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Drivers and Effects of Residence and Citizenship by Investment

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Drivers and Effects of Residence and Citizenship by Investment

Prepared by Sofronis Clerides, Maria Coelho, Alexander Klemm, and Christos Kotsogiannis*

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ABSTRACT: This paper discusses under what circumstances residence and citizenship by investment (RBI or CBI) schemes could be used by individuals engaging in tax avoidance or evasion. It describes the market for CBI and RBI and how features of the offered programs might reveal the underlying motivations of governments offering them. The paper then presents empirical evidence on the conditions under which such schemes are offered. Finally, the paper estimates the impact of such schemes on investment, house prices, and public revenues.

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Contents

I. Introduction

Interest in instruments that increase investment and revenues never diminishes. This is true of policymakers in both developed and developing countries. Traditionally, the focus of the analysis amongst academics (and in policy circles) has been around the role of taxation in attracting mobile tax bases—especially capital, but also some forms of labor. The implications of unfettered tax competition amongst countries, and the role of tax coordination for welfare have been amply analyzed. While tax competition—both over real investment and reported profits—is a well-studied phenomenon for corporate taxes,[1] it is also becoming increasingly important for personal income taxes, because of increasing mobility (real or fictional) of individuals. The reduction in mobility costs for households, firms, and factors, together with increasing economic integration across countries has created challenges for governments seeking to raise revenues from mobile factors. Concern at the pressures imposed on national tax bases has led to proposals for action on coordinated measures to restrict downward pressures on tax rates, and while progress has been slow, a new global corporate minimum ("Pillar 2 of the Inclusive Framework Agreement") was agreed in 2021 and is now being implemented (see IMF 2023).

In an attempt to entice wealthy taxpayers, focus has recently turned to much less known instruments tailored to particular types of investment: Citizenship by Investment (CBI) and Residence by Investment (RBI), which we jointly refer to as CRBIs. CRBIs are programs that allow individuals to obtain residence permits or citizenship in exchange of making specific financial investments in immovable property, government bonds, or national development funds. The investment options are not mutually exclusive, with countries allowing for different types of investment and their combination. Applications for these programs are subject to a formal review process for which applicants must pay a non-refundable one-time administrative fee.

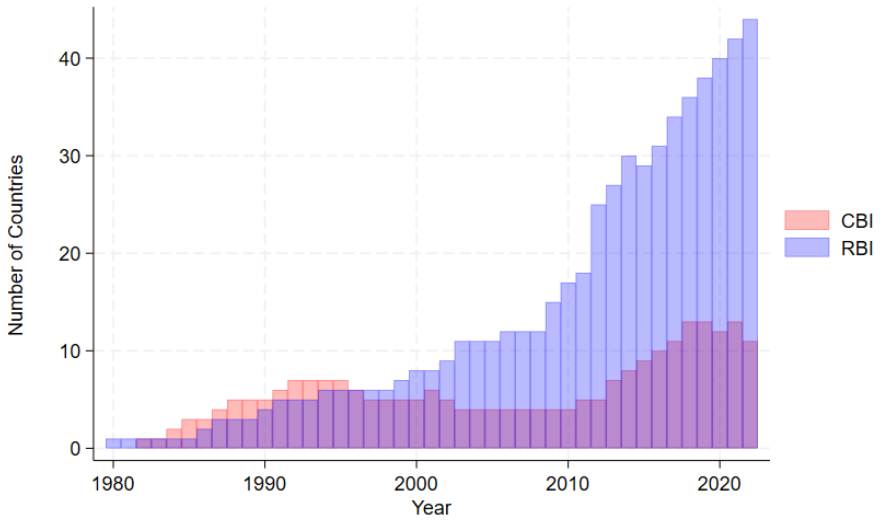
CRBI programs vary substantially in the residency requirement. Some programs have strict conditions linked to physical presence, so that beneficiaries need to physically move country to qualify. In other cases, requirements can be lax, and qualification can be obtained by minimal or even no physical presence in the country granting citizenship or residence. There is also variation in how easy it is for family members (spouse and dependent children) to obtain residency under the same application.

CBIs and RBIs have been around since the 1980s but have increased in popularity during the last decade. Figure 1 shows the number of countries that have offered such a scheme every year since 1980. Perhaps not surprisingly, given the nature of the programs, more countries offer RBIs than CBIs. Twenty-three countries have offered a CBI program at one time or another, with 11 programs being active in 2022. Many more countries offered an RBI program: 44 in 2022, up from about a dozen in the 2000s.[2]

[1] For a review of the theoretical literature see Keen and Konrad (2013) and Devereux and Loretz (2013). For evidence of (corporate) tax competition see Devereux, Lockwood and Redoano (2008), Kammas (2011) and Overesch and Rincke (2011). But the evidence is not always in support of tax competition. On this see, for example, Chirinko and Wilson (2017), and Redoano (2014).

[2] This excludes the current RBI program in the Cayman Islands, a British overseas territory with limited macroeconomic data available for inclusion in the econometric analysis below.

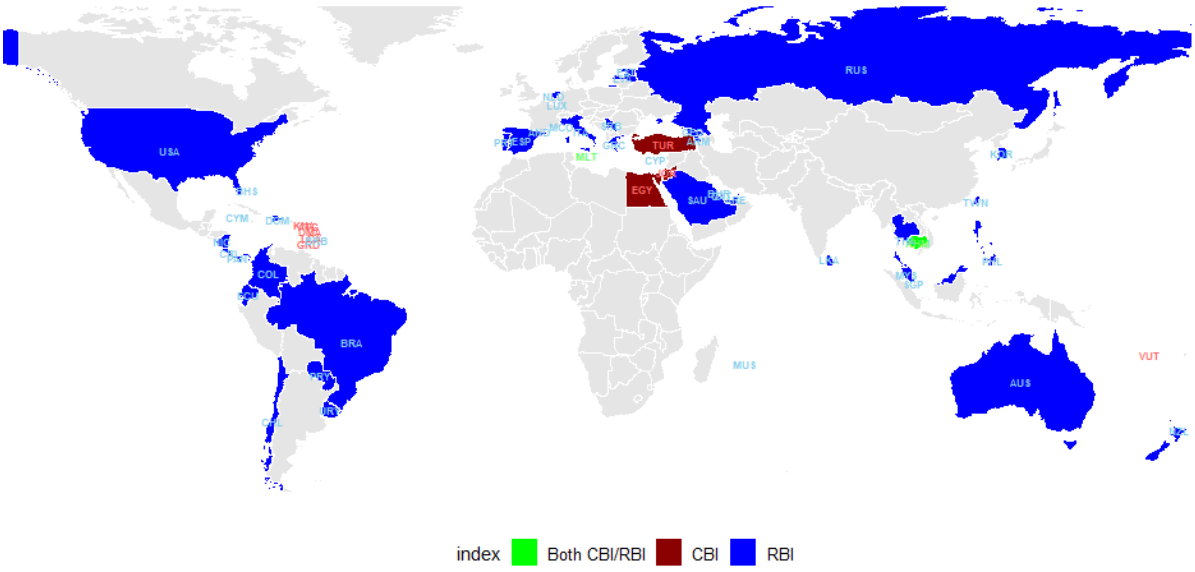
Figure 1. Number of Countries with CBI and RBI Schemes



Source: Authors' compilation from multiple sources.

Aspects of geography, and size of a country, seem to matter for the design of these programs. The majority of countries offering CBIs are small, isolated islands, while RBIs are offered by larger and wealthier countries. Figure 2 shows the geographic distribution of the countries offering the programs in 2022. Out of the eleven countries offering CBIs, seven are small countries and islands, whereas out of the forty-four countries offering RBIs most countries are large. Interestingly, with very few exceptions, countries offer either CBI or RBI but not both.

Figure 2. World Map of CBI and RBI

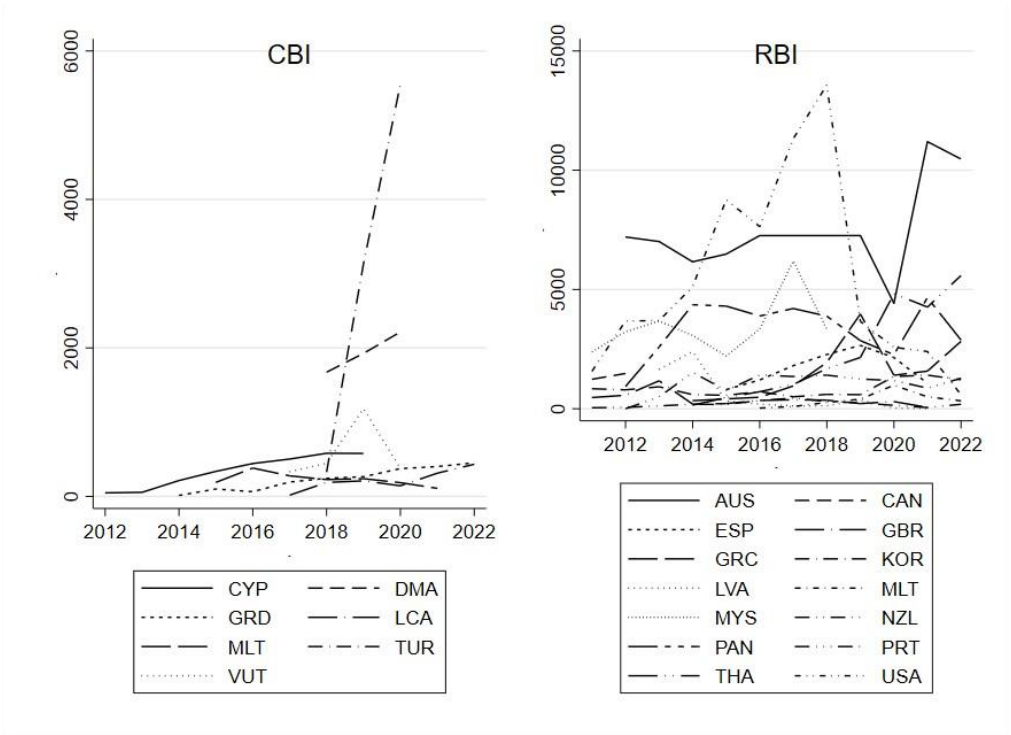


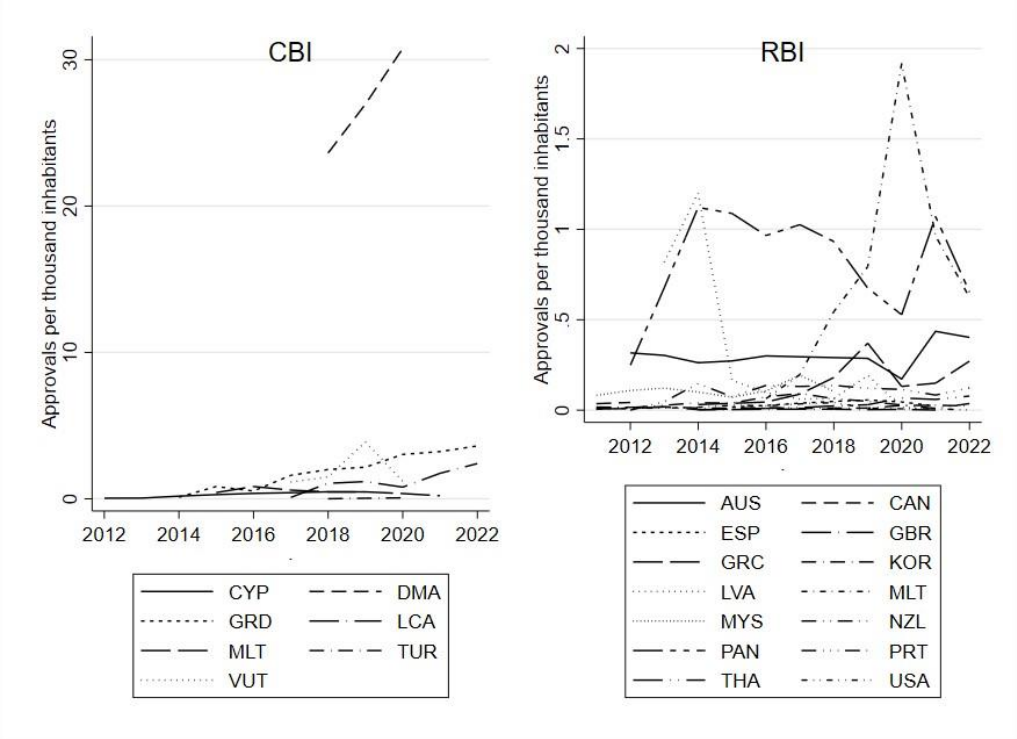
Source: Data collected by the authors.

There is no comprehensive database on the number of people obtaining residency or citizenship through these schemes. Investment Migration Insider (IMI) publishes data for some countries and periods, which suggest that the numbers of citizenships and residencies granted are very small relative to the size of the world population, but also small relative to the local population (relevant for the CBIs).

Figure 3 shows the number of successful applications for countries for which information is available over the period 2012-2022. It is, moreover, striking that the highest approvals occur in high-tax countries such as Türkiye (for CBI) and the United States and Australia (for RBI).

Figure 3. Annual Approvals of Applications (Individual Totals and as a Share of Population)





Source: IMI.

Notes: For improved visibility, the RBI chart excludes CYM, ITA, IRL, and PRY, all of which never approve more than 500 cases per year. Some significant CBI countries such as St. Kitts and Nevis are absent from the IMI database.

In addition,

Figure 3 highlights that the number of approvals through time vary, suggesting that—as one would expect—the decision to adopt a program might be driven by what other countries do, thereby creating interdependencies between countries. Despite their small numbers, these programs can have a sizeable impact on economic activity and public finances, providing governments with more financial flexibility to improve public services and infrastructure without increasing taxes on the existing population. Inflows might affect investment and GDP significantly while government budgets benefit directly from any fee revenue and indirectly from the additional economic activity generated directly through the investment and indirectly through the multiplier effect of the investment. If properly targeted, the immediate injection of funds can lead to the revitalization of underdeveloped sectors, enhancing infrastructure and increasing the overall standard of living. As already noted, fees may contribute to revenues too, but here things are more difficult to evaluate as often part of the fee is offered as bonus to the service provider for the successful application (Surak 2023). Alongside these programs a booming industry has developed to promote them to prospective applicants, help them choose among available options, and guide them through the often cumbersome application process.

Gold and Myrvoda (2017), for example, report that related revenues exceeded 10 percent of GDP in St. Kitts and Nevis and approached this level in Dominica, though these impacts vary by year. Other estimates have suggested that in some nations (for example, Dominica), the revenue from these schemes constitutes upwards of 50 percent of their budget, underscoring their critical economic importance (Surak 2023). But there are complications regarding estimating revenues from the programs and the realized revenues are often smaller than those reported (Surak 2023).

As with all policy instruments, whether CBIs and RBIs are effective programs requires evaluation. For example, it is unclear whether programs that focus on investment in immovable property add significant value to economic activity, as this investment might be left unutilized. It is not unheard of that countries offer discounts by reducing the actual price investors pay.[3] The same applies to investments in assets, which may be directed to unproductive uses. Such programs also come with significant risks. For the countries that offer them, they could lead to corruption if they are not well administered and monitored; some recent examples support this view. There are other potential security risks if background checks are not thorough, such as financial integrity risks (money laundering, terrorist financing, proliferation financing, and evasion of financial sanctions) or the entry of individuals with criminal backgrounds.[4] According to a report by the Financial Action Task Force (FATF), the global money laundering and terrorist financing watchdog, CBIs facilitate financial crime by altering identities, enhancing freedom of movement, and facilitating the establishment of illegal persons in other jurisdictions (FATF/OECD 2023). Ultimately, the related scrutiny and reputational costs for global banks can jeopardize the provision of correspondent banking relationships.

The impact on other economies should not be underestimated too, as other countries can be affected through negative tax spillovers, for example, when such schemes allow tax avoidance or evasion. Citizenship programs also raise a number of important issues that go well beyond taxation, including the philosophical question of whether citizenship and sovereignty should be commodified. The European Parliament in 2014 expressed concern that national schemes involving the “direct or indirect outright sale” of Union citizenship undermined the very concept of Union citizenship.[5] Underlying this is the fact that granting national citizenship includes EU citizenship, with all its attendant rights, such as free movement within the EU (see Carrera 2014 or Džankić 2015). In general, any benefits in terms of revenues and economic growth must be weighed against their potentially high costs, such as the obligations that arise from making someone a citizen (see Gold and Myrvoda 2017).

This all raises two fundamental questions: first, what drives the adoption of these programs? And second, once the programs are adopted, do they deliver the expected outcomes? There is surprisingly little work on this, perhaps reflecting the paucity of data. This paper takes stock of the issues and assesses (to the extent possible given data availability) these two issues. To make progress on this, we elaborate further on the programs focusing on two arguably appealing incentives for someone to join in one of these programs (without, of course, overlooking other attractive features such as security and stability): a) the opportunity to reduce one’s tax liability by obtaining residency or citizenship and taking advantage of tax-privileged systems, and b) the opportunity these programs might offer for sheltering wealth.

Tax Implications of CRBI

While all countries that have income taxes cover income sourced within their borders, further tax liabilities, such as taxation of worldwide income (or privileges such as personal allowances) are typically determined by

[3] Surak (2023) elaborates more on this offering insightful examples of discounts being offered to investors (under RBI programs). See, in particular, Chapter 7.

[4] See also discussion in Fernando, Pampolina, and Sykes (2021).

[5] European Parliament Resolution of 16 January 2014 on EU citizenship for sale (2013/2995(RSP)). Concerns have also been expressed more recently in the EU. See Communication COM(2019) 12 final

residence. The main exception is the United States,[6] where citizens are liable for US taxes irrespective of their residence.[7] Changing tax residence therefore has tax implications. For income that originates in the original home country, shifting tax residence only reduces tax if also the source of the income (be it labor or capital) is shifted to the new country of residence (or elsewhere). For income originating in third countries, however, there is an immediate tax effect, as such income will not be taxable in the previous country of residence anymore (except for a potential exit tax, if applicable).

Moving tax residence to a low-tax jurisdiction could therefore have significant tax consequences, notably for people who currently pay relatively high taxes on income that can either easily be moved or that originates in low-tax jurisdictions but is subject to residence-based taxation in their home country. Such individuals may therefore be willing to pay significant fees or undertake investment in return to being able to shift their tax residence. Note that a residence permit—obtained through RBI or otherwise—only provides authorization to reside in a country, and does not necessarily establish tax residency, which likely requires further conditions to be met, such as physical presence and other country-specific rules. And ceasing to be a tax resident in the former country also requires conditions to be met, which might include reducing physical presence or active economic ties.

A well understood mechanism that may drive the uptake of RBI and determine how high fees and investment requirements can be, is tax competition over real resources: individuals who qualify for RBI may physically move to a country and restart their personal and economic lives. This channel is, however, likely to be limited, given that the countries offering such schemes may not offer adequate business and recreational opportunities and given ties to families and networks in the home country. It is also less problematic as the individual would stop (or at least significantly reduce) consumption of public goods in the home country[8] and instead rely on such in the new place of residence.

Demand for RBI might also be driven by illegal tax practices and tax evasion opportunities. For example, individuals may declare tax residence in a country where they have only limited physical residence. The receiving country might accommodate this by requiring only minimal presence for granting RBI and accepting a taxpayer as resident for tax purposes. The country of origin would apply its own rules (or the respective double tax treaty) to determine tax residence. In most cases, merely obtaining a foreign residence permit would not be sufficient to cease tax residence in the home country. But the home country would have great difficulty enforcing its tax rules if individuals hold assets through their new country of residence. This is because local financial institutions are likely to accept local proof of residence, which will undermine any automatic exchange of information (AEOI) with the original home country. This likely requires individuals to lie in any financial sector questionnaires asking them about any further countries where they might have tax residence.[9]

[6] Eritrea is the only other country in the world currently taxing its diaspora irrespective of source of income but, as argued in Christians (2017), this is different in that it imposes a flat 2 percent tax rather than the home country system with credits. Several other countries have anti-avoidance rules, based on citizenship: for example, Mexico, Portugal, and Spain continue taxing citizens moving residence elsewhere for 3-5 years, unless the taxpayer can prove that they have not moved to a tax haven.

[7] Nonresident citizens, however, receive a foreign income allowance of $120,000 (2023) per year and can credit foreign taxes, so that a US citizen working either for a relatively low foreign income or paying sufficiently high foreign taxes, will face a filing obligation with little to no tax liability.

[8] It is still likely to be a net loss for the home country, as a wealthy individual might have paid much more in tax than their consumption of public goods.

[9] Since 2022, the commentary to the Common Reporting Standards clarifies that taxpayers need to list all tax residences and cannot rely on tiebreaker rules when more than one jurisdiction has a potential claim.

In comparing these two mechanisms, it is noteworthy that in the former it might be impossible to determine whether a move takes place for tax or nontax reasons, as people move countries for a host of private reasons. In the second case, however, tax is necessarily the reason. Of course, some people may wish to hold their investment through a third country for nontax reasons, such as stability or expertise, but in those cases, they would still declare their tax residence truthfully and any related home country taxes, which would be enforceable through exchange of information.

CBI at first seems redundant for tax reasons, as residence is normally sufficient. There are nevertheless some tax reasons for it:

- Granting residence—especially based on minimal presence—may be insufficient to protect individuals from automatic exchange of information (AEOI). Responsible financial institutions would know that a residence permit is insufficient to establish tax residence and would investigate further to ensure that relevant criteria are met or require a certificate from the home country. A local passport, however, is more likely to prevent any further investigations by financial institutions into the question of residence.
- US citizens, as noted, remain US taxpayers irrespective of their residence. This is theoretically true even if they acquire an additional nationality. However, financial institutions may not ask questions about additional nationalities if a local passport is shown—or individuals may lie—in which case the Foreign Account Tax Compliance Act (FATCA) which has shifted the reporting requirement by foreign financial institutions from self-reporting to mandatory reporting, will apply in theory but may not be enforceable in practice.
- Since citizenship can be passed on through familial ties, this type of path can be used to skirt inheritance taxes in origin countries for wealth held outside the home country.

In addition to these tax reasons, there are many nontax reasons for which individuals might be attracted by CBI. While it was argued above that obtaining residence without actually moving is virtually always driven by tax considerations, citizenship could be pursued even by tax-compliant individuals, for example to facilitate travel by obtaining citizenship of countries with fewer visa requirements. For instance, in the EU—and some other country groupings—being a citizen of a Member State secures extensive rights across all other Member States. Another benefit of citizenship is access to a safe haven in case of conflict in the home country.

Overall, both citizenship and temporary and permanent residence clearly have important tax implications. This means that countries can strategically use these to attract talent and investment, but also simply to collect revenue.

The Market for Citizenship and Residency

Moving across borders or even shifting investment across borders can be done for many nontax and, even more broadly, noneconomic reasons. Explaining migration or investment purely by tax would therefore be a gross oversimplification. However, where a right, such as citizenship or residence, is granted directly in return for a financial consideration in the form of a significant fee or investment requirement, and where the country offering both is not otherwise a magnet for immigration or investment, tax considerations are likely to be a relevant—and in some cases even dominant—consideration. It seems therefore justifiable to analyze such transactions as a market based on financial considerations. The following analysis looks more closely into the costs and benefits in such a market and the rationales behind different schemes.

The sellers in this market are countries that have residency or citizenship to offer. Almost every country offers some path to residency and citizenship, but conditions that must be met differ widely. Some countries require

many nonfinancial conditions to be met, including physical presence and cultural adaptation (citizenship and language tests) before granting permanent residency, with naturalization possible only after many years of permanent residence. Even if such countries offer initial residence permits for investment, such nonfinancial conditions still need to be met to obtain permanent residency or citizenship. These represent hard-to-value adaptation costs. Many RBI or CBI schemes, however, are combined with very weak nonfinancial conditions, with physical presence either unnecessary or reduced to a minimal amount (potentially just days). The transaction is then relatively simple to assess. The price charged is simply the fee paid—or in case of an investment requirement, the opportunity cost from undertaking this rather than a different investment. The benefits could include the tax saving described above, security, or in the case of citizenship, also the potential simplification of international travel. For RBI, tax considerations are therefore likely dominant. For CBI, the benefits related to travel (and potentially from having access to a safe place) need to be netted off to figure out the pure tax benefit. Even the tax benefit of CBI is likely higher than for RBI, given the much greater certainty it provides.[10]

The buyers are individuals who can obtain advantages from residency or citizenship. Focusing on the case of CRBI that are for sale with minimal restrictions, the willingness to pay should be related to the potential tax saving, adjusted for risks. Risks will depend on their individual situation, including the rules of their home country. Obtaining another citizenship could lead to loss of the current citizenship, although it is likely that many individuals do not report the acquisition of a second citizenship to the home country and the latter has no easy way of obtaining this information. Moving tax residence could trigger exit taxes that reduce the value of tax savings. In many cases the tax saving is due to evasion rather than genuine relocation, so that there is a risk of being caught.

There are also various intermediaries, including advisers to find the optimal scheme for someone's personal circumstances, and lawyers to help with regulatory and compliance documents. They also act as liaisons with the authorities, coordinating information and facilitating the due processes. Schemes are complex, and even more so if the interaction with home country rules are taken into account. Before paying for RBI or CBI, individuals would like to know the exact implications, not just in terms of direct tax saving, but also any indirect effect from having access to different double-taxation agreements from their new residence, the risks of being caught in case they use the scheme to evade taxes, and the potential costs of undoing in the future an arrangement that may not be worthwhile anymore under changing rules.

It is not always possible to neatly classify a program as a CBI or an RBI. Many intermediaries promote, for example, Austria as a CBI country because the Austrian Citizenship Act provides a path to citizenship on the basis of investment. Others do not consider Austria to be a CBI country because the naturalization process is much longer and more demanding than a typical CBI program. A broad definition would classify any capital-based path to citizenship—including Austria's—as a CBI. A narrower approach would limit the CBI designation to programs providing a *direct path to citizenship* within a period of time that is significantly shorter than the time required to obtain citizenship through a regular naturalization process (often five years). We adopt this narrower definition and set the threshold to 12 months in order to ensure that Malta's program is classified as a CBI, since it is widely considered as such. The European Parliament has adopted a similar definition in its latest report on the matter. Among European countries, it designated only the programs of Cyprus (offered until 2020) and Malta as CBIs, leaving out Austria's and Bulgaria's programs (Fernandes, Navarra, and De Groot, 2021).

[10] In some cases, CBI could also have tax disadvantages, for example, if a country offers tax incentives only to non-citizens.

A similar dilemma between a narrow and a broad definition exists for RBI programs. They can be broadly classified in two categories. One includes the programs often referred to as “golden visas”, which provide residency in return for passive investments, typically in real estate or a national fund. The programs of Greece and Portugal are well-known examples. The second category includes programs targeting active investors who are interested in starting their own business. Canada’s Startup Visa and the United States’ E2 Visa fall in this category. We consider these two types of programs as being fundamentally different in the type of investor they target. The emphasis of our work is on the more generic, golden-visa type of program and we therefore only classify those as RBI. Again, our classification concurs with the most recent European Parliament assessment of residency and citizenship programs.

While details will depend on personal circumstances in complex ways, Table 1 provides an overview of the main features of countries that might offer RBI or CBI schemes, and how these might allow deducing the rationale behind the schemes. There are four quadrants in the table, determined by whether physical presence (and other) requirements related to citizenship or residence are weak or strong and whether taxation is low or high.

High tax countries clearly are not an option for individuals seeking to avoid or evade taxes. If such countries have strict rules, they present a destination country option for people wishing to reside in another country, which potentially offers more opportunities. If they have lax rules, then obtaining citizenship facilitates travel or creates a safe harbor in case a move is needed, residence does only the latter, and is less secure.

For low-tax countries, clearly tax-motivated purchases are more relevant. It is important to note that “low-tax” does not necessarily refer to the general tax system, but only to the one applicable to beneficiaries of CRBI, which could potentially be lower, although possibly only temporarily. For people with high global income, a territorial system might be very attractive, while high taxes on local income would not be an impediment. Among those countries, if physical presence requirements are minimal, they are the prime example of a situation facilitating tax evasion. If such requirements are strong, taxes can still be reduced but require real migration. While the principle behind the table should be relatively clear, the difficulty for any empirical analysis is to draw the line between low and high taxes, as well as weak and strong residence requirements, as in practice these are continuous rather than dichotomous variables.

Table 1. Implied Targets of CRBI Schemes

		Residence/Citizenship requirements	
		Weak (no or limited physical presence needed, CBI offered)	Strong
Taxation	Low (low/no income tax, territoriality, tax incentives—possibly temporarily)	Facilitates tax evasion. (Fee income or very small tax revenue in exchange for providing a saving of foreign taxes)	Encourages real migration for tax reasons. (Offers low taxes in return for investment/talent/spending) Temporary incentives: possibly motivated by future tax revenue.
	High	Capitalizes on nontax benefits (safe refuge, convenient travel, circumventing sanctions)	Encourages real migration for nontax reasons. (Offer access to an attractive country in exchange for investment)

The rest of this paper is structured as follows. Section II describes the data used to analyze CRBI schemes. The following sections then turn to empirical analysis with Section III considering the determinants of adopting CBI or RBI schemes and section IV analyzing the impact of such schemes on economic outcomes, such as investment, portfolio holdings, and house prices. Section V concludes and discusses policy implications.

II. Data

CRBI Data

There is no comprehensive information repository on CRBI programs. This function is performed to varying degrees by intermediaries in the investment migration market, who collect information from available programs and publish it on their websites or in annual reports. We harvested data from several such service providers, including Henley & Partners, Arton Capital, CS Global Partners, Best Citizenships, Investment Migration Insider (IMI), and residencies.io. Additional information has been obtained from reports from official sources such as the OECD and the European Commission, and by international associations such as Transparency International and Global Witness.[11]

IMI was our primary data source because it is the most up to date and comprehensive in its coverage. It provides information on the legal basis of each program, delineates paths to residency and citizenship, and classifies programs into different types depending on their characteristics. It also offers access to a subscription-based data center that includes information on the number of applications and/or approvals for several countries. Another good source for data is Henley & Partners, an industry pioneer serving both sides of the market: it provides services to interested individuals and advises governments on designing their programs. It also publishes an annual ranking of CRBI programs based on ten criteria assessing the program's benefits and cost effectiveness for potential applicants. Rankings of CBI (but not RBI) programs are also published by Arton Capital, Best Citizenships, and until recently by PWM, a publication of the Financial Times.[12]

Building our dataset of currently active programs and their key characteristics from the service providers mentioned above was a difficult task because of the non-uniform availability of data. Three key challenges arose. First, each program's start date (and end date where applicable) was not readily available from a single source. This was particularly true for less successful or abandoned programs. We were able to find the information for most programs (and almost all major ones) by exhaustively searching websites of service providers, official country websites, international news media outlets, and other sources. Second, many programs have changed over time, and it has not been an easy task to track down previous versions of each program. Though we kept track of changes to the extent possible, unfortunately some gaps remain. The third issue was the definition of CRBI programs, as discussed above.

Other Data

Economic variables were mostly obtained from the World Bank's World Development Indicators. They include GDP, GDP per capita, openness (the sum of exports and imports as a fraction of GDP), net FDI inflows,

[11] Some examples include European Commission (2019), OECD/FATF (2023), Transparency International and Global Witness (2018), Scherrer and Thirion (2018).

[12] This ranking, known as the CBI Index, was published annually between 2017-2022 by PWM in association with CS Global Partners. In 2023 the index was not published by PWM but is listed on the Financial Times website as partner content.

unemployment, and urbanization (urban population as a fraction of the total). For house prices, we use the house prices index which covers all types of dwellings with base year 2015 and is from the BIS.

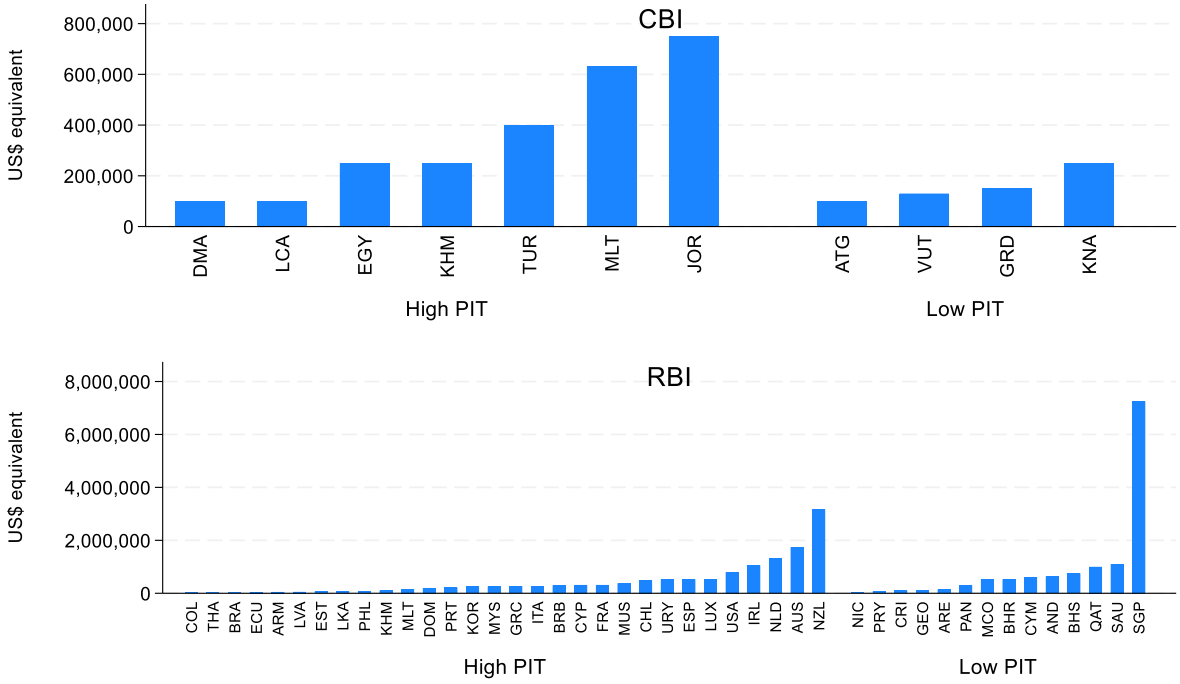
On governance, we use two measures from the World Bank's World Governance Indicators (WGI) as indicators of institutional quality. *Voice and Accountability* measures the extent to which a country's citizens are able to participate in selecting their government and citizens' perceptions to freedom of expression, freedom of association, and a free media. *Control of Corruption* captures perceptions of the extent to which public power is exercised for private gain. The measures are normalized to range from -2.5 (weak) to 2.5 (strong governance) and are available from 1996 onward.

Geographic variables include information on whether the country is an island country from the WorldAtlas and whether it is a landlocked country from the World Population Review. Country size measured by land area (square kms) were taken from the Food and Agriculture Organization.

III. The Adoption of CRBI Schemes

Adopting a CBI or RBI scheme is not a binary choice, but also requires setting other relevant conditions, notably about any minimum investment, and other requirements, such as physical presence. As shown in Figure 4, minimum investment amounts for CBI differ much across countries, and having low taxes does not appear to allow countries to require higher investment. There is even greater dispersion for RBI schemes. Annex Table A 1 and Table A 2 provide greater detail on the breakdown of minimum investment options by asset type for 2024.

Figure 4. Minimum Investment under CBI and RBI Schemes, 2022



Source: IMF staff calculations based on IMI data.

Notes: Low PIT countries are classified as such when the top marginal PIT rate is one standard deviation below average or the tax system is territorial. Data for 2022 is shown for consistency with the broader panel dataset used in econometric analysis in this paper, which ends in 2022 due to lagged availability of other relevant variables.

For a subsample of cases, we have assessment data from Henley & Partners, an international investment migration advisory firm. Every year the firm produces a ranking of CBI and RBI programs based on ten criteria, six of which are common while four are specific to the type of program. Programs are graded on a 1-10 scale on each criterion and the scores are aggregated to determine the overall ranking. In 2023 Henley's graded 26 RBI programs and 14 CBI programs.

The number of programs is too small for econometric analysis, so we resort to looking at simple correlations. Table 2 displays the correlation of each criterion with investment requirements for the 26 RBI programs and 14 CBI programs. Note that countries with low minimum investments in USD will score highly in the 'Investment Requirements' criterion. This means that we should expect a *negative* correlation between the 'Investment Requirements' criterion and the rest of the criteria: a high score in, say, 'Reputation', indicates a higher quality product that should command a higher price, meaning a higher minimum investment, which translates to a *lower* score in the 'Investment Requirements' criterion.

Table 2. Correlation Coefficients Between Investment Requirements and Features of RBI and CBI Programs

Criterion	Higher score means:	Correlation with investment requirement	
		RBI	CBI
Reputation	Better country reputation	-0.337*	-0.807***
Quality of Life	Better quality of life	-0.143	-0.845***
Visa-Free or Visa-on-Arrival Access	Access to more countries	0.252	0.002
Processing Time	Faster processing	0.369*	0.742***
Compliance	Better due diligence	-0.408**	-0.027
Total Costs	Less costly process	0.688***	
Time to Citizenship	Faster path to citizenship	-0.508***	
Citizenship Requirements	Fewer requirements	-0.460**	
Tax	Favorable tax regime	0.256	
Residence Requirements	Fewer requirements		0.212
Relocation Flexibility	Easier to relocate		-0.753***
Physical visit Requirements	Fewer requirements		0.757***
Transparency	Clear rules and processes		0.291
Investment Requirements	Low investment req.	1.000	1.000
Number of programs		26	14

Source: Authors' calculation based on IMI data. Superscripts *, **, and *** denote significance at the 10%, 5% and 1% level respectively.

We first look at the five criteria that are common to CBI and RBI programs. Reputation and quality of life are strongly negatively correlated with investment requirement scores, and therefore positively correlated with the price of a passport. This is consistent with the expectation outlined above. The sign of the correlation is the same for RBI programs, but not nearly as strong. Easier access to other countries is not correlated with investment requirements. Processing time has a counter-intuitive positive correlation (strongly significant for CBI, less so for RBI). High compliance scores are associated with higher investment requirements for RBI

programs. This suggests that the market values a strong compliance regime. Interestingly, there is no such correlation for CBI programs.

Regarding RBI-specific criteria, 'Total Costs' is a measure of all costs associated with a program. A higher score means lower costs. Investment requirements are a big component of that, hence the positive correlation. 'Time to Citizenship' and 'Citizenship Requirements' both have to do with the ease of obtaining citizenship after residency. The negative correlation suggests that countries offering an easier path can ask for greater investment. The friendliness of the tax regime is not correlated with investment requirements.

Turning to CBI-specific criteria, countries to which relocation is considered easier require higher minimum investment as expected. 'Physical Visit Requirements' counterintuitively are associated with lower investment requirements. This may reflect that attractive countries can demand both, something that could only be checked with multivariate analysis for which this sample is too small. The remaining criteria ('Transparency' and 'Residence Requirements') are insignificant.

Interestingly, some countries appear to recognize competitive pressure over the minimum investment requirement. To address this, the members of the Organisation of Eastern Caribbean States offering CBI programs, recently signed a memorandum of agreement, introducing a common minimum investment of $200,000 (net of any commissions) from June 30, 2024. The memorandum also covers cooperation, regulation, information sharing and similar matters.

To analyze the adoption of CRBI programs further—and returning to the full sample—we grouped schemes into their potential motivation using the criteria developed above and spelled out in Table 1. A challenge in applying the criteria in practice is that it requires specific cutoffs for concepts such as being "low tax" or "having strong requirements" to obtain residence or citizenship. Specifically, we defined low tax to mean that the top personal income tax rate is at least one standard deviation below the global average or that the country offers a territorial system. Regarding other requirements, we defined minimum residence periods of less than 30 days for RBI as being weak.[13] We considered CBI weak by definition, contrasting it to standard naturalization, which would be based on years of legal residence and potentially language and other requirements.

While the precise definitions are certainly up for debate, the broad picture that emerges (Table 3) is interesting. First, the least common combination is to offer low taxes and strong qualification requirements, which would be used by countries trying to attract real immigration through low taxes. Slightly more common are countries offering low taxes and an easy process, followed by countries charging high taxes and having high requirements. The most common combination, however, is high taxes and lax requirements, a combination dominant in relatively poorer per capita jurisdictions, that is relevant in the market of attracting wealthy investors seeking nontax advantages, such as a place of refuge or ease of travel. Countries with strong qualification requirements tend to be on average richer.

[13] In 2022, 51 percent of RBI schemes required 0 days of residence, 12 percent require 5 or 7 days, and all others require 30 days or more.

Table 3. Minimum Investment by Type of Scheme

		Residence/Citizenship requirements	
		Weak (less than 30 days or CBI offered)	Strong (at least 30 days)
Taxation	Low (top PIT rate one s.d. below average or territoriality)	Countries: 10 Mean investment: 1002K Median investment: 200K Mean GDP per capita: 27K	Countries: 8 Mean investment: 468K Median investment: 565K Mean GDP per capita: 31K
	High	Countries: 21 Mean investment: 244K Median investment: 250K Mean GDP per capita: 15K	Countries: 12 Mean investment: 745K Median investment: 420K Mean GDP per capita: 41K

Adoption of CRBI schemes is likely the result of many factors. To take this further, we ran a range of logit regressions to assess determinants more systematically while allowing for multiple variates. The results (Table 4) indicate that there is no strong average marginal effect of predictors on CBI schemes. Equation (1) shows the baseline regression. Notwithstanding, a number of explanatory variables do have statistically significant impact on the log-odds ratio (not shown here), including control of corruption, being a landlocked country, and being a larger economy (log nominal GDP), which appear to reduce the likelihood of having a CBI scheme, and higher debt and being a richer economy (log GDP per capita), which appear to increase the odds of introducing a CBI scheme. However, several of these effects are not significant at the observed covariate levels shown below, except for corruption control and economy size/per capita income. The same holds with the addition of year effects (equation (2)). To analyze the link with taxation, equation (3) adds in the low-tax dummy. This is not significant, confirming that—even when controlling for a host of other variables—there is no clear link between tax levels and offering such schemes. We find a similar lack of significant effect when including time-varying top marginal PIT rates instead. The following three regressions repeat the analysis for RBIs, which provides more significant findings in terms of average marginal effects, likely helped by the greater number of such schemes. The key finding is that larger (log nominal GDP) and richer (log GDP/capita), and more open (trade/GDP) economies are more likely to offer such schemes, as well as economies with lower general government revenue ratios. The different sign in the coefficient on log nominal GDP for CBI and RBI is noteworthy, as it suggests that the choice between them is driven by economic circumstances, with larger economies less likely to adopt CBIs and more likely to adopt RBIs. Interestingly, higher control of corruption seems to be associated with greater likelihood of introduction of RBIs, *ceteris paribus*, when controlling for year fixed effects (equation (5)). Other conjunctural and geographic variables remain insignificant.

To assess the robustness of these results, we ran many more regressions than shown, with key experiments being the lagging of explanatory variables and the addition of random country effects. Results are very stable.

Table 4. Determinants of CBI and RBI Adoption Probability

	(1)	(2)	(3)	(4)	(5)	(6)
Dependent variable	CBI in place			RBI in place		
Control of Corruption	-0.020*	-0.013	-0.019*	0.014	0.040*	0.011
	(0.012)	(0.009)	(0.010)	(0.023)	(0.023)	(0.023)
Real GDP Growth	0.081	0.100	0.082	-0.098	0.098	-0.090
	(0.056)	(0.066)	(0.055)	(0.143)	(0.185)	(0.148)
Unemployment Rate	-0.002	-0.002	-0.002	0.002	0.003	0.002
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
General Government Balance	-0.000	0.000	-0.000	0.000	0.002	0.001
	(0.001)	(0.001)	(0.001)	(0.002)	(0.002)	(0.002)
Total Government Revenue Ratio	-0.001	-0.001	-0.001	-0.005**	-0.004**	-0.005**
	(0.001)	(0.001)	(0.001)	(0.002)	(0.002)	(0.002)
Government Debt to GDP	-0.000	-0.000	-0.000	0.000	0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.001)	(0.001)	(0.001)
Log nominal GDP (USD)	-0.009*	-0.009*	-0.010*	0.031**	0.032**	0.028*
	(0.005)	(0.005)	(0.006)	(0.014)	(0.014)	(0.016)
Log GDP per Capita	0.008*	0.004	0.010*	0.040*	0.015	0.046*
	(0.005)	(0.004)	(0.006)	(0.022)	(0.023)	(0.027)
Trade as Fraction of GDP	0.030	0.029	0.028	0.081**	0.075*	0.078**
	(0.023)	(0.022)	(0.020)	(0.037)	(0.039)	(0.039)
Island	0.014	0.012	0.009	0.081	0.089*	0.074
	(0.016)	(0.017)	(0.016)	(0.050)	(0.048)	(0.053)
Landlocked Country	-0.048	-0.047	-0.047	-0.065	-0.067	-0.068
	(0.033)	(0.031)	(0.031)	(0.072)	(0.068)	(0.074)
Population Density	-0.000	-0.000	-0.000	-0.000*	-0.000*	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Low-PIT Tax Jurisdiction			-0.027			-0.034
			(0.020)			(0.059)
Fixed Effects	No	Year	No	No	Year	No
Pseudo R-squared	0.231	0.270	0.255	0.234	0.276	0.236
N	3786	3786	3786	3786	3786	3786
Number of countries	166	166	166	166	166	166

Standard errors in parentheses

Note: Marginal effects from a logit regression with country-clustered standard errors.

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

Having found some economic and geographical variables with explanatory power for implementing CRBI schemes, we assess whether such schemes are introduced to some extent as a result of competition among countries, similar to the literature estimating tax reaction functions (e.g., Devereux, Lockwood, and Redoano 2008). We calculated both inverse distance and unweighted leave-out average of dummies of having a CBI or RBI in place. As is well known, finding a positive slope in reactions functions can be driven by various mechanisms, including competition over real resources (in this case applicants for CRBI schemes), which is known as the resource-flow model, or mimicking other countries' policies, which is one form of a spillover model (see Brueckner, 2003). Hence, without a structural model and evidence on its parameters, we can only establish the presence of competition, not its mechanism, and we cannot even exclude other possibilities, such as common trends that are not driven by any competitive process.

As shown in Table 5, there is some evidence of competitive pressure to introduce such schemes when other countries do. For CBI, this is significant only for distance-weighted averages, suggesting more sensitivity to CBI adoption in the region. For RBI, there is no difference between distance and equal weighted averages. In any case, the finding is indistinguishable from a time trend, inclusion of which reduces the significance of the the

result (CBI) or counterintuitively turns it negative (RBI). Competitive pressure could go beyond adoption and result in downward pressure on minimum investment. While we do not have the data to estimate such impact, countries appear to perceive such pressure, as evidence by the above-mentioned memorandum on minimum investment requirements among members of the Organisation of Eastern Caribbean States.

Table 5. Estimation of Reaction Functions

	(1)	(2)	(3)	(4)	(5)	(6)
Dependent variable	CBI in place			RBI in place		
Inverse Distance Weighted	0.635***		0.473**	0.738***		-1.569***
Neighbor CBI or RBI	(0.206)		(0.235)	(0.207)		(0.549)
Unweighted Other CBI or RBI		0.282			0.777***	
		(0.223)			(0.199)	
Time			0.001			0.021***
			(0.001)			(0.005)
Control of Corruption	-0.016	-0.018	-0.013	0.036	0.036	0.043*
	(0.010)	(0.012)	(0.010)	(0.024)	(0.023)	(0.023)
Real GDP Growth	0.107	0.105*	0.107	0.002	0.013	0.038
	(0.066)	(0.062)	(0.065)	(0.144)	(0.145)	(0.149)
Unemployment Rate	-0.002	-0.002	-0.002	0.003	0.003	0.004
	(0.002)	(0.002)	(0.002)	(0.003)	(0.003)	(0.002)
General Government Balance	0.000	-0.000	0.000	0.002	0.002	0.002
	(0.001)	(0.001)	(0.001)	(0.002)	(0.002)	(0.002)
Total Government Revenue Ratio	-0.001	-0.001	-0.001	-0.004**	-0.004**	-0.004**
	(0.001)	(0.001)	(0.001)	(0.002)	(0.002)	(0.002)
Government Debt to GDP	-0.000	-0.000	-0.000	0.000	0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.001)	(0.001)	(0.001)
Log nominal GDP (USD)	-0.008*	-0.008	-0.008*	0.033**	0.032**	0.030**
	(0.005)	(0.005)	(0.005)	(0.014)	(0.014)	(0.013)
Log GDP per Capita	0.004	0.005	0.003	0.021	0.019	0.011
	(0.005)	(0.005)	(0.004)	(0.023)	(0.024)	(0.024)
Trade as Fraction of GDP	0.031	0.031	0.031	0.079**	0.078**	0.074*
	(0.021)	(0.022)	(0.021)	(0.039)	(0.039)	(0.038)
Island	0.018	0.019	0.017	0.091*	0.090*	0.084*
	(0.015)	(0.015)	(0.015)	(0.050)	(0.050)	(0.049)
Landlocked Country	-0.045	-0.045	-0.045	-0.070	-0.069	-0.065
	(0.030)	(0.032)	(0.030)	(0.071)	(0.071)	(0.069)
Population Density	-0.000	-0.000	-0.000	-0.000*	-0.000*	-0.000*
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Fixed Effects	No	No	No	No	No	No
Pseudo R-squared	0.301	0.273	0.304	0.252	0.257	0.278
N	3535	3535	3535	3535	3535	3535
Number of countries	161	161	161	161	161	161

Standard errors in parentheses

Note: Marginal effects from a logit regression with country-clustered standard errors.

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

Overall, the results from the analysis of determinants of adoption or RBIs and CBIs suggests that taxes and its avoidance and evasion are not the only or even the driving force behind the proliferation of such schemes. Instead, it appears that country-specific motivations must be driving the adoption. Of course, for some countries, the tax story might be the relevant one.

IV. Impact on Economic Outcomes

While the previous section suggested that motivations for CRBI schemes likely differ across countries, this section investigates their impact on economic outcomes. Despite their different motivations, it is useful to know whether they are successful in boosting investment or revenue, or if they merely raise house prices and lead to more portfolio investment being held through countries offering such schemes.

The literature in this area is relatively scant. Xu et al. (2015) discusses recent developments and implications of the CBI programs for the real economy, focusing in particular on the risks to macroeconomic and financial stability for the mostly small countries offering such programs. Konrad and Rees (2020) investigate CBI programs in the European Union making the point that because of free movement in the EU, these programs automatically give a right to settle in any country within the EU, and therefore individual EU countries price these programs at a price that would be suboptimal from an EU perspective, since they ignore the externality their decision imposes on other EU Member States. Pereira dos Santos and Strohmaier (2024) assess the impact of Portugal's RBI on house prices and find a significant effect.

The most concretely studied issue is the impact of such programs on investments or bank deposits held by residents of countries offering such schemes. While Ahrens et al. (2022) did not find robust evidence of an impact of such programs, Langenmayer and Zyska (2023)—who focus specifically on CRBI offered by countries that are high risk from a tax perspective—find evidence that citizenship-by-investment programs are used to circumvent tax information exchange.

Domestic Investment

To assess the impact of CRBI schemes on investment, we run a simple aggregate investment regression (expressed as a share of GDP), with a lagged dependent variable, some standard controls, and a dummy that indicates the presence of an CRBI scheme. To address heteroskedasticity across countries, standard errors are clustered at the country level. We purposefully look at aggregate investment, not just investment related to meeting CRBI conditions. The compulsory investment could potentially crowd out other investment, in which case it would not add to the capital stock. It may also include purchases of existing capital (e.g., existing houses), which would not contribute to increased domestic investment statistics. And finally, some of it may not materialize, because investors find ways to circumvent the investment requirement or make counteracting transactions. Therefore, if one of the aims of a CRBI is to encourage an increase in the country's capital stock, the benchmark outcome of interest should be aggregate domestic investment.

Our key finding is that domestic investment appears to be unaffected by the availability of an RBI or CBI scheme (Table 6). Equation (1) is a simple OLS regression, equation (2) adds year effects, and equation (3) adds country effects. None of these regressions reveal any significant impact of CBI regimes.

Equation (4) interacts the CBI dummy with an indicator on whether the country offering the program has been listed by the OECD as "posing a high risk to the integrity of the CRS [Common Reporting Standards]."[14] This is to control for the possibility that schemes in that categorization might be less effective in attracting investors. The result is insignificant. Adding a measure of the low-tax status of the jurisdiction (equation (5)), or the top

[14] See Residence/Citizenship by investment - Organisation for Economic Co-operation and Development (oecd.org).

marginal PIT rate in each country-year, also does not change these findings, either as a stand-alone covariate or interacted with the main treatment variable.

Equation (6) replaces the RBI dummy by the share of RBI approvals per population per year, to allow for the fact that only programs with significant uptake can be expected to have any macroeconomic impact. As noted before, these data are scarce, so using them leads to a reduction in observations, as we drop all RBI schemes for which no such data are available. The coefficient on this new variable is positive, significant, and large (implying one additional approval per thousand residents is associated with an increase of 3 percent in the gross capital formation to GDP ratio); the only indication that RBIs may affect positively investment rates—if approvals are high relative to the population.

To control for potentially structurally heterogeneous effects of these programs based on country size, equation (7) interacts the main treatment dummy with a binary indicator for small island developing states (SIDS). We find a positive and statistically significant effect of being a SIDS offering such a regime under full panel and year fixed effects, suggesting an over 1 percent of GDP positive real investment boost for smaller island countries, that is not observed in other larger non-island economies. Notwithstanding, an alternative specification interacting program treatment with log-GDP is not statistically significant. To control for the possibility that countries with low foreign reserves may prefer to use forex inflows through CRBI schemes to accumulate reserves rather than increase investment with a potentially large import share, equation (8) includes the ratio of Gross International Reserves to Net International Reserves (GIR/NIR) for each country-year as a covariate – itself is indeed positively correlated with domestic investment, but its interaction with CRBI is not statistically significant.

While the bias from a lagged dependent variable in a fixed effects regression should be small given the relatively long time period (on average 22 years per country), equation (9) uses a system-GMM estimator to address any resulting panel data bias. Moreover, GMM allows treating also the other explanatory variables as endogenous. The coefficient on the lagged dependent variable is between the OLS and the fixed effect regression result, which is the expected result (and suggests that some panel bias did remain despite the long time period).

Overall, the conclusion is that simply offering CRBI schemes does not appear to affect domestic investment. Of course, that does not exclude the possibility that such schemes are associated with some increase in real investment at the project level, but this does not affect domestic investment at the aggregate level, either because the impact is trivially small or because of crowding out. With the caveat of working with a smaller sample, there is at least weak evidence that for a scheme to have any impact, it must be effective in obtaining applications and approving them in significant numbers relative to the population.

Table 6. Domestic Investment and CRBI Programs

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
L.Gross Fixed Capital Formation Pct GDP	0.875***	0.877***	0.663***	0.663***	0.663***	0.656***	0.663***	0.701***	0.732***
	(0.018)	(0.018)	(0.027)	(0.027)	(0.027)	(0.028)	(0.027)	(0.026)	(0.063)
L.Active CRBI Program	-0.078	-0.104	-0.272	-0.353	-0.254		-0.409	-1.173	-0.496
	(0.126)	(0.126)	(0.305)	(0.315)	(0.278)		(0.315)	(1.054)	(0.549)
L.CRBI in High-Risk Country				0.970					
				(0.791)					
L.CRBI X Low PIT					-0.068				
					(0.841)				
L.RBI Approvals per Population						2.543*			
						(1.473)			
L.CRBI X SIDS							1.290*		
							(0.737)		
GIR/NIR								1.152*	
								(0.670)	
L.CRBI X GIR/NIR								1.172	
								(1.111)	
Log GDP per Capita	-0.056	-0.045	-0.016	0.005	-0.013	-0.144	-0.044	-0.193	-0.018
	(0.048)	(0.047)	(0.899)	(0.900)	(0.899)	(0.961)	(0.901)	(1.019)	(0.356)
Trade as Fraction of GDP	0.223	0.188	2.472***	2.448***	2.468***	2.890***	2.555***	0.632	3.050**
	(0.158)	(0.152)	(0.735)	(0.741)	(0.735)	(0.835)	(0.739)	(0.565)	(1.455)
Inflation Rate	0.010	0.008	0.011	0.011	0.011	0.010	0.011	0.004	0.025***
	(0.013)	(0.013)	(0.011)	(0.011)	(0.011)	(0.010)	(0.011)	(0.014)	(0.009)
Unemployment Rate	-0.015	-0.014	-0.141***	-0.142***	-0.141***	-0.156***	-0.141***	-0.120***	0.054
	(0.016)	(0.016)	(0.032)	(0.032)	(0.032)	(0.035)	(0.032)	(0.044)	(0.089)
General Government Balance	0.003	-0.014	-0.062*	-0.063*	-0.062*	-0.076**	-0.063*	0.081**	0.068
	(0.018)	(0.018)	(0.033)	(0.033)	(0.033)	(0.034)	(0.033)	(0.040)	(0.096)
Government Debt to GDP	-0.006***	-0.006***	-0.022***	-0.022***	-0.022***	-0.023***	-0.022***	-0.019**	-0.031**
	(0.002)	(0.002)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.007)	(0.014)
Fixed Effects	None	Year	Country & year	Country & year	Country & year	Country & year	Country & year	Country & year	GMM, Country & year
R-squared	0.779	0.787	0.539	0.539	0.539	0.536	0.539	0.660	
N	3802	3802	3802	3802	3802	3437	3802	1513	3802
Number of Countries	154	154	154	154	154	152	154	85	
AR(2) p-value									0.16
Hansen p-value									0.24

Standard errors in parentheses; * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Dependent variable: Domestic investment in percent of GDP.

Note: The GMM estimation uses Roodman's (2009) instrument collapsing method.

Revenue

While there are well-documented cases of one-off revenue windfalls for some countries (e.g., Gold and Myrvoda (2017) for a discussion of cases in the Caribbean), there is little evidence using broader samples of

CRBI regimes. To assess such an impact, we regress revenue as a share of GDP on the CRBI indicator, as well as a range of control variables. As dependent variable we consider both general government revenue—which includes any fees from such schemes—and personal income tax revenue, which would abstract from fees and only detect a successful indirect effect from rising incomes (assuming some progressivity in the tax schedule).

Overall, the results (Table 7) reveal a significant positive impact of CRBI schemes on revenues only for small island developing states (Regression (5)). More generally though, countries with CRBI programs are actually statistically more likely to have lower revenues than other countries (Regression (1)). There does not seem to be a difference for high-risk CRBI countries (Regression (2)). But when country effects are added, and the identification rests on changes over time, the negative impact disappears (Regression (3)). Analogous regressions using personal income taxes as the explanatory variable (Regressions (6)-(10)) generally find no significant impact, the only exception being a weakly significant negative impact from introducing CRBI schemes in countries classified as high-risk to the integrity of the CRS. Coefficients on control variables are mostly in line with expectations: generally, revenues are boosted by per capital GDP, low inflation, and high tax rates. Less intuitively, unemployment, and in two cases negative real growth, are associated with higher revenues.

Table 7. Public Revenues and CRBI Programs

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Dependent variable	General government revenue / GDP					Personal income tax revenue / GDP				
L.Active CRBI program	-4.866***	-4.910***	0.368	0.118		-0.244	-0.104	0.198	0.197	
	(1.319)	(1.386)	(0.625)	(0.641)		(0.662)	(0.678)	(0.127)	(0.134)	
L.CRBI in High-Risk Country		0.618					-1.798*			
		(3.355)					(1.033)			
L.CRBI X SIDS				3.435**					0.013	
				(1.697)					(0.184)	
L.RBI Approvals per Population					-0.965					0.172
					(1.273)					(0.272)
Log GDP per Capita	5.105***	5.105***	2.718**	2.695*	2.749*	1.846***	1.847***	-0.042	-0.042	-0.156
	(0.676)	(0.676)	(1.363)	(1.365)	(1.479)	(0.289)	(0.288)	(0.216)	(0.216)	(0.234)
Trade as Fraction of GDP	0.418	0.405	6.452**	6.721**	7.915**	-0.693*	-0.663*	0.262	0.264	0.011
	(1.782)	(1.806)	(2.634)	(2.645)	(3.319)	(0.370)	(0.380)	(0.407)	(0.413)	(0.483)
Inflation Rate	-0.046**	-0.046**	-0.006	-0.006	-0.006	-0.001	-0.000	-0.008***	-0.008***	-0.007***
	(0.019)	(0.019)	(0.007)	(0.007)	(0.007)	(0.010)	(0.010)	(0.002)	(0.002)	(0.003)
Unemployment Rate	0.334***	0.333***	0.039	0.041	0.055	0.038	0.040	0.005	0.005	0.008
	(0.122)	(0.122)	(0.077)	(0.077)	(0.086)	(0.039)	(0.039)	(0.023)	(0.023)	(0.025)
Real GDP Growth	-2.041	-2.006	8.042**	7.929**	7.742*	-4.962	-5.165*	-1.450**	-1.450**	-1.079
	(8.285)	(8.285)	(3.877)	(3.902)	(4.154)	(3.040)	(3.045)	(0.716)	(0.718)	(0.704)
Top PIT Rate	0.044	0.043	0.077**	0.078**	0.079*	0.055**	0.056**	0.051***	0.051***	0.045***
	(0.063)	(0.063)	(0.039)	(0.039)	(0.043)	(0.022)	(0.022)	(0.014)	(0.014)	(0.014)
Fixed Effects	Year	Year	Country & year	Country & year	Country & year	Year	Year	Country & year	Country & year	Country & year
N	2375	2375	2375	2375	2091	1944	1944	1944	1944	1707
R-squared	0.378	0.378	0.127	0.130	0.144	0.471	0.473	0.160	0.160	0.127
Number of Countries	151	151	151	151	147	136	136	136	136	132

Standard errors in parentheses, * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

House Prices

For a subset of countries, we have house price data from the BIS and can analyze the impact of CRBI programs. As shown in Table 8, there is some evidence that CRBI schemes increase house price inflation (inducing an increase of as much as 3 percent in the first year depending on the model used). The effect persists when fixed country effects are added (Regression (3)). This is consistent with—albeit smaller than—the effect on high-end house price growth found by Pereira dos Santos and Strohmaier (2024) for Portugal's RBI. The effect appears—unsurprisingly—to be concentrated in countries where real estate is allowed as an investment type (Regression (4)), and the effect is lowered in high-risk countries (Regression (6)), while being a low-tax country as previously defined (Regression (5) or a small island developing state (Regression (8)) does not change the effect. Among macro covariates, higher GDP growth, lower unemployment and a more urban population are systematically associated with higher housing price growth. Regression (7) controls for the number of available bilateral treaties as a measure of the scheme's attractiveness, but this turns out insignificant. Although not shown in Table 8, the significant positive effect remains after controlling for episodes of macroprudential policy tightening of limits to loan to value ratios.[15] Puzzlingly at first glance, RBI approvals intensity relative to population seems to reduce house price inflation (Regression (9)), but this effect disappears entirely if excluding Malta and Cyprus from the country sample and is thus driven by outliers.[16]

[15] Based on data from the IMF's Integrated Macroprudential Policy (iMaPP) Database as of December 2024. Results available upon request from the authors.

[16] As a robustness check, we found the strength of residence requirements for program qualification is positively associated with house price growth, but not statistically significant (not shown). This likely reflects the fact that what matters for the house price market is whether investors purchase homes, not how much time they spend in them.

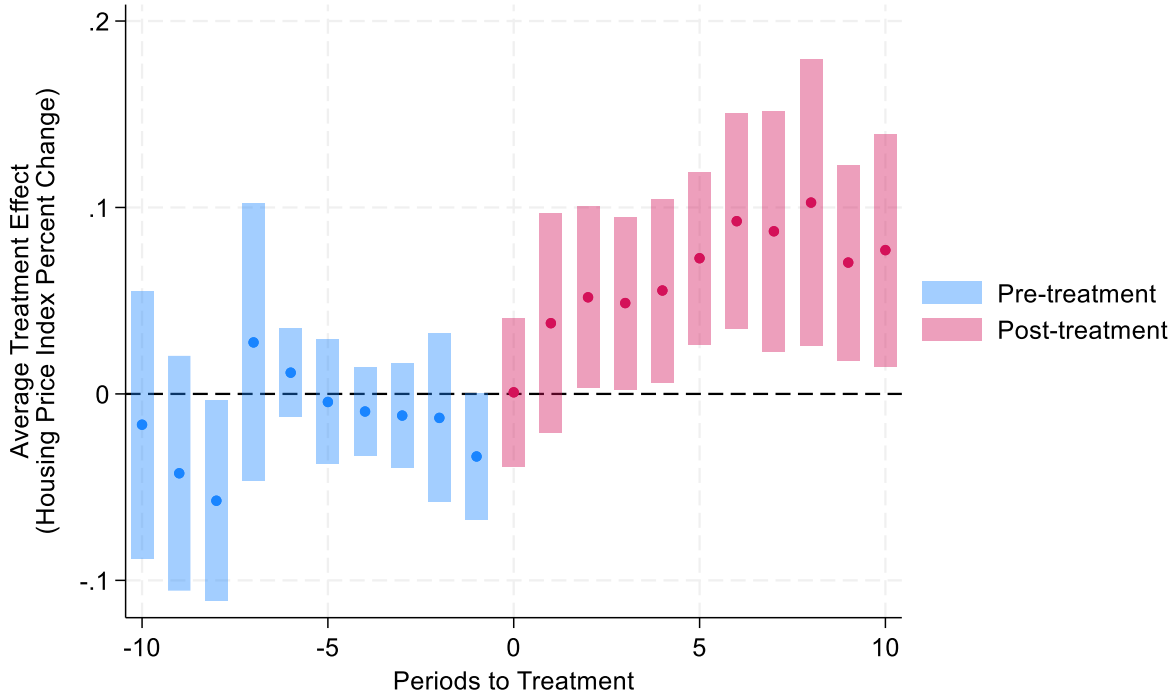
Table 8. House price growth and CRBI Schemes

	Panel OLS									Diff-in-Diff
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
L.Active CRBI Program	0.011**	0.007	0.017**	-0.002	0.014	0.021**	0.015*	0.018**		
	(0.005)	(0.005)	(0.008)	(0.010)	(0.009)	(0.009)	(0.008)	(0.009)		
Population Density	-0.000*	-0.000*	0.000	0.000*	-0.000	0.000	0.000	0.000	0.000	
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	
Real GDP Growth	0.890***	1.053***	1.306***	1.316***	1.306***	1.305***	1.261***	1.312***	1.330***	
	(0.115)	(0.141)	(0.152)	(0.149)	(0.151)	(0.152)	(0.158)	(0.153)	(0.173)	
Trade as Fraction of GDP	0.005	0.006	-0.006	-0.010	-0.008	-0.005	-0.017	-0.010	-0.014	
	(0.006)	(0.006)	(0.021)	(0.018)	(0.019)	(0.020)	(0.021)	(0.023)	(0.022)	
FDI Net Inflows as Fraction of GDP	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	
Inflation Rate	-0.000	0.001	0.002	0.002	0.002	0.002	0.002	0.002	-0.001	
	(0.001)	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.001)	
Unemployment Rate	-0.001*	-0.001	-0.007***	-0.007***	-0.007***	-0.006***	-0.006***	-0.007***	-0.007***	
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	
Fraction of Urban Population	0.062***	0.070***	0.129	0.093	0.130	0.100	0.114	0.127	0.134	
	(0.020)	(0.020)	(0.154)	(0.161)	(0.152)	(0.155)	(0.150)	(0.154)	(0.169)	
L.CRBI X Real Estate Allowed=1				0.029**						
				(0.013)						
L.CRBI X Low PIT					0.028					
					(0.019)					
L.CRBI X CRS High Risk=1						-0.052***				
						(0.012)				
Log Bilateral Treaties							-0.004			
							(0.009)			
L.CRBI X SIDS								-0.032		
								(0.036)		
L.RBI Approvals per Population									-0.029**	
									(0.014)	
ATTC										0.029**
										(0.012)
Fixed Effects	None	Year	Country & year	Country & year	Country & year	Country & year	Country & year	Country & year	Country & year	
N	1349	1349	1349	1349	1349	1349	1277	1349	1124	1145
R-squared	0.212	0.321	0.409	0.412	0.410	0.413	0.407	0.410	0.421	
Number of Countries	58	58	58	58	58	58	58	58	57	58

Dependent variable: real house price growth. Standard errors in parentheses; * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

As a robustness check for the statistically significant results in the panel OLS regressions, we estimate the average treatment effect on the treated using a difference-in-differences approach based on Callaway and Sant'Anna (2021) (Regression (10), average treatment effect on the treated censored at 10 years before and after the event - ATTC). Their estimator allows for (i) multiple time periods, (ii) variation in treatment timing, and (iii) the "parallel trends assumption" to hold after conditioning on observed covariates. Doing so using the set of never-treated countries as the control group confirms the OLS estimates and suggests the increase in house price growth persists for RBI countries, up to 10 years after regime introduction (Figure 5).

Figure 5. Conditional Diff-in-Diff Real Estate Price Impact of CRBI Schemes



Outward Portfolio Investment

Since one possible reason to apply for CBI or RBI systems is tax avoidance or evasion by holding assets through a different country, one could expect to see an increase in portfolio assets held by residents of countries offering such schemes. Alternatively, any substantial revenue gain by the government could also lead to rising government deposits in the banking system, which banks might invest overseas under limited availability of safe domestic financial asset.

As shown in Table 9, results suggest that countries offering CBI or RBI schemes have higher foreign portfolio holdings (Regression (1)), which holds up to adding year effects (Regression (2)). Among the controls, the number of treaties is noteworthy, which is positive and significant, suggesting that a strong treaty network is associated with higher portfolio holdings. In addition, higher top marginal PIT rates seem to be associated with higher outward portfolio investment, possibly because this allows residents to avoid domestic taxation, either because of a territorial system or an imperfect worldwide taxation system (where capital income is not repatriated, or enforcement of worldwide income tax provisions is imperfect). Regression (3) adds interactions of the CRBI dummy with the high-risk classification and territoriality. It shows that the positive impact is more than undone when the country is labeled as high risk for CRS.[17] Adding country effects (Regressions (4) and (5)) turns most coefficients of interest insignificant, including the CRBI dummy, the availability of treaties, and the top personal income tax rate, likely due to the limited variability over time in these variables. We do not find evidence that programs in SIDS affect portfolio flows materially. Notwithstanding, higher intensity of approvals

[17] As a CBI/RBI in a territorial country is particularly attractive for holding assets in third countries, we also ran regressions in which we interacted the CB/RBI dummy with territoriality, but this never turned out to be significant.

relative to the population does seem to be positively associated with an increase in foreign portfolio asset holdings, even after controlling for country fixed effects (equation (7)) – hinting that changes in asset holdings over time may be more difficult to measure for countries already with sizeable international portfolio investment positions unless the relative number of new resident investors is significant.

Table 9. Portfolio Investment and CRBI

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
L.Active CRBI Program	0.490**	0.479**	0.608***	-0.031	-0.038	-0.019	
	(0.213)	(0.221)	(0.219)	(0.097)	(0.096)	(0.103)	
L.CRBI in High-Risk Country			-1.686***		0.094		
			(0.566)		(0.509)		
L.CRBI X SIDS						-0.239	
						(0.193)	
L.RBI Approvals per Population							0.304**
							(0.136)
Log Bilateral Treaties	0.603***	0.593***	0.559***	0.283***	0.283***	0.293***	0.332**
	(0.136)	(0.140)	(0.142)	(0.106)	(0.106)	(0.107)	(0.132)
Log GDP per Capita	1.988***	2.031***	2.018***	1.322**	1.315**	1.322**	0.880
	(0.115)	(0.113)	(0.110)	(0.604)	(0.605)	(0.605)	(0.648)
Trade as Fraction of GDP	-0.001	-0.043	0.001	-0.125	-0.133	-0.162	-0.168
	(0.238)	(0.244)	(0.231)	(0.212)	(0.211)	(0.227)	(0.286)
Inflation Rate	-0.042**	-0.039**	-0.040**	-0.006***	-0.006***	-0.006***	-0.008***
	(0.017)	(0.018)	(0.018)	(0.002)	(0.002)	(0.002)	(0.002)
Unemployment Rate	-0.025	-0.026	-0.022	-0.027	-0.027	-0.027	-0.038*
	(0.040)	(0.040)	(0.039)	(0.019)	(0.019)	(0.019)	(0.020)
General Government Balance	-0.032**	-0.036***	-0.035***	-0.017*	-0.017*	-0.017*	-0.012
	(0.012)	(0.013)	(0.013)	(0.010)	(0.010)	(0.010)	(0.010)
Government Debt to GDP	0.005	0.004	0.005	-0.001	-0.001	-0.001	-0.000
	(0.004)	(0.004)	(0.004)	(0.003)	(0.003)	(0.003)	(0.003)
Top PIT Rate	0.034***	0.037***	0.037***	-0.004	-0.004	-0.004	-0.004
	(0.011)	(0.012)	(0.012)	(0.009)	(0.009)	(0.009)	(0.008)
Fixed Effects	None	Year	Year	Country & Year	Country & Year	Country & Year	Country & Year
N	1226	1226	1226	1226	1226	1226	1016
R-squared	0.760	0.770	0.778	0.617	0.617	0.617	0.571
Number of Countries	74	74	74	74	74	74	72

Dependent variable: Log of US$ portfolio assets. Standard errors in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Overall, the empirical section has found that CRBIs may have measurable effects on outward portfolio holdings and house price inflation but appear to have no significant (or no positive) effects on real variables, such as domestic investment and revenues, except for the case of small island developing states. While it is certainly useful to know that simply having a CBI or RBI is unlikely to create major positive impact on real variables, the impact of any specific CBI or RBI could be different depending on its precise features. As an illustration of such heterogeneity, Box 1 discusses a few country cases—some with strong budgetary impact, and some with negligible macroeconomic effect.

Box 1. Heterogeneity in the Macroeconomic Impact of CRBI Schemes

Despite the muted general effects of CRBI schemes, there are some examples of countries where they have played a major economic role, especially for public finances.

Saint Kitts and Nevis is a very small country with around 50,000 inhabitants. Its CBI dates from 1984. For many years it had the largest in absolute number of approvals at more than 2,000 per year—though recently it was overtaken by Türkiye (Surak 2024). Initially, the budgetary impact was very small, growing toward 1 percent of GDP by 2008, then accelerating to 14 percent of GDP in 2014, before falling back to 7 percent of GDP in 2016 (Gold and Myrvoda 2017). During 2020/21, on average more than a third of government revenue (one sixth of GDP) came from the CBI program (Surak 2024). Including off-budgetary flows, such as investments, the overall annual impact amounted to 53 percent of GDP according to estimates by Surak (2024).

Dominica is also a very small country with fewer than 80,000 inhabitants. It approves the third-highest number of CBIs per year, which translates into high revenues despite a relatively low minimum donation of $100,000 (Surak 2024). Gold and Myrvoda (2017) show that already in 2005, the impact of the CBI on the fiscal balance was positive, though very small. By 2012 it had risen to close to 5 and by 2016 close to 10 percent of GDP. Surak (2024) reports that on average over 2020/21 the CBI program accounted for more than 50 percent of government revenue, which would imply that it reached about a quarter of GDP.

Vanuatu has less than 330,000 inhabitants. Its CBI started comparatively late in 2013, but now grants the fourth largest approvals per year, and just over 40 percent of government revenue (15 percent of GDP) over 2020-21 came from the CBI program (Surak 2024). In May 2022, the Council of the European Union suspended visa-free access to the Schengen area citing security concerns related to the CBI.[18]

In other cases, economic effects have been negligible or even detrimental, especially in the property market.

Cyprus, a comparatively larger country with a population of about 1 million, had a CBI scheme requiring much higher contributions of €2.5 million (including fees and minimum investment). In absolute numbers it thus had the highest investment of all CBIs, but as a share of GDP the contribution to both government revenues and investment was only between 3 and 5 percent (Surak 2024). In 2018, more foreigners than nationals bought property in the country, contributing to the sector's booming (Louca 2018). The scheme was abolished in 2020 amidst a corruption scandal.

Türkiye, as noted, now has the highest number of approvals at over 4,000 in 2019 (Surak 2024). However, with a population of about 85 million, the macro impact of the scheme is much more muted. Investment related to the CBI stands at about 0.1 percent of GDP and fiscal revenues are negligible.

Canada, a G-20 member country of nearly 40 million people, repealed its federal Immigrant Investor Program in 2014 due to lack of sustained positive impact on personal income tax revenues or aggregate investment associated with investors in the program (Government of Canada, 2014).

[18] https://www.consilium.europa.eu/en/press/press-releases/2022/11/08/vanuatu-council-fully-suspends-visa-free-travel-agreement/

Similarly, Surak and Tsuzuki (2021) find that even large RBI programs in relatively small economies, such as the one in **Greece**, contribute receipts of less than 1 percent of GDP. For EU countries with disaggregated data available, applicants overwhelmingly opt to invest in real estate rather than other asset types. In 2018, RBI applicants accounted for about 36 percent of all real estate transactions in Greece, or 72 percent of all foreign investment in the sector, contributing to a potentially destabilizing housing market boom.

V. Conclusions and Policy Implications

RBI, and especially CBI programs, are highly controversial. While being important contributors to the public finances of some individual countries, they may have undesirable side effects. Locally, they can cause inflated house prices, while their international spillovers could include diverted investment, circumvention of sanctions, and—as discussed in some detail—facilitation of tax avoidance and evasion.

Despite these controversies, there has been relatively little empirical analysis of their domestic and international effects. While some country-specific studies have found very large effects, this paper shows that it is much harder to detect strong or generally valid effects across a broad sample of such programs.

Empirical analysis of what causes adoption of CRBI programs, revealed some generally valid determinants, such as lack of corruption control for CBI, and larger, richer, more open economies with lower government revenues for RBI. However, contrary to priors, we found no evidence connecting the likelihood of adoption to either type of regime and low tax treatment. There is some tentative evidence that programs in more attractive countries or with more attractive features can extract a higher price from applications. There is also some evidence of countries reacting to CRBI adoption by others, though it is indistinguishable from a time trend. While adoption is often driven by country-specific considerations that are not easily picked up in a cross-country study of differing programs offered under differing circumstances, our findings suggest some themes differentiating the modal country adopting a CBI versus an RBI.

Regarding the economic impact, there is a distinction between the effects on real variables and those on nominal variables or ownership. The paper did not find convincing evidence of an impact on real variables, such as aggregate investment or public revenues, except for a measurable positive effect on overall government revenues for SIDSs and on investment for countries with high RBI approval ratios relative to overall population. There is more consistent evidence on nominal variables. House prices indeed appear to increase, and there is evidence of a generally positive relationship between holdings of international assets and the adoption of CRBI programs, exacerbated in cases with high intensity of approvals.

Regarding policy implications, countries considering the introduction of such schemes should be wary about expecting results in line with what was achieved in some anecdotal cases. Under different circumstances or if offering different program parameters, they may not achieve much. Moreover, except for SIDS or where potential demand for the program is high relative to the size of the population, the most likely effects may not be beneficial or significant—and can in some cases be outright harmful. For example, if more investors hold international assets through a certain jurisdiction offering RBI, that jurisdiction does not benefit much from it, as these investors will likely not engage in much real activity in the territory. If purchasing real estate and residential properties, the resulting price increase of the housing stock can be harmful in terms of affordability for the local population. Moreover, circumstances have changed as a result of counter measures. The classification of certain schemes as high risk by the OECD, for example, has reduced their impact in some specifications. Beyond taxation, benefits such as visa free travel can be revoked by countries affected by

spillovers. At the very least, countries should undertake a careful and comprehensive cost-benefit analysis before considering such programs. These should include all the economic and political costs involved in commodifying citizenship and residence rights, ensuring also that there is sufficient transparency and oversight to prevent misuse of the schemes.

Annex. Minimum Investment Requirements

Table A 1: CBI minimum investment and available investment options, historically through 2024 (in thousands of US$)

CBI Programs	Minimum contribution	Real estate option	Bond/fund option	Business investment option	Active period
Antigua & Barbuda	230	300	230	1,500	2013-present
Belize	40	-	-	-	1985-2002
Cambodia	250	-	250	305	1996-present
Comoros	45	-	-	-	2001-2018
Cyprus	2,150	2,150	2,150	2,150	2011-2020
Dominica	100	100	200	-	1993-present
Egypt	250	300	250	450	2019-present
Grenada	235	270	235	-	2013-present
Ireland	1,275	-	-	1,275	1988-1998
Jordan	750	-	1,000	750	2018-present
Malta	740	740	800	-	2014-present
Marshall Islands	100	-	-	-	1987-1996
Moldova	105	-	105	-	2018-2019
Montenegro	475	475	-	-	2018-2022
Nauru	15	-	-	-	1998-2003
North Macedonia	210	-	210	420	2021-2022
Peru	25	-	-	-	1992-1993
Samoa	11	-	-	-	1991-1997
Saint Kitts & Nevis	250	400	-	-	1984-present
Saint Lucia	250	300	250	250	2016-present
Tonga	35	-	-	-	1982-1996
Türkiye	400	400	500	500	2017-present
Vanuatu	130	-	130	-	2015-present

Table A 2: RBI minimum Investment and available investment options, historically through 2024 (in thousands of US$)

RBI Programs	Minimum contribution	Real estate option	Bond/ fund option	Business investment option	Active period
Andorra	630	630	630	630	2013*-present
Armenia	50			50	2006*-present
Australia	1,500	-	-	1,500	2012-2024
Bahamas	750	750	-	750	2021-present
Bahrain	530	530	-	-	2022-present
Barbados	300	300	300	300	1980*-present
Brazil	30	125	-	30	2018-present
Bulgaria	540	-	540	540	2009-2022
Cambodia	100	100	-	100	2022-present
Canada	700	-	-	700	1986-2013
Cayman Islands	600	600	-	1,200	2009-present
Chile	500	500	500	500	2010-present
Colombia	25	75	-	25	2017*-present
Costa Rica	100	150	-	100	2021*-present
Cyprus	315	315	-	315	2012-present
Dominican Republic	200	200	-	200	2012*-present
Ecuador	46	46	-	46	2022*-present
Estonia	50	-	-	50	2017-present
France	320	-	-	320	2016-present
Georgia	100	100	-	300	2014*-present
Greece	263	263	424	263	2014-present
Hong Kong	3,855	-	-	3,855	2003-2015
Hungary	1,060		-	1,060	2012-2017
Ireland	420	-	420	1,050	2012-2023
Italy	265	-	2,110	265	2017-present
Latvia	53	265	265	53	2010-present
Luxembourg	530	-	3,170	530	2017-present
Malaysia	115	170	115	-	2002-present
Malta	80	400	-	80	2014-present
Mauritius	375	375	-	-	2020*-present
Monaco	530	530	-	-	1991*-present
Netherlands	1,320	-	1,320	1,320	2013-present
New Zealand	2,930	2,930	2,930	2,930	1999-present
Nicaragua	30	30	-	30	2011*-present
Panama	300	300	-	500	2012-present
Paraguay	70	-	-	70	2016-present
Philippines	75	-	75	75	1987*-present
Portugal	210	-	210	530	2012-present

Qatar	1,000	1,000	-	-	2018-present
Saudi Arabia	1,100	1,100	-	1,900	2019-present
Singapore	7,452	-	18,630	7,452	2009-present
South Korea	235	235	235	-	2000-present
Spain	530	530	2,120	1,060	2013-present
Sri Lanka	75	75	-	75	2022-present
Thailand	26	26	-	-	2003-present
United Arab Emirates	136	545	545	136	2019-persent
United Kingdom	2,250	-	-	2,250	1994-2022
United States	800	-	-	800	1990-present
Uruguay	525	525	-	2,250	2020*-present

Note: Years marked with an asterisk (*) are those for which the effective start date of the program was not available. For these entries, the year of approval of the law which provides the legal basis for the program has been used.

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