

# Assessing Visa Costs on a Global Scale

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RSCAS 2020/18
Robert Schuman Centre for Advanced Studies
Migration Policy Centre

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Italy

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## Abstract

Visas are an important means for countries to regulate incoming mobility flows. Past datasets and quantitative research on visas have focused on visa waivers, ignoring the fact that visas, where demanded, can vary greatly by cost. This paper presents a novel dataset based on a manual collection of visa costs for travel between a global set of country pairs in seven different categories (tourist, work, student, family reunification, business, transit, and other). Our analyses reveal a strong global visa cost divide that raises important questions about the injustice regarding the right to travel for people located in different areas of the world. Whereas Europeans usually hardly have to work at all for travel permits, visa costs often amount to several weeks or even months of mean income in Sub-Saharan Africa and South Asia. Regression analyses show that these discriminatory practices are explained by the (lack of) economic prosperity and (flawed) state of democracy in the country of origin. This suggests that the global visa cost regime is driven by a rationale of economic and political control and exclusion rather than blatant racism. The result is a fundamentally paradoxical situation: The richer a country, the less its citizens pay for visas to go abroad (both in absolute terms and relative to their income).

## Keywords

Visa costs, mobility, migration, tourism, visa waiver, network analysis.

## Introduction[*]

The possibly most basic fact of political life is that the planet we inhabit is split into self-organized units called, in common language, *nations* (or, more precisely, states). If international mobility is conceptually distinct from spatial mobility tout court, it is because there are nations. In a stateless world, geographical movements would not need an adjective to qualify them: all mobility would simply be 'mobility'.

Sovereign states, in turn, are predicated on frontiers that delimit their jurisdictions – that is, according to Max Weber's classical definition, the territory where the state can 'claim the monopoly of the legitimate use of physical force' (Weber 1948, 78). However, while states arguably have an in-built preference for their subjects' immobility within their boundaries (Scott 1998), their existence does not preclude mobility across national borders, at least on a temporary basis. States are not impenetrable monads, but gatekeepers: exits and especially entries onto their soil are controlled and restricted. The history of the advent of the modern state is indeed intertwined with the centralization and monopolization of this gatekeeping power (Torpey 1998 and 2018). Who can access them from outside and who cannot is a major prerogative of states – what Torpey (1998, 240) dubs the 'very 'stateness' of states'. Nationals enjoy entry rights if they happen to be abroad – this is a cornerstone of national citizenship in all its possible declinations. Non-nationals, in turn, have to be authorized. Such authorizations, or entry permits, are called 'visas'. Visa-based restrictions are the paramount instrument in international law to control mobility and immigration, pre-selecting (and also deterring, a key point for the analysis that follows) would-be travellers and migrants before they initiate a mobility project from their country of origin. Visas allow states to anticipate possible entries in time – as they must be demanded in advance – and in space – as applications usually occur far from the destination. Through visas, border control is pushed back to the aspiring movers' doorsteps, so to speak. This is a basic rationale for the existence of consulates, which lies more in the state interest of regulating international mobility in advance and far away from its territory than in the alleged protection of nationals residing or travelling abroad. Such a 'remote control' of international mobility through visas (Zolberg 2006, 443) is reiterated by imposing visa checks on air carriers before boarding.

With different scales and foci, existing empirical research on visa regimes is now abundant and rather detailed, examining the historical premises, configurations, determinants and consequences of visa obligations (Koslowski 2000; Neumayer 2006; Mau 2010; Hobolt 2014; Lawson and Roychoudhury 2016; Laube and Heidler 2016; Czaika and Neumayer 2017; Czaika et al 2018). The smaller number of empirical studies with a global scope have particularly focused on 'visa waivers' – that is, the automatic concession of entry permits to citizens of other states as a consequence of international agreements (Brabandt and Mau 2013a and b; Gülzau et al 2016). Mau et al (2015) collected systematic information on visa waivers between all possible combinations of sovereign states worldwide in 1969 and 2010 (the Visa Network Data). They found that the proportion of visa waivers increased globally over four decades, from an average of 24 to 32 destinations per passport. However, they also showed that the hierarchy of citizenships granting more or less easy access to foreign territories, which earlier work had already outlined (e.g., Neumayer 2006), had consolidated over time. The mean number of borders that travellers from OECD countries could cross freely grew substantially, while it changed only minimally for citizens of non-OECD countries. Notably, visa-free travel possibilities shrank for citizens of African countries. From their inter-temporal comparison, the geography of visa waivers reveals an increasingly polarized world in terms of opportunities for international mobility (Mau et al 2015).

[*] We thank Miguel Centeno (Princeton University) for the help with the Gallup World Poll data, Samuel Sorokin for contributing to coding, Cosimo Recchi for a final quality check of the dataset, and Li Kathrin Rupieper for assistance in preparing the migration intentions and plans variables. We are also grateful to Steffen Mau and Fabian Gülzau for advice regarding the comparability of their visa waiver data with our data on visa costs.

Visa policies lie at the crossroads of three policy areas: immigration control; trade, tourism and FDI management; and foreign policy relations. Therefore, Czaika et al (2018, 1-2) contend that 'real-world travel visa regimes may not fit within simplistic North-South schemes […] reflect[ing] more complex geopolitical relations and multi-layered hierarchies at the regional level'. Their DEMIG Visa Database, which gathers yearly information on visa waivers and prohibitions to travel for certain nationalities in the 1973-2013 period, offers granular insights on historical and geopolitical circumstances that trigger changes in visa policies. The emergence of regional organizations like the EU, ECOWAS and ASEAN is a case in point, as well as international political alliances that find an echo in visa lifting as a symbol and commitment to further exchanges and proximity between countries. Overall, visa-free travel appears to be mostly an achievement of regional blocs and the OECD 'club'. Broadly speaking, there is stability in the extent of global visa restrictiveness, with about three quarters of country-pairs requiring a visa in the four decades under study in the DEMIG project (ibid, 13-14).

Czaika et al's (2018) yearly analysis also highlights that visa requirements can become stricter under different pressures: unwanted waves of asylum-seeking, wariness for investments from certain countries, or retaliation against foes in international relations. They classify bilateral visa dynamics into eight possible combinations: mutual gratification, bilateral opening, unilateral opening, negative turnaround, positive turnaround, unilateral closing, mutual retaliation (ibid, 8). However, as they also recognize, changes in visa policies are only partially captured by the introduction or removal of a visa obligation. It is misleading to think that the international visa landscape is black and white – that is, having either visa-restricted or visa-free country pairs. Even when not lifted, access to visas may become more or less difficult, leveraging on additional aspects. States may be more or less generous in granting visas on many grounds: the time needed to issue them, the preliminary conditions for applicants, the limits on the duration of visits, and others. Such conditions are meant not only to screen visitors, but even more basically to deter the less wanted among possible travellers. A key condition in this respect is the 'cost' of visa applications. In spite of its relevance, however, the cost of visa application has not been examined systematically by empirical research so far. This is the objective of the dataset we have created as part of the Global Mobilities Project (GMP) at the Migration Policy Centre (MPC) of the European University Institute (EUI) and that we present and analyse in the following sections.

The remainder of the paper is structured as follows: we first recount the creation of the Global Visa Cost Dataset, which consisted of a manual data collection and an automatized web-scraping-based data collection. These two data sources are subsequently described and compared. Next, we run a set of analyses based on the new Global Visa Cost Dataset, focussing on three research questions that partially build on one another:

1. How are visa costs stratified globally?
2. Is the global visa cost regime racist?
3. Do visa costs help explain mobility flows?

We end with a discussion of the implications of our findings.

## The Global Visa Cost Dataset: Data collection and organization

### *The manual data collection*

Our Global Visa Cost Dataset takes its first inspiration from the Visa Network Data (Mau et al 2015) and the DEMIG Visa Database (Czaika et al 2018), aiming to capitalize on them and widen their acquisitions. In particular, we stick to their logic of collecting information on a country-to-country basis (i.e., in network format) and to their global scope. We expand on them, however, in three senses. The first one is that we collect information on the cost of visas, which is 0 in case of visa waivers, but can vary substantially if a visa is required (the large majority of country pairs). The second point is that we collected data for 2019, i.e. a more recent point in time than previous sources, allowing for more up-to-date analyses. The third difference has to do with the source. Both Mau et al (2015) and Czaika et al (2018) rely on the Travel Information Manual (TIM) of the International Air Transportation Association (IATA). This handbook is used by airlines and travel agencies to assess visa rules for passengers. While accurate, this remains a secondary and short-hand document lacking information on how visas can be obtained and at which cost.

Therefore, for our dataset, our main data is retrieved manually from official governmental websites of the destination country. In the case of missing, unclear or contradictory information in governmental websites, priority goes to the information provided by the country's general consulate in Berlin (and in Paris as a backup source), and eventually to the consulate of the destination country in the sending country. We have coded visa costs in the following categories: tourism, study, business, work, family reunification, transit, and other motives. We have introduced some simplifications such as in the case of distinct costs for the same type of visa, to take the cheapest one, which also uses to be the one for the shortest stay (usually 30 days). The process of data retrieval of visa costs was complex and time-consuming. For countries where information was not available in English, French, Spanish, Arabic, Italian or Russian, a translation website was used to retrieve the necessary information from the primary language of the country.

Palestine and the Syrian Arab Republic are not coded due to a lack of information about travel access to these countries. Some countries in Africa, Oceania and the Middle East required a second round of visa cost checks due to difficulties in finding the information about their visa policy and visa requirements. In the case of many country pairs, there is visa policy information but there is no indication of the actual visa costs. For instance, Nauru in Oceania required a particularly engaged search to retrieve an official document on Immigration Regulations of January 2014, where the actual visa categories and costs are mentioned. This information is not indicated in any other official online source. For country pairs where information is not available in the dataset, missing values are introduced.

We have coded the main visa categories and costs available in the year 2019 (coding took place between April and September, with quality checks in November-December). During the data entry process, we observed that there are also countries with refused entry relations, which we coded separately. In the dataset, 0 means visa-free entry and blank cells are missing information on visa relations.[1] The information about visa cost between the country pairs was first entered in the currency that was indicated in the official source. Later on, we harmonized currencies into US dollars (USD) for each visa category. The date of the currency exchange rate was set to June 1, 2019.

The reported cost refers to what governments and consulates demand to process visa applications, either in consulate offices or online, which is usually not refundable in case of rejection of the application (with some exceptions, for instance Chile). It does not take into account other money-related

[1] In a limited number of cases, countries refuse entry to citizens of particular states. These cases are coded as 'missing' in the published dataset to facilitate statistical analysis, but we also have a version of the dataset with this additional information (available upon request). For the purpose of possible case studies, we can also provide a version of the dataset with additional notes on specificities of country dyads (for instance, about modalities to obtain the visa).

requirements, like giving proof of hotel reservations in the receiving country, a health insurance certificate or having a bank account with a given amount in deposit – which may also be significant deterrents to travels. Equally, the reported cost does not include possible extra costs for agencies managing the red tape, which proliferate off- and online (see next section).

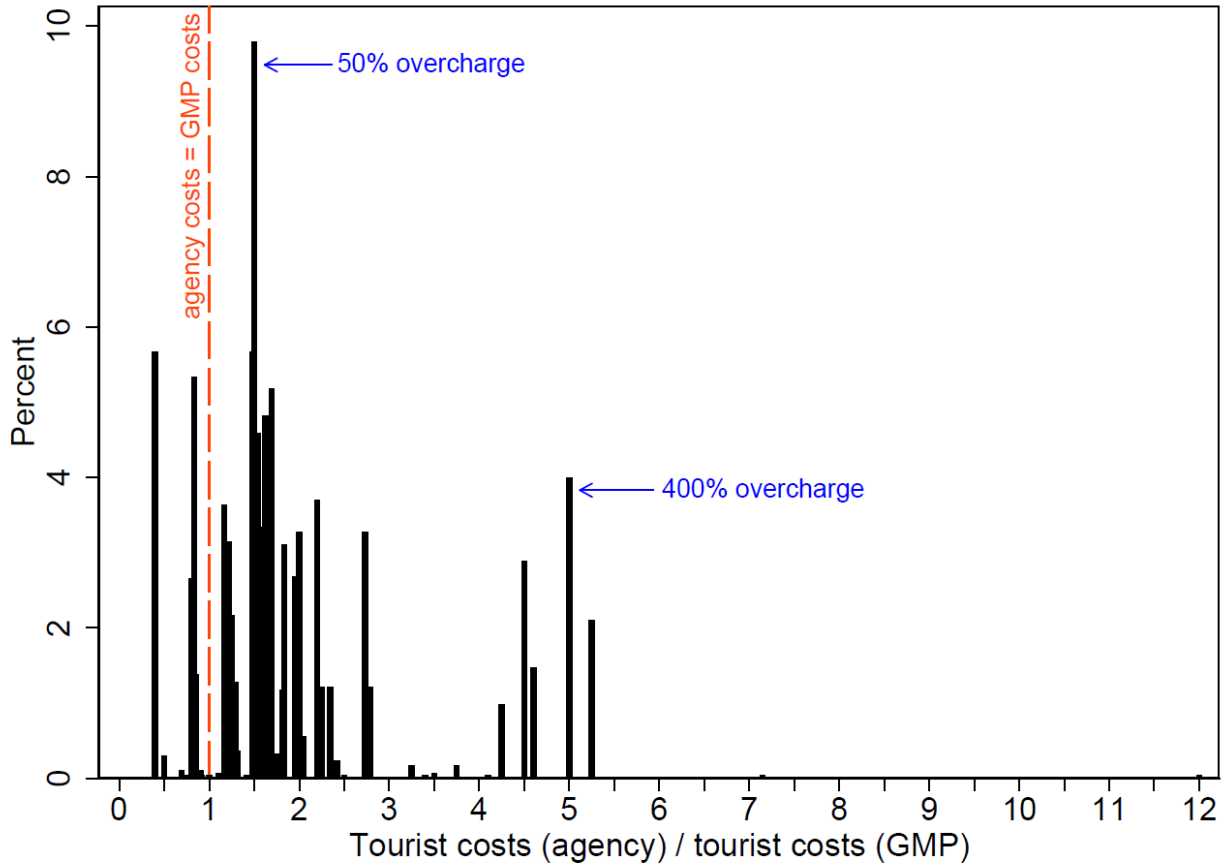
### *The web-scraping data collection*

Given the emerging visibility and success of online companies offering to cater for visas, we have also retrieved information on the cost of tourist, business, and transit visas through one leading online agency (www.touristvisaonline.com). For many potential travellers such agencies are the most convenient way to apply and get a visa, due to their distance from consulates or personal issues in submitting an application in person. The online agency portal asks users to enter their nationality and the country of destination. Users can then select the reason for the trip and see the costs they will incur to ask for the type of visa required. We automated the process of filling in the web form through a Python library called Selenium, looking for the costs of visas for the same pairs of countries identified through the manual process described above. With this method, we were able to obtain information on those country pairs for which the online agency provides visas, which we found to be only a minority of all possible combinations. Through this procedure, we collected the costs of the most relevant visas and integrated them into a separate dataset. Overall, it includes the costs of 7,700 tourist, work/business and transit visas. In parallel, we collected the amount of agency fees for each of these visas, which are provided separately from the visa costs on the website.

### *Comparing official costs and online agency costs*

Our data collection strategy reproduced, as much as possible, the standpoint of an individual wishing to apply for a visa to a potential destination country. We find that the two options – the do-it-yourself and the use of a mediating agency – have significant cost differences, *even setting aside the agency fee*. For 3,053 cases, we have information on the tourist visa costs from both official sources and the online agency. We can compare the two visually by plotting the ratio of the agency costs over the official-sources costs (figure 1). On average, visas are 89.9 percent more expensive if provided by the agency (*nota bene*: excluding their fees) than applying directly to a consulate. It is also noteworthy that there is only a single case (or 0.03 percent) in which the visa costs are the same in both sources. In a minority of cases (15.6 percent) the official tourist visa costs exceed the agency tourist visa costs, while in the vast majority of cases (84.4 percent), the agency charges more than our manual collection would suggest the costs are.

**Figure 1. Comparing official visa costs and agency visa costs**




Note: Appendix Table A1 lists the precise ratios for full transparency. Source: Global Visa Cost Dataset

A closer look at the precise ratios (cf. table A1 in the appendix) reveals that there are several interesting spikes in the distribution: For example, there are 111 cases (3.64 percent) where the agency charges *exactly* one sixth more than what the price is officially and 299 cases (9.79 percent) where it overcharge *exactly* 50 percent. There are also 100 cases (3.28 percent) where it overcharges *exactly* 100 percent and 122 cases (4.00 percent) that charge *exactly* 400 percent more than the official cost suggests. For each of these round ratios, the surrounding cases of non-round ratios are much lower. This clearly suggests that the visa agency systematically overcharges, in many cases using round percentage values to calculate the size of the overcharge. This has at least two implications:

First, it implies that the price that this agency reports on its website cannot readily be used to create a systematic global dataset of visa costs because in many cases (although not in all)[2], it systematically overcharges. The discrepancy from the manually collected costs suggests that the agency reports misleading information (remember that it charges its own fees separately).[3] All this reduces the prospects of automatic data collection of visa costs based on private sector service providers like this

[2] Actual non-round values are usually quite rare (e.g., 1.571429 occurs one time). These non-round values may partially be created through the conversion of currency rates to USD. A full list of values and their potential roundness can be found in the Appendix.

[3] When we include these officially announced agency fees, the overall agency price is on average 2.59 times the size of the price based on our manual data collection. In 91.35 percent of the cases the total agency price exceeds the official price as from our manual data collection.

agency. However, a broader comparison across more such companies would be necessary to substantiate this suspicion further.

Second, despite the fact that almost no cases lead to precisely the same values, the comparison entails that the data contained in the manual collection is reliable. Otherwise, peaks in the ratio of costs between the two sources at round values (+50 percent, +100 percent, etc.) that clearly deviate from a random distribution would not be plausible. A systematic overrepresentation of round values can only be explained by human intervention, in this case through the introduction of hidden fees by a corporate actor.[4] This underlines that our manually collected data *is* reliable, whereas falling back on agency data would produce biased results (at least as long as the majority of people obtains visas directly from embassies and consulates – which we assume).

### *The final Global Visa Cost Dataset*

Due to these discrepancies and the apparent unreliability of the automatized data collection from the agency website, we decided not to merge the two sources, but to rely solely on the manually collected data in our analyses of global visa costs and the published dataset. The dataset is available for free download on the EUI Migration Policy Centre's website (http://www.migrationpolicycentre.eu/globalmobilities/dataset/) and can be used by interested researchers to conduct their own analyses.

Overall, this dataset includes information on the official cost of 85,155 visas. More precisely, we recorded 25,038 country pairs for tourist visas, 16,940 for business visas, 6,073 for work visas, 6,338 for student visas, 5,104 for family reunification visas, 21,968 for transit visas and 3,694 for other motive visas (the full list of variables in the dataset is provided in table A2). In most cases, information on other types of visas is given when and only when there is information on the most basic, so to speak, form of visa – the tourist one. For tourist visas, we could retrieve information on their costs for 65.2 percent of all possible combinations of countries. This proportion is very much in line with previous data collection: 60.5 percent (1969) and 69.1 percent (2010) in the Visa Network Data (Mau et al 2015).[5]

### *Methods*

In the following sections we will test whether various variables explain visa costs and vice versa by drawing on the multiple regression quadratic assignment procedure (MRQAP) via Double Dekker semi-partialing (Dekker et al 2007). MRQAP takes the relational structure of network data and the resulting interdependence of observations into account (Biggiero and Basevi 2009; Krackhardt 1988). To do that, it first runs a standard multiple regression analysis across the cells of the dependent and independent data matrices. It then randomly permutes the rows and columns of the dependent matrix many (here: 2,000) times. This permutation procedure enables estimation of unbiased standard errors and is thus robust to the autocorrelation between rows and columns (i.e., interdependence of observations) that arises in network data (Tsai and Ghoshal 1998). Another advantage of this method is its robustness against multicollinearity (Dekker et al 2003). We show standardised coefficients, which has the drawback that the interpretation of coefficients is less straightforward than for unstandardised coefficients (just as in usual OLS regressions) but the benefit of allowing effect sizes to be compared across independent variables. All MRQAP analyses were conducted in UCINET 6 (Borgatti et al 2002).

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[4] The human preference for round values and its consequences are well-documented in several fields of research (e.g., Lee and Zhang 2017; Lynn et al 2013; Pope and Simonsohn 2011; Tourangeau et al 2000).

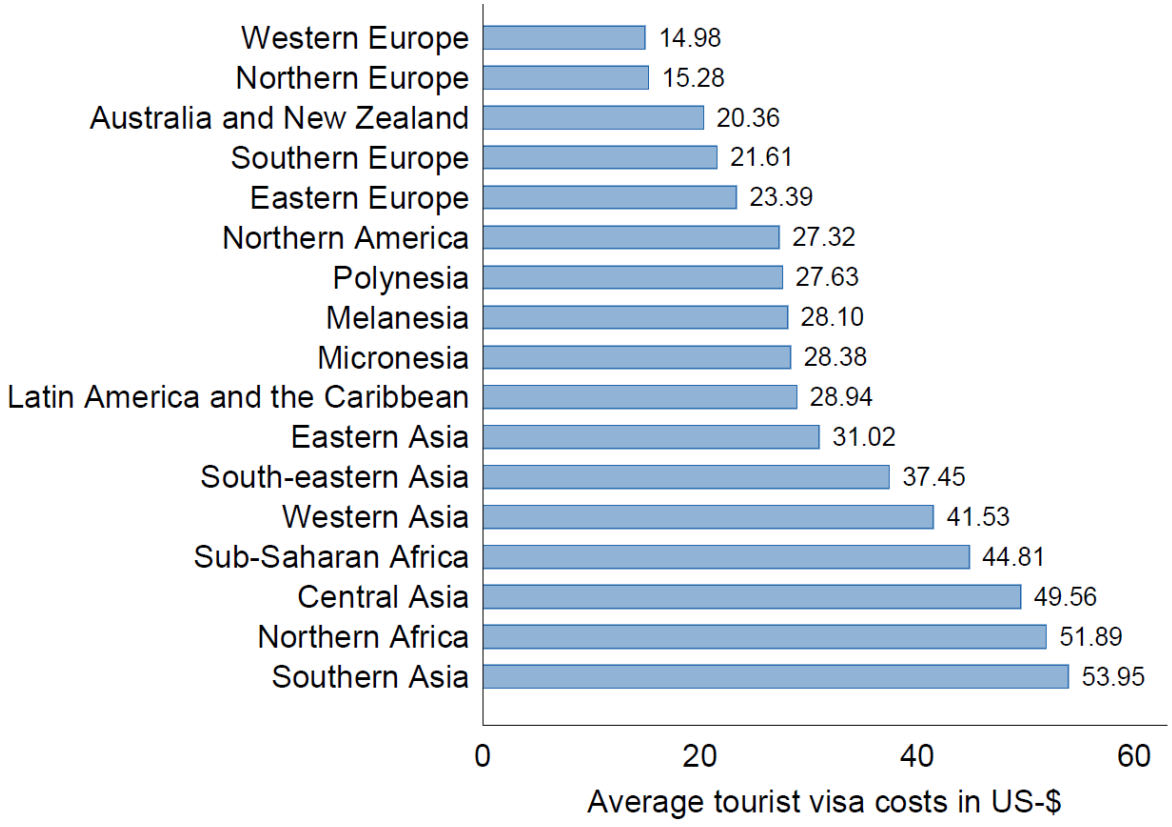
[5] In and by itself, the partial opacity of visa costs contains a message: in the majority of theoretically possible destinations, sovereign states maintain a widespread discretion in granting authorization of access to their soil to non-nationals. The international regulation of human mobility is far from being globally transparent. When the cost of visas is not listed, potential travellers have to inquire and visa applications are processed on an individual case-by-case basis by government authorities or, more often, by consulates.

## Analyses

### *Mapping the global visa cost divide*

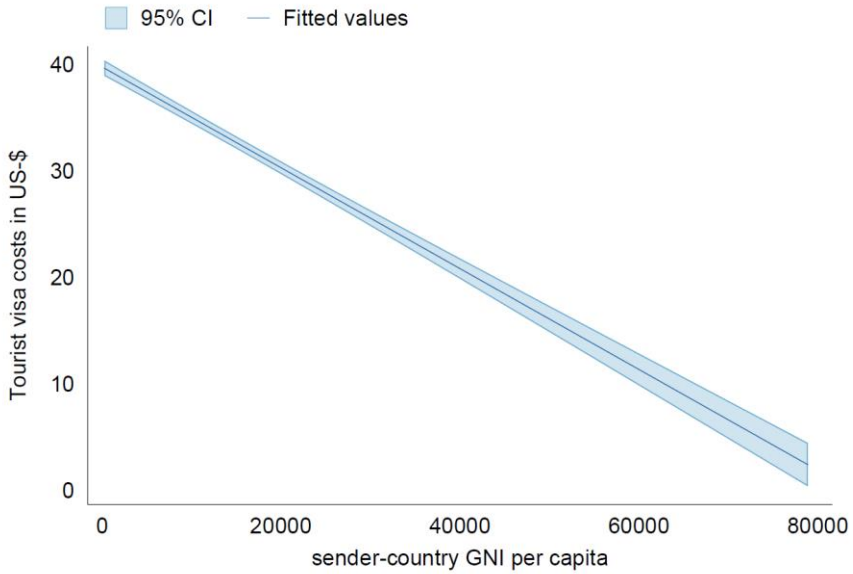
Visa costs vary greatly at the global scale. Let us first focus on the most common category of visas, tourist visas, and look at the costs by world region. Depending on the region of origin of travellers, our dataset shows a clear global gradient in tourist visa costs (figure 2). People in Southern Asia pay on average more than three times more than Western Europeans when getting a visa to go abroad. Note that this does not take differences in income into account yet. Figure 3 shows that there is a strong and highly significant negative relation between tourist-visa costs and sender-country GNI per capita (World Bank 2019). There is thus a fundamentally paradoxical situation: The richer a country, the less its citizens have to pay for visas to go abroad. This could be called the Matthew effect of visa costs: when they want to go abroad, the poor get poorer and the rich stay rich.

**Figure 2. Average tourist visa costs in USD by sender-country subregion**




Source: Global Visa Cost Dataset

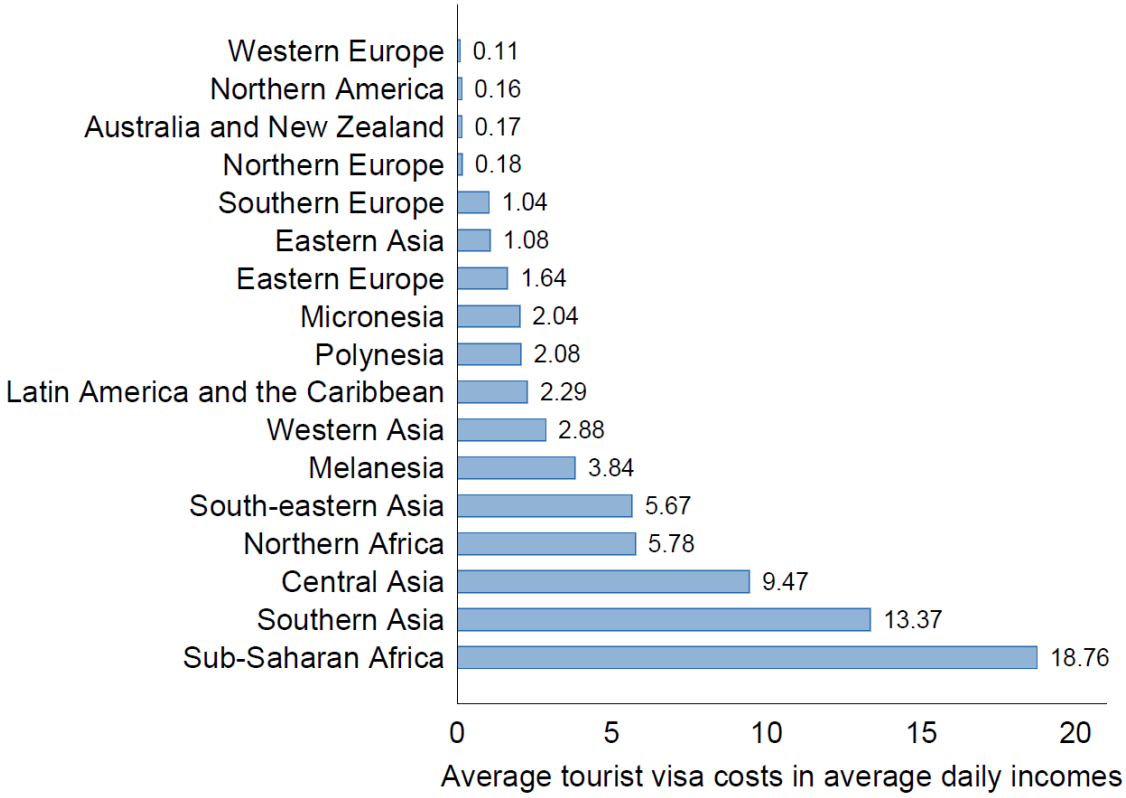
**Figure 3. Relation between tourist visa costs and sender-country GNI per capita**




Source: Global Visa Cost Dataset

What does the picture look like when we take the income of people into account to compute what the *actual*, i.e. income-adjusted visa costs are? Figure 4 shows that when calculating the real costs (expressed in average daily income per sender country), i.e. estimating how long people have to work on average to be able to afford a visa, the stark global gradient we already observed in figure 3 for raw costs (expressed in USD) becomes even more pronounced. In real-cost terms, Western, Northern and Southern Europeans as well as Australians and New Zealanders hardly have to work at all to obtain a visa, whereas Central Asians have to work more than nine days, Southern Asians have to work almost two weeks and Sub-Saharan Africans have to work almost 19 days to apply for a visa. This reveals a fundamental global injustice when it comes to the right to be mobile and to leave a country – a right that should be guaranteed universally under the UN Declaration of Human Rights (article 13).

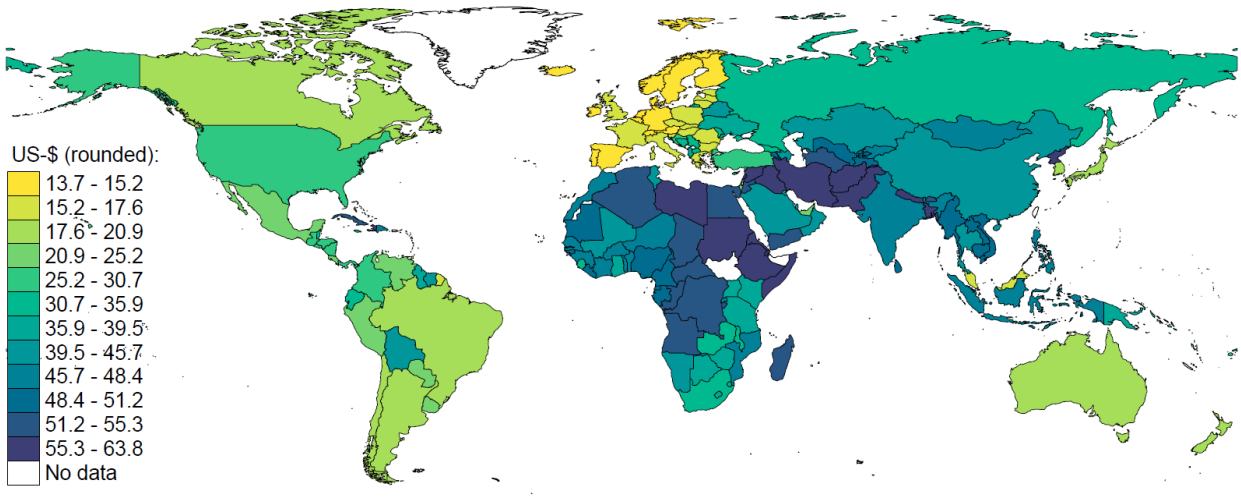
**Figure 4. Tourist visa costs expressed in average daily incomes by sender-country sub-region**




Source: Global Visa Cost Dataset

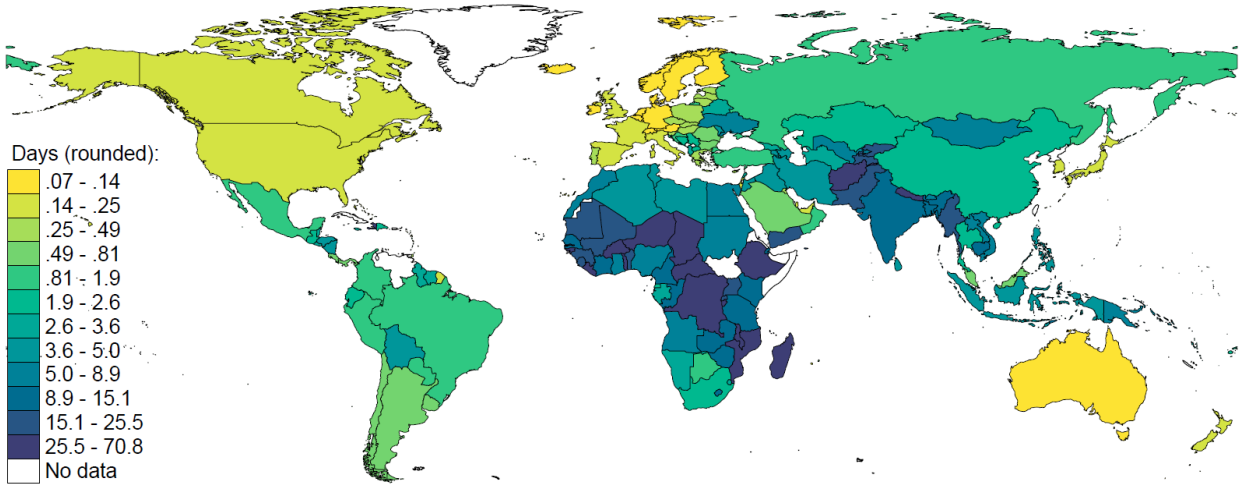
We can refine this picture further by zooming in from the sender sub-region to the sender-country level. This is done in figures 5 to 8 (figures A1 and A2 in the Appendix replicate the maps by receiving country).

**Figure 5. Average *tourist* visa costs in USD by sender country**



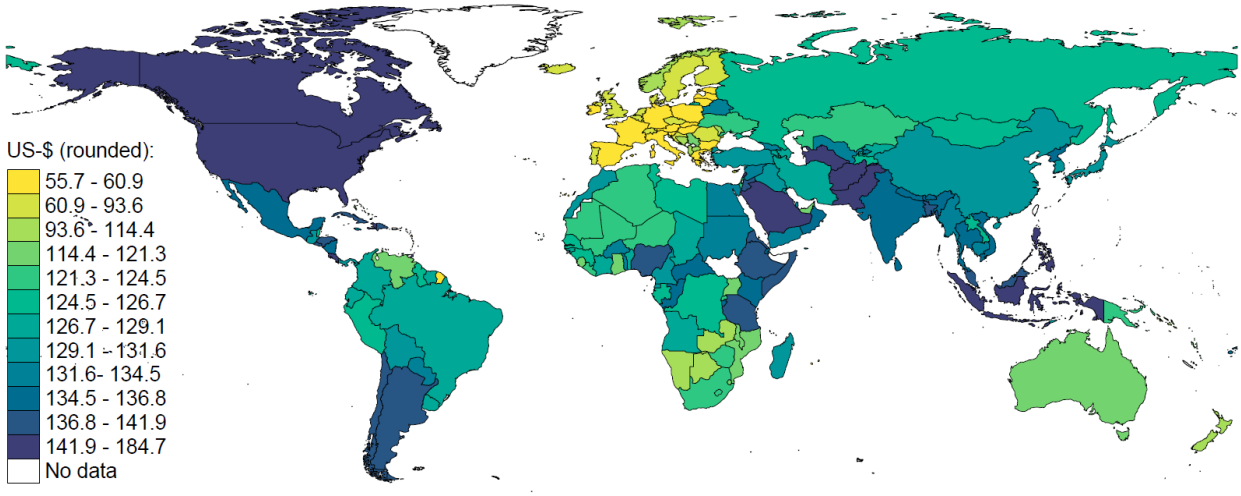

Source: Global Visa Cost Dataset

**Figure 6. Average *tourist* visa costs in average daily income by sender country**



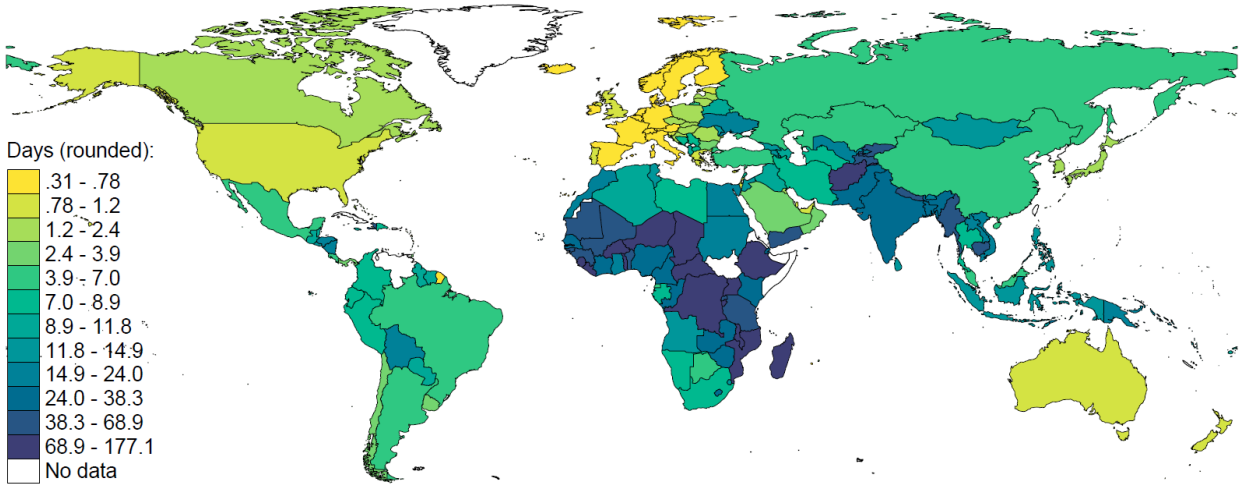

Source: Global Visa Cost Dataset

**Figure 7. Average *work* visa costs in USD by sender country**




Source: Global Visa Cost Dataset

**Figure 8. Average *work* visa costs in average daily income by sender country**



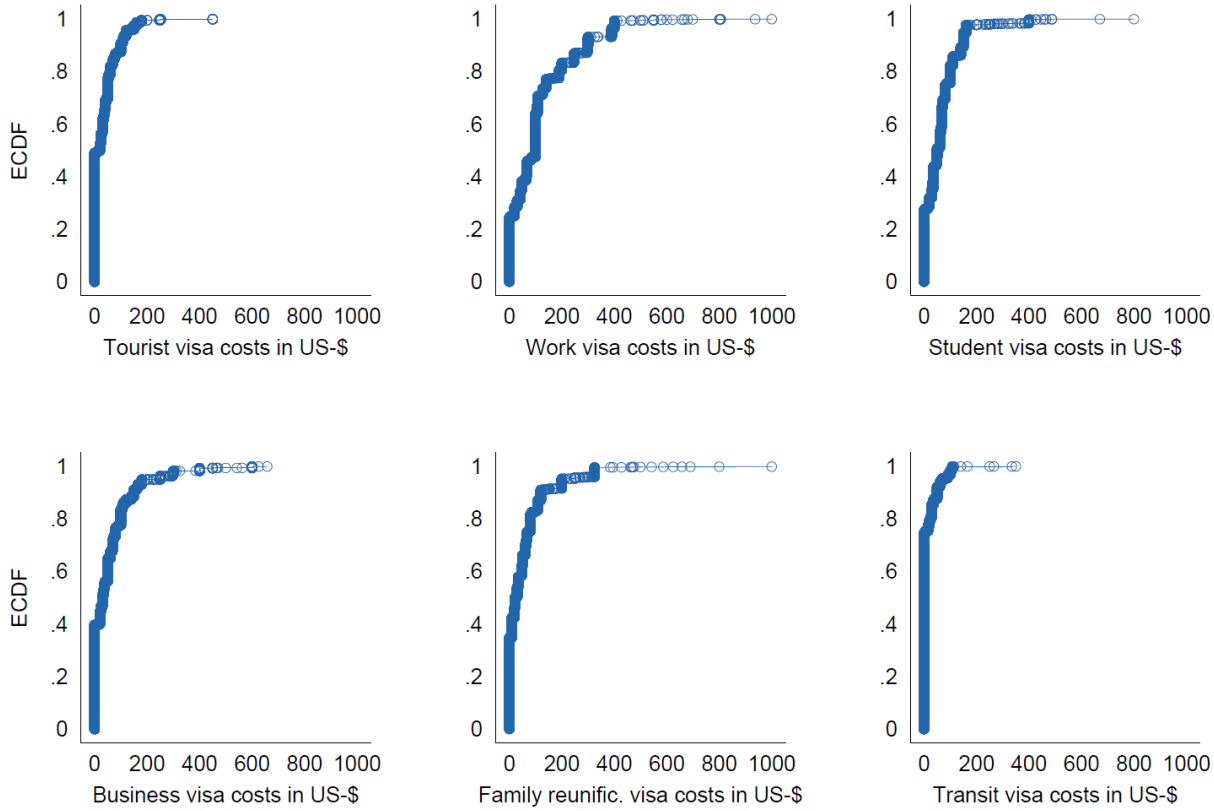

Source: Global Visa Cost Dataset

Nationals of Western Europe, Scandinavia, Australia and New Zealand stand out as travellers with the lowest possible visa costs as tourists, especially if these costs are calculated relative to the national income per capita (figures 5 and 6). Comparatively, costs are slightly higher for Southern and Eastern Europeans and North Americans. Still, these differences are minimal, with average visa costs staying below one day of average income. The real gap is with many African, Middle Eastern, Asian and – to a lesser extent – Latin American countries, both in absolute and in relative terms (that is, relative to the standard of living). In some countries in these areas, more than ten days of income are needed to apply for a tourist visa.

Work visas are more expensive everywhere (figures 7 and 8). Here, the most privileged are Europeans, who generally enjoy the lowest costs in absolute and relative terms. Citizens from other parts of the Global North (and especially US and Canadian nationals) have to face higher visa costs if they intend to settle abroad. Still, relative to their incomes, these costs are way below those of Sub-Saharan Africans who often need to invest more than a one-month salary if they intend to apply for a work visa. Almost as severe is the cost for potential workers moving from Southern Asia and parts of Latin America.

So far, the maps have shown the average of visa costs across all receiver countries for each sender country. We can now go one final step further in the disaggregation and look at the stratification of visa costs by country pair. Figure 9 shows the resulting cumulative distributions comparatively for the six individual types of visa contained in the dataset (excluding the category ‘other types of visas’). Various differences become apparent. First, the proportion of country pairs for which the visa is for free (i.e., the height of the vertical line at the left end of the distribution in figure 9) varies by type of visa: Transit visas are free for most country pairs (75 percent), followed by tourist visas (49 percent), business visas (40 percent), family reunification visas (35 percent), while student visas (27 percent) and work visas (24 percent) are only free in a minority of country-pair cases. This order appears ‘rational’ in that states seem to use visa costs to regulate access primarily to their labour markets (frequent work-visa costs) and education systems (frequent student-visa costs) while being generally more liberal when it comes to mere passage (rare transit-visa costs), trade opportunities (rare visa-business costs), and potentially revenue-bringing visitors who are required to leave after a short period (rare tourist-visa costs).

**Figure 9. Cumulative distributions of visa costs by country pairs and type of visa**




Note: Distributions are cut at 1000 US-$ to increase the readability of the graph. As a consequence, a small number of outliers with very high visa costs are excluded in the case of work, business, and family reunification visas.
Source: Global Visa Cost Dataset

A second observation is that for most country pairs that *do* have visa costs attached to them, these costs are relatively moderate compared to a small number of outlier country pairs with exceptionally high visa costs that have almost prohibitive character. This pattern holds across all six types of visa. One example from the distribution of tourist visa costs is the outlier Ecuador, which charges a staggering 450 USD for entry from a small number of poorer and/or conflict-ridden countries, often located in Africa (e.g., Nigeria, Eritrea, Ethiopia, and Somalia, but also Afghanistan, Haiti, Bangladesh, Pakistan and North Korea). In the case of Ethiopia, for example, a visa cost of 450 USD amounts to more than 7 months of mean income. Thus, the nature of these costs seems prohibitive rather than regulative in nature. A potentially helpful typology could thus differentiate between three types of visa costs: no costs (liberal access, vertical line at the left end of distributions in figure 9), prohibitive costs (practically shutting-off access, 'horizontal' line at the right end), and moderate costs (regulation of access, cases in between).

A third observation is that both the mean costs and the maximum costs vary by visa type and form an order that largely mirrors the one observed above for the share of no-cost country pairs (Table 1). Overall, transit and tourist visas have the lowest restrictions globally, work visas have the highest, with business, family reunification and student visas ranging in between.[6]

[6] The high maximum costs for business and family reunification visas look noteworthy. The highest costs in our dataset are charged by the Ukraine to UK citizens for family reunification (USD 2,002). The Cayman Islands charges USD 1,388 for its business (and work) visas. The Cayman Islands have, however, a rather complex visa scheme that takes into account the type of work, location and duration of the work contract in the country (see http://www.immigration.gov.ky/portal/page/portal/ver-8/immhome/help/fees/Fees%20R%2025%2005%202014.pdf, last

**Table 1. Visa-cost regulation by visa type**

| Visa Type | No-cost share (%) | Mean costs (USD) | Maximum costs (USD) | Restrictions |
|---|---|---|---|---|
| Transit | 75 | 48 | 350 | lowest |
| Tourist | 49 | 65 | 450 | |
| Business | 40 | 96 | 1,388 | |
| Family reunification | 35 | 84 | 2,002 | |
| Student | 27 | 85 | 800 | |
| Work | 24 | 147 | 1,388 | highest |

Source: Global Visa Cost Dataset

### *Is the global visa cost regime racist?*

One question we can examine in greater detail is whether the global visa cost regime is racist in that it discriminates against a specific set of populations – namely, Africans. As we have seen above, apart from Southern and Central Asia, African countries, in particular in the Sub-Saharan part of the continent, face some of the highest visa costs when travelling abroad for tourism. What explains these higher fees? Are they, at least to some extent, due to racist practices?

To answer this question, we run a set of MRQAP models (table 2). In models 1-2, the dependent variable is tourist-visa costs, in models 3-4 it is work-visa costs. Model 1 statistically confirms what we have seen in the maps above: when a country lies on the African continent, its residents pay more on average for a tourist visa than potential travellers in other parts of the globe. Model 2 tests whether this discrimination is due to racism or whether it can be explained by other factors. To do so, it introduces two factors that have been identified in Mau (2013) as central determinants of visa waivers: economic prosperity (measured here via the GNI per capita of the sender country) and the quality of democracy (measured here based on the Economist Intelligence Unit (EIU)'s Democracy Index[7] of the sender country). Our results show that when both factors are included in the model, they do have the expected effects: richer countries with better-functioning democracies pay less for tourist visas. Furthermore, the formerly significant effect of departing from Africa is rendered non-significant. This implies that the higher costs for tourist visas that African applicants have to pay are entirely explained by the (lack of) economic prosperity and functioning democracy of their countries. While this does not, of course, rule out the possibility that the economic prosperity or state of democracy of African countries are themselves influenced by racist practices (as well as post- and neo-colonial power structures), there is no remaining direct effect that could be linked to openly racist visa cost settings. In other words, racism may still work via indirect paths (which we cannot test here) but there does not seem to be a direct statistical[8] link between higher visa costs charged for African citizens and racist practices in the global visa regime. Rather, the global visa cost regime seems to be driven by a rationale of economic and political control and exclusion.

accessed 4 January, 2020) – which is not reflected in our dataset. A residency visa for somebody earning over CI$ 150,000 per year costs CI$ 12,500 (i.e., about USD 15,000). Further on, permanent residency can be acquired for CI$ 100,000 (i.e., about USD 120,000). On the market for permanent residency, investor visas and citizenship-by-investment schemes, see Schachar and Bauböck (2014) and Surak (2016).

7 We use the Gapminder version available at http://gapm.io/ddemocrix_eiu (last accessed 12 February 2020).

8 Statistical evidence at this aggregated level does also not preclude the possibility that in specific individual cases (at the country-pair level or even at the level of individual visa applications) there are cases of direct racism against African citizens.

Models 3 and 4 reproduce the test for work visas, with similar outcomes. Model 3 shows that the discrimination against African countries in terms of visa costs is much weaker than in the case of tourist visas to start with (and only significant here at the 90% confidence level). When economic prosperity and state of democracy are included in the model, the coefficient for the variable denoting that the sender country lies in Africa even becomes negative (significant at the 95% confidence level), suggesting that given their relatively weak economic prosperity and comparatively low values regarding the state of democracy, African countries actually pay less for work visas than other countries on the globe. A potential explanation for this surprising effect is that African workers may provide a cheap labour force, in particular for seasonal work in richer parts of the world (cf. Gabrielli et al 2019). The comparison of the tourist-visa cost and the work-visa cost models thus seems to reveal that Africans are treated slightly preferentially in the global visa cost regime when it comes to working abroad (at least when structural factors like economic prosperity and state of democracy are taken into account), but not when it comes to tourism.

**Table 2. MRQAP models predicting tourist visa costs (in USD)**

| | (1) Tourist visa costs | (2) Tourist visa costs | (3) Work visa costs | (4) Work visa costs |
|---|---|---|---|---|
| Sender country is African (1=yes) | .107*** | -.004 | .032† | -.034* |
| GNI per capita (sender) | | -.099*** | | -.140*** |
| EIU Democracy Index (sender) | | -.200*** | | -.066*** |
| N | 24,744 | 19,768 | 6,001 | 4,946 |
| Adjusted $R^2$ | .011 | .073 | .001 | .031 |

Note*:* Standardized coefficients, 2-tailed p-values, 2,000 permutations. Source: Global Visa Cost Dataset. EIU=Economist Intelligence Unit; ***: p<0.001; **: p<0.005; *: p<0.05; †: p<0.01.

***Do visa costs help explain mobility flows?***

A final question we tackle is whether the cost of visas helps explain the global structure of transnational mobility flows. In particular, we examine whether information on visa costs adds explanatory power compared to models that merely contain binary information on visa waivers like those employed in the literature so far (Mau et al 2015; Czaika et al 2018). We test this by first regressing tourist visa costs on travel flow estimates based on the Global Transnational Mobility Dataset created by the Global Mobilities Project at the EUI's Migration Policy Centre (Recchi et al 2019) and second by regressing work visa costs on migration flow estimates (based on Azose and Raftery 2019).

Let us start with the tourist visa costs and the travel flows. Model 1 in Table 3 shows that in a simple bivariate regression model, as expected, higher visa costs (in USD) are indeed associated with a lower volume of travels. In this sense, visa costs do seem to intervene in regulating transnational mobility flows. Model 2 shows a similar effect when we calculate the costs in terms of average days of labour rather than USD. Models 3 and 4 show, for comparison, what happens when instead of the precise visa costs we introduce simple binary variables to explain travel flows. Model 3 does this for visa waivers in 2010 (using the Mau et al 2015 dataset) and model 4 for the visa waivers in 2019 (treating all tourist visa costs of 0 as 'visa waivers'). In both cases, the facilitating effect of visa waivers on the volume of transnational mobility flows is strong and highly significant. When we include visa costs and visa waivers simultaneously (models 5 and 6), the explanatory power of visa waivers consistently beats that

of visa costs when predicting mobility flows.[9] From a substantial point of view, this could imply that travellers are more sensitive to the removal of visas than to differences in the precise amount of visa fees. From a researcher's perspective, this analysis confirms the explanatory power of visa waivers and suggests that future research in the field may continue to rely on visa waivers rather than switching to visa costs when modelling factors that shape mobility flows. This is good news, since visa waivers can be collected automatically from digital sources (at least for recent years), whereas, as stated above, the manual collection of visa costs was time-consuming and complex.

**Table 3. MRQAP models predicting transnational travel flows**

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) |
|---|---|---|---|---|---|---|---|
| Tourist visa costs (USD) | -.050*** | | | | -.014 | .012 | -.005 |
| Tourist visa costs per average daily income | | -.036** | | | | | |
| Visa waivers 2010 | | | .097*** | | .091*** | | |
| 'Visa waivers' 2019 | | | | .075*** | | .084*** | |
| 20 control variables included | | | | | | | ✓ |
| N | 17,730 | 17,353 | 24,690 | 17,494 | 15,405 | 17,485 | 16,672 |
| Adjusted $R^2$ | .002 | .001 | .009 | .006 | .010 | .006 | 0.315 |

Note*:* Standardized coefficients, 2-tail ed p-values, 2,000 permutations. Tourist visa costs (in USD) based on Global Visa Cost Dataset; travel flows based on estimated travel flows in 2016 as reported in the GMP Global Transnational Mobility Dataset (Recchi et al 2019); visa waivers 2010 based on Mau et al (2015). Control variables: GNI per capita (of sender country, receiver country, and difference between sender and receiver, World Bank 2019), geographic distance, historical union, colony-colonizer relation, same colonizer, common language, common currency (CEPII *GeoDist* Dataset, Mayer & Zignago 2006), contiguity, time difference, conflict, regional trade agreements, common legislative system (both CEPII *Gravity* Dataset, Head et al 2010) religious proximity (CEPII *repro_ling* Dataset, Melitz & Toubal 2014), product of sender and receiver population size (UN 2014), trade flows (CoW *Trade* Dataset, v3.0, Barbieri & Keshk 2012), common membership in international organizations (CoW *IGO* Dataset v2.1, Pevehouse et al 2004), , diplomatic exchange (CoW *Diplomatic Exchange* Dataset, Bayer 2006), military alliances (CoW *Formal Interstate Alliances* Dataset v4.0, Gibler 2009). For detailed descriptions of these variables, see also Deutschmann (2017) ***: p<0.001; **: p<0.005; *: p<0.05; †: p<0.01. ***: p<0.001; **: p<0.005; *: p<0.05; †: p<0.01.

In the next step we tested whether work-visa costs predict migration flows. Model 1 in table 4 shows that even in a simple bivariate regression model, no effect seems to exist.[10] In models 2 and 3, we use migration *intentions* and migration *plans* based on Gallup World Poll data as dependent variable. Interestingly, here there are significant positive effects indicating that higher costs of obtaining a work visa are associated with *more* people willing to come to these countries. This makes intuitive sense: where there is a lot of potential supply of incoming workers, states can raise the costs for accessing their labour markets, be it for the purpose of regulating that supply or for benefiting financially from higher charges.

Remarkably, the explanatory power of work visa costs for migration intentions and plans remains intact when we control, in models 4 and 5, for the per capita income of both the sender and the receiver

[9] Using a logarithmic version of visa costs (not shown) does not lead to higher explanatory power either.

[10] We also checked models using alternative migration flow estimates based on Abel and Sanders (2014) for the 2005-10 period and migration stocks in 2017 based on UNDP data as dependent variable (not shown), both of which are also *not* significantly explained by work visa costs in a simple bivariate regression model.

country, as well as the difference in income between sender and receiver (all of which are important predictors of migration intentions and plans). Only when a larger set of economic, political, cultural and geographic control variables are included do the effects of work visa costs on migration intentions and plans become non-significant (models 6 and 7). It thus seems that the costs that countries charge for their work visas have at least some signalling power for people intending or planning to migrate, but are not associated with actual migration (whose structure looks very different). Interestingly, this signalling power is positive, i.e. higher work visa costs make these countries a *more* desirable destination of migration. However, the full models suggest that the high work-visa costs are a by-product of the attractiveness generated by a larger set of other, positive characteristics of these countries.

**Table 4. MRQAP models predicting migration flows, intentions and plans**

| | (1) Migration flows | (2) Migration intentions | (3) Migration plans | (4) Migration intentions | (5) Migration plans | (6) Migration intentions | (7) Migration plans |
|---|---|---|---|---|---|---|---|
| Work visa costs (USD) | -.005 | .033* | .034* | .057** | .053** | .008 | .021 |
| GNI per capita (sender) | | | | -.095*** | -.128*** | -.119*** | -.137*** |
| GNI per capita (receiver) | | | | .133*** | .107*** | .058* | .048† |
| GNI per capita difference | | | | .098** | .127*** | .146*** | .162*** |
| 17 control variables | | | | | | ✓ | ✓ |
| N | 4,818 | 4,316 | 4,047 | 4,291 | 3,976 | 4,219 | 3,976 |
| Adjusted $R^2$ | -.000 | .001 | .001 | .037 | .039 | .129 | .110 |

Note*:* Standardized coefficients, 2-tailed p-values, 2,000 permutations. Work visa costs (in USD) based on Global Visa Cost Dataset; migration flows based on Azose & Raftery (2019) data for the 2010-15 period, migration plans (year: 2015) and intentions (2017) based on Gallup World Poll data. Control variables: Geographic distance, historical union, colony-colonizer relation, same colonizer, common language, common currency (CEPII *GeoDist* Dataset, Mayer & Zignago 2006), contiguity, time difference, conflict, regional trade agreements, common legislative system (both CEPII *Gravity* Dataset, Head et al 2010) religious proximity (CEPII *repro_ling* Dataset, Melitz & Toubal 2014), product of sender and receiver population size (UN 2014), trade flows (CoW *Trade* Dataset, v3.0, Barbieri & Keshk 2012), common membership in international organizations (CoW *IGO* Dataset v2.1, Pevehouse et al 2004), , diplomatic exchange (CoW *Diplomatic Exchange* Dataset, Bayer 2006), military alliances (CoW *Formal Interstate Alliances* Dataset v4.0, Gibler 2009). For detailed descriptions of these variables, see also Deutschmann (2017) ***: p<0.001; **: p<0.005; *: p<0.05; †: p<0.01.

## Conclusion

Crossing state borders is never a banal act. Even the plan to go abroad on a mere tourist and short-term trip needs some consideration of the political-legal barriers to be overcome. The most common of these barriers is a visa application to the state authorities of the travel destination. Citizens of rich countries are somewhat spoiled by the power of their passports (Kochenov and Lindeboom 2017; Okagbue et al 2019), which entail a huge list of visa waivers, and are thus led to overlook the costs and complications of travel admission procedures elsewhere. As we have shown, visa applications can be particularly expensive (up to more than one monthly average income) in poorer countries. Citizens of the Global South suffer not only from their own comparatively lower income but also from visa costs that are in absolute terms higher than for people in the Global North. In stark contrast, for Europeans, Australians, New Zealanders, and North Americans, tourist visas cost much less than a single day of income – often no more than a stamp-like, symbolic chip. The international gradient of inequality in affordability of visas is even steeper when it comes to work visas (which are in general more expensive).

The prices of visas are also not transparent (i.e., disclosed officially in government and consulate websites) in a sizeable number of country combinations. Resorting to online visa agencies is no less of a hardship, as these agencies are not practically able to provide visas for a large number of possible travel destinations and, possibly even worse ethically, tend to overcharge substantially for the face-value cost of the visas, on top of their explicit fees, as our analysis suggested.

Visas are particularly expensive for citizens of Sub-Saharan African countries, but we found that this is the by-product of the low level of economic prosperity and political development of the area rather than its specificity. Overall, visas are globally cheaper for nationals of richer and more democratic countries, regardless of the location of such countries. As mentioned before, this analysis only showed that there are no *statistical* signs of direct racism in the global visa regime. This does of course not preclude the possibility that individual countries or persons are discriminated against due to their location or skin colour, nor that levels of economic prosperity or political development are in themselves affected by racism and (neo-)colonialism. It is also important to note that our depictions of global inequality in visa costs are likely conservative and may underestimate the actual inequalities. We used the GNI per capita as a gross approximation of the mean income of the average person in a country to calculate what the real costs of visas may feel like. However, since the GNI is in itself distributed extremely unequally, the *mean* GNI is likely driven statistically by very large incomes at the top, and is not really representative of the 'average' person in that country. The *median* income would be more appropriate, but is, unfortunately, difficult to obtain for a global set of countries. Thus, for a large number of people, in particular in the Global South, real visa costs may be even higher than depicted in this study.

Ultimately, seeing like a state, to borrow Scott's (1988) metaphor, the rationale of visa costs aligns with one of the underlying functions of visas altogether: regulate – and in some cases deter or even prevent – incoming mobility flows of non-nationals. We did find prima facie that the higher the costs of visas, the lower the inflows of cross-border travellers. However, this effect disappeared once we controlled for visa waivers, suggesting that the main signalling power emanates from whether a visa is required at all, whereas the precise costs play a lesser role in shaping mobility flows. In fact, we did not find any effect of work visa costs on the volume of migration. However, visa costs do reflect migration *aspirations* between countries. In a sense, visa costs can be seen as 'price tags' on potential destinations for labour migration. They do not seem to intervene elastically as mediators of the size of actual mobility and migration flows, though.

Our analyses could prove that visa waivers – that is, a zero cost for visas – are critical in boosting the volume of global mobility, as argued in the literature (Mau et al 2015; Czaika et al 2018). The visa-free connections between countries thus highlight the ever-growing mobile part of the planet, while the country pairs with visa costs outline its mirror image, representing a world where moving transnationally is hard and made difficult on purpose. For travellers, visa costs are a signal of being relatively unwanted – or only conditionally wanted, the condition being the willingness and ability to pay for an entry ticket, and perhaps more afterwards.

# Appendix

**Figure A1. Average *tourist* visa costs in USD by receiver country**

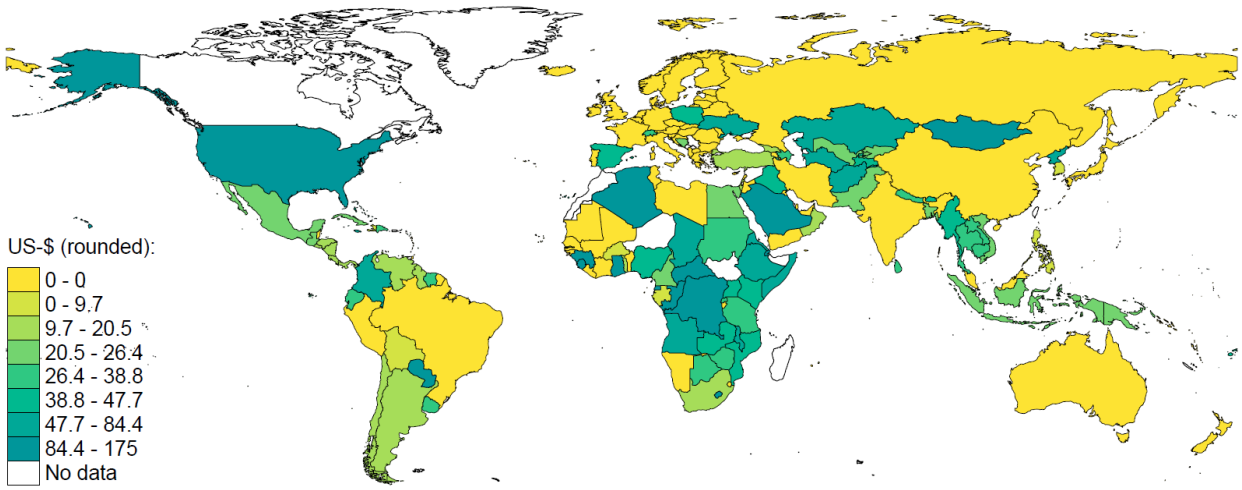



**Figure A2. Average *work* visa costs in USD by receiver country**

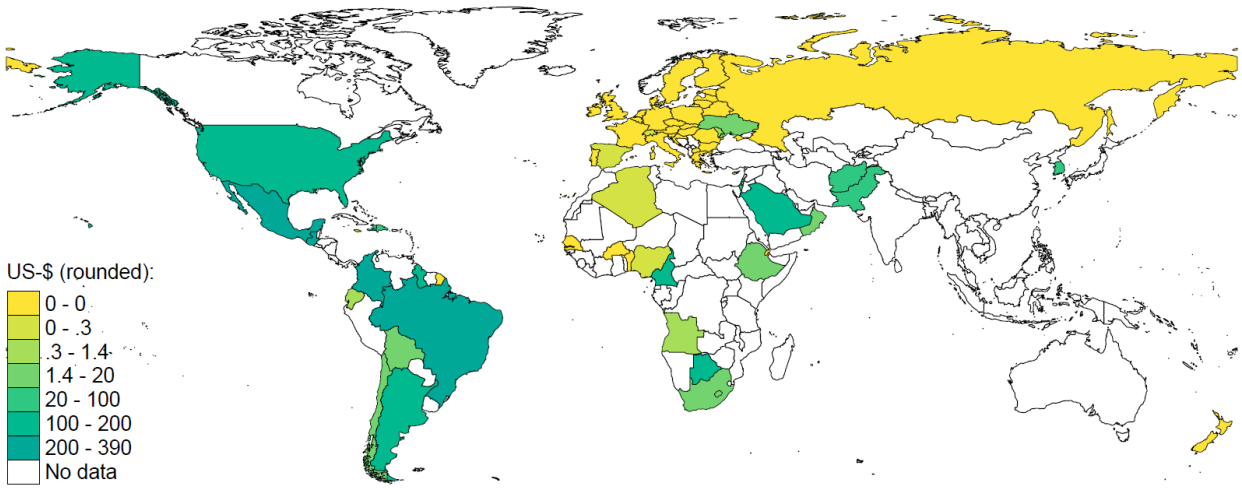


**Table A1. List of ratios between agency visa costs and GMP visa costs**

| Ratio | Observations | Percentage | Round | Explanation for potential 'roundness' |
|---|---|---|---|---|
| 0.4 | 173 | 5.67 | yes | |
| 0.5 | 9 | 0.29 | yes | |
| 0.6944444 | 3 | 0.1 | | |
| 0.7333333 | 1 | 0.03 | maybe | 11/15 |
| 0.7985075 | 81 | 2.65 | | |
| 0.8333333 | 163 | 5.34 | yes | 5/6 |
| 0.8461539 | 42 | 1.38 | maybe | 11/13 |
| 0.9 | 3 | 0.1 | yes | |
| 0.9166667 | 1 | 0.03 | maybe | 11/12 |
| 1 | 1 | 0.03 | yes | |
| 1.1 | 2 | 0.07 | yes | |
| 1.166667 | 111 | 3.64 | yes | +1/6 |
| 1.208333 | 46 | 1.51 | | |
| 1.214286 | 96 | 3.14 | | |
| 1.222222 | 1 | 0.03 | maybe | +2/9 |
| 1.25 | 66 | 2.16 | yes | |
| 1.294118 | 39 | 1.28 | | |
| 1.315789 | 11 | 0.36 | | |
| 1.416667 | 1 | 0.03 | maybe | +5/12 |
| 1.480769 | 173 | 5.67 | maybe | +25/52 (potential deviation from +1/2 due to currency conversion) |
| 1.5 | 299 | 9.79 | yes | |
| 1.52 | 133 | 4.36 | maybe | +13/25 (potential deviation from +1/2 due to currency conversion) |
| 1.54 | 140 | 4.59 | | |
| 1.555556 | 102 | 3.34 | maybe | +5/9 |
| 1.571429 | 1 | 0.03 | maybe | +4/7 |
| 1.625 | 147 | 4.81 | maybe | +5/8 |
| 1.692308 | 5 | 0.16 | | |
| 1.694444 | 158 | 5.18 | | +25/36 |
| 1.714286 | 1 | 0.03 | | |
| 1.75 | 10 | 0.33 | yes | |
| 1.818182 | 36 | 1.18 | maybe | +9/11 |
| 1.833333 | 95 | 3.11 | maybe | +5/6 |
| 1.952381 | 1 | 0.03 | | |
| 1.956522 | 82 | 2.69 | | |
| 2 | 100 | 3.28 | Yes | |
| 2.045455 | 17 | 0.56 | | |
| 2.05 | 2 | 0.07 | | |
| 2.2 | 113 | 3.7 | yes | |
| 2.222222 | 1 | 0.03 | maybe | +11/9 |
| 2.25 | 37 | 1.21 | Yes | |
| 2.342857 | 37 | 1.21 | | |
| 2.416667 | 7 | 0.23 | | |
| 2.5 | 1 | 0.03 | yes | |
| 2.733333 | 100 | 3.28 | maybe | +26/15 |
| 2.75 | 3 | 0.1 | yes | |
| 2.785714 | 37 | 1.21 | maybe | +25/14 |
| 3.25 | 5 | 0.16 | yes | |
| 3.4 | 1 | 0.03 | | |

| | | | |
|---|---|---|---|
| 3.5 | 2 | 0.07 | yes |
| 3.75 | 5 | 0.16 | yes |
| 4.1 | 1 | 0.03 | |
| 4.25 | 30 | 0.98 | yes |
| 4.5 | 88 | 2.88 | yes |
| 4.6 | 45 | 1.47 | |
| 5 | 122 | 4 | yes |
| 5.25 | 64 | 2.1 | yes |
| 7.15 | 1 | 0.03 | |
| 12 | 1 | 0.03 | yes |

**Table A2. Variables contained in the Global Visa Cost Dataset**

| Name | Explanation |
|---|---|
| source | Country of origin |
| target | Country of destination |
| source_iso3 | ISO3 code of country of origin |
| target_iso3 | ISO3 code of country of destination |
| tourist_visa | Tourist visa costs (in USD) |
| student_visa | Student visa costs (in USD) |
| business_visa | Business visa costs (in USD) |
| work_visa | Work visa costs (in USD) |
| family_reunification_visa | Family reunification costs (in USD) |
| transit_visa | Transit visa costs (in USD) |
| other_motives_visa | Other motives visa costs (in USD) |
| tourist_perdailyincome | Tourist visa costs (in average daily incomes) |
| student_perdailyincome | Student visa costs (in average daily incomes) |
| business_perdailyincome | Business visa costs (in average daily incomes) |
| work_perdailyincome | Work visa costs (in average daily incomes) |
| family_perdailyincome | Family reunification costs (in average daily incomes) |
| transit_perdailyincome | Transit visa costs (in average daily incomes) |
| other_perdailyincome | Other motives visa costs (in average daily incomes) |
| source_region | World region country of origin is located in |
| target_region | World region country of destination is located in |
| source_subregion | World sub-region country of origin is located in |
| target_subregion | World sub-region country of destination is located in |

Note: Regions and sub-regions are based on the UN M.49 GeoScheme. All visa costs from 2019.

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## Author contacts:

**Ettore Recchi (Corresponding author)**
Migration Policy Centre, Robert Schuman Centre for Advanced Studies, EUI
Villa Malafrasca, Via Boccaccio 151
50133 Florence
Italy; and
Sciences Po
Observatoire Sociologique du Changement
CNRS
Paris
France

Email: ettore.recchi@eui.eu

**Emanuel Deutschmann**
Migration Policy Centre, Robert Schuman Centre for Advanced Studies, EUI
Villa Malafrasca, Via Boccaccio 151
50133 Florence
Italy; and
Georg-August University Göttingen
Göttingen
Germany

**Lorenzo Gabrielli**
Istituto di Scienza e Tecnologie dell'Informazione
Consiglio Nazionale delle Ricerche,
Pisa
Italy

**Nodira Kholmatova**
Migration Policy Centre, Robert Schuman Centre for Advanced Studies, EUI
Villa Malafrasca, Via Boccaccio 151
50133 Florence
Italy


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