



Dual Citizenship and the Directive on Administrative Cooperation(DAC6) of the European Union

An empirical study on dual citizenship as a method of regulatory arbitrage

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Master thesis, Economics and Business Administration

Major: Business Analysis & Performance Management

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This thesis was written as a part of the Master of Science in Economics and Business Administration at NHH. Please note that neither the institution nor the examiners are responsible – through the approval of this thesis – for the theories and methods used, or results and conclusions drawn in this work.

Acknowledgements

This thesis is written as part of my Master of Science in Economics and Business Administration at the Norwegian School of Economics(NHH).

Firstly, I am grateful to my supervisors, Mohammed Mardan and Elisa Casi, who guided me with great enthusiasm in the formulation and completion of this thesis. The continuous feedback and advice I received helped me immensely in completing the thesis without any impediments.

I want to extend my gratitude to the Norwegian Centre for Taxation(NoCeT) and the Norwegian Tax Authority(Skatteetaten) for awarding a thesis grant for this master thesis. I would also like to thank the faculty members responsible for the course *FIE441 Taxes and Business Strategy*, which was the birthplace of my interest and motivation in the field of taxation.

Writing a thesis during the times of the pandemic has been a very onerous and cumbersome task, and I would like to take this opportunity to thank all my friends who were great pillars of support during these challenging times. Finally, though I know that I can never thank them enough for everything they have done, I would still like to thank my parents for their unwavering guidance and support for the last 33 years.

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Bergen, May 2021

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Abstract

The DAC6 directive was introduced by the EU in the year 2018 with a policy objective to increase the effectiveness in tackling cross-border tax avoidance and evasion. Dual citizenship is one of the methods of achieving dual tax residency and therefore, this thesis tries to verify whether dual citizenship can also be one of the methods of regulatory arbitrage in circumventing the DAC6 directive and reduce the probability of detection and repatriation of offshore deposits. An empirical framework is built to study the movement of cross-border deposits before and after the initiation of the DAC6 guidelines for a period of 19 quarters starting from Q1 2016 to Q3 2020. The analysis is done by verifying the cross-border deposits of countries offering dual citizenship against those countries not offering dual citizenship. Also, the countries are further classified as EU countries and non-EU countries and the study also tries to verify the changes in the cross-border deposits of these groups before and after DAC6. The results show that residents and resident companies of countries having dual citizenship in general have more deposits when compared to countries not offering dual citizenship. The results also show that the increase of deposits in tax havens post-DAC6 is much more from the countries offering dual citizenship than from countries not offering dual citizenship. The study finds that the deposits of residents and resident companies across the European Union have increased considerably post the DAC6 indicating that a stricter reporting structure is possibly having an effect. However, the study also finds that EU deposit locations are becoming less lucrative for residents and resident companies of non-EU countries offering dual citizenship post-DAC6 indicating the use of dual citizenship as a method of regulatory arbitrage against DAC6. Moreover, an analysis is also done for the countries offering Citizenship by Investment(CBI) schemes and the findings indicate that people might also be pro-actively pursuing these schemes post DAC6, indicating that such schemes could also be used as methods of regulatory arbitrage against DAC6.

Keywords – DAC6, Dual Citizenship, European Union(EU), Regulatory arbitrage

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1 Introduction

Regulatory arbitrage has been defined in literature as the ability of actors to circumvent or neutralise rules by restructuring or re-characterising transactions by relocating either the transactions or themselves (Marjosola, 2021). Therefore, regulatory arbitrage can be described as a very generic term referring to any transaction used to circumvent the law. Regulatory arbitrage can be seen as a phenomenon associated with tax evasion or avoidance extensively in modern times. Aggressive tax planning activities by various actors in society have been a cause of concern for governments and tax authorities worldwide. Some studies in the past have pegged the loss in corporate tax revenue to governments to be to the tune of \$500-\$600 billion due to tax havens (Crivelli et al., 2015; Cobham and Jansky, 2018). Another study by Alstadsæter et al. (2018) estimates the wealth stashed away by foreign individuals only in Switzerland to be \$2.3 trillion, indicating that the combined wealth stashed away in all the tax havens might be much more. Forbes magazine has reported that the number of billionaires in the world increased by 31.5% in 2021 (Dolan, 2021). With such an exponential rise in the number of high net-worth individuals, it would not be difficult to imagine the demand for aggressive tax planning mechanisms.

The Directive on Administrative Cooperation(DAC6) was introduced by the European Union(hereafter referred as EU) as a countermeasure to aggressive tax planning activities by individuals and corporations through the help of intermediaries. Under this new directive, the definition of an intermediary encompasses any person or entity who makes a cross-border arrangement possible by organising, marketing, designing, implementing or managing to implement the cross-border arrangement. However, the scope of reporting under the DAC6 is limited to reporting the cross-border arrangements of only EU taxpayers to their respective tax authorities.(Council of the European Union, 2018) If an individual has dual citizenship, she enjoys a taxpayer status in both countries of citizenship. This dual citizenship status makes it very tricky for countries to track the cross-border arrangements made by her from the other country. This has much relevance for the EU as it has to be noted that the EU comprises only 27 countries. As per research conducted for this study, 24 of these countries allow their citizens to hold dual citizenship, albeit some allow dual citizenship only under certain conditions(details of dual citizenship countries provided in

the appendix).

This study, therefore, tries to empirically test the effects of dual citizenship on DAC6 through the following research question:

1. Can dual citizenship be an effective method of regulatory arbitrage against DAC6?

The fore-mentioned question is the main focus of the study. However, the study also examines two other research questions additionally. The examination of the following two questions adds more significance and a logical paradigm to the study.

2. Does DAC6 help in the effective reporting of cross-border arrangements of EU country residents?

3. Are citizenship by investment programs used as effective methods of regulatory arbitrage against DAC6?

The importance of question 2 is that for the effect of dual citizenship as an effective method of regulatory arbitrage against DAC6 to be correlated with significance, the study will have to verify if DAC6 effectively achieved its desired motive of more substantial reporting of cross-border arrangements. Question 3 tries to prove the same effect as question 1 with a change in the treatment and control groups. Citizenship by investment (hereafter called CBI) programs are specially designed programs by countries to attract investments from high net-worth investors and are viewed as programs to promote aggressive tax planning (Christians, 2017; Langenmayr and Zyska, 2021). However, CBI programs are more lucrative to only citizens of countries that allow dual citizenship as they can obtain the citizenship of the CBI country without relinquishing their existing citizenship. Therefore, CBI countries are a subset of countries that offer dual citizenship.

In section 2 of the thesis, the literature review and the theoretical example crucial in driving the study are presented. In section 3, the data description of the cross-border deposits and dual citizenship is given. Section 4 will describe the research methodology along with the various regression models. In section 5, the descriptive and empirical results are presented and analysed. In section 6, the study's limitations and the case of Norway, which is the latest country to introduce dual citizenship, are discussed. In section 7, the thesis concludes.

2 Theory & Literature Review

The study of tax evasion has been a complex phenomenon. Franzoni (1999) stated that the taxpayer's idea of tax compliance is influenced by many factors such as the perceived fairness of the taxes, prevailing social norms, and the chances of non-compliance being detected or punished. Slemrod (2007) puts forward a very compelling argument as to why governments introducing tax systems cannot wholly rely on their taxpayers' sense of duty to comply. The study says that initially thought a few taxpayers might comply, over some time, even the few who pay will stop paying due to a majority of taxpayers avoiding the taxes. The study also says that non-payment of taxes should be countered with penalties.

As per Franzoni (1999), tax evasion occurs when individuals deliberately fail to comply with the general tax obligations resulting in a loss of tax revenue. Since taxes are the primary source for the functioning of the state, this causes a void in the state exchequer, paralysing the activities of the state. Tax avoidance is a related concept but essentially differs from tax evasion. Franzoni (1999) defines it as the phenomenon when individuals reduce their tax liability unintended and legally. The ethical boundaries of transactions leading to tax avoidance are still questionable, and studies in the past such as McBarnet (1992); Cowell (1992) say that the difference between tax evasion and avoidance is hardly distinguishable at times. However, the commonality between tax evasion and avoidance is that both are aggressive tax planning activities. In this study, though the difference between tax evasion and avoidance is recognised, we briefly discuss the idea of aggressive tax planning only through tax evasion. It has to be noted that from now on, tax evasion and avoidance will be used interchangeably for convenience and the term wherever used represents the case of aggressive tax planning.

Tax evasion has always been an issue of concern for countries around the world. The history of tax evasion is not new. Webber and Wildawsky (1986), in their book 'A history of taxation and expenditure in the Western world, give us an example of tax evasion as early as the third century AD when Romans hid their jewellery and gold coins by burying them in the ground. Tax evasion has become more evident during the second wave of globalisation, followed after the second world war (Vanham, 2019). As a result of the large-scale technological development and globalisation, it has become more accessible

for people and corporations worldwide to invest in offshore locations (Casi et al., 2019). With the options of investing abroad increasing, cross-border tax evasion has become a significant concern for countries. A 2008 US senate report pegs the amount of tax lost every year due to this kind of tax evasion at \$100 billion annually (Casi et al., 2019).

Individuals and companies can perform tax evasion on the income earned within a country or from income made from investments outside a country's borders. The deposits that individuals hold outside a country's borders are referred to as offshore deposits and are products of cross-border arrangements. Though the theory and logic of tax evasion apply without any geographic bounds, the idea of this study is to essentially study the effects on the offshore deposits held by individuals and companies abroad and therefore; we discuss tax evasion only from that perspective. The history of the offshore finance industry can be dated back to 1815, in the Vienna Congress, which established Switzerland's neutrality (Hodges, 2013). Though there are also some other claims that offshore banking originated in the Channel Islands of France (Palan, 2009), there is no literature to back up the claim. In one of the studies by Farquet (2012), the findings suggest that significant activity in offshore banking started post-world war I and was the golden age of opportunity for tax avoidance through offshore channels.

2.1 The CRS & AEOI

Governments and tax authorities around the world have always been apprehensive of these offshore deposits. The countries that offer special incentives in tax benefits to attract such offshore deposits have been labelled as tax havens (Dharmapala and Hines Jr., 2009). Tax havens were not just labelled as such just for attracting the offshore deposits but also because they provide secrecy to the deposits enabling the investor to hide these investments from her home country (Fitzgibbon and Hallman, 2020). The G-7 summit in 1996 had taken the first measures to counter the effect of tax havens on a collective level, where the concerned countries asked OECD to establish standards to counter the harmful tax competition (Sullivan, 2007). In 1998, the OECD announced a list of 35 nations considered to be pursuing such destructive tax competition methods to attract foreign investments into the country (Sullivan, 2007).

To ensure greater disclosure of tax information and counter tax evasion, countries have

signed exchange of information treaties between national tax authorities (Keen and Lighthart, 2006). Countries in the past used to rely on bilateral instruments for exchanging tax information extensively. The primary mechanism that governments are now banking upon for tax information disclosure is the automatic exchange of information (hereafter AEOI). AEOI provides for the automatic exchange of information on financial accounts held by non-resident individuals and entities in a pre-defined format between tax authorities. The information exchanged includes details about the financial account (e.g. the financial institution maintaining it, the account number and the account balance, etc.) and details about the account holder (e.g. their name, address, date of birth and taxpayer identification number, etc.) (OECD, 2021a). Countries also take up other types of instruments such as Double Taxation Agreements(DTAs) and Tax Information Exchange Agreements (TIEAs) (Meinzer, 2009) from time to time to have greater disclosure of information. Countries felt the importance of countering tax havens through AEOI much more post the 2008 financial crisis (Shaxson, 2015). The first piece of legislation that kept the ball of AEOI rolling was the Foreign Account Tax Compliance Act(FATCA) (De Simone et al., 2019) which the USA adopted in the year 2010. The emphasis on AEOI was increased further when the OECD introduced the Common Reporting Standard(hereafter CRS) in 2014 (Gadzo and Klemencic, 2017).

Before the AEOI was implemented, through CRS and FATCA, tax information exchange mainly was done through TIEAs. A TIEA between two countries ensured tax information exchange between tax authorities of different countries, albeit only on request. TIEAs did not allow for the automatic exchange of tax information(Government of the Virgin Islands, 2021). However, CRS and FATCA were introduced to ensure that the exchange of tax information happened automatically. The primary purpose of the CRS was to establish the tax residency of the individual or firm. Under CRS, financial institutions are required to identify customers(individuals and controlling persons in passive non-financial entities(NFE)) who are tax resident outside the country of operation of the financial institute and report certain information on the financial accounts of such customers to the local tax authorities. The local tax authorities, in return, exchange the information with the tax authorities of the country in which the customer is a tax resident (Noked, 2018). Though CRS is a powerful instrument of AEOI against tax evasion, it still has a few

drawbacks. The most important of these is that the customer himself provides the information obtained by the financial institution through self-certification (Avi-Yonah and Mazzoni, 2018). Suppose the customer can conceal his tax residency from the financial institution while self-certifying; it is challenging for the financial institution to identify the tax residency of the customer correctly. Another major disadvantage of CRS is that CRS is not a law but rather a reporting standard. The OECD model for AEOI also came with a Competent Authority Agreement (hereafter called CAA) that enabled the implementation of the CRS system into the national law of a country (Casi et al., 2019). Therefore, countries planning to participate in the CRS must sign the CAA and then implement the CAA into their law. But there are three different CAA models that a country can choose between, and this adds to the problem while implementation of CRS on a global level (Casi et al., 2019). With no deadline set by OECD for implementation of CRS in the national law, many countries have not yet come under AEOI. As per OECD (2020), approximately only half the countries and territories have started sharing information under AEOI by 2020. Moreover, it has to be noted that the biggest economy in the world, the USA, has not signed the CAA and is not part of CRS (Noked, 2018; Casi et al., 2019). A final disadvantage of CRS is that OECD does not clearly define the penalty for violation of CRS, and the penalties are decided mainly by the countries themselves (Casi et al., 2019).

Despite the discussed drawbacks of CRS, one study reveals that CRS has been considerably successful in the repatriation of offshore deposits held in tax havens (Casi et al., 2020b). Since the implementation of CRS by the OECD, 105 countries have participated in the AEOI by 2020. By the end of 2023, a total of 115 countries have agreed to start exchanging information under the CRS (OECD, 2020). The OECD forum has also come forward with a Model Mandatory Disclosure Rules for CRS Avoidance Arrangements and Opaque Offshore Structures approved by the OECD Committee of Fiscal Affairs in 2018. However, it has to be observed that CRS is still in a very nascent phase, and tax evaders are finding new ways to circumvent AEOI and CRS (Johanessen and Zucman, 2014; Menkhoff and Miethe, 2019). One such method of evading AEOI is by obtaining dual citizenship (OECD, 2018).

2.2 Dual Citizenship

With increasing immigration worldwide, countries are increasingly allowing their citizens to acquire the citizenship of other countries without losing their existing citizenship (Vink et al., 2019). There have been requests and demands from the diaspora of different nations who have immigrated to introduce dual citizenship by their home countries (Reshma, 2017). In the recent past, we have seen a significant number of countries introducing dual citizenship, such as Colombia (1991), Finland (2003), Australia (2002), Kenya (2010), and, most recently, Norway(2020) (Vink et al., 2019). The history of conflicts due to citizenship date back to the war of 1812 between the USA and the UK (Spiro, 2010). The study by Spiro (2010) says that though dual citizenship was not allowed in most parts of the world till world war 2, the concept started to become more acceptable after that.

Dual citizenship was a problem for most nations because it clashed with the idea of sovereignty. Torpey (1999) says that the power of states was correlated mainly with the control of resources, both physical and human. Therefore, the concept of dual citizenship clashed with the idea of control over the human resources of a country. Moreover, it also challenged the notion of loyalty to a state. Spiro (2010) also says that states were free to treat their citizens as they pleased but had to maintain restraint when treating nationals of other countries. The concept of dual citizenship violated the ground rules leading to complete discretion of sovereigns in their realm. However, in time, the idea of the sovereignty of a country changed and did not allow states complete discretion in the treatment of nationals. This change in the behaviour of society as such can be construed as the main reason for the increasing acceptance of dual citizenship.(Spiro, 2010)

The human rights of citizens and its conflict with sovereignty is a sociological and political subject and does not fall under the purview of this study. This study focuses more on the tax sovereignty of nations and the concept of dual citizenship as a tool to violate the tax sovereignty of nations. Aggressive tax planning by individuals or corporations leads to an erosion in the country's tax base, thereby causing a problem to the tax sovereignty of nations. DAC 6 was construed by the EU to protect the tax sovereignty of its member states.

2.3 Directive on Administrative Cooperation(DAC6)

The history of administrative cooperation in direct taxation in Europe leads back to Directive 76/308/EEC, which was drafted on 15 March 1976 under the former European Economic Community(EEC) (Casi et al., 2020a). Directive 77/799/EEC introduced the detailed rules for implementing information exchange provisions upon request by EU member states (European Commission, 2021). In 2011, the first draft of the Directive on Administrative Cooperation(DAC1) was introduced vide directive 2011/16/EU, which replaced the erstwhile directive introduced by the EEC in 1977 (European Commission, 2021). AEOI of financial accounts was introduced in 2014 when council directive 2014/107/EU modified the Directive on Administrative Cooperation, and DAC2 came into force. A timeline of the Directive on Administrative Cooperation (European Commission, 2021) is given in Table 2.1.

The EU modified the Directive on Administrative Cooperation on 25 May 2018, paving the way for DAC6 vide council directive 2018/822/EU. The DAC6 directive was introduced with a policy objective to increase the effectiveness of tax authorities in tackling cross-border tax avoidance and evasion. This is done by providing member states' tax authorities with details of all cross-border arrangements of taxpayers of EU member states that are characteristic of aggressive tax planning and indicating a possibility of tax evasion or avoidance. An arrangement can be classified as a cross-border arrangement if it meets any of the following criteria (Council of the European Union, 2018):

1. Not all participants in the arrangement are tax resident in the same jurisdiction.
2. A permanent establishment linked to any of the participants is established in a different jurisdiction, and the arrangement forms part of the business of the permanent establishment.
3. At least one of the participants in the arrangement carries on activities in another jurisdiction without being resident for tax purposes or creating a permanent establishment situated in that jurisdiction.
4. At least one of the participants has a dual residency for tax purposes.
5. Such an arrangement can impact the automatic exchange of information or identify

beneficial ownership.

These cross-border arrangements, specifically for aggressive tax planning, may concern individuals, legal persons (i.e. companies) or legal arrangements (i.e. trusts and foundations), all of whom are classified as taxpayers. Under the new council directive an intermediary, who sells reportable cross-border arrangements to their clients, should report the information on the arrangement to the tax authorities of the member state to which the client belongs. An intermediary can be an individual or a company(i.e., accountants, lawyers, banks, financial advisors, etc.). However, in some cases, the directive shifts the obligation of reporting from the intermediary to the taxpayer.(Council of the European Union, 2018) The obligation to report the arrangements shifts to the taxpayer when (Council of the European Union, 2018):

1. The intermediary is a non-EU intermediary. An intermediary is considered non-EU when it qualifies under all the following conditions:
 - It is not resident in any member state of the EU.
 - It does not maintain a permanent establishment in any member state of the EU.
 - It is not incorporated/governed by the laws of any member state of the EU.
 - It is not a member of a professional association in any member state of the EU.
2. If there is no intermediary involved.
3. If the intermediary has a right to waiver reporting due to legal professional privilege.

Table 2.1: A timeline of the Directive on Administrative Cooperation

Directive of Administrative Cooperation- DAC						
Version	DAC1	DAC2	DAC3	DAC4	DAC5	DAC6
Council Directive	2011/16/EU	2104/107/EU	2015/2376/EU	2016/881/EU	2016/2258/EU	2018/822/EU
AEOI/Non-AEOI	Non-AEOI	AEOI	AEOI	AEOI	Non-AEOI	AEOI
Proposed date of effective implementation	01/2013	01/2016	01/2017	06/2017	01/2018	07/2020
Key Features	<p>All exchanges of information including:</p> <ol style="list-style-type: none"> Exchange on request Spontaneous exchanges Presence in administrative offices Simultaneous Controls Request for notification Sharing best practices Use of standard forms 	<p>Automatic Exchange on financial account information:</p> <ol style="list-style-type: none"> Interests, dividends or income generated by financial account Gross proceeds from sale or redemption Account Balances 	<p>Automatic Exchange of Information (using a central directory as from 1/2018) of:</p> <ol style="list-style-type: none"> Advance cross-border rulings Advance pricing arrangements 	<p>Automatic exchange of information on country-by-country reports on certain financial information :</p> <ol style="list-style-type: none"> Revenues Profits Taxes paid and accrued Accumulated earnings Number of employees Certain assets 	<p>Access to tax authorities to beneficial ownership information as collected under AML rules.</p> <ol style="list-style-type: none"> Revenues Profits Taxes paid and accrued Accumulated earnings Number of employees Certain assets 	<p>Introduction of hallmarks and new features such as:</p> <ol style="list-style-type: none"> Mandatory disclosure rules for intermediaries and taxpayers. Automatic exchange of information on tax planning cross-border arrangements.

Source: (European Commission, 2021)

The significance of DAC6 is that it tries to fill in the gaps left by the CRS in dealing with AEOI concerning reporting of cross-border financial account information. DAC2, which came into force through council directive 2014/107/EU amended DAC1 to incorporate the CRS at the EU level (Casi et al., 2020a). Under the CRS, only the financial institution maintaining the accounts of the customer was responsible for reporting the information, provided a self-certification is supplied by the customer of her tax residency (Noked, 2018; Casi et al., 2019). If the customer failed to disclose the details of her tax residency to the financial institution, the account information would not be reported (Avi-Yonah and Mazzoni, 2018). There was no liability of reporting on behalf of the customer or any other intermediary that was party to the account being opened. All versions of the Directive on Administrative Cooperation before DAC6 did not address this gap. However, through DAC6, the EU defined the reporting liability of all parties involved in addition to the financial institution holding the accounts, i.e., of the intermediary advising the customer and the customer herself. As mentioned before, all EU intermediaries involved in the transaction (i.e., accountants, lawyers, banks, financial advisors, etc.) are responsible for reporting the details of the cross-border arrangements unless exempted by law. Suppose the intermediary is a non-EU intermediary or an intermediary exempted by law. In that case, the customer, a taxpayer in one of the EU member states, is responsible for reporting the cross-border arrangements. (Council of the European Union, 2018; Casi et al., 2019)

Another significant change made by DAC6 is the introduction of the classification of cross-border arrangements based on hallmarks. A hallmark as per DAC6 refers to any characteristic or feature of a cross-border arrangement that indicates a potential risk of tax avoidance. There are five categories of hallmarks under DAC6. A reportable cross-border arrangement is any cross-border arrangement that qualifies to be reported under one of the five categories of hallmarks under DAC6. However, this study checks for dual citizenship as a method of regulatory arbitrage against category D hallmarks of DAC6. Category D hallmarks are specific hallmarks concerning the AEOI and beneficial ownership. An arrangement should be reported under this category if it has the effect of undermining the rules, or the absence thereof, on beneficial ownership or any other equivalent agreement on AEOI.(Council of the European Union, 2018) A detailed description of the categories of hallmarks and the various transactions they cover can be found in the Council directive 2018/822/EU of the European Union. DAC6 gave a substantial boost to tax authorities in

trying to curb aggressive tax planning by introducing mandatory disclosure rules, which mandate all cross-border arrangements qualifying under the hallmarks of DAC6 to be reported. Before DAC6, this was not evidenced.

However, as per Kaeser et al. (2018), DAC6 increases the cost of reporting for intermediaries and taxpayers as collecting and transmitting the information falling under the various hallmarks of DAC6 involves substantial costs. Moreover Kaeser et al. (2018) also says that the implementation of DAC6 also has additional costs for the tax authorities, who have to invest in IT infrastructure to analyze and exchange the information.

2.4 Theoretical example

In this subsection we first introduce a theoretical example of how AEOI takes place under CRS. We explain the drawbacks of CRS with the help of the example. After that we explain how DAC6 tries to address the drawbacks of CRS. Finally, we present another example to explain how dual citizenship can be used to circumvent DAC6 and act as a method of regulatory arbitrage.

The following is an example of how CRS and AEOI work. Assume a taxpayer of France currently living in Panama. When she tries to open a financial account in a bank or any other financial institution in Panama, she has to self-certify the details of her tax residency to the financial institution. The definition of tax resident varies from country to country, and one can find the details of the same in the OECD portal (OECD, 2021b). The financial institution in Panama then shares the details of the customer's financial accounts to the tax authorities in Panama, who in turn share the details periodically with the tax authorities in France. This information is automatically exchanged as both France and Panama are signatories of the Multilateral Competent Authority Agreements (MCAA) (OECD, 2021c).

Allingham and Sandmo (1972) was one of the early and pioneering studies on tax evasion. The study emphasises that the income of the individual is not known to the tax authorities and this information asymmetry between the two parties is the incentive for the taxpayer to evade taxes, given that there is no mechanism to detect and penalize the activity. By assuming that the taxpayer conforms to the Von-Neumann Morgenstern axioms for behaviour under uncertainty, they show that higher penalties on evaded taxes and a higher

probability of detection might lead to higher income declaration. However, in the case of CRS, it has to be observed that the information exchange is not between the taxpayer and the tax authorities (Noked, 2018). It is facilitated by a financial institution (hereafter FI) which maintains the accounts of the taxpayer. The presence of a financial institution for reporting the data reduces the risk of detection for a taxpayer as she can falsely self-certify her tax residency (Avi-Yonah and Mazzoni, 2018) thereby allowing to circumvent CRS and AEOI.

In this case, though the financial institution does not increase the probability of tax evasion purposefully, it happens due to the information asymmetry that exists between the taxpayer and the financial institution. Also, since the penalty for non-compliance is imposed on the financial institution and not on the customer, the need to righteously self-certify tax residency details further reduces for the individual. Moreover, another important thing to be noted here is that the taxpayer might be advised by other intermediaries (such as accountants, lawyers, banks, financial advisors, etc.), in France or other EU countries, that help in the process of opening accounts in Panama. However, such intermediaries are also not liable to report the details of the financial account information to the tax authorities in France.

Another way that the taxpayer can avoid CRS is by relocating the accounts to a country that is not party to the CRS like USA, Paraguay or Cambodia (Henderson, 2020). Since these countries are not party to the CRS, unless a TIEA exists between France and these countries, disclosure of account information is very difficult. Even when the TIEA exists, information is only exchanged if a request is made by the French tax authorities and is not exchanged automatically. In this case also, if there is an intermediary advising the taxpayer and facilitating the relocation of the financial accounts, neither the intermediary or taxpayer has any liability to report the details of the accounts.

When DAC6 comes into effect, it makes the intermediary (if the intermediary is an EU intermediary), that is advising and facilitating the accounts of the taxpayer, as well as the taxpayer accountable for disclosure of all information. Even if the financial institution in Panama is not informed of the tax residency status of the taxpayer, the intermediary as well as the taxpayer are now liable to inform the French tax authorities of the accounts maintained in Panama if they qualify under hallmark D of DAC6. The added advantage

that DAC6 has is that under DAC6 the taxpayer and the intermediary advising the taxpayer are penalized in case of non-disclosure of such financial accounts. The penalties vary from €5,100 by Bulgaria to €4.4 million by Poland((PWC, 2020). The penalty deters the intermediary and the taxpayer from implementing the cross-border arrangements through aggressive tax planning mechanisms. The intermediary is at a greater risk as it faces both reputational and monetary losses in case of non-compliance. Even if the taxpayer locates his accounts to a non-CRS country, he is still liable to report the accounts. In the future if France signs a TIEA with such a country, there is the possibility that the accounts of the taxpayer might then be disclosed causing him to be penalized for non-disclosure. However, dual citizenship can still be one of the methods through which the taxpayer might circumvent the DAC6. In the following example, a description of how dual citizenship can be used as a method of regulatory arbitrage against DAC6 is given.

Let us consider the same example of a French taxpayer who currently resides in Panama. Let us, however, assume now that the taxpayer also has dual citizenship and holds a Taiwanese citizenship in addition to the French citizenship. When DAC6 comes into force, if the taxpayer does not want the details of her financial accounts in Panama to be reported to the French tax authorities, she would not declare her French tax residency to the financial institution. She would now declare to the financial institution in Panama that she is a tax resident of Taiwan and would use her Taiwanese passport and identification documents to open and operate the accounts. She would also use the services of a Taiwanese or non-EU intermediary to open the accounts in Panama as non-EU intermediaries are not required to report the details of the cross-border arrangements under DAC6. However, in this case the taxpayer is still liable to disclose the details of the accounts to the French tax authorities. Then why does the customer not disclose the details herself to the French tax authorities? The answer lies in the fact that the probability of detection of the accounts by the French tax authorities reduces significantly now, incentivizing the customer to not disclose the details of her accounts.

When AEOI takes place under CRS, Panama only reports the account details of the taxpayer to Taiwan as she has used her Taiwanese passport and other identification documents to open the accounts and has declared herself as a Taiwanese tax resident. However, the account details are not known to the French tax authorities. In this case,

the French tax authorities will find it very difficult to access the account details even on request. When requested the Panamanian tax authorities can refuse the request of the French tax authorities saying that the account does not belong to a French tax resident. Even if a TIEA is in place between France and Panama, Panama would still not disclose the details of the taxpayer to the French authorities as they recognize the taxpayer as only a tax resident of Taiwan. Even when DAC6 comes into effect, there is very little possibility of the French tax authorities accessing that information. Moreover, since the taxpayer, knows that an EU intermediary will have to report such transactions, uses the services of a non-EU intermediary in opening the accounts. In such an instance, the French tax authorities will have to solely depend on the disclosure provided by the customer. As the customer knows that the probability of Panama disclosing the details of the accounts is very less, she will not disclose the details of the accounts. Since Taiwan is a non-EU country the details of cross-border arrangements of Taiwanese taxpayers is not available to the EU member states under DAC6. The French tax authorities can still perform an investigation through law enforcement agencies to obtain information on the accounts but it will need the help of tax authorities from Taiwan and Panama. Given the complexity of the investigation and the cooperation of multiple parties the probability of detection would be very less. In this way, dual citizenship can be used to circumvent the DAC6 and be a method of regulatory arbitrage.

Let us now assume that the taxpayer in our case is a citizen of Netherlands, an EU country that does not offer dual citizenship to its citizens. The option of availing the citizenship of another country to route the cross-border arrangements is absent here. If the taxpayer decides to obtain the citizenship of another country, she automatically loses the citizenship of the Netherlands. If the incentives of being a citizen of the Netherlands are high, then taxpayer would not relinquish it. If the taxpayer does not relinquish her Dutch citizenship, then she will comply with the DAC6 and report the deposits as non-compliance can attract severe penalties. Suppose she renounces the citizenship of the Netherlands. In that case, she ceases to be a citizen and a taxpayer for all income earned outside the borders of Netherlands, and there is effectively no regulatory arbitrage here.

An important point to be noted here is that dual citizenship can also be used as a method of regulatory arbitrage against CRS as well. However, since DAC6 was introduced with

the objective of plugging the gaps of CRS, we try to evaluate whether dual citizenship can be used to circumvent the DAC6 as mentioned in the example. As part of this study, we try to empirically test whether there is possible causality between the dual citizenship of countries and the cross-border deposits held by the residents of these countries with respect to the introduction of DAC6. The strong correlation between dual citizenship and the cross-border deposits could indicate the possible causality of dual citizenship as a method of regulatory arbitrage against DAC6.

2.5 Significance of the study

The Directive on Administrative Cooperation has existed since the year 2011. However, for the first time in 2018, DAC6 has enabled mandatory disclosure of cross-border arrangements taking a giant leap in curbing cross-border arrangements, specifically taken up for aggressive tax planning. The introduction of these mandatory disclosure guidelines also adds more momentum to the existing framework of AEOI, at least from an EU perspective, in tackling aggressive tax planning activities. Despite the importance of DAC6, few studies have assessed the impact of DAC6 on curbing aggressive tax planning. The normative research of DAC6 by Casi et al. (2020a) is one of the few studies that assess DAC6 and provide valuable suggestions. Other legal studies such as Cachia (2018); Clappers and Mac-Lean (2019); Peeters and Vanneste (2020) and Resenig (2020) have provided valuable information. However, none of these studies has empirically evaluated the effect of DAC6 or methods that can be used to circumvent the DAC6. This study was therefore designed to fill in the fore-mentioned gap in the literature.

The other gap in the existing literature that this study tends to address is that of dual citizenship as a method of regulatory arbitrage for tax evasion and avoidance. There are very few studies that address regulatory arbitrage against policies such as CRS or DAC6. Ahrens et al. (2020) is one such study. However, the study only checks the effect of golden visas (synonymous for citizenship or residency by investment schemes) and corporate shells as methods of regulatory arbitrage against AEOI. Despite dual citizenship being listed as one of the possible methods of circumventing AEOI, studies assessing the effect of dual citizenship, in general, have not been evidenced.

The study by Langenmayr and Zyska (2021) though measuring the effect of dual citizenship

on tax evasion, only checks the impact of the CBI program offered by 12 countries worldwide. Moreover, the study also considers a period from the year 2010 to 2018. It does not show the precise impact that the schemes have on CRS or AEOI, particularly as most of the countries currently offering CBI(excluding Serbia, St. Lucia and Vanuatu) started the CBI programs before 2014 (Christians, 2017). Also, the study does not tell us if the offshore deposits of citizens of these countries increased significantly post introduction of CRS or pre-introduction of CRS. Apart from the studies by Casi et al. (2020b); Menkhoff and Miethe (2019); Langenmayr and Zyska (2021), no other empirical studies have been witnessed studying the effect on offshore deposits in the recent past. Studies such as Knobel and Meinzer (2014); Knobel (2016); Gadzo and Klemencic (2017); Noked (2018); Avi-Yonah and Mazzoni (2018) have outlined some of the possible factors affecting the implementation of AEOI. Still, the effect of none of these factors has been tested empirically.

Therefore, the study has been designed to address these gaps in the existing literature concerning dual citizenship as a method of regulatory arbitrage. Since the category D hallmarks of DAC6 are specific hallmarks concerning the AEOI and beneficial ownership, the study can also serve as a base for any further investigations that study regulatory arbitrage of AEOI or CRS.

3 Data & Descriptive Statistics

3.1 Data on cross-border deposits

The data on the cross-border deposits are obtained from the Bank of International Settlements-Locational Banking Statistics (BIS-LBS) database (Bank of International Settlements, 2021). The database consists of the cross-border deposits held by the residents and resident companies of 215 countries and autonomous territories in a select list of 31 countries. Though 49 countries currently report the total volume of the cross-border deposits held by them, the individual country wise data of deposits held are only reported by 31 countries. We refer to these 31 countries as the deposit locations. The 215 countries whose residents or resident companies hold the deposits in the 31 deposit locations will be called resident countries. The database has both liabilities and claims of a country, but we do not consider the country's claims. Only the liabilities, which are indicators of the deposits held by residents or companies (hereafter referred to as non-bank deposits) of a country in select cross border locations, are extracted from the database. We exclude the bank deposits held by banks of a resident country in a deposit location as inter-bank deposits cannot be a possible source of tax evasion (Johanessen and Zucman, 2014).

The BIS-LBS database records the deposits for every quarter till September 2020. For this study, we extract data on cross-border deposits from the first quarter of 2016 till the third quarter of 2020. The reason for selecting the first quarter of 2016 as the starting point is that the financial institutions located in early-adopter countries started collecting information on new foreign reportable accounts for the CRS from this quarter (Casi et al., 2019). This date marks the start of the effective implementation of the CRS. CRS kickstarted the notion of automatic exchange of information on a global level. Since the assumption made is that dual citizenship undermines hallmark D of DAC6, which emphasises the Automatic Exchange of Information (AEOI) and Beneficial Ownership of cross-border deposits or investments, data before the implementation of CRS might invite an unwanted bias in the estimations of the study. A descriptive summary of the deposits in the deposit locations over the entire study period is given in Table 3.1.

Table 3.1: Descriptive Statistics of cross-border deposits in the deposit locations

Deposit Location	Obs	Mean	Std. Dev.	Min	Max
Hong Kong	3465	2093.03	12539.327	.127	173028.7
Jersey	3279	329.675	1653.474	1	22614
Guernsey	3014	151.786	708.36	.001	7982.054
Macau SAR	2134	288.197	1753.732	.001	22846.017
Isle of Man	3877	123.102	754.249	.001	12513.385
Luxembourg	3725	742.714	2703.398	.001	30826.838
Switzerland	4006	1476.89	4113.833	.001	46297.744
Australia	3775	317.567	1640.1	.001	31534.931
Brazil	554	102.444	780.298	1	8788
Canada	3023	1003.41	9797.175	.009	145556.9
Chile	1715	8.946	100.497	.001	2021.109
Taiwan	3770	423.063	2389.621	.001	33170.934
Korea	2957	108.79	511.29	-3.946	7528.273
Mexico	229	133.757	499.494	.001	4379.143
United States	2647	9787.07	50062.435	4	578294
South Africa	1995	40.618	136.999	0	1844
Netherlands	1114	2861.219	7978.752	3.162	67781.736
Belgium	3933	411.093	1982.403	.001	36047.993
Greece	629	20.924	54.765	.001	455
Sweden	3461	176.196	830.314	0	16021.99
France	3697	4275.955	22755.305	1	286916
Spain	3675	359.29	1485.619	.011	25168.353
Denmark	2891	208.706	914.154	.001	11747.14
Ireland	3081	356.9	1713.832	.001	18877.759
Finland	2072	145.586	844.145	.001	17494.083
United Kingdom	3794	8333.395	47845.068	0	785456
Austria	3762	241.2	1348.005	0	19923.025
Philippines	2188	18.38	77.531	.001	1224.523
Italy	2849	307.749	1599.884	.001	20927.228

Notes: The table depicts the quarterly cross-border deposits of non-bank deposits of all the resident countries in the specific deposit location from the 1st quarter of 2016 to the 3rd quarter of 2020. All values except observations are in US\$ million.

The data is further classified based on specific characteristics of the resident countries or the deposit locations. The first classification is for the resident countries divided into countries that offer dual citizenship and countries that do not offer dual citizenship. Next, the resident countries are divided into countries that belong to the European Union (EU) and those that do not belong to the EU. This classification primarily helps to understand the effect of DAC6 on the EU countries. It has to be noted that the United Kingdom is also considered as a part of the EU for this study since the United Kingdom left the EU only on 31st January 2020 (Government of Netherlands, 2021) and the transition period for Brexit ended on 31st December 2020 (Gibson Dunn, 2021).

Moreover, the UK had officially introduced the DAC6 into the UK law on 1st July 2020. All transactions till the end of 2020 will be reported under DAC6 (Gibson Dunn, 2021). Residence countries are also divided into countries that offer a Citizenship by Investment (CBI) program or scheme and those that do not offer such schemes. The data for the countries offering CBI programs were taken from the list of CBI countries

compiled by Christians (2017). It has to be noted that the CBI countries automatically qualify for dual citizenship as well. The CBI countries are further divided into aggressive CBI countries and non-aggressive CBI countries based on the study by Langenmayr and Zyska (2021). A descriptive summary of the deposits of residence countries based on their classifications is given in Table 3.2.

Table 3.2: Descriptive Statistics of cross-border deposits in the residence countries

Variable	Mean	Std.Dev.	Min	Max	Observations
EU Country with dual citizenship before DAC6	3016.976	17469.510	0.001	368486	5624
EU Country with dual citizenship after DAC6	3471.376	21079.850	-3.946	445850	6309
Non-EU Country with dual citizenship before DAC6	899.066	14246.020	0.001	748573	16765
Non-EU Country with dual citizenship after DAC6	1011.509	17045.110	0	785456	19040
EU Country without dual citizenship before DAC6	2574.277	10982.190	0.003	98786	635
EU Country without dual citizenship after DAC6	2785.927	11919.810	0.003	101987	717
Non-EU Country without dual citizenship before DAC6	964.171	11789.640	0	450793	15332
Non-EU Country without dual citizenship after DAC6	1017.915	13321.300	0	578294	16889

Notes: The table depicts the quarterly cross-border deposits of non-bank deposits of resident countries based on their classification of whether the country is an EU country, whether the country offers dual citizenship or not and based on whether the deposits belong to the pre-DAC 6 period or the post-DAC 6 period. All values except observations are in US\$ million.

The deposit locations, similar to the residence countries, are also classified into different types. Deposit locations are first classified into tax haven deposit locations and non-tax haven deposit locations. The classification of deposit locations as tax havens is based on Casi et al. (2020b). The study considers Jersey, Guernsey, Isle of Man, Hong Kong, Switzerland and Luxembourg as the tax haven deposit locations and a similar classification is also adopted for this study. Finally, the deposit locations are also classified as EU

deposit locations or not. The DAC 6 was initiated by the EU on June 25, 2018. All transactions initiated on or after June 25, 2018, have to be reported to the tax authorities of the respective EU nations irrespective of whenever the DAC 6 law comes into full effect in any EU country. Therefore, the cross-border deposits are split into two groups, pre-DAC 6 deposits and post-DAC 6 deposits. Since June 25 falls within the second quarter of the year 2018, deposits up to the 1st quarter of 2018 are considered pre-DAC 6 deposits, and deposits from the 2nd quarter of 2018 are considered post-DAC 6 deposits. However, the data obtained from the BIS-LBS database has its limitations. The data of deposits held by residents and resident companies are not distinguished. Therefore, it is hard to establish whether the deposits belong to individuals or companies. The limitation has been pointed out in previous studies, such as Casi et al. (2020b) and Langenmayr and Zyska (2021). However, that is not a significant limitation to our study as companies controlling persons with dual citizenship might still use it to invest the deposits of their firms in offshore locations, and the data on such deposits have to be included. Recent trends suggest that there has been a tremendous growth in foreign direct investment (FDI) in countries (te Velde, 2006). As per the definition of OECD, a controlling person of an entity is one who ultimately has a controlling ownership interest, which in most countries is 25%. However, in case no natural person(s) exercise control through ownership, then the controlling person of the entity is deemed to be the natural person holding a senior managerial position. Now let us assume that there are 5 foreign individuals each holding 20% share in a firm that operates in a country that is not the home country of any of the five individuals. In this case, we can observe that as a collective they hold 100% share in the entity. However, none of them are reportable as per the definition of OECD. Therefore, there can be possible instances of such companies which do not disclose the names of their actual owners, though eventually as a collective, they are enjoying the benefits. The data on deposits from the BIS-LBS database has widely been used as a proxy for tax evasion previously in studies by Huizinga and Nicodème (2004); Johannesen and Zucman (2014); Casi et al. (2020b); Langenmayr and Zyska (2021); Johannesen (2014).

3.2 Data on dual citizenship

The data on countries offering dual citizenship was taken from the website of Arton Capital (Arton Capital, 2021). This service company helps high net worth individuals in obtaining dual residency/citizenship around the world. The list obtained from the website was again cross verified with other websites such as www.dualcitizenshipreport.org that hold information on an individual country basis and explain whether the country allows dual-citizenship without restrictions or allows it with certain restrictions. All the countries in the list offered dual citizenship throughout the study, Norway being the only exception. Norway introduced dual citizenship on 1st January 2020 (Utlendingsdirektoratet, 2020). The list of countries offering dual citizenship is provided in the appendix.

The data on countries offering dual citizenship also has its limitations. A singular source for the data on countries offering dual citizenship could not be found. Therefore, data from multiple sources have been used in constructing this list of dual citizenship countries. Most of this data has been obtained from various websites, the details of which are presented in the appendix. However, the possibility that some countries can be disputed as not offering dual citizenship is present. Some countries have mild to severe restrictions on granting dual citizenship. In some other countries, the number of citizens with dual citizenship might be too few to make an impact. Care has been taken to prepare the list as accurately as possible.

Some of the countries in the list offer dual citizenship only on a conditional basis. So the number of people eligible for dual citizenship in these countries are also very few. Moreover, the conditions are vague in many cases making it very difficult to understand the people who qualify for dual citizenship in these countries. For example, South Korea and Austria both do not offer dual citizenship in general. However, both countries make exemptions to individuals who are of importance to their countries and can contribute to the betterment of these countries (Proell, 2021). So, there is a possibility that high-value individuals who might be of great help to these economies can obtain dual citizenship in these countries. Also, Austria and South Korea rank relatively high in the Financial Secrecy Index - 2020 Results compiled by the Tax Justice Network. That is why both these countries also find a place in the list of countries offering dual citizenship. Some other countries offer dual citizenship only to residents of select countries with which they

have agreements. One such example is Argentina. Argentina offers dual citizenship to the citizens of Spain and Italy only (Habib, 2016). It does not allow the citizens of other countries to obtain Argentinean citizenship without relinquishing the existing citizenship. However, Argentina is included in the list. Argentina's agreements are with EU countries, and DAC 6 is mainly on the EU countries. An entire list of the restrictions applied by the countries is provided in the appendix.

4 Research Methodology & Design

The research methodology or framework for the study consists of multiple regression models, each of which is explained in individual subsections. In each subsection, we describe the research design that has been adopted for the model. An explanation of the design follows it. The subsections are ordered logically to portray the effects of dual citizenship on DAC 6.

4.1 Effect of dual citizenship on cross-border deposits

We first measure the effect of dual citizenship in general on the cross-border non-bank deposits in the entire set of deposit locations. A simple panel regression model is used to estimate the effect of dual citizenship on the cross-border deposits of residence countries over the entire period of time. The regression model is as follows:

$$\ln Deposits_{ijt} = \alpha + \beta_1 Dual_Citizenship_{it} + \gamma_{jt} + \theta_{ij} + \epsilon_{ijt} \quad (4.1)$$

In the regression model, $\ln Deposits_{ijt}$ represents the log of deposits of residence country i in deposit location j in time period t . The $Dual_Citizenship_{it}$ takes a value of 1 for residence country i in period t if the country offers dual citizenship. It takes a value of 0 if the residence country does not offer dual citizenship. We include a deposit-location quarter-year time fixed effects (Wooldridge, 2019), represented by γ_{jt} . These time fixed effects allow us to control any common time trends affecting the deposit location, which might cause a higher or lower influx of deposits into the location. Since dual citizenship is a characteristic of the residence country, taking residence-country quarter-year fixed effects will not result in multicollinearity (Wooldridge, 2019). We also include ordered country-pair fixed effects, represented by θ_{ij} . These ordered country-pair fixed effects allow us to control all time-invariant country-pair factors that might affect cross-border deposits. The standard errors are cluster-robust with clustering at the residence country level. We cluster the standard errors (Abadie et al., 2017) at the residence country level because this is where we expect the change in deposits to happen due to the presence of the residence country having a dual citizenship scheme. The error term is denoted by ϵ_{ijt} .

However, from the compiled list of dual citizenship countries, we can observe that most developed western economies in Europe and North America offer dual citizenship. Therefore, we break down the deposit locations into tax haven deposit locations and non-tax haven deposit locations and execute the model. For a long time, tax haven deposit locations have been important centres of secrecy and are highly preferred by individuals and corporations to evade taxes and hide their assets (Garcia-Bernardo et al., 2021). So, the notion behind this break down of data is that if dual citizenship is not a method of regulatory arbitrage, then the difference in deposit levels in both tax havens and non-tax havens should be similar for residence countries offering dual citizenship and residence countries not offering dual citizenship.

For a final assessment, we drop Luxembourg from the list of tax havens and execute the model on the other tax haven deposit locations. According to the world handbook of CIA (CIA.gov, 2021), Luxembourg is a financial powerhouse and is home to the world's second-largest investment fund asset domicile, after the US. The handbook also says that though Luxembourg has lost some of its advantages due to the LuxLeaks, it continues to be an important financial centre in the world. There could be a very high possibility that the deposits of large multinational companies present in Luxembourg could be a reason for an abnormal difference in the deposit levels between countries having dual citizenship and not having dual citizenship. Eliminating Luxembourg from the list can give us a better picture of the deposits held in tax havens by individual high net-worth investors and small companies, which can be used to conceal the nationality of the controlling persons.

4.2 Effect of dual citizenship on cross-border deposits post-DAC6

In the first part of the framework, we have only measured the standalone effect of dual citizenship on cross-border deposits. In this part, we try to measure the effect of dual citizenship after DAC6 by the EU. For this model, we use a difference-in-difference (henceforth referred to as DiD) (Angrist and Pischke, 2014) design to estimate the average effect of dual citizenship on the cross-border deposits post-DAC6 initiation. The DiD

design model is as follows:

$$\begin{aligned} \ln Deposits_{ijt} = & \alpha + \beta_1 Dual_Citizenship_{it} \\ & + \beta_2 DAC_6_Initiated_t * Dual_Citizenship_{it} \\ & + \gamma_{jt} + \theta_{ij} + \epsilon_{ijt} \end{aligned} \quad (4.2)$$

In this model, we get an estimate of the effect of dual citizenship post-DAC 6 initiation from the interaction term $DAC_6_Initiated_t * Dual_Citizenship_{it}$. The $DAC_6_Initiated$ is the same for every ordered country-pair in the dataset, which takes a value of 1 from the second quarter of 2018 and a value of 0 before that. The interaction term gives the difference in pre-DAC6 deposit levels and post-DAC6 deposit levels of resident countries offering dual citizenship against those not offering dual citizenship. We control for the deposit-location quarter-year time fixed effects, γ_{jt} , and the time-invariant ordered country-pair fixed effects, θ_{ij} , just like in the first model. The standard errors are cluster-robust with clustering at the residence country level. The error term is denoted by ϵ_{ijt} .

Similar to the previous model, we break down the deposit locations into tax haven deposit locations and non-tax haven deposit locations and execute the model. Finally, we drop Luxembourg from the list of tax havens and execute the model on the other tax haven deposit locations. Another point that has to be observed is that Luxembourg is the only tax haven within the EU and is directly affected by the DAC6. Therefore, the last scenario of the model can give a much better picture of the effect of dual citizenship on cross-border deposits post-DAC6.

4.3 Effect of DAC6 on cross-border deposits of EU Residence countries

In this part of the framework, we design a model used to estimate DAC6 on the cross-border deposits of EU residence countries. This model has been designed to specifically test research question 2. The DAC6 guidelines call for stricter reporting of cross-border deposits, and therefore it is crucial to assess the impact of the DAC6 on the deposits of EU residence countries. Similar to the second part, where we assessed the effect of dual citizenship post-DAC6, we use a DiD design to estimate the effect of DAC6 on the

cross-border deposits of EU residence countries. The DiD design model is as follows:

$$\begin{aligned} \ln Deposits_{ijt} = & \alpha + \beta_1 EU_Country_{it} \\ & + \beta_2 DAC_6_Initiated_t * EU_Country_{it} \\ & + \gamma_{jt} + \theta_{ij} + \epsilon_{ijt} \end{aligned} \quad (4.3)$$

In this model, we get an estimate of the effect of DAC6 on EU residence countries from the interaction term $DAC_6_Initiated_t * EU_Country_{it}$. The $EU_Country_{it}$ term takes a value of 1 if the residence country belongs to the EU and a value of 0 if it does not belong to the EU. We control for the deposit-location quarter-year time fixed effects, γ_{jt} , and the time-invariant ordered country-pair fixed effects, θ_{ij} . The standard errors are cluster-robust with clustering at the residence country level. The error term is denoted by ϵ_{ijt} .

After the initial assessment, we assess whether reporting of cross-border deposits of EU residence countries have increased from the tax haven deposit locations or not. These are the locations where most of the undisclosed cross-border deposits are held. So, we break down the data set into tax haven deposit locations and non-tax haven deposit location and run the model. Also, we would like to assess whether the deposit levels have increased throughout all tax havens or only from Luxembourg. So, we remove Luxembourg from the set of tax haven deposit locations and run the model. We also run the model individually for the deposits reported from Luxembourg. The idea is that Luxembourg is the only deposit location that is situated in the EU and officially comes under DAC6.

4.4 Effect of CBI programs on cross-border deposits post-DAC6

In this part of the framework, we design a model used to estimate the effect of CBI schemes on cross-border deposits post-DAC6 and whether such schemes are being used more actively post-DAC6. This model has been specifically designed to address research question 3. We use a DiD design to estimate the effect of CBI schemes on the cross-border

deposits post-DAC6. The DiD design model is as follows:

$$\begin{aligned} \ln Deposits_{ijt} = & \alpha + \beta_1 CBI_Country_RC_{it} \\ & + \beta_2 DAC_6_Initiated_t * CBI_Country_RC_{it} \\ & + \gamma_{jt} + \theta_{ij} + \epsilon_{ijt} \end{aligned} \quad (4.4)$$

The estimate of the effect of CBI schemes on cross-border deposits post-DAC6 is obtained from the interaction term $DAC_6_Initiated_t * CBI_Country_RC_{it}$. The term $CBI_Country_RC_{it}$ takes a value of 1 if the residence country i has a CBI scheme in period t and a value of zero otherwise. We control for the deposit-location quarter-year time fixed effects, γ_{jt} , and the time-invariant ordered country-pair fixed effects, θ_{ij} . The standard errors are cluster-robust with clustering at the residence country level. The error term is denoted by ϵ_{ijt} .

After the initial assessment, we break down the data set into tax haven deposit locations and non-tax haven deposit locations and rerun the model. Finally, we remove Luxembourg from the list of tax haven locations and rerun the model as Luxembourg is an EU country directly affected by DAC6.

For the second part of the framework on the effect of CBI countries, we categorize some of the CBI countries as aggressive CBI residence countries. This classification is based on the study by Langenmayr and Zyska (2021), where they only check the effect of high-risk CBI schemes on cross-border deposits. The countries used by Langenmayr and Zyska (2021), along with Panama, are categorized as aggressive CBI residence countries. The idea behind this classification is to check whether high-risk CBI programs have a significantly different effect than other CBI programs. We use a DiD design to estimate the effect of high-risk CBI schemes on the cross-border deposits post-DAC6. The DiD design model is as follows:

$$\begin{aligned} \ln Deposits_{ijt} = & \alpha + \beta_3 Aggressive_CBI_Country_RC_{it} \\ & + \beta_4 DAC_6_Initiated_t * Aggressive_CBI_Country_RC_{it} \\ & + \gamma_{jt} + \theta_{ij} + \epsilon_{ijt} \end{aligned} \quad (4.5)$$

The estimate of the effect of high-risk CBI schemes on cross-border deposits post-DAC6 is obtained from the interaction term $DAC_6_Initiated_t *$

$Aggressive_CBI_Country_RC_{it}$. The term $Aggressive_CBI_Country_RC_{it}$ takes a value of 1 if the residence country i has a high-risk CBI scheme in period t and a value of zero otherwise. We control for the deposit-location quarter-year time fixed effects, γ_{jt} , and the time-invariant ordered country-pair fixed effects, θ_{ij} . The standard errors are cluster-robust with clustering at the residence country level. The error term is denoted by ϵ_{ijt} . After the initial assessment, we break down the data set into tax haven deposit locations and non-tax haven deposit locations and rerun the model. Finally, we remove Luxembourg from the list of tax haven locations and run the model.

4.5 Effect of DAC6 on cross-border deposits in EU deposit locations

In this part of the framework, we design a model used to estimate DAC6 on cross-border deposits in EU deposit locations. The idea behind this assessment is that post-DAC6, all EU countries have to adapt to the strict reporting guidelines, which entails a higher cost of compliance for both depositors and intermediaries. Therefore, assessing the deposit levels in the EU deposit locations might throw some light on how countries react to the DAC6. We use a DiD design to estimate the effect of DAC6 on the cross-border deposits in EU deposit locations. The DiD design model is as follows:

$$\begin{aligned} \ln Deposits_{ijt} = & \alpha + \beta_1 EU_Country_DL_{jt} \\ & + \beta_2 DAC_6_Initiated_t * EU_Country_DL_{jt} \\ & + \delta_{it} + \theta_{ij} + \epsilon_{ijt} \end{aligned} \quad (4.6)$$

In this model, we get an estimate of the effect of DAC6 on cross-border deposits in EU deposit locations from the interaction term $DAC_6_Initiated_t * EU_Country_DL_{jt}$. The $EU_Country_DL_{jt}$ term takes a value of 1 if the deposit location belongs to the EU and a value of 0 if the deposit location does not belong to the EU. However, we do not control the deposit-location quarter-year time fixed effects like in the previous scenarios. Instead, we control the residence-country quarter-year time fixed effects, represented by δ_{it} . Since the EU deposit location changes between the control and the treatment group controlling for deposit-location quarter-year time fixed effects leads to a multicollinearity problem. We control for the ordered country-pair fixed effects, θ_{ij} like in the previous

sections. The standard errors are cluster-robust with clustering at the residence country level. The error term is denoted by ϵ_{ijt} .

After the initial assessment, we break down the data set based on multiple conditions and run the model:

1. For those residence countries offering dual citizenship.
2. For residence countries not offering dual citizenship.
3. For EU residence countries offering dual citizenship and EU residence countries not offering dual citizenship separately. After that, we run the model for non-EU residence countries offering dual citizenship and non-EU countries not offering dual citizenship separately.
4. For EU residence countries with dual citizenship that offer CBI program, EU residence countries with dual citizenship but not offering CBI programs, non-EU countries with dual citizenship and offering CBI programs and non-EU countries with dual citizenship not offering CBI programs separately.

5 Results & Analysis

The results are divided into two parts. In the first part, we have a glimpse and analyse the results from the descriptive statistics through graphs of deposits for different data sets, and then we move on to analyse the results from the various regression models.

5.1 Descriptive evidence and analysis

The main deterministic characteristic of this study is the dual citizenship status of a country. Since the study hypothesises that dual citizenship might be one of the methods of regulatory arbitrage, to better understand the movements of the deposits in the countries having dual citizenship and the countries not having dual citizenship throughout the study, we plot the deposits over time, as shown in Figure 5.1. The results are also checked for both sets of countries before and after DAC6 initiation.

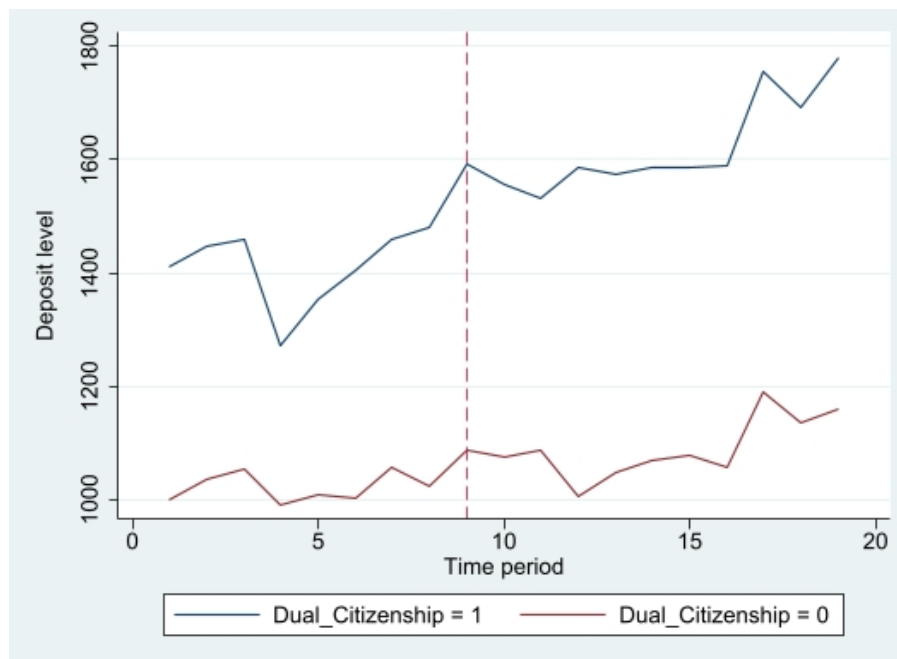


Figure 5.1: Deposits over time representation for countries having dual citizenship and countries not having dual citizenship

The red dashed line in the figure is the point of initiation of the DAC6. It falls in the 9th period as DAC6 was introduced after that period, namely the 2nd quarter of 2018. From the figure, we can observe that for countries with dual citizenship, there has been a continuous growth in deposits from period 4, i.e., from the 1st quarter of 2017

till DAC6. It can be observed that there is a sharp fall in the deposits from countries having dual citizenship after the 3rd period. However, it has to be understood that the effective implementation of AEOI under CRS started in January 2016. Therefore, after the start of AEOI, we see that there has been a correction in the deposit levels. Even here, we can observe that the fall in deposits has been much more for countries with dual citizenship than for countries not having dual citizenship, substantiating the argument that dual citizenship might be an effective tool for regulatory arbitrage. After the initiation of DAC 6, we see that the deposit growth has reduced but is still more than that for countries without dual citizenship, and the gap between the two sets continues to increase. However, the sudden stop in the growth of deposits from countries having dual citizenship post-DAC6 is intriguing. From the graph, we could assume that the shock from post-DAC6 might have affected the deposits from these countries.

However, since the DAC6 profoundly affects the EU countries and the deposits held by the residents of EU countries, we break down the data further and extract the descriptive statistics. The details of the same are already presented in Table 3.1. From Table 3.1, we can observe that the mean of deposits for EU countries having dual citizenship shows an increase of 15.06% from pre-DAC6 levels. The change for non-EU countries with dual citizenship is 12.51%, whereas the change for EU countries and non-EU countries without dual citizenship is only 8.23% and 5.6%, respectively. A pictorial representation of the statistics for both sets of countries is presented in Figure 5.2. The individual figures are titled 'EU Countries' and 'Non-EU Countries'.

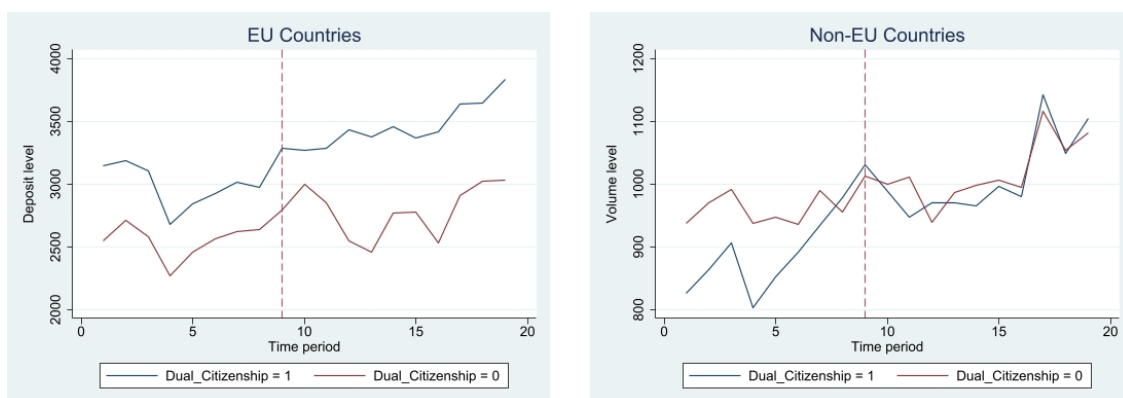


Figure 5.2: Deposits over time representation for EU and Non-EU Countries

In the first figure for the EU countries, we can observe that the growth in deposit levels was similar for both the countries with dual citizenship and those without dual

citizenship. However, post-DAC6, we can observe that though the deposits from countries with dual citizenship continue to grow, the countries without dual citizenship tend to reduce drastically and recover later. A significant correction in the deposit levels happens post-DAC6 in the countries without dual citizenship. This correction, however, can be attributed to the fact that the set of EU residence countries are only 3, namely the Netherlands, Estonia and Slovakia. Two of these countries, Estonia and Slovakia, are east-European countries with much smaller economies than the Netherlands. Changes in the deposit levels of even one single country can cause a difference in the course of the deposit levels of this set of countries. Therefore, it has to be viewed as an aberration due to kinks and outliers rather than the effect of DAC6.

On the contrary, for non-EU countries having dual citizenship, we can observe that the deposit levels rise continuously until the initiation of DAC6, after which the deposit levels tend to stop growing. In fact, in the first few quarters, the deposits tend to take a corrected path and go below the level of deposits of countries without dual citizenship. In the last few quarters, however, the deposit levels tend to grow again and go beyond countries' deposits without dual citizenship. The countries without dual citizenship, on the other hand, do not tend to go through any significant corrections in the course of study. A possible explanation for this could be that people in countries with dual citizenship might have taken some time to find alternate methods of routing the deposits. Therefore we see a pause in the growth of deposit levels post-DAC 6. In both the graphs in Figure 5.2, we see a similar drop in deposits between period 3 and period 4 as observed in Figure 5.1, which might be due to the reporting of information under AEOI post-CRS.

The previous analysis, however, is performed over the entire set of deposit locations. We now check how the deposit levels of EU and non-EU countries have varied in the EU deposit locations and non-EU deposit locations. This check is an essential step of the study since the DAC6 law introduced in the respective EU countries will make reporting very strict and, therefore, comes with an additional reporting cost. Therefore, observing the movement of deposits in these subsets of data might be very insightful. The graphs for these two subsets of data are given in Figure 5.3 and 5.4, respectively.

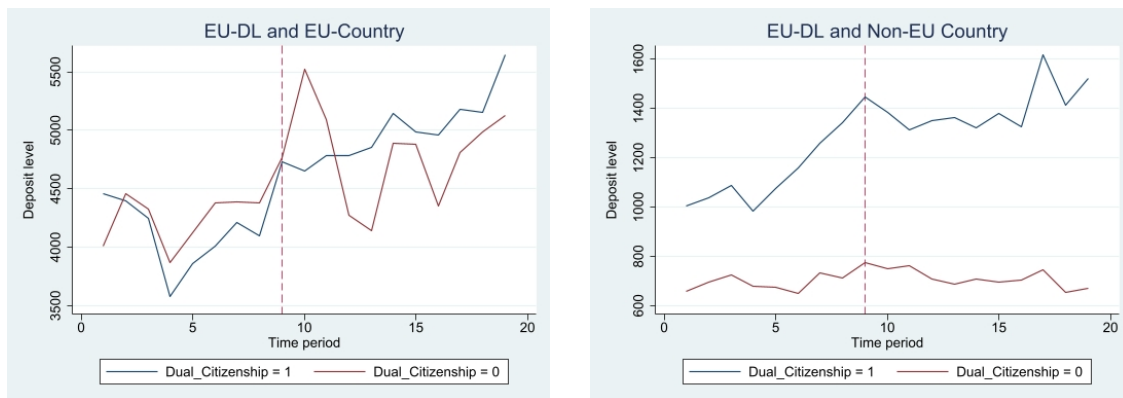


Figure 5.3: Deposits over time representation for EU and Non-EU Countries in EU deposit locations

In the EU deposit locations, we can observe that the deposit level increases over time for EU residence countries with dual citizenship. For countries without dual citizenship, we see a sharp correction in the deposit levels post-DAC6. Despite the irregular path followed by the deposit level, eventually, the levels of the deposits tend to stabilise from the 17th period. This uneven path can again be attributed to the fact that the list of EU countries not having dual citizenship is very small. Any significant change in even one country can cause substantial variations in the deposit level of the group on the whole.

For the deposits of non-EU countries in EU deposit locations, we can observe that for countries with dual citizenship, the growth in deposit level observed till the start of DAC6 abruptly stops growing. This stop in the growth is very intriguing as DAC6 does not apply to non-EU countries. For countries without dual citizenship, we see no profound effect of DAC6, and the deposit levels continue to remain at a level similar to pre-DAC6 initiation. This helps us predict a change in the behaviour of investors from non-EU countries with dual citizenship post-DAC6. Now, the stop in the growth of deposits in the EU deposit locations can be due to two reasons, the first being a higher cost of compliance for investors from non-EU countries and the second being the threat of being detected while investing in EU deposit locations. For example, a resident of an EU residence country having dual citizenship, who also possesses the citizenship of a non-EU residence country, might avoid investing in EU deposit locations from the non-EU residence country as the deposits might be detected due to the implementation of DAC6.

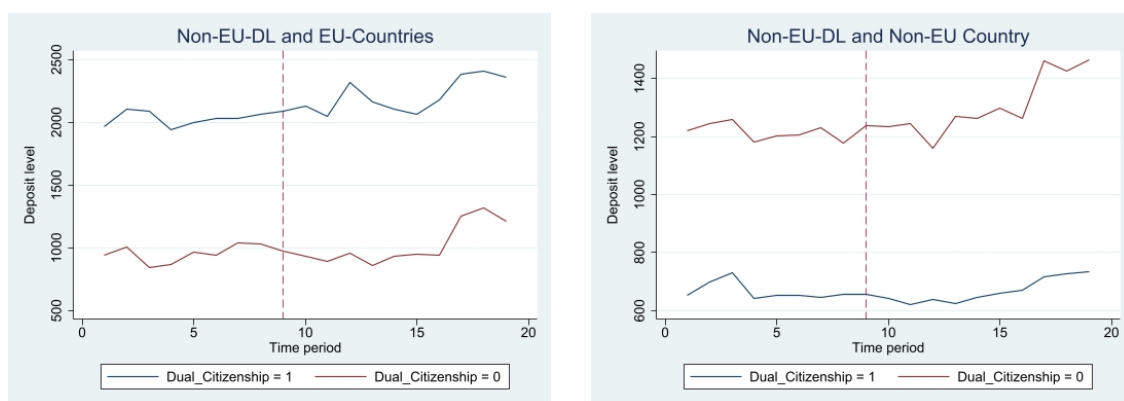


Figure 5.4: Deposits over time representation for EU and Non-EU Countries in non-EU deposit locations

In the case of non-EU deposit locations, we do not observe any significant changes post-DAC6 initiation. Throughout the non-EU deposit locations, the deposit levels continue to follow the trend observed pre-DAC6 irrespective of whether the residence country belonged to the EU or not or whether it has dual citizenship. Finally, we plot the deposit levels of CBI residence countries over the entire period and see how the deposit levels from countries offering CBI programs have changed post-DAC6. The graph for the CBI residence countries is as shown below.

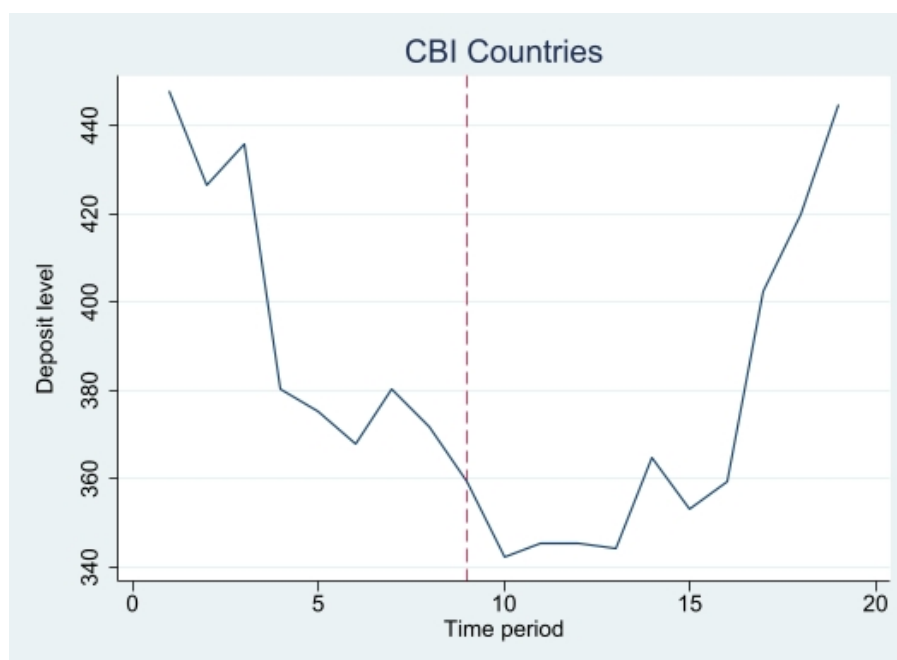


Figure 5.5: Deposits over time representation for CBI residence countries

For the residence countries that offer CBI programs, we can observe from Figure 5.5 that post-DAC6, the deposits from these countries have seen an exponential upward trend. The

levels which were on a downward trend for the first few periods see a significant correction and starts on an upward trend. From the figure, it is evident that these schemes have become very lucrative post-DAC6. Since high-net-worth individuals primarily use the CBI schemes for tax evasion (Langenmayr and Zyska, 2021), we can infer that post-DAC6 residents from countries having dual citizenship have been increasingly pursuing these programs for regulatory arbitrage. Though the descriptive statistics give us a good glimpse of how the deposit levels have changed over the different sets of residence countries and deposit locations, they are of little help in accurately estimating the change in deposit levels post-DAC6. For that, we now turn to the regression evidence.

5.2 Regression evidence & analysis

In this part of the study, we provide the results from the regression models we constructed in chapter 4. A detailed analysis of the cases or scenarios in each model follows the results.

5.2.1 Effect of dual citizenship on cross border deposits

The results from regression model 4.1 are presented in Table 5.2 below.

Table 5.1: Effect of dual citizenship on deposits in general

VARIABLES	(1)	(2)	(3)	(4)
Dual_Citizenship	0.152*** (0.0131)	0.455*** (0.0211)	0.0612*** (0.0157)	0.189*** (0.0222)
Observations	81,207	21,350	59,857	17,626
R-squared	0.964	0.964	0.964	0.967
Country-pair FE	YES	YES	YES	YES
Deposit-time FE	YES	YES	YES	YES
Tax-Haven-DL		YES	NO	YES
Luxembourg-DL				NO

Robust standard error in parantheses

***p<0.01, **p<0.05, *p<0.1

Notes: The columns numbered (1)-(4) in the table represent the findings under different data sets. The first column is for the entire data set. The second column is for the data set containing the deposits in the tax haven deposit locations(Tax-Haven-DL is mentioned as YES in the bottom). The third column is for the deposits held in non-tax haven deposit locations(Tax-Haven-DL is mentioned as NO in the bottom). The final column is for the deposits held in the tax haven deposit locations but excluding Luxembourg(Tax-Haven-DL is mentioned as YES whereas Luxembourg-DL is mentioned as NO in the bottom). We control for the country-pair time-invariant fixed effects and the deposit location-quarter year time fixed effects. The standard errors are cluster robust with clustering at the residence country level.

The data set is divided into smaller subsets in scenarios 2, 3 and 4(the terms columns and scenarios will be used interchangeably throughout the remainder of the section) as the regression model that is run on the entire data set might not reveal an accurate picture. When the model is run for the whole data set, we observe a coefficient of 0.152 on the $Dual_Citizenship_{it}$ variable, indicating that the deposit level for residence countries having dual citizenship is in general 15.2%(significant in the 99% confidence interval) more than for residence countries not having dual citizenship. The coefficient indicates a percentage change because we have taken the $\log(\text{Deposits})$ as the dependant variable. However, it has to be borne in mind that most countries with dual citizenship are the west's developed economies, which are also important centres for financial and commercial

activity. The higher level of deposits could be due to this inherent bias in the treatment and the control group. To check this, we divide the data set into two groups, the deposits held by residence countries in tax havens and non-tax havens, respectively. The reason for dividing the data set into the groups mentioned above is that individuals or companies generally pursue tax havens to reduce their tax liability (Picciotto, 1992). This reduction in tax liability could either be in the form of tax evasion or avoidance and broadly comes under the purview of regulatory arbitrage (Ahrens et al., 2020).

When the model is run on the data set of deposits of residence countries in tax haven locations only, we observe a coefficient of 0.455 on the *Dual_Citizenship_{it}* variable, indicating that the deposit level for residence countries having dual citizenship is in general 45.5%(99% confidence interval) more than for residence countries not having dual citizenship. For the deposits of residence countries in non-tax haven locations, we observe that the deposit level for countries with dual citizenship is only 6.12%(99% confidence interval) than the countries without dual citizenship. Usually, suppose dual citizenship does not have any effect. In that case, the difference in the level of deposits in a tax haven and non-tax haven deposit locations should be the same for both countries having and not having dual citizenship. This abnormal difference in the deposit levels in a tax haven and non-tax haven gives us the first evidence that dual citizenship might be an effective method to avoid or evade taxes. However, caution has to be observed here as the tax haven deposit locations include Luxembourg. As previously mentioned in section 4.1, Luxembourg is a financial powerhouse and home to a huge investment fund. Therefore, excluding Luxembourg from the list of tax havens might give a better estimate about dual citizenship being used for tax evasion or avoidance by individual high net-worth individuals or shell companies.

When we exclude Luxembourg from the list of tax havens and run the model, we observe that the coefficient on the *Dual_Citizenship_{it}* variable reduces considerably from 0.455 to 0.189, indicating that the deposit level for residence countries having dual citizenship is in general 18.9% more than for residence countries not having dual citizenship. Excluding Luxembourg from the list reduces the difference between the treatment and the control group, adding weight to the assumption made about Luxembourg. However, we still have a more significant value than the difference between the treatment and control group for

non-tax haven deposit locations, strengthening the argument that dual citizenship might be used as a method of regulatory arbitrage.

5.2.2 Effect of dual citizenship on cross-border deposits post-DAC6

The results from the DiD regression design model in 4.2 is presented in Table 5.3 below.

Table 5.2: Effect of dual citizenship on deposits post-DAC6

	(1)	(2)	(3)	(4)
VARIABLES	DAC6 Intro & Dual Citizenship	DAC6 Intro & Dual Citizenship	DAC6 Intro & Dual Citizenship	DAC6 Intro & Dual Citizenship
Dual_Citizenship	0.115*** (0.0239)	0.394*** (0.0357)	0.0332 (0.0267)	0.117*** (0.0357)
DAC_6_Initiated* Dual_Citizenship	0.0551* (0.0303)	0.0904* (0.0472)	0.0419 (0.0349)	0.107** (0.0507)
Observations	81,207	21,350	59,857	17,626
R-squared	0.964	0.964	0.964	0.967
Country-pair FE	YES	YES	YES	YES
Deposit-time FE	YES	YES	YES	YES
Tax-Haven-DL		YES	NO	YES
Luxembourg-DL				NO

Robust standard error in parantheses

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Notes: The columns numbered (1)-(4) in the table represent the findings under different data sets. The first column is for the entire data set. The second column is for the data set containing the deposits in the tax haven deposit locations. The third column is for the deposits held in non-tax haven deposit locations. The final column is for the deposits held in the tax haven deposit locations but excluding Luxembourg. We control for the country-pair time-invariant fixed effects and the deposit location-quarter year time fixed effects. The standard errors are cluster robust with clustering at the residence country level.

For the first scenario of the model, we observe that the coefficient on the standalone effect of $Dual_Citizenship_{it}$, β_1 , on the deposit level is 0.115. This indicates that, in general, countries having dual citizenship have a deposit level of 11.5% (99% confidence interval) more than countries not having dual citizenship by having dual citizenship. The DiD interaction term $DAC_6_Initiated_t * Dual_Citizenship_{it}$ gives the effect of dual citizenship post-DAC6. From the coefficient of the interaction term, β_2 , in the first column, we can infer that post-DAC 6, the growth in deposit levels for countries with dual citizenship was 5.51% (90% confidence interval) more than the growth in deposit

levels for countries not having dual citizenship. This indicates that post-DAC 6 also, dual citizenship is still effective as a method of regulatory arbitrage.

However, as explained in the previous model, the list of dual citizenship countries includes most of the developed economies of the west that are prominent centres for business activity. Therefore, similar to the previous model, we also run the model for the deposits held by countries in tax havens and non-tax havens separately. In column 2, for the deposits held by countries in tax havens, we observe that the standalone coefficient β_1 significantly increases to 39.4%. The coefficient of the interaction term, β_2 , also shows an increase to 9.04%(90% confidence interval) now from 5.51% observed for the first scenario indicating that post-DAC 6, the effect of dual citizenship is more robust in the tax haven locations suggesting the possible use of dual citizenship. For non-tax havens, we observe that β_1 reduces drastically to 3.32%(not statistically significant), and β_2 also marginally reduces to 4.19%(statistically not significant).

For the last scenario, as done in the previous model, we exclude Luxembourg from the list of tax havens because Luxembourg is a significant tax haven for multinational corporations and because Luxembourg is the only tax haven that is directly affected by the DAC6 as it is an EU country. When the model is run by excluding Luxembourg, we see that β_1 reduces drastically to 11.7%(99% confidence interval) from 39.4% observed in scenario 2. However, the interaction term yields a more substantial result of 10.7% now from the 9.04% reported in scenario 2. The result is also statistically significant, indicating that the tax havens situated outside the EU are now more lucrative for the residents of countries with dual citizenship. This finding adds more credence to the argument that dual citizenship might be an effective method of regulatory arbitrage post-DAC6.

5.2.3 Effect of DAC6 on cross-border deposits of EU countries

The results from the DiD regression model described in equation 4.3 is presented in Table 5.4. The purpose of this model is different from all the other models. Whereas all the other models were built to check if dual citizenship can be used as an effective method of regulatory arbitrage, this model was constructed to analyse whether DAC 6 has effectively reported cross-border deposits DAC6 is meant explicitly for countries belonging to the EU.

Table 5.3: Effect of DAC6 on cross-border deposits of EU residence countries

	(1)	(2)	(3)	(4)	(5)
VARIABLES	DAC6 Intro and EU_Country	DAC6 Intro and EU_Country	DAC6 Intro and EU_Country	DAC6 Intro and EU_Country	DAC6 Intro and EU_Country
DAC_6_ Initiated* EU_Country	0.103*** (0.0375)	0.231*** (0.0628)	0.0600 (0.0450)	0.121* (0.0659)	0.786*** (0.129)
Observations	81,207	21,350	59,857	17,626	3,724
R-squared	0.964	0.964	0.964	0.967	0.950
Country-pair FE	YES	YES	YES	YES	YES
Deposit-time FE	YES	YES	YES	YES	YES
Tax-Haven-DL		YES	NO	YES	
Luxembourg-DL				NO	YES

Robust standard error in parantheses

***p<0.01, **p<0.05, *p<0.1

Notes: The columns numbered (1)-(5) in the table represent the findings under different data sets. The first column is for the entire data set. The second column is for the data set containing the deposits in the tax haven deposit locations. The third column is for the deposits held in non-tax haven deposit locations. The fourth column is for the deposits held in the tax haven deposit locations excluding Luxembourg. The final column is for the deposits that are held exclusively in Luxembourg. We control for the country-pair time-invariant fixed effects and the deposit location-quarter year time fixed effects. The standard errors are cluster robust with clustering at the residence country level.

The first four data sets in this model are similar to the last two models. As a measure of further analysis, we run the model for the deposits held in Luxembourg exclusively in the previous scenario. In all the columns, we can observe that the standalone effect of EU countries, in general, does not exist as the coefficient, β_1 is eliminated due to multicollinearity. However, in column (1), where the study is performed over the entire data set, the coefficient for the interaction term $DAC_6_Initiated_t * EU_Country_{it}$, β_2 , is observed to have a value of 0.103 indicating that the growth of deposits from EU residence countries is 10.3% more than the growth of deposits from non-EU residence countries post-DAC 6 (99% confidence interval). From the first scenario, we can observe a strong correlation between the introduction of DAC6 and the growth of deposits from EU countries, indicating that DAC6 might have impacted the reporting of deposits. Given that DAC6 was the only policy shock that had been introduced in that given period, it is highly probable that the DAC 6 was, in fact, successful in ensuring a strict reporting of cross-border deposits and closing the gaps that existed in AEOI, if any.

In column (2), when we only consider the deposits held by countries in tax havens, we observe that the coefficient β_2 yield a much higher value of 0.231 or 23.1% (significant in the 99% confidence interval). The higher level of deposits from EU countries post DAC6 can be primarily attributed to DAC6. This shows that DAC 6 has been effective in ensuring that the deposits held by EU residents in any location in the world will now have to be reported strictly. The directives under DAC6 that the intermediaries, be it banks or other financial institutions, have to report the various schemes suggested by them to their customers irrespective of where the investments are made. In column (3), when we consider the deposits held in non-tax haven locations, we observe that the coefficient shows a marginal increase of only 6% (statistically not significant) post-DAC6. Generally, the deposits held in non-tax havens are considered to be held for trade or business, and there is no incentive for tax evaders or avoiders to invest in non-tax havens. However, Picciotto (1992) says that any country might be a haven in relation to another by definition. However, the description is rhetorical, and for this study, we stick to the six deposit locations considered by Casi et al. (2020b) in their research.

When we remove Luxembourg from the list of tax havens and run the model in column (4), we observe that the coefficient significantly reduces from 23.1% previously to 12.1% (90%

confidence interval) now. This result, however, signifies that the effect of DAC6 is not the same on all tax-havens. Excluding the lone tax haven in the EU makes a considerable change in the coefficient, both numerically and statistically, implying that the correlation between DAC6 and the successful reporting of deposits from tax havens is weak compared to the complete set of tax havens. The EU should be more cautious and ensure that the deposits held in tax havens outside the EU are tracked meticulously to ensure better DAC6. Finally, when we run the model for only the deposits held in Luxembourg, we see a robust coefficient of 78.6%(99% confidence interval), indicating that the growth of deposits from EU residence countries post-DAC6 has been 78.6% more than the growth of deposits from non-EU countries. It cannot be possible that the coefficient is due to more deposits being made. Still, there is a strong possibility that since Luxembourg is directly affected by DAC6, there is stricter adherence to the guidelines under DAC6, ensuring strict reporting compliance. The coefficient term indicates high levels of correlation between DAC6 and strict reporting from all EU countries, indicating that DAC6 might be very effective in aiding AEOI.

5.2.4 Effect of CBI programs on cross-border deposits post-DAC6

This section analyses the results from the DiD regression design models given in equations 4.4 and 4.5, which are presented in Table 5.5. It has to be noted here that countries that offer CBI programs qualify under the list of countries providing dual citizenship. However, the countries that offer such programs are generally tiny, except Turkey, and none has any significant economic value. However, these schemes appear to strongly correlate with tax evasion, as evidenced by Langenmayr and Zyska (2021). The first four columns in Table 5.5 pertain to the effect of CBI programs in general post-DAC6. We only break the CBI countries into aggressive CBI countries and non-aggressive CBI countries in the last four columns. The countries considered aggressive CBI countries are Cyprus, Dominica, Grenada, Malta, St. Lucia, Vanuatu and Panama. In these countries, the first six countries are also considered by Langenmayr and Zyska (2021) in their study as high-risk CBI programs.

Table 5.4: Effect of CBI programs on cross-border deposits post-DAC6

VARIABLES	(1) DAC6 Intro and CBI Country	(2) DAC6 Intro and CBI Country	(3) DAC6 Intro and CBI Country	(4) DAC6 Intro and CBI Country	(5) DAC6 Intro and CBI Country	(6) DAC6 Intro and CBI Country	(7) DAC6 Intro and CBI Country	(8) DAC6 Intro and CBI Country
CBI_Country_RC	0.00462 (0.0548)	0.166*** (0.0573)	-0.0528 (0.0623)	0.368*** (0.0539)				
DAC_6_Initiated* CBI_Country_RC	0.265*** (0.0799)	0.172** (0.0854)	0.304*** (0.0909)	0.276*** (0.0790)				
DAC_6_Initiated* Aggressive_CBI_Country_RC					0.277*** (0.0976)	0.127 (0.109)	0.338*** (0.108)	0.251** (0.0985)
Observations	81,207	21,350	59,857	17,626	80,105	21,034	59,071	17,363
R-squared	0.965	0.964	0.964	0.967	0.965	0.964	0.964	0.967
Country-pair FE	YES	YES	YES	YES	YES	YES	YES	YES
Deposit-time FE	YES	YES	YES	YES	YES	YES	YES	YES
Tax-Haven-DL		YES	NO	YES	YES	YES	NO	YES
Luxembourg-DL			NO	NO				NO

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Notes: The columns numbered (1)-(8) in the table represent the findings under different data sets. The first column is for the entire data set. The second column is for the data set containing the deposits in the tax haven deposit locations. The third column is for the deposits held in non-tax haven deposit locations. The fourth column is for the deposits held in the tax haven deposit locations excluding Luxembourg. The columns (5)-(8) are run on the same data sets as the first four columns. The major difference here is that the treatment group consists of only the aggressive CBI countries. It is to be noted that the control group for (5)-(8) remains the same as for (1)-(4). The non-aggressive CBI countries are not considered for scenarios (5)-(8). We control for the country-pair time-invariant fixed effects and the deposit location-quarter year time fixed effects. The standard errors are cluster robust with clustering at the residence country level.

However, as per the list compiled by Christians (2017), Panama is also a country that offers many CBI programs that are very similar to those provided by the other high-risk CBI countries(OECD, 2018). Therefore, we also consider Panama as an aggressive CBI country for this study. In the first four columns, when we consider all the CBI countries, we can observe that the standalone coefficient of $CBI_Country_RC_{it}$, β_1 , is present. In column (1), when we consider the entire data set, β_1 has a minimal value of 0.4%(not statistically significant). However, the coefficient of the interaction term $DAC_6_Initiated_t * CBI_Country_RC_{it}$, β_2 has a value of 0.265 or 26.5%(99% confidence interval), indicating that the CBI programs were in high demand post-DAC6. Since DAC6 affects only the EU countries, an investor who does not have the citizenship of any EU country would not be especially inclined towards these programs post-DAC6. However, there is an incentive for investors from the EU who would desire more secrecy to choose these programs post-DAC6. As mentioned earlier, since CBI countries are a subset of the countries having dual citizenship, there is a strong correlation observed here between the introduction of DAC6 and the increasing popularity of the CBI programs. Another observation here is that CBI programs are specifically designed for individual investors and not for companies. Therefore, they are more prone to be used by tax evaders to avoid disclosure.

In column(2), when we run the model only for tax haven deposit locations, we observe that the standalone coefficient β_1 tends to increase significantly from 0.4% to 16.6%(99% confidence interval), suggesting that the deposits from CBI countries in tax havens are generally more than that of non-CBI countries, which is on expected lines. However, the coefficient of the interaction term β_2 reduces considerably from 26.5% to 17.2%(95% confidence interval). This result is also puzzling. We have previously observed that post-DAC6, the deposit levels in tax havens of countries having dual citizenship was much more than in the entire set of deposit locations. For the deposits held in non-tax havens in column (3), we observe that β_2 has a value of 30.4%(99% confidence interval) while β_1 has a value of -5.28%(not statistically significant). This result shows that though residents of CBI countries primarily avoided non-tax haven deposit locations, post-DAC6, there is a strong affinity for these deposit locations. The only possible explanation for this could be that the non-tax haven deposit locations are being used as a transitory option by the residents of CBI countries till they can sort out alternative methods of routing the money

back into tax havens.

As a final measure of the analysis for CBI countries, we exclude Luxembourg from the list of tax havens and rerun the model. Now, we observe that β_1 increases from 16.6% in column (2) to 36.8%(99% confidence interval). The coefficient β_2 also increases significantly from 17.2% to 27.6%(99% confidence interval) now. This is in line with the assumption that Luxembourg was more of a tax haven for multinational corporations and lesser for individuals. It also reinforces the previous argument that Luxembourg would largely be avoided as it is the only tax haven directly affected by the DAC6. The exclusion also brings the β_2 value for scenarios (1), (3) and (4) relatively close, suggesting that residents from CBI countries have been indifferent between tax havens and non-tax havens post-DAC6, which suggests that CBI programs are also heavily used as methods of regulatory arbitrage post-DAC6.

In columns (5)-(8), we run the DiD regression design model given in equation 4.5. In these scenarios, the treatment group consists of only the aggressive CBI countries. The control group of countries that have been used in columns (1)-(4) will also be used here. However, the treatment group includes only the deposits of seven countries now, and three countries, Montenegro, Serbia and Turkey, which are not categorised as high-risk CBI programs, are dropped from the treatment group. The purpose behind this model is to evaluate if the high-risk CBI program has a much significant effect on the deposits post-DAC6 than the entire set of CBI countries taken together. From the results, we can witness that the standalone coefficient of *Aggressive_CBI_Countries_RC_{it}*, β_3 , is not present due to multicollinearity. However, when we take the coefficients on the interaction term *DAC_6_Initiated_t * Aggressive_CBI_Countries_RC_{it}*, β_4 , we observe that the value of the coefficient is almost equal to the coefficient β_2 in columns (1)-(4). The only difference is that the coefficients on columns(6) and (8) are statistically less significant than their counterparts in columns (2) and (4). Apart from that, we do not see a substantial change in the coefficient values, suggesting that there is, in fact, no significant difference between high-risk CBI programs and other CBI programs. The idea that high-risk CBI programs will only be used for tax evasion is not evidenced here.

5.2.5 Effect of DAC6 on cross-border deposits in EU deposit locations

The results from the DiD regression model in equation 4.6 are given in Table 5.6. This model is unique because, in all the other models, we have measured how the deposits of residence countries, having specific characteristics, changed post-DAC6. In this model, however, we observe how the deposits have changed in EU deposit locations post-DAC6. The model is run over 11 different data sets.

For all the columns in the list, we can observe no value presented for the standalone coefficient of $EU_Country_DL_{jt}$, β_1 , due to multicollinearity. However, the coefficient on the interaction term $DAC_6_Initiated_t * EU_Country_DL_{jt}$, β_2 , is presented. In column (1), when we consider the entire set of countries, we can observe that the value of β_2 is almost close to zero at -0.8% (not statistically significant). When we break down the data set into countries with dual citizenship in column (2), we observe that the value of β_2 changes from -0.8% to -1.12% now. However, it is still a minimal change and is not statistically significant. In column (3), where we consider the set of countries not having dual citizenship, the value of β_2 is similar to the first scenario and is not statistically significant. However, when we break down the data set further based on whether the country is an EU country or not, we start observing that the value of β_2 starts to change. In column (4), where we consider the set of EU countries having dual citizenship, we see that β_2 has a value of 20.8% (99% confidence interval). Previously, in scenario (2), we have seen no effect on the EU deposit location post-DAC6 for countries with dual citizenship. However, now we cannot say the same. For EU countries not having dual citizenship, we find that the value of β_2 to be 14.7% (column (5)). However, the value is not statistically significant.

When we check the model for non-EU countries having dual citizenship, we observe that the value of β_2 is now -8.58% (95% confidence interval). This finding indicates that the residents of non-EU countries with dual citizenship avoid the EU deposit locations post-DAC6 for two reasons. One might be the higher cost of reporting post-DAC6, making EU deposit locations less lucrative. The other possibility could be that the citizens of EU countries who also have citizenship of a non-EU country might avoid depositing in EU deposit locations due to a higher threat of detection. For the time being, let us

assume that the higher cost of reporting is the prime reason non-EU citizens avoid EU deposit locations. In that case, we should see a similar result for the non-EU countries without dual citizenship in column (7). However, we find the value of β_2 only to be -1.35% for column (7), and the value is not statistically significant. Therefore, the higher cost of reporting compliance can be ruled out as we do not see a similar effect on non-EU countries not having dual citizenship strengthening the argument that dual citizenship can be used to avoid being detected. The finding allows us to infer that dual citizenship can be used as a method of regulatory arbitrage.

Since the set of countries with dual citizenship also includes countries offering CBI programs, we rerun the model by breaking down the data set into dual citizenship countries offering CBI programs and dual citizenship countries not offering CBI programs. The reason for doing this is that we have already observed from Table 5.5 that CBI schemes had a significant effect post-DAC 6. So, it could also be the case that most of the negative growth in EU deposit locations for non-EU countries was coming from the countries offering CBI programs. To ascertain whether dual citizenship also has a role in the reduction in the deposits we run the model for scenarios (8)-(11). For countries belonging to the EU and offering CBI(column (8)), we find the value of β_2 to be -10.1%(statistically not significant). For non-EU countries offering CBI(column (9)), we find the value of β_2 to be -26.3%(statistically not significant). When we consider the set of EU countries having dual citizenship but not CBI, we find the value of β_2 to be 23.5%(99% confidence interval). Previously for EU countries having dual citizenship, we observed the value to be 20.8%. Therefore, though the value of β_2 is not statistically significant in column (8), we can observe that from countries offering CBI programs, investing in EU deposit locations has reduced post-DAC6. Finally, when we run the model for non-EU countries having dual citizenship but not CBI, we observe that the value of β_2 is -6.96%(90% confidence interval). We see a reduction in the value and statistical significance after excluding the CBI countries, but the value is still more than that for countries not having dual citizenship.

Table 5.5: Effect of DAC6 on cross-border deposits in EU deposit locations

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
DAC6 Intro and EU_Country_DL	-0.00852	-0.0112	-0.00676	0.208***	0.147	-0.0858**	-0.0135	-0.101	-0.263	0.235***	-0.0696*
	(0.0285)	(0.0347)	(0.0484)	(0.0582)	(0.0808)	(0.0392)	(0.0503)	(0.204)	(0.240)	(0.0586)	(0.0378)
Observations	81,207	47,694	33,512	11,928	1,352	35,766	32,160	947	2,876	10,981	32,888
R-squared	0.965	0.968	0.959	0.970	0.967	0.964	0.958	0.940	0.949	0.972	0.965
Country-pair FE	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Residence-time FE	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Dual-Citizenship	YES	YES	NO	YES	NO	YES	NO	YES	YES	YES	YES
EU-Country				YES	YES	NO	NO	YES	NO	YES	NO
CBI-Country RC								YES	YES	NO	NO

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Notes: The columns numbered (1)-(11) in the table represent the findings under different data sets. The first column is for the entire data set. The second and third columns are for the countries having dual citizenship and for countries not having dual citizenship respectively. The fourth and fifth columns are for EU countries with dual citizenship and without dual citizenship respectively. The sixth and seventh columns are for non-EU countries having and not having dual citizenship respectively. The eighth and ninth columns are for EU countries with dual citizenship having and not having CBI programs respectively. The tenth and eleventh columns are for non-EU countries with dual citizenship having and not having CBI programs respectively. We control for the country-pair time-invariant fixed effects and the residence country-quarter year time fixed effects. The standard errors are cluster robust with clustering at the residence country level.

6 Discussion

The findings in the previous section show that there is a correlation between dual citizenship and the deposit levels of countries post-DAC6, suggesting possible causality of dual citizenship as a method of regulatory arbitrage against DAC6. However, care has to be taken while inferring strict causality as the study is not without its limitations. In the following subsection 6.1, we discuss the limitations of the research and how they can affect the study results. In subsection 6.2, we discuss how dual citizenship can affect countries by studying the case of Norway, the latest country to allow dual citizenship.

6.1 Limitations of study

This study tries to assess the impact of dual citizenship as a method of regulatory arbitrage against DAC6 with the help of five regression models. Each of the models controls for the time-invariant country-pair fixed effects. In the first four models, we control for the deposit-location quarter-year time fixed effects, and in the last model, we control for the residence-country quarter-year time fixed effects. We do not control for any other factors explicitly in the models. However, there might be instances where the country-pair time-invariant characteristics between countries can change. The possibility that volatility in certain key areas can cause an omitted-variable bias (Wooldridge, 2019) in the results is acknowledged. However, owing to the short period of only 19 quarters in the study, we assume that the time-invariant and time-variant fixed effects cover most of the factors to be controlled for similar to the study by Casi et al. (2020b). An example of the factors that can be controlled explicitly for the study includes economic characteristics of countries like GDP and GDP per capita (Langenmayr and Zyska, 2021), country characteristics such as capital account openness (Chinn and Ito, 2006) and banking crisis (Laeven and Valencia, 2018) in the period of study. Other important factors that can affect the cross-border deposits also include political system stability and corruption (Andersen et al., 2017), armed conflicts and natural disasters (Andersen et al., 2020) and also exchange rate fluctuations (Andersen et al., 2017). Controlling for all additional factors might help eliminate any existing bias in the study.

The lack of data on the number of citizens holding dual citizenship in countries is one of

the possible limitations of this study. As explained in the section on data description, some countries that offer dual citizenship only provide it under restricted conditions. Under these restrictions, since the number of citizens having dual citizenship might be few, it can be argued that considering the deposits of such countries might cause a positive bias in the results. However, there are three reasons why countries that offer dual citizenship under restrictions are also considered under the list of countries providing dual citizenship:

1. No source can give a complete list of citizens from each country that have dual citizenship.
2. It has to be noted that the assumption is that aggressive tax planning is pursued mainly by high net worth individuals. Even if a country has very few people who have dual citizenship, there is a high possibility that these people might be the high net worth individuals of that country. Therefore, adding such countries to the list is assumed not to cause any bias in the results.
3. From the list of dual citizenship provided in the appendix, it can be observed that most of the developed economies do not pose any restrictions on dual citizenship, barring a few countries such as Germany, Austria and South Korea, which makes it intuitively sound to add all the countries that offer dual citizenship with or without restrictions to the treatment group.

As mentioned in the data description section, a final possible limitation is the use of cross-border deposits as a method of assessing tax evasion or avoidance. Apart from the limitations of the data mentioned previously, it has to be observed that the deposits in only 31 countries are reported in the database. The cross-border deposits held in some major economies like China, India, Russia etc., is not present in the database. Therefore, including the cross-border deposits from these nations might cause the results to change. Also, in the current study, we only study the movement of cross-border deposits. However, many more instruments qualify under cross-border arrangements that are not recorded in the database. The source for other cross-border investments is the IMF's Coordinated Portfolio Investment Survey (CPIS) (IMF, 2021). The use of CPIS is especially limited as there is no segregation of data and the numbers presented in the database include investments by individuals, companies and banks. There is a high possibility that the investments from banks could be more significant in some cases, causing an inherent bias

in the results (Cobham and Jansky, 2018). Therefore, this study is performed on the more widely used data of cross-border deposits.

6.2 The case of Norway

Norway is the latest country to introduce dual citizenship. Norway introduced dual citizenship with effect from 1st January 2020 (Utlendingsdirektoratet, 2020). Norway is a relatively small but wealthy country in the world with a projected GDP per capita of \$81,995 for the year 2021 as reported by the International Monetary Fund's World Economic Outlook database. The population of Norway at the end of the fourth quarter of 2020 was 5,391,369 (Statistics Norway, 2021). As per a report by Forbes (Nikel, 2020), Norway had received 26,000 applications for dual citizenship in few months. The number of applications is equal to approximately 0.5% of Norway's population. Given that these are the number of applications received in the first few months, many more people might apply for Norwegian citizenship in the months to come. Though Norway was planning to introduce Mandatory Disclosure Requirements (hereafter called MDR) similar to DAC6 and a proposal to that effect was also introduced on 27th June 2019, no formal law regarding the MDR has been introduced (Brown Brothers Harriman, 2020; KPMG, 2019).

In light of the significant number of applications received by Norway regarding dual citizenship, adequate requirements should be taken. Økokrim, Norway's state economic crime unit, has mentioned tax evasion as one of the biggest threats to the welfare state (Berglund, 2018). Given the findings of this study that dual citizenship can be used as one of the methods of regulatory arbitrage against DAC6, care should be taken by Norway in minimizing the loss in tax revenue due to aggressive tax planning activities. It can be suggested that clauses regarding disclosure be made more stringent for the applicants of dual citizenship when MDR is officially introduced in Norway. It is also suggested that MDR should be introduced at the earliest and stringent laws for mandatory disclosure for all dual citizens should be put in place to ensure minimization of aggressive tax planning. Moreover, the findings in the study suggest a strong preference for CBI programs post-DAC6. Therefore, the tax authorities must ensure that CBI programs are not used by Norwegians for aggressive tax planning in the guise of dual citizenship.

7 Conclusion

This thesis aims to verify if dual citizenship can be used as a method of regulatory arbitrage against DAC6. The thesis analyses panel data of cross-border deposits from Q1 2016 till Q3 2020 by controlling for fixed effects and using difference-in-difference models. A small period of 19 quarters post introduction of CRS is chosen to ensure that multiple policy shocks are not present within the same period. Similar to the study by Casi et al. (2020b), we implement a strong fixed effects structure to control for deposit location-specific shocks to the cross-border deposits in models that test the change in deposits over time for residence countries. In the model that tests the change of deposit levels in deposit locations, we control residence country-specific shocks that could impact the cross-border deposits.

The findings from the models indicate that post-DAC6 deposits of residents of countries that have dual citizenship showed higher growth in tax havens than countries not having dual citizenship. The growth of deposits from countries having dual citizenship was found to be stronger and more significant when Luxembourg, which is generally considered to be a tax haven for MNCs, was dropped from the list of tax havens. Also, it was evidenced that the deposits of residents of non-EU countries having dual citizenship were growing much slower in EU deposit locations in comparison to non-EU countries not having dual citizenship post-DAC6. Both the previous findings show that dual citizenship can be used as a method of regulatory arbitrage against DAC6. DAC6 was found to be more effective in disclosing deposits as the reported deposits from EU countries post-DAC6 showed much more substantial growth than non-EU countries. Finally, the study also found that the affinity for CBI programs was high post introduction of DAC6, with the deposits from these countries showing a very strong growth post-DAC6, indicating that such schemes could also be used as a method of regulatory arbitrage.

The study adds to the existing literature of legal and normative studies on DAC6 by providing an empirical angle on the movement of deposits post-DAC6. The study also adds to the current literature of empirical studies on the methods of regulatory arbitrage used against instruments devised to curb aggressive tax planning such as CRS and DAC6. However, the most significant contribution of this study is that it tries to study dual

citizenship from an angle of regulatory arbitrage and tax sovereignty. The study can serve as a base for policymaking in the future to ensure that tax loss due to aggressive tax planning by using dual citizenship is minimized, given that more countries continue to introduce dual citizenship over time.

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Appendix

A1 List of countries offering dual citizenship

The following countries are listed as countries offering dual citizenship on the website of Arton Capital (Arton Capital, 2021), a consultancy that assists people in obtaining dual citizenship. However, the website does not provide the details of the restrictions about the same. The details of the restrictions have been researched on various other websites. Therefore, in the following table, the details of the restrictions on dual citizenship and the source of information are provided.

Table A1.1: List of countries offering dual citizenship

Country	Details of Restriction	Source
Albania	NA	https://www.dualcitizenshipreport.org/dual-citizenship/albania/
Algeria	NA	https://www.dualcitizenshipreport.org/dual-citizenship/algeria/
Angola	Child born abroad of Angolan parents, who obtains the nationality of the country of birth, may retain dual citizenship until reaching the age of 18, when one citizenship must be chosen.	https://www.multiplecitizenship.com/wscl/ws_ANGOLA.html
Argentina	Two groups are recognized as dual citizens. The first are children (18 and under), born abroad, who acquire citizenship of birth country. Upon reaching maturity at age 18, however, a declaration of allegiance must be made to one country. Citizens of Spain and Italy can hold dual citizenship per agreement with Argentina.	(Habib, 2016)

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Country	Details of Restriction	Source
Armenia	NA	https://www.dualcitizenshipreport.org/dual-citizenship/armenia/
Australia	NA	https://www.dualcitizenshipreport.org/dual-citizenship/australia/
Austria	Persons obtaining two citizenships at birth. The retention of the second citizenship is in the interest of Austria for extraordinary service.	https://www.dualcitizenshipreport.org/dual-citizenship/austria/
Bangladesh	Government can grant citizenship to any person who is a citizen of Europe or North America or of any state which the government may , by notification in the official gazette, specify in this behalf.	https://www.dualcitizenshipreport.org/dual-citizenship/bangladesh/
Barbados	NA	https://www.dualcitizenshipreport.org/dual-citizenship/barbados/
Belgium	NA	https://www.dualcitizenshipreport.org/dual-citizenship/belgium/
Belize	NA	https://www.multiplecitizenship.com/wscl/ws_BELIZE.html
Benin	NA	https://www.multiplecitizenship.com/wscl/ws_BENIN.html
Bolivia	NA	https://www.dualcitizenshipreport.org/dual-citizenship/bolivia/
Bosnia & Herzegovina	Dual citizenship allowed only with Croatia, Serbia and Sweden based on treaties.	https://www.dualcitizenshipreport.org/dual-citizenship/bosnia-and-herzegovina/
Brazil	NA	https://www.dualcitizenshipreport.org/dual-citizenship/brazil/
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Country	Details of Restriction	Source
Bulgaria	Dual citizenship is allowed for spouses of bulgarian citizens, citizens of a member state of EU, country party to EEA or from Switzerland, and countries that have treaties with Bulgaria	https://www.dualcitizenshipreport.org/dual-citizenship/bulgaria/
Burkina Faso	NA	https://www.multiplecitizenship.com/wscl/ws_BURKINA_FASO.html
Burundi	<p>Article 21: Any Burundian, to whom the law confers this status as a native, is entitled to have dual nationality.</p> <p>Article 22: Any person having held Burundian nationality as a native and having lost it by acquiring a foreign nationality may regain Burundian nationality, on condition of applying for it, and keep his or her second nationality.</p> <p>Article 23: An adopted child can, on reaching the age of majority, apply to recover Burundian nationality without losing the nationality of the adoptive parent.</p>	https://www.refworld.org/docid/485ba8577.html
Cambodia	NA	https://www.dualcitizenshipreport.org/dual-citizenship/cambodia/
Canada	NA	https://www.dualcitizenshipreport.org/dual-citizenship/canada/
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Country	Details of Restriction	Source
Cape Verde	NA	https://www.multiplecitizenship.com/wscl/ws_CAPE_VERDE.html
Central African Republic	NA	https://www.multiplecitizenship.com/wscl/ws_CENTRAL_AFRICAN_REPUBLIC.html
Chile	NA	https://www.dualcitizenshipreport.org/dual-citizenship/chile/
Colombia	NA	https://nomadcapitalist.com/second-passport/colombia/
Comoros	Citizens of all countries except France and Iran can acquire dual citizenship.	https://www.second-citizenship.org/second-citizenship/union-of-comoros/
Congo	Child born abroad, who obtains the citizenship of the country of birth may retain dual citizenship until their 21st birthday. Person then has 12 months to renounce foreign citizenship or Congolese citizenship will be revoked.	https://www.multiplecitizenship.com/wscl/ws_DR_CONGO.html
Costa Rica	NA	https://www.multiplecitizenship.com/wscl/ws_COSTA_RICA.html
Ivory Coast	NA	https://www.multiplecitizenship.com/wscl/ws_COTE_DIVOIRE.html
Croatia	NA	https://www.dualcitizenshipreport.org/dual-citizenship/croatia/
Cyprus	NA	https://www.dualcitizenshipreport.org/dual-citizenship/cyprus/
Czech Republic	NA	https://www.dualcitizenshipreport.org/dual-citizenship/czech-republic/
Denmark	NA	https://www.dualcitizenshipreport.org/dual-citizenship/denmark/
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Country	Details of Restriction	Source
Dominica	NA	https://www.dualcitizenshipreport.org/dual-citizenship/dominica/
Dominican Republic	NA	https://www.second-citizenship.org/second-citizenship/citizenship-of-the-dominican-republic/
Ecuador	NA	https://www.dualcitizenshipreport.org/dual-citizenship/ecuador/
Egypt	The Egyptian law allows Egyptian citizens to naturalize a foreign nationality while retaining the Egyptian citizenship after obtaining the permission of the Minister of the Interior.	https://www.egyptembassy.org/citizenship/dual-approval/
El Salvador	Salvadorans by birth have the right to enjoy double or multiple citizenship. This right is not extended to those whose citizenship was acquired through naturalization.	https://www.multiplecitizenship.com/wscl/ws_EL_SALVADOR.html
Fiji	NA	https://www.dualcitizenshipreport.org/dual-citizenship/fiji/
Finland	NA	https://www.dualcitizenshipreport.org/dual-citizenship/finland/
France	NA	https://www.dualcitizenshipreport.org/dual-citizenship/france/
The Gambia	NA	https://www.dualcitizenshipreport.org/dual-citizenship/the-gambia/
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Country	Details of Restriction	Source
Germany	<p>As a rule, children born to a German and a non-German parent, or to parents with dual nationality, acquire the nationalities of both parents at birth, according to the principle of descent.</p> <p>Ethnic German repatriates and family members admitted with them acquire German citizenship when they are issued a repatriates certificate, in accordance with Section 7 of the Nationality Act; they do not have to give up their previous citizenship. If allowed by their countries of origin, their children born in Germany then acquire at birth both German citizenship and that of their parents.</p> <p>In certain cases, German citizens may apply for dual nationality, allowing them to acquire foreign citizenship while retaining their German citizenship.</p>	<p>https://www.bmi.bund.de/SharedDocs/faqs/EN/topics/migration/staatsang/Doppelte_Staatsangehoerigkeit_Mehrstaatigkeit_en.html</p>
Ghana	NA	<p>https://www.dualcitizenshipreport.org/dual-citizenship/ghana/</p>
Greece	NA	<p>https://www.dualcitizenshipreport.org/dual-citizenship/greece/</p>
Grenada	NA	<p>https://www.cbi.gov.gd/grenada-citizenship/benefits/</p>
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Country	Details of Restriction	Source
Guatemala	Guatemala maintains dual citizenship agreements with some countries of Central and South America. Only such citizens can get dual citizenship.	https://www.multiplecitizenship.com/wscl/ws_GUATEMALA.html
Honduras	Only with countries that Honduras has a dual-citizenship treaty.	https://www.dualcitizenshipreport.org/dual-citizenship/honduras/
Hong Kong	Dual citizenship previously tolerated but barred since 2021.	https://edition.cnn.com/travel/article/asia-dual-citizenship-intl-hnk-dst/index.html
Hungary	NA	https://www.dualcitizenshipreport.org/dual-citizenship/hungary/
Iceland	Child born to married parents of different nationalities, one being Icelandic and the other a foreigner. A naturalized person is not required to renounce their former citizenship.	https://www.multiplecitizenship.com/wscl/ws_ICELAND.html
Iraq	NA	https://www.indexmundi.com/iraq/citizenship.html
Ireland	NA	https://www.dualcitizenshipreport.org/dual-citizenship/ireland/
Israel	NA	https://www.dualcitizenshipreport.org/dual-citizenship/israel/
Italy	NA	https://www.dualcitizenshipreport.org/dual-citizenship/italy/
Jamaica	NA	https://www.multiplecitizenship.com/wscl/ws_JAMAICA.html

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Country	Details of Restriction	Source
Jordan	The laws of Jordan provide for the acquisition of Jordanian citizenship at birth to any child whose father is a Jordanian citizen. This is true regardless of the place of birth, and of other nationalities the child may have acquired.	https://jo.usembassy.gov/u-s-citizen-services/local-resources-of-u-s-citizens/dual-nationality/
Kenya	NA	https://www.kenyahighcom.org.uk/dual-citizenship
Kyrgyztan	In case the obtainment of the citizenship of the other state is not in contradiction with Kyrgyz laws and where treaties are in place.	https://www.dualcitizenshipreport.org/dual-citizenship/kyrgyzstan/
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Country	Details of Restriction	Source
Latvia	<p>Citizenship of another EU Member State or another EFTA Member State;</p> <p>Citizenship of another NATO Member State;</p> <p>Citizenship of Australia, Brazil or New Zealand;</p> <p>Citizenship of such a country with which Latvia has concluded an agreement on the recognition of dual citizenship (no such agreement is currently concluded);</p> <p>Citizenship of a country not referred to previously if due to important national interests permission from the Cabinet is received to retain dual citizenship;</p> <p>Citizenship of a country not referred to previously if it has been acquired automatically (ex lege) through marriage or as a result of adoption. Children of citizens of Latvia may hold dual citizenship with any country.</p>	<p>https://www.pmlp.gov.lv/en/dual-citizenship</p>
Lebanon	NA	<p>https://www.multiplecitizenship.com/wscl/ws_LEBANON.html</p>
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Country	Details of Restriction	Source
Lithuania	A person who has acquired the citizenship of another country by birth or adoption (upto 21 years). Through marriage to a citizen of another state. A person who fled Lithuania before 11th March, 1990 and became the citizen of another country.	https://www.dualcitizenshipreport.org/dual-citizenship/lithuania/
Luxembourg	NA	https://www.dualcitizenshipreport.org/dual-citizenship/luxembourg/
Macau	Dual citizenship is not recognized for Chinese nationals. Allowed for all other countries.	https://www.dualcitizenshipreport.org/dual-citizenship/macau/
Macedonia	NA	https://www.dualcitizenshipreport.org/dual-citizenship/north-macedonia/
Mali	NA	https://www.multiplecitizenship.com/wscl/ws_MALI.html
Malta	NA	https://www.dualcitizenshipreport.org/dual-citizenship/malta/
Mauritius	NA	https://www.multiplecitizenship.com/wscl/ws_MAUROITIUS.html
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Country	Details of Restriction	Source
Mexico	<p>Mexican law establishes a distinction between nationality and citizenship. The 1998 Amendment recognized Mexican nationality transmitted by birth, restricting nationality to the first generation born abroad.</p> <p>It also preserved Mexican nationality by birth, when adopting a foreign nationality. Mexicans abroad holding Mexican nationality will be treated with legal equality in Mexico; specifically, they will keep patrimonial rights, access to reserved areas of investment, and the ability to inherit without restriction.</p>	<p>https://www.multiplecitizenship.com/wscl/ws_MEXICO.html</p>
Moldova	NA	<p>https://www.dualcitizenshipreport.org/dual-citizenship/moldova/</p>
Montenegro	<p>Dual citizenship is permitted to citizens who held dual citizenship before Montenegro declared independence on 3rd June, 2006.</p> <p>Also people who obtain dual citizenship by the citizenship by investment scheme.</p>	<p>https://www.dualcitizenshipreport.org/dual-citizenship/montenegro/</p>
Morocco	NA	<p>https://www.dualcitizenshipreport.org/dual-citizenship/morocco/</p>
Nauru	<p>Nauruan woman who receives a second citizenship upon her marriage to a foreign national, does not lose her Nauruan citizenship.</p>	<p>https://www.multiplecitizenship.com/wscl/ws_NAURU.html</p>
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Country	Details of Restriction	Source
New Zealand	NA	https://www.dualcitizenshipreport.org/dual-citizenship/new-zealand/
Nicaragua	Countries of Central America and other countries with which Nicaragua has agreements of dual citizenship. No agreement exists with the United States.	https://www.multiplecitizenship.com/wscl/ws_NICARAGUA.html
Niger	NA	https://www.cia.gov/the-world-factbook/field/citizenship/
Nigeria	NA	https://www.dualcitizenshipreport.org/dual-citizenship/nigeria/
Norway	NA	http://www.nyinorge.no/en/Familiegjenforening/New-in-Norway/Moving-to-Norway/Citizenship/
Panama	NA	https://www.offshore-protection.com/panama-passport-residency-immigration
Pakistan	Dual citizenship only allowed for nationals of : United Kingdom, France, Italy, Belgium, Iceland, Australia, New Zealand, Canada, Finland, Denmark, Switzerland, Sweden, USA, Netherlands, Ireland, Bahrain, Egypt, Syria and Jordan.	https://www.dualcitizenshipreport.org/dual-citizenship/pakistan/
Papua New Guinea	Only to citizens of Australia, Fiji, Germany, New Zealand, Samoa, UK, USA and Vanuatu.	https://www.pnghighcomm.org.uk/consular-services/dual-citizenship/
Paraguay	Only citizens of Spain and Italy can become dual citizens of Paraguay.	https://www.dualcitizenshipreport.org/dual-citizenship/paraguay/
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Country	Details of Restriction	Source
Peru	NA	https://www.dualcitizenshipreport.org/dual-citizenship/peru/
Poland	NA	https://www.dualcitizenshipreport.org/dual-citizenship/peru/
Portugal	NA	https://www.dualcitizenshipreport.org/dual-citizenship/portugal/
Romania	NA	https://www.dualcitizenshipreport.org/dual-citizenship/romania/
Russia	NA	https://www.dualcitizenshipreport.org/dual-citizenship/russian-federation/
Saint Lucia	NA	https://www.dualcitizenshipreport.org/dual-citizenship/saint-lucia/
Saint Vincent and the Grenadines	Person born abroad of St. Vincentian parents, who obtained citizenship of the country of birth. Child born in St. Vincent of foreign parents. Citizen of St. Vincent married to a foreign national. Naturalized citizens.	https://www.multiplecitizenship.com/wscl/ws_ST_VINCENT_AND_THE_GRENADINES.html
Samoa	A person who involuntarily acquires dual citizenship by marriage to a foreign national.	https://www.multiplecitizenship.com/wscl/ws_WESTERN_SAMOA.html
Serbia	NA	https://www.dualcitizenshipreport.org/dual-citizenship/serbia/
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Country	Details of Restriction	Source
Seychelles	The government of Seychelles only recognizes dual citizenship in specific cases concerning native born citizens of Seychelles who later obtain another citizenship for domestic or economic convenience (such as to work abroad) or involuntarily through marriage to a foreign citizen.	https://www.multiplecitizenship.com/wscl/ws_SEYCHELLES.html
Sierra Leone	NA	https://www.cia.gov/the-world-factbook/field/citizenship/
Slovenia	NA	https://www.dualcitizenshipreport.org/dual-citizenship/slovenia/
South Africa	NA	https://www.dualcitizenshipreport.org/dual-citizenship/south-africa/
South Korea	Dual citizenship may be permitted if a person marries a Korwan citizen, a person has greatly contributed to Korea, has outstanding abilities or finds it difficult to renounce previous nationality.	https://www.dualcitizenshipreport.org/dual-citizenship/south-korea/
South Sudan	NA	https://www.cia.gov/the-world-factbook/field/citizenship/
Spain	Only allowed for citizens of countries with historical links with Spain. Also Spanish nationals can acquire other citizenships without losing Spanish citizenship.	https://www.dualcitizenshipreport.org/dual-citizenship/spain/
Sri Lanka	NA	https://www.dualcitizenshipreport.org/dual-citizenship/sri-lanka/
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Country	Details of Restriction	Source
Sudan	NA	https://www.dualcitizenshipreport.org/dual-citizenship/sudan/
Sweden	NA	https://www.dualcitizenshipreport.org/dual-citizenship/sweden/
Switzerland	NA	https://www.dualcitizenshipreport.org/dual-citizenship/switzerland/
Syria	NA	https://www.multiplecitizenship.com/wscl/ws_SYRIA.html
Taiwan (Chinese Taipei)	Except that citizens of Taiwan are not recognized as dual citizens of the People's Republic of China	https://www.cia.gov/the-world-factbook/field/citizenship/
Tajikistan	Dual citizenship is determined under international treaties signed by Tajikistan	https://www.dualcitizenshipreport.org/dual-citizenship/tajikistan/
Thailand	NA	https://www.thaicitizenship.com/thai-dual-citizenship/
Tonga	NA	https://www.cia.gov/the-world-factbook/field/citizenship/
Trinidad & Tobago	NA	https://www.dualcitizenshipreport.org/dual-citizenship/trinidad-and-tobago/
Tunisia	NA	https://www.multiplecitizenship.com/wscl/ws_TONGA.html
Turkey	NA	https://www.dualcitizenshipreport.org/dual-citizenship/turkey/
United Kingdom	NA	https://www.dualcitizenshipreport.org/dual-citizenship/united-kingdom/
United States	NA	https://www.dualcitizenshipreport.org/dual-citizenship/united-states/
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Country	Details of Restriction	Source
Uruguay	NA	https://www.dualcitizenshipreport.org/dual-citizenship/uruguay/
Vanuatu	NA	https://www.goldenvisas.com/vanuatu
Venezuela	NA	https://www.dualcitizenshipreport.org/dual-citizenship/venezuela/
Vietnam	Vietnam has permitted dual citizenship under limited circumstances since July 1, 2009. Certain foreigners and overseas Vietnamese can apply for dual citizenship. Those having Vietnamese parents or children or married to a Vietnamese spouse, those who make special contributions or benefit Vietnam may apply for dual citizenship.	https://www.dualcitizenship.com/countries/vietnam.html
Zambia	NA	https://www.cia.gov/the-world-factbook/field/citizenship/
Zimbabwe	NA	https://www.dualcitizenshipreport.org/dual-citizenship/zimbabwe/

The data downloaded from the BIS-LBS database, the code used for cleaning and organizing the data and the regression codes for the models described in the thesis will be provided on request. For access to the data please mail the author at rohitreddy.muddasani@gmail.com.