\begin{cases} Y = 0 & \text{if the post-transaction share is less than 10\%} \\ Y = 1 & \text{if the post-transaction share is between 10\% and 50\%} \\ Y = 2 & \text{if the post-transaction share is more than 50\%} \end{cases} \quad (2)$$

Similarly to the (binary) Logit model, the ordered Logit model can be derived from an underlying latent variable Y^* determined as follows:

$$\begin{cases} Y^* = X\beta + e, & e | X \sim \Lambda(0, \frac{\pi^2}{3}) \\ Y = k & \text{if } \alpha_k < Y^* \leq \alpha_{k+1} \quad k = 0, 1, 2 \end{cases} \quad (3)$$

where β is the coefficient vector, X is the vector of explanatory variables, $\Lambda(\cdot)$ is the standard logistic distribution function, $\alpha_0 = -\infty$, $\alpha_3 = +\infty$, and α_1 and α_2 are unknown parameters. As Y^* crosses unknown thresholds α_1 or α_2 , we move up the ordering of alternatives. For example, with a very low Y^* , i.e. smaller than α_1 , we get a minority stake. For a very high Y^* , i.e. larger than α_2 , we get a majority stake.

We can then easily compute the conditional choice probabilities:

$$\begin{cases} P(Y = 0 | X) = P(Y^* \leq \alpha_1 | X) = \frac{1}{1 + \exp(X\beta - \alpha_1)} \\ P(Y = 1 | X) = P(\alpha_1 < Y^* \leq \alpha_2 | X) = \frac{1}{1 + \exp(X\beta - \alpha_2)} - \frac{1}{1 + \exp(X\beta - \alpha_1)} \\ P(Y = 2 | X) = P(Y^* > \alpha_2 | X) = 1 - \frac{1}{1 + \exp(X\beta - \alpha_2)} \end{cases} \quad (4)$$

¹⁹Ordered Logit models rely on the parallel regression assumption. A more general model, so-called generalized ordered Logit model ([Long and Freese \(2014\)](#)) relaxes this assumption. We performed a Wald test developed by [Brant \(1990\)](#) in order to discriminate between the ordered Logit model and the generalized ordered Logit model. Results confirm that the ordered Logit model is not rejected and best fit our data. Results are available upon request.

²⁰We will no longer explicitly refer to ij subscripts in view to simplify notations

The cut-points α_1 , α_2 and the parameters β are estimated by maximum likelihood. The interpretation of the β s are of limited interest as they relate to Y^* while our focus is on the categorical variable Y . We will thus report in the results section the partial effects of X_k on the probabilities, which are computed as follows for the continuous explanatory variables:

$$\begin{cases} \partial P(Y = 0 | X) / \partial X_k = - \left(\frac{\exp(X\beta - \alpha_1)}{(1 + \exp(X\beta - \alpha_1))^2} \right) \beta_k \\ \partial P(Y = 1 | X) / \partial X_k = \left(\frac{\exp(X\beta - \alpha_2)}{(1 + \exp(X\beta - \alpha_2))^2} - \frac{\exp(X\beta - \alpha_1)}{(1 + \exp(X\beta - \alpha_1))^2} \right) \beta_k \\ \partial P(Y = 2 | X) / \partial X_k = \left(\frac{\exp(X\beta - \alpha_2)}{(1 + \exp(X\beta - \alpha_2))^2} \right) \beta_k \end{cases} \quad (5)$$

The partial effects on $P(Y = 0 | X)$ and $P(Y = 2 | X)$ are unambiguously determined by the sign of β_k , while the sign is not conclusive for the effect on the intermediate category. Since partial effects are conditional on specific values for X , we follow common practice by setting the variables at their average values. As these partial effects are of little relevance when X_k is a dummy variable, we will in these cases rather compute the partial effects for indicator variables as follows:

$$\partial P(Y = k | X) / \Delta X_k = P(Y = k | X_{-k}, X_k = 1) - P(Y = k | X_{-k}, X_k = 0) \quad (6)$$

where X_{-k} , the explanatory variables other than X_k , are set at their average values.

4.2.2 Results

We report the results of the general and parsimonious ordered Logit model estimations in Table 7. As for the Logit model, we rely on bootstrap to do finite sample statistical inference and the significance level of the variables entering in the ordered Logit models have been obtained using (parametric) bootstrapped confidence intervals with bias correction for 500 replications. We also report the marginal effects based on the parsimonious model in Table 8.

The estimates of the ordered Logit model confirm the results of the bivariate Logit models in some respects. First, regarding financial characteristics of the target firm, once again except *logDEBT*, all the financial variables are not significant, which confirms that the financial characteristics of the target firm do not matter in the cross-border acquisition decision done by GCC SWFs. They only focus on the financial wealth of the company by targeting non financial distressed firms. A 10% increase in the *logDEBT* variable increases the probability to take a minority stake (less than 10%) by 0.71 percentage points and decreases the probability to take a majority stake (more than 50%) by 0.40 percentage points, holding all other variables at their means (see Table 8). This result is contrary to [Kotter and Lel \(2011\)](#) and [Karolyi and Liao \(2017\)](#)

Table 7: Ordered Logit models

This table reports the results of the estimations of the ordered Logit modelS, where the endogenous variable Y_{ij} takes the value 1 if the post-transaction share of the SWF i in the target j is smaller than 10%, the value 2 if the share lies between 10% and 50% and the value 3 if it is larger or equal to 50%. Column (3) reports the estimates for the full model, while column (4) reports results of the parsimonious model. The significance level of the variables have been obtained using (parametric) bootstrapped confidence intervals with bias correction for 500 replications.

	Hyp.	Ordered logit complete	Ordered logit parsimonious
logDEBT	1	-0.280 **	-0.297 ***
LIQUIDITY	1	0.174	0.161
ROA	1	-0.030	
ANTISELF	2	0.661	
logKAOPEN	2	0.846	
POLITY	2	-0.105	-0.111
dlogREER	2	2.067	
FTAFORCE	3	-0.232	
FINANCE	4a	-2.586 ***	-2.498 ***
INDUSTRY	4a	-0.441	
LUXURY	4a	0.119	
ENERGY	4b	-1.441 *	-1.875 **
.....			
TRANSPARENT		1.471 **	1.883 **
EUDUMMY		1.435 **	1.753 ***
logOILPRICE		1.583	1.927
CRISIS		-0.608	-0.204
SIZESWF		-0.002	
cut1		6.190 (4.920)	7.487 * (4.093)
cut2		8.361 * (4.936)	10.427 ** (4.123)

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 8: Marginal effects at means of the ordered Logit parsimonious model

This table reports, for all significant variables of the parsimonious ordered logit model, the respective marginal effects on the probabilities to take minority, large and majority stakes, all other variables being held constant at their means. The estimates are derived from the parsimonious ordered Logit model estimated using (parametric) bootstrapped confidence intervals with bias correction for 500 replications and reported in column (4) of Table 7.

	Predict Y=0		Predict Y=1		Predict Y=2	
	Minority Stake		Large Stake		Majority stake	
<i>Continuous explanatory variables - $\partial P(Y = k X) / \partial X_k$</i>						
logDEBTS	0.071	***	-0.031	*	-0.040	***
<i>Binary explanatory variables - $\partial P(Y = k X) / \Delta X_k$</i>						
ENERGY	0.437	***	-0.247	***	-0.190	***
TRANSPARENT	-0.390	***	0.074	***	0.316	***
FINANCE	0.524	***	-0.344	***	-0.180	***
EUDummy	-0.408	***	0.193	***	0.215	***

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. Based on robust standard-errors.

who find that SWFs tend to invest in firms that are poorly performing and exhibiting financial difficulties, which suggests that GCC SWFs have a different investment decision strategy compared to other SWFs. This result, that is robust to different econometric models, shows that financial motives are not the exclusive target of their acquisition strategy.

Regarding H4 which posits that GCC SWFs target cross-border companies operating in strategic industries, the estimates of the ordered Logit model confirm and refine results of the bivariate Logit models. The variables *FINANCE* and *ENERGY* are negatively significant, meaning that the probability of having large or majority stakes decreases when the target firm belongs to one of these sectors in contrast with minority stakes (less than 10%). Consistent with H4.2, we find that that cross-border large acquisition (more than 10%) are under-represented in the energy sector: the fact that a target firm belongs to the *ENERGY* sector increases the probability that the SWF takes a minority stake (less than 10%) by 43.7 percentage points and decreases the probability to take a majority acquisition (more than 50%) by 19 percentage points, holding all other variables at their means. This result found for *ENERGY* can be explained by the fact that commodity funds like GCC funds tend to diversify away their commodity risks by investing in non-commodity-dependent firms and thereby reducing their majority acquisition in this sector. This suggests that firms operating in strategic sectors are targeted by GCC funds for diversification purposes but not for the purpose of acquisition or control.²¹

Not surprisingly, the probability of taking large or majority stakes increases with the transparency of the fund. When a fund is transparent, the likelihood to take a minority stake decreases by 39 percentage points, while the likelihood to take a majority stake (more than 50%) increases by 31.6 percentage points. SWFs that are managed in a non-transparent way have a tendency to increase the host country fears. Consequently, transparent SWFs have less trouble taking large stakes in cross-border companies.

At last, the variable *EUDUMMY* is significantly positive at a 1% level, indicating that that GCC SWFs target countries of the European Union when they take large (10% or more) stakes: the likelihood to take a minority stake decreases by 40.8 percentage points in countries localized in the EU, while the likelihood to take a majority stake (more than 50%) increases by 21.5 percentage points.

4.3 Robustness section

The policy objectives of SWFs vary, depending on their macro-fiscal objectives, which creates a great heterogeneity among them. Based on the IMF and the Santiago Principles, five types of SWFs can be distinguished: stabilization funds, saving funds, domestic economic support funds, pension reserve funds and reserve investment funds (Al-Hassan, Papaioannou, Skancke and Sung (2013)). If we refer to GCC SWFs, they can be listed into two categories depending on different objectives: i) reserve investment funds aimed to reduce the negative carry costs of earning higher return on ample reserves by pursuing higher returns from equity and alternative investments; and ii) domestic economic support funds set up to allocate resources to

²¹On the other hand, it may be a consequence of the regulations aiming at preventing SWFs to take significant stakes in strategic sectors. Such regulations are in place in many developed countries such as the United States or the European Union countries.

socio-economic domestic projects. In Table 1, we have 10 investment reserve funds that made 109 deals during the sample period and 5 domestic economic support funds with only 15 deals. Given the low number of transactions for domestic economic support funds, we choose to focus our robustness analysis on GCC reserve investment funds in order to refine our results and more specifically to test what are the drivers of the acquisition strategy for this type of funds. Table 9 presents the results of the two Logit models and the ordered Logit model considering the sub-sample of GCC reserve investment SWFs. The significance level of the variables have been obtained using (parametric) bootstrapped confidence intervals with bias correction for 500 replications.

These new estimates confirm our results. First, the Logit models show that the factors driving the decision to acquire large stakes ($> 10\%$) differ from those driving the decision to acquire majority stakes ($> 50\%$). Second, these models confirm that GCC reserve investment SWFs don't take into account the financial performance of the company they acquire large/majority stakes or the institutional characteristics of the country. Overall, these results show that our previous results are driven by Reserve Investment Funds which are the most common in GCC countries.

Table 9: Results of Models considering only GCC Reserve Investment SWFs

This table reports the results of the estimation of separate estimations of Logit models and the ordered Logit model considering only GCC SWFs whose stated objective is the investment of the reserves. The significance level of the variables have been obtained using (parametric) bootstrapped confidence intervals with bias correction for 500 replications. Column (1) (resp. (2)) reports the results of the parsimonious Logit model when the endogenous variable (Y_{ij}) is a dummy variable equals to zero if the post transaction share of the SWF i in the target j is smaller than 10% (resp. 50%), and equals to one otherwise. Column (3) reports the results of the parsimonious ordered Logit model, where the endogenous variable Y_{ij} takes the value 1 if the post transaction share of the SWF i in the target j is smaller than 10%, the value 2 if the share lies between 10% and 50% and the value 3 if it is larger or equal to 50%.

	Hyp.	(1) Logit DEALS+10%	(2) Logit DEALS+50%	(3) Ordered Logit
<i>logDEBT</i>	1	-0.246 **	-0.351 ***	-0.411 ***
LIQUIDITY	1	0.297 *		0.189
POLITY	3	-0.130 *		-0.091
FINANCE	4a	-2.182 ***		-2.514 ***
ENERGY	4a	-1.186 ***		-2.041 **
TRANSPARENT		1.721 ***	1.048	1.848 *
EUDUMMY		1.869 ***		1.882 **
OILPRICE		2.006 *		2.194
SIZESWF				
CRISIS			-1.444 *	-0.378
Constant		-8.853 *	-1.428 **	
cut1				9.735
cut2				11.907 ***

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

5 Conclusions

One of the main concerns about SWF's strategy, which has been widely studied in the literature, is what drives their investment strategy. However, only a few papers have tried to explain the decision on the share size of these cross-border acquisitions. This paper aims to shed light on the drivers of SWFs when they decide to acquire a large or majority stake. In order to take into account the great heterogeneity among SWFs, the study focuses on one particular group of SWFs, that's GCC SWFs. These SWFs are particularly interesting because they present some key characteristics that make them a distinct group among SWFs: they are all funded by commodity revenues (mostly oil) meaning that their proceeds are extremely dependent on oil prices; they come from autocratic countries and they are located in a same region, with common language and religion. The growing size of these SWFs, coupled with their opaque and highly politicized nature, has raised concerns in Western countries in terms of perceived political and security risks. In particular, GCC SWFs are perceived as seeking strategic industrial gains to control access to technologies and industrial areas. In this paper, we have tried to shed light on the real motivations of these state-owned funds when they decide to take large or majority stakes. To our knowledge, this is the first paper that studies the determinants of large or majority stakes done by GCC SWFs.

Several insights emerge from our analysis. The paper provides evidence that the usual determinants of SWFs investments are not the same when we look at large ($> 10\%$) or majority ($> 50\%$) acquisitions made by GCC SWFs. This reinforces the fact that comparison of acquisition level is an important aspect of the empirical analysis. Unlike results found in the literature investigating the determinants of SWFs cross-border investments, our results indicate that: i) GCC SWFs do not take into account the financial characteristics of the target firm by taking majority stakes, apart from its financial wealth ii) the economic and financial development of the target country does not matter in their acquisition strategy; and iii) they do not consider investor protection or the existence of bilateral trade agreements for decisions on the degree of ownership.

We also find that firms operating in strategic sectors (finance, energy) are targeted by GCC funds for diversification purposes but not for the purpose of acquisition or control. It means that majority acquisitions are not a lever for GCC governments to get strategic interests in the target countries. Our results suggest that the most transparent funds take the most majority stakes: transparent SWFs are indeed less likely to provoke hostility and political pressure from host governments, which increases the likelihood of large/major shareholdings. When we consider the objectives of the funds, we find that our results are mainly explained by GCC Reserve Investment funds.

Overall, our results lend support to the hypothesis that GCC SWFs, which are exposed to political influences, differ from other institutional investors in terms of acquisition decision strategy. In particular,

our results suggest that financial and commercial motives are not the exclusive target of their acquisition strategy. These results may be of interest for the regulators seeking the optimal regulatory response to the activism of GCC SWFs.

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